

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: W40 NEMA Premium Efficiency Three-Phase	Product code :	13621553		
		Catalog # :	30018OT3G447/9T-W40		
Frame	: 447/9T	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	: 1951 lb		
Protection degree	: IP23	Moment of inertia (J)	: 56.1 sq.ft.lb		
Design	: B				
Output [HP]	300	250	250	250	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	339	344	331	323	
L. R. Amperes [A]	2407	2236	2416	2519	
LRC [A]	7.1x(Code H)	6.5x(Code G)	7.3x(Code H)	7.8x(Code J)	
No load current [A]	105	103	113	120	
Rated speed [RPM]	1780	1475	1480	1480	
Slip [%]	1.11	1.67	1.33	1.33	
Rated torque [ft.lb]	885	890	887	887	
Locked rotor torque [%]	220	190	210	229	
Breakdown torque [%]	229	210	240	260	
Service factor	1.15	1.15	1.15	1.15	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	28s (cold) 16s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	
Noise level ²	77.0 dB(A)				
Efficiency (%)	25%	95.7	94.3	94.3	94.3
	50%	95.8	95.0	95.0	95.0
	75%	95.8	95.4	95.4	95.4
	100%	95.8	96.0	96.0	96.0
Power Factor	25%	0.52	0.52	0.48	0.45
	50%	0.76	0.76	0.73	0.70
	75%	0.83	0.83	0.81	0.79
	100%	0.85	0.85	0.84	0.83
Bearing type	: <u>Drive end</u> 6319 C3 <u>Non drive end</u> 6314 C3	Foundation loads			
Sealing	: Without Without	Max. traction	: 5173 lb		
	: Bearing Seal Bearing Seal	Max. compression	: 7124 lb		
Lubrication interval	: 20000 h 20000 h				
Lubricant amount	: 45 g 27 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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Customer : _____

Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermistor - 2 wires	1 x Phase	155 °C

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TORQUE AND CURRENT VS SPEED CURVE



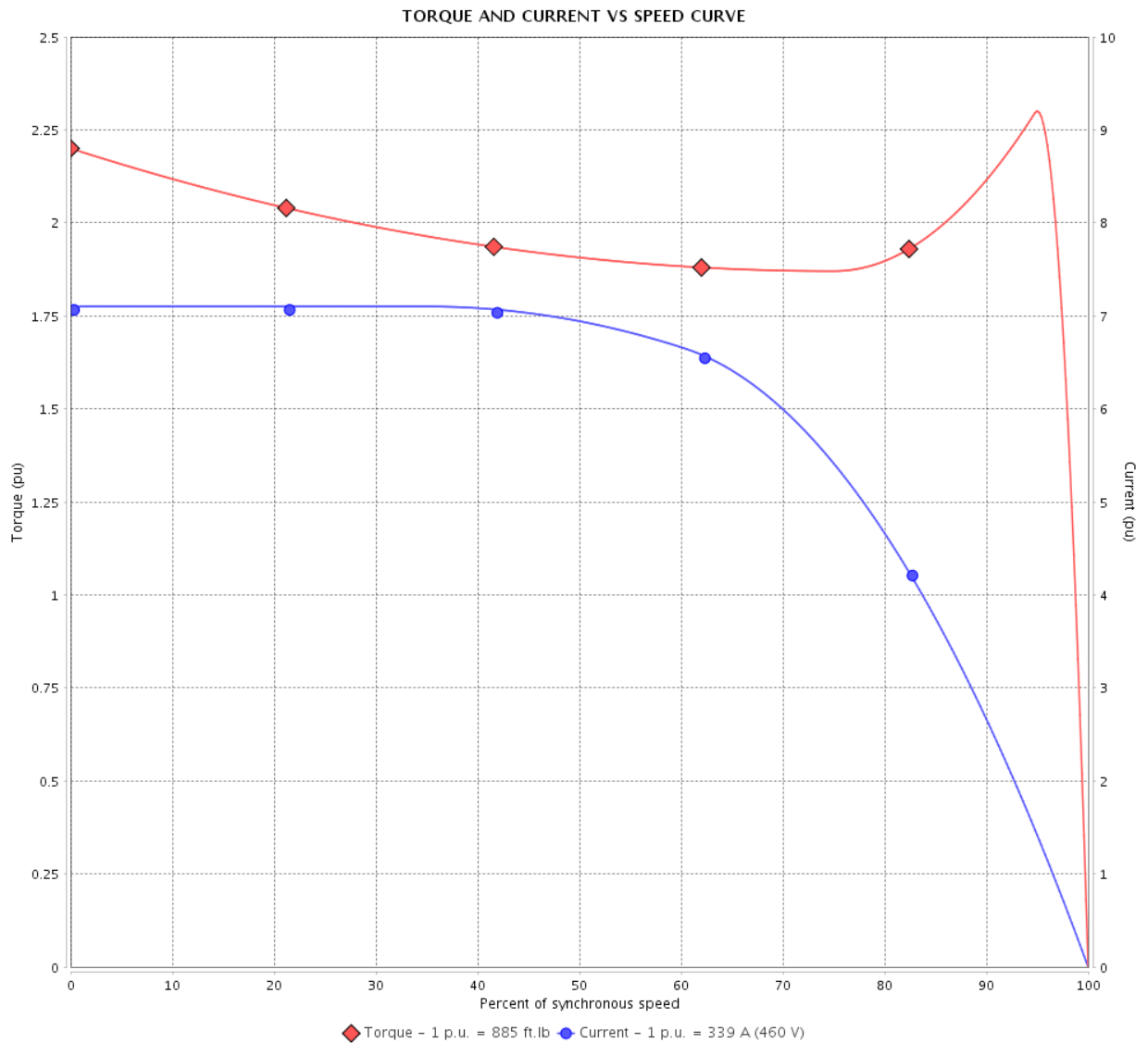
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 13621553

Catalog # : 30018OT3G447/9T-W40



Performance : 460 V 60 Hz 4P

Rated current	: 339 A	Moment of inertia (J)	: 56.1 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 885 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1780 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



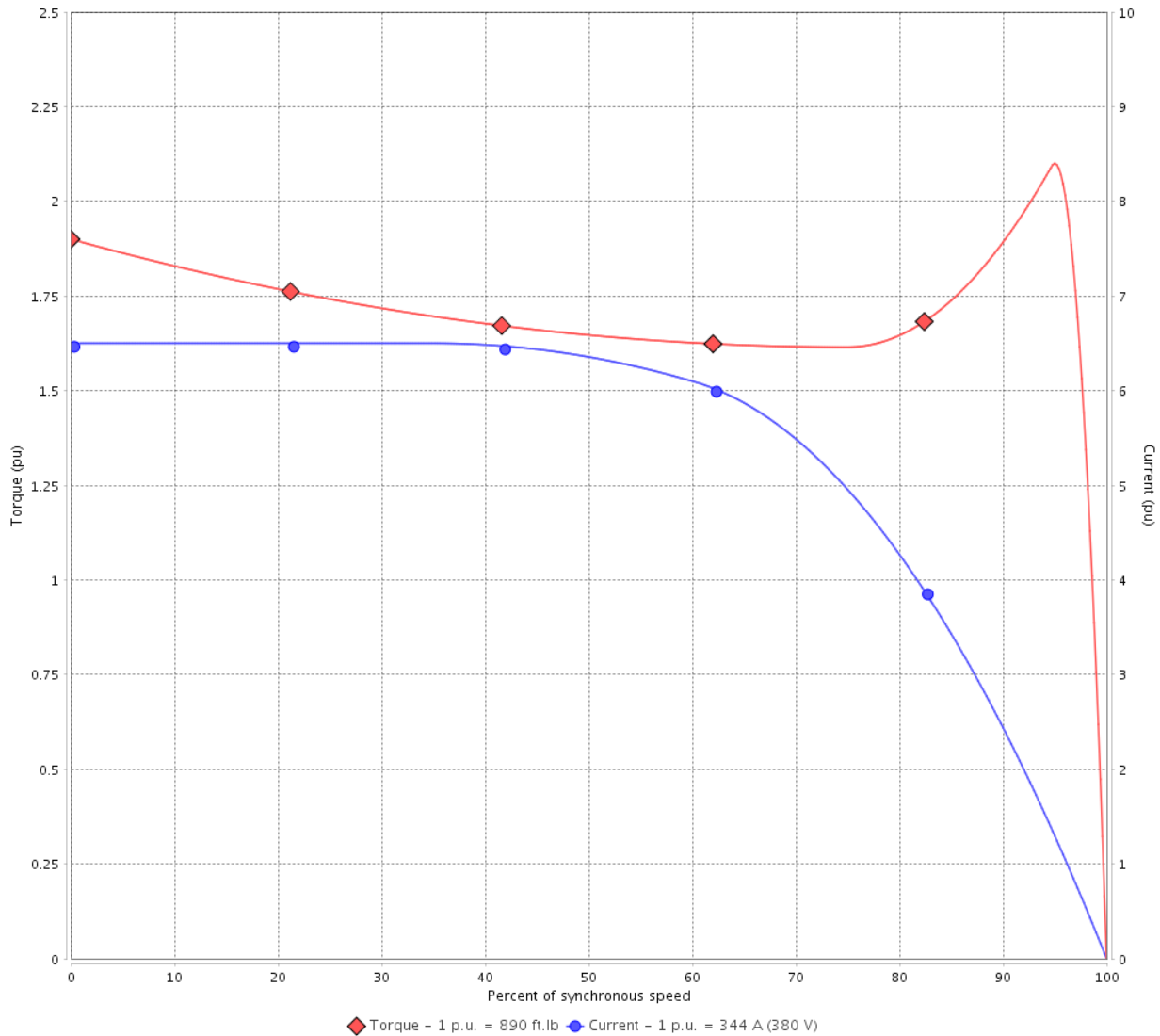
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 13621553

