

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :				
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	11439856	
		Catalog # :	10036XT3E405TS	
Frame	: 404/5TS	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	: 1189 lb	
Protection degree	: IP55	Moment of inertia (J)	: 13.2 sq.ft.lb	
Design	: B			
Output [HP]	100	75	75	75
Poles	2	2	2	2
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	220/110	98.3	94.4	91.0
L. R. Amperes [A]	1430/715	649	699	728
LRC [A]	6.5x(Code G)	6.6x(Code G)	7.4x(Code H)	8.0x(Code H)
No load current [A]	50.0/25.0	26.0	27.0	28.0
Rated speed [RPM]	3550	2955	2960	2965
Slip [%]	1.39	1.50	1.33	1.17
Rated torque [ft.lb]	148	133	133	133
Locked rotor torque [%]	250	200	220	240
Breakdown torque [%]	280	280	310	330
Service factor	1.15	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	37s (cold) 21s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)
Noise level ²	85.0 dB(A)	82.0 dB(A)	82.0 dB(A)	82.0 dB(A)
Efficiency (%)	25%			
	50%	93.6	93.6	93.6
	75%	95.0	94.0	94.5
	100%	95.0	94.5	94.5
Power Factor	25%			
	50%	0.85	0.84	0.82
	75%	0.89	0.88	0.87
	100%	0.90	0.90	0.89
Bearing type	: <u>Drive end</u> 6314 C3 <u>Non drive end</u> 6314 C3	Foundation loads		
Sealing	: Oil Seal Lip Seal	Max. traction	: 720 lb	
Lubrication interval	: 3604 h 3604 h	Max. compression	: 1909 lb	
Lubricant amount	: 27 g 27 g			
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V 244A SF 1.00 SFA 244A				
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	Thermostat - 2 wires	1 x Phase	155 °C

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TORQUE AND CURRENT VS SPEED CURVE



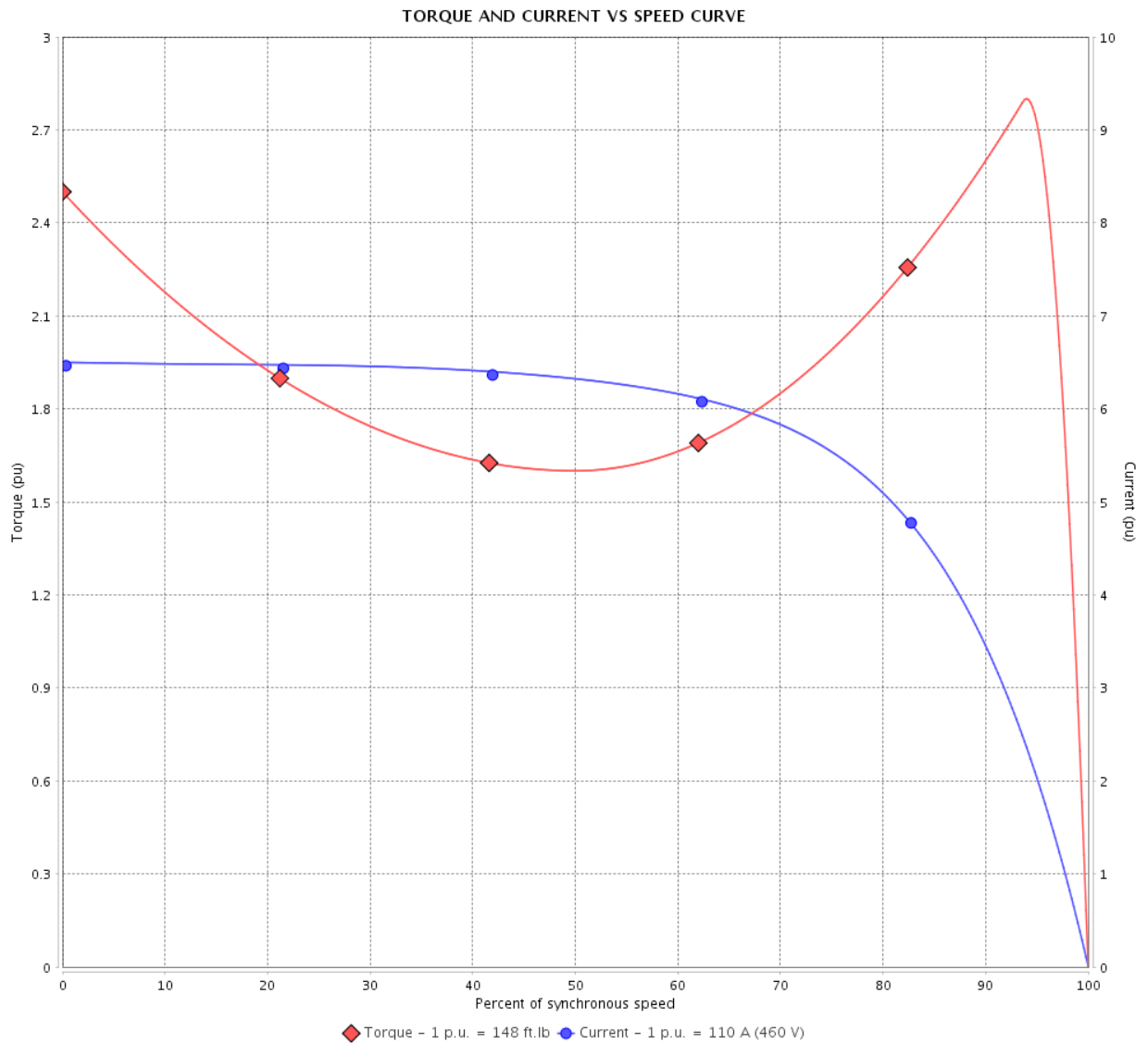
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439856

Catalog # : 10036XT3E405TS



Performance : 230/460 V 60 Hz 2P

Rated current : 220/110 A
 LRC : 6.5
 Rated torque : 148 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 280 %
 Rated speed : 3550 rpm

Moment of inertia (J) : 13.2 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 37s (cold) 21s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



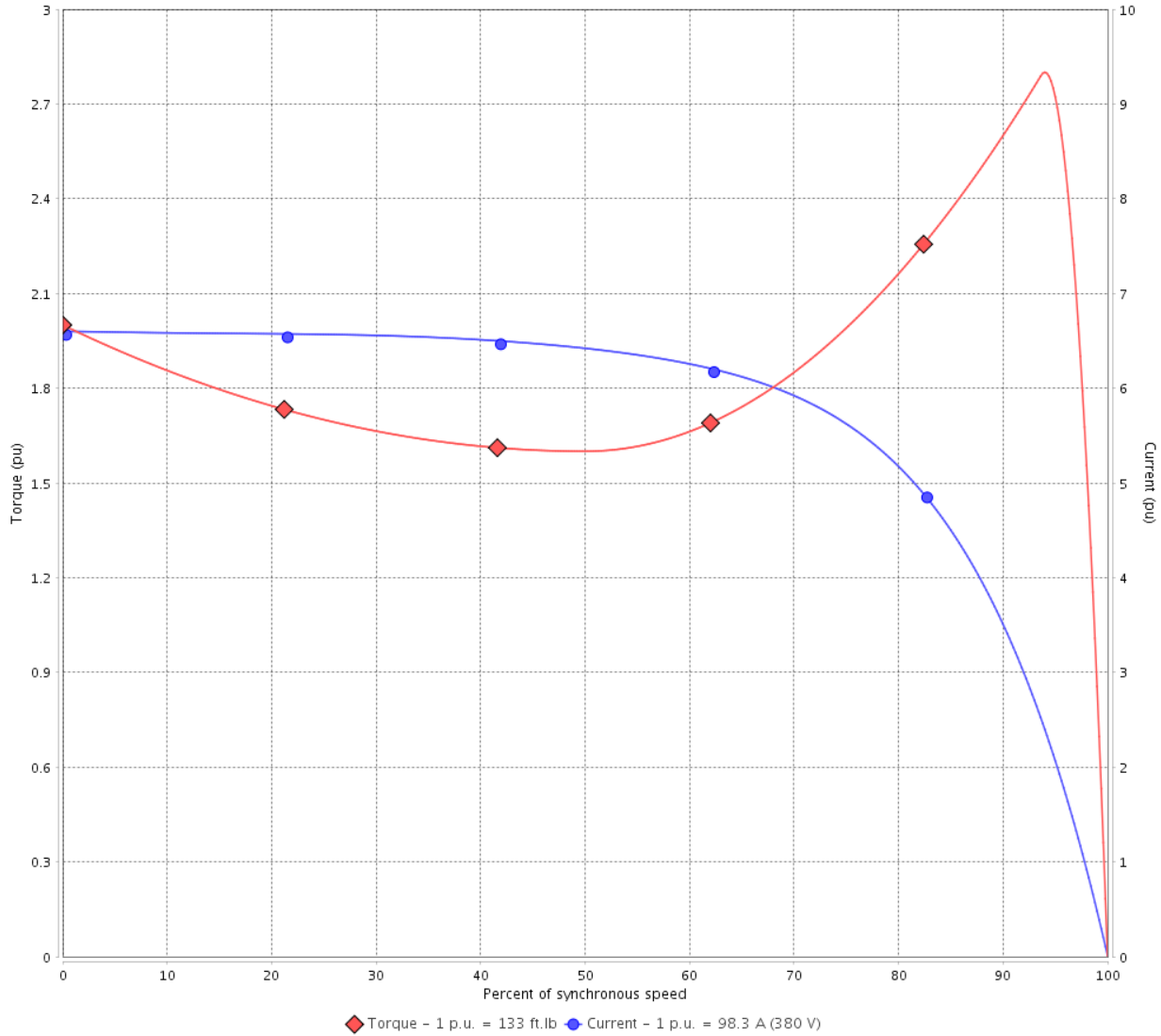
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439856

