

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :	11431291	
			Catalog # :	20018ET3G447T-W22	
Frame	: 445/7T	Cooling method	: IC411 - TEFC		
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	: 2289 lb		
Protection degree	: IP55	Moment of inertia (J)	: 76.2 sq.ft.lb		
Design	: B				
Output [HP]	200	200	200	200	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	230	279	264	257	
L. R. Amperes [A]	1564	1423	1478	1568	
LRC [A]	6.8x(Code G)	5.1x(Code E)	5.6x(Code F)	6.1x(Code G)	
No load current [A]	70.0	69.0	75.0	79.0	
Rated speed [RPM]	1785	1475	1480	1480	
Slip [%]	0.83	1.67	1.33	1.33	
Rated torque [ft.lb]	588	712	710	710	
Locked rotor torque [%]	229	170	190	210	
Breakdown torque [%]	250	200	220	240	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	105 K	105 K	105 K	
Locked rotor time	28s (cold) 16s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)	
Noise level ²	73.0 dB(A)				
Efficiency (%)	25%	95.7	94.3	94.9	
	50%	95.8	94.5	95.0	
	75%	96.2	95.0	95.4	
	100%	96.2	95.0	95.4	
Power Factor	25%	0.50	0.56	0.53	
	50%	0.73	0.78	0.76	
	75%	0.82	0.85	0.84	
	100%	0.85	0.86	0.86	
Bearing type	: <u>Drive end</u> 6319 C3 <u>Non drive end</u> 6316 C3	Foundation loads			
Sealing	: WSeal WSeal	Max. traction	: 3396 lb		
Lubrication interval	: 8000 h 10000 h	Max. compression	: 5685 lb		
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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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



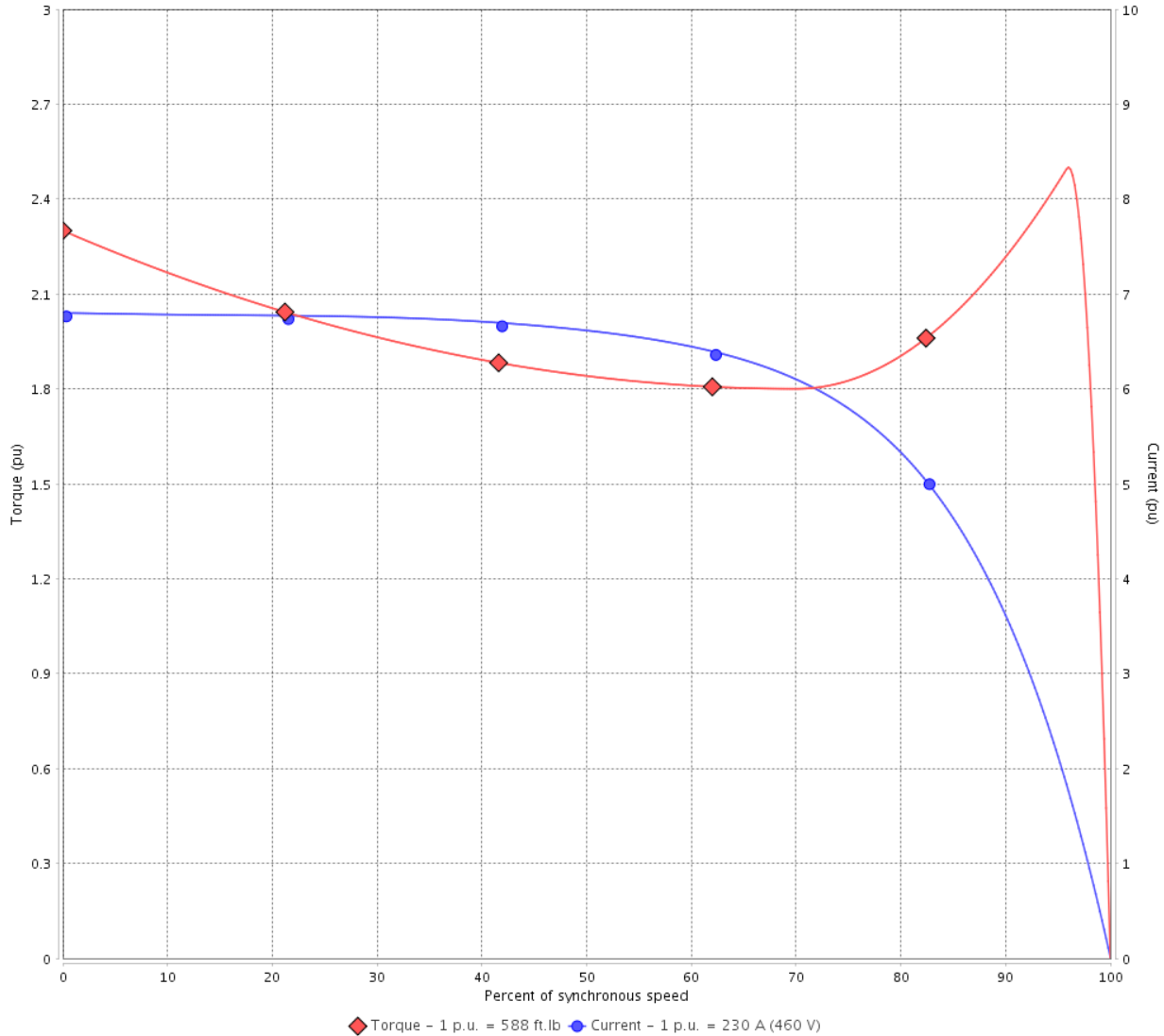
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11431291

Catalog # : 20018ET3G447T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 230 A	Moment of inertia (J)	: 76.2 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 588 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1785 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



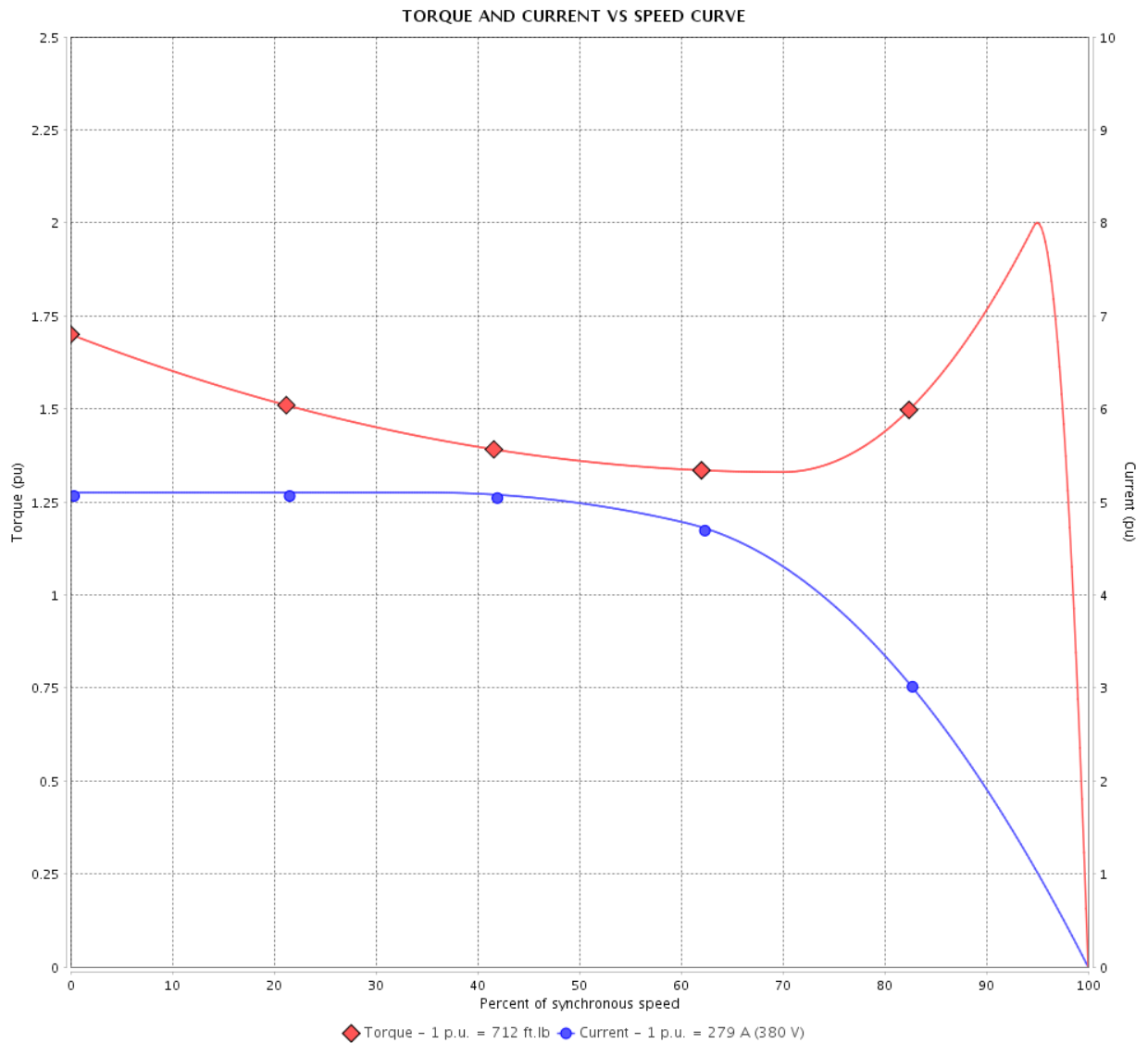
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11431291

