

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	14325714		
		Catalog # :	35018ST3QIERB449T-W2		
Frame	: L447/9T	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	: 3223 lb		
Protection degree	: IP55	Moment of inertia (J)	: 131 sq.ft.lb		
Design	: B				
Output [HP]	350	300	300	300	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	394	404	388	379	
L. R. Amperes [A]	2719	2868	3065	3222	
LRC [A]	6.9x(Code G)	7.1x(Code G)	7.9x(Code H)	8.5x(Code J)	
No load current [A]	115	110	116	122	
Rated speed [RPM]	1787	1486	1488	1490	
Slip [%]	0.72	0.93	0.80	0.67	
Rated torque [ft.lb]	1030	1060	1060	1060	
Locked rotor torque [%]	260	240	260	290	
Breakdown torque [%]	229	229	250	280	
Service factor	1.15	1.15	1.15	1.15	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	81s (cold) 45s (hot)	88s (cold) 49s (hot)	75s (cold) 42s (hot)	68s (cold) 38s (hot)	
Noise level ²	77.0 dB(A)	77.0 dB(A)	77.0 dB(A)	77.0 dB(A)	
Efficiency (%)	25%	95.7	96.1	95.8	95.5
	50%	95.8	96.2	95.9	95.6
	75%	96.2	96.3	96.3	96.2
	100%	96.2	96.3	96.3	96.2
Power Factor	25%	0.52	0.52	0.48	0.45
	50%	0.76	0.74	0.70	0.66
	75%	0.83	0.82	0.80	0.78
	100%	0.86	0.86	0.85	0.84
Bearing type	: <u>Drive end</u> NU-322 C3 <u>Non drive end</u> 6319 C3	Foundation loads			
Sealing	: Inpro/Seal Inpro/Seal	Max. traction	: 6281 lb		
Lubrication interval	: 4000 h 8000 h	Max. compression	: 9504 lb		
Lubricant amount	: 60 g 45 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



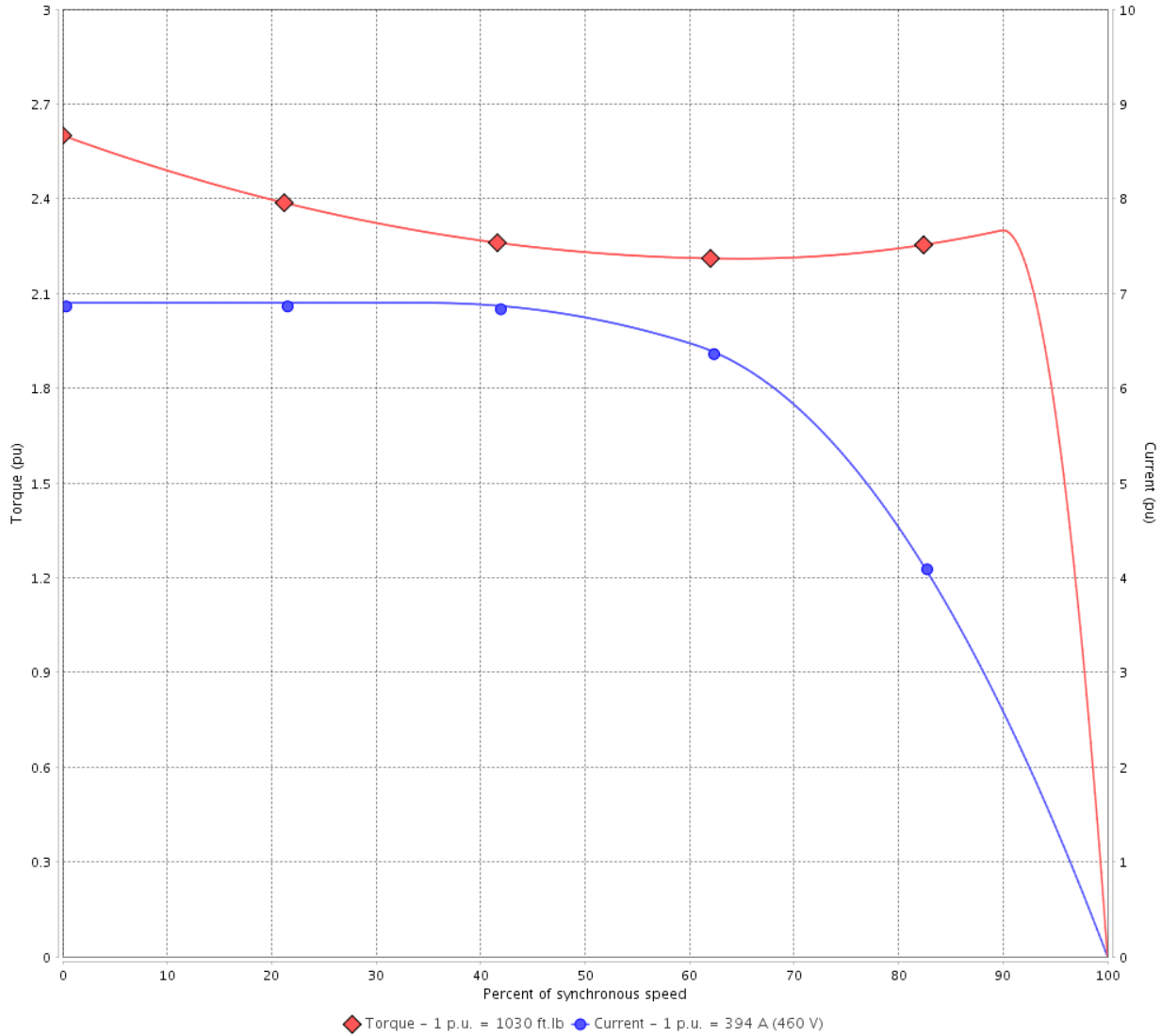
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14325714

Catalog # : 35018ST3QIERB449T-W2

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 394 A	Moment of inertia (J)	: 131 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 1030 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1787 rpm	Design	: B

Locked rotor time : 81s (cold) 45s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



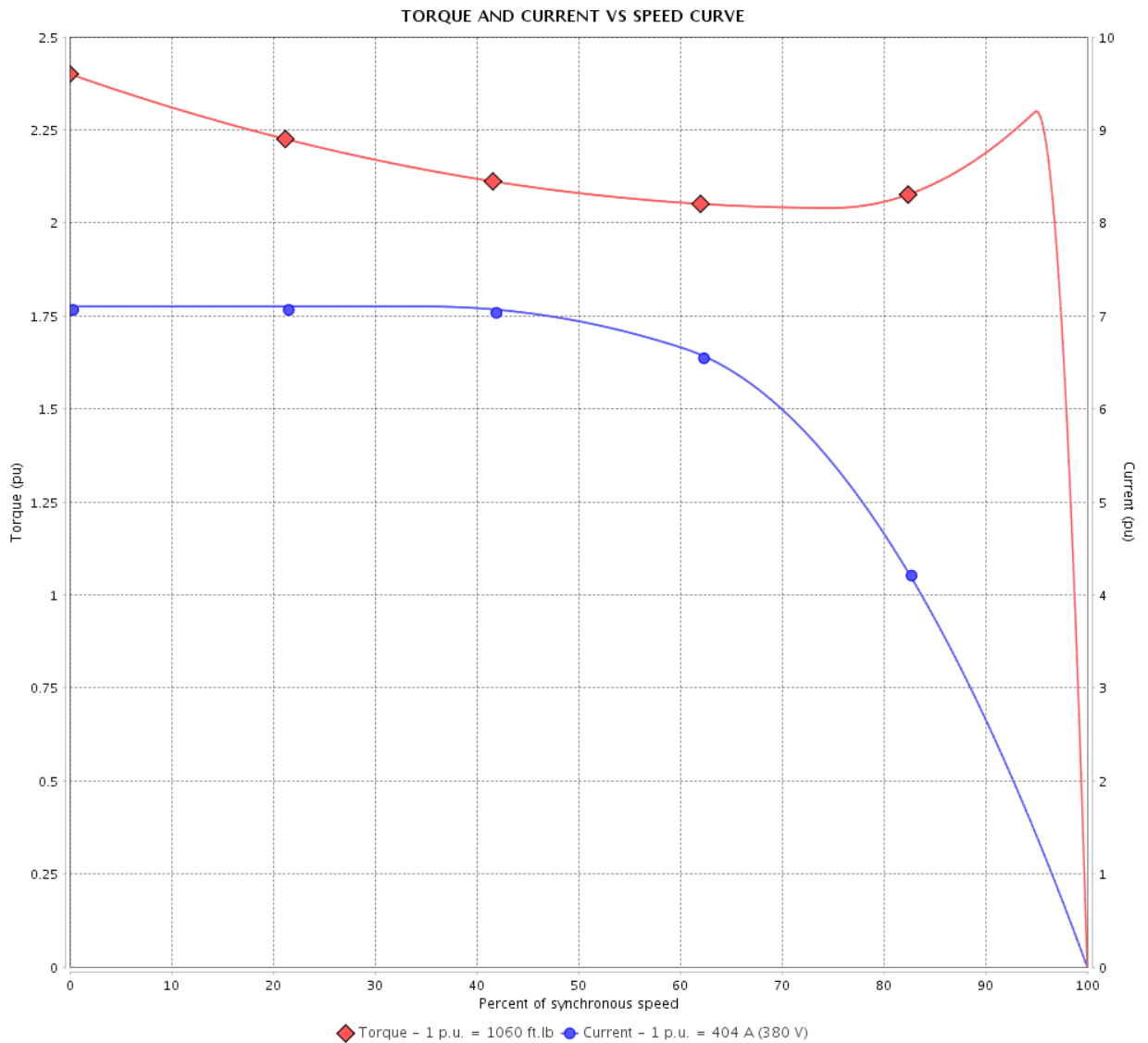
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14325714