Catalog # : 10036XT3E405TS

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 2P IE3

Rated current	: 98.3 A	Moment of inertia (J)	: 13.2 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 133 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 2955 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



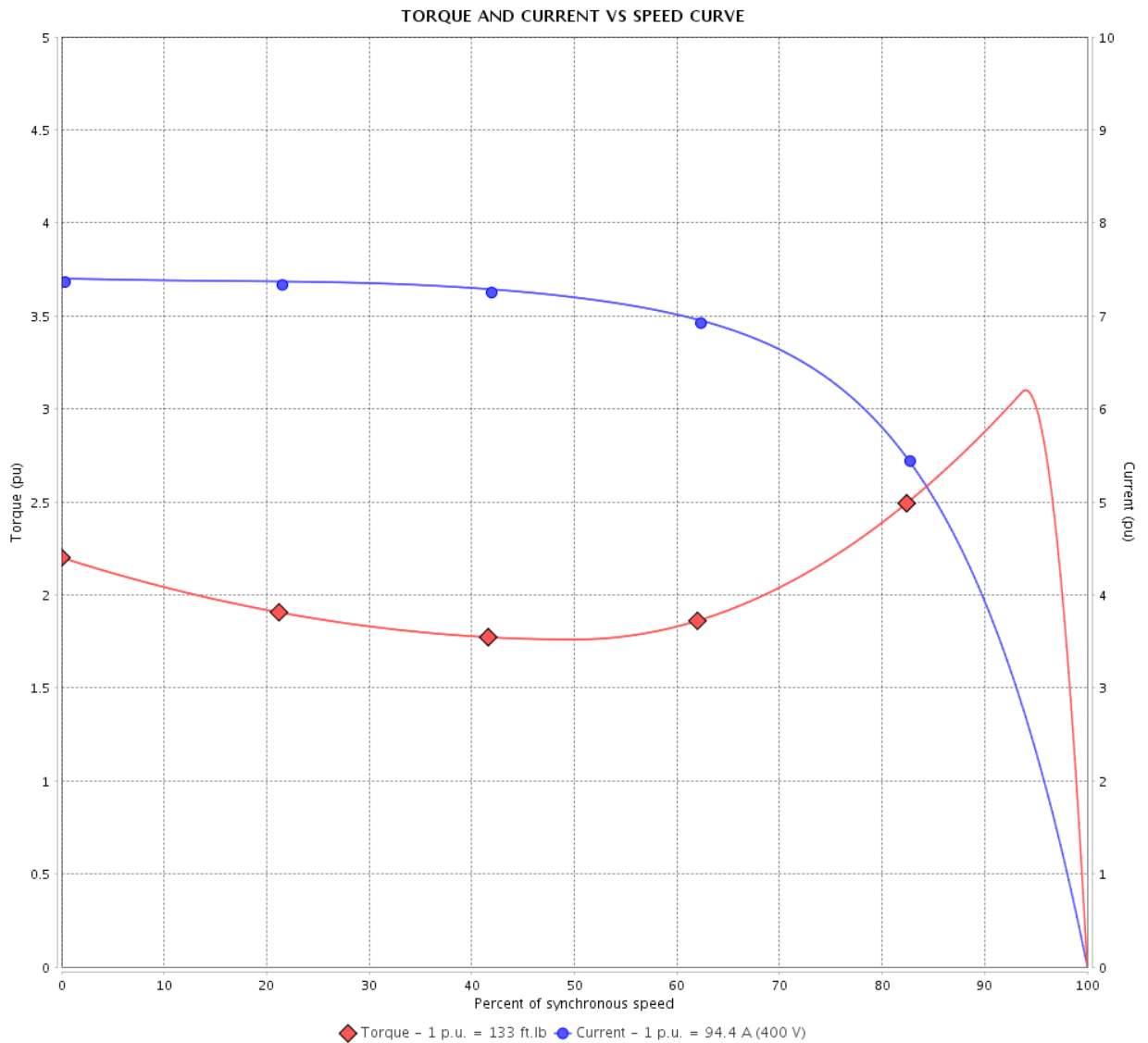
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439856

Catalog # : 10036XT3E405TS



Performance : 400 V 50 Hz 2P IE3

Rated current : 94.4 A
 LRC : 7.4
 Rated torque : 133 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 310 %
 Rated speed : 2960 rpm

Moment of inertia (J) : 13.2 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 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



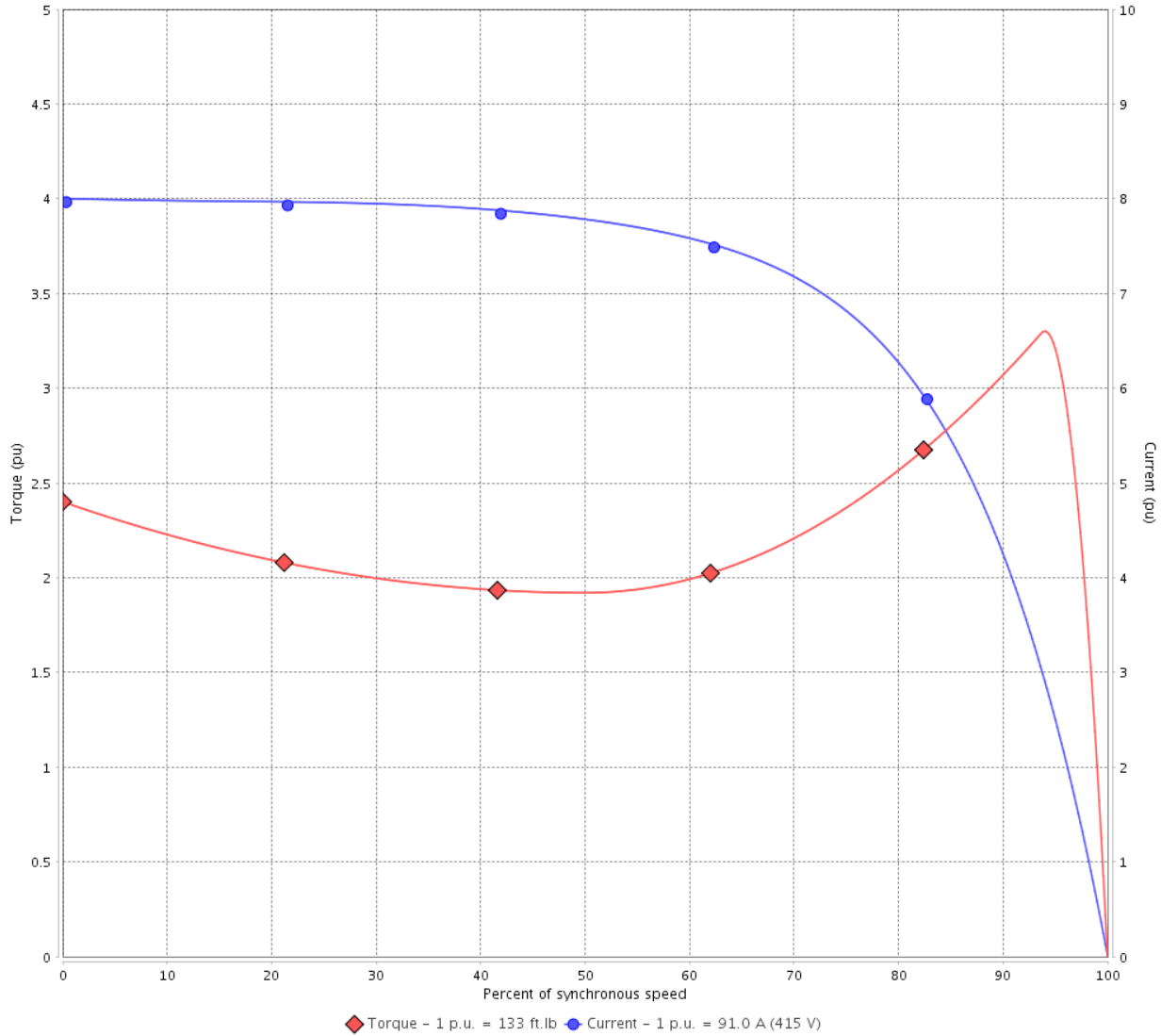
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 2P IE3

Rated current	: 91.0 A	Moment of inertia (J)	: 13.2 sq.ft.lb
LRC	: 8.0	Duty cycle	: Cont.(S1)
Rated torque	: 133 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 2965 rpm	Design	: B

