

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	11963107		
		Catalog # :	25018XT3G447T		
Frame	: 447T	Cooling method	: IC411 - TEFC		
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>	: 2678 lb		
Protection degree	: IP55	Moment of inertia (J)	: 89.6 sq.ft.lb		
Design	: B				
Output [HP]	250	200	200	200	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	284	280	269	262	
L. R. Amperes [A]	1988	1960	2071	2175	
LRC [A]	7.0x(Code H)	7.0x(Code H)	7.7x(Code J)	8.3x(Code J)	
No load current [A]	100	100	105	110	
Rated speed [RPM]	1782	1482	1485	1486	
Slip [%]	1.00	1.20	1.00	0.93	
Rated torque [ft.lb]	736	708	707	706	
Locked rotor torque [%]	250	229	260	290	
Breakdown torque [%]	260	260	290	320	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	54s (cold) 30s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	
Noise level <sup>2</sup>	82.0 dB(A)	82.0 dB(A)	82.0 dB(A)	82.0 dB(A)	
Efficiency (%)	25%	95.3	94.5	95.3	95.3
	50%	95.4	95.0	95.4	95.4
	75%	96.2	95.4	95.8	95.8
	100%	96.2	95.8	95.8	95.8
Power Factor	25%	0.47	0.47	0.44	0.41
	50%	0.72	0.72	0.69	0.66
	75%	0.81	0.81	0.79	0.77
	100%	0.85	0.85	0.84	0.83
Bearing type	: <u>Drive end</u> 6319 C3 <u>Non drive end</u> 6316 C3	Foundation loads			
Sealing	: Viton Oil Seal Viton Seal	Max. traction	: 4690 lb		
		Max. compression	: 7368 lb		
Lubrication interval	: 7038 h 8569 h				
Lubricant amount	: 45 g 34 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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# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



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

### Thermal protection

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

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# TORQUE AND CURRENT VS SPEED CURVE



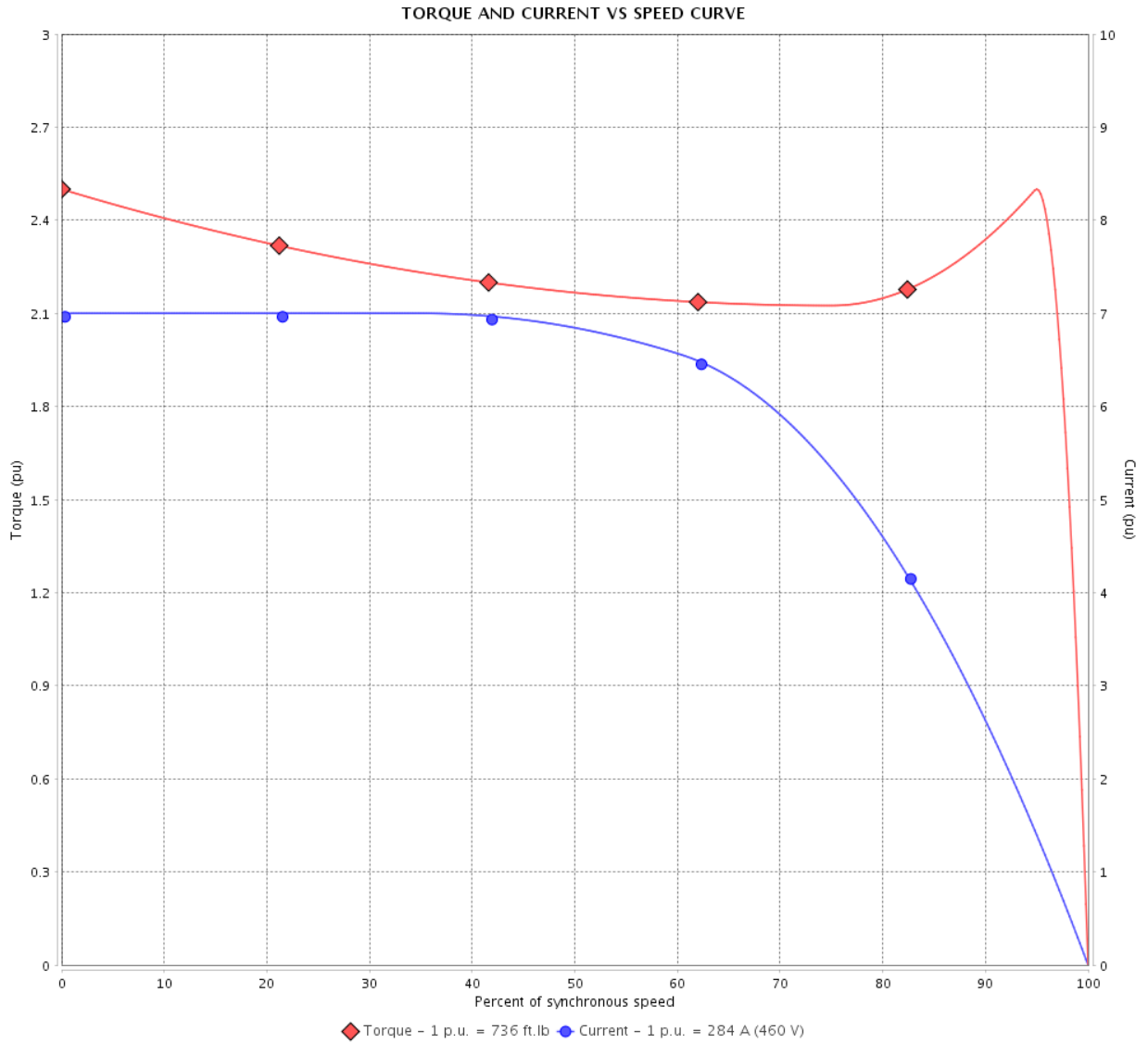
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11963107

Catalog # : 25018XT3G447T



Performance : 460 V 60 Hz 4P

Rated current	: 284 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 736 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.15
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1782 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



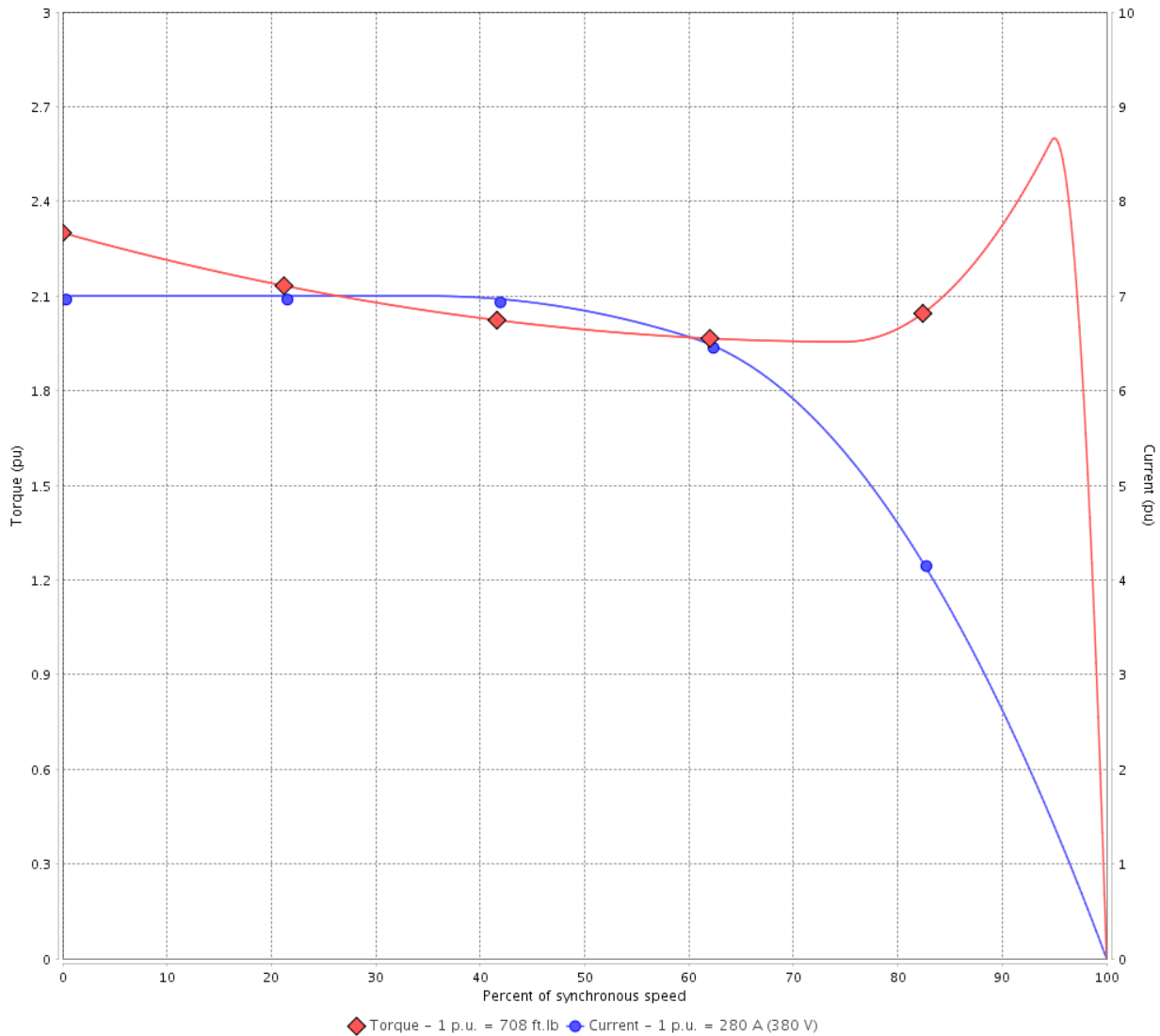
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11963107

