

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	14407174		
		Catalog # :	05018XT3E326TC		
Frame	: 326TC	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	: 699 lb		
Protection degree	: IP55	Moment of inertia (J)	: 9.16 sq.ft.lb		
Design	: B				
Output [HP]	50	40	40	40	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	121/60.6	60.1	58.6	58.7	
L. R. Amperes [A]	885/443	415	445	470	
LRC [A]	7.3x(Code H)	6.9x(Code H)	7.6x(Code J)	8.0x(Code K)	
No load current [A]	55.0/27.5	27.1	29.7	31.8	
Rated speed [RPM]	1775	1475	1480	1480	
Slip [%]	1.39	1.67	1.33	1.33	
Rated torque [ft.lb]	148	142	142	142	
Locked rotor torque [%]	260	240	260	280	
Breakdown torque [%]	280	260	290	310	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	36s (cold) 20s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	
Noise level ²	71.0 dB(A)	69.0 dB(A)	69.0 dB(A)	69.0 dB(A)	
Efficiency (%)	25%	93.4	92.8	92.8	92.2
	50%	93.6	93.0	93.0	92.4
	75%	94.5	93.6	93.6	93.6
	100%	94.5	93.6	93.6	93.6
Power Factor	25%	0.40	0.39	0.35	0.33
	50%	0.65	0.65	0.60	0.57
	75%	0.76	0.76	0.73	0.69
	100%	0.81	0.81	0.79	0.76
Bearing type	: <u>Drive end</u> 6312 C3 <u>Non drive end</u> 6212 C3	Foundation loads			
Sealing	: Oil Seal Lip Seal	Max. traction	: 1339 lb		
Lubrication interval	: 20000 h 20000 h	Max. compression	: 2038 lb		
Lubricant amount	: 21 g 13 g				
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 134A SF 1.00 SFA 134A					
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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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



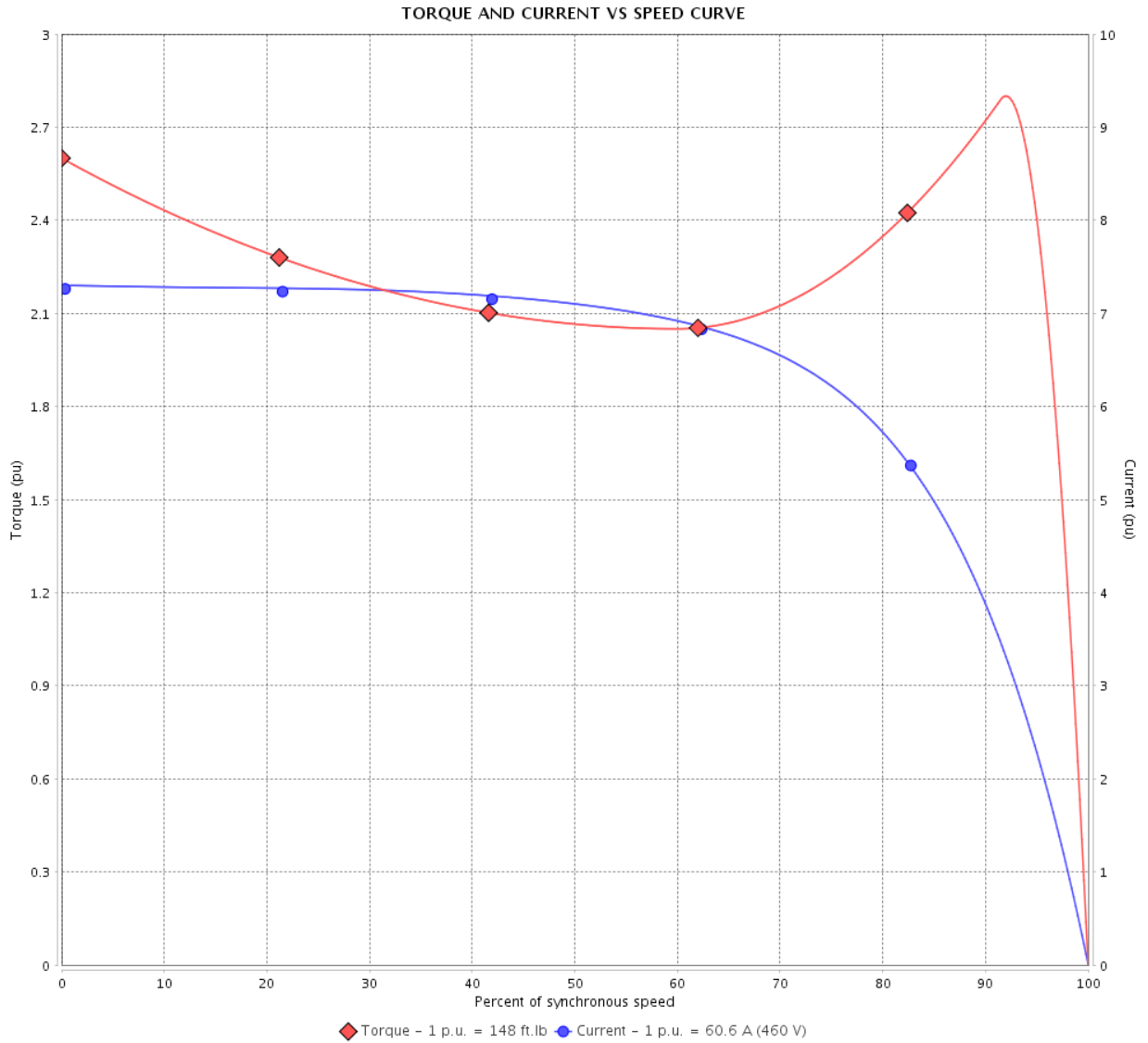
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407174

Catalog # : 05018XT3E326TC



Performance : 230/460 V 60 Hz 4P

Rated current : 121/60.6 A
 LRC : 7.3
 Rated torque : 148 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 280 %
 Rated speed : 1775 rpm

Moment of inertia (J) : 9.16 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 36s (cold) 20s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



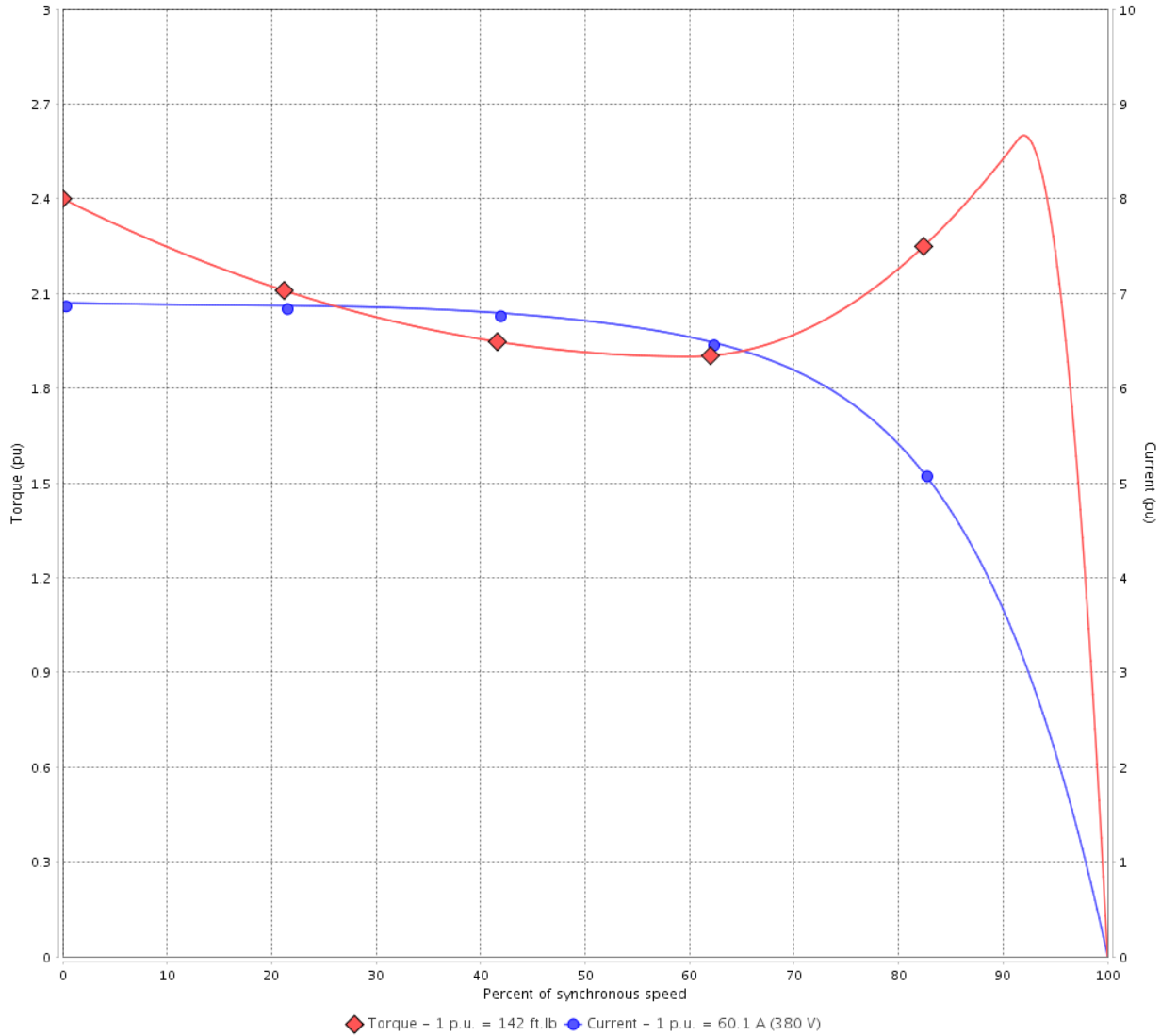
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407174