Catalog # : 30018OT3G447/9T-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE3

Rated current	: 344 A	Moment of inertia (J)	: 56.1 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 890 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.15
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 1475 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



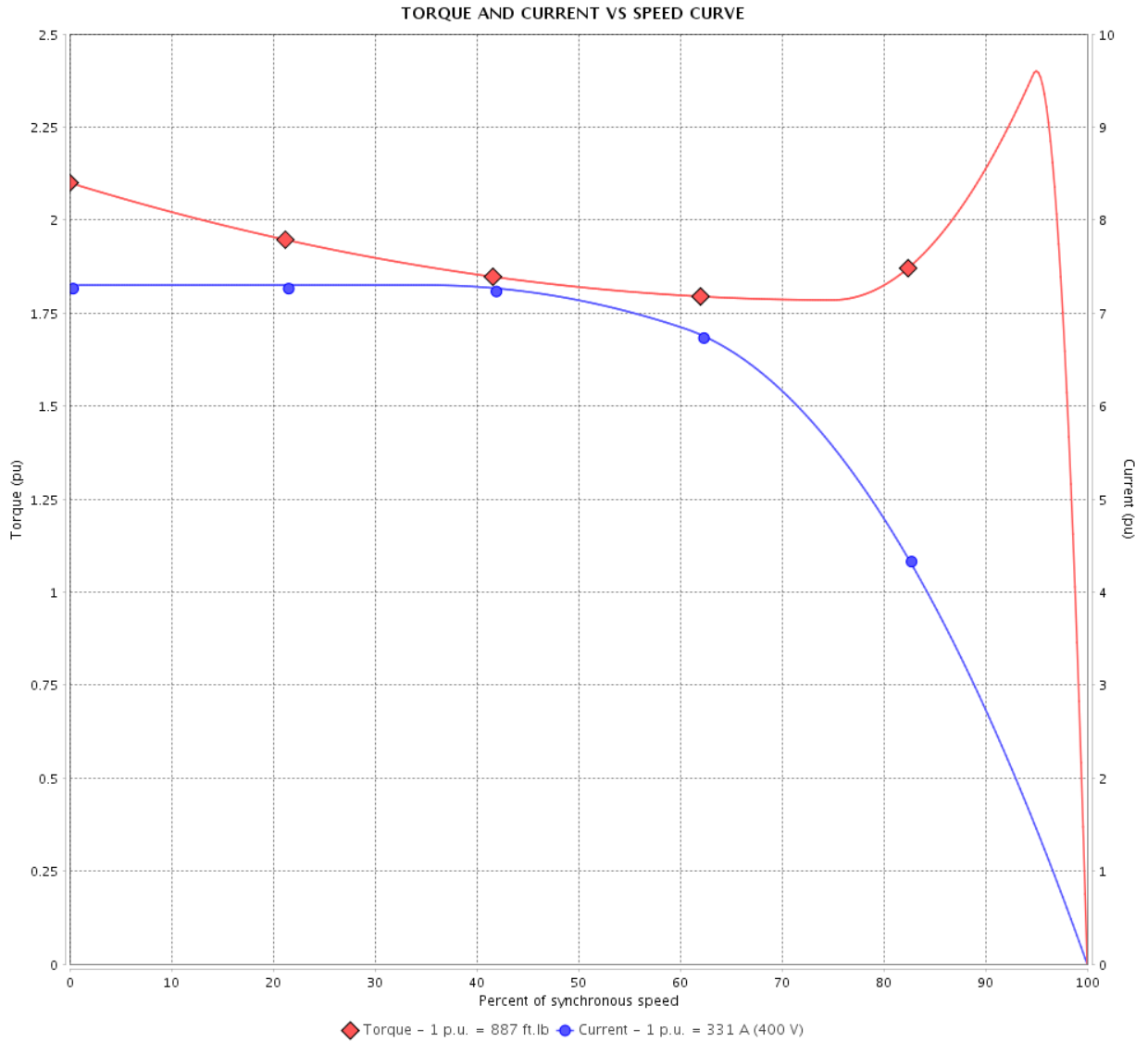
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 13621553

Catalog # : 30018OT3G447/9T-W40



Performance : 400 V 50 Hz 4P IE3

Rated current	: 331 A	Moment of inertia (J)	: 56.1 sq.ft.lb
LRC	: 7.3	Duty cycle	: Cont.(S1)
Rated torque	: 887 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



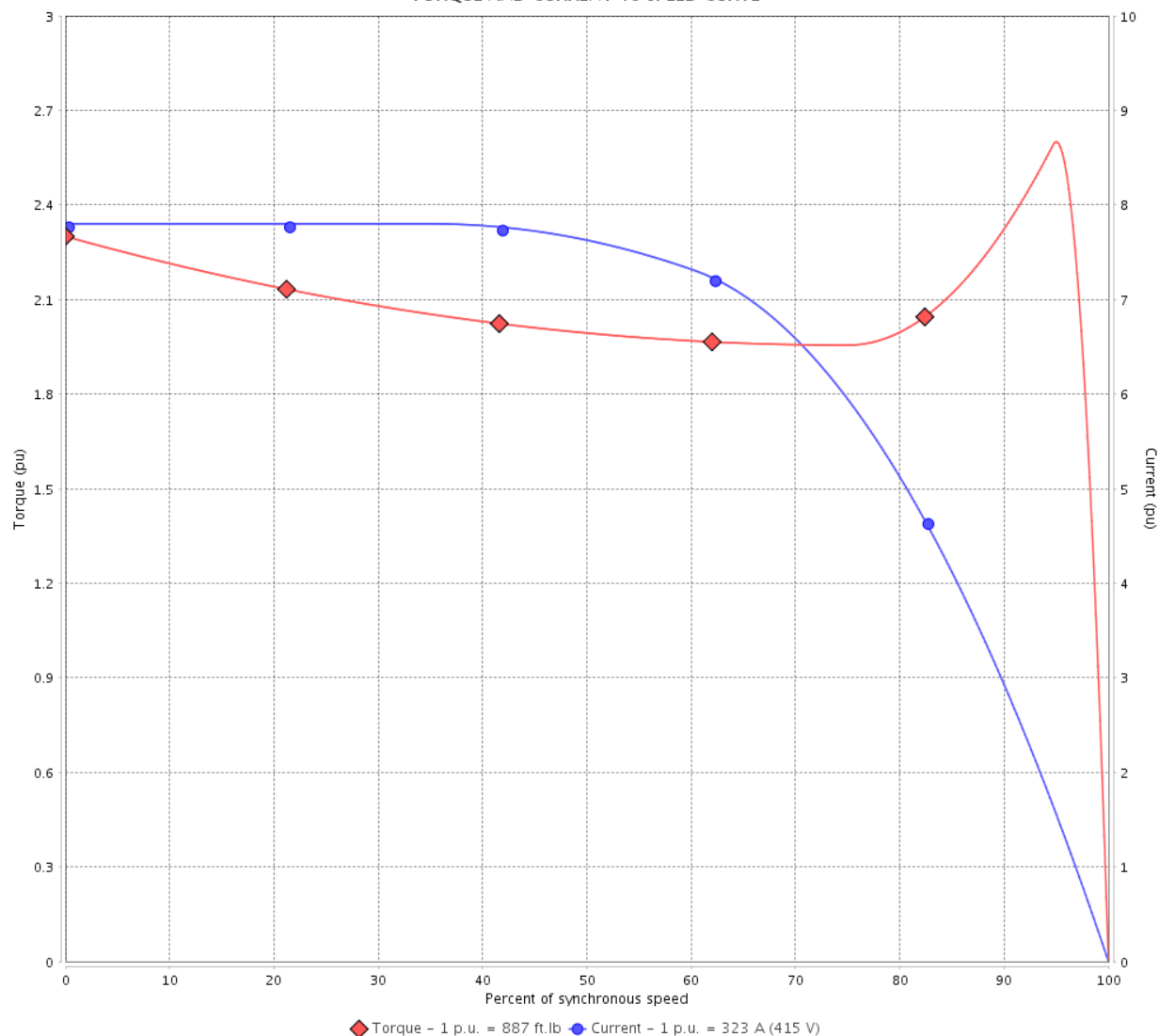
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Product code : 13621553

Catalog # : 30018OT3G447/9T-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE3

Rated current	: 323 A	Moment of inertia (J)	: 56.1 sq.ft.lb
LRC	: 7.8	Duty cycle	: Cont.(S1)
Rated torque	: 887 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.15
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