Catalog # : 35018ST3QIERB449T-W2



Performance : 380 V 50 Hz 4P IE3

Rated current	: 404 A	Moment of inertia (J)	: 131 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 1060 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1486 rpm	Design	: B

Locked rotor time : 88s (cold) 49s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



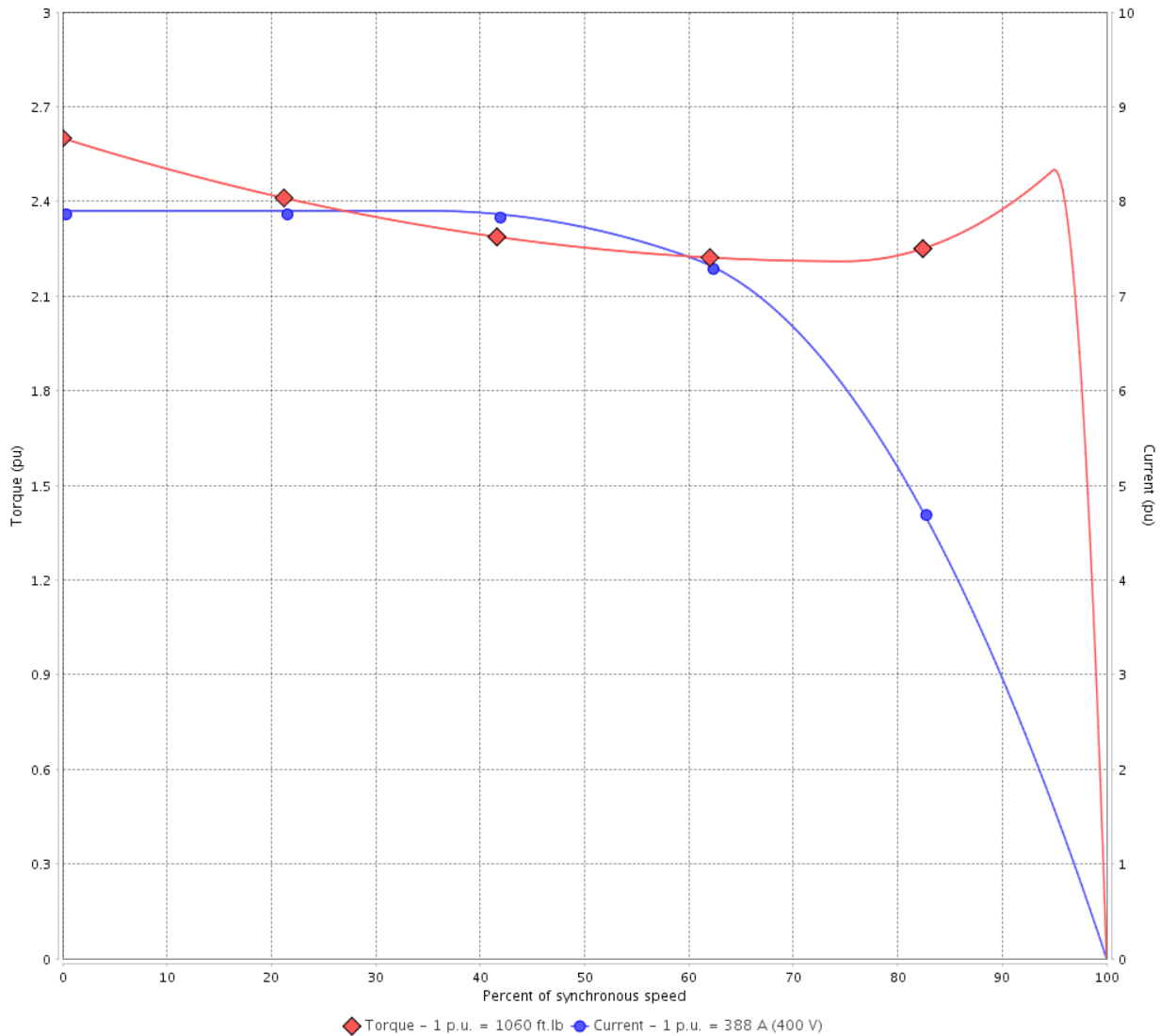
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14325714

Catalog # : 35018ST3QIERB449T-W2

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 388 A	Moment of inertia (J)	: 131 sq.ft.lb
LRC	: 7.9	Duty cycle	: Cont.(S1)
Rated torque	: 1060 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1488 rpm	Design	: B

Locked rotor time : 75s (cold) 42s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



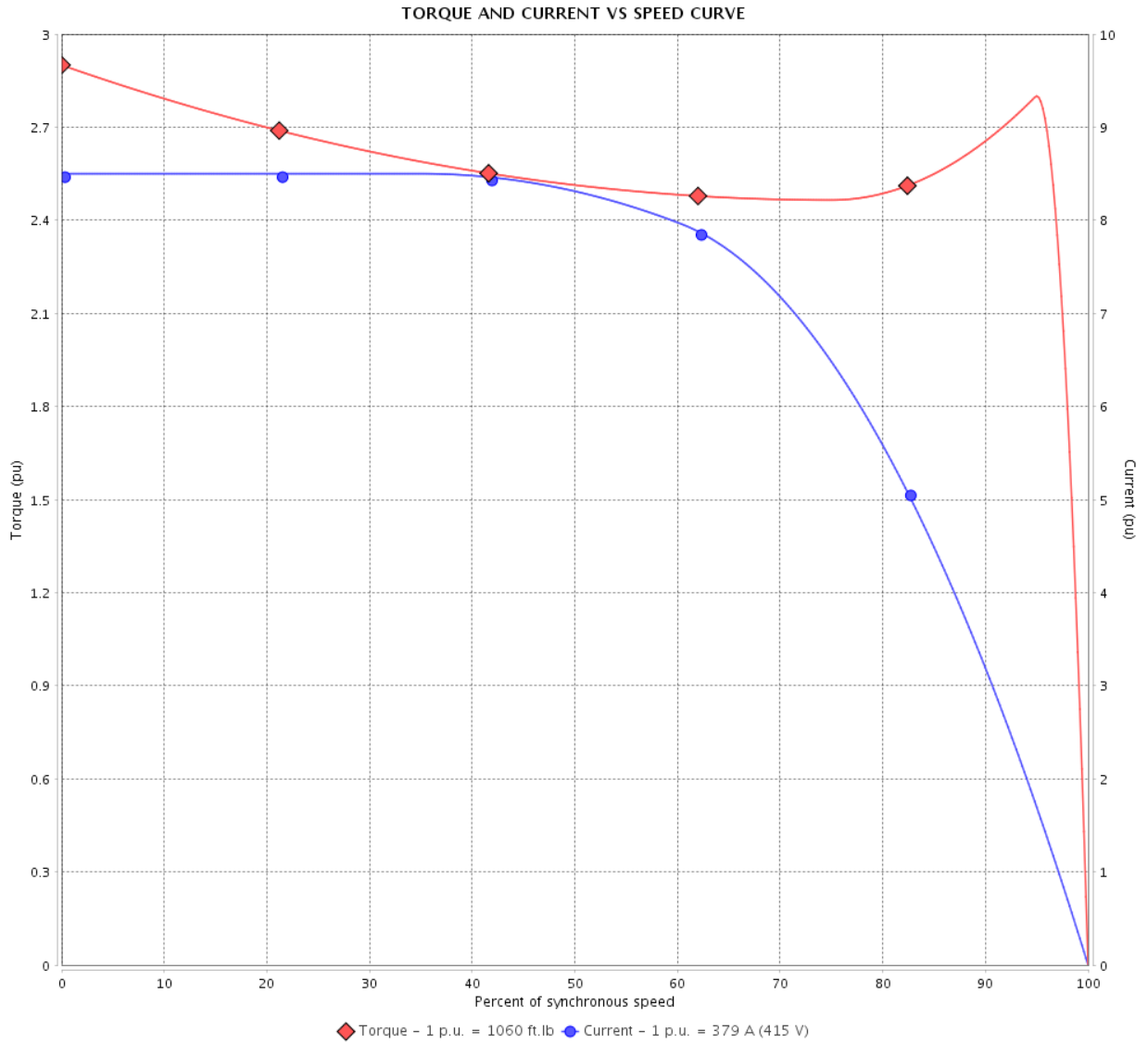
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Performance : 415 V 50 Hz 4P IE3