Catalog # : 25018XT3G447T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE3

Rated current	: 280 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 708 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1482 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



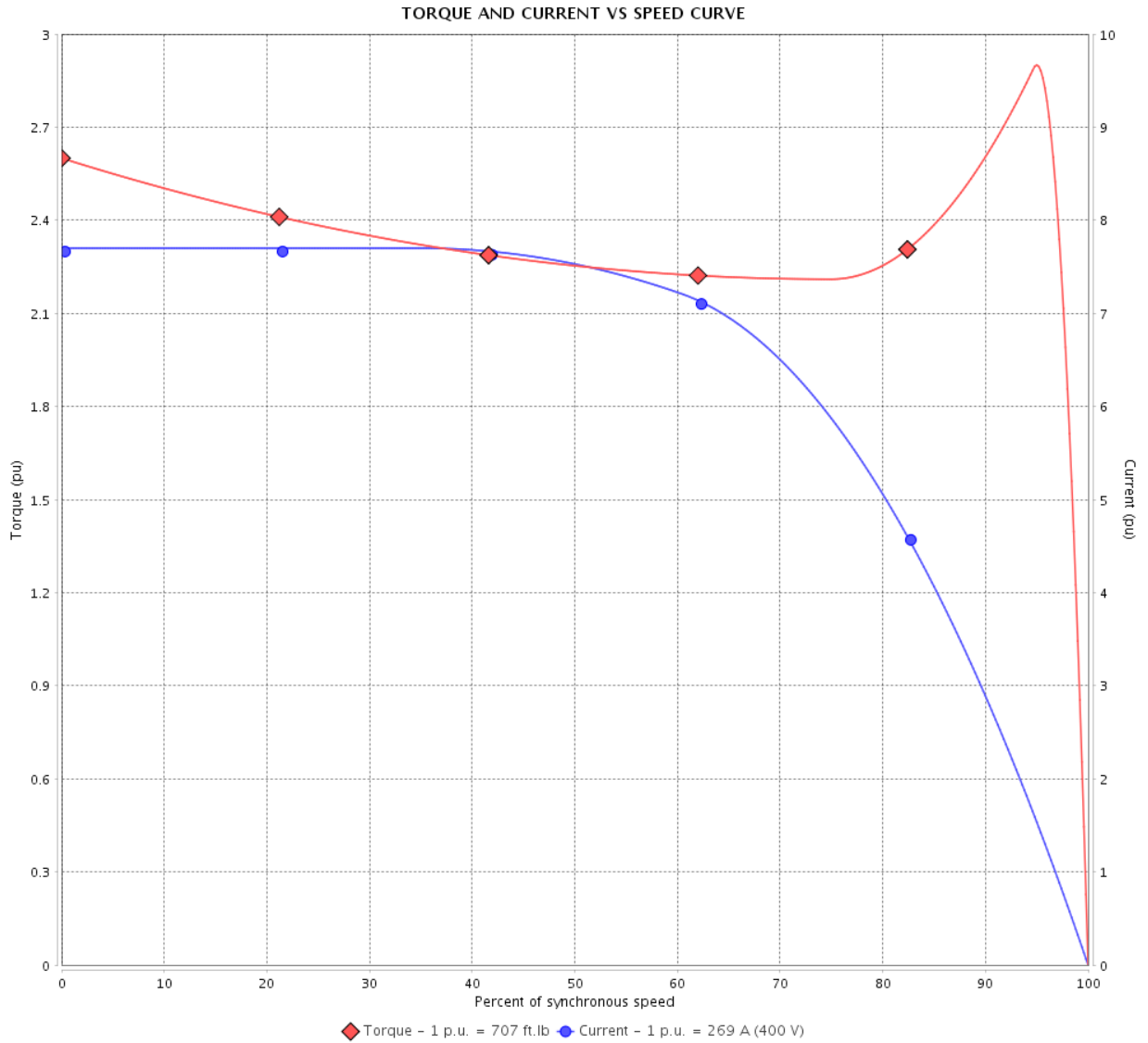
## Three Phase Induction Motor - Squirrel Cage

Customer :

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Product code : 11963107

Catalog # : 25018XT3G447T



Performance : 400 V 50 Hz 4P IE3

Rated current	: 269 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 707 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



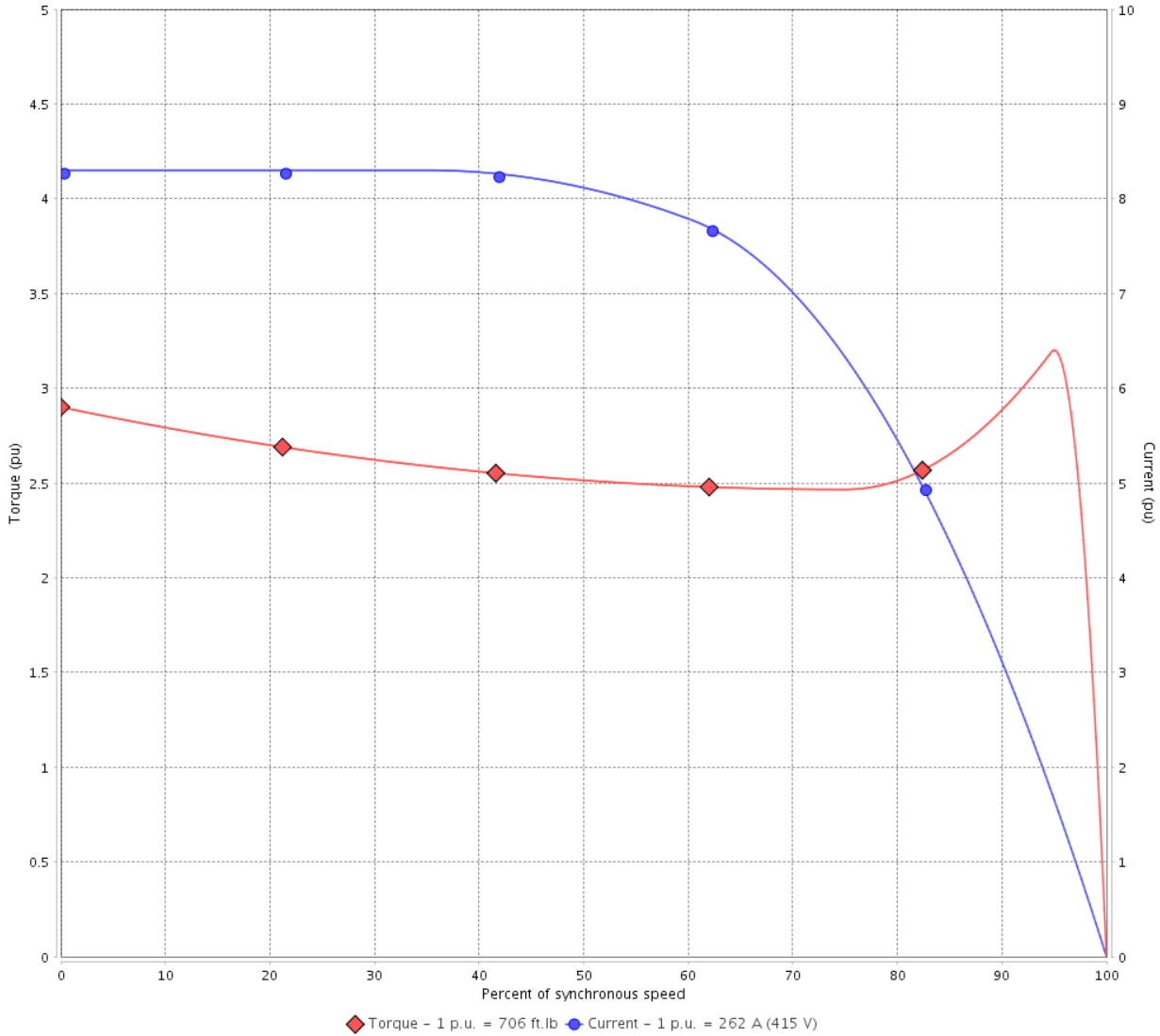
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Product line : NEMA Premium Efficiency Three-Phase

Product code : 11963107

Catalog # : 25018XT3G447T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE3

Rated current	: 262 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 8.3	Duty cycle	: Cont.(S1)
Rated torque	: 706 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 1486 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