Catalog # : 20018ET3G447T-W22



Performance : 380 V 50 Hz 4P IE2

Rated current	: 279 A	Moment of inertia (J)	: 76.2 sq.ft.lb
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 712 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 1475 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



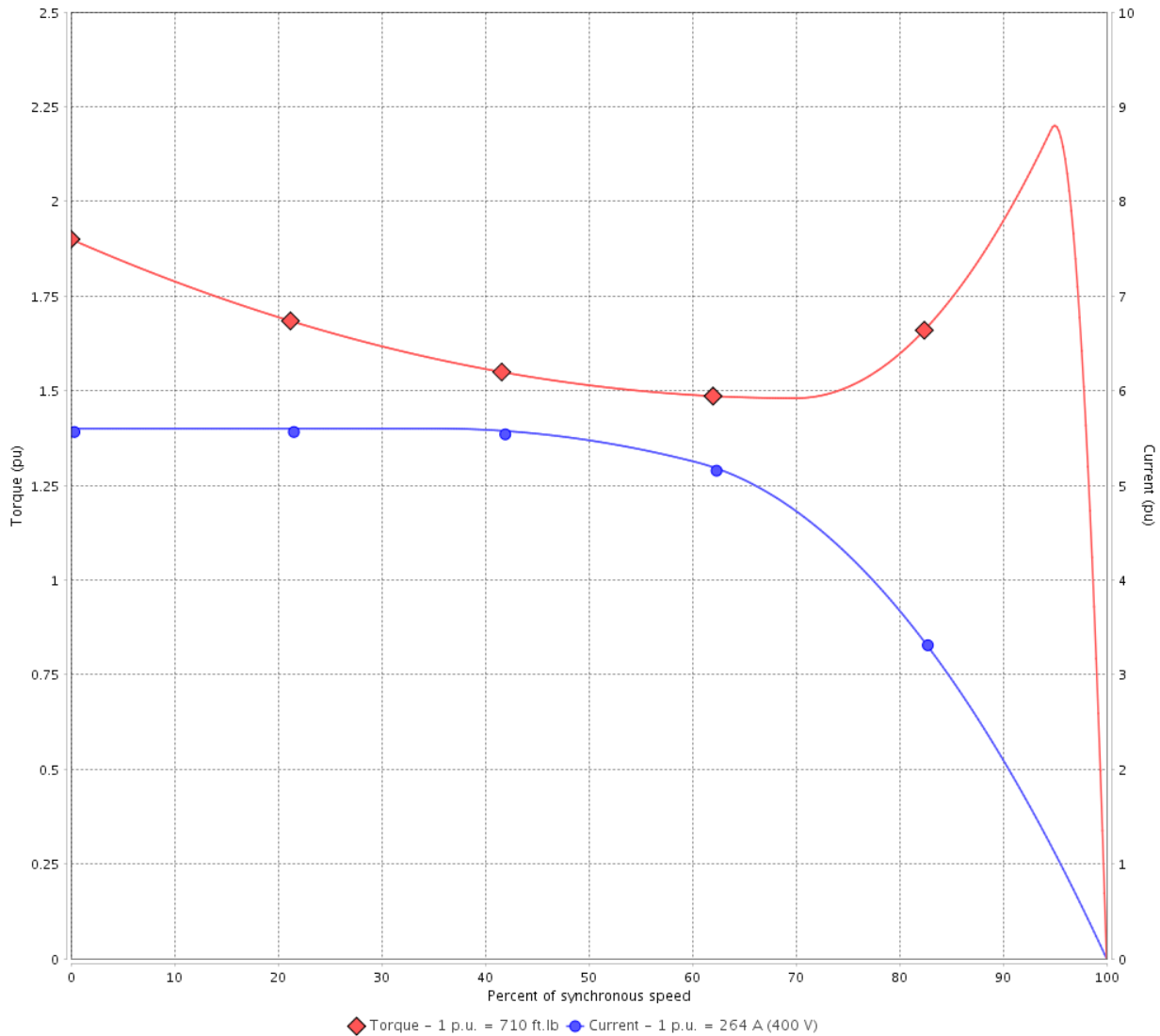
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Product line : NEMA Premium Efficiency Three-Phase

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TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE2

Rated current	: 264 A	Moment of inertia (J)	: 76.2 sq.ft.lb
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 710 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 105 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



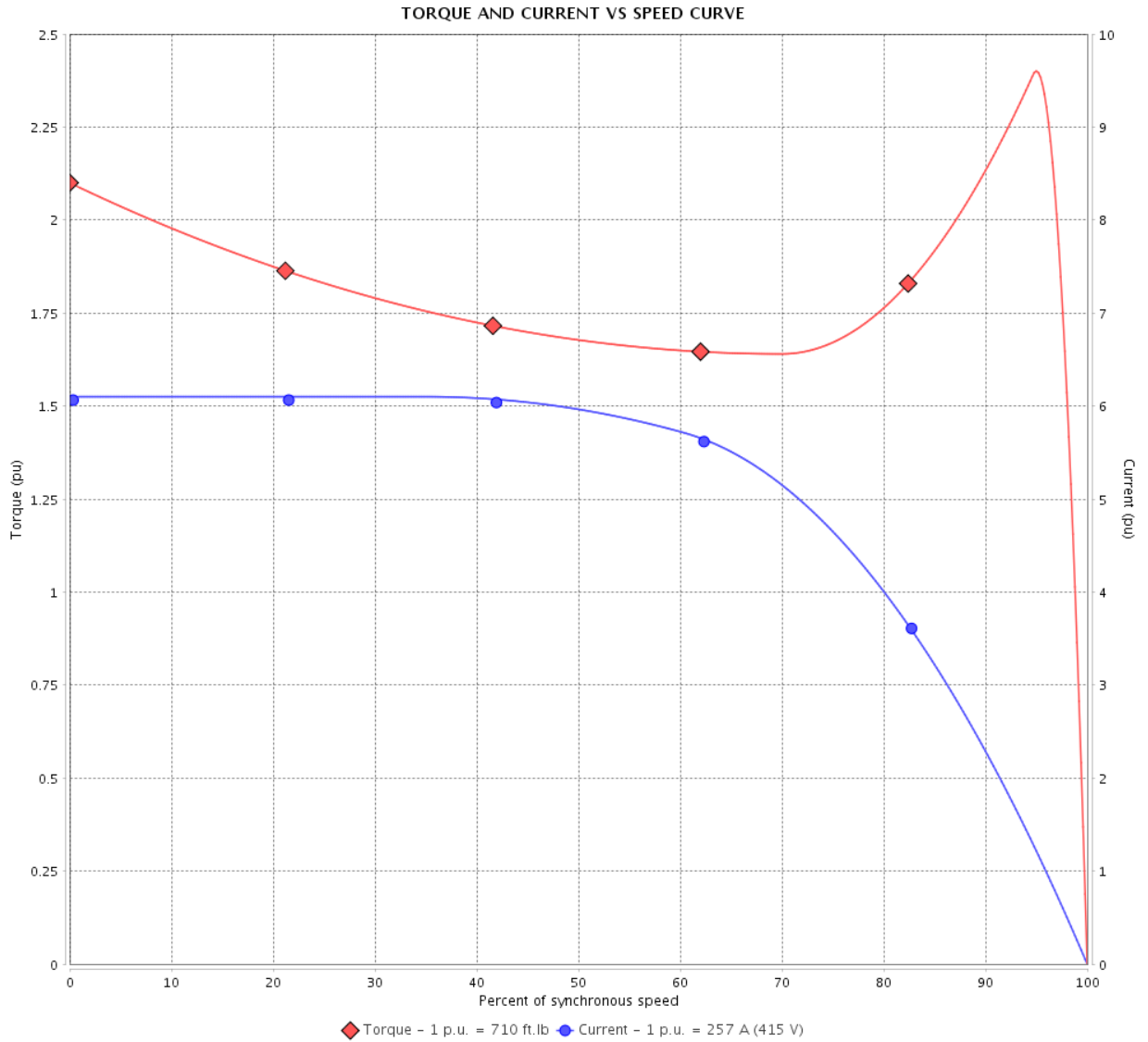
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Performance : 415 V 50 Hz 4P IE2