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LOAD PERFORMANCE CURVE

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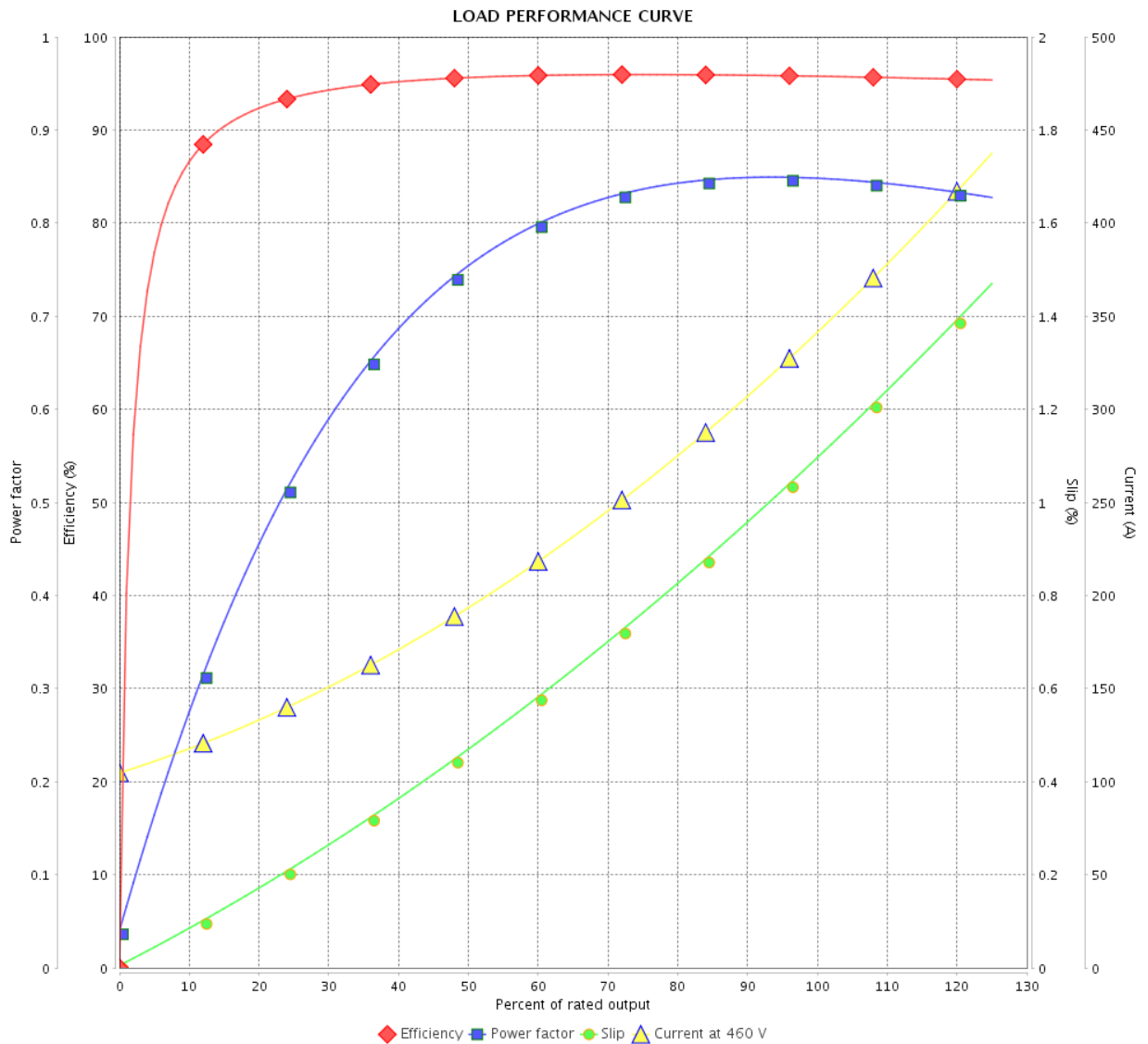


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Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 13621553

Catalog # : 30018OT3G447/9T-W40



Performance : 460 V 60 Hz 4P

Rated current : 339 A
 LRC : 7.1
 Rated torque : 885 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 229 %
 Rated speed : 1780 rpm

Moment of inertia (J) : 56.1 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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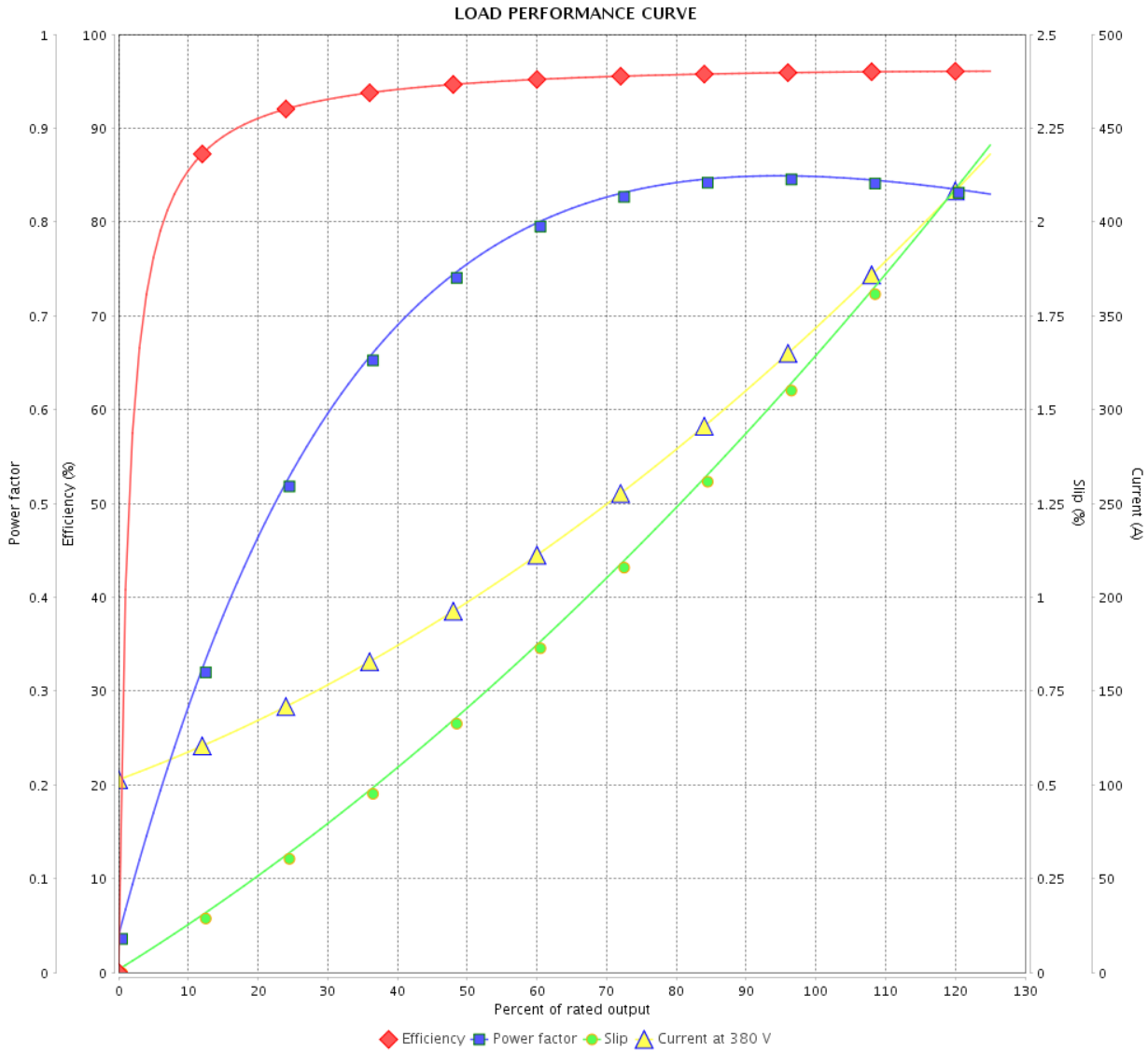


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Product code : 13621553

Catalog # : 30018OT3G447/9T-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 344 A
 LRC : 6.5
 Rated torque : 890 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 210 %
 Rated speed : 1475 rpm

Moment of inertia (J) : 56.1 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