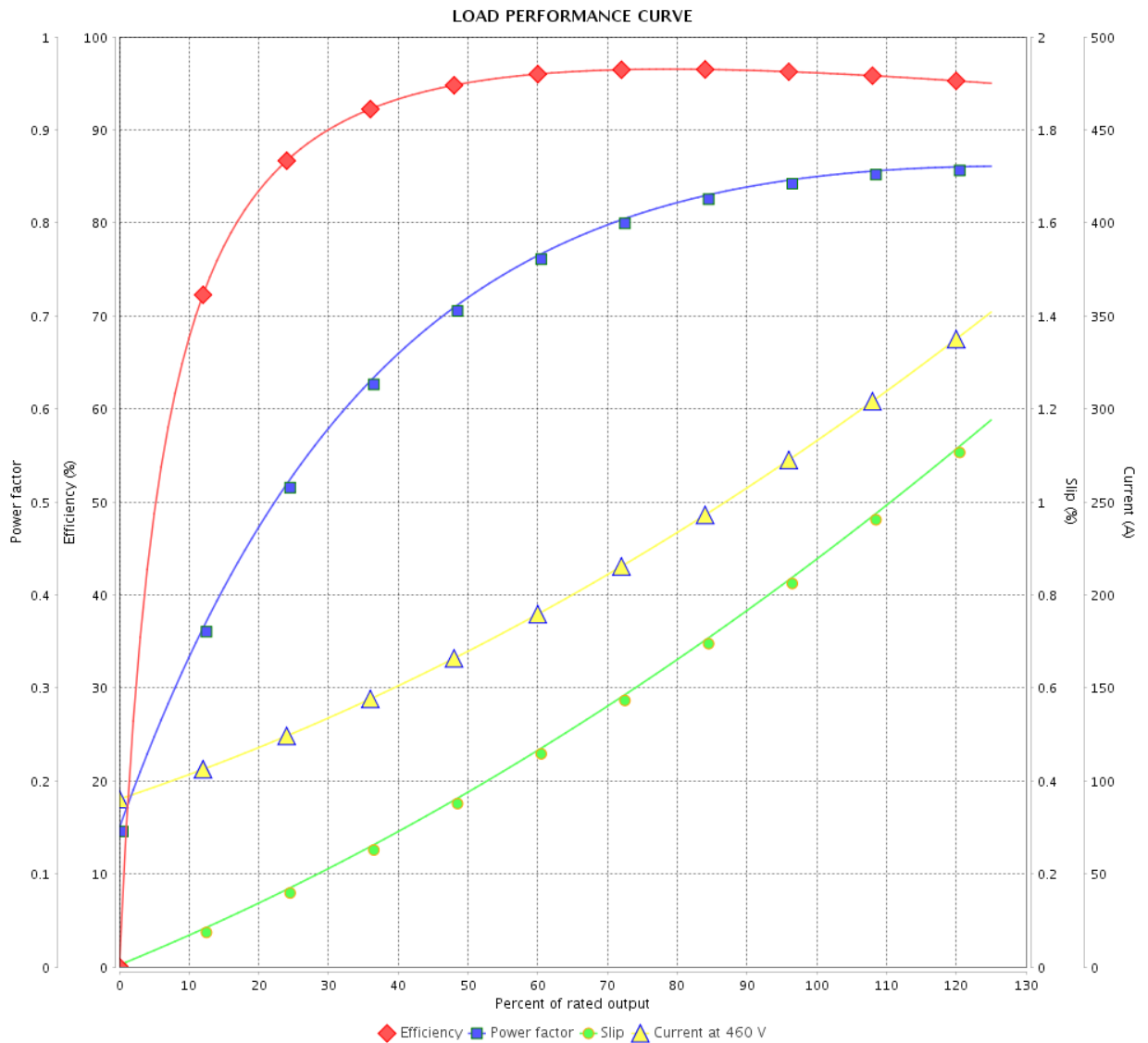


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Product line : NEMA Premium Efficiency Three-Phase

Product code : 11963107

Catalog # : 25018XT3G447T



Performance : 460 V 60 Hz 4P

Rated current : 284 A  
 LRC : 7.0  
 Rated torque : 736 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 260 %  
 Rated speed : 1782 rpm

Moment of inertia (J) : 89.6 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

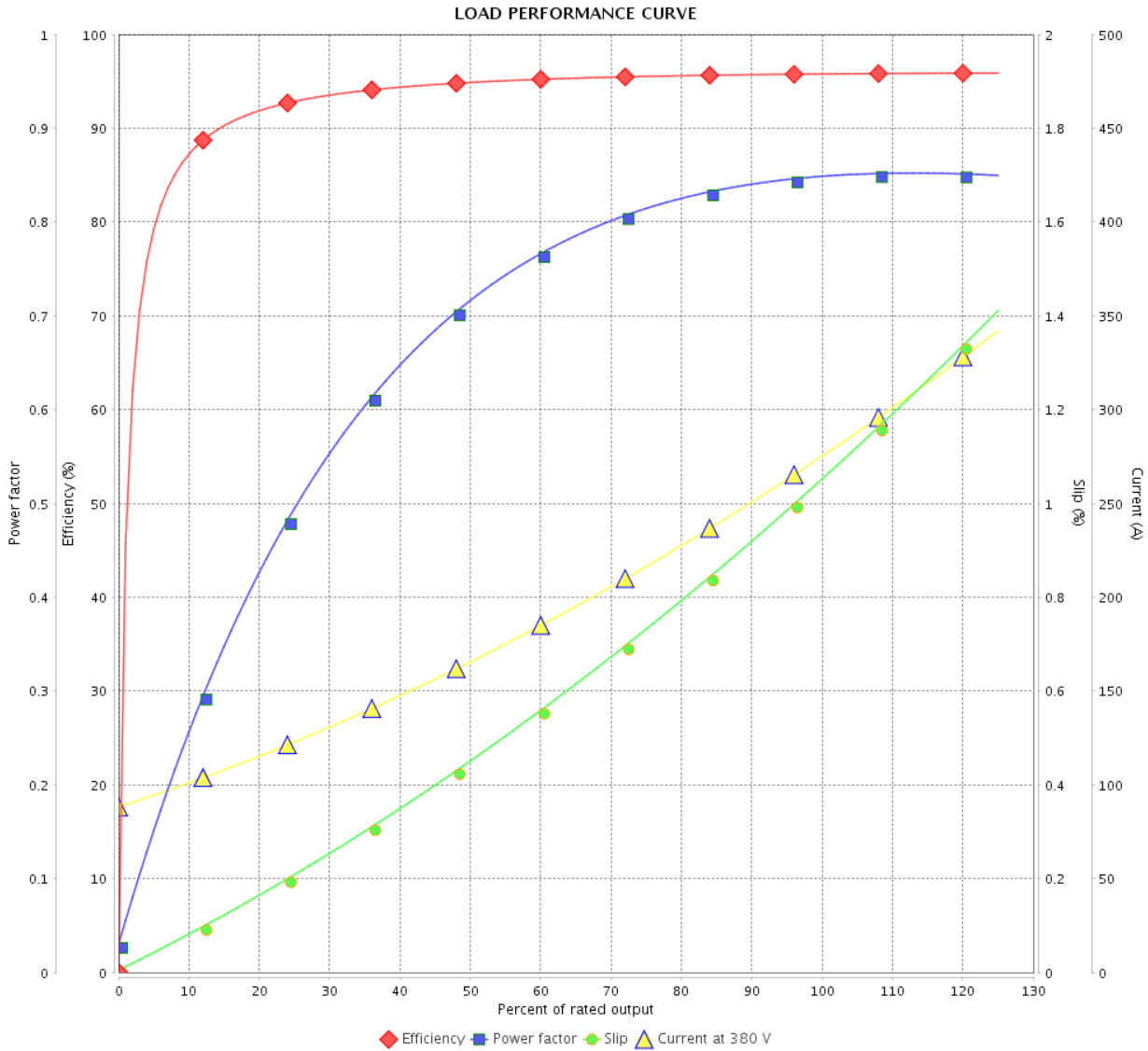


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Performance : 380 V 50 Hz 4P IE3

Rated current	: 280 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 708 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1482 rpm	Design	: B

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## Three Phase Induction Motor - Squirrel Cage

