

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :	14504503	
			Catalog # :	05036XT3E326TS	
Frame		: 326TS	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	: 669 lb	
Protection degree		: IP55	Moment of inertia (J)	: 5.42 sq.ft.lb	
Design		: B			
Output [HP]	50	40	40	40	
Poles	2	2	2	2	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	111/55.5	55.1	52.6	51.0	
L. R. Amperes [A]	799/400	369	389	403	
LRC [A]	7.2x(Code H)	6.7x(Code G)	7.4x(Code H)	7.9x(Code J)	
No load current [A]	29.5/14.8	14.5	15.7	16.6	
Rated speed [RPM]	3560	2960	2965	2965	
Slip [%]	1.11	1.33	1.17	1.17	
Rated torque [ft.lb]	73.8	71.0	70.8	70.8	
Locked rotor torque [%]	260	240	270	280	
Breakdown torque [%]	260	250	280	300	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	59s (cold) 33s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	
Noise level ²	81.0 dB(A)	74.0 dB(A)	74.0 dB(A)	74.0 dB(A)	
Efficiency (%)	25%				
	50%	92.4	92.4	92.4	
	75%	93.6	93.0	93.6	
	100%	94.1	93.0	93.6	
Power Factor	25%				
	50%	0.82	0.82	0.79	
	75%	0.88	0.88	0.86	
	100%	0.89	0.89	0.88	
Bearing type		Drive end : 6312 C3	Non drive end : 6212 C3	Foundation loads	
Sealing		: Oil Seal	: Lip Seal	Max. traction : 481 lb	
Lubrication interval		: 9829 h	: 12143 h	Max. compression : 1150 lb	
Lubricant amount		: 21 g	: 13 g		
Lubricant type		: Mobil Polyrex EM			
Notes USABLE @208V 123A SF 1.00 SFA 123A					
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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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



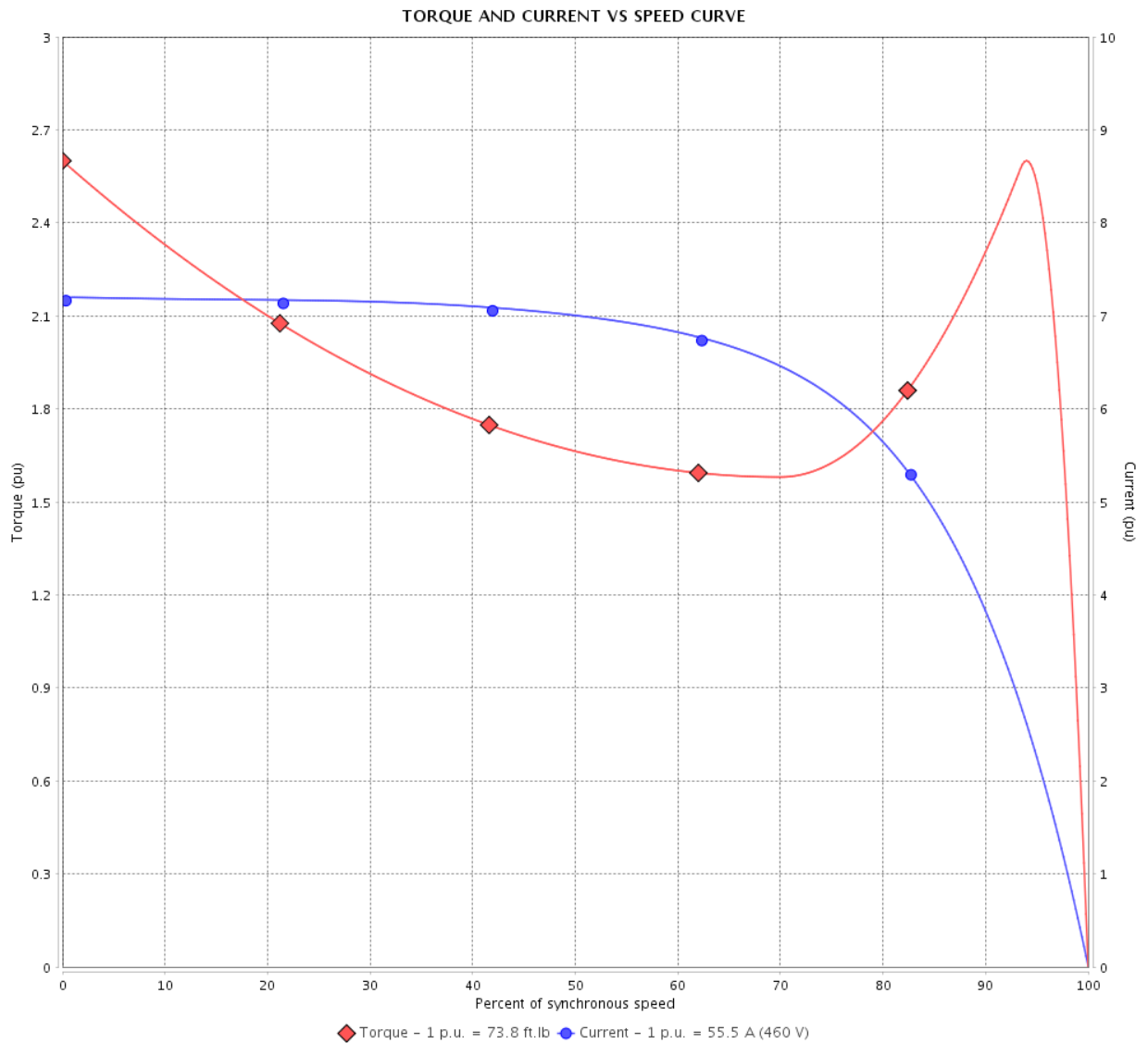
Three Phase Induction Motor - Squirrel Cage

Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14504503

Catalog # : 05036XT3E326TS



Performance : 230/460 V 60 Hz 2P

Rated current : 111/55.5 A
 LRC : 7.2
 Rated torque : 73.8 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 260 %
 Rated speed : 3560 rpm

Moment of inertia (J) : 5.42 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 59s (cold) 33s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



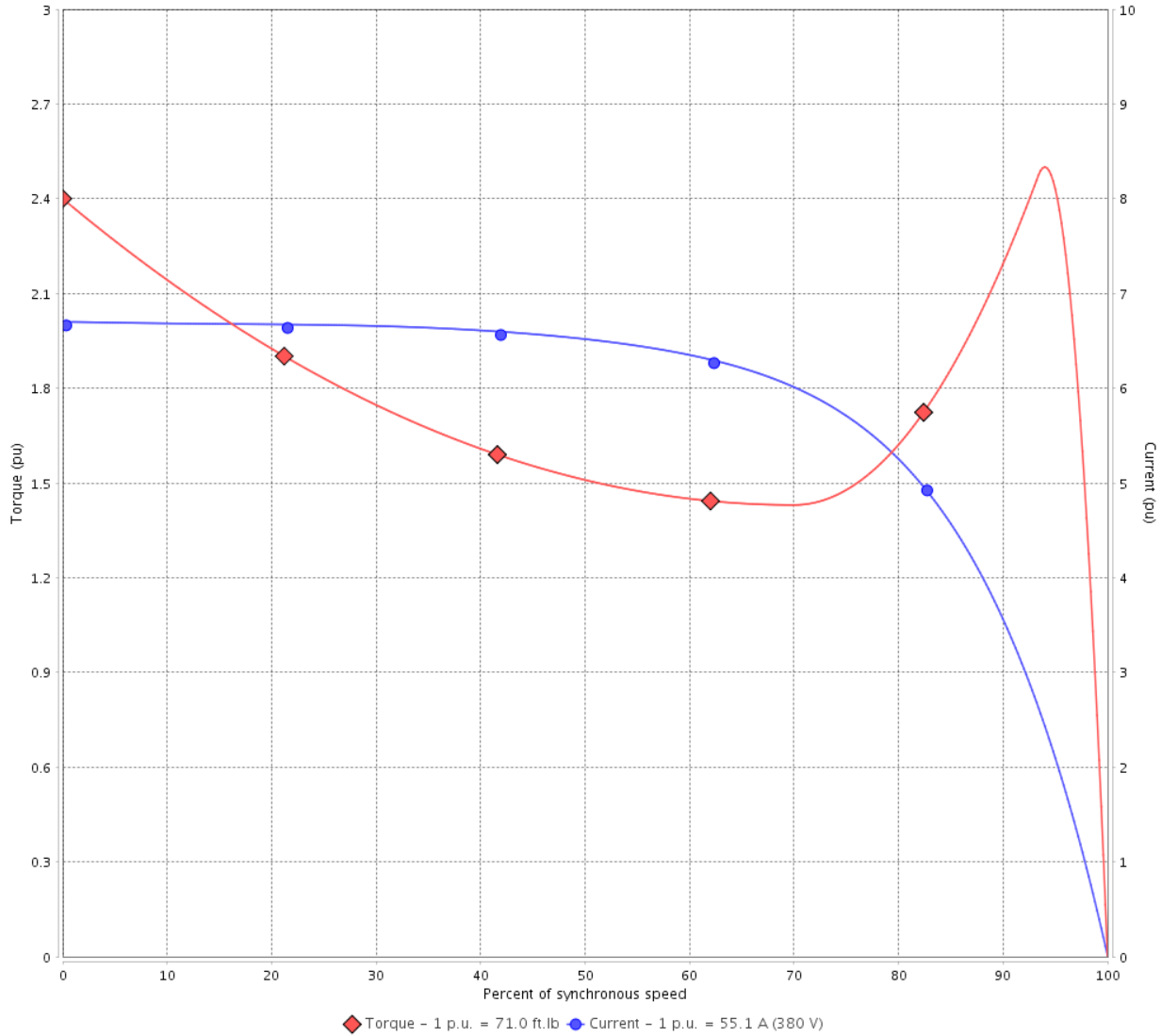
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14504503