Rated current	: 379 A	Moment of inertia (J)	: 131 sq.ft.lb
LRC	: 8.5	Duty cycle	: Cont.(S1)
Rated torque	: 1060 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.15
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1490 rpm	Design	: B

Locked rotor time : 68s (cold) 38s (hot)

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LOAD PERFORMANCE CURVE

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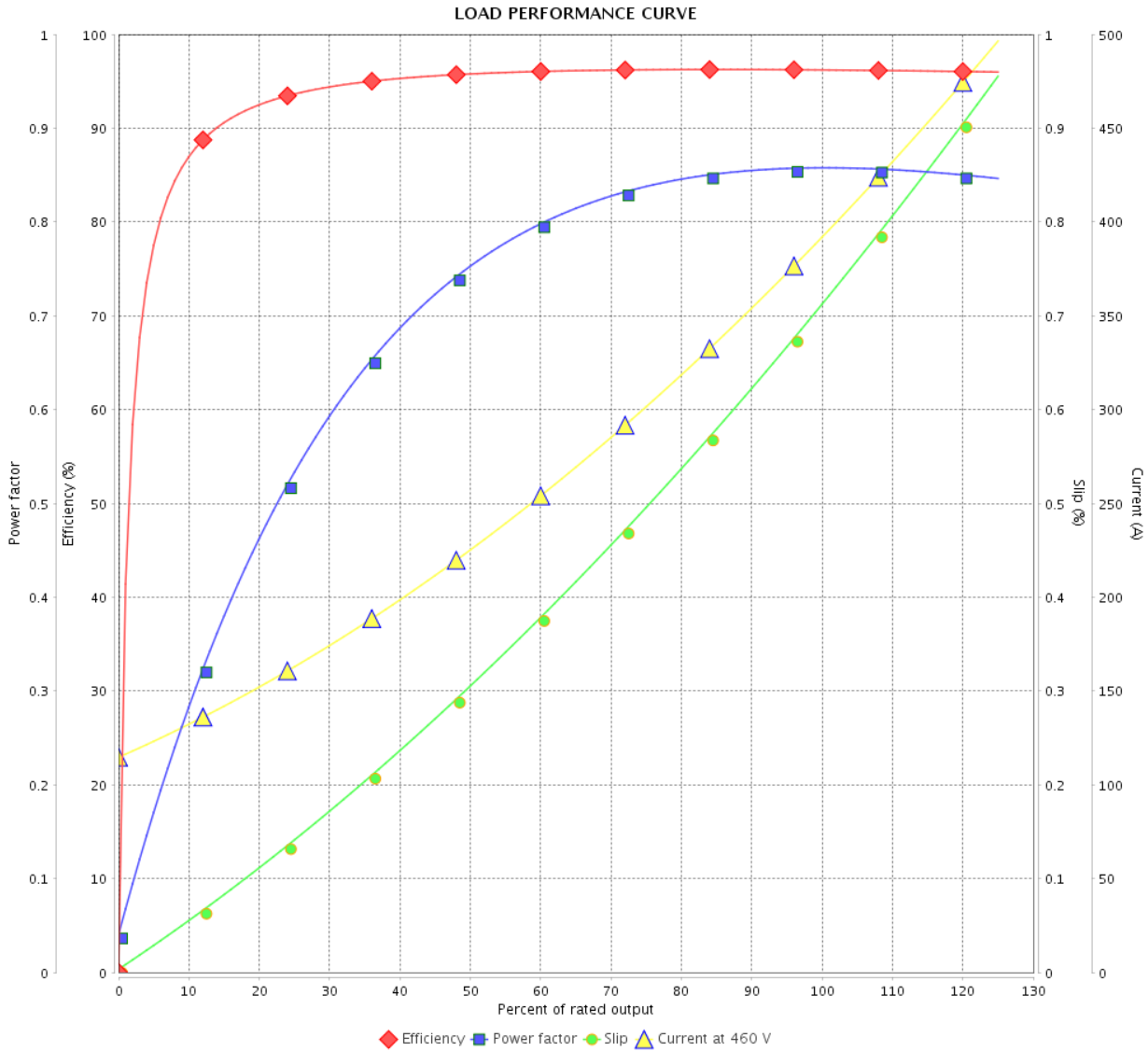


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Product line : NEMA Premium Efficiency Three-Phase

Product code : 14325714

Catalog # : 35018ST3QIERB449T-W2



Performance : 460 V 60 Hz 4P

Rated current : 394 A	Moment of inertia (J) : 131 sq.ft.lb
LRC : 6.9	Duty cycle : Cont.(S1)
Rated torque : 1030 ft.lb	Insulation class : F
Locked rotor torque : 260 %	Service factor : 1.15
Breakdown torque : 229 %	Temperature rise : 80 K
Rated speed : 1787 rpm	Design : B

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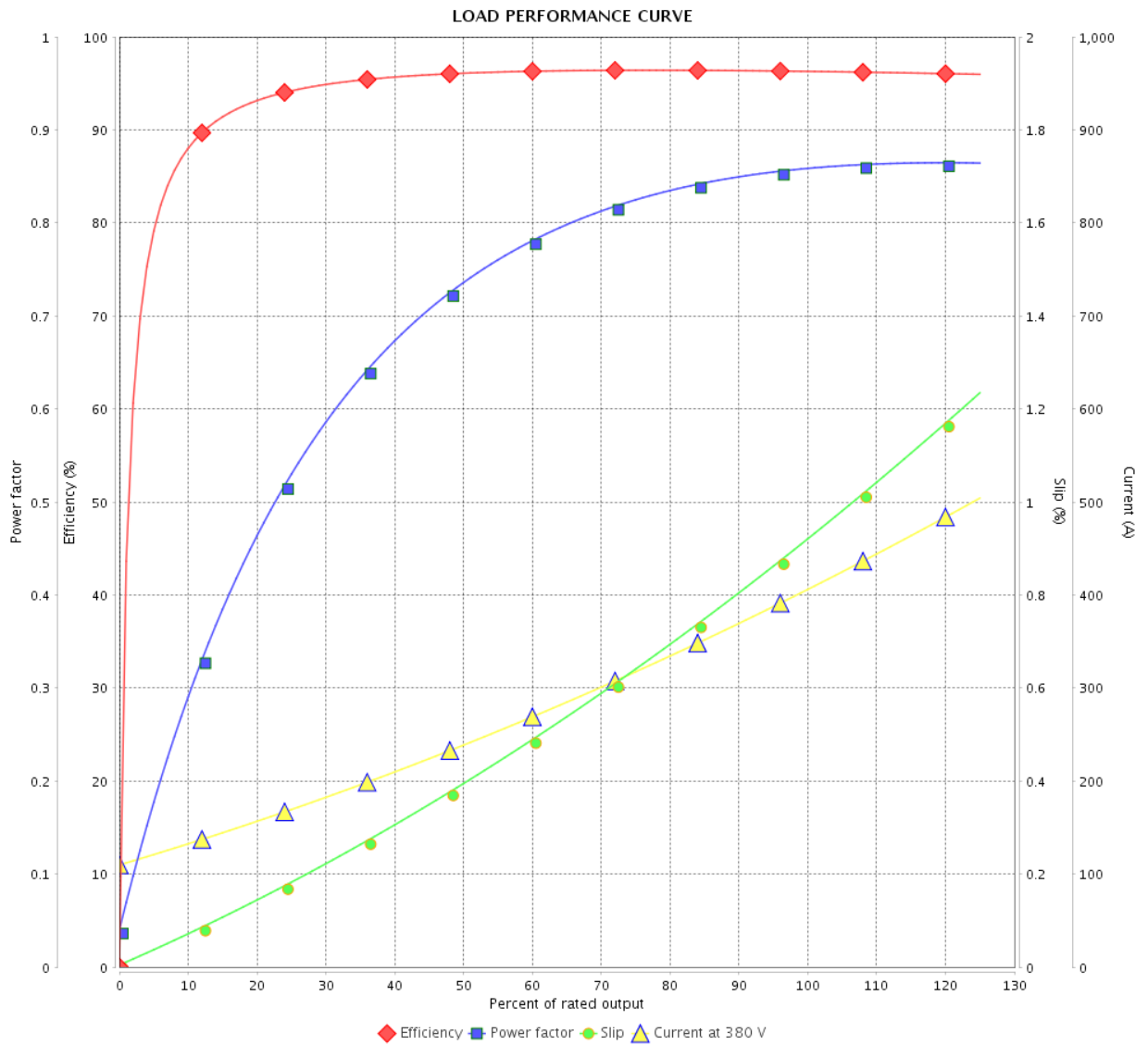


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Performance : 380 V 50 Hz 4P IE3

Rated current : 404 A
 LRC : 7.1
 Rated torque : 1060 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 229 %
 Rated speed : 1486 rpm