Catalog # : 05018XT3E326TC

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE3

Rated current	: 60.1 A	Moment of inertia (J)	: 9.16 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 142 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	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



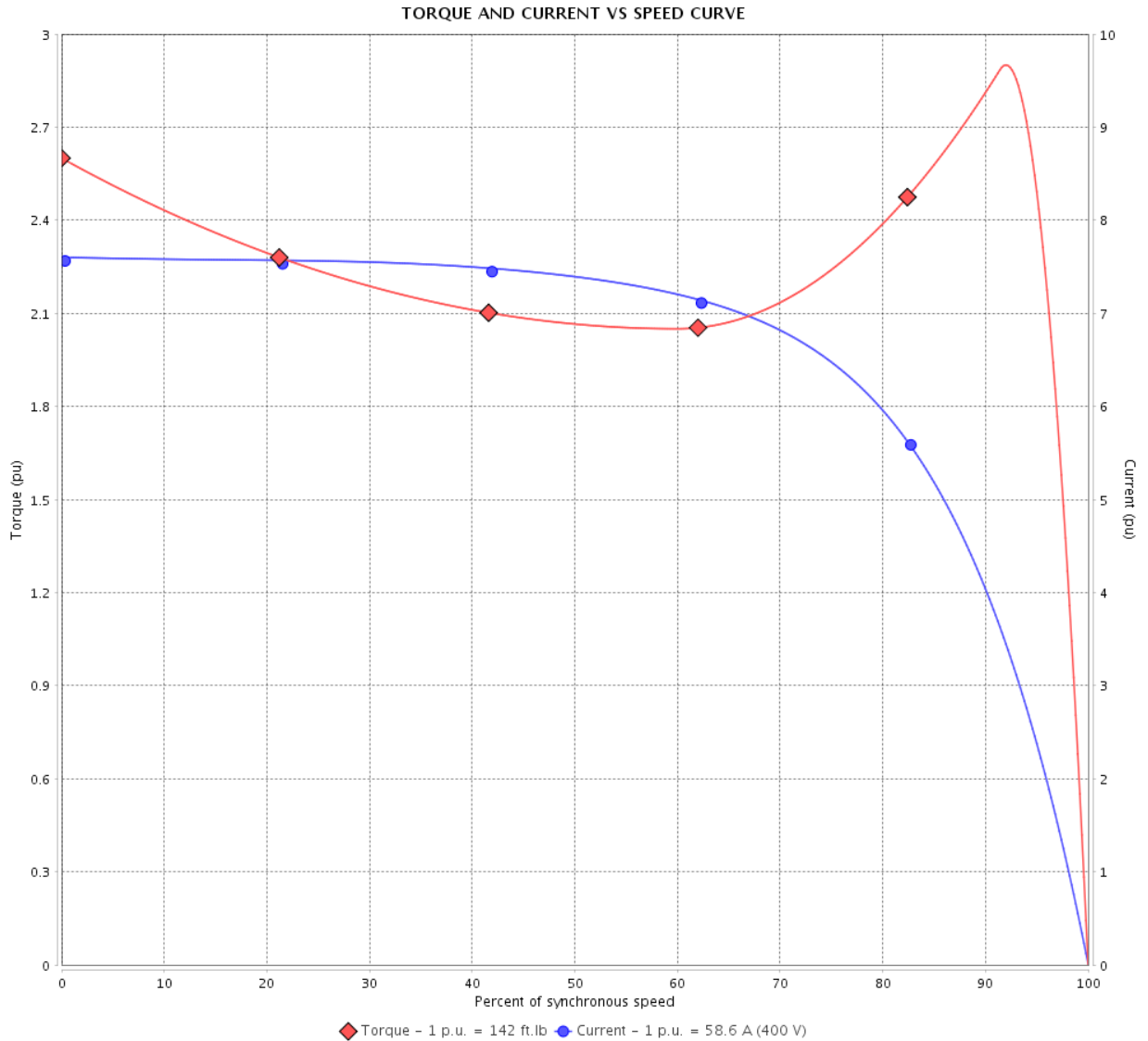
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

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Catalog # : 05018XT3E326TC



Performance : 400 V 50 Hz 4P IE3

Rated current	: 58.6 A	Moment of inertia (J)	: 9.16 sq.ft.lb
LRC	: 7.6	Duty cycle	: Cont.(S1)
Rated torque	: 142 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 290 %	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



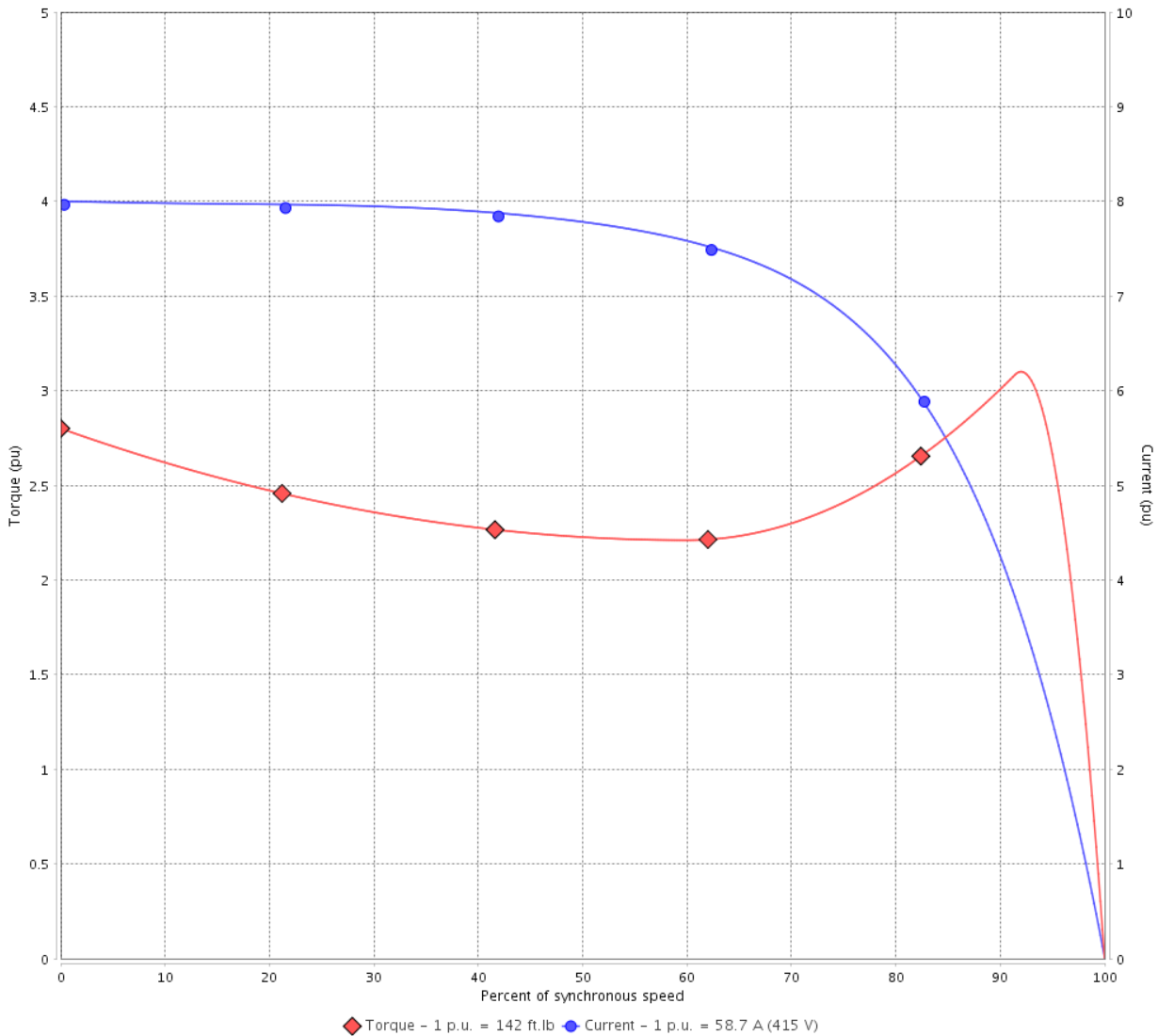
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE3