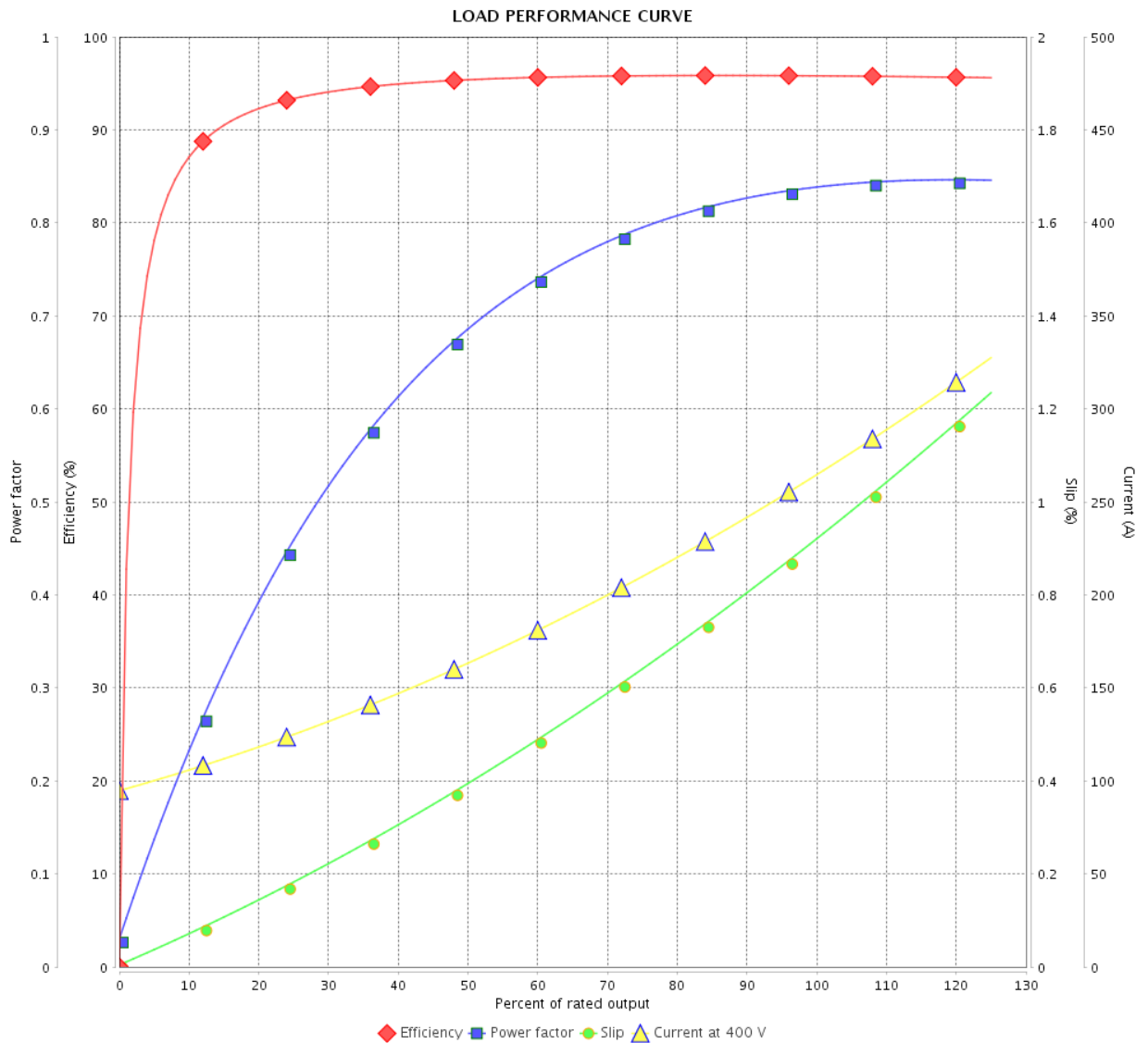


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 Rated torque : 707 ft.lb  
 Locked rotor torque : 260 %  
 Breakdown torque : 290 %  
 Rated speed : 1485 rpm

Moment of inertia (J) : 89.6 sq.ft.lb  
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 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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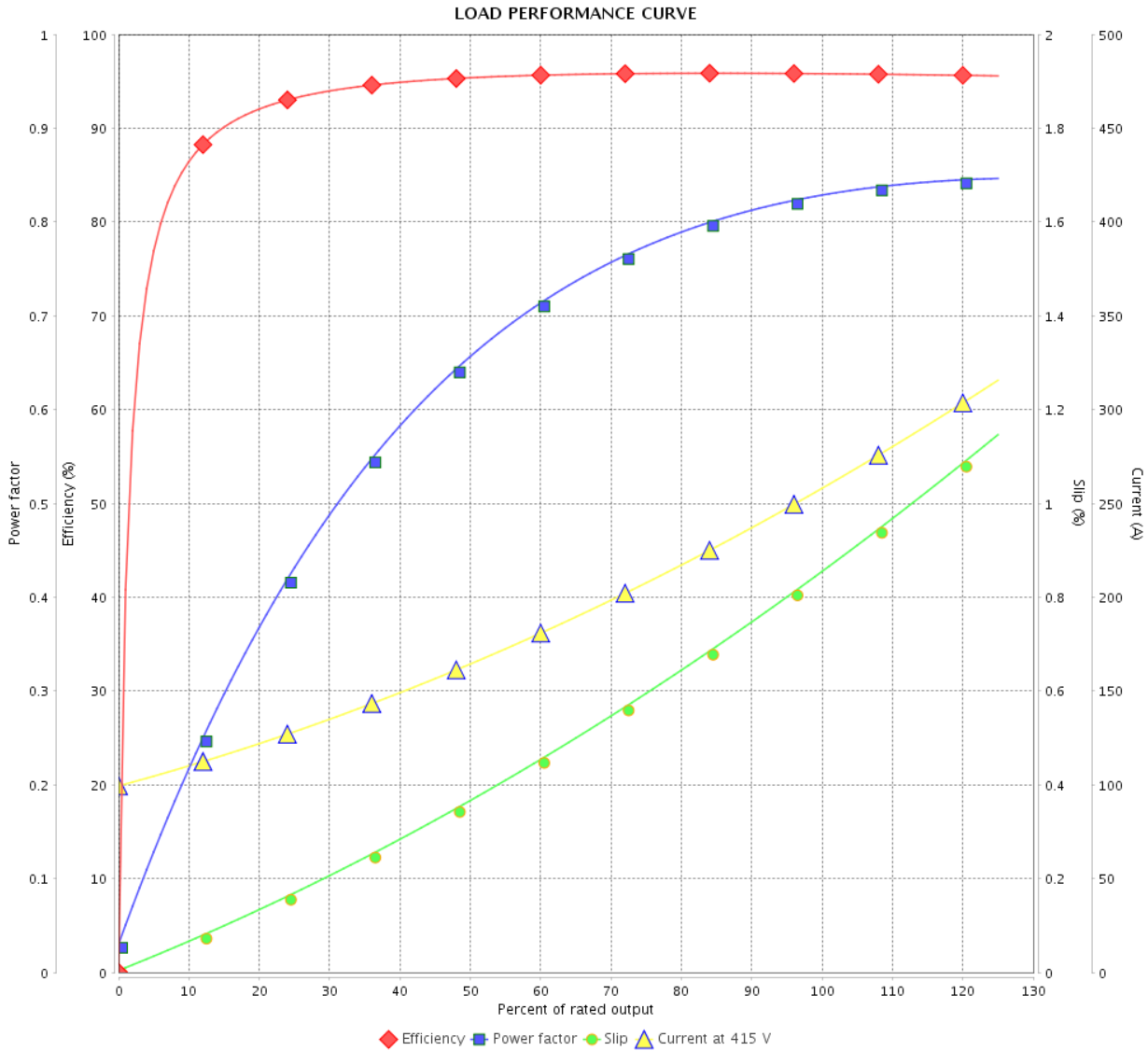


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 Breakdown torque : 320 %  
 Rated speed : 1486 rpm

Moment of inertia (J) : 89.6 sq.ft.lb  
 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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Rated speed : 1782 rpm	Design : B