Rated current	: 257 A	Moment of inertia (J)	: 76.2 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 710 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

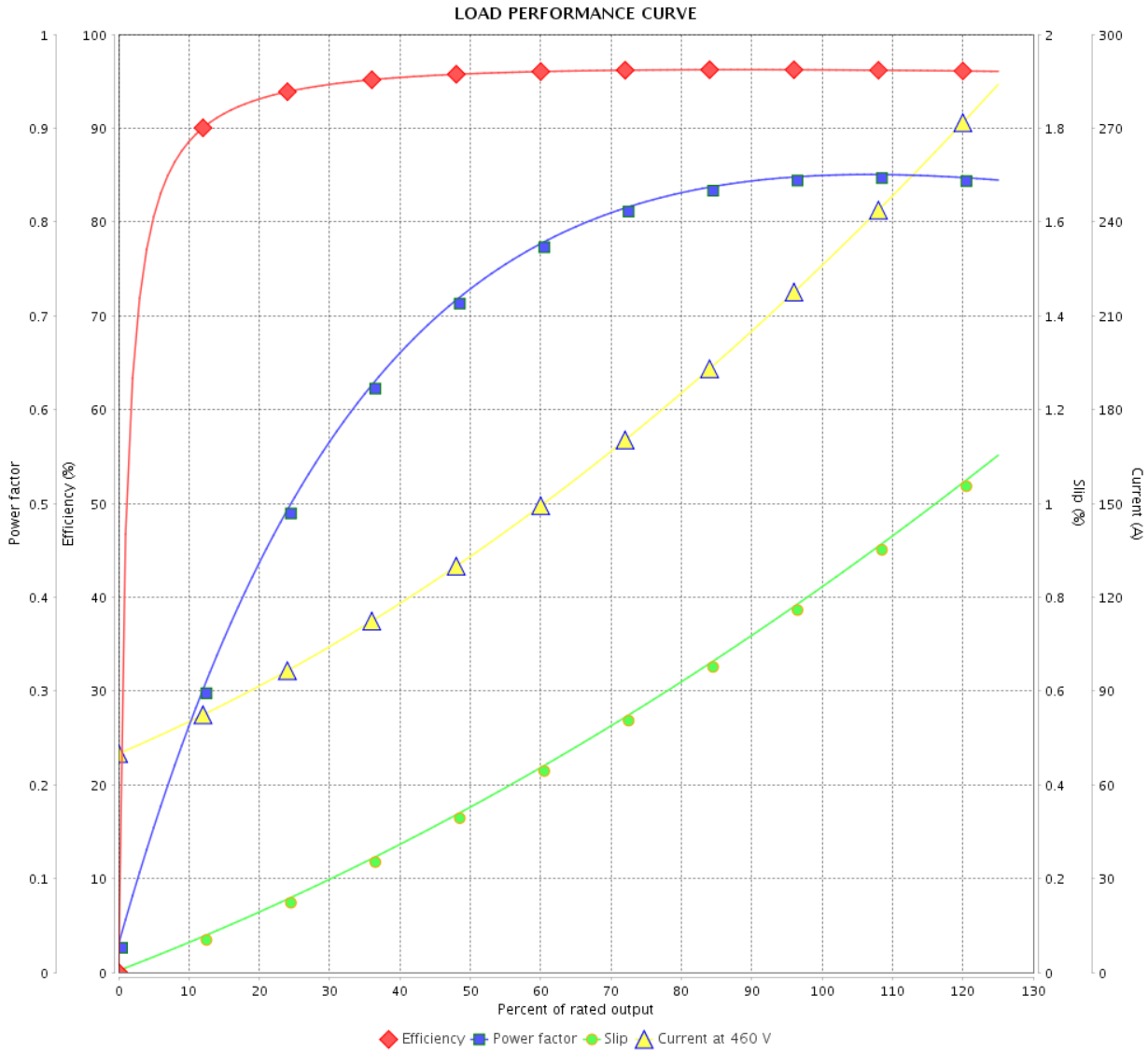


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Performance : 460 V 60 Hz 4P

Rated current	: 230 A	Moment of inertia (J)	: 76.2 sq.ft.lb
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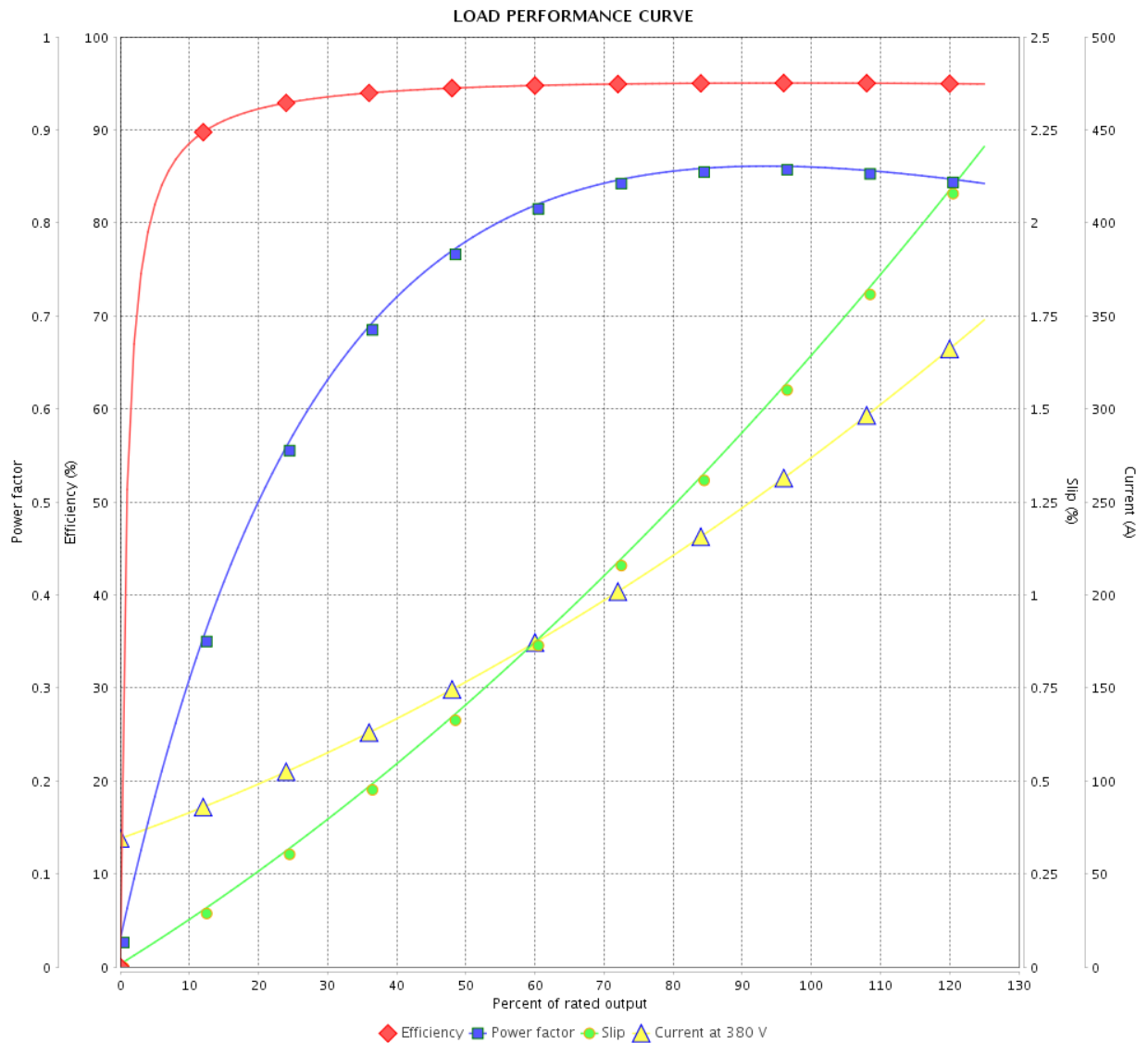


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Performance : 380 V 50 Hz 4P IE2

Rated current : 279 A
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 Rated torque : 712 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 200 %
 Rated speed : 1475 rpm