Catalog # : 05036XT3E326TS

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 2P IE2

Rated current	: 55.1 A	Moment of inertia (J)	: 5.42 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 71.0 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 2960 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



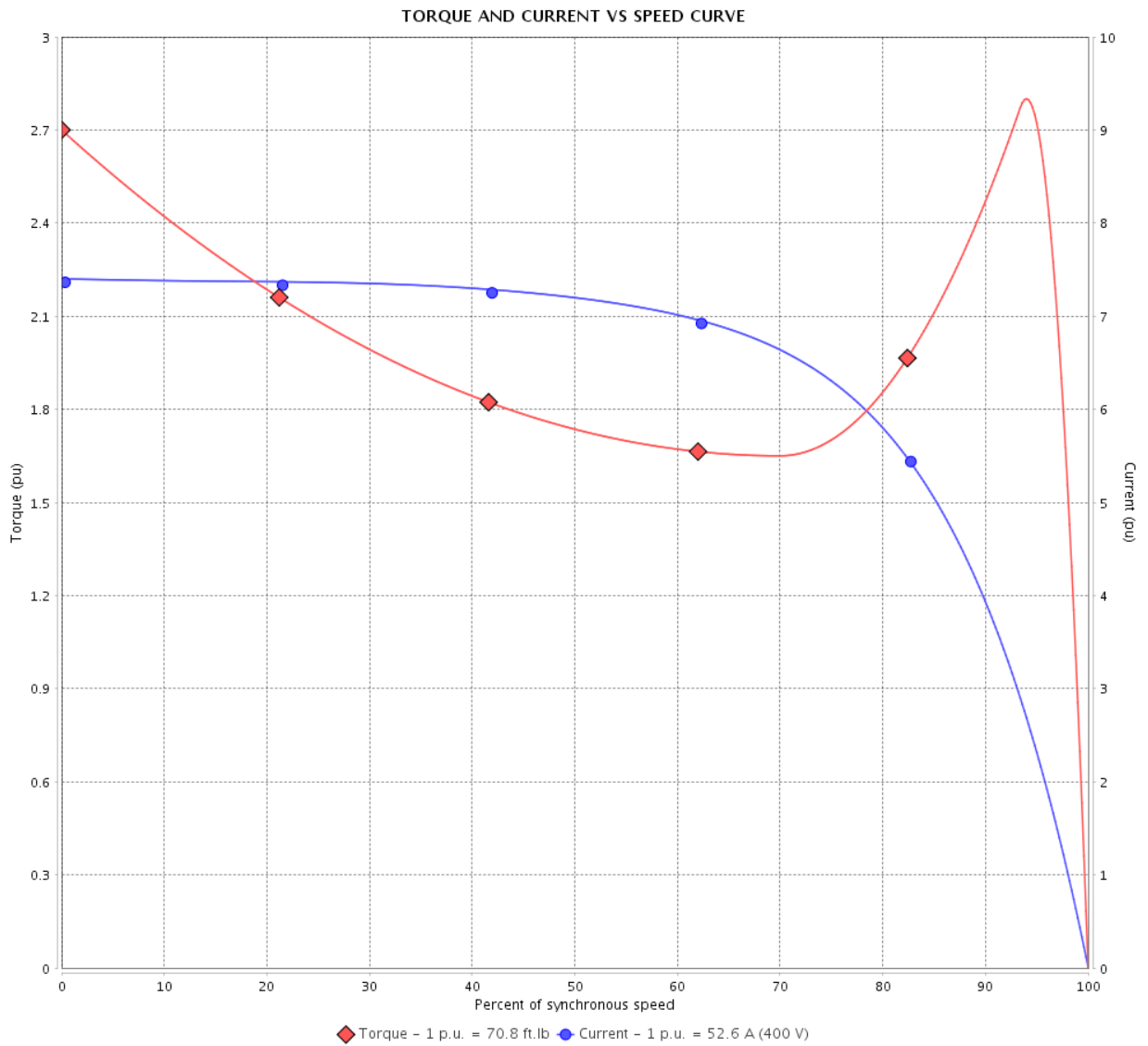
Three Phase Induction Motor - Squirrel Cage

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Product line : NEMA Premium Efficiency Three-Phase

Product code : 14504503

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Performance : 400 V 50 Hz 2P IE3

Rated current	: 52.6 A	Moment of inertia (J)	: 5.42 sq.ft.lb
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 70.8 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 2965 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE

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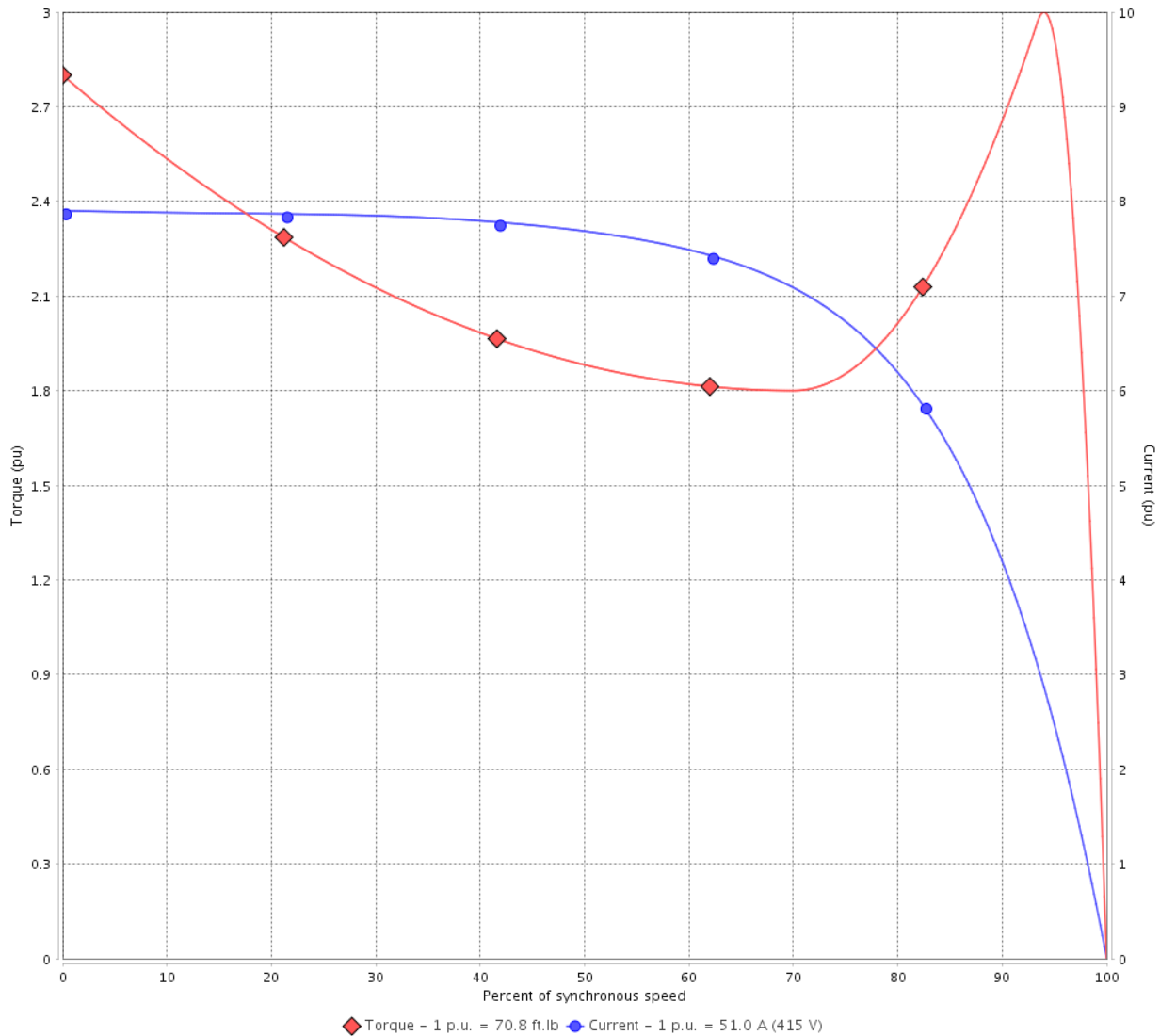
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TORQUE AND CURRENT VS SPEED CURVE



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Rated torque	: 70.8 ft.lb	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 2965 rpm	Design	: B