Rated current	: 58.7 A	Moment of inertia (J)	: 9.16 sq.ft.lb
LRC	: 8.0	Duty cycle	: Cont.(S1)
Rated torque	: 142 ft.lb	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 310 %	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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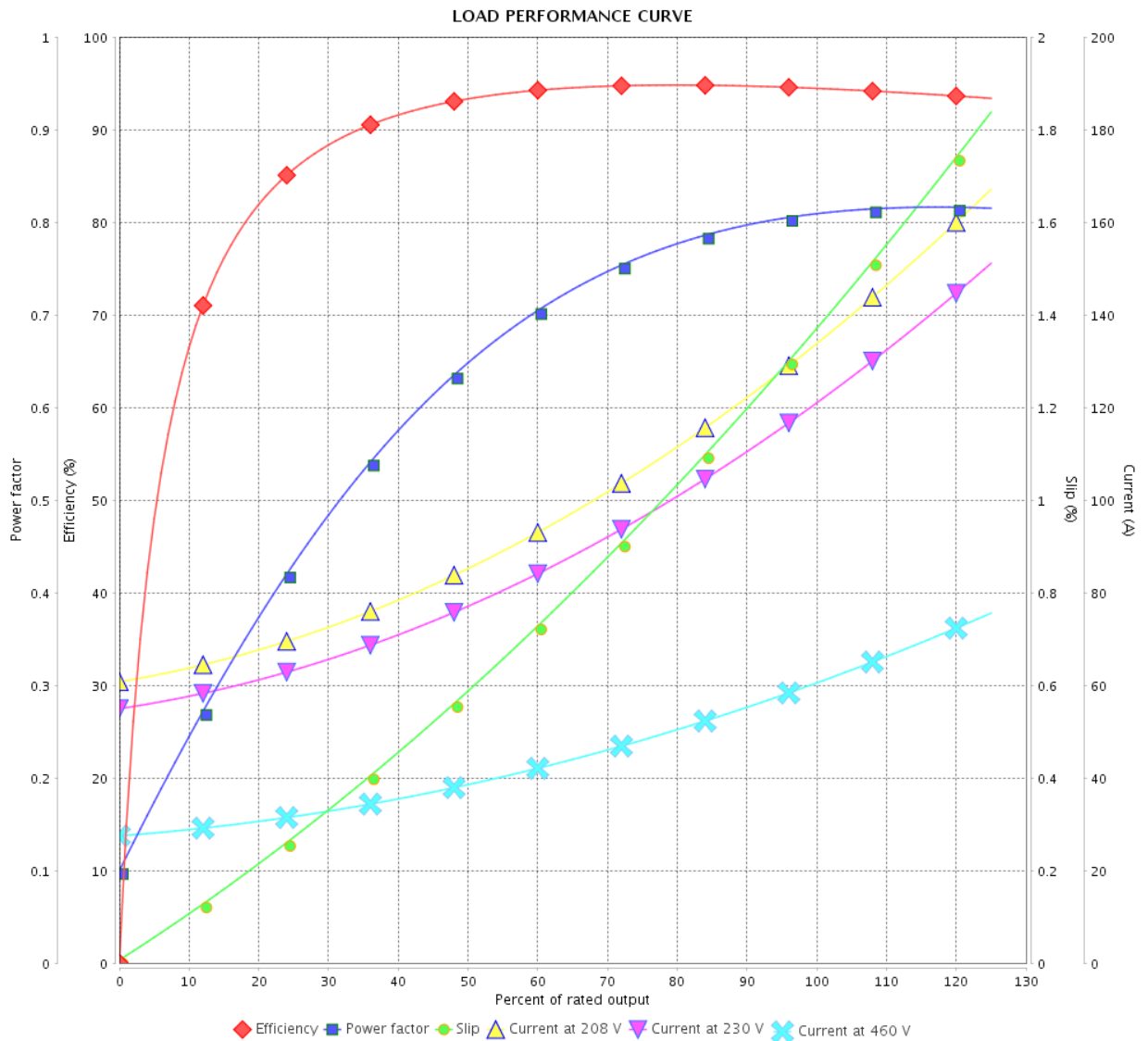


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Performance : 230/460 V 60 Hz 4P

Rated current : 121/60.6 A
 LRC : 7.3
 Rated torque : 148 ft.lb
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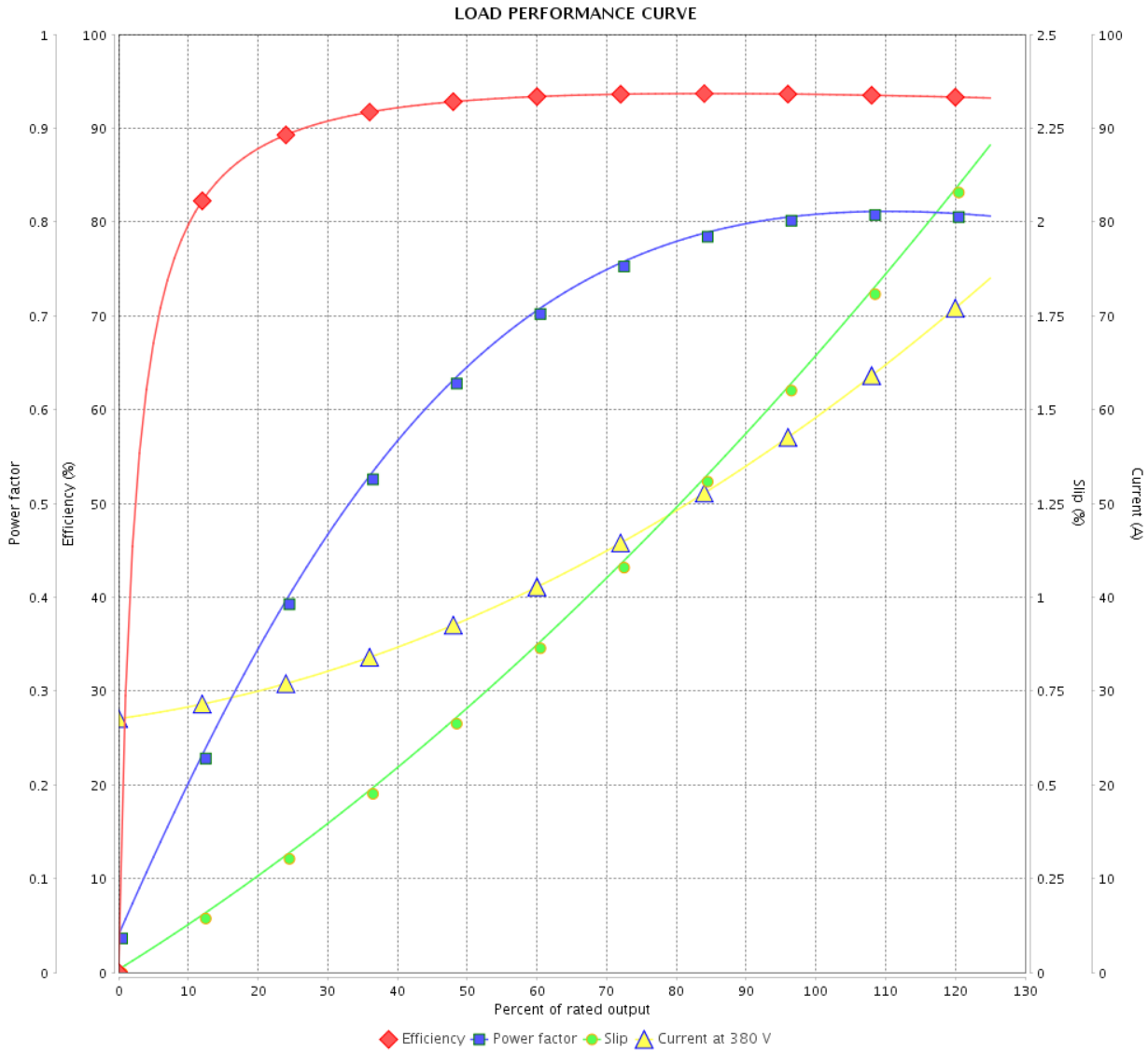


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Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1475 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
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Three Phase Induction Motor - Squirrel Cage