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

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LOAD PERFORMANCE CURVE

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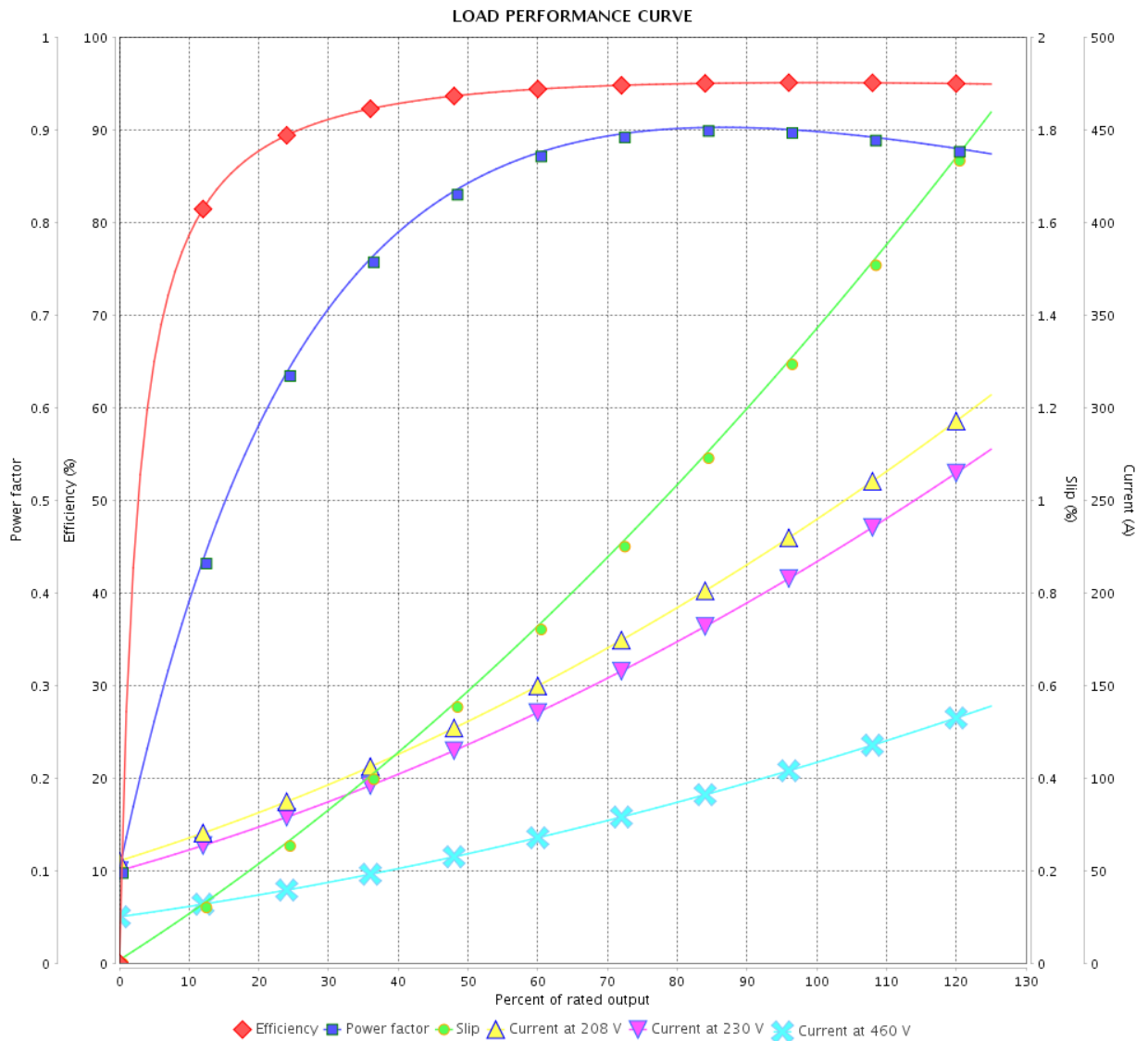


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Product line : NEMA Premium Efficiency Three-Phase

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Performance : 230/460 V 60 Hz 2P

Rated current : 220/110 A
 LRC : 6.5
 Rated torque : 148 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 280 %
 Rated speed : 3550 rpm

Moment of inertia (J) : 13.2 sq.ft.lb
 Duty cycle : Cont.(S1)
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 Service factor : 1.15
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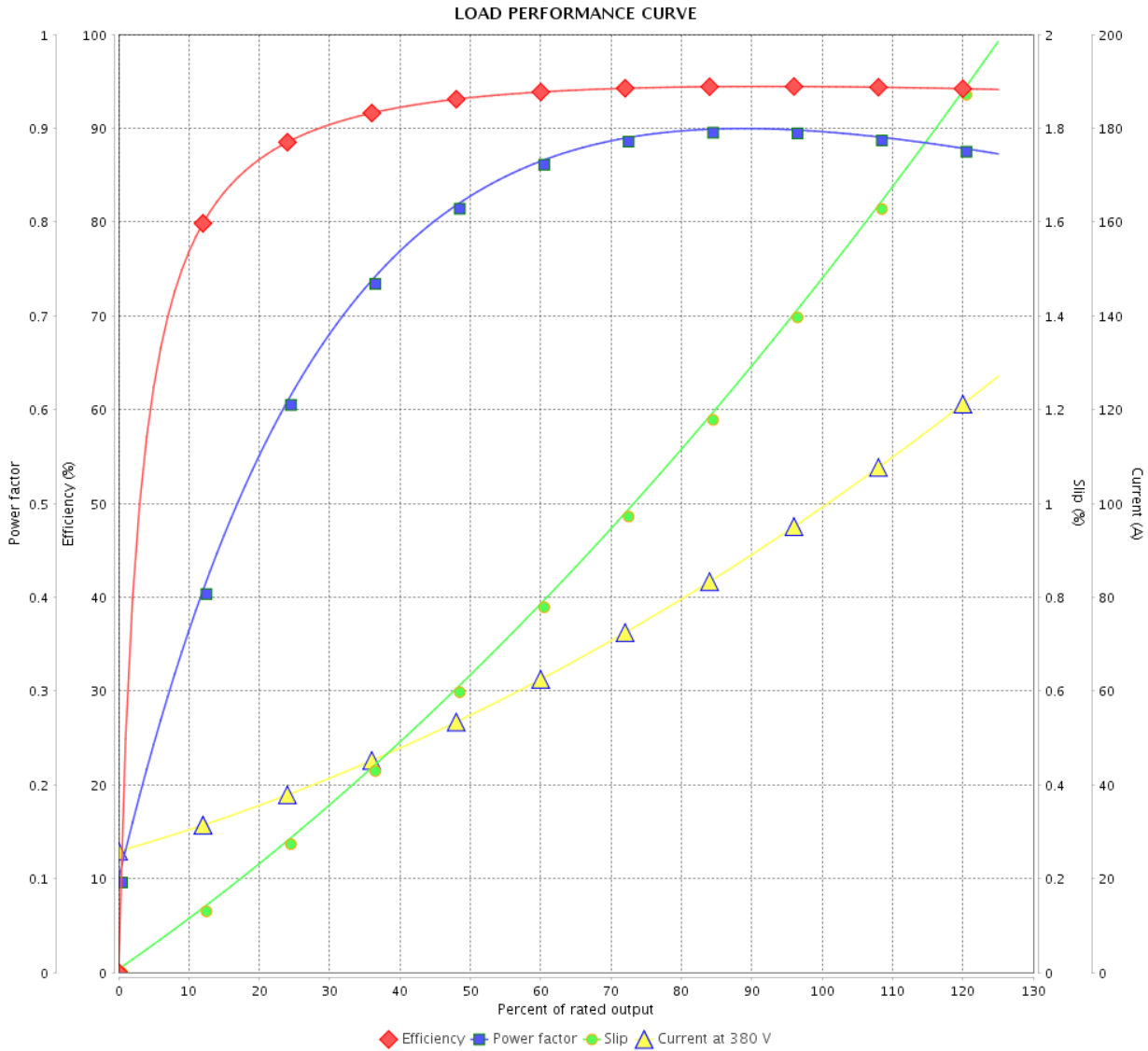