Moment of inertia (J) : 131 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
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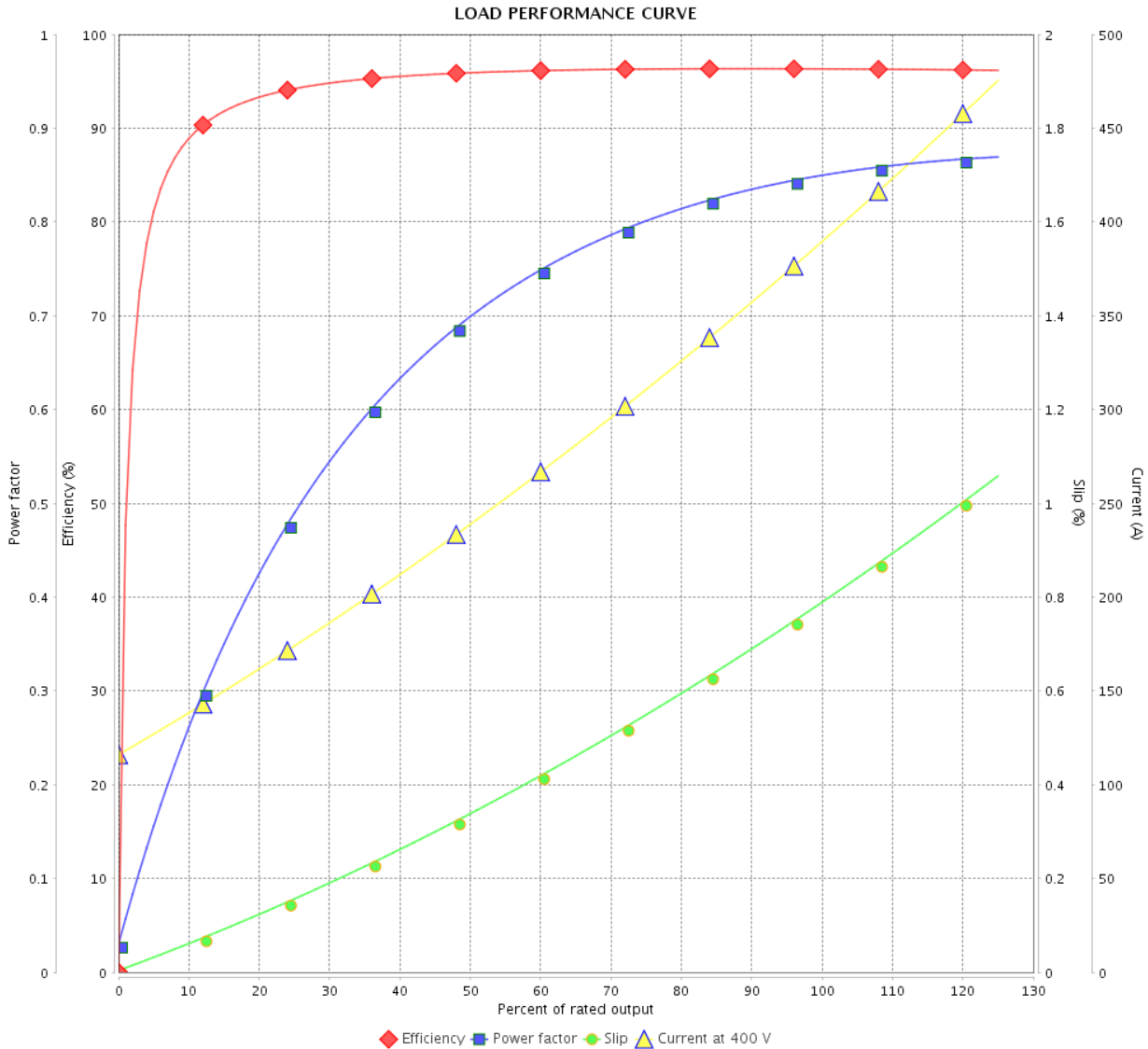


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LRC : 7.9	Duty cycle : Cont.(S1)
Rated torque : 1060 ft.lb	Insulation class : F
Locked rotor torque : 260 %	Service factor : 1.15
Breakdown torque : 250 %	Temperature rise : 80 K
Rated speed : 1488 rpm	Design : B

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LOAD PERFORMANCE CURVE

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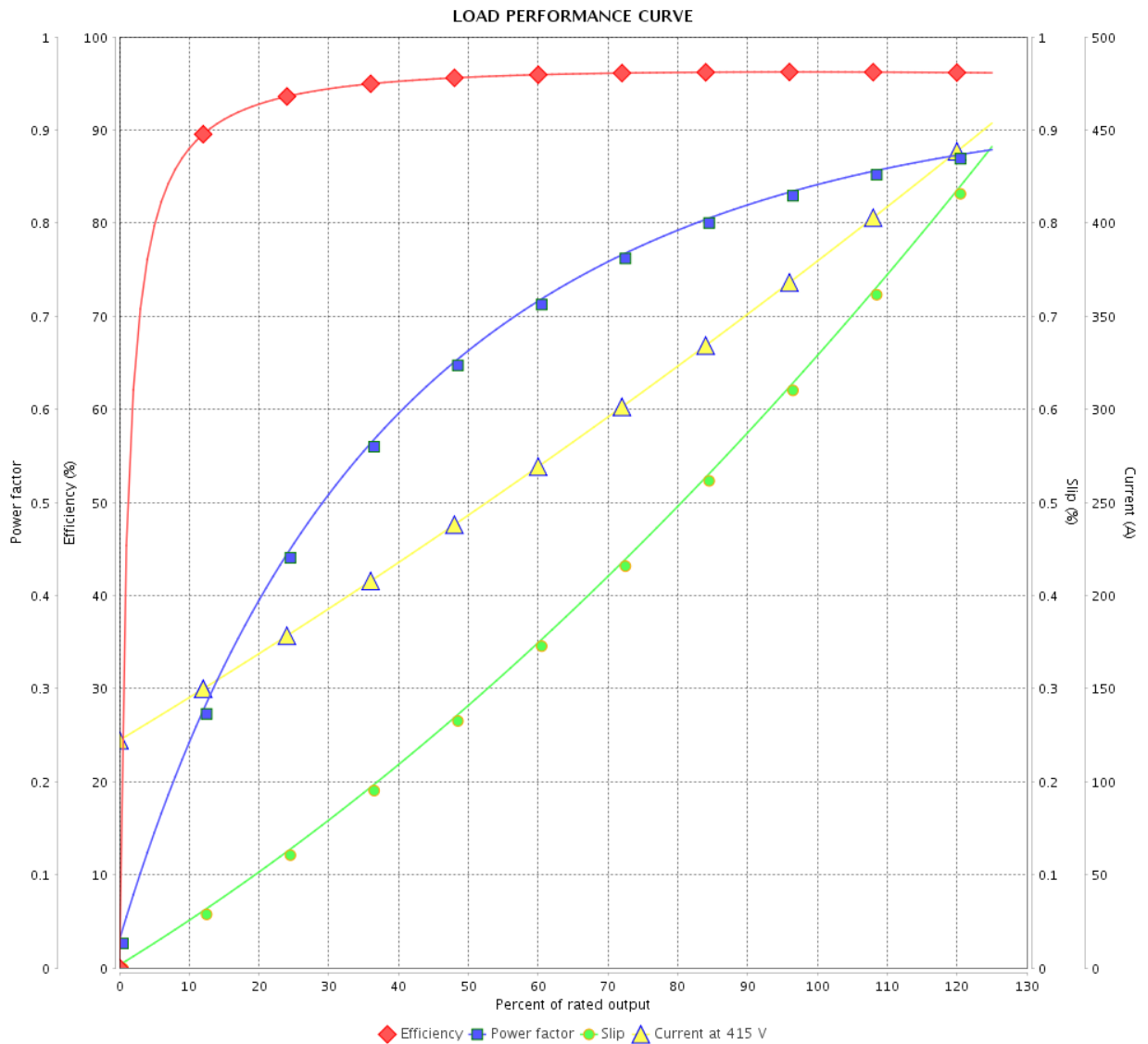


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Performance : 415 V 50 Hz 4P IE3

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Moment of inertia (J) : 131 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
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THERMAL LIMIT CURVE



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Rated speed : 1787 rpm	Design : B