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

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LOAD PERFORMANCE CURVE

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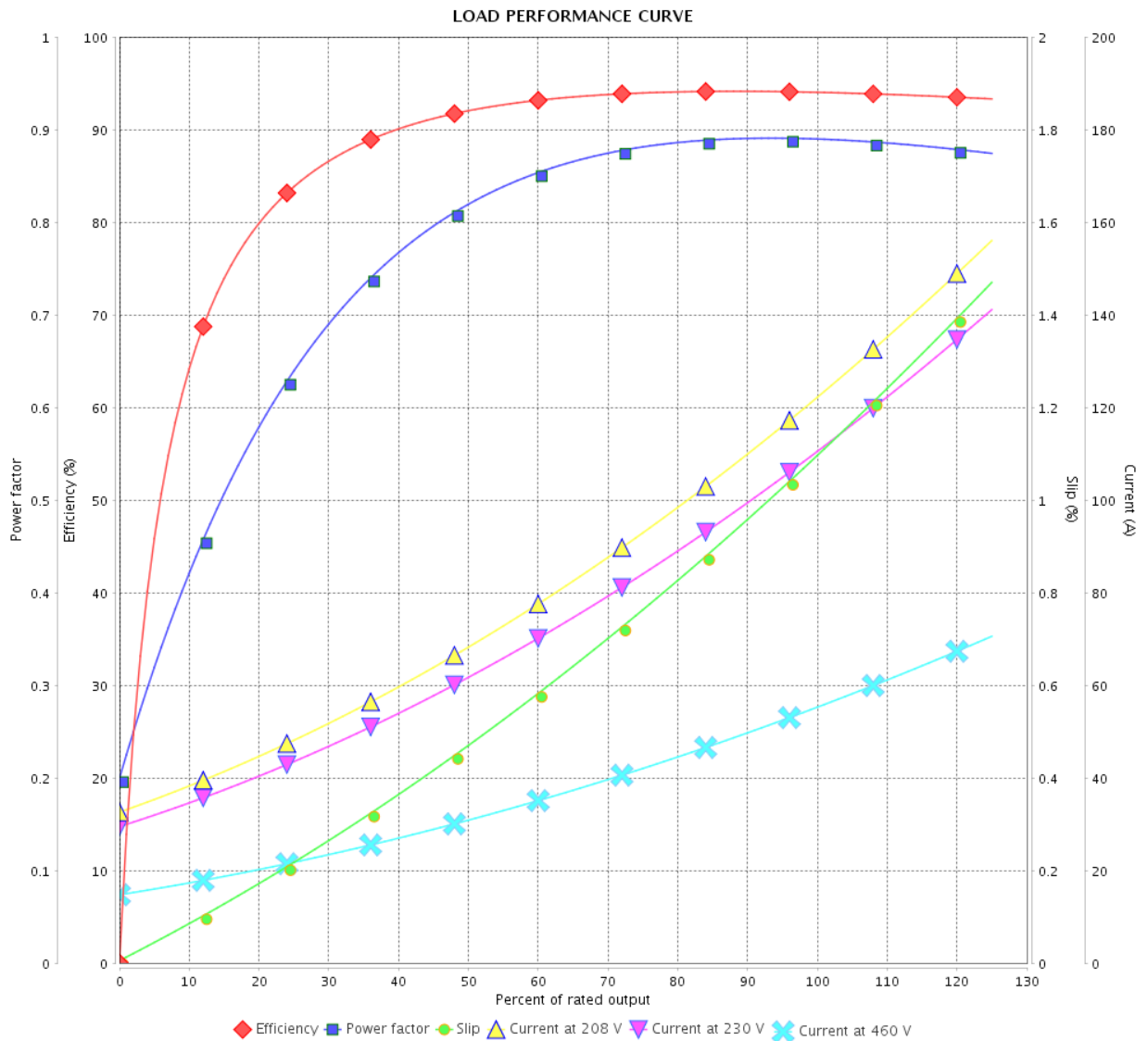


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Performance : 230/460 V 60 Hz 2P

Rated current : 111/55.5 A
 LRC : 7.2
 Rated torque : 73.8 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 260 %
 Rated speed : 3560 rpm