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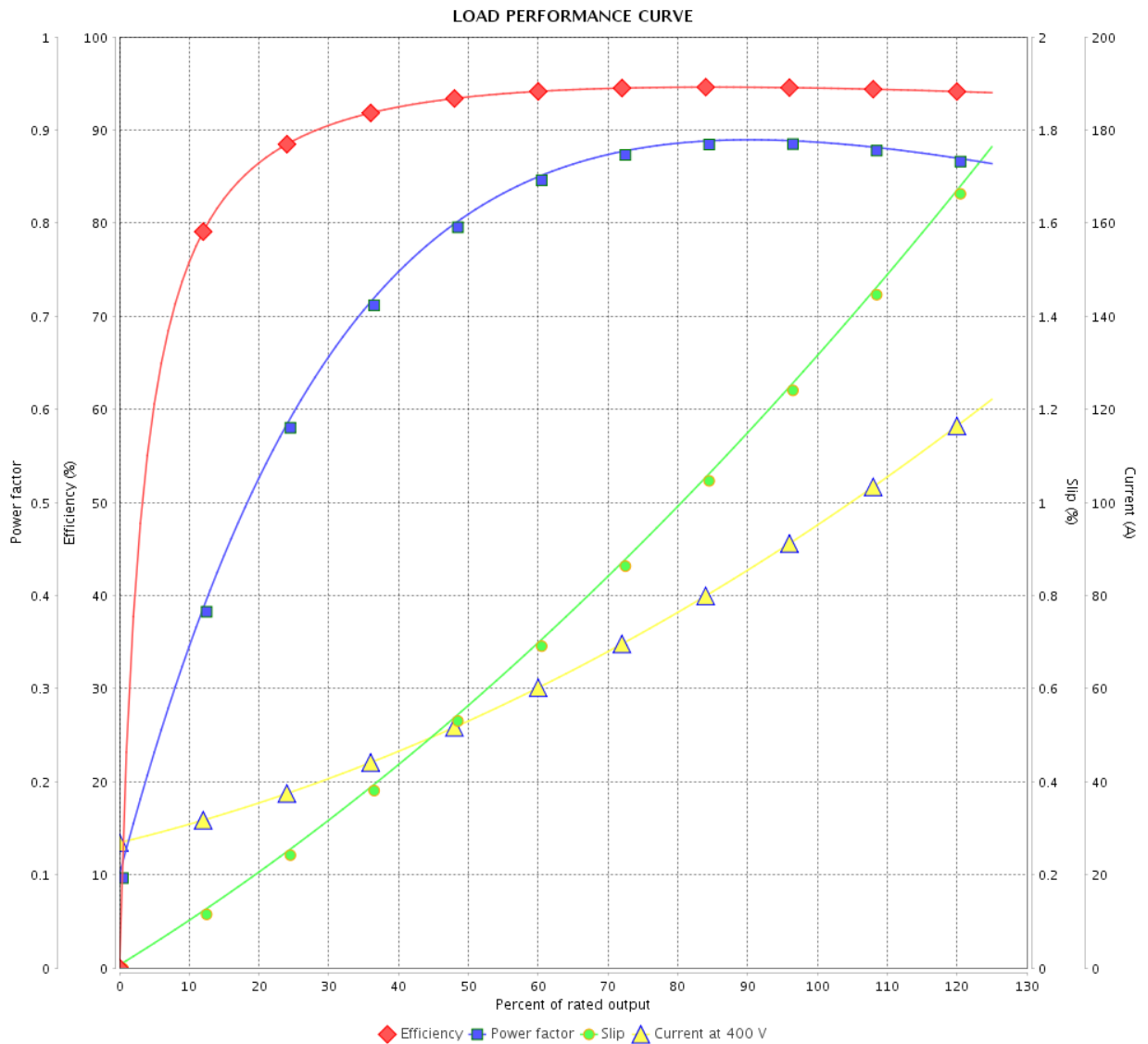


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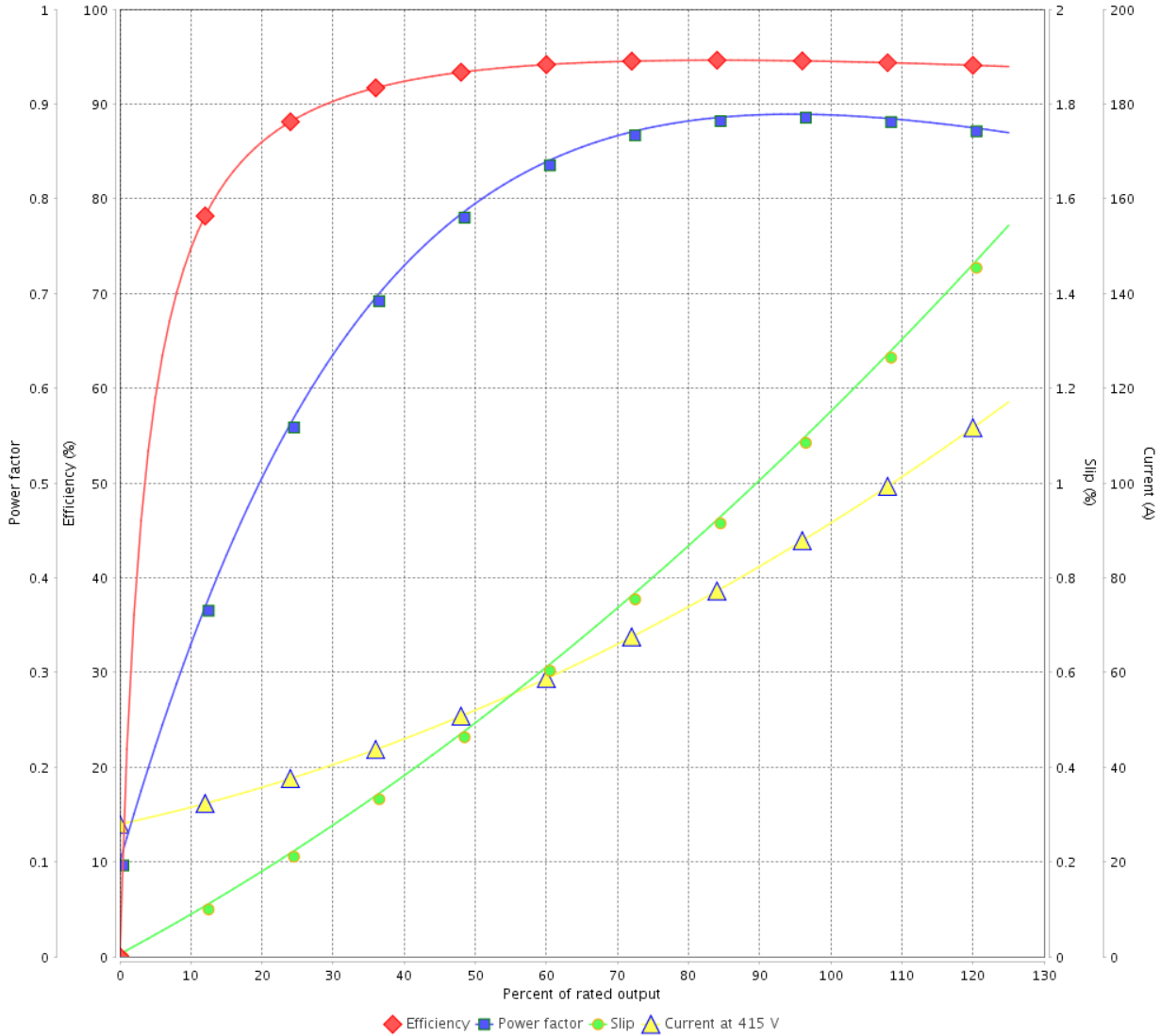
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THERMAL LIMIT CURVE



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Rated speed : 3550 rpm	Design : B