Heating constant

Cooling constant

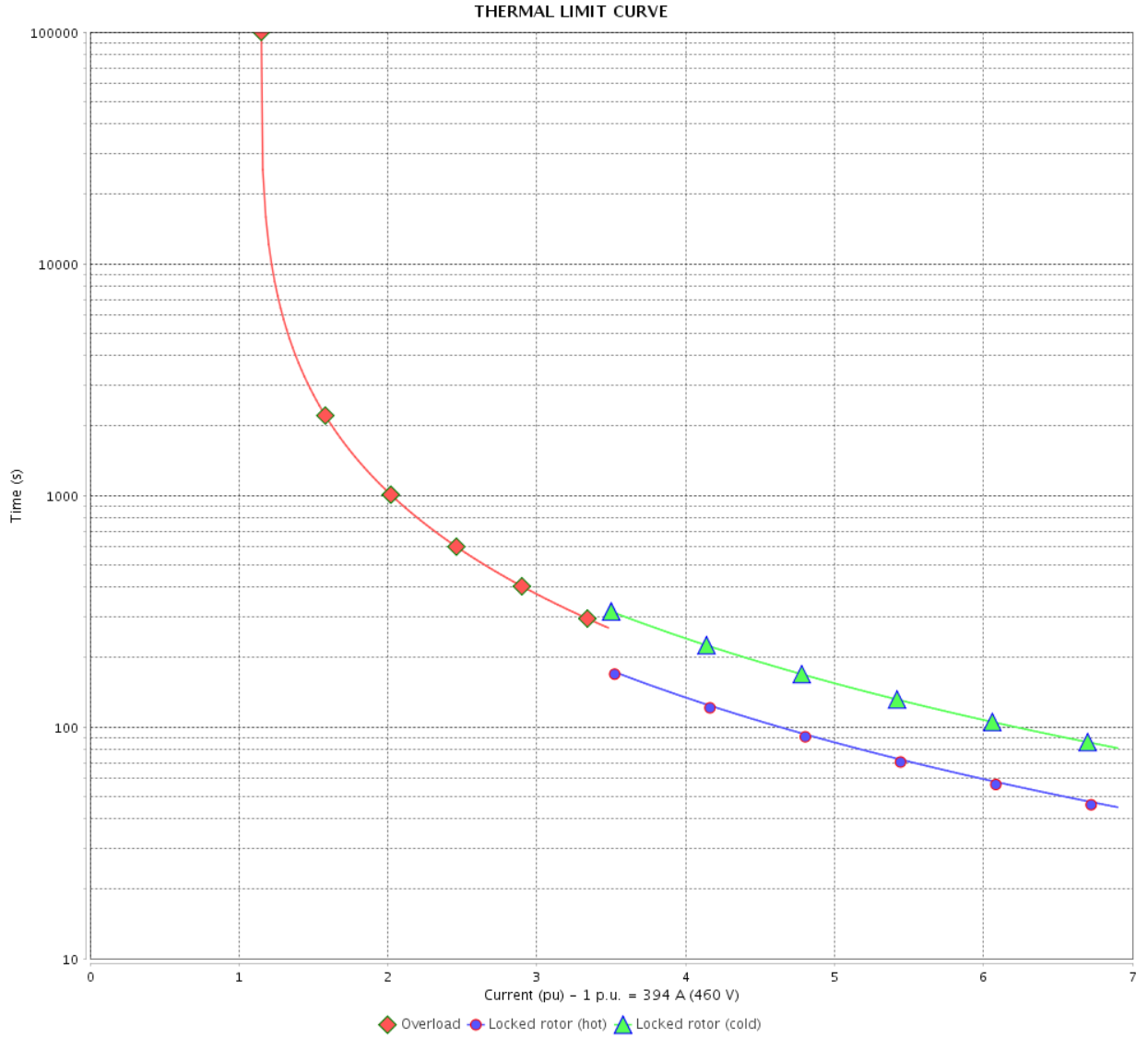
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Locked rotor torque	: 240 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1486 rpm	Design	: B

Heating constant

Cooling constant

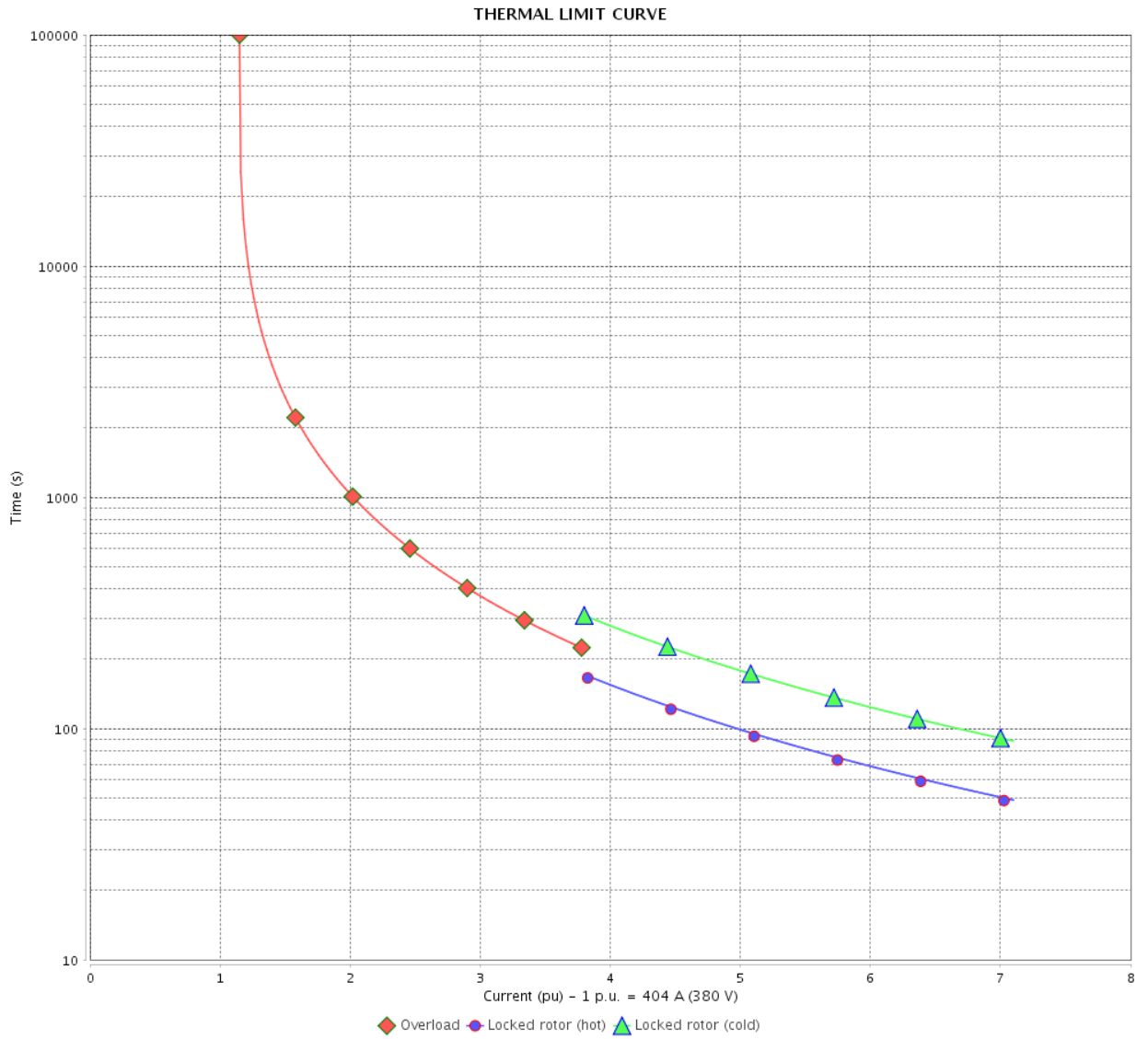
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Locked rotor torque	: 260 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1488 rpm	Design	: B

Heating constant

Cooling constant

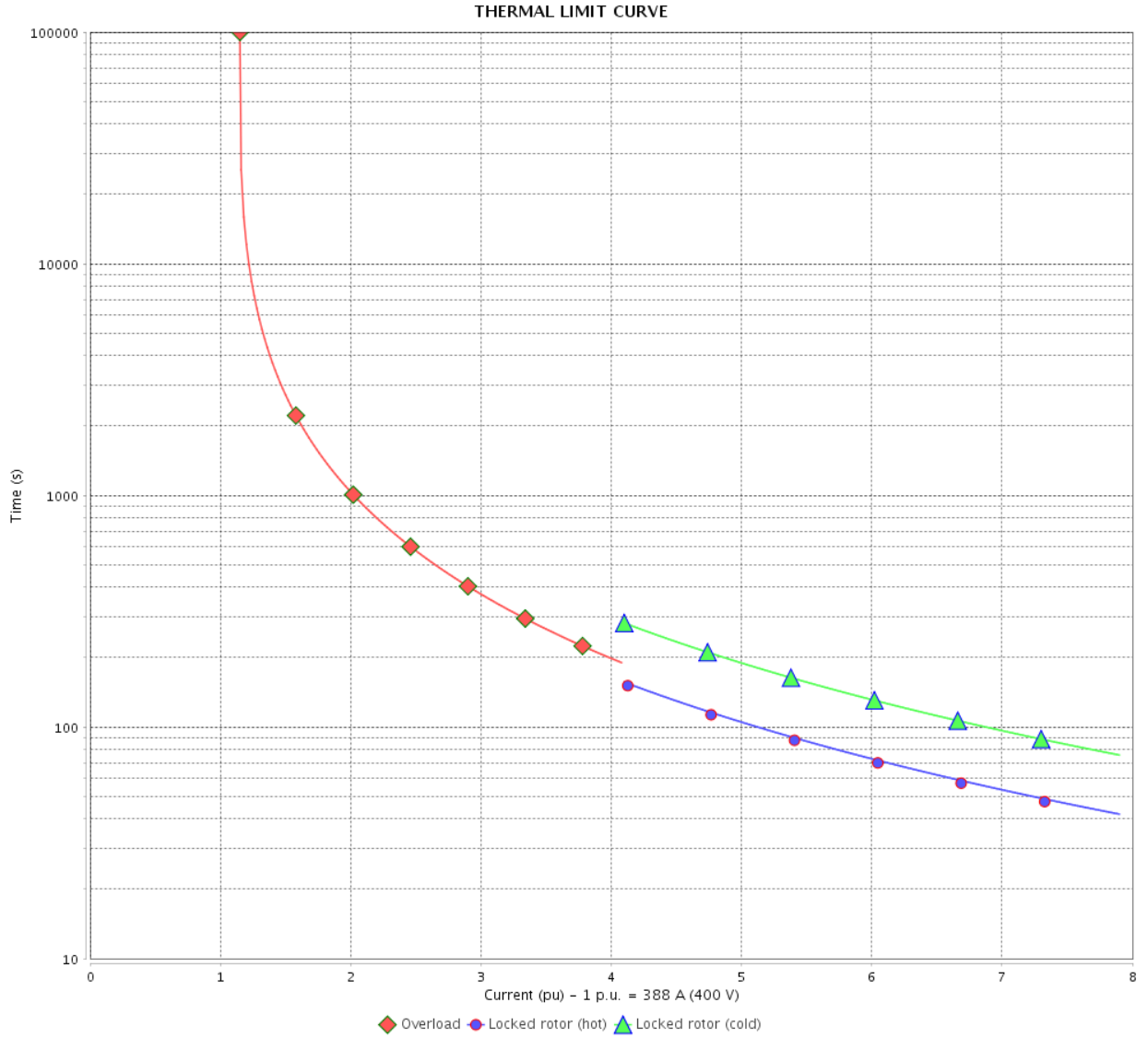
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Three Phase Induction Motor - Squirrel Cage