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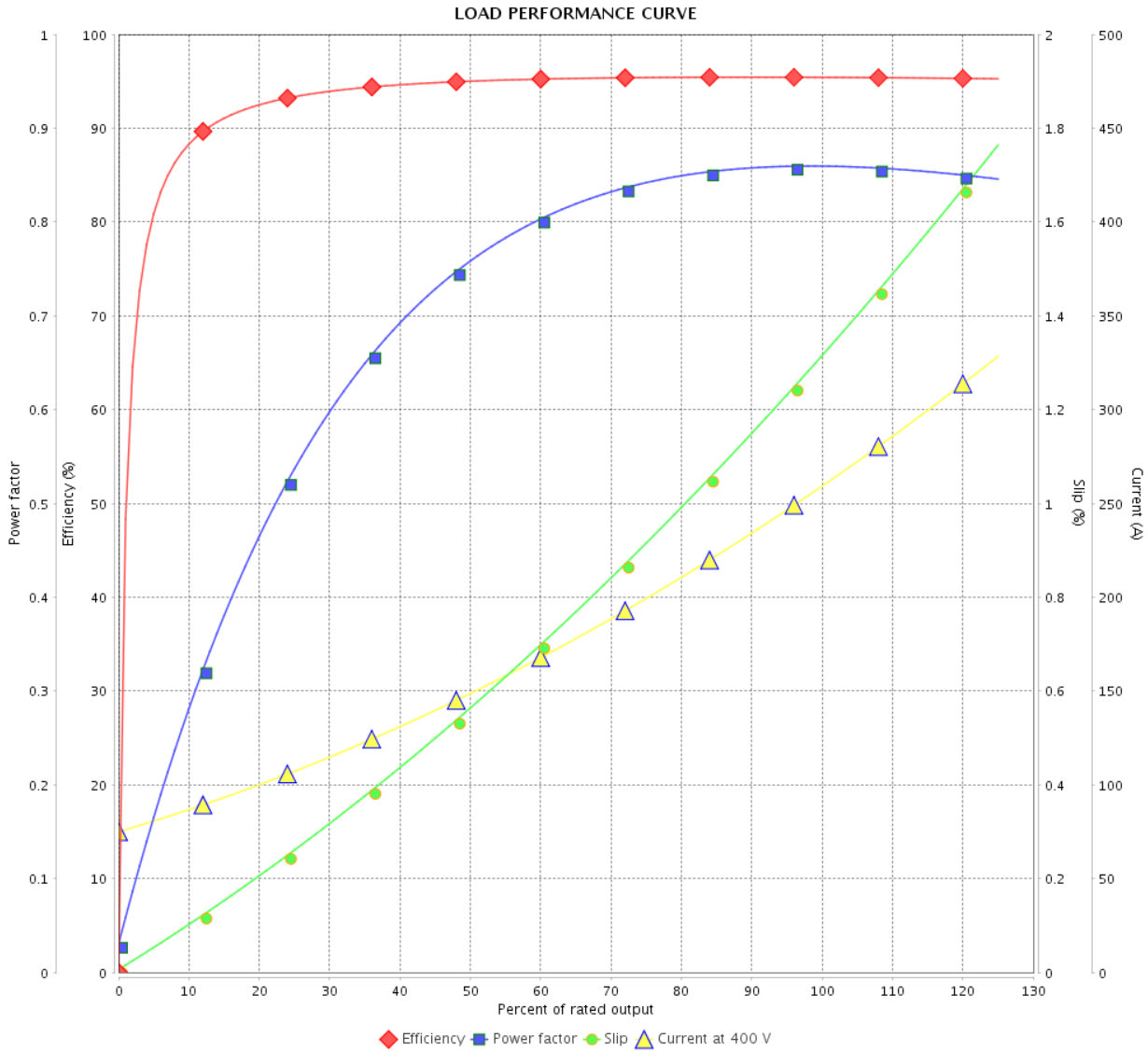


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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
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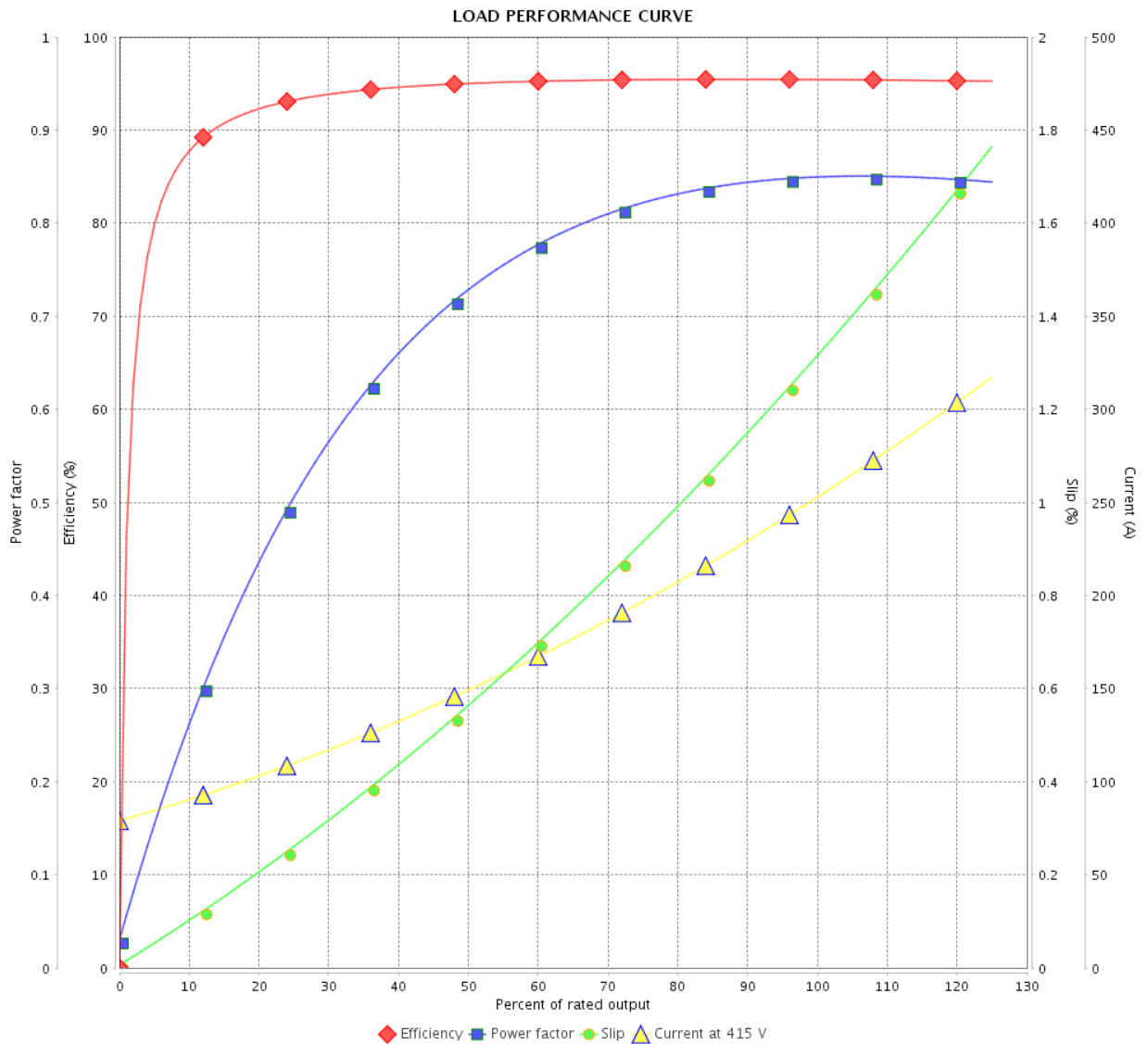