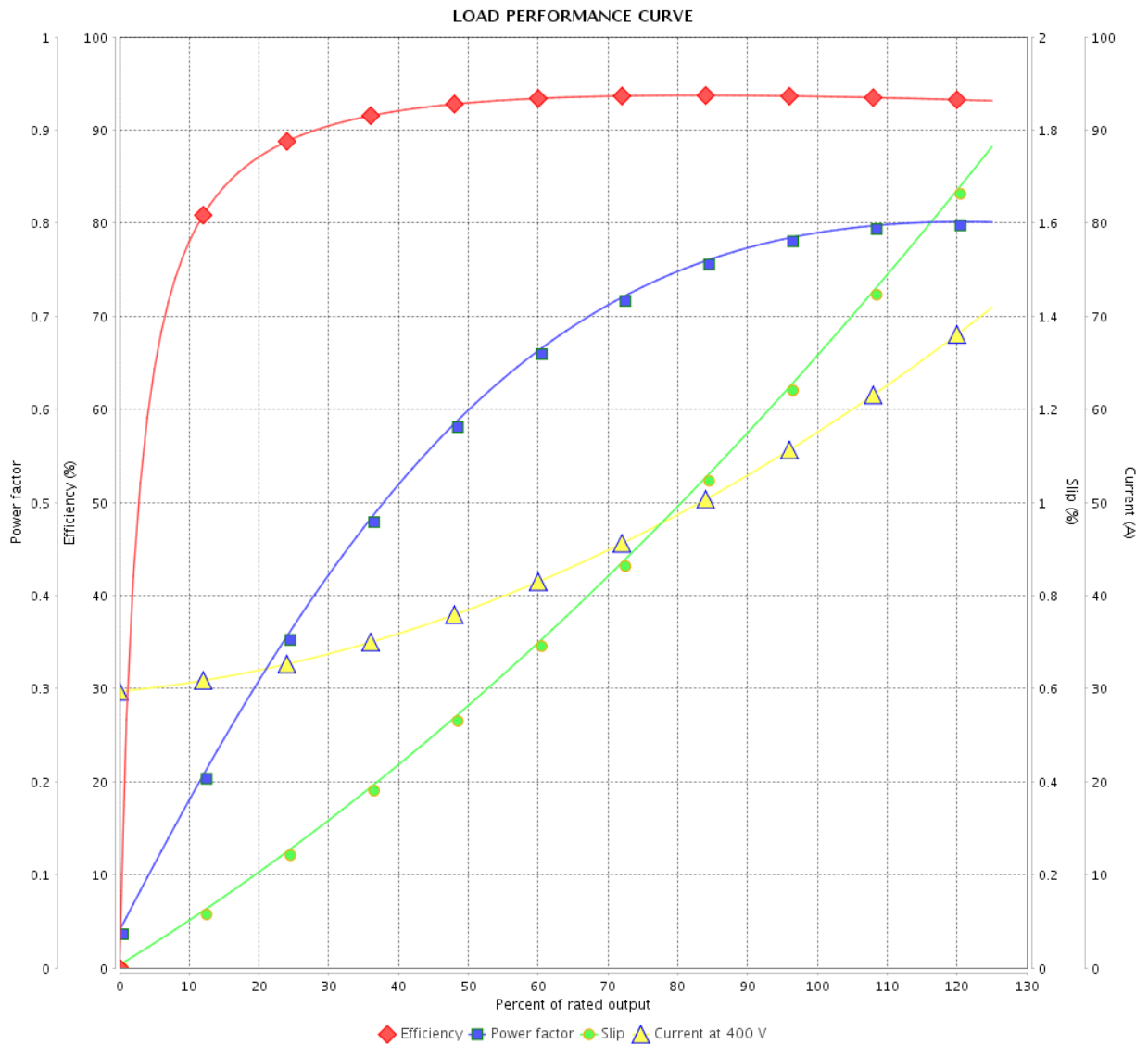


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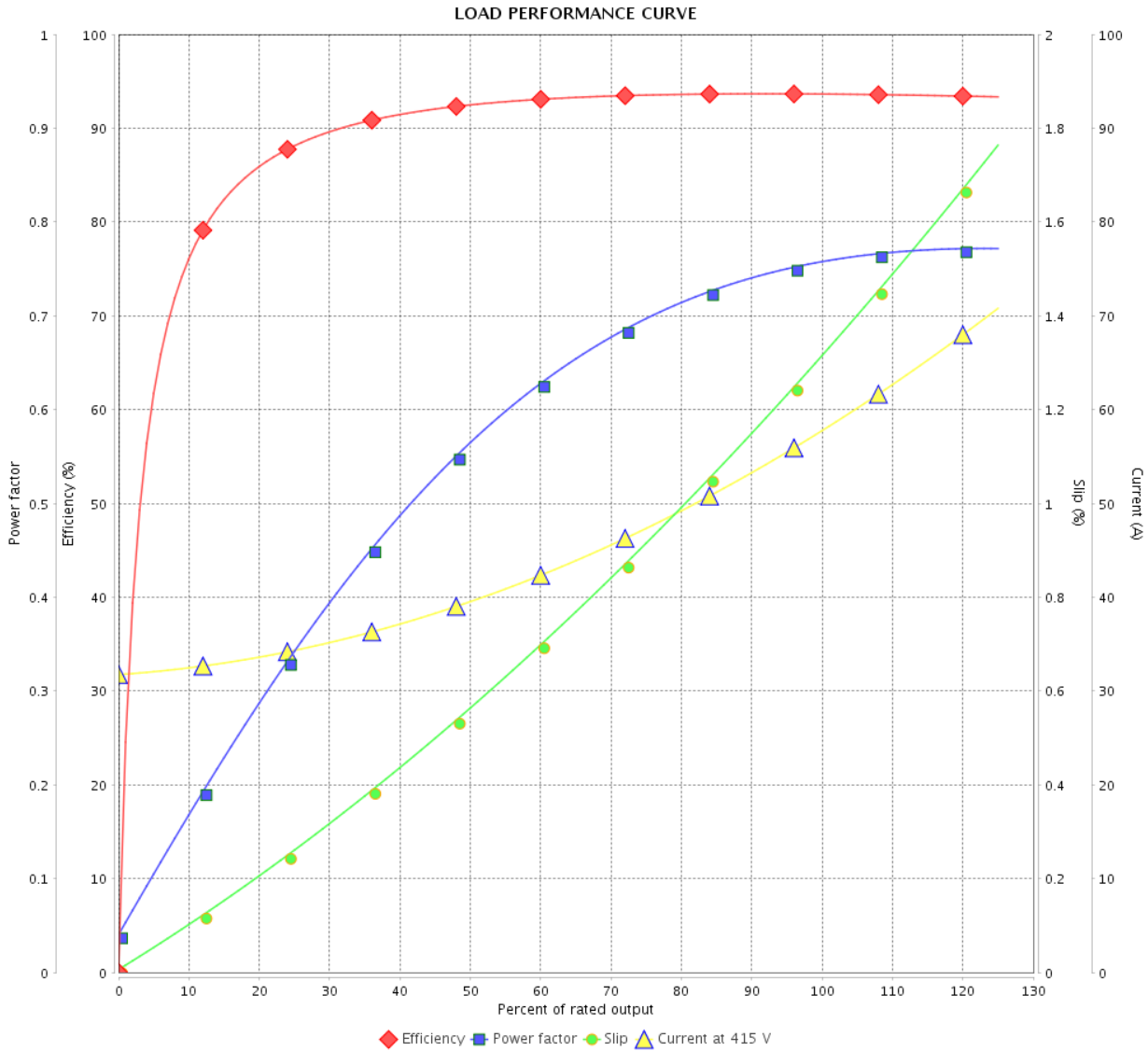


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Breakdown torque	: 310 %	Temperature rise	: 80 K
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THERMAL LIMIT CURVE



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Heating constant

Cooling constant

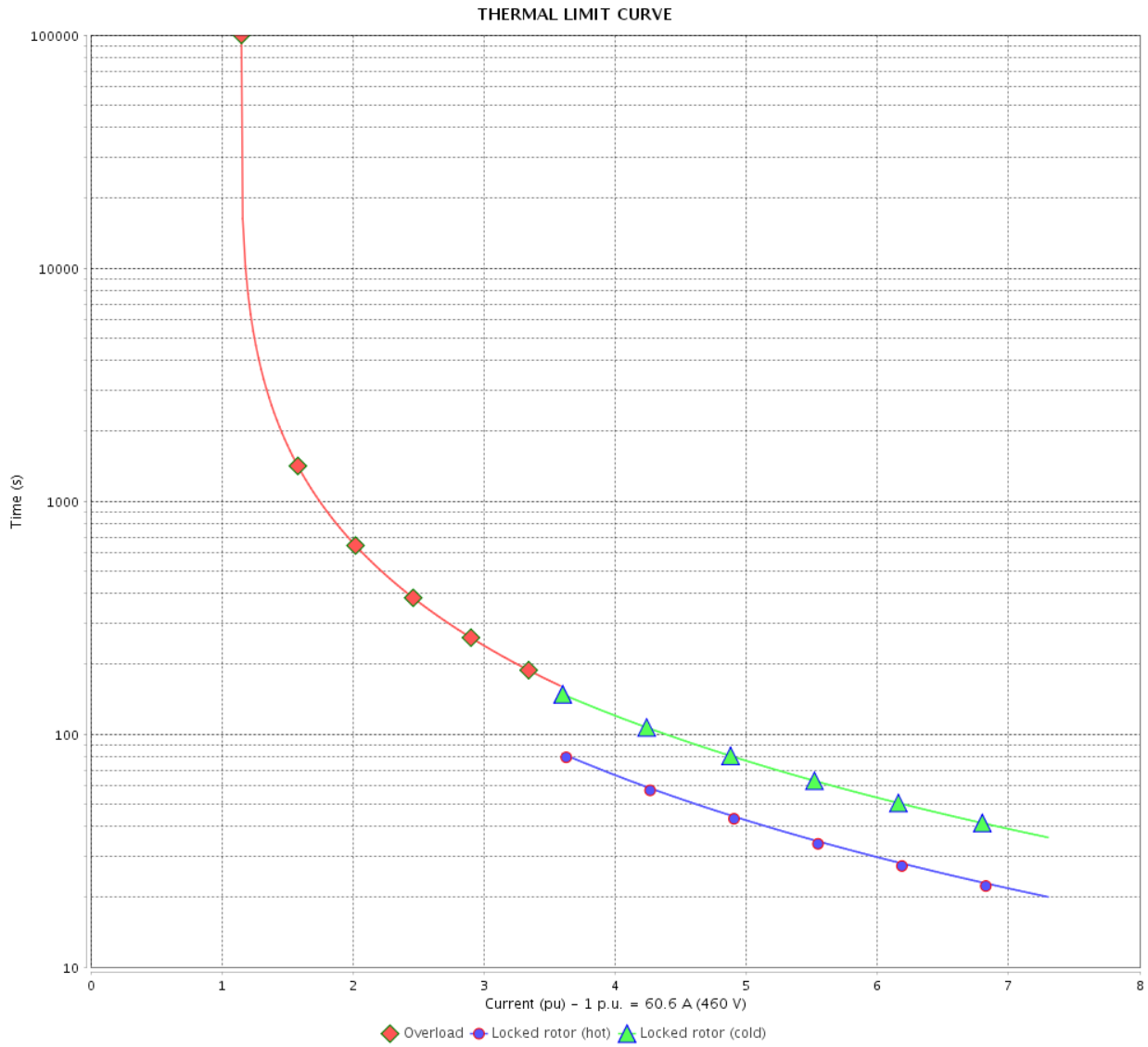
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Cooling constant