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LRC	: 8.5	Duty cycle	: Cont.(S1)
Rated torque	: 1060 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.15
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1490 rpm	Design	: B

Heating constant

Cooling constant

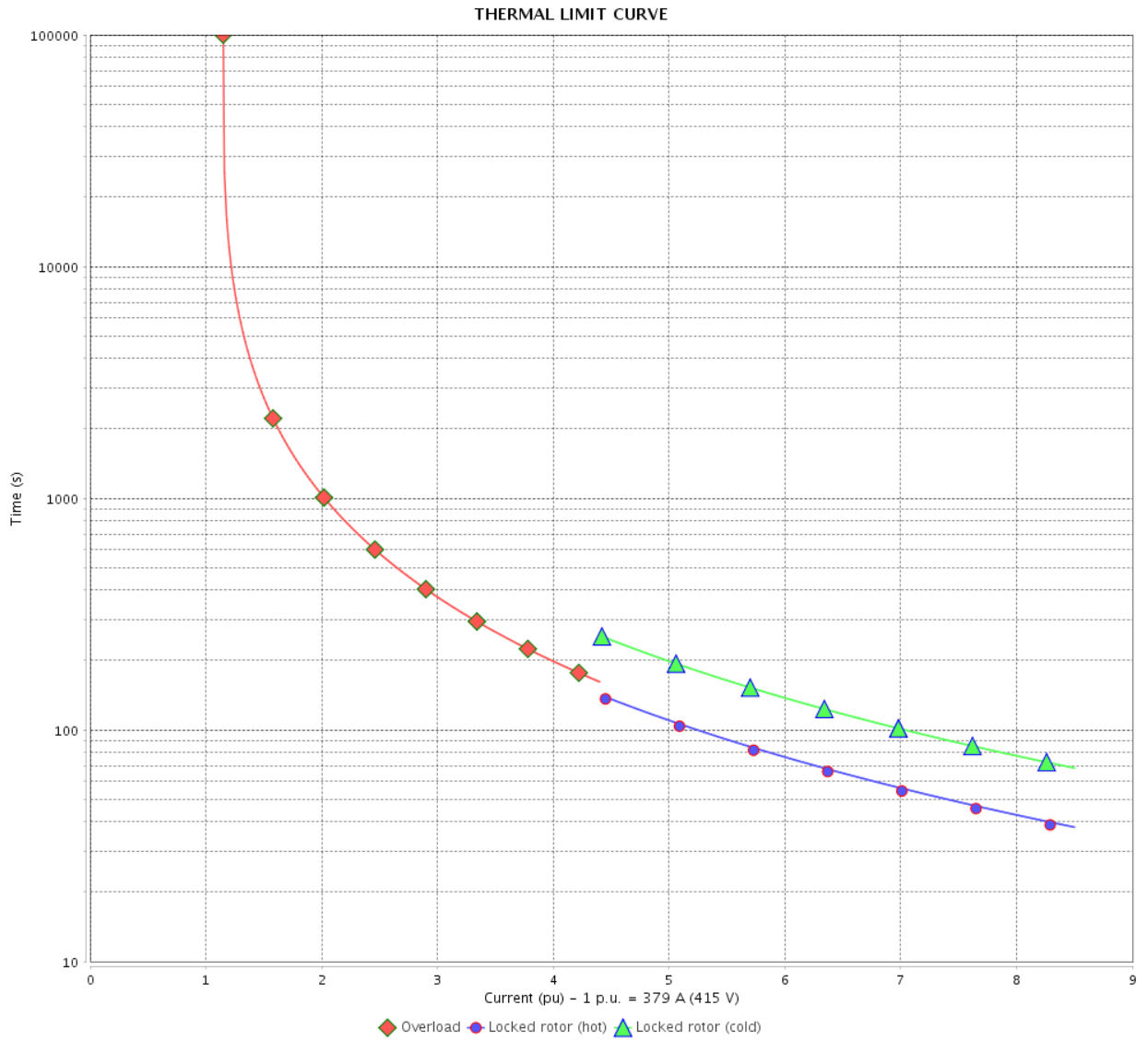
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Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

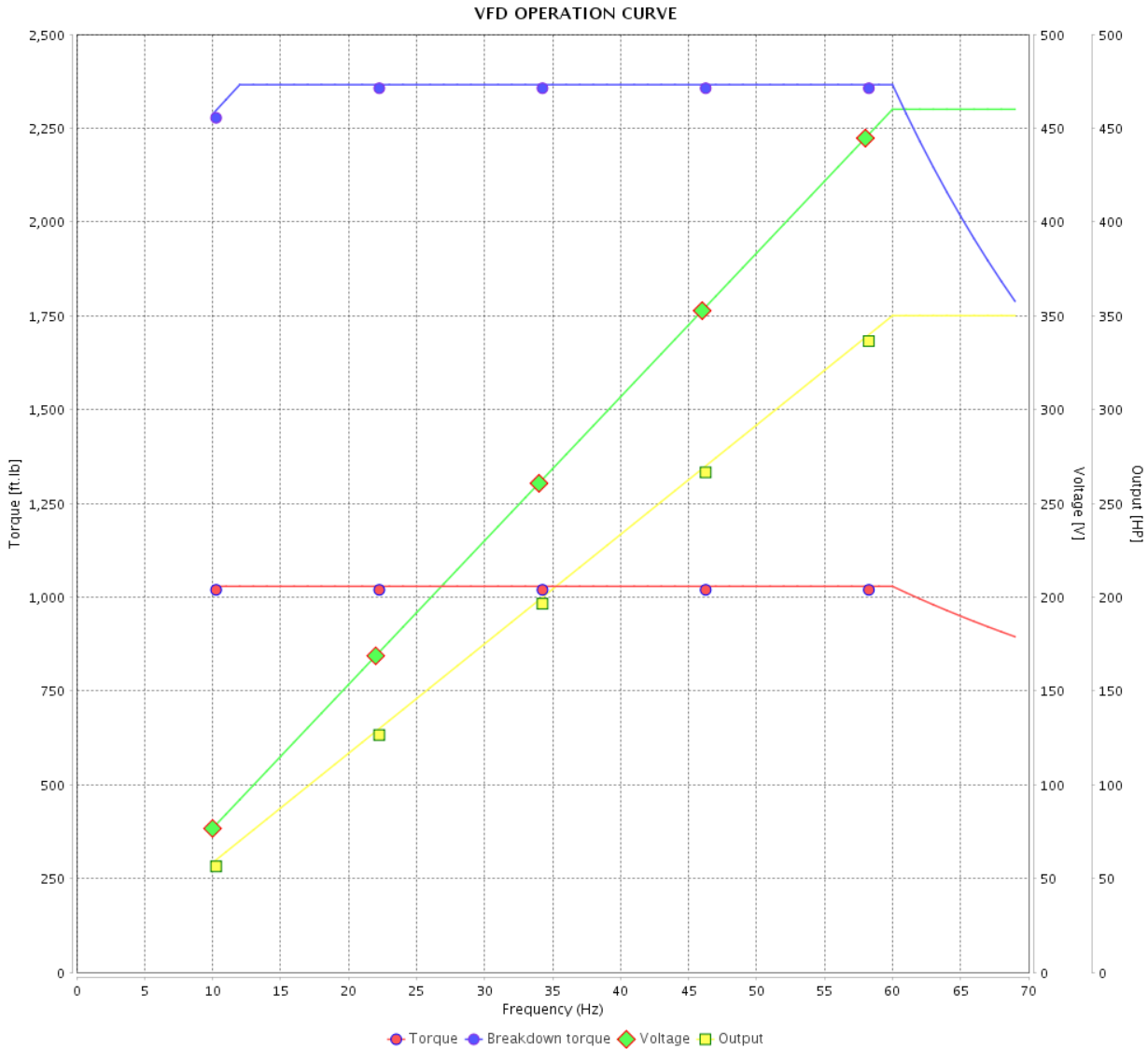


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Performance : 460 V 60 Hz 4P