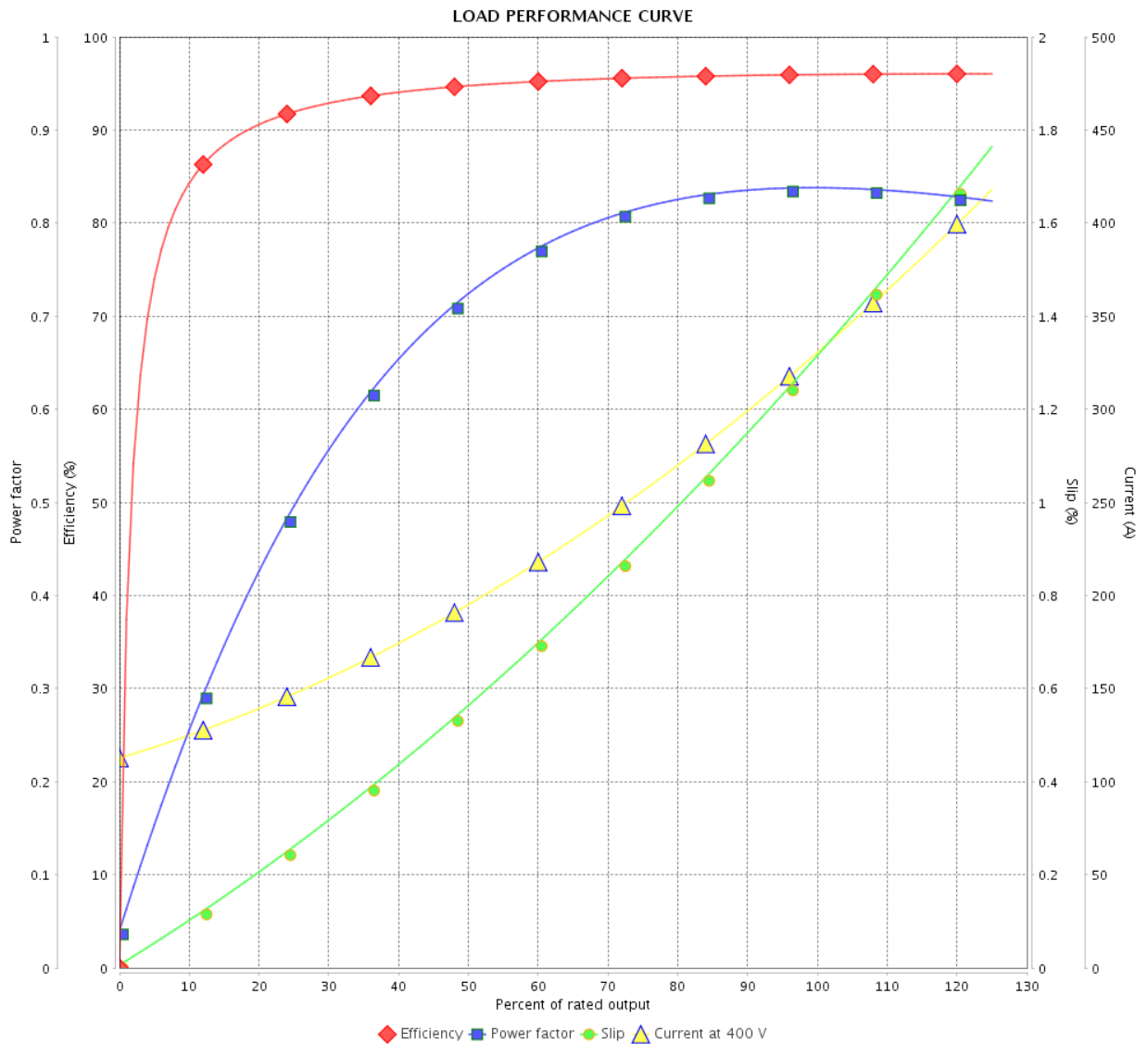


Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 13621553

Catalog # : 30018OT3G447/9T-W40



Performance : 400 V 50 Hz 4P IE3

Rated current : 331 A
 LRC : 7.3
 Rated torque : 887 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 240 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 56.1 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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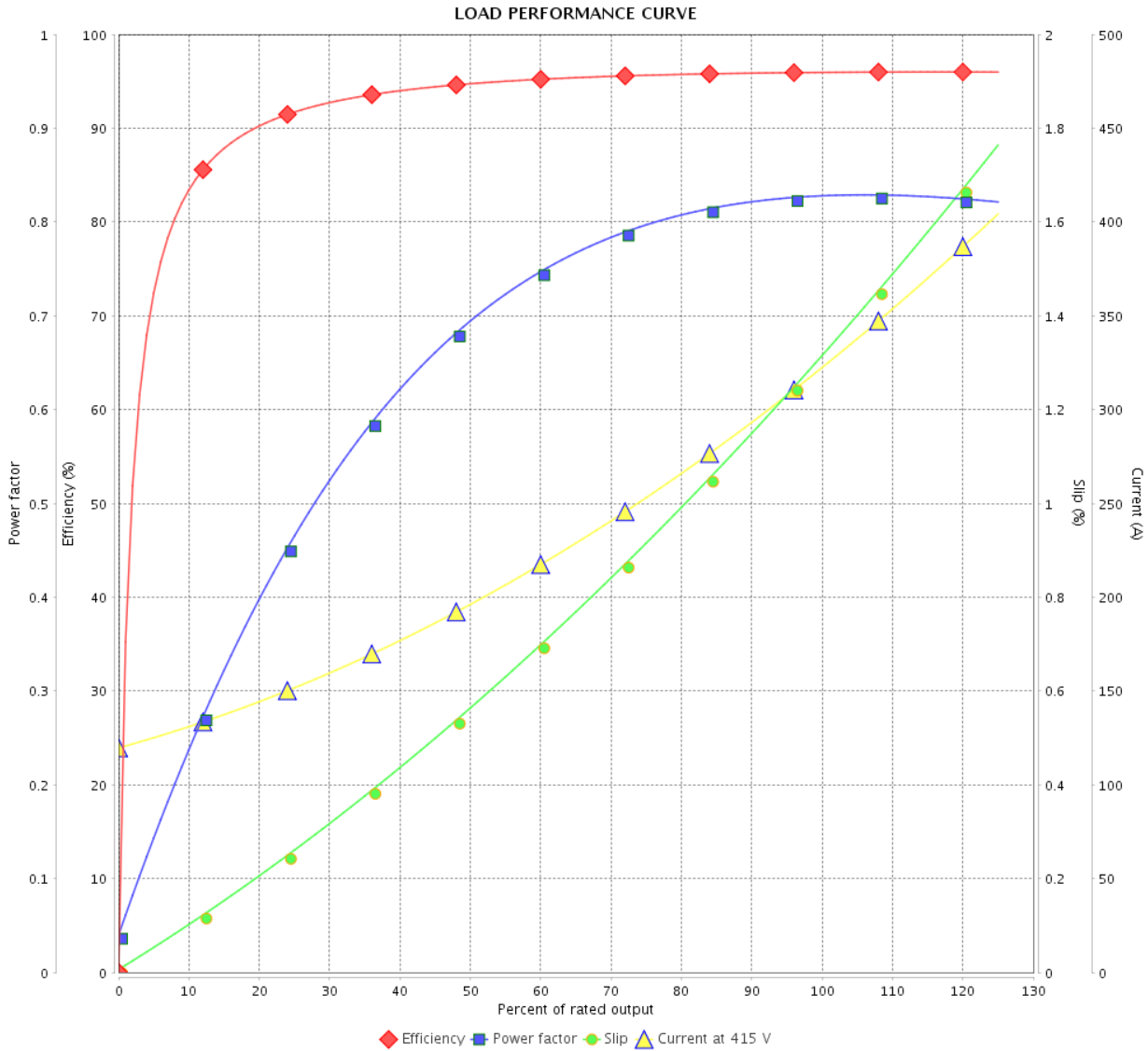


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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE



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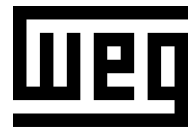
Heating constant

Cooling constant

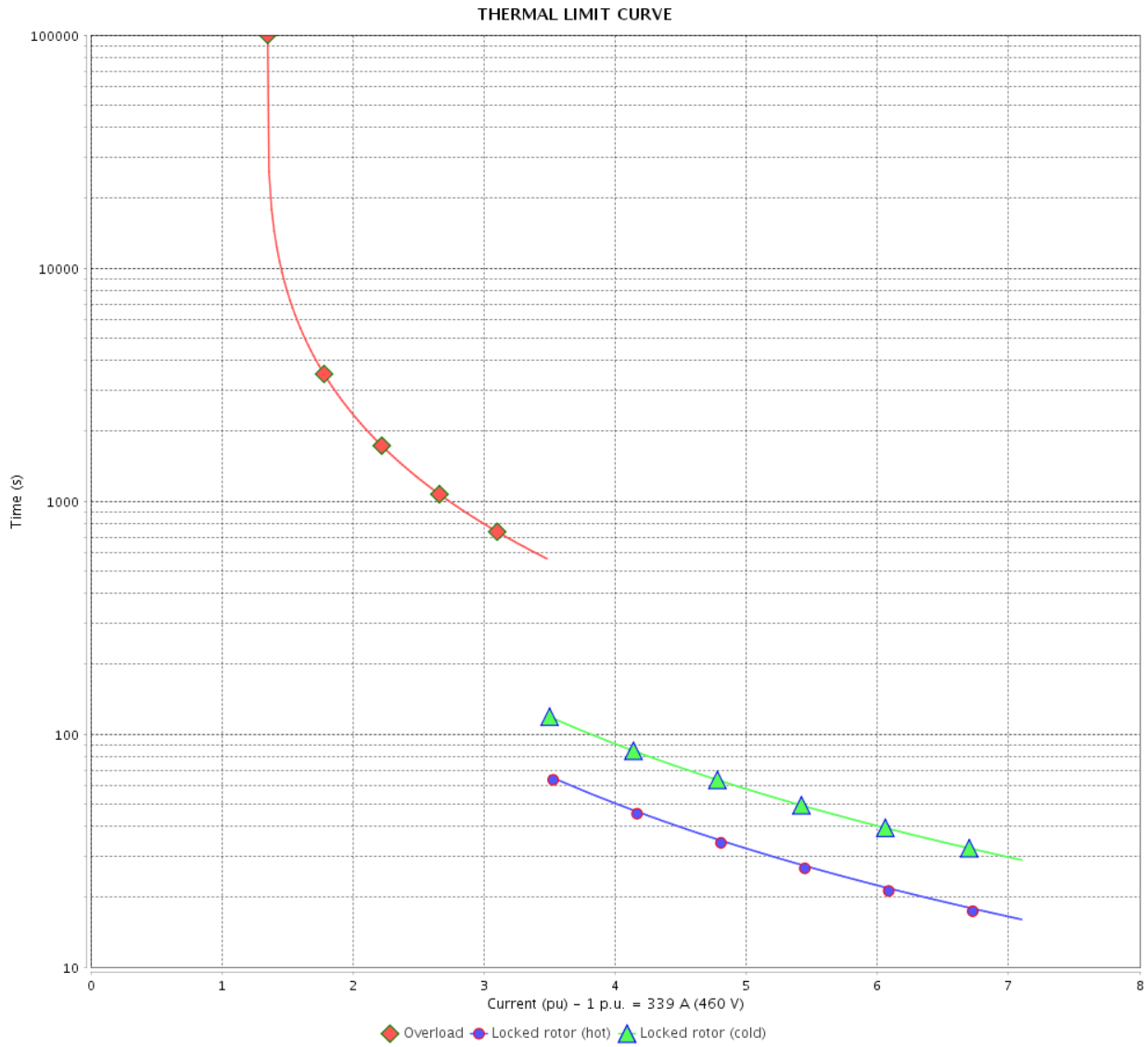
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Performance : 380 V 50 Hz 4P IE3