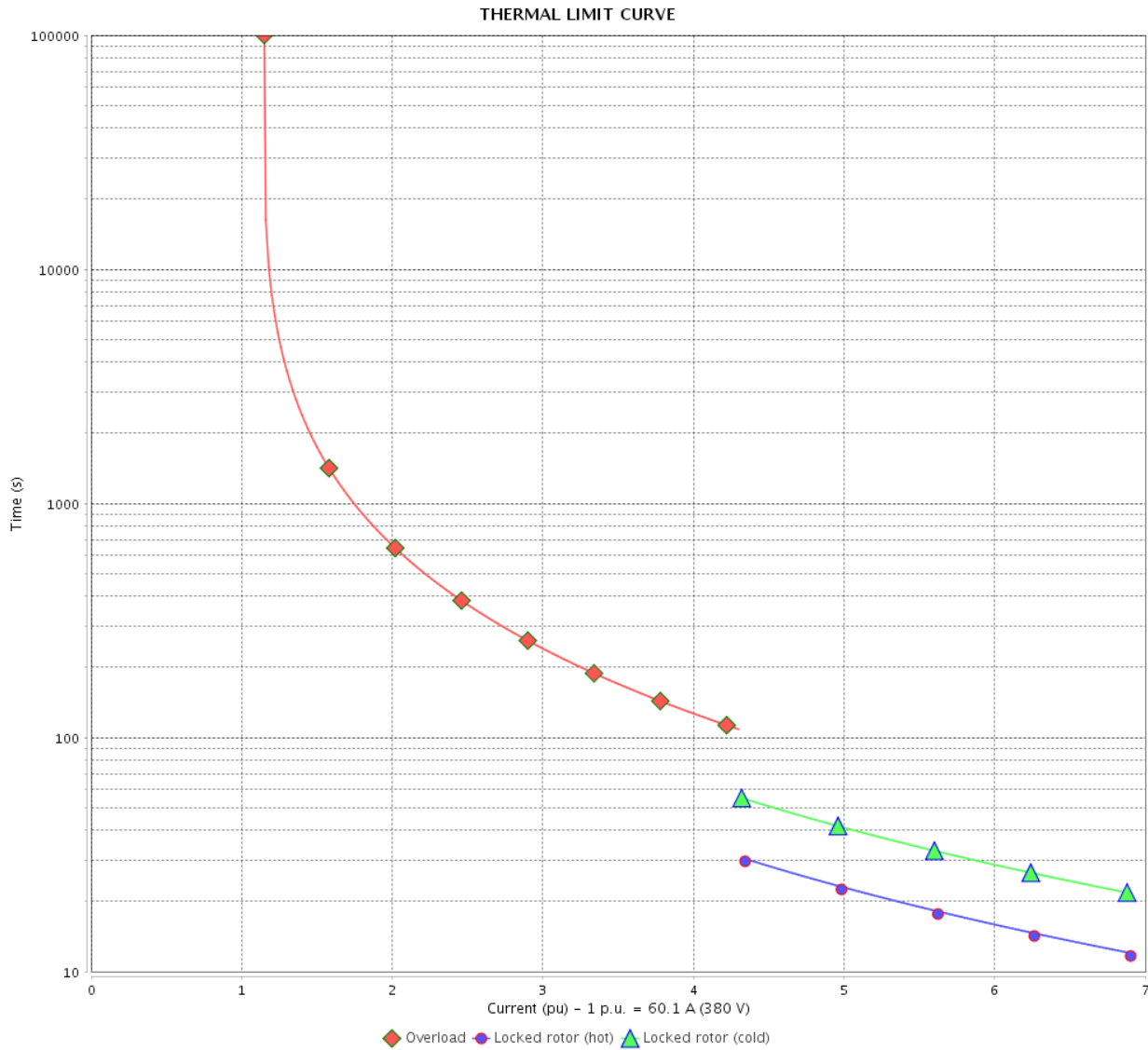
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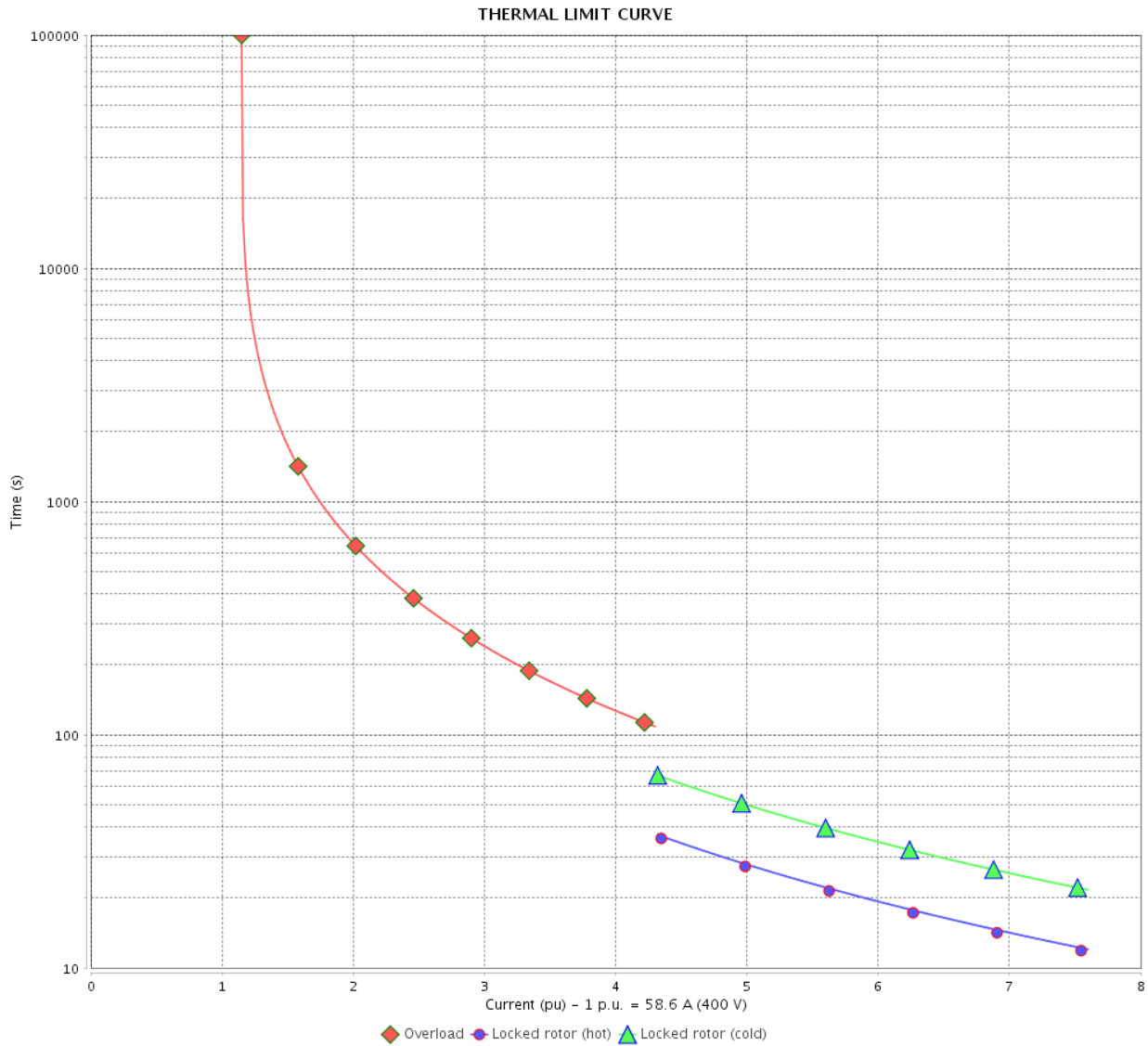
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LRC : 8.0	Duty cycle : Cont.(S1)
Rated torque : 142 ft.lb	Insulation class : F
Locked rotor torque : 280 %	Service factor : 1.00
Breakdown torque : 310 %	Temperature rise : 80 K
Rated speed : 1480 rpm	Design : B