Heating constant

Cooling constant

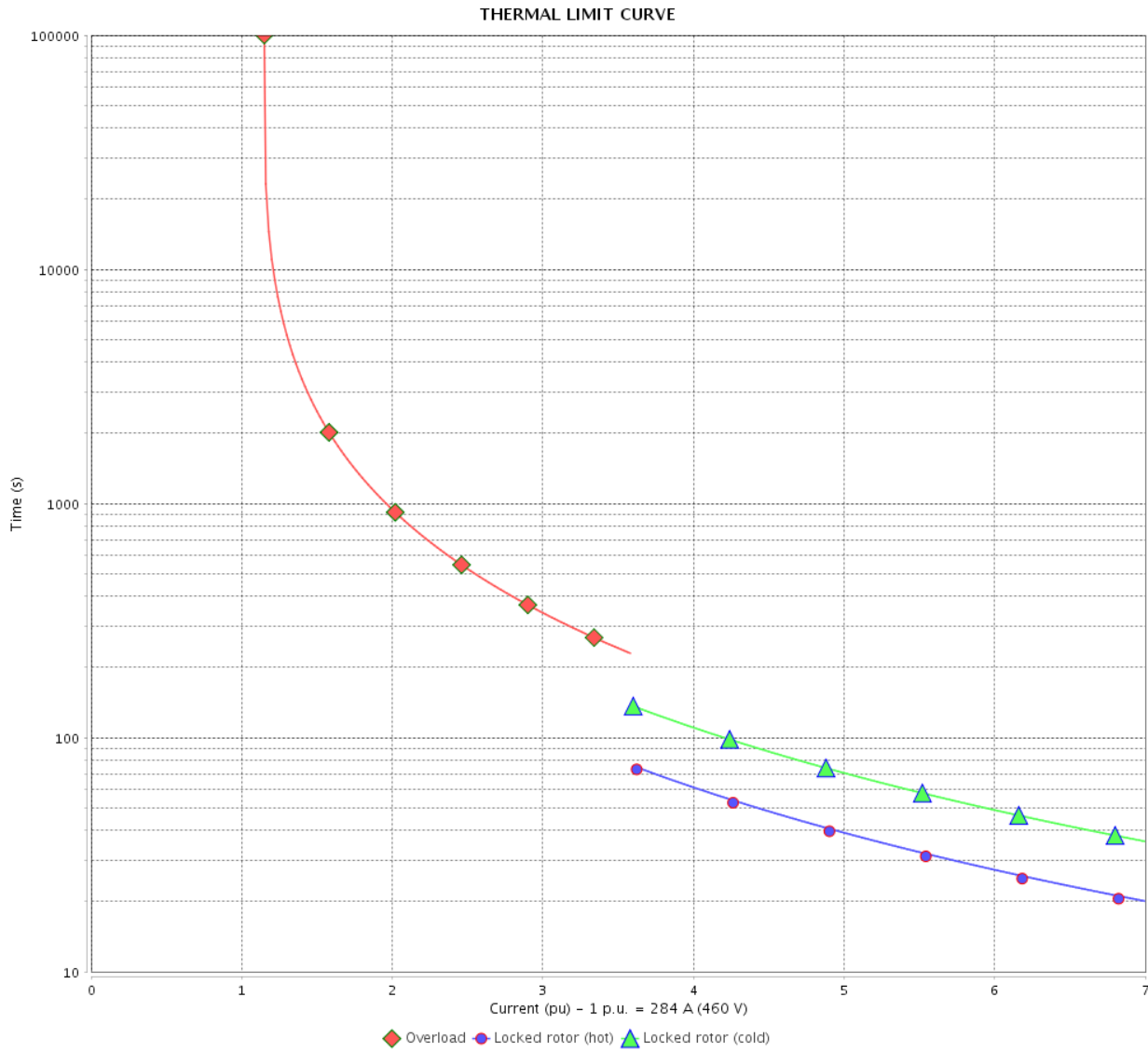
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Rated current : 280 A	Moment of inertia (J) : 89.6 sq.ft.lb
LRC : 7.0	Duty cycle : Cont.(S1)
Rated torque : 708 ft.lb	Insulation class : F
Locked rotor torque : 229 %	Service factor : 1.00
Breakdown torque : 260 %	Temperature rise : 80 K
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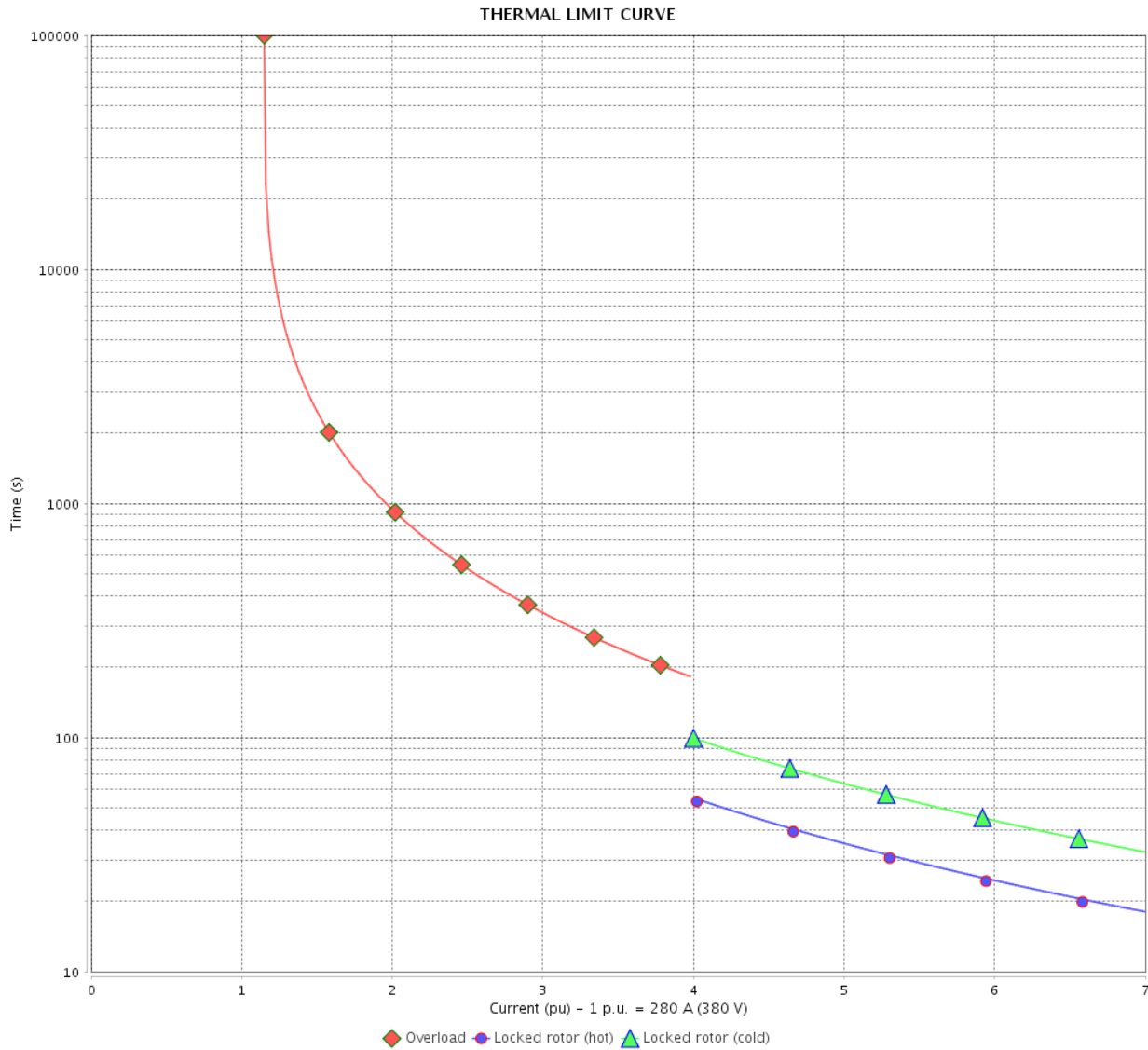
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Locked rotor torque : 260 %	Service factor : 1.00
Breakdown torque : 290 %	Temperature rise : 80 K
Rated speed : 1485 rpm	Design : B

Heating constant

Cooling constant

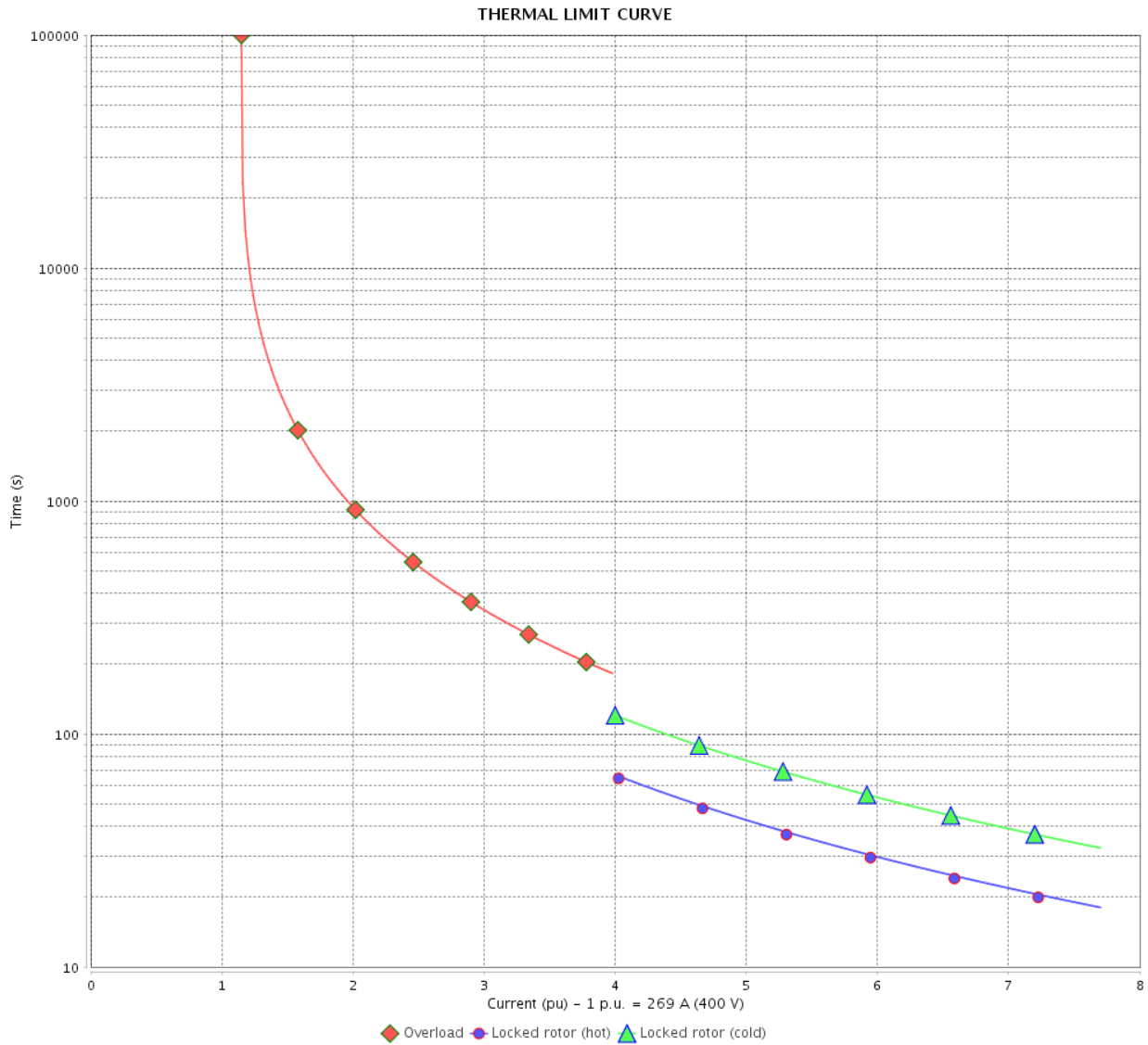
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Performance : 415 V 50 Hz 4P IE3