Moment of inertia (J) : 5.42 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
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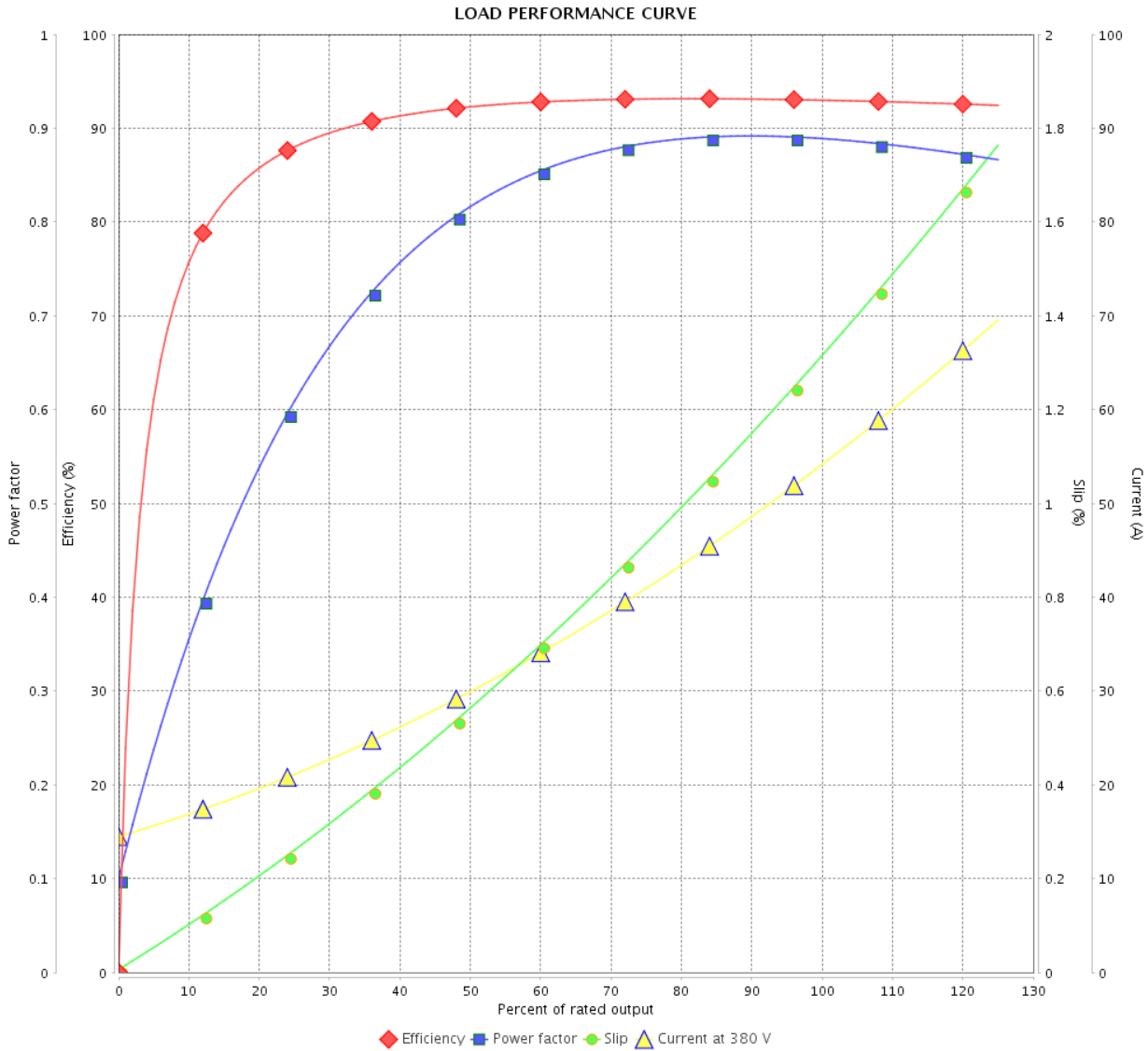


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Breakdown torque	: 250 %	Temperature rise	: 80 K
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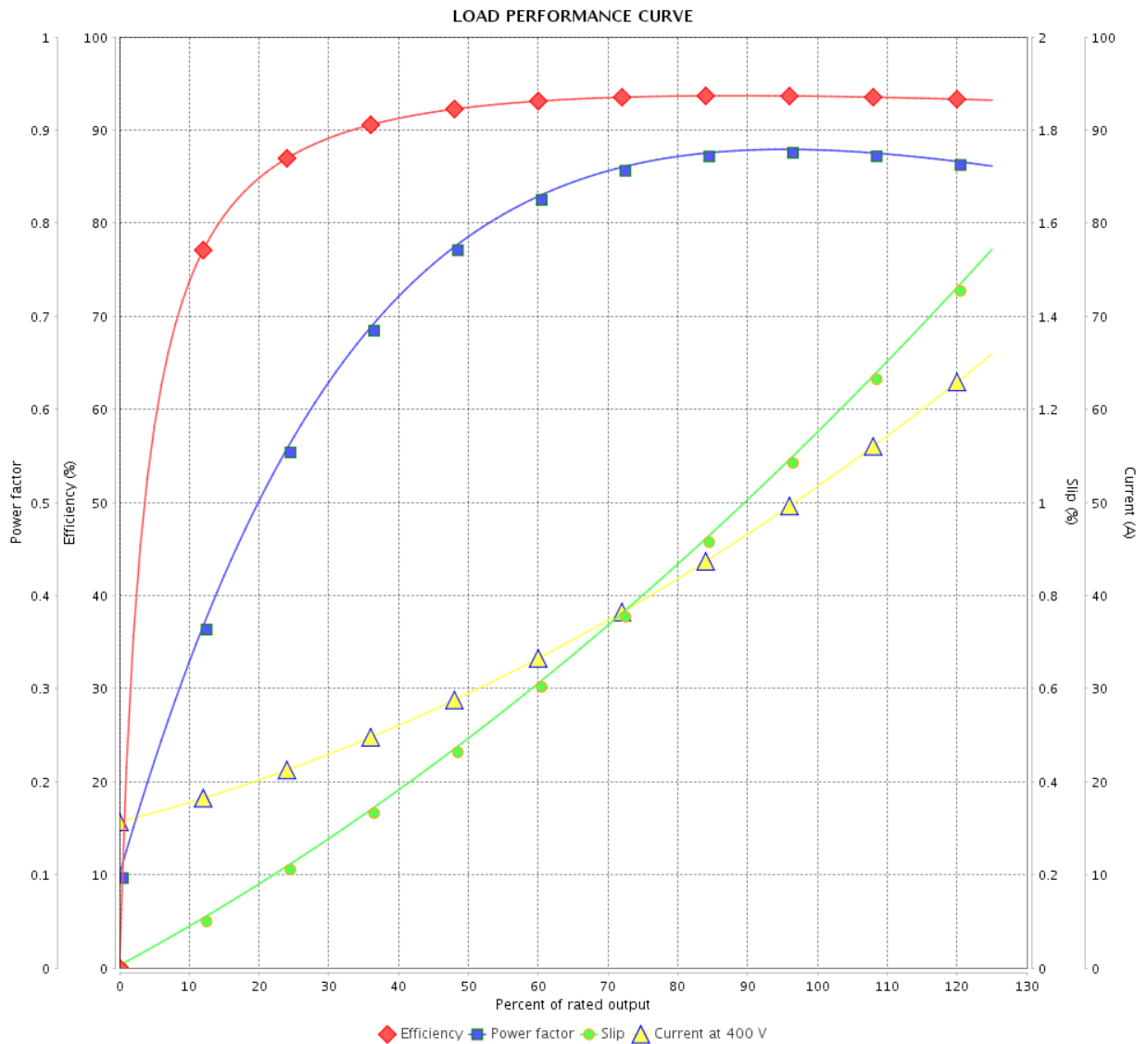