Heating constant

Cooling constant

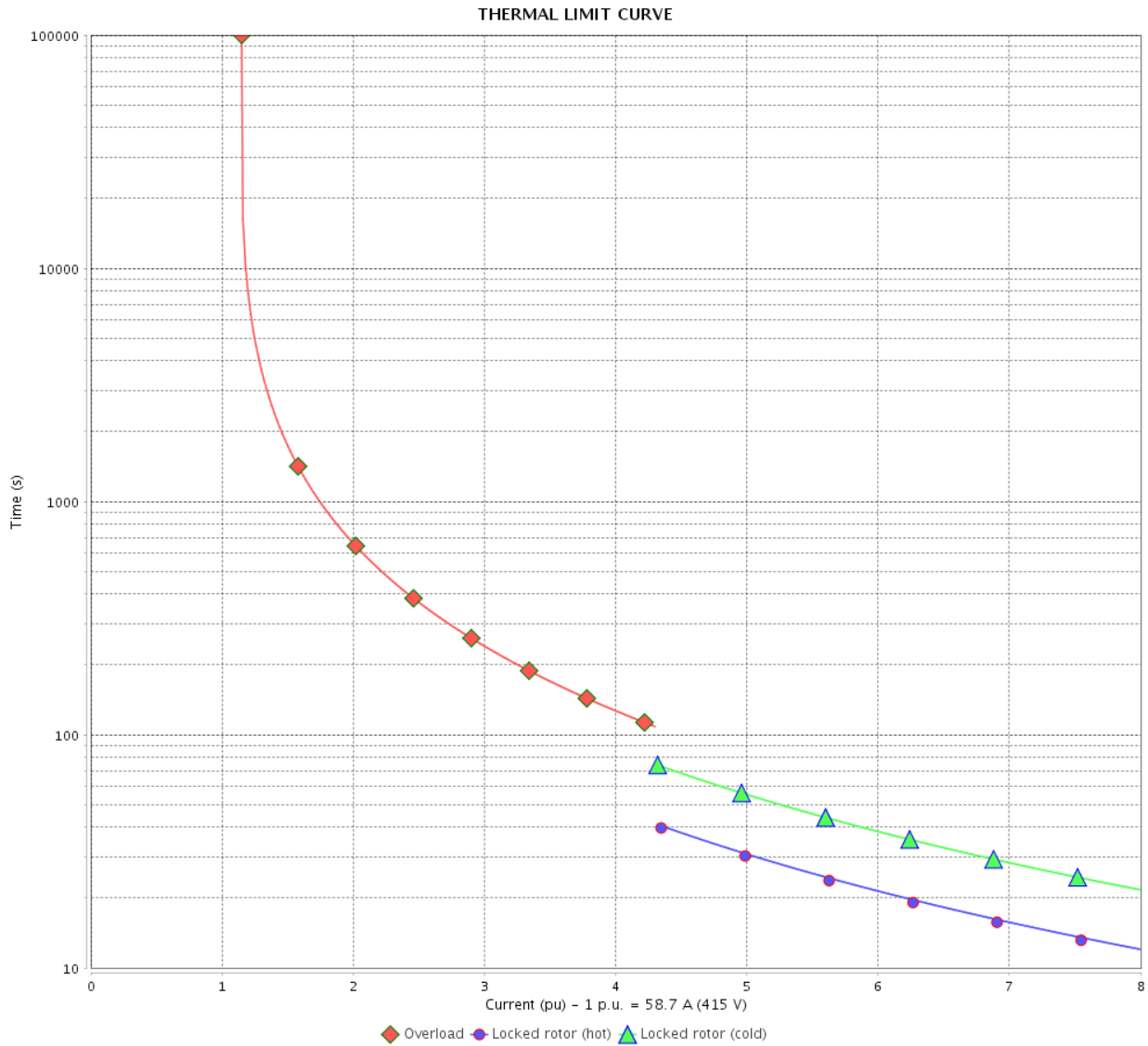
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

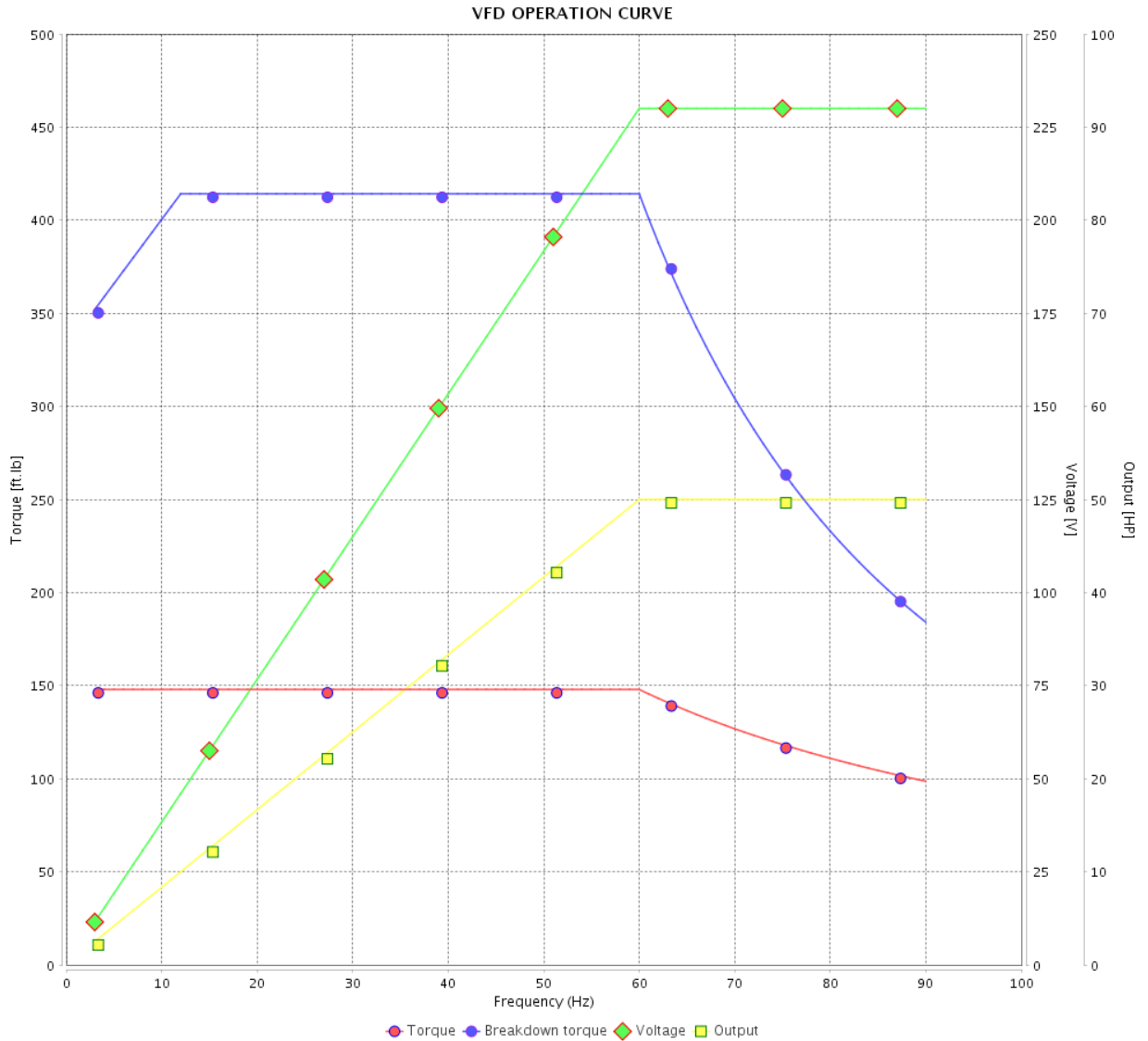


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Performance : 230/460 V 60 Hz 4P