Rated current : 344 A	Moment of inertia (J) : 56.1 sq.ft.lb
LRC : 6.5	Duty cycle : Cont.(S1)
Rated torque : 890 ft.lb	Insulation class : F
Locked rotor torque : 190 %	Service factor : 1.15
Breakdown torque : 210 %	Temperature rise : 80 K
Rated speed : 1475 rpm	Design : B

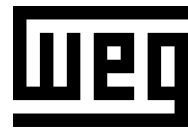
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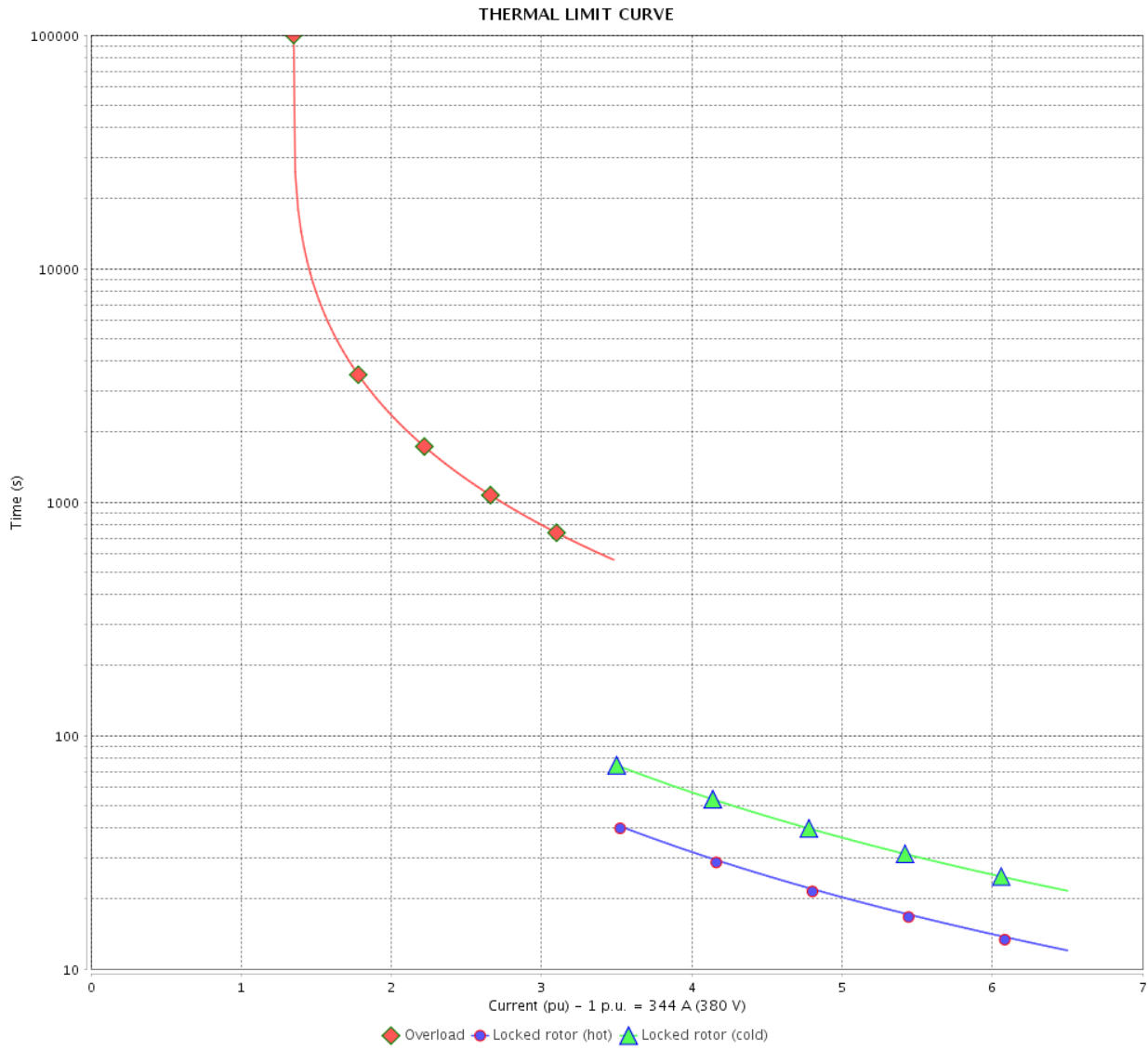
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Customer :

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LRC : 7.3	Duty cycle : Cont.(S1)
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Locked rotor torque : 210 %	Service factor : 1.15
Breakdown torque : 240 %	Temperature rise : 80 K
Rated speed : 1480 rpm	Design : B

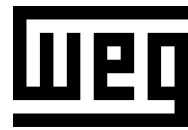
Heating constant

Cooling constant

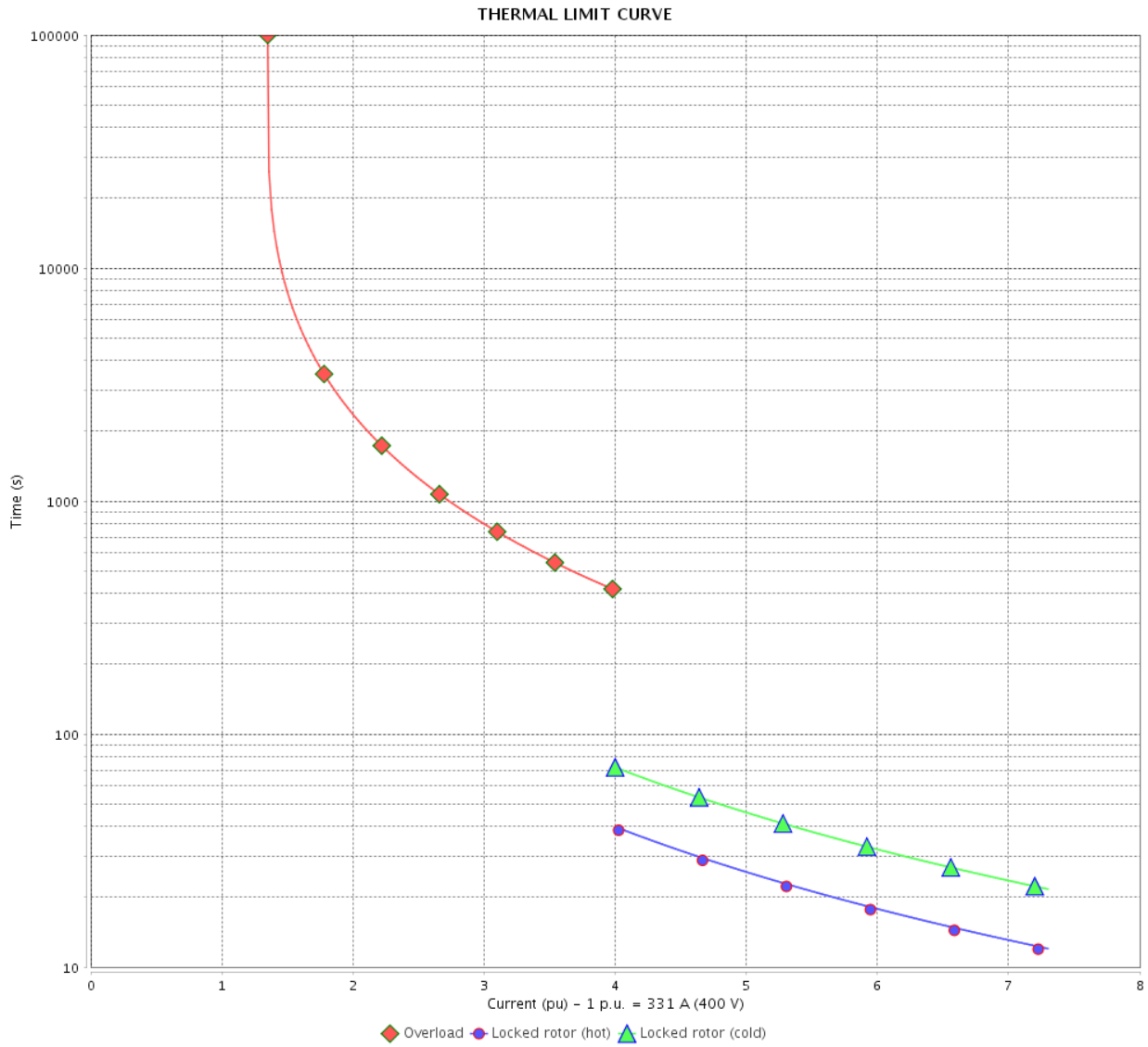
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