Heating constant

Cooling constant

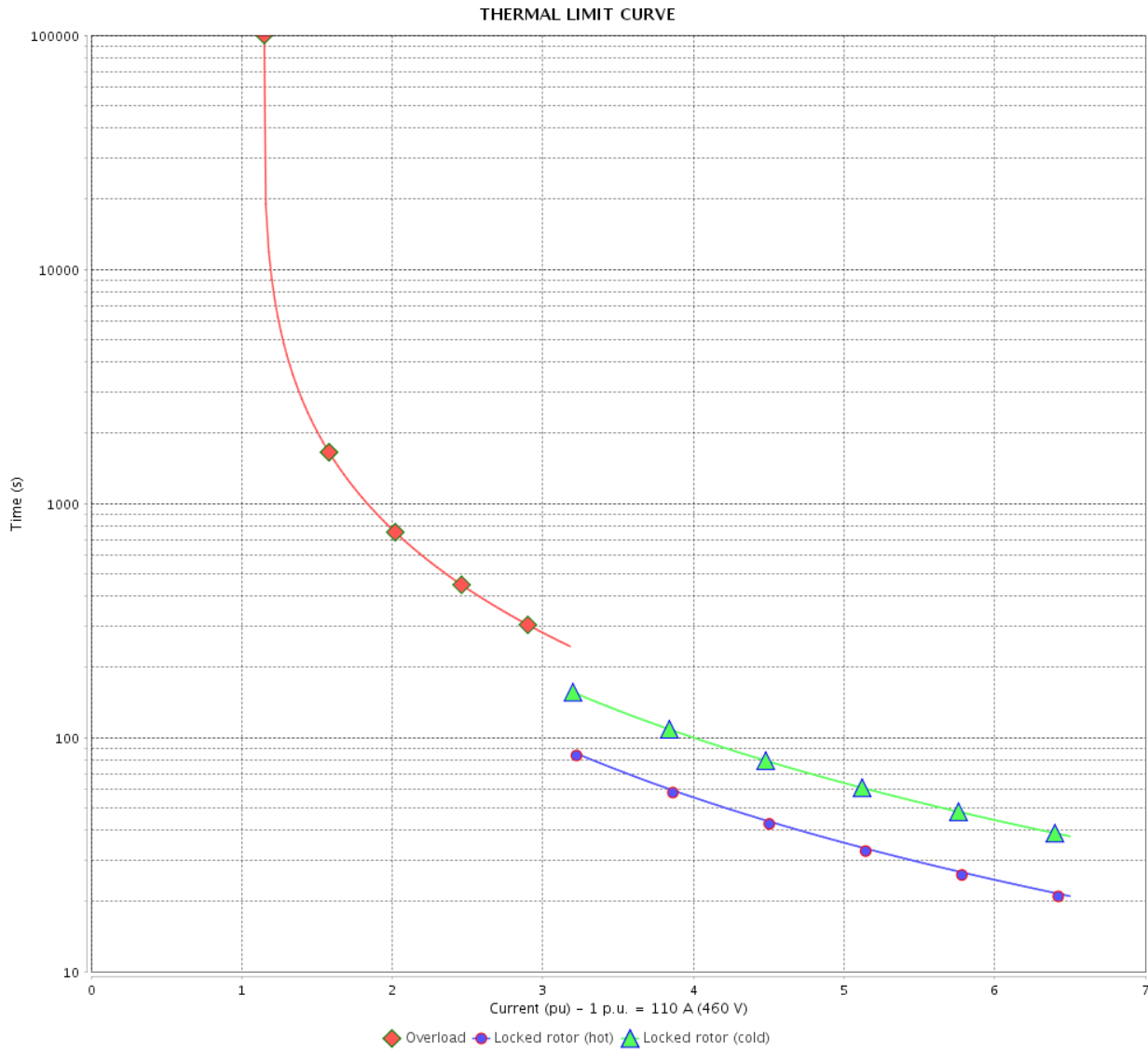
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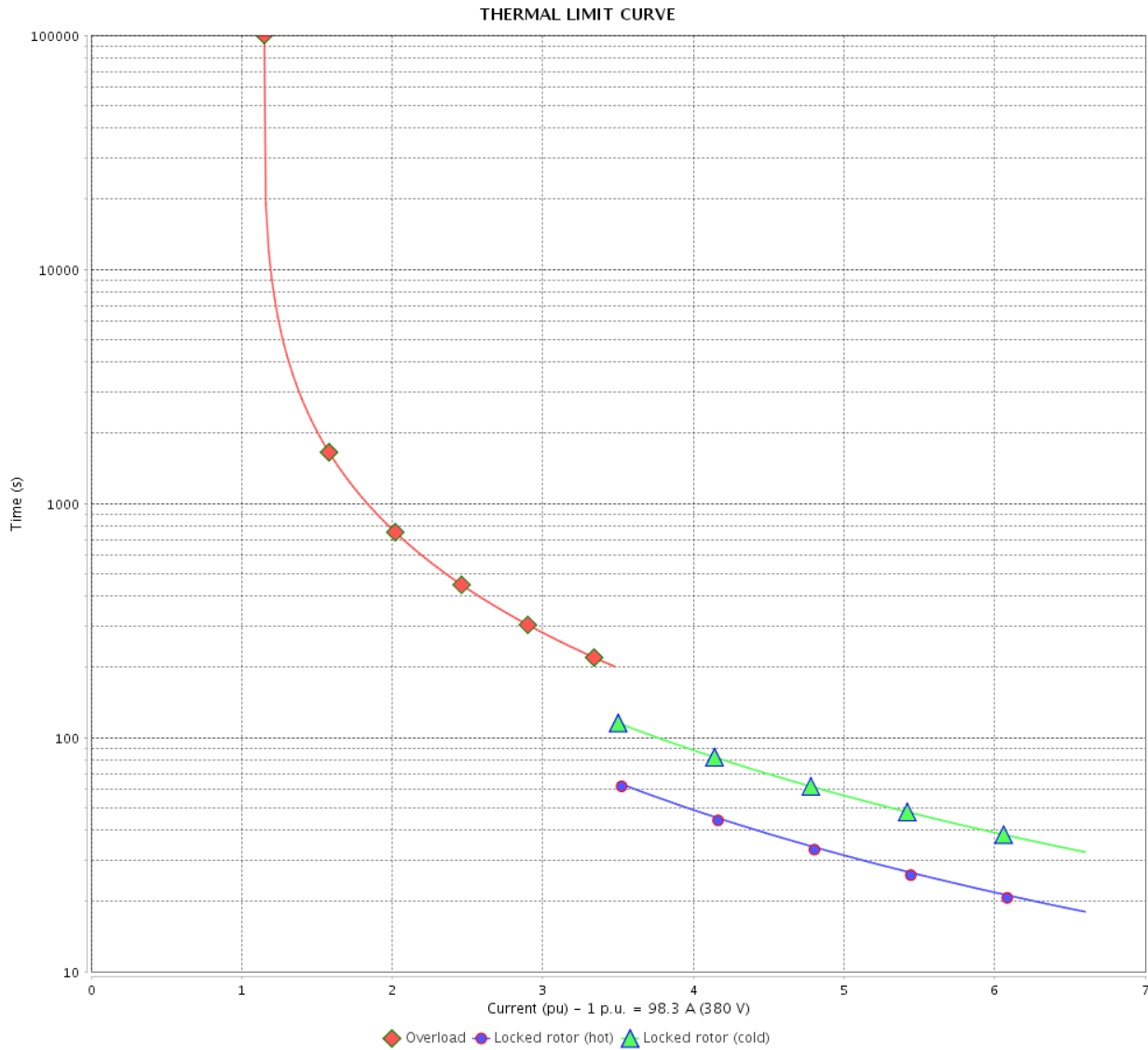
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LRC : 7.4	Duty cycle : Cont.(S1)
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Locked rotor torque : 220 %	Service factor : 1.00
Breakdown torque : 310 %	Temperature rise : 80 K
Rated speed : 2960 rpm	Design : B

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Cooling constant

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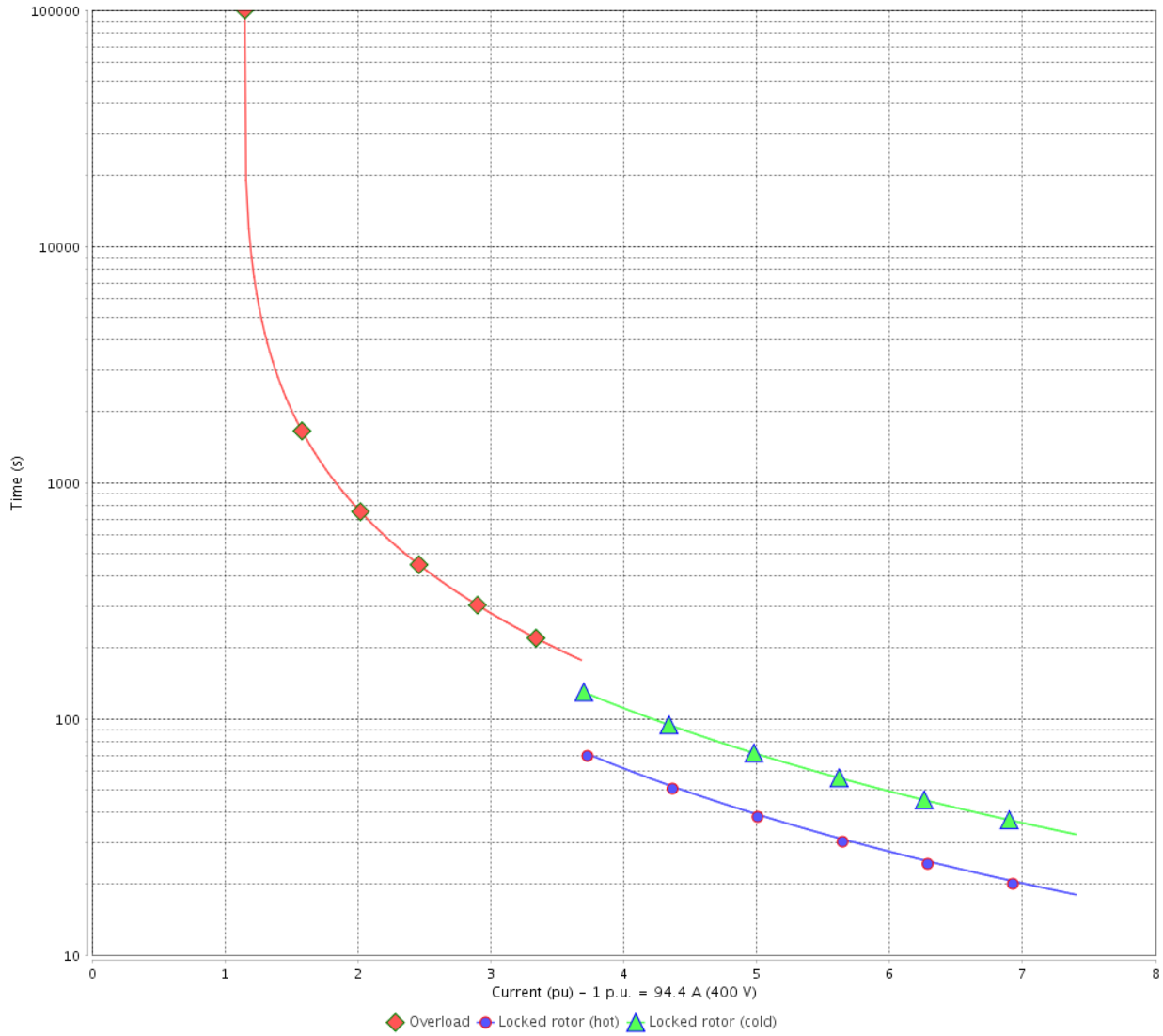
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Three Phase Induction Motor - Squirrel Cage