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



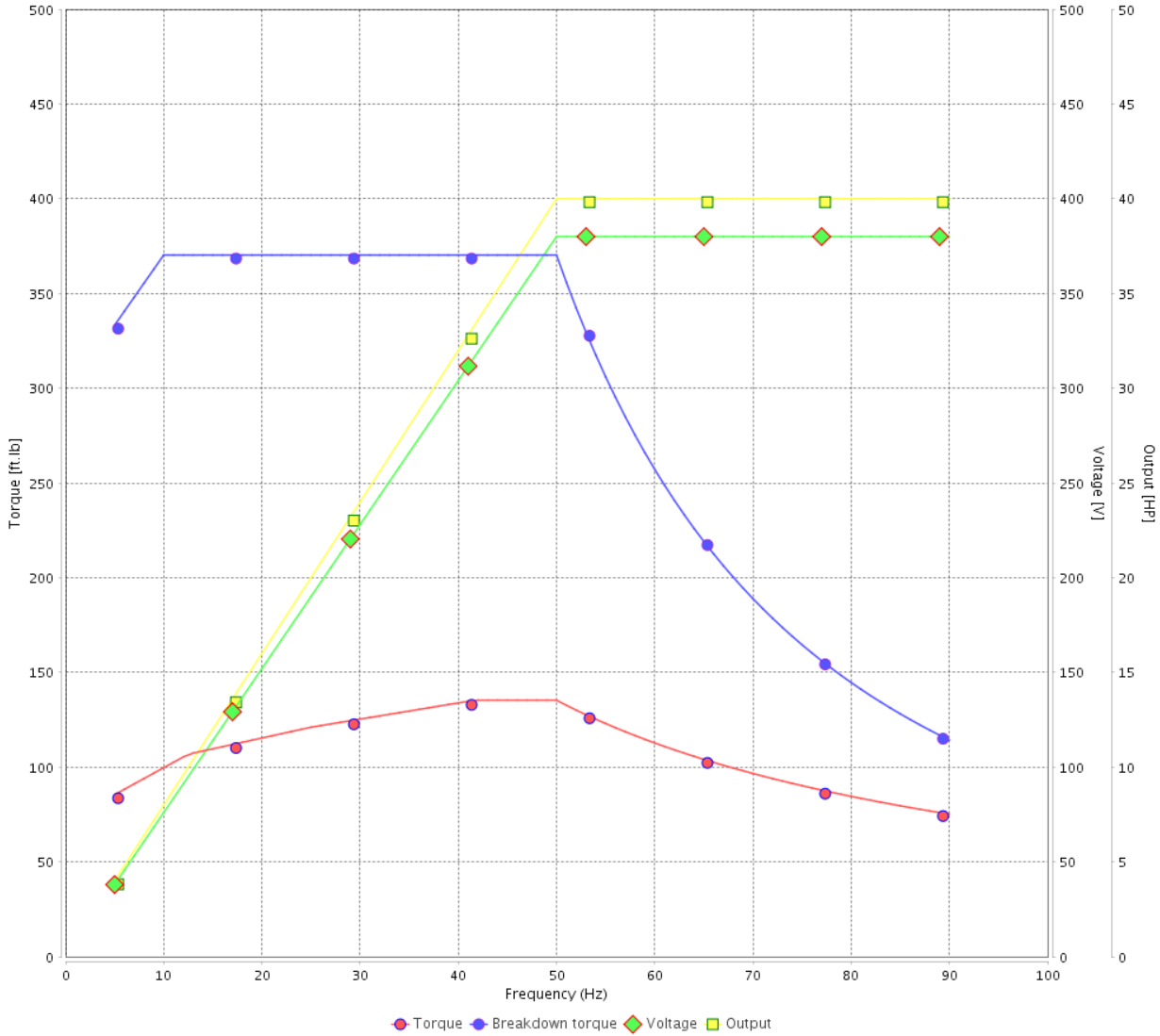
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VFD OPERATION CURVE



Performance : 380 V 50 Hz 4P IE3

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VFD OPERATION CURVE

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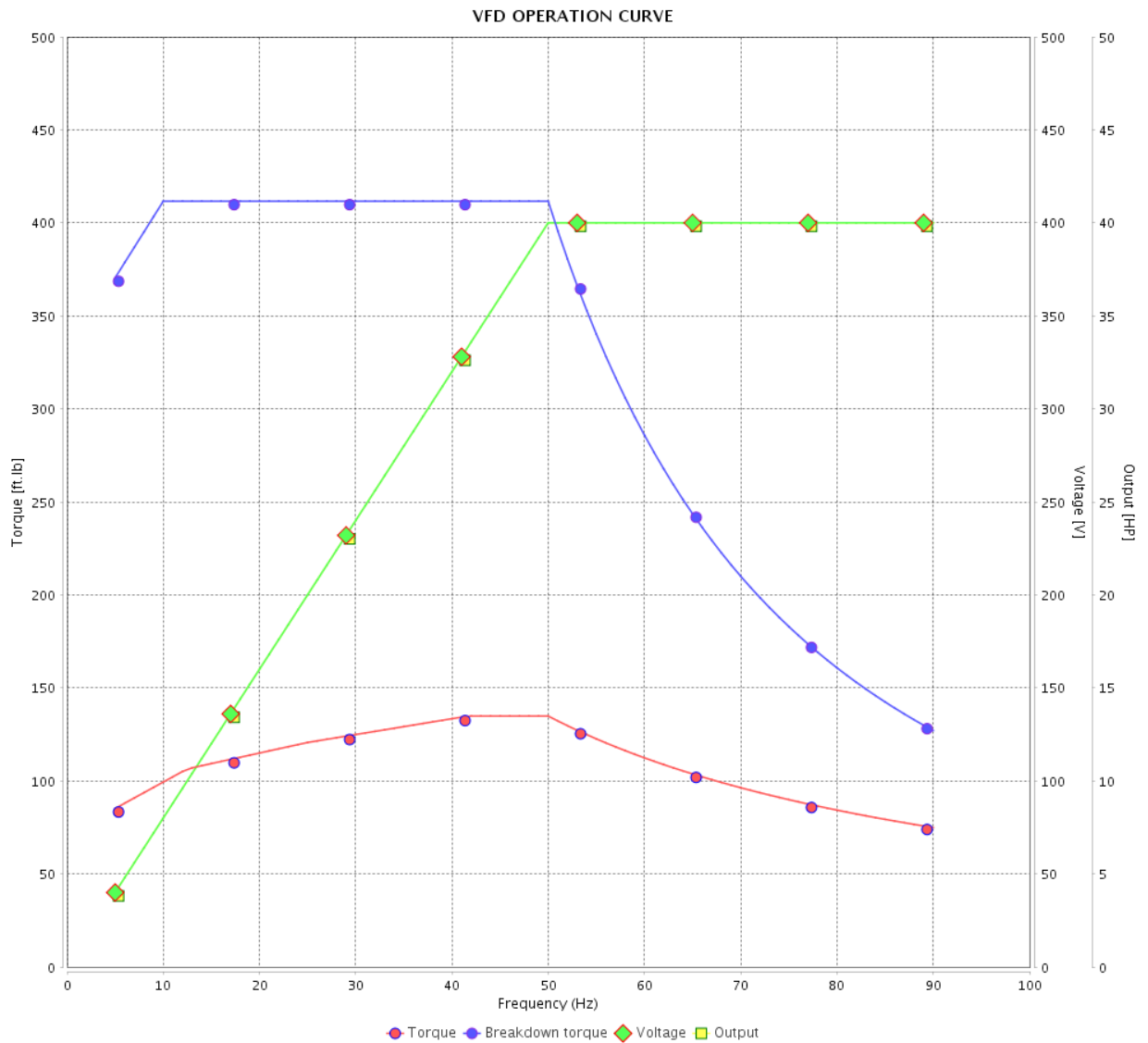


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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