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THERMAL LIMIT CURVE



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Heating constant

Cooling constant

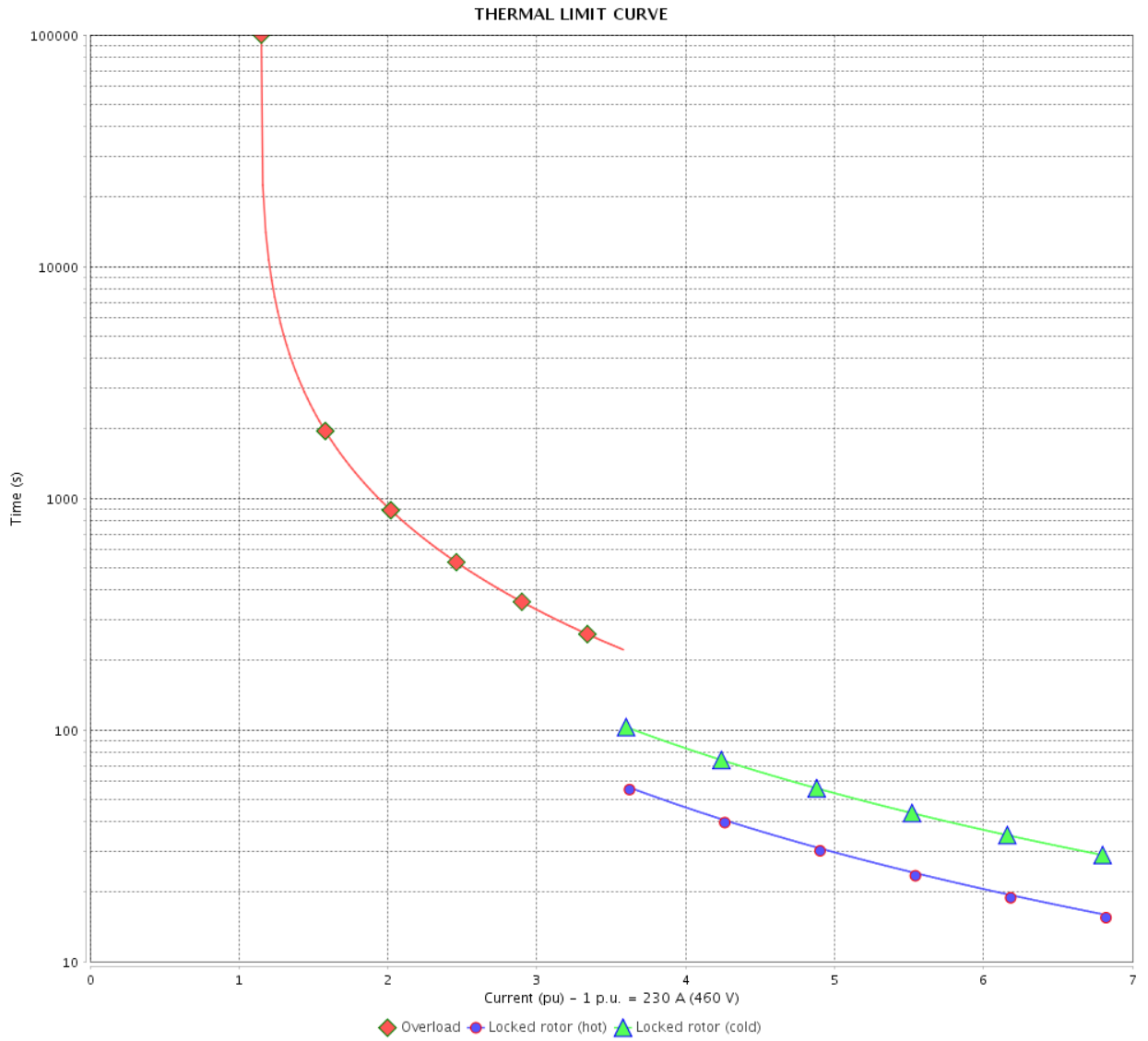
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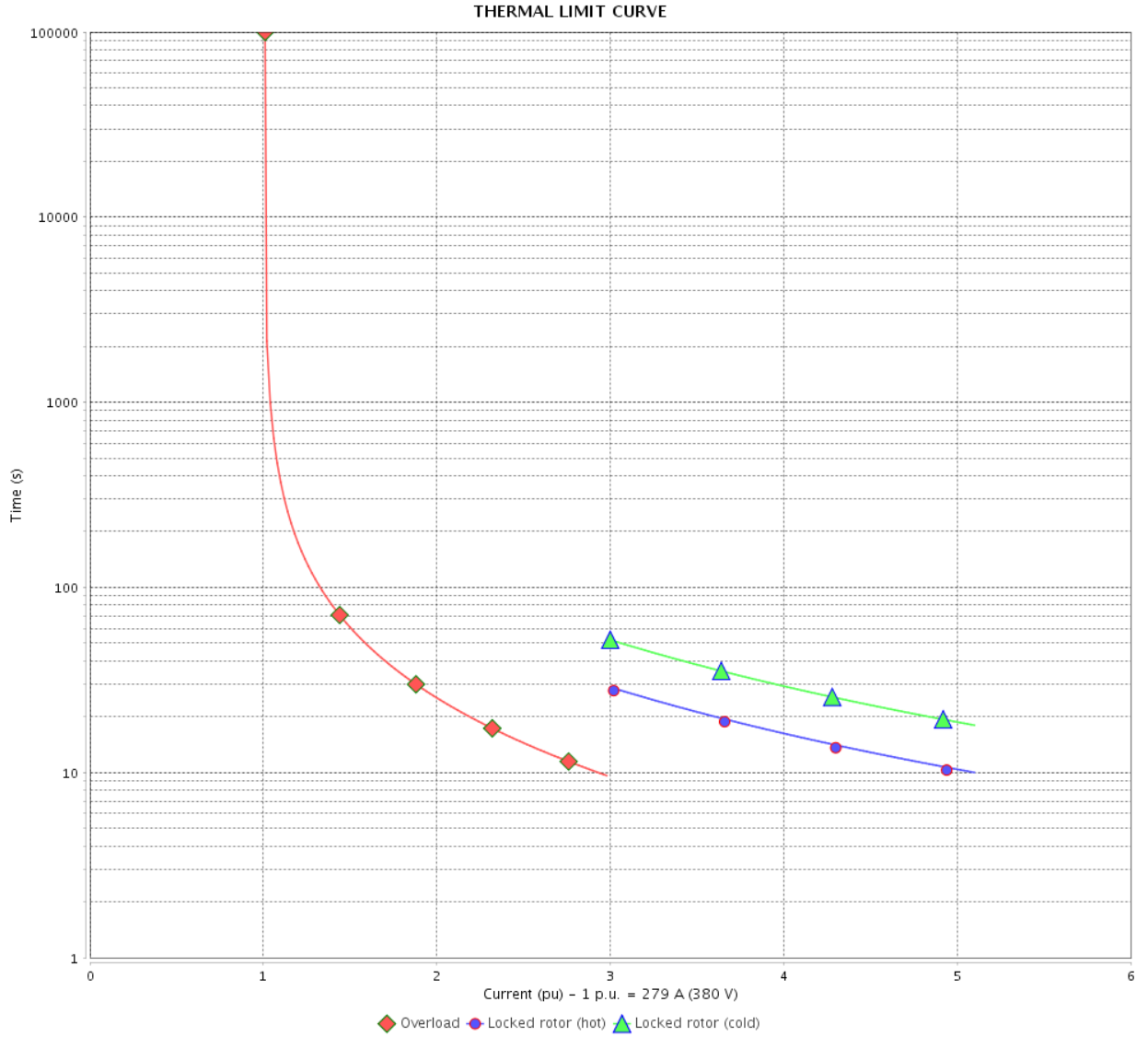
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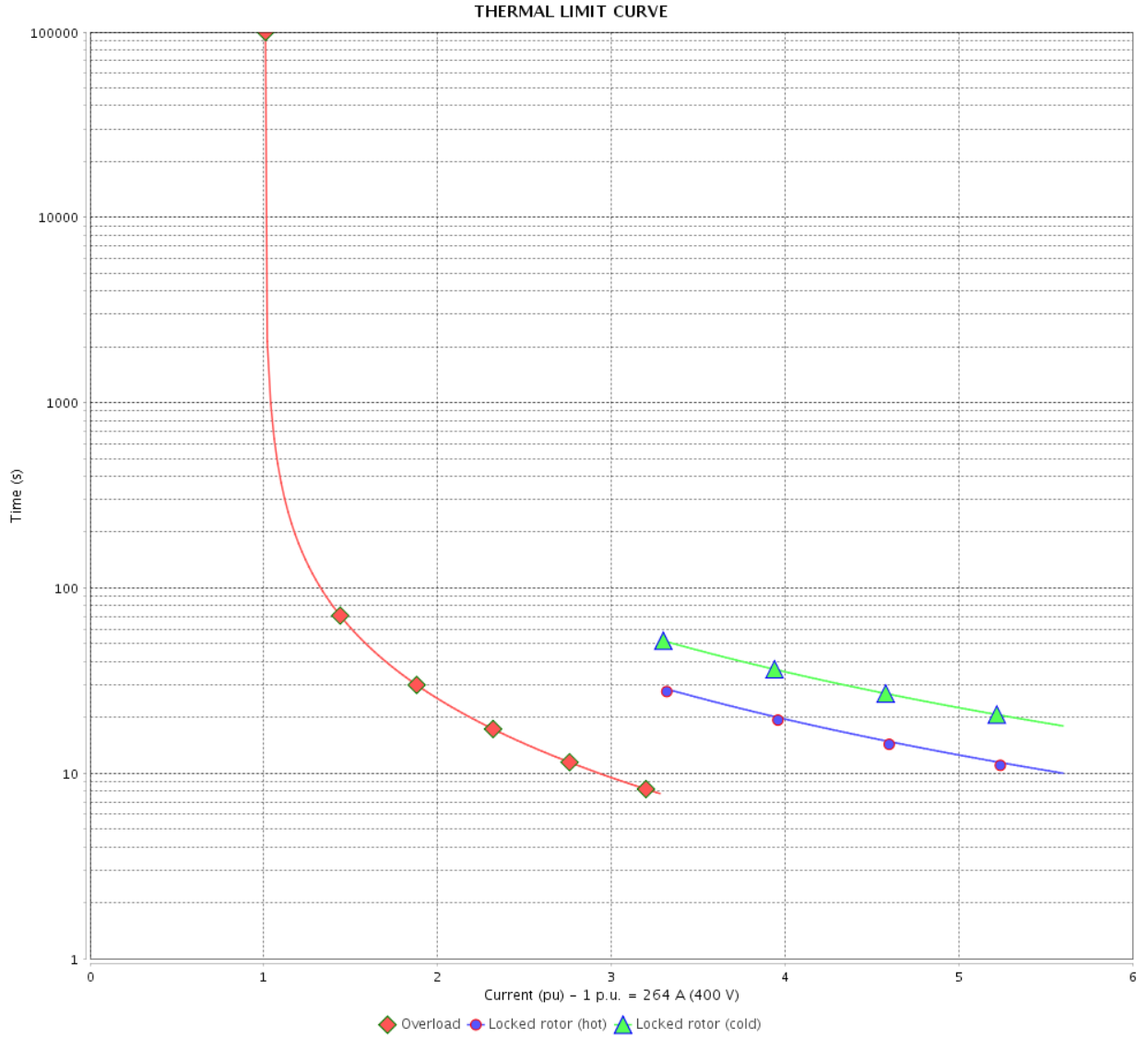
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Rated current	: 257 A	Moment of inertia (J)	: 76.2 sq.ft.lb
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Rated torque	: 710 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
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Cooling constant