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 Catalog # : 30018OT3G447/9T-W40

Performance : 415 V 50 Hz 4P IE3

Rated current : 323 A	Moment of inertia (J) : 56.1 sq.ft.lb
LRC : 7.8	Duty cycle : Cont.(S1)
Rated torque : 887 ft.lb	Insulation class : F
Locked rotor torque : 229 %	Service factor : 1.15
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 1480 rpm	Design : B

Heating constant

Cooling constant

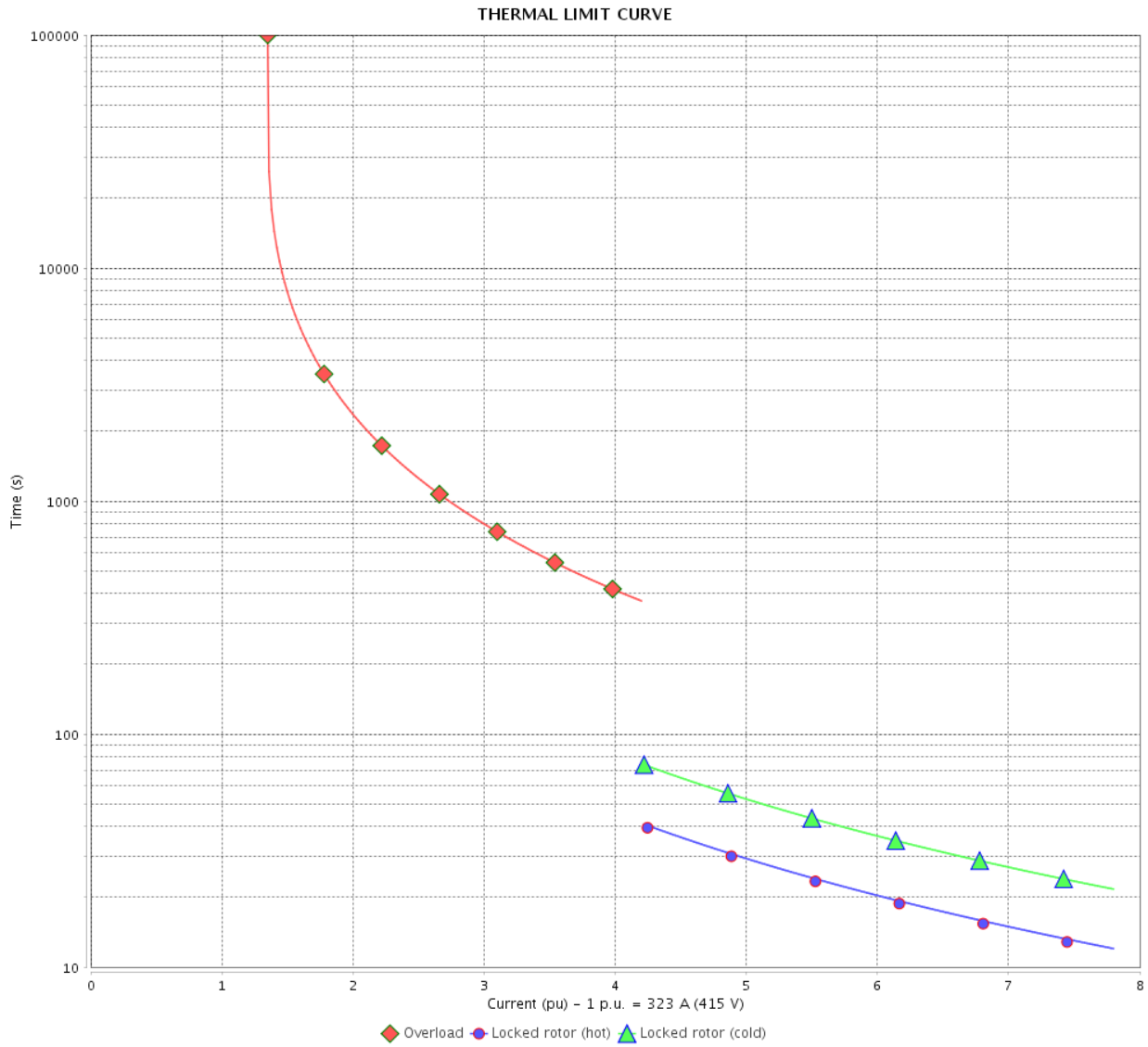
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Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

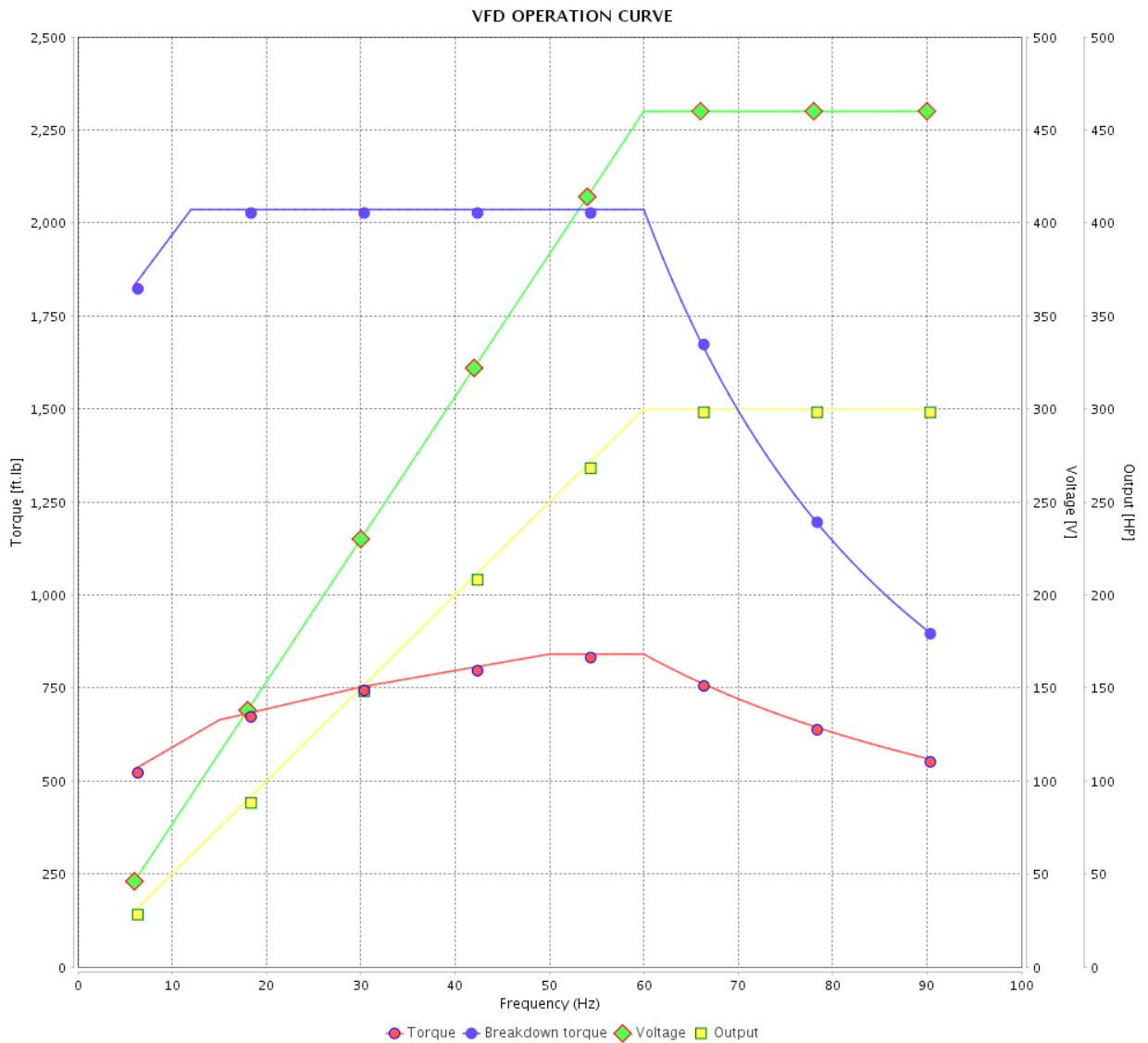


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Three-Phase

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Catalog # : 30018OT3G447/9T-W40