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Rated torque	: 1030 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1787 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

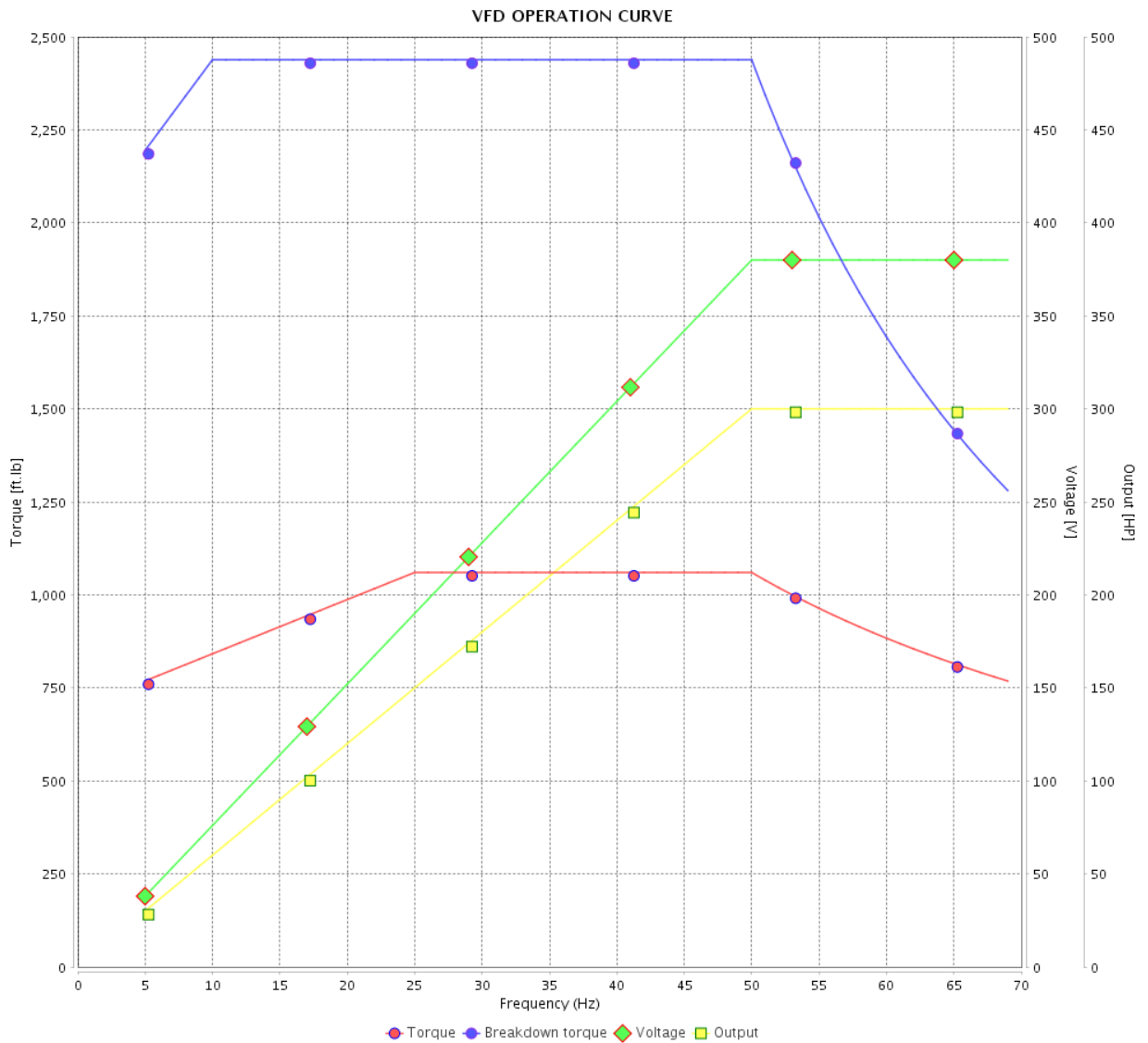


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Performance : 380 V 50 Hz 4P IE3

Rated current : 404 A
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 Locked rotor torque : 240 %
 Breakdown torque : 229 %
 Rated speed : 1486 rpm

Moment of inertia (J) : 131 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



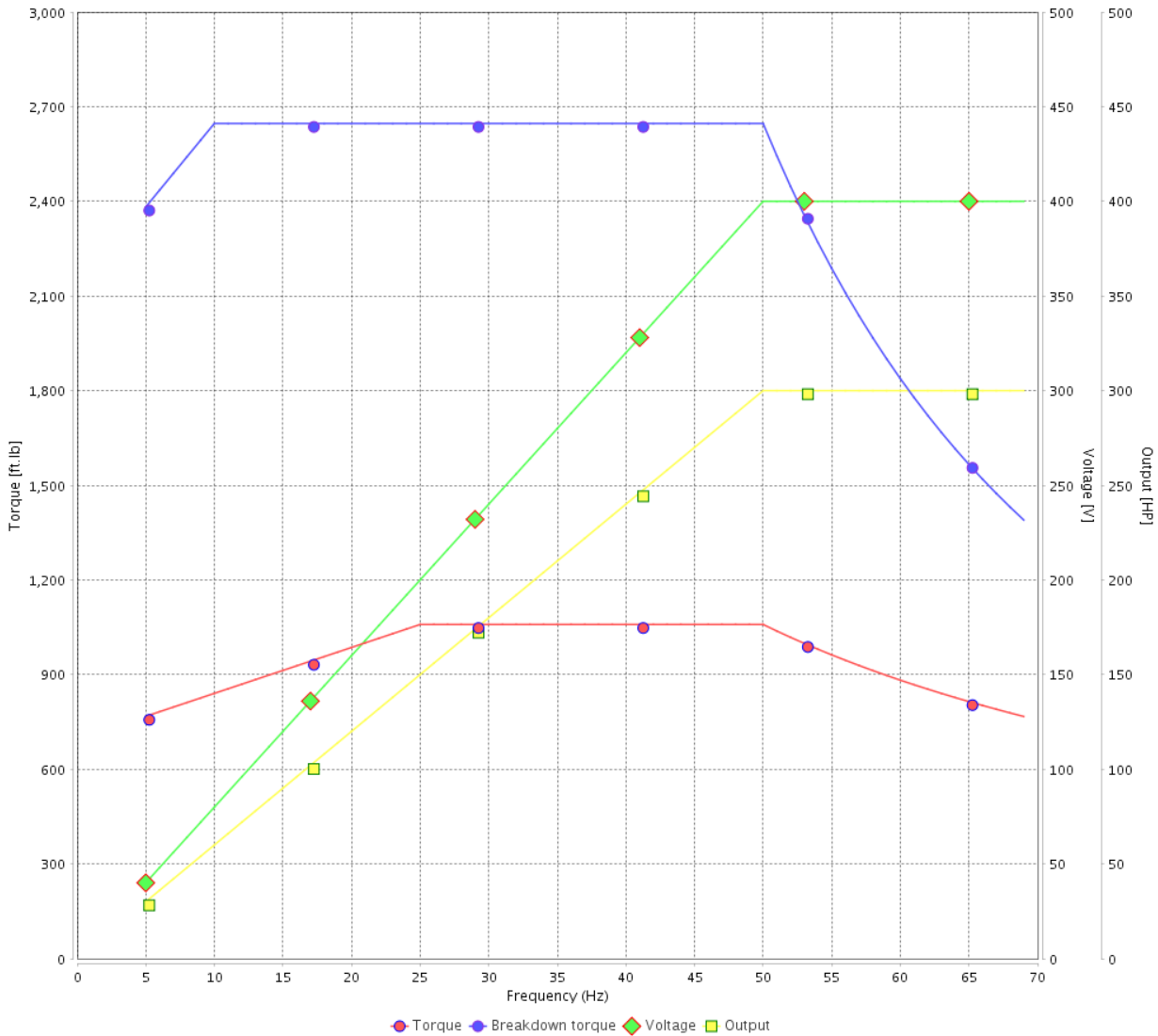
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VFD OPERATION CURVE



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Rated current	: 388 A	Moment of inertia (J)	: 131 sq.ft.lb
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Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1488 rpm	Design	: B