Rated current : 262 A	Moment of inertia (J) : 89.6 sq.ft.lb
LRC : 8.3	Duty cycle : Cont.(S1)
Rated torque : 706 ft.lb	Insulation class : F
Locked rotor torque : 290 %	Service factor : 1.00
Breakdown torque : 320 %	Temperature rise : 80 K
Rated speed : 1486 rpm	Design : B

Heating constant

Cooling constant

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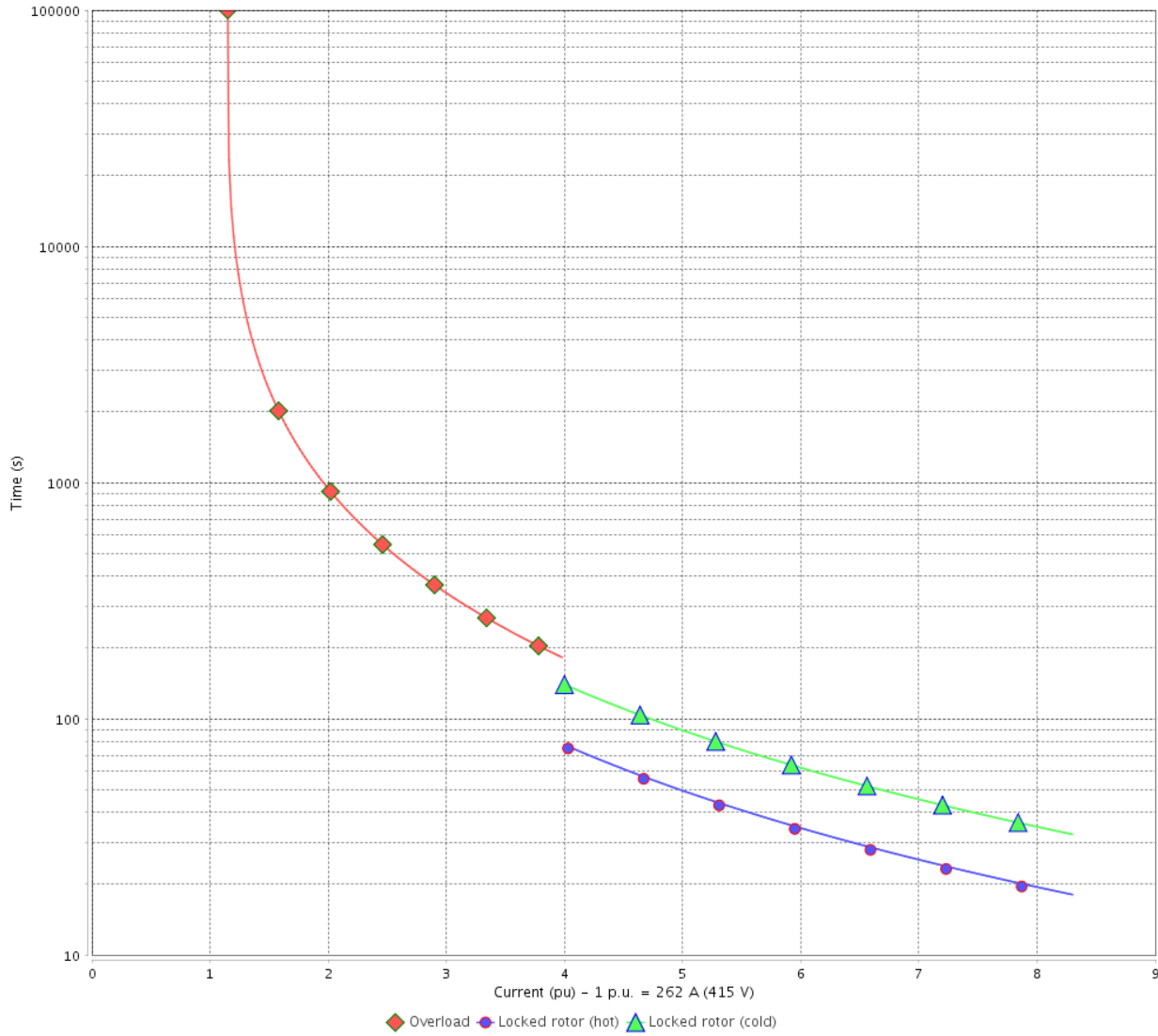
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Three Phase Induction Motor - Squirrel Cage



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THERMAL LIMIT CURVE



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

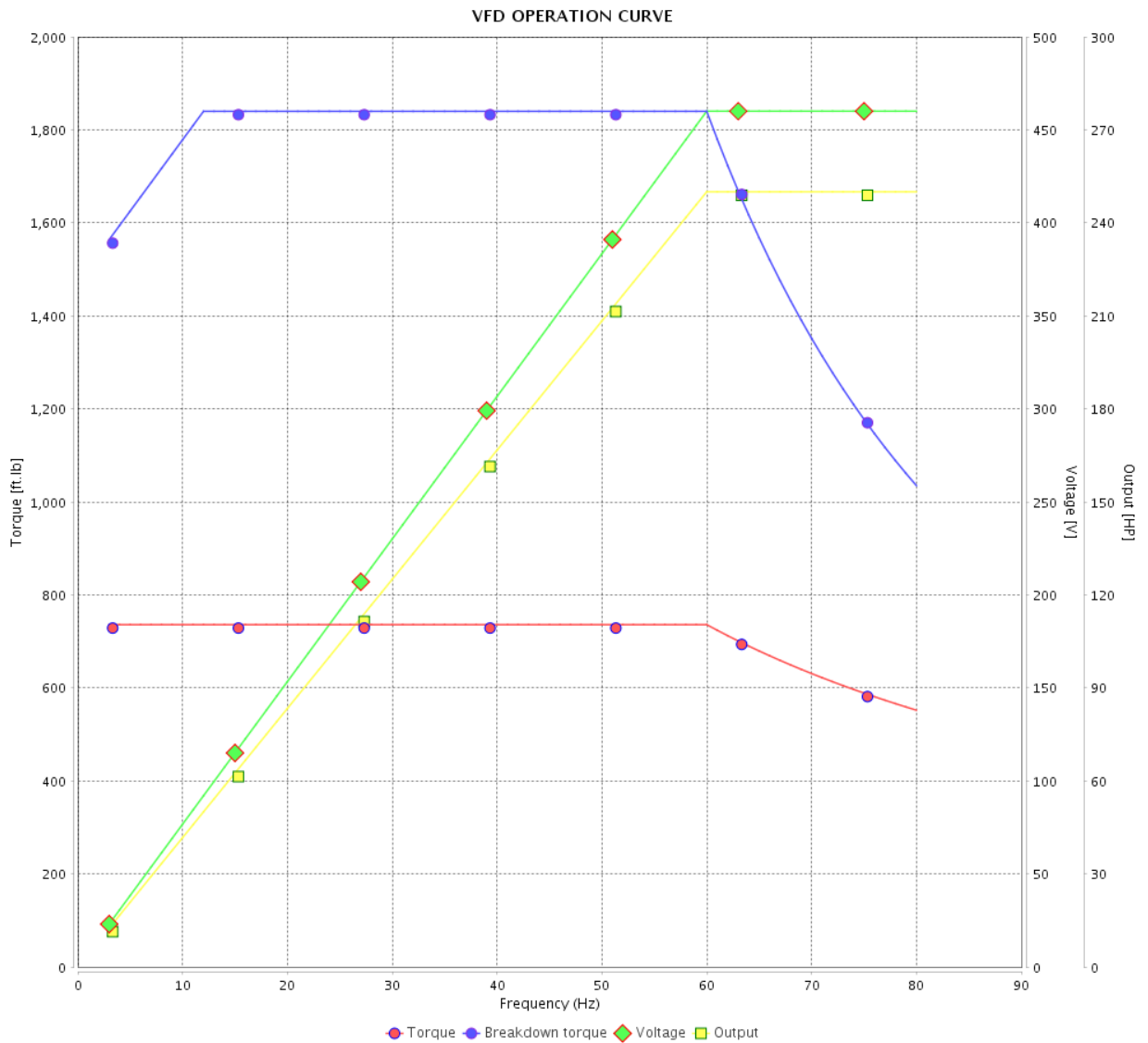


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Moment of inertia (J) : 89.6 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