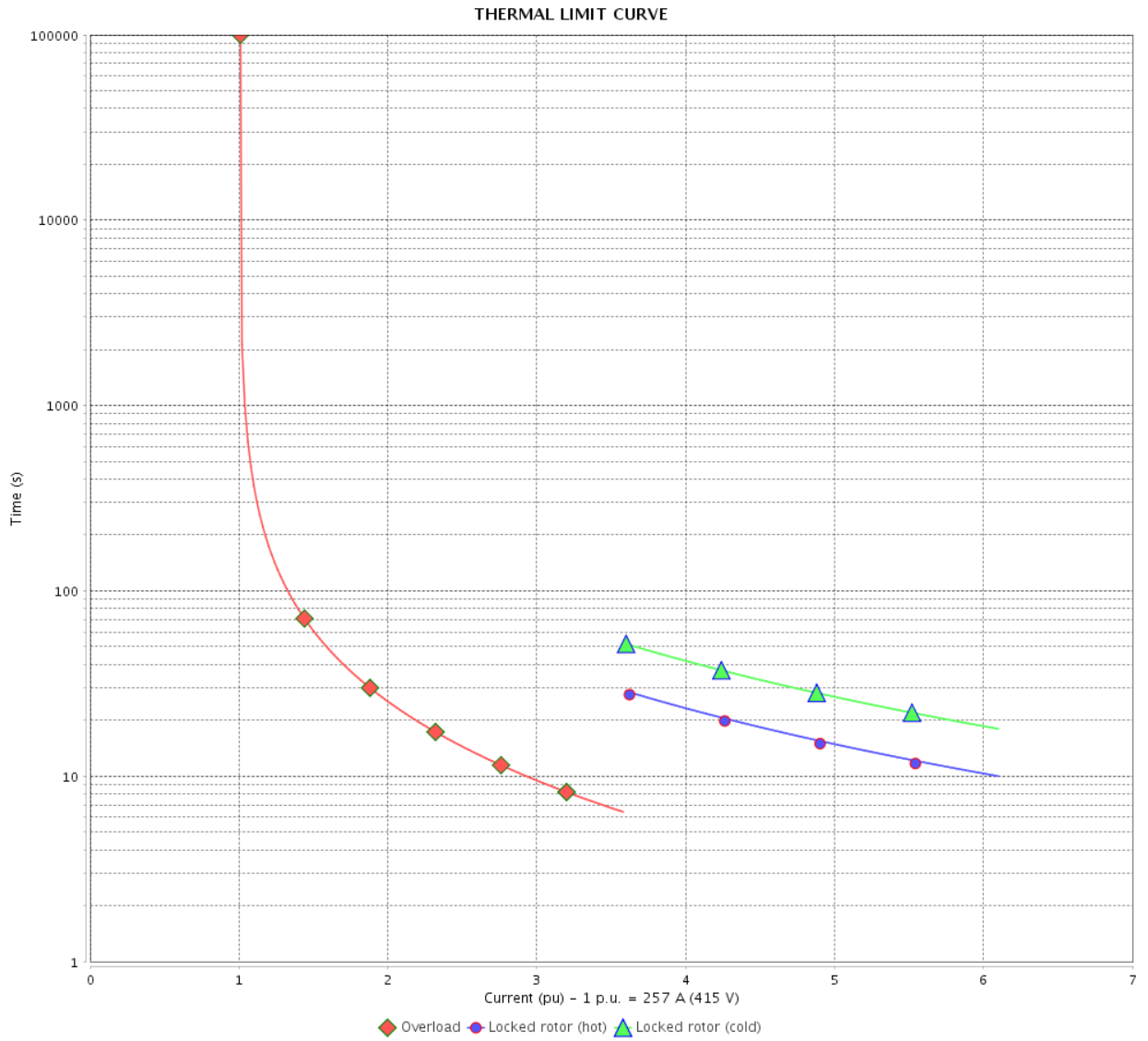
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



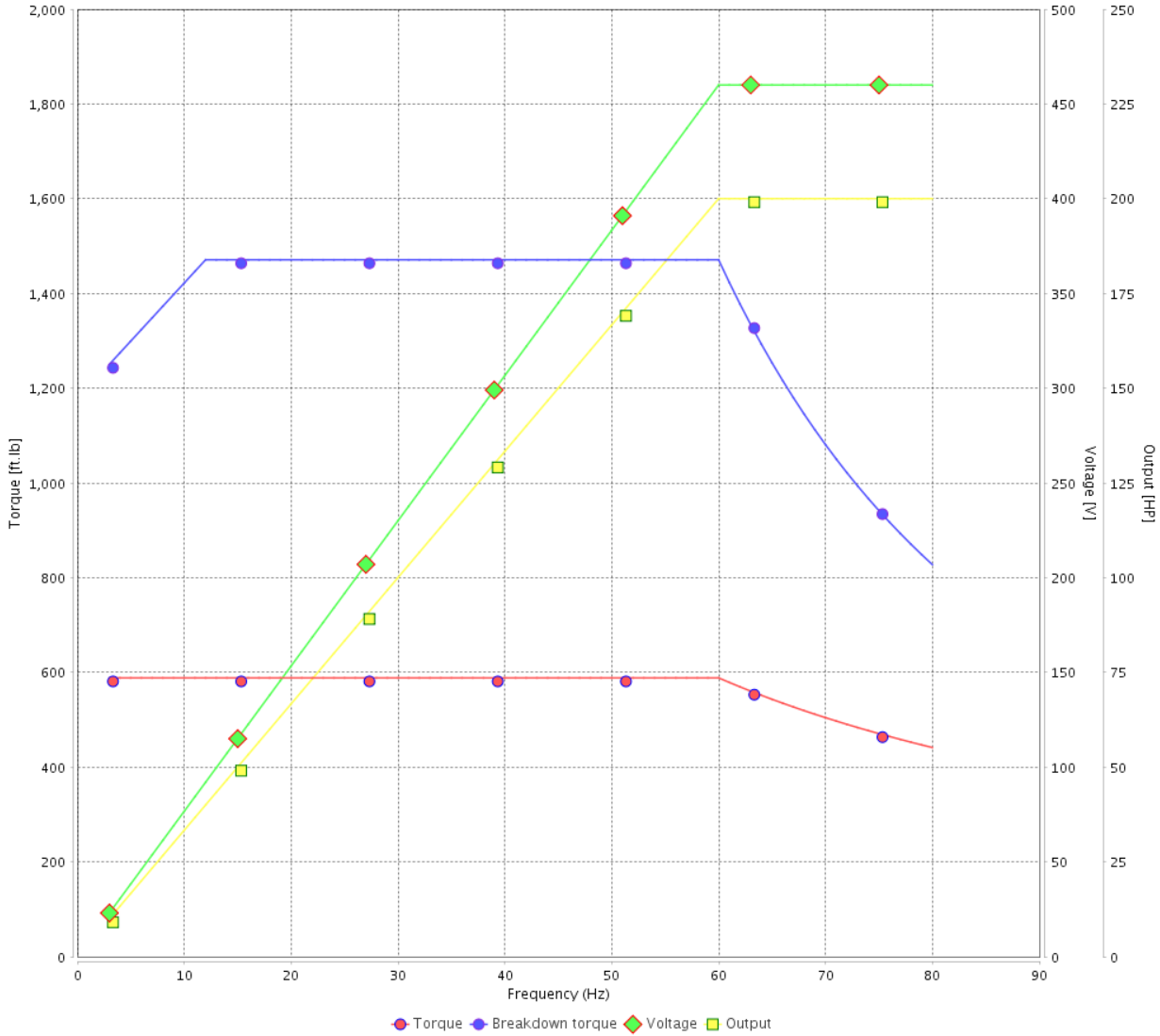
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VFD OPERATION CURVE