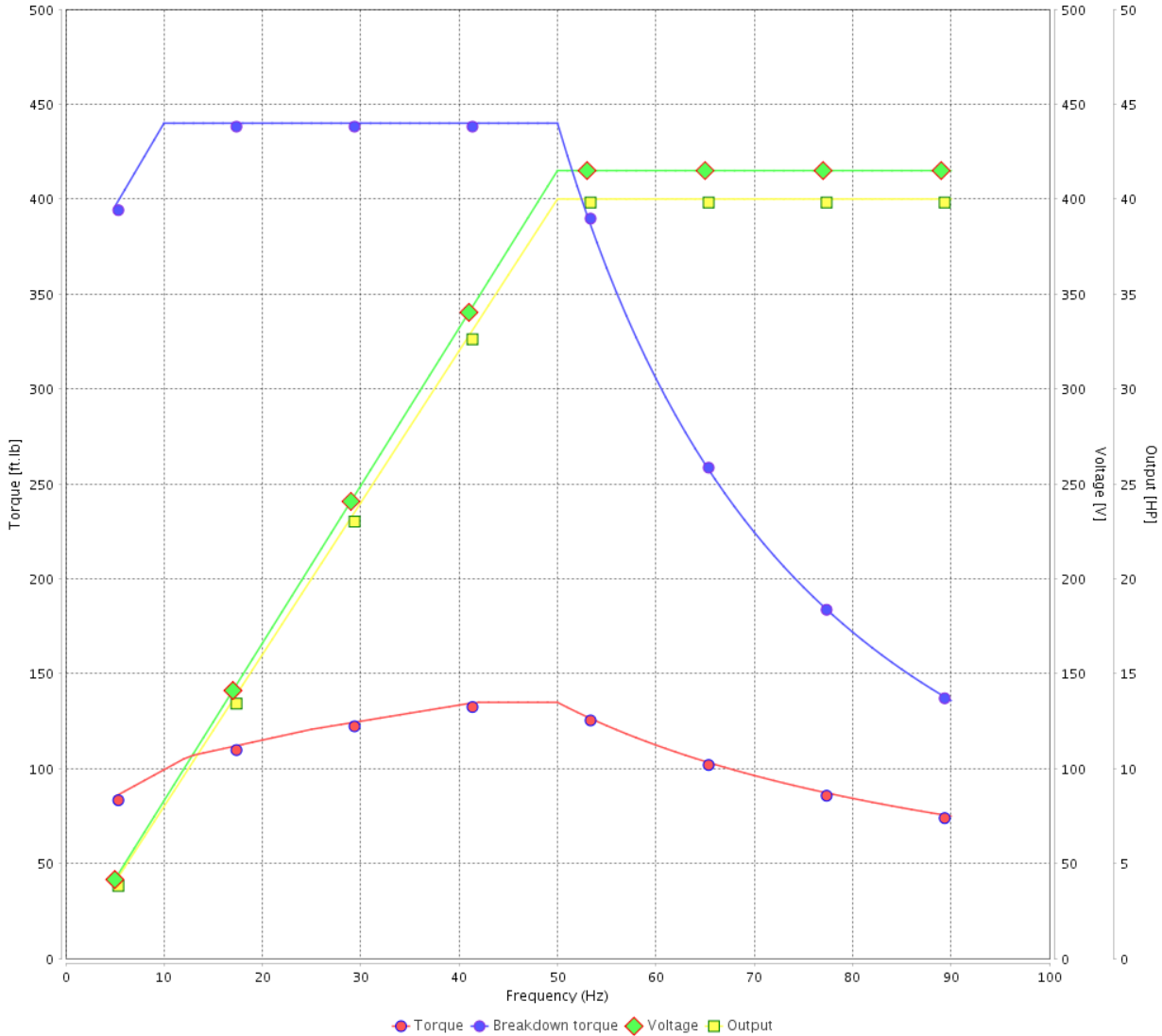
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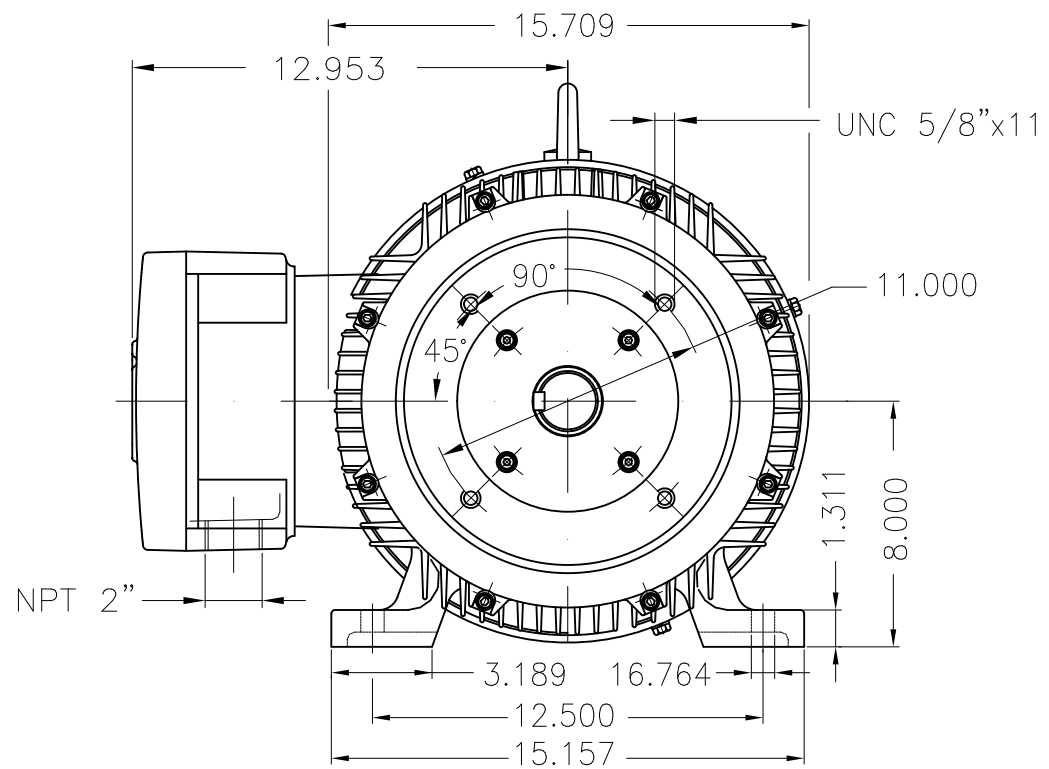
VFD OPERATION CURVE



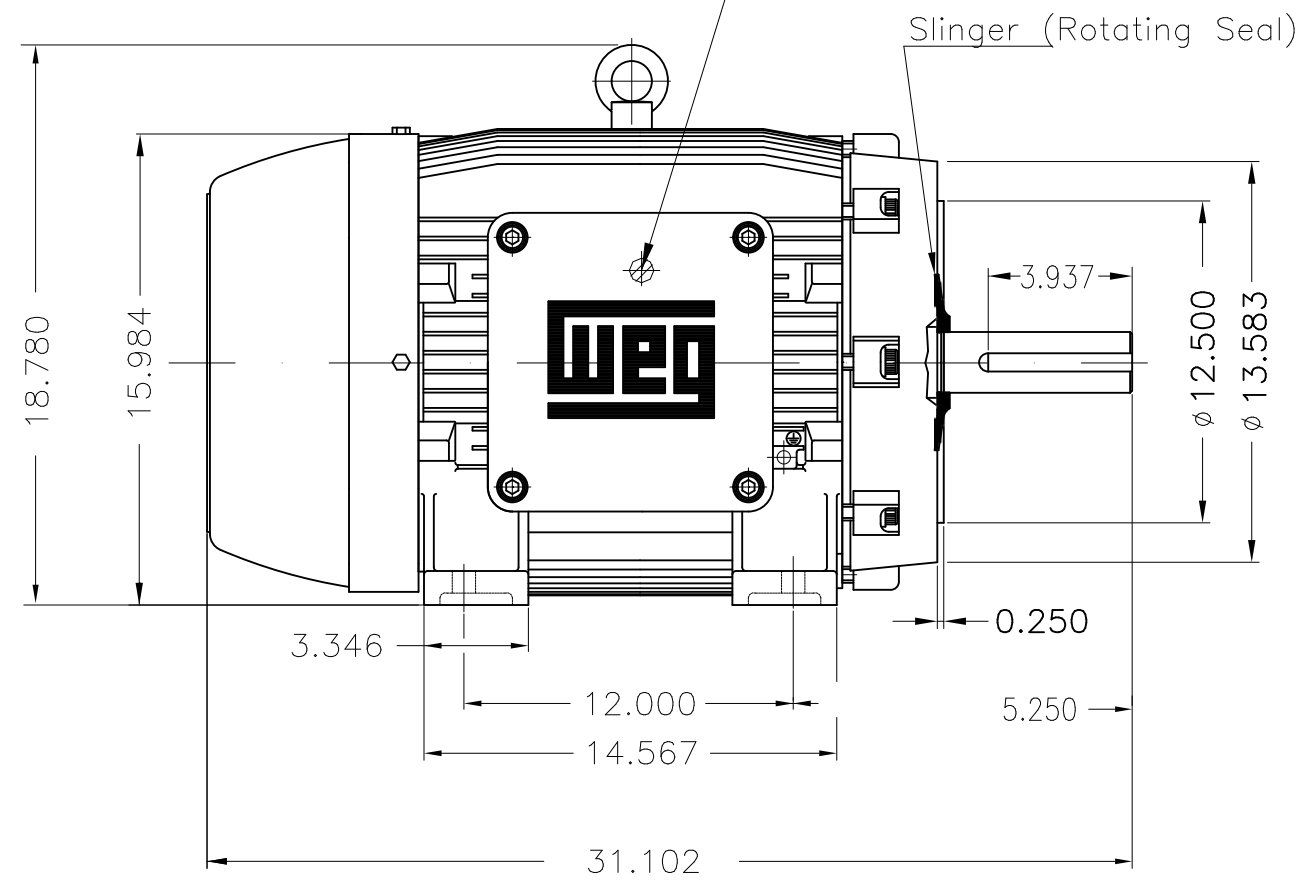
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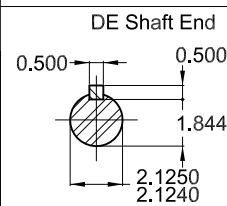
Grounding for leads 5.2–35 mm² / 10–2 AWG



50 HP 04 Poles 60 Hz

A

- With grease fitting
- Color RAL 5009
- Painting plan 202P
- Mounting NEMA F-1
- Mounting B34R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 326TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD



MADE IN BRAZIL


W21X NEMA
Premium

14407174



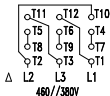
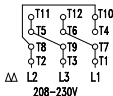
LISTED

CC029A

Inverter Duty Motor
Severe Duty

MODEL 05018XT3E326TC

PH 3	FR 326TC		
HP(kW) 50.0(37.0)		HZ 60	IP55
V 230/460		A 121/60.6	
RPM 1775		NEMA NOM EFF 94.5%	
PF 0.81		SFA 139/69.7	DES B
INS CL F Δ T 80 K		SF 1.15	ENCL TEFC
DUTY CONT.		CODE H	ALT 1000 m.a.s.l.
AMB 40°C	USABLE @208V	134 A	SF 1.00
AMB 55°C SF1.0			
40HP 30kW 50Hz 380V 60.1A 1475RPM SF1.00 EFF 93.6% (IE3)			



→ 6312-C3 MOBIL POLYREX EM
 → 6212-C3 21 g 20000 h

699 Lbs



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, 6:1CT, 1.0SF, T3C, AMB 40°C.