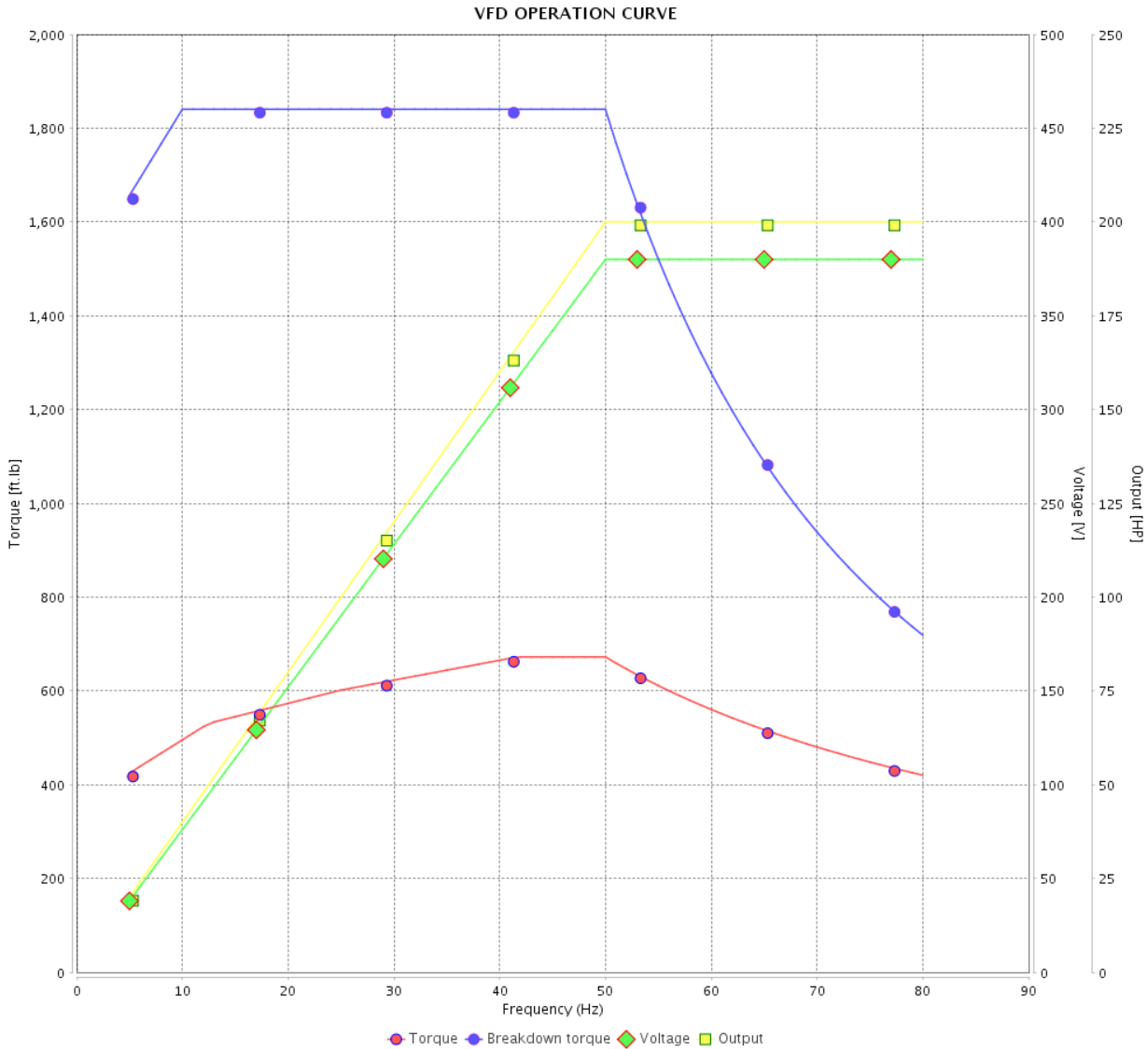


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Rated current : 280 A  
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 Locked rotor torque : 229 %  
 Breakdown torque : 260 %  
 Rated speed : 1482 rpm

Moment of inertia (J) : 89.6 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
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# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