Performance : 460 V 60 Hz 4P

Rated current : 339 A
LRC : 7.1
Rated torque : 885 ft.lb
Locked rotor torque : 220 %
Breakdown torque : 229 %
Rated speed : 1780 rpm

Moment of inertia (J) : 56.1 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

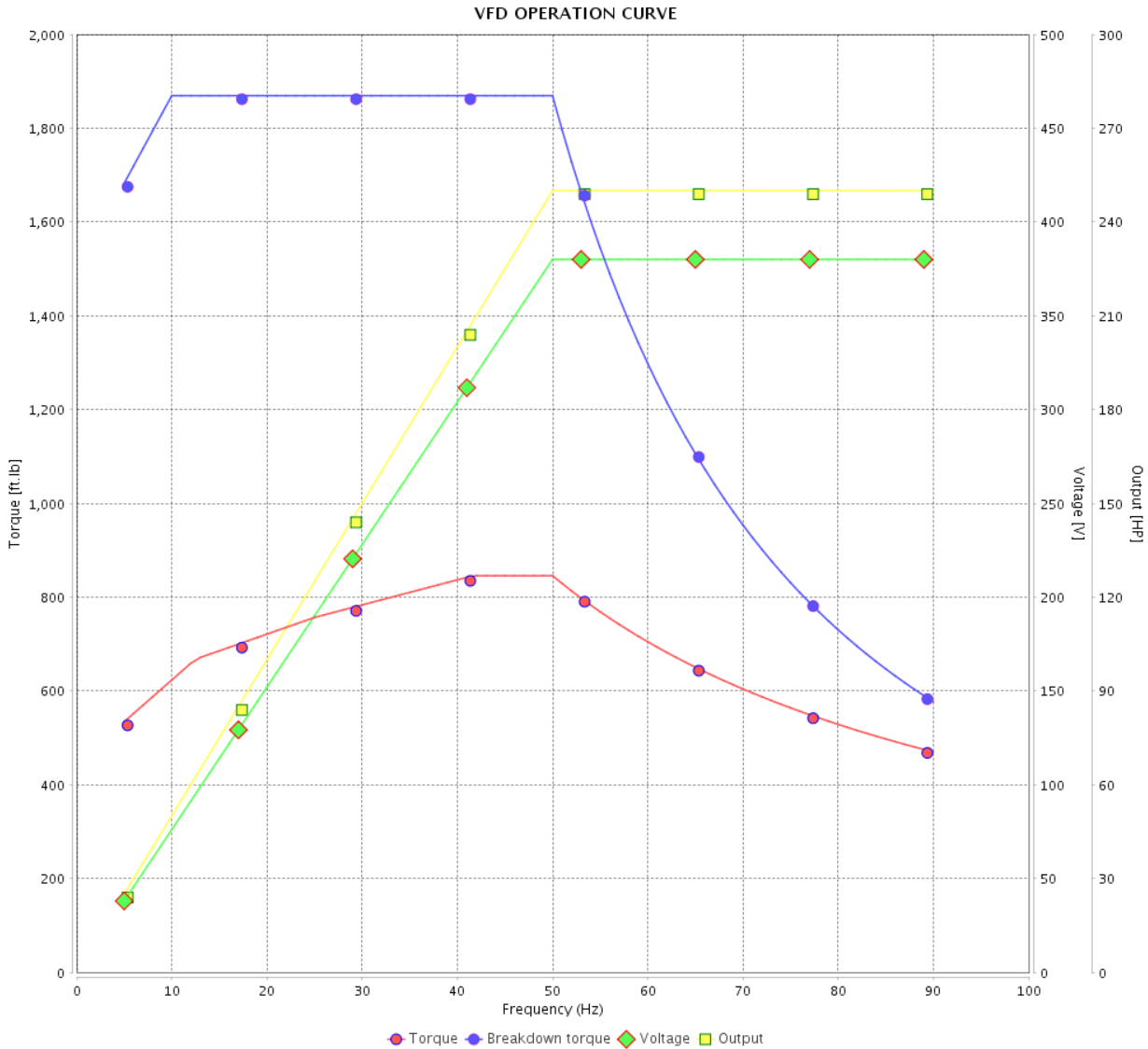


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Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 1475 rpm	Design	: B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

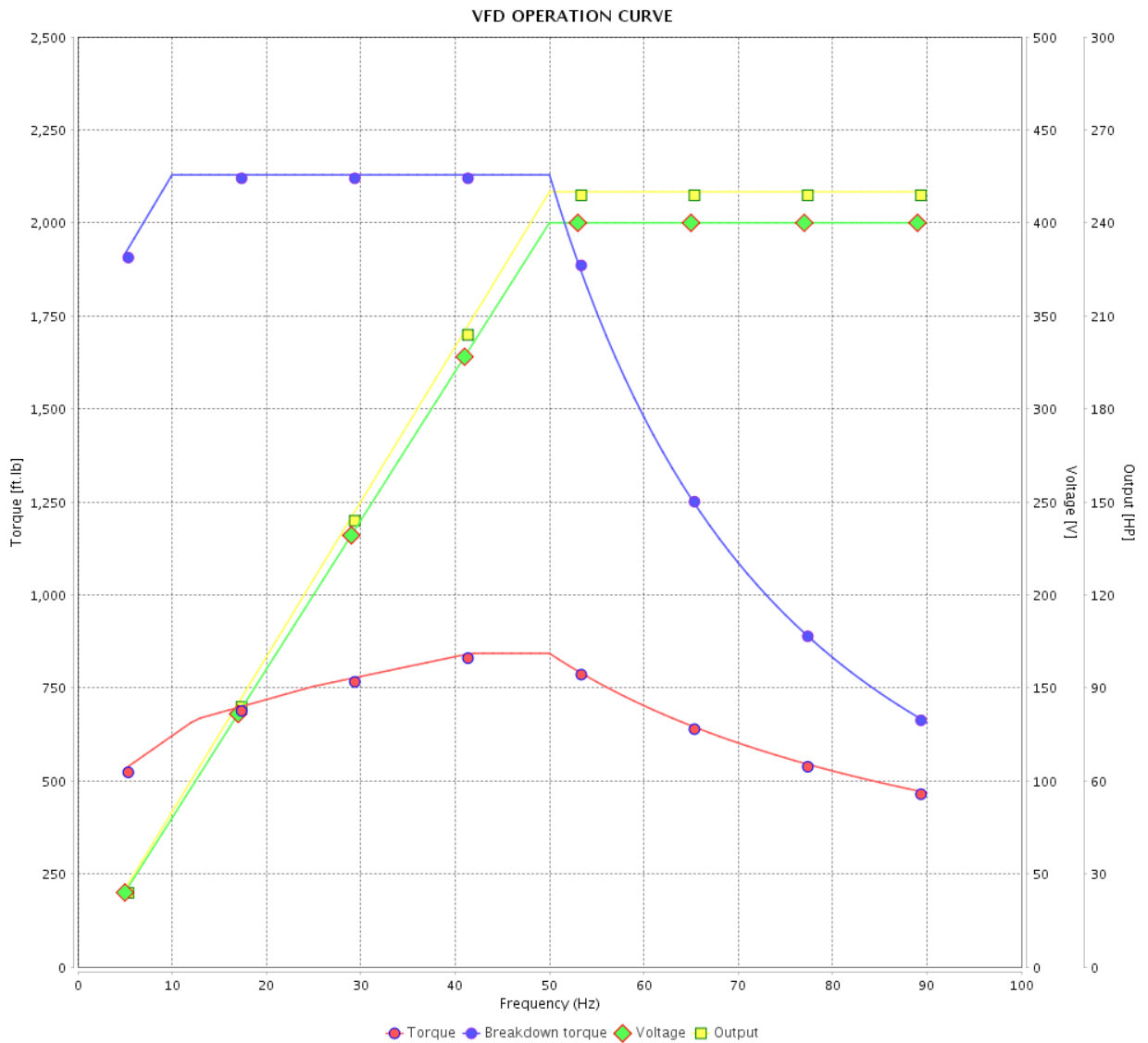


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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