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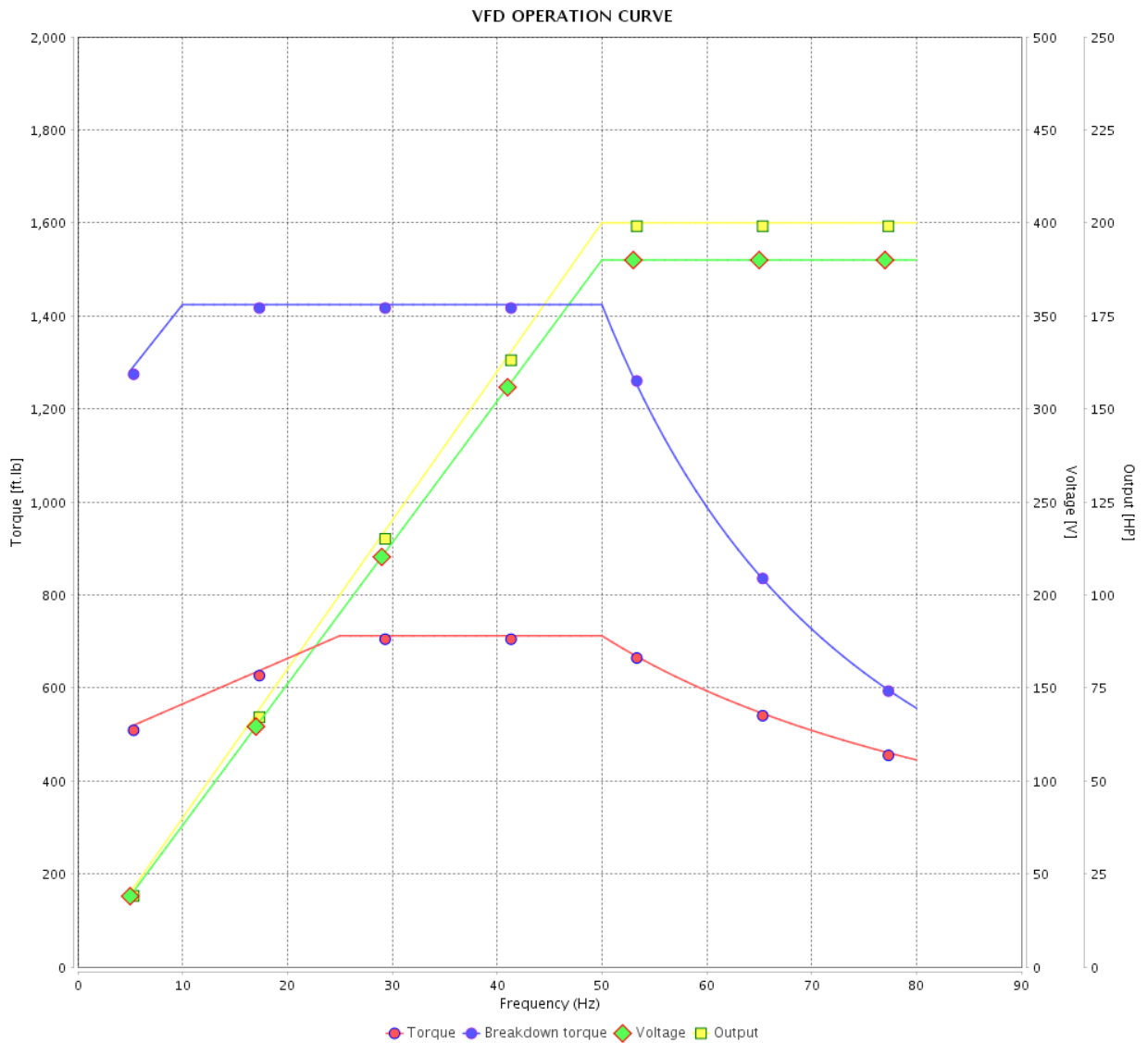
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