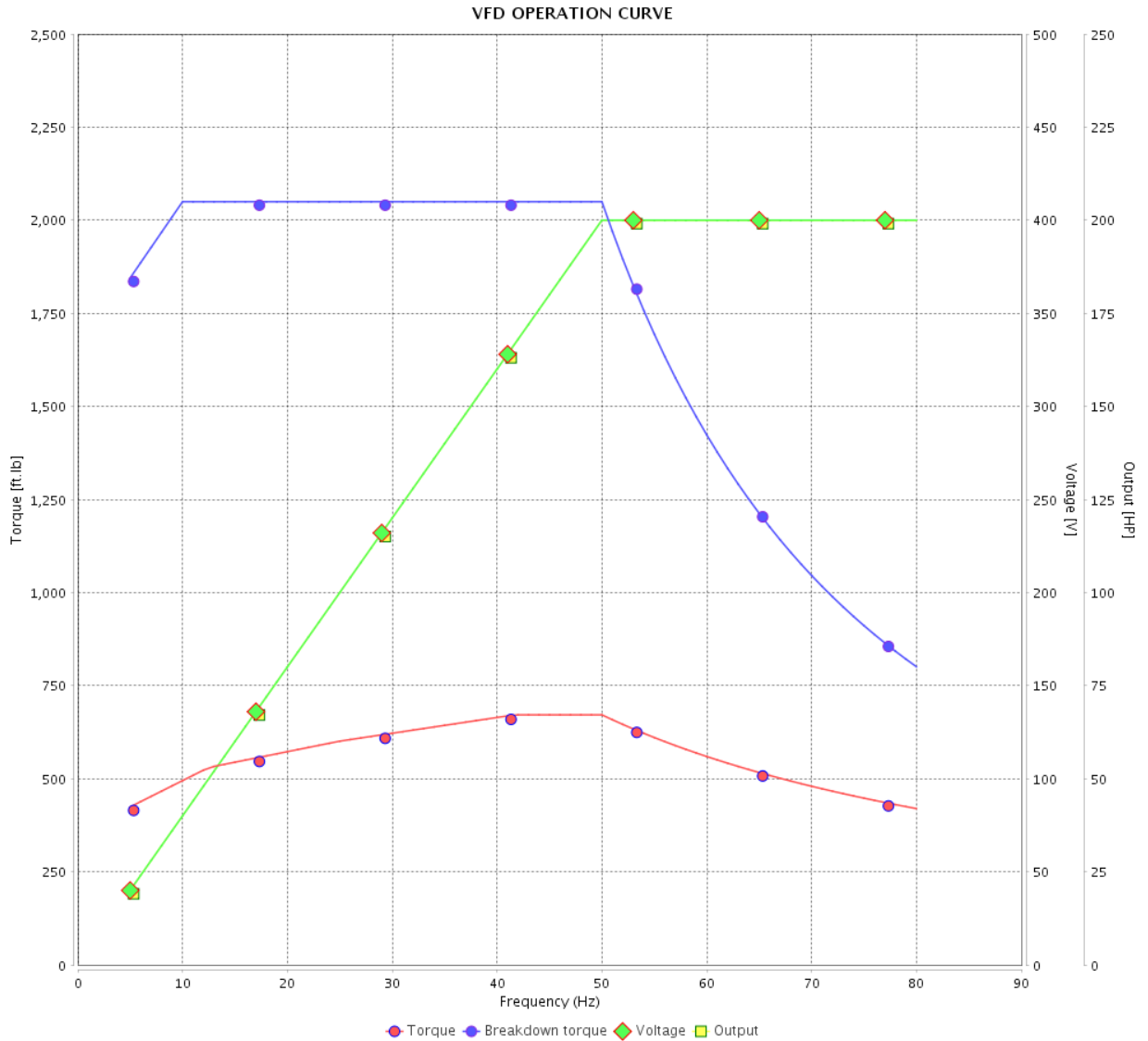


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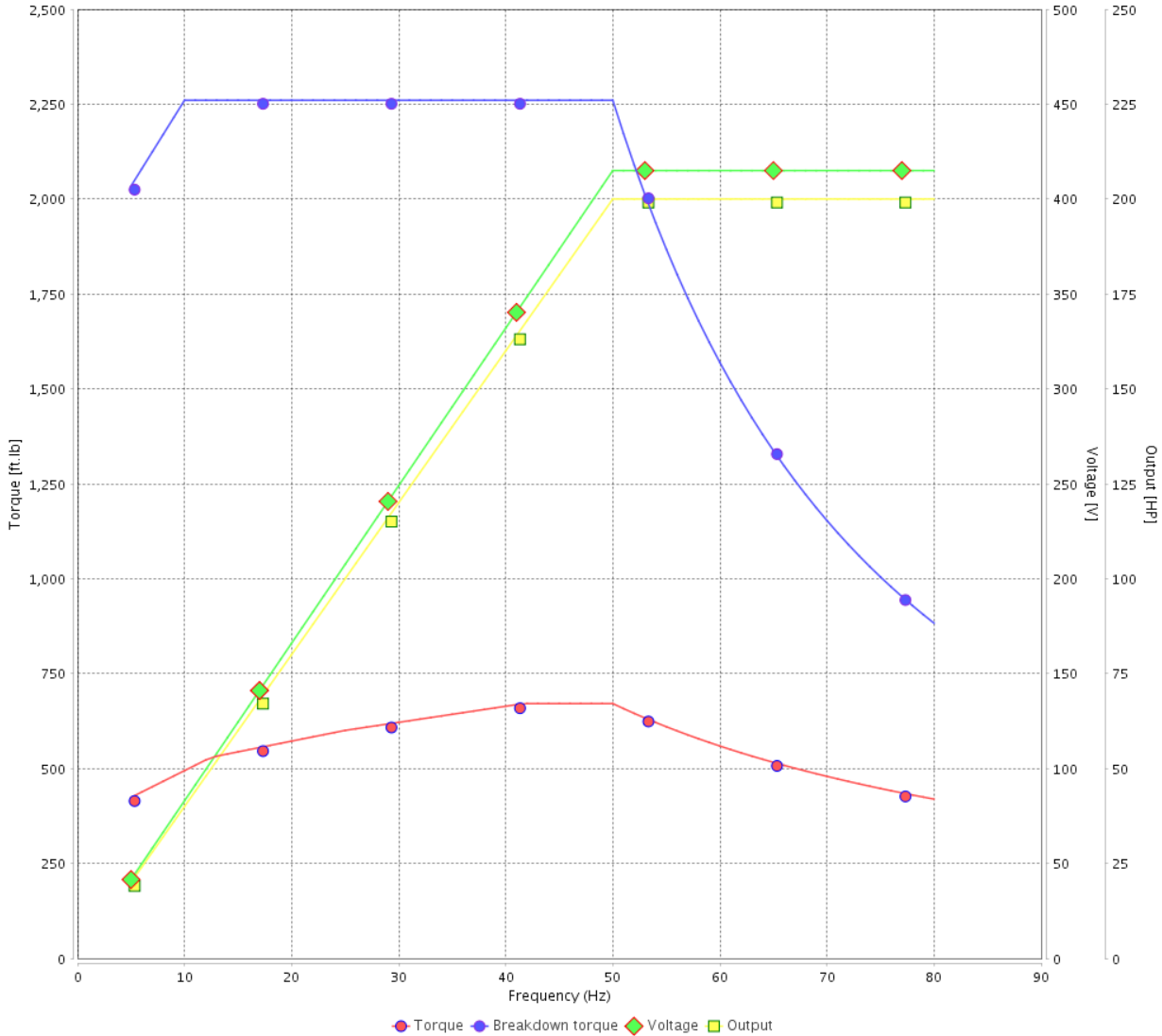
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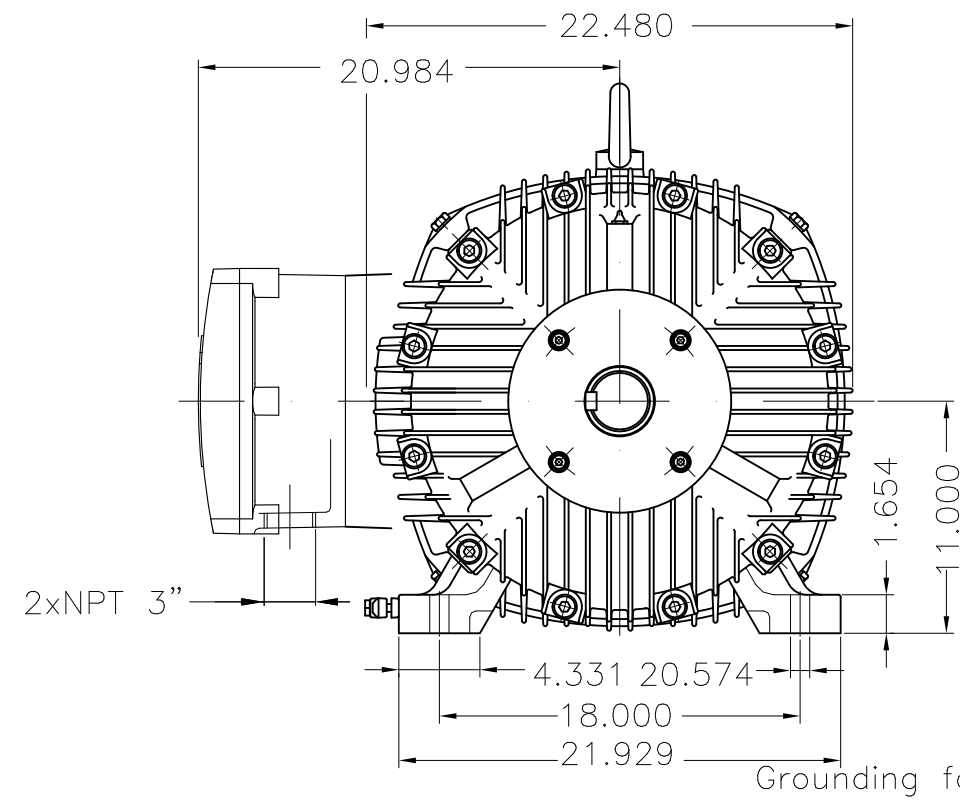
VFD OPERATION CURVE



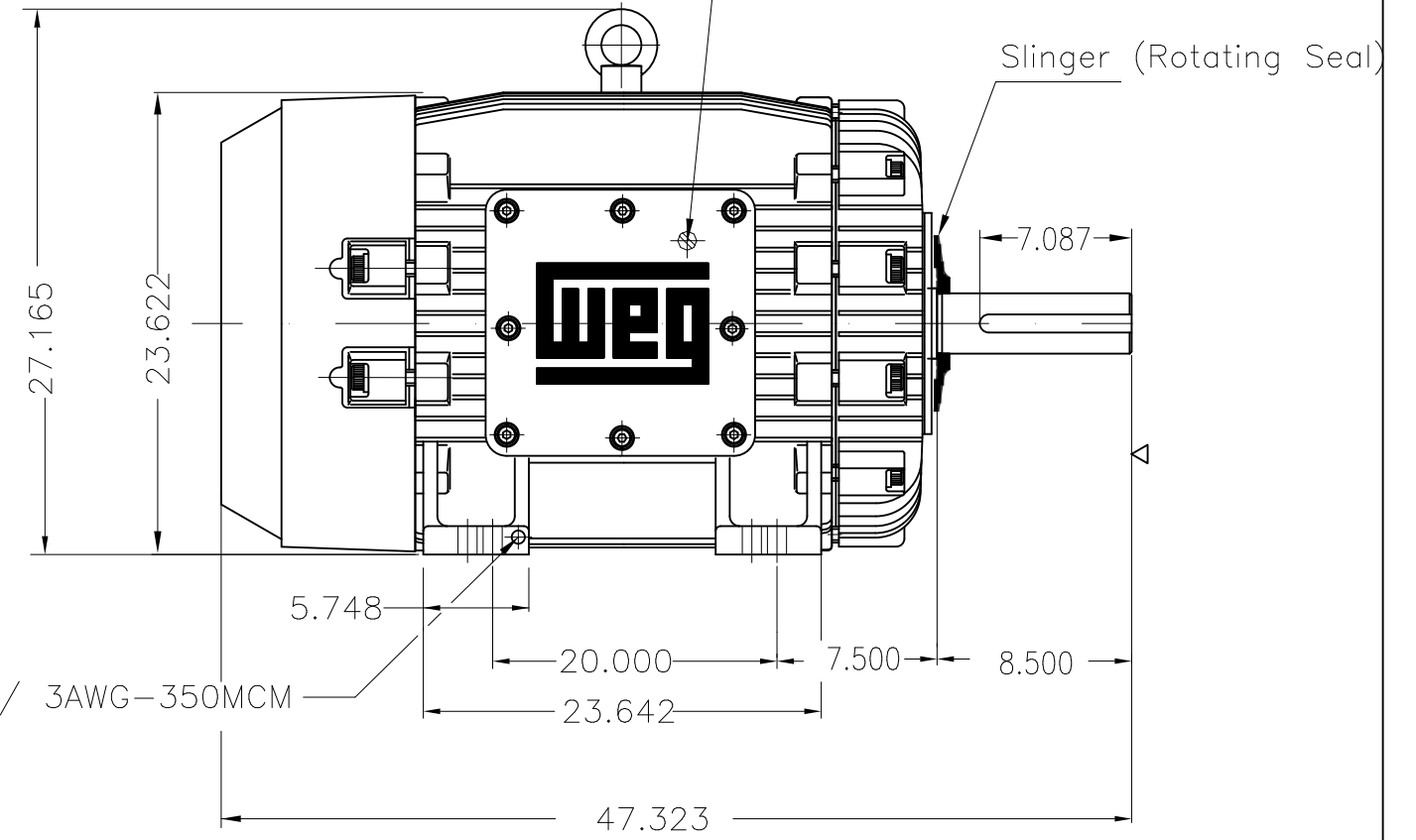
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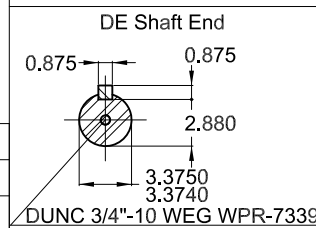
Grounding for leads 35–70 mm<sup>2</sup> / 1–2/0 AWG



Grounding for leads 25–185 mm<sup>2</sup> / 3AWG–350MCM

250 HP 04 Poles 60 Hz

A



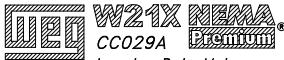
Color RAL 5009  
 Painting plan 202P  
 Mounting B3R(D)

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 447T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

**PREVIEW**  
 WDD



SHEET 1 / 1



Inverter Duty Motor  
Severe Duty



TEMP CODE T3C  
 CSA/UL: Class I - Div. 1 - Groups C and D  
 CSA: Class II - Div. 1 - Groups F and G  
 CSA: Class I - Zone 1 - IIB  
**EXPLOSION PROOF MOTOR**

FOR USE ON VPWM VFD 1000:1VT, 2:1CT, 1.0SF, T3C, AMB 40°C.

MODEL 25018XT3G447T  
MADE IN BRAZIL  
11963107

PH 3	FR 447T	HP(kW) 250(185)	Hz 60
V 460	A 284	RPM 1784	
NEMA NOM. EFF. 96.2%		INS CL F $\Delta$ T 80 K	IP55
PF 0.85	DUTY CONT.		CODE H
ENCL. TEFC	SF 1.15	SFA 327	
AMB 40°C	DES B		

PART-WINDING						WYE-DELTA					
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

→ 6319-C3(45g)      MOBIL POLYREX EM  
 → 6316-C3(34g)      7038 h

ALT 1000 m.a.s.l      2590 Lbs