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Performance : 400 V 50 Hz 2P IE3

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 Breakdown torque : 280 %
 Rated speed : 2965 rpm

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 Insulation class : F
 Service factor : 1.00
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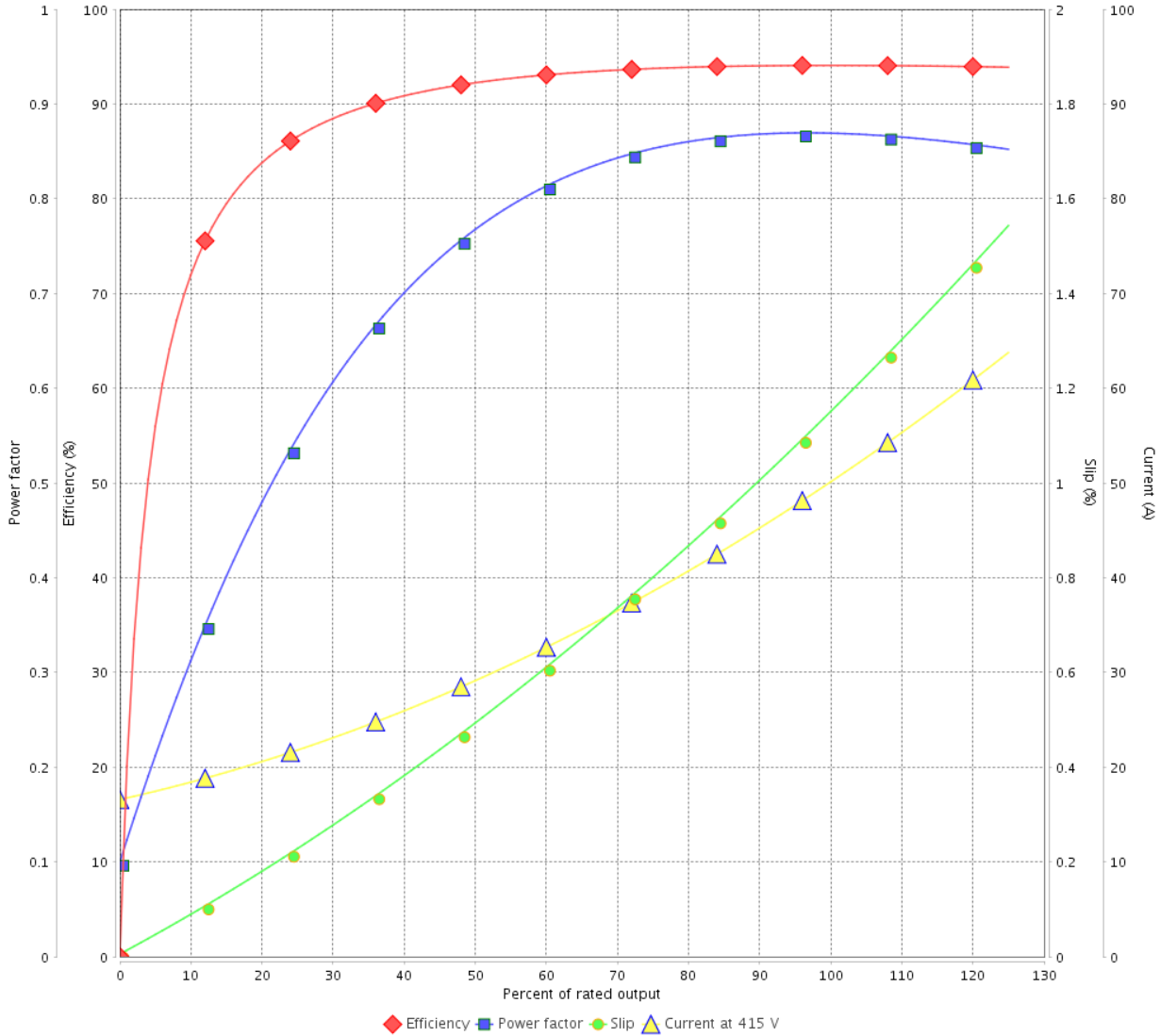
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THERMAL LIMIT CURVE