Customer : _____

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Locked rotor torque : 240 %	Service factor : 1.00
Breakdown torque : 330 %	Temperature rise : 80 K
Rated speed : 2965 rpm	Design : B

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Cooling constant

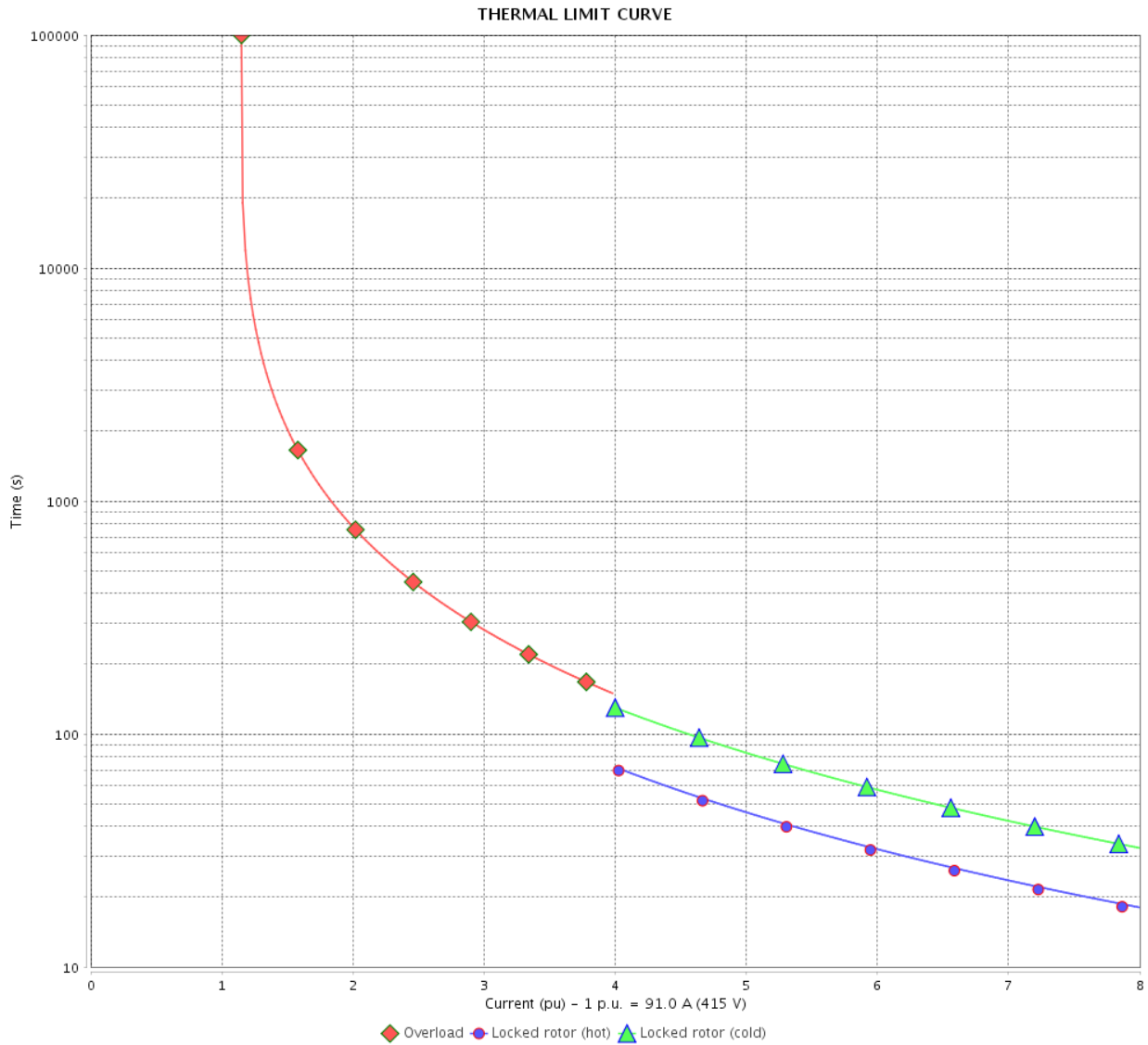
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Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

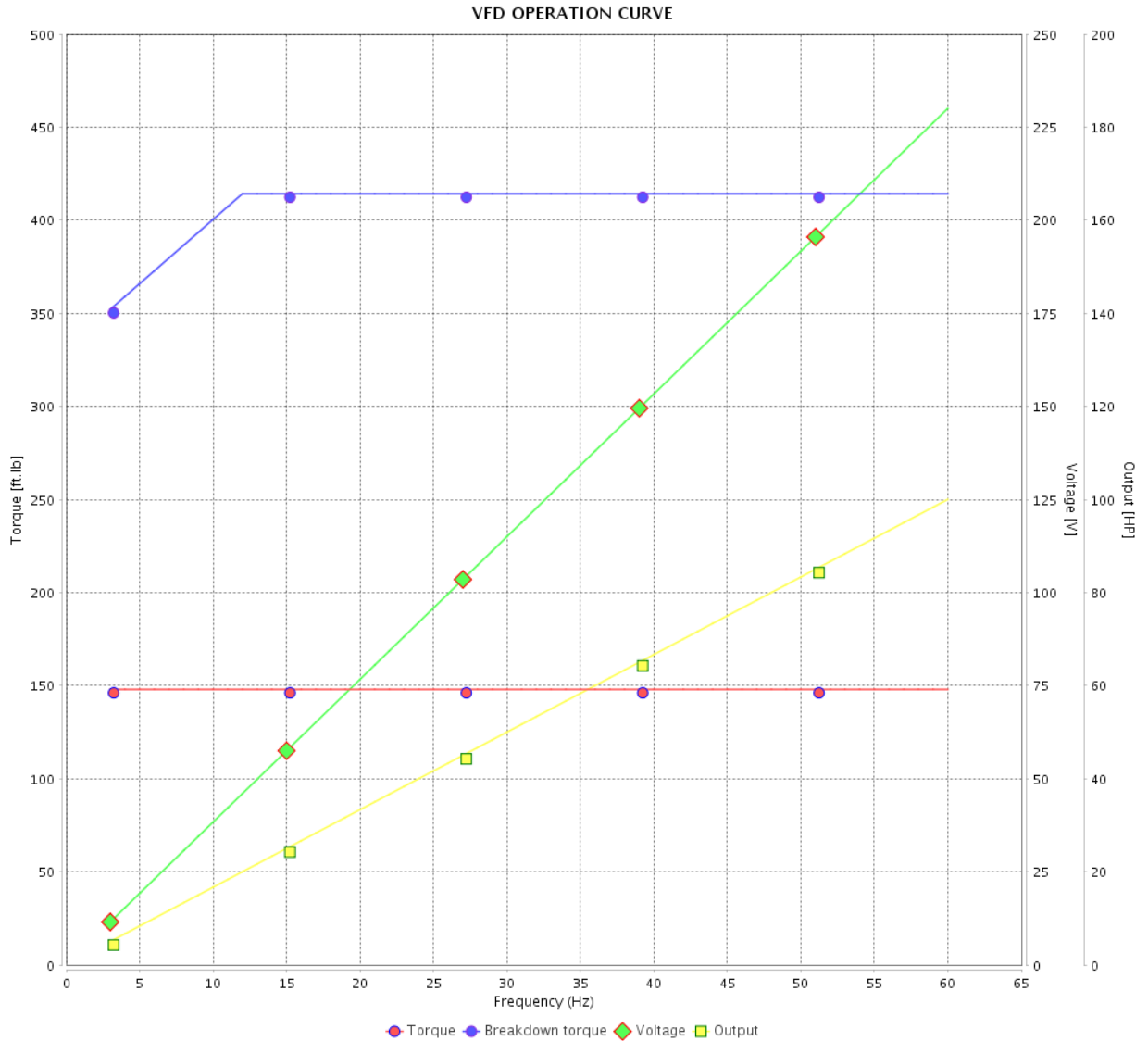


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Performance : 230/460 V 60 Hz 2P

Rated current : 220/110 A
 LRC : 6.5
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