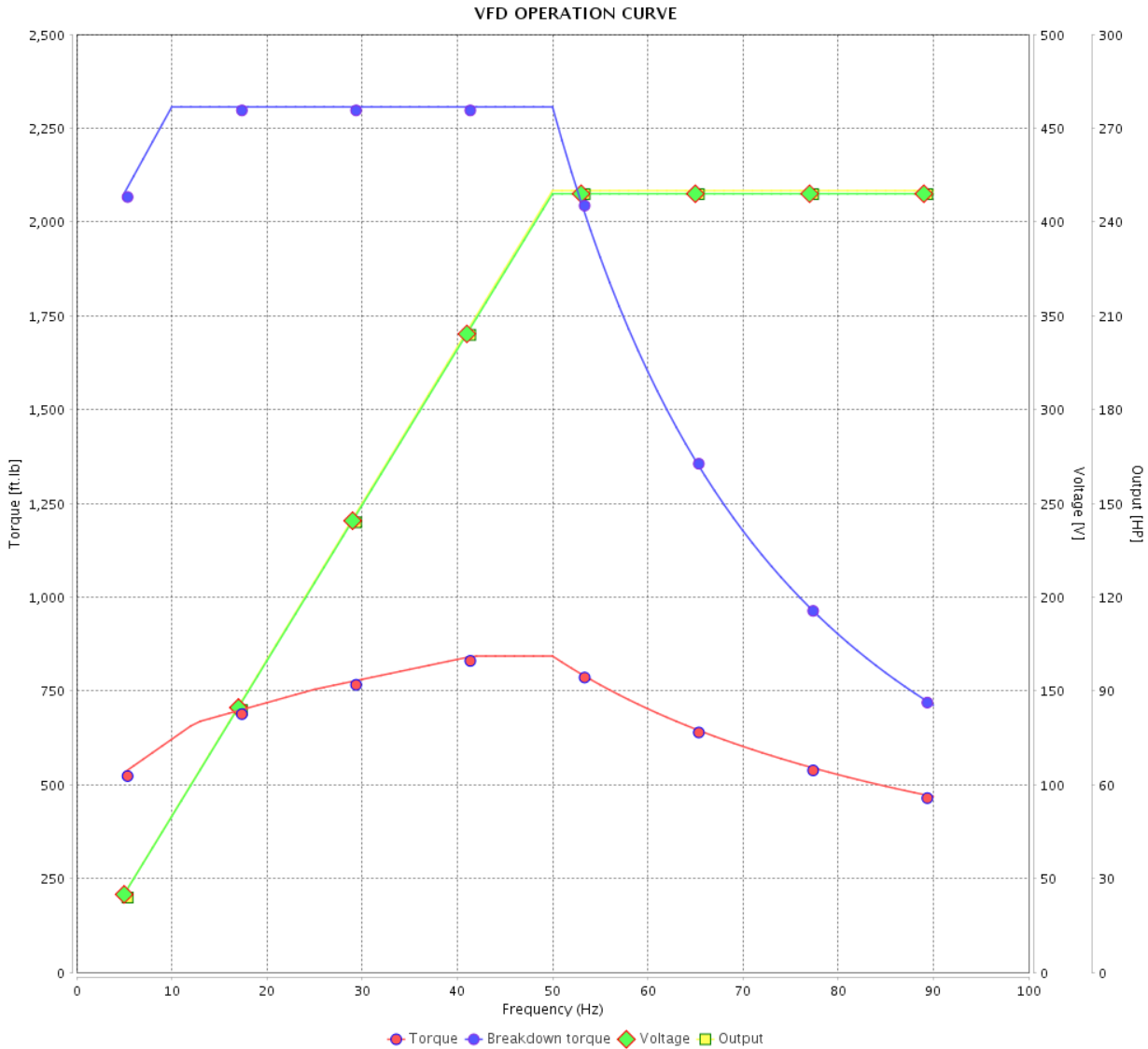


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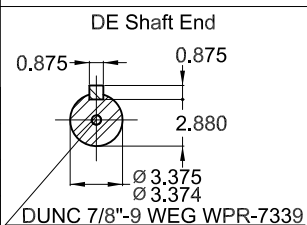
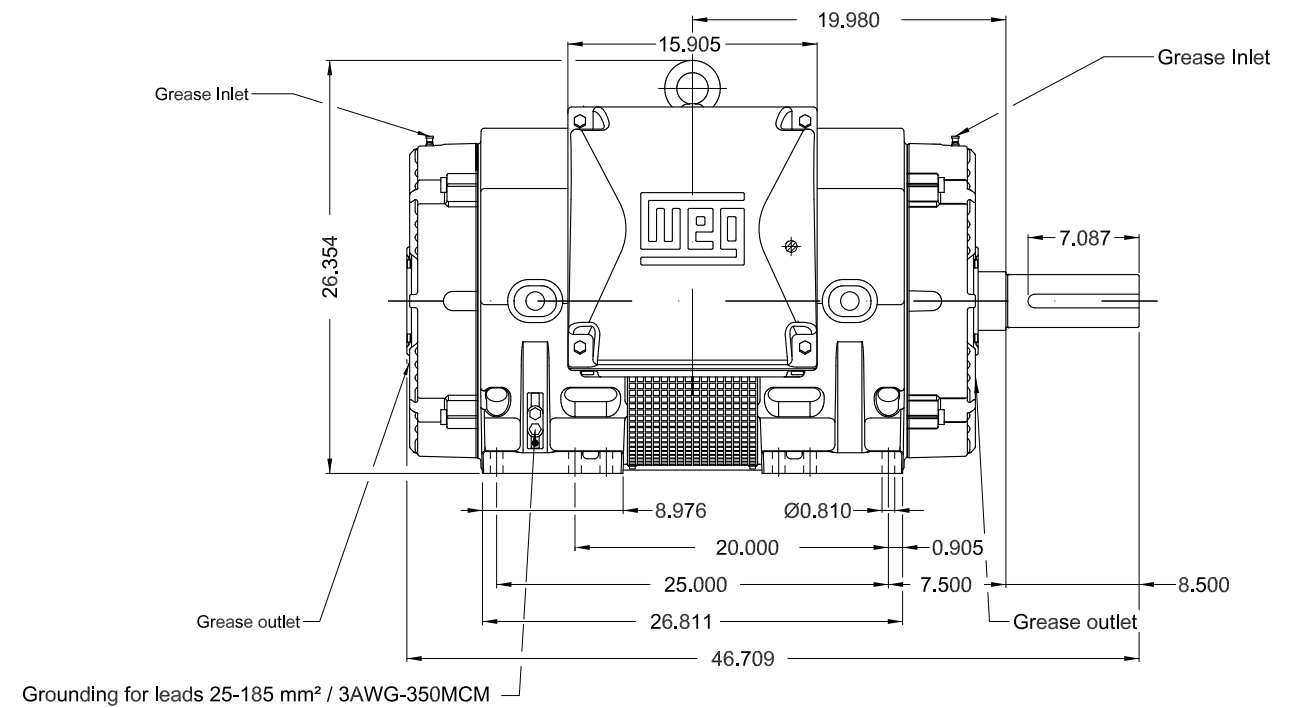
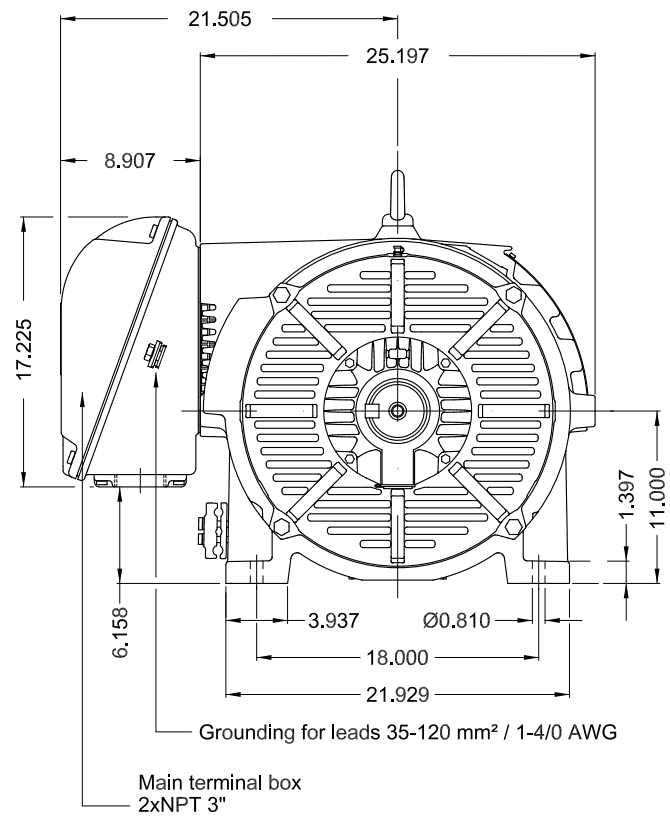


Performance : 415 V 50 Hz 4P IE3

Rated current : 323 A
LRC : 7.8
Rated torque : 887 ft.lb
Locked rotor torque : 229 %
Breakdown torque : 260 %
Rated speed : 1480 rpm

Moment of inertia (J) : 56.1 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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

300 HP 04 Poles 60 Hz

Dimensions in inches

1:12

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 PREM. EFF.					
CHECKED		FRAME 447/9T IP23 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD



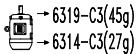
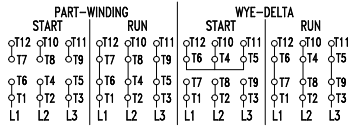
MODEL 300180T3G447/9T-W40
MADE IN BRAZIL
13621553



MOD.T01#FOXON



PH 3	FR 447/9T	HP(kW) 300(220)	Hz 60
V 460	A 339	IP23	
NEMA NOM EFF	95.8 %	RPM 1780	
ENCL ODP	DUTY CONT.	INS. CL. F ΔT 80 K	
PF 0.85	DES B	CODE H	AMB. 40°C
SF 1.15	SFA 390	ALT 1000 m.a.s.l.	



MOBIL POLYREX EM
20000 h

1951 Lbs