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Heating constant

Cooling constant

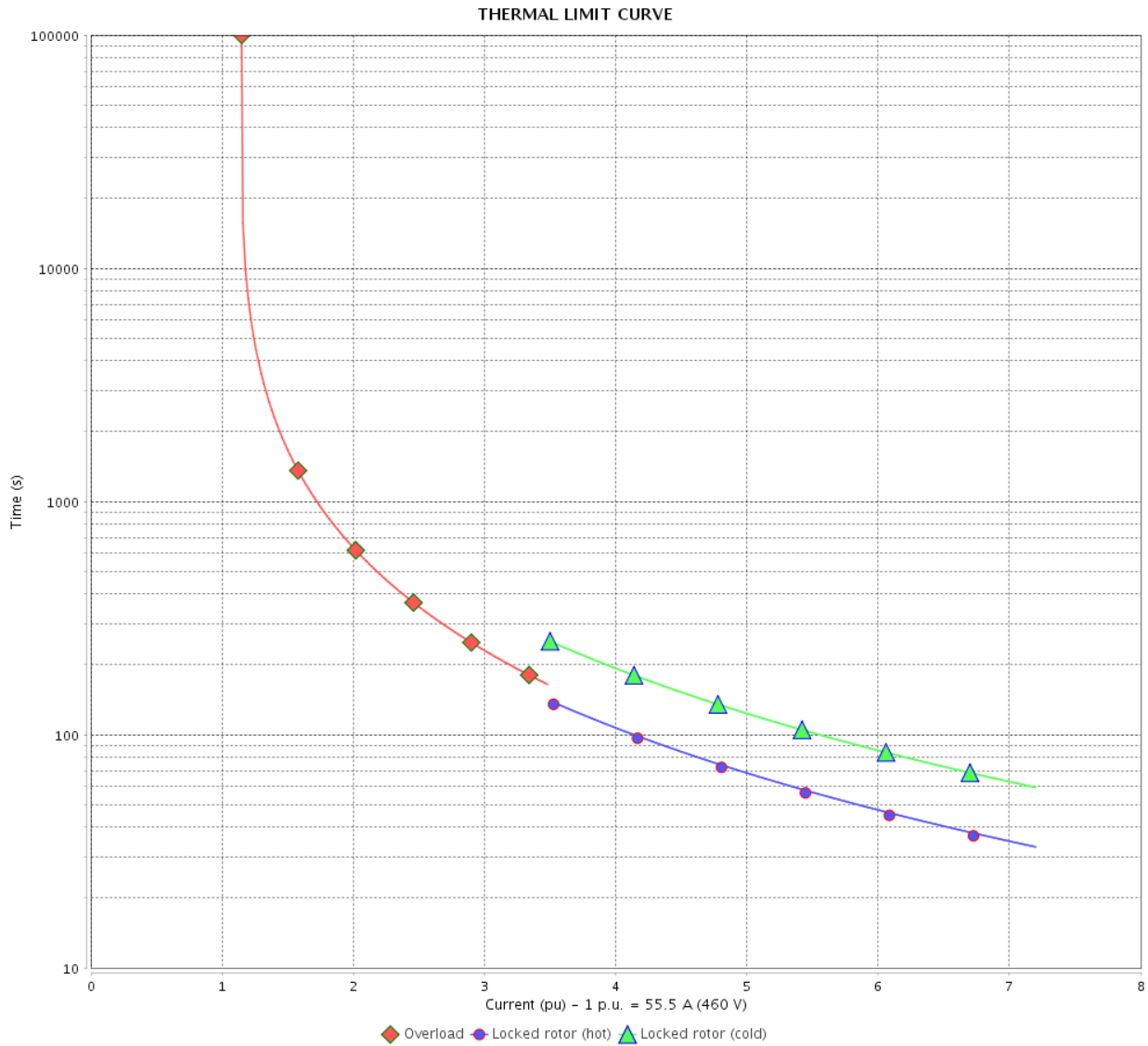
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