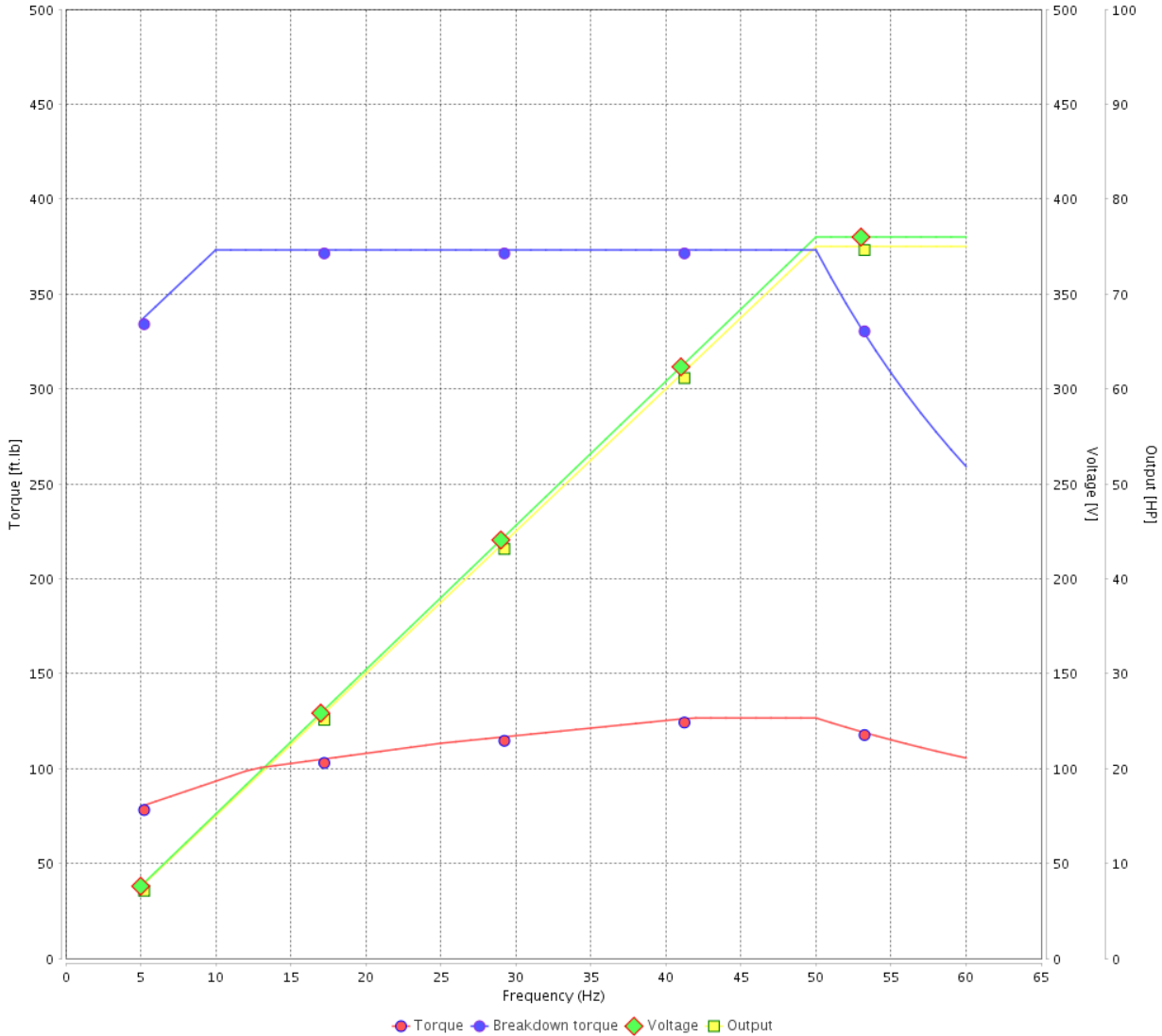
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VFD OPERATION CURVE



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

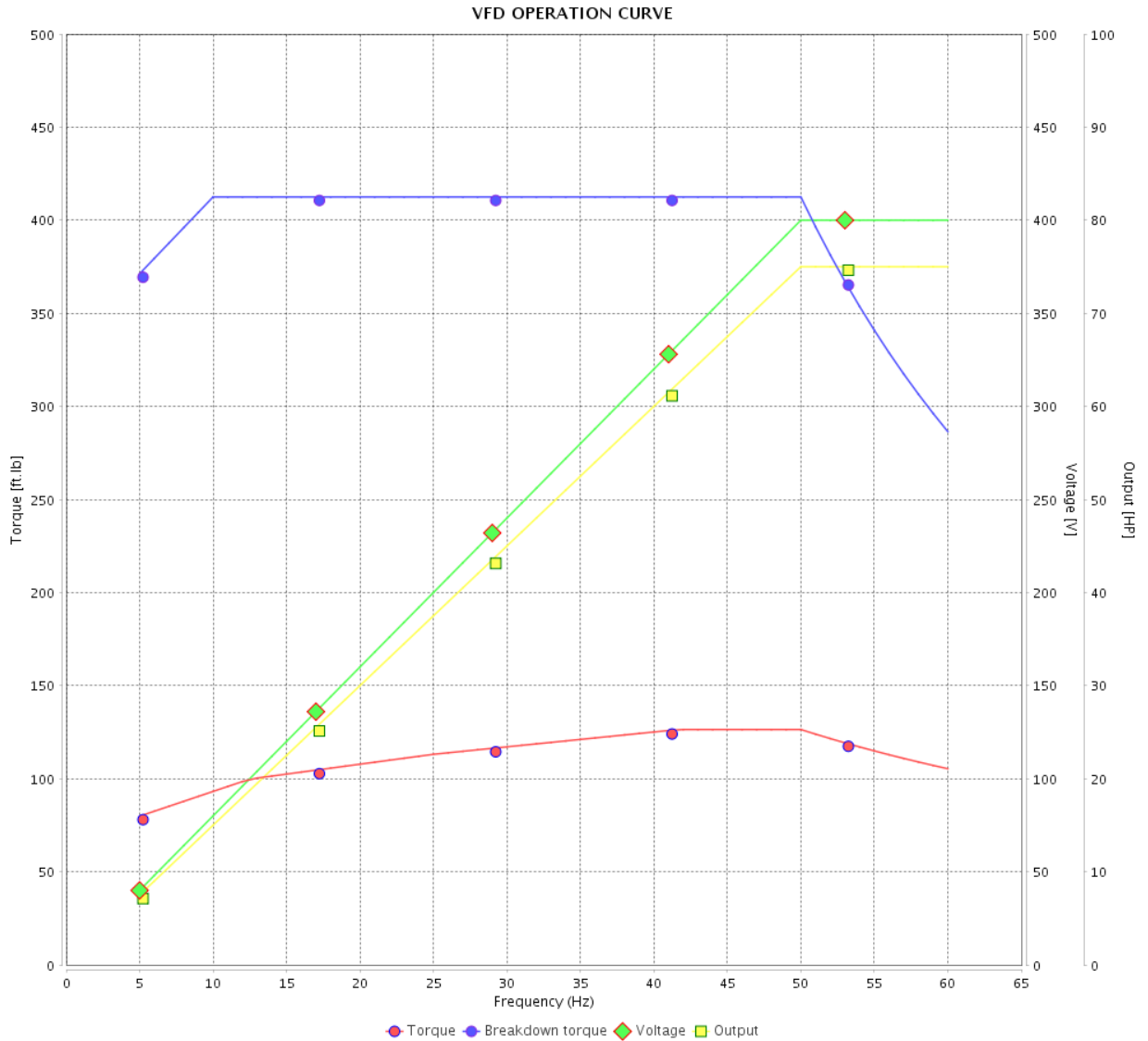


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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