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VFD OPERATION CURVE

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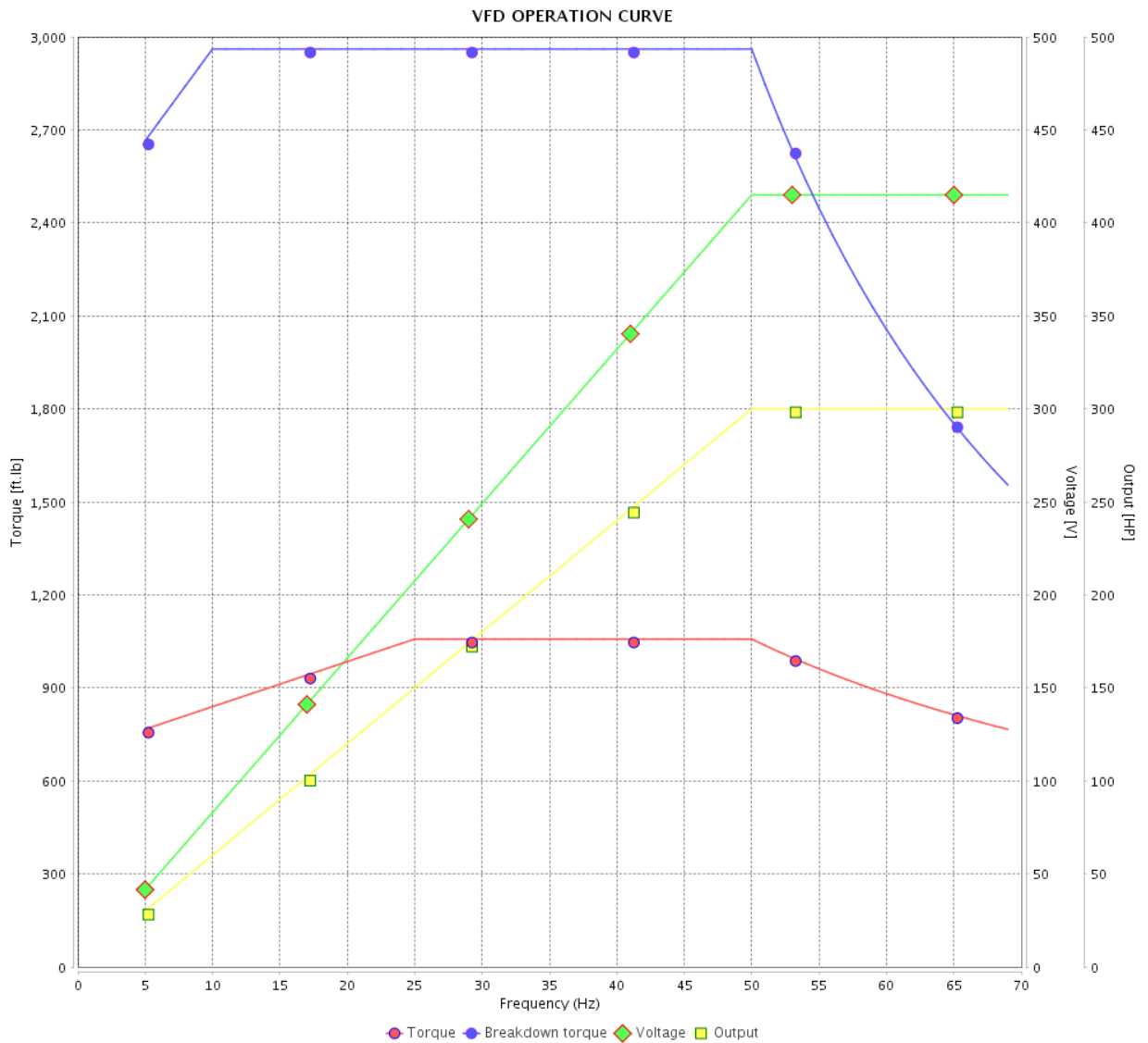


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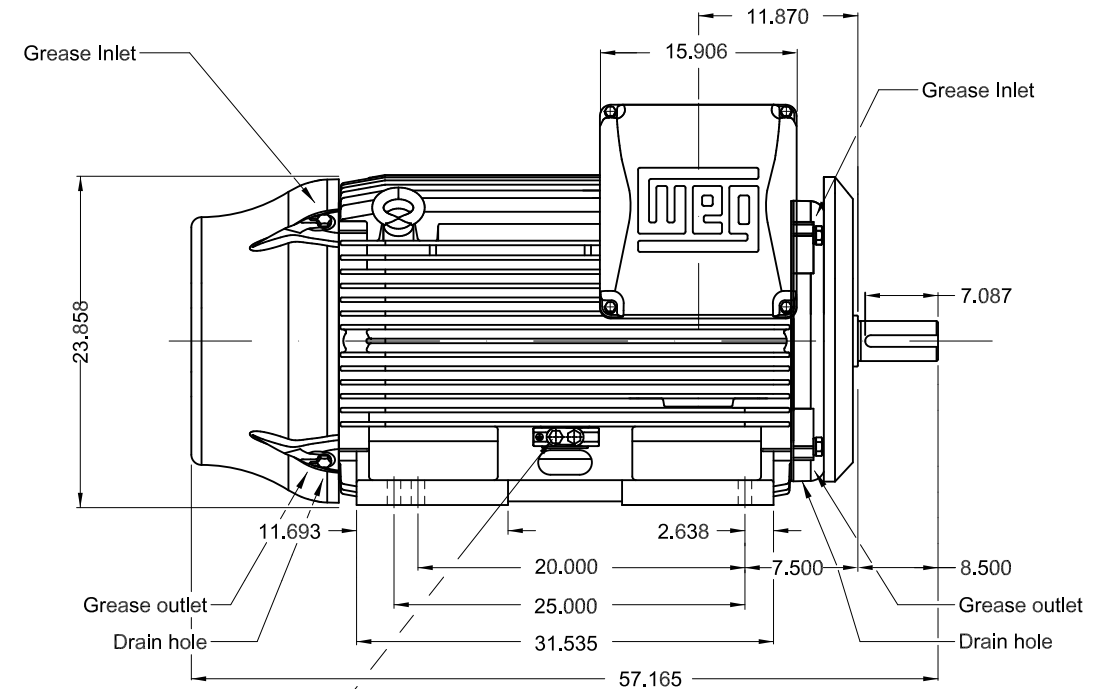
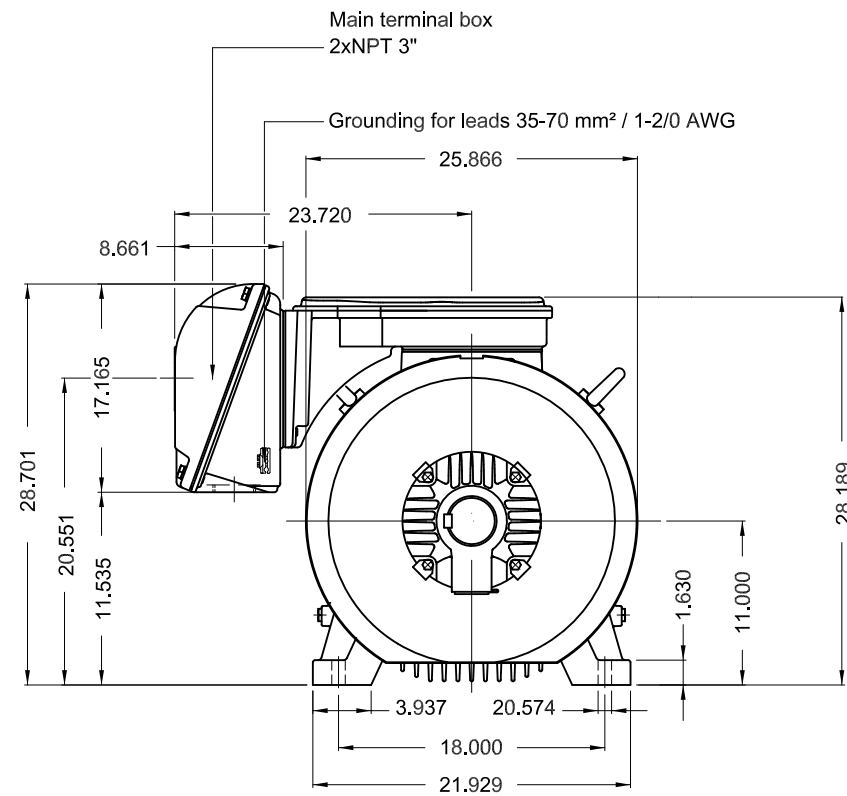


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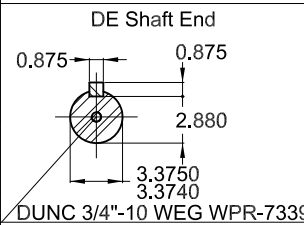
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Grounding for leads 25-185 mm² / 3AWG-350MCM

350 HP 04 Poles 60 Hz A

- DE roller bearing
- Shaft locking device
- NDE endshield with electrically insulated bearing hub
- Drive-End Air Deflector
- Color RAL 5009
- Painting plan 202E
- Mounting NEMA F-1
- Mounting B3R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR IEEE 841 W22 PREM. EFF. FRAME L447/9T IP55 TEFC					
CHECKED							
RELEASED							
REL DT.							
		WMO Jaragua do Sul	Product Engineering	SHEET 1 / 1		<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <p>PREVIEW</p> <p>WDD</p> </div> <div style="text-align: center;"> </div> </div>	