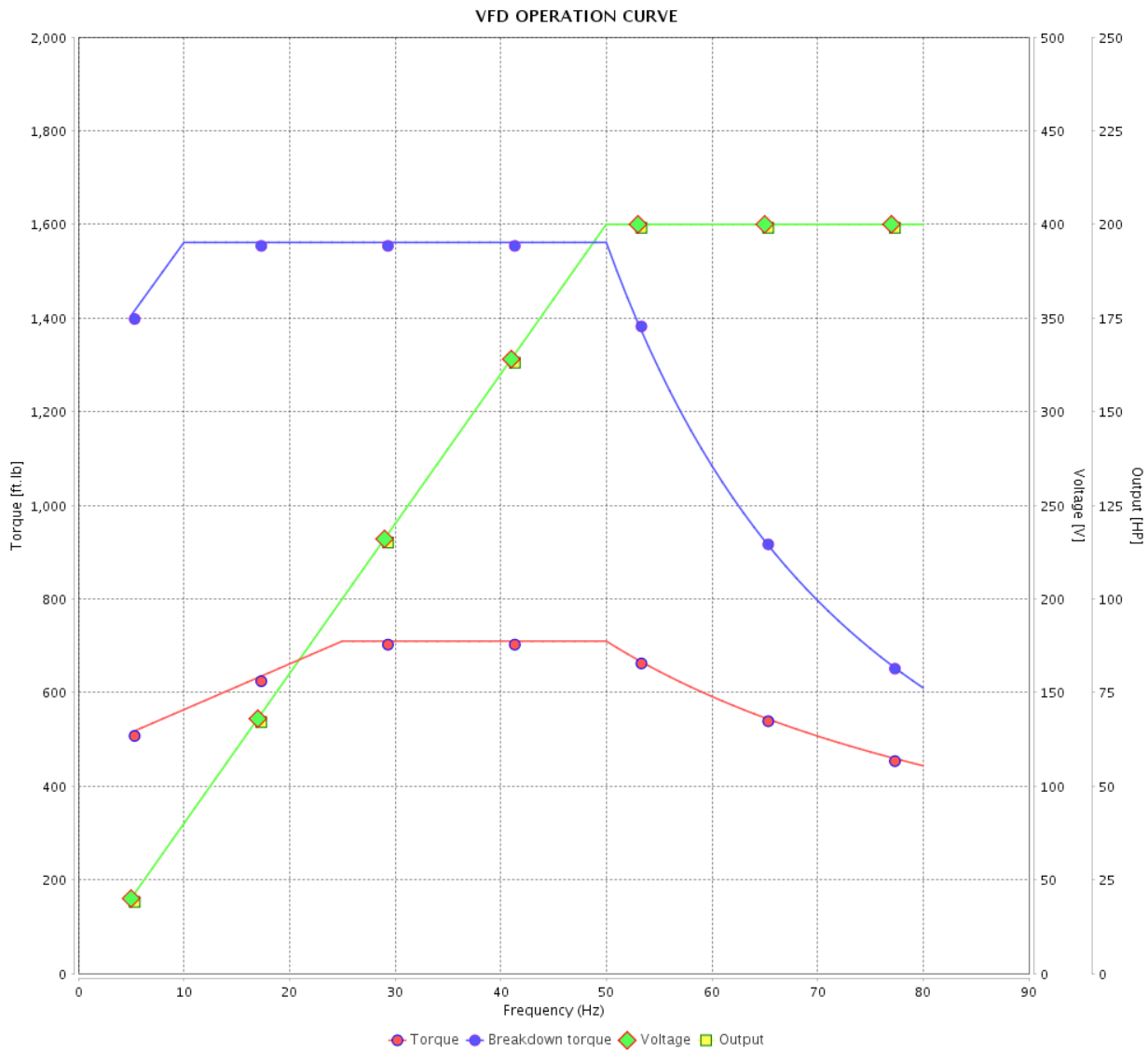


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VFD OPERATION CURVE

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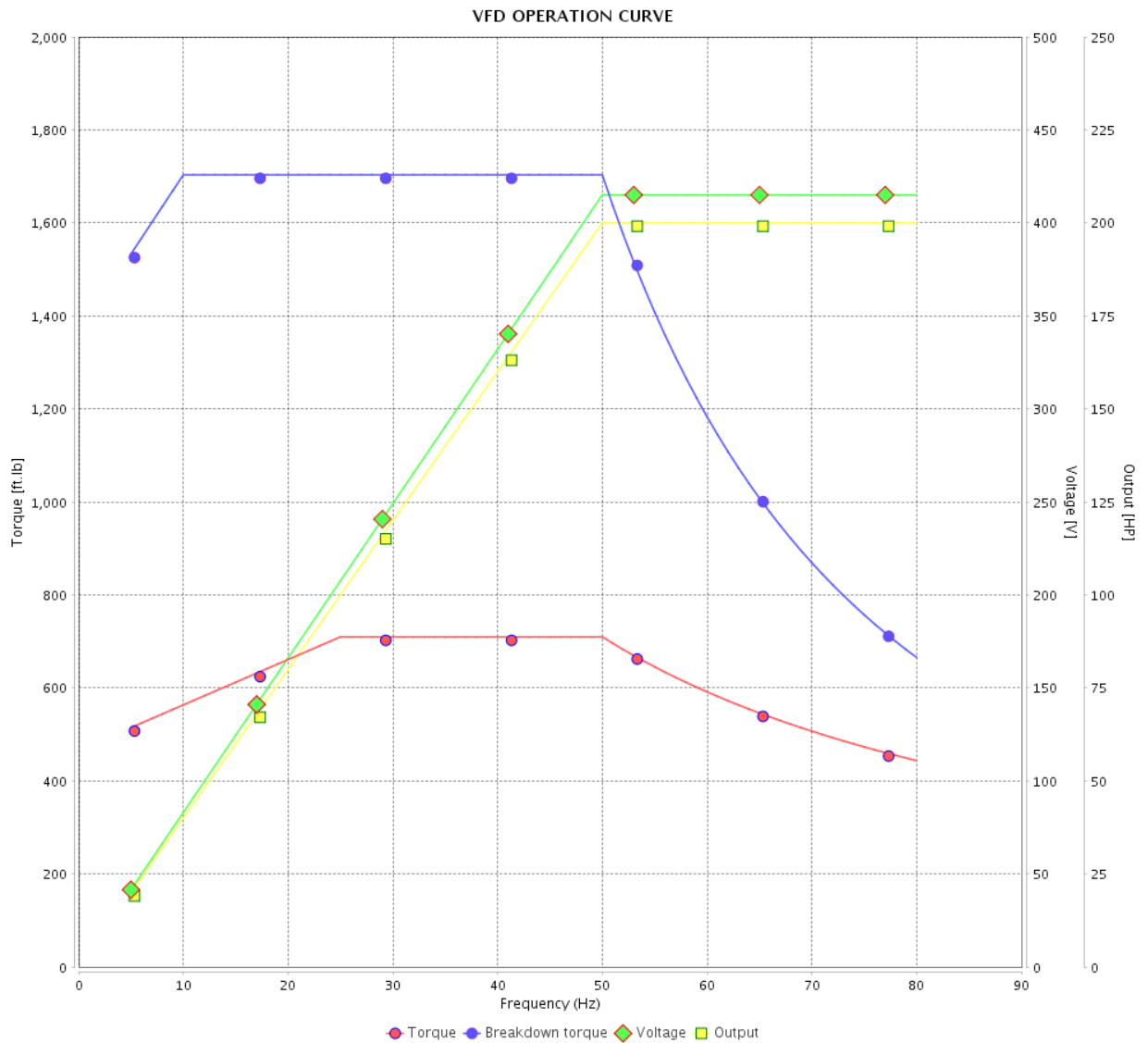


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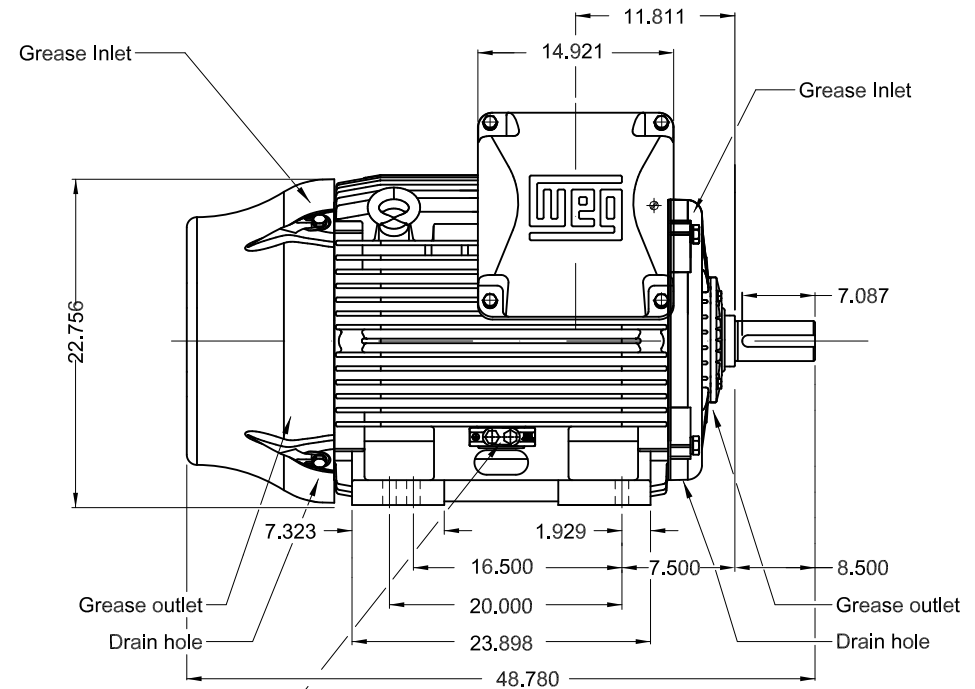
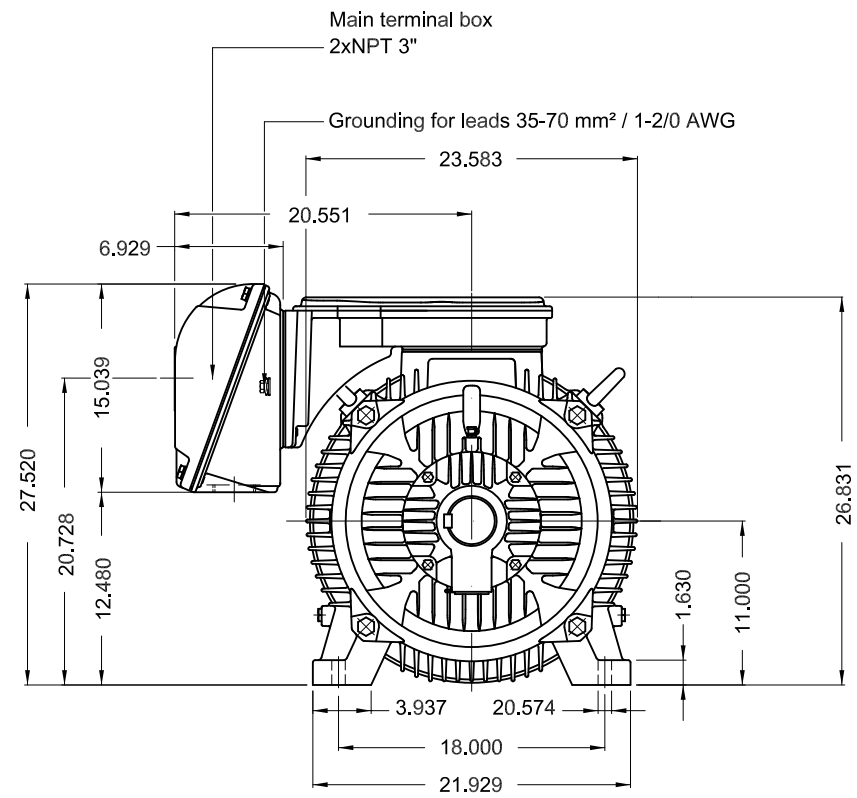


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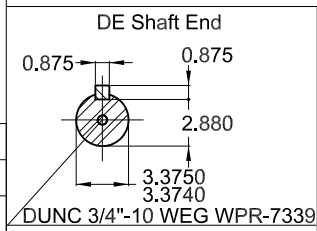
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Grounding for leads 25-185 mm² / 3AWG-350MCM

Color RAL 5009
 Painting plan 203A
 Mounting B3R(D)



200 HP 04 Poles 60 Hz

A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR W22 PREM. EFF.					
CHECKED		FRAME 445/7T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
 WDD



SHEET 1 / 1

Dimensions in inches

XME A3

MADE IN MEXICO
11431291



FOR SAFE AREA
Mod.TE1BFOXON
CC029A

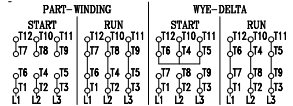




Class I, Div 2, Gr A, B, C and D - T3
Class I, Zone 2, IIC - T3
Class II, Div 2, Gr F and G - T3C
For use on PWM: Gr. A, B, C, D and F,
VT 1000:1, CT 20:1, 1.00SF - T3


MODEL 20018ET3G447T-W22

Inverter Duty Motor
Severe Duty

PH3	60Hz	Fr. 445/7T	1000m.a.s.l.	IP55	TEFC	2293lb
V 460				A 230		
HP 200				kW 150		
SF 1.15				SFA 265		
RPM 1785				PF 0.85		
AMB 40°C				INS cl. F DT80K	NEMA NOM EFF 96.2%	
DUTY CONT.				DES B Code G		



 → 6319-C3 (45g)
 → 6316-C3 (34g)

 MOBIL POLYREX EM (8000h)