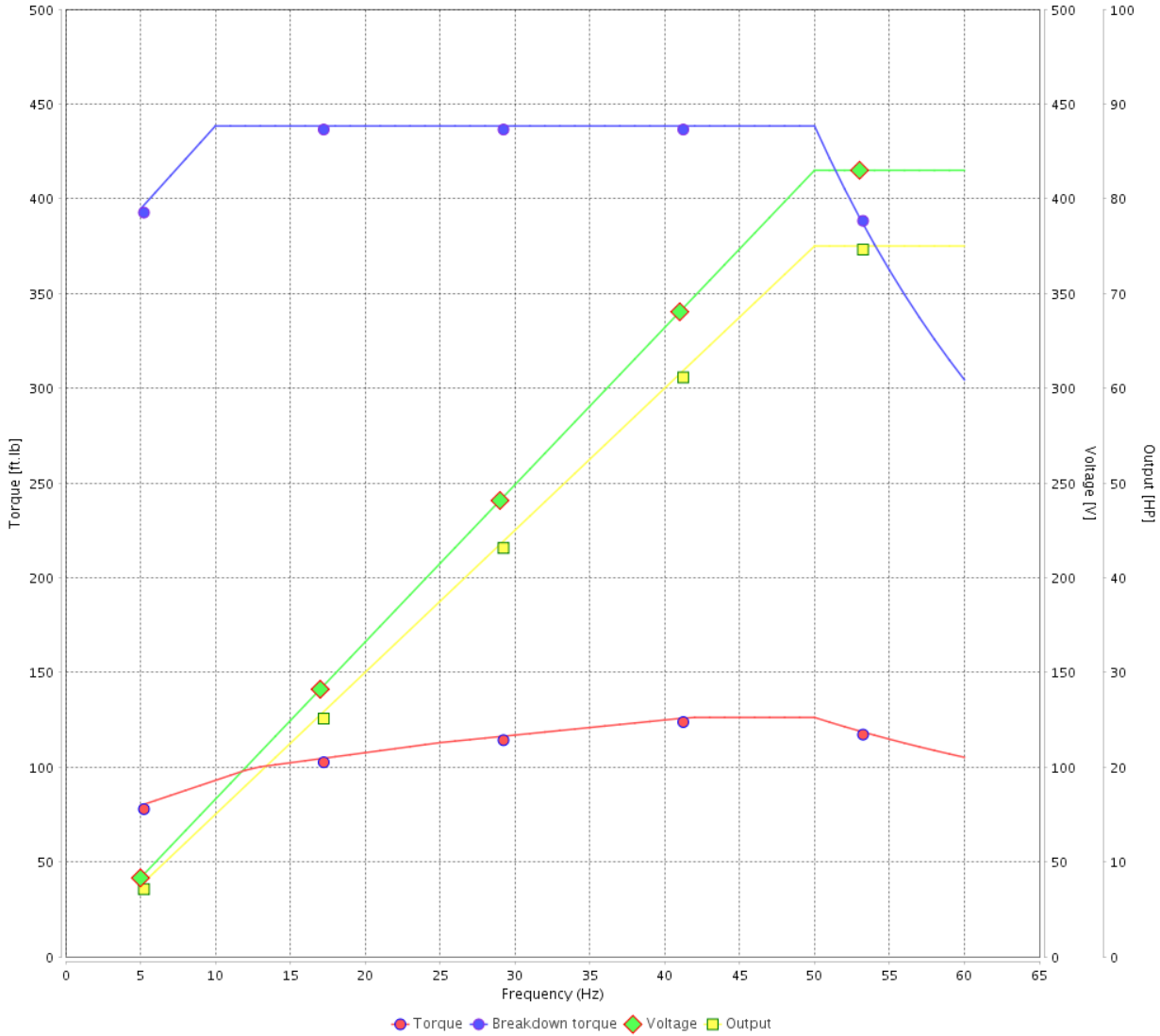
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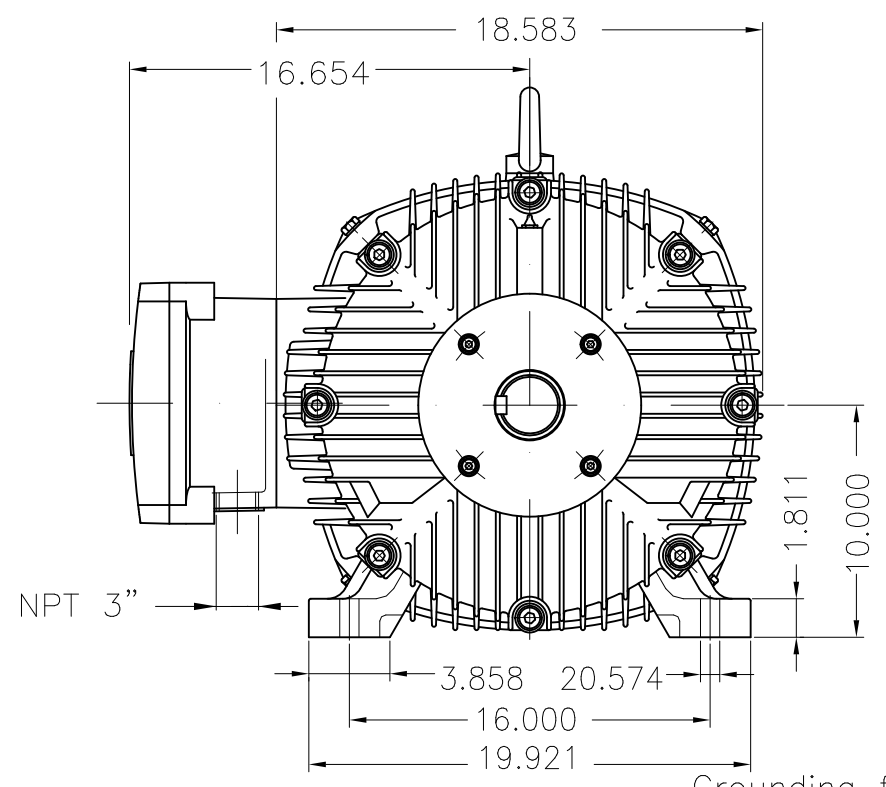
VFD OPERATION CURVE



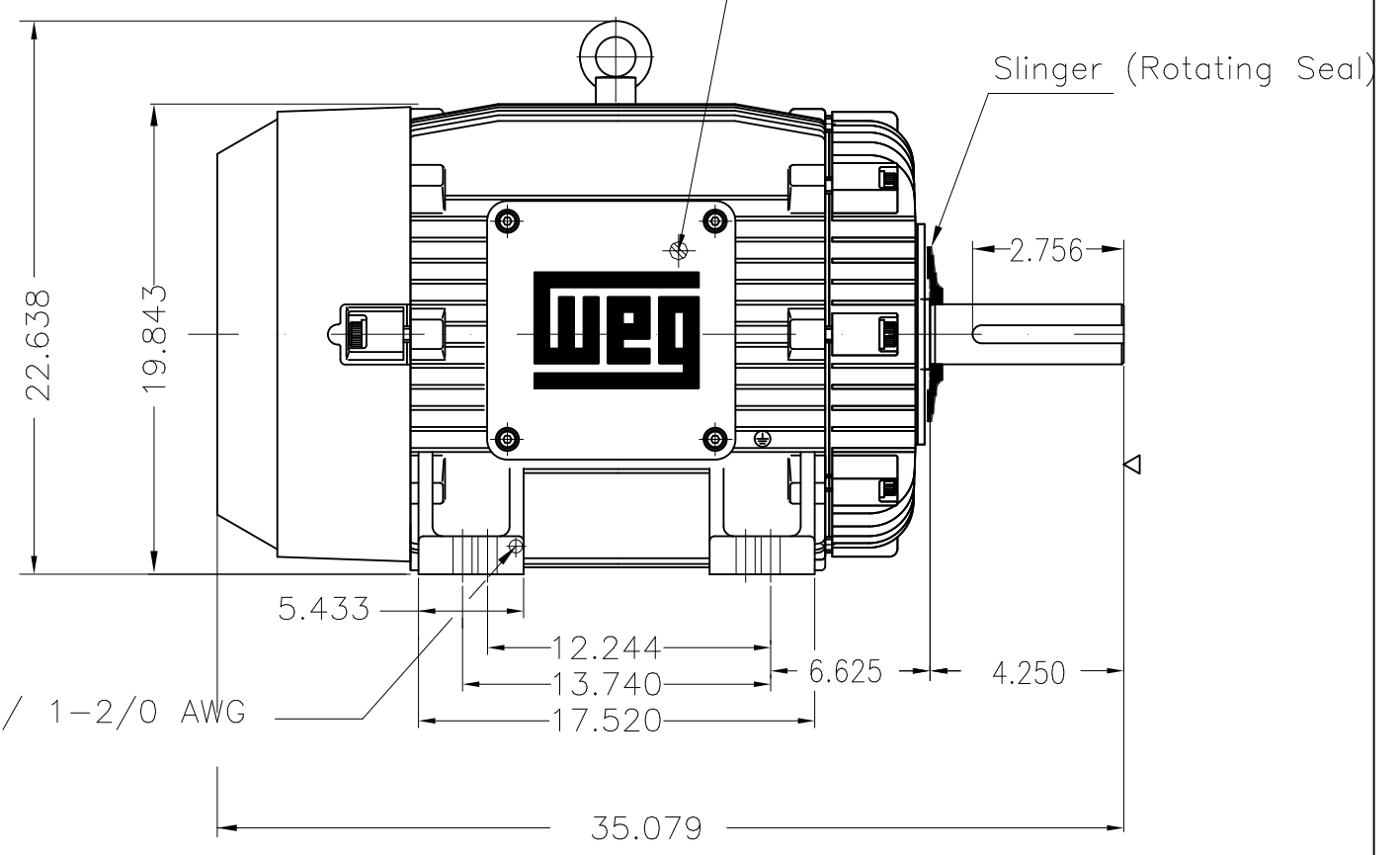
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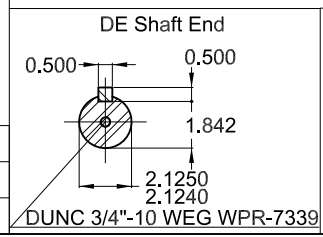
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Grounding for leads 25–50 mm² / 3–1 AWG



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



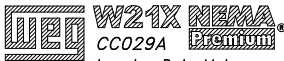
Color RAL 5009
 Painting plan 202P
 Mounting B3R(D)

100 HP 02 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 404/STS IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
 WDD





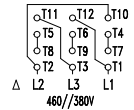
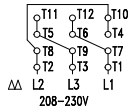
W21X NEMA
CC029A Premium
Inverter Duty Motor
Severe Duty



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 10036XT3E405TS
 MADE IN BRAZIL
 11439856

PH 3	FR 404/5TS	HP(kW) 100.0(75.0)	Hz 60
V 230/460		A 220/110	RPM 3550
NEMA NOM. EFF. 95.0%		INS CL F Δ T 80 K	IP55
PF 0.90	DUTY CONT.		CODE G
ENCL. TEFC	SF 1.15	SFA 253/126	
AMB 40°C	DES B	USABLE @208V 244 A SF 1.00	
AMB 55°C SF1.0	-bearings lub interval reduced by a factor of 50%		
75HP 55kW 50Hz 380V 98.3A 2955RPM SF1.00 EFF 94.5% (IE3)			



→ 6314-C3(27g) MOBIL POLYREX EM
 → 6314-C3(27g) 3604 h
 ALT 1000 m.a.s.l 1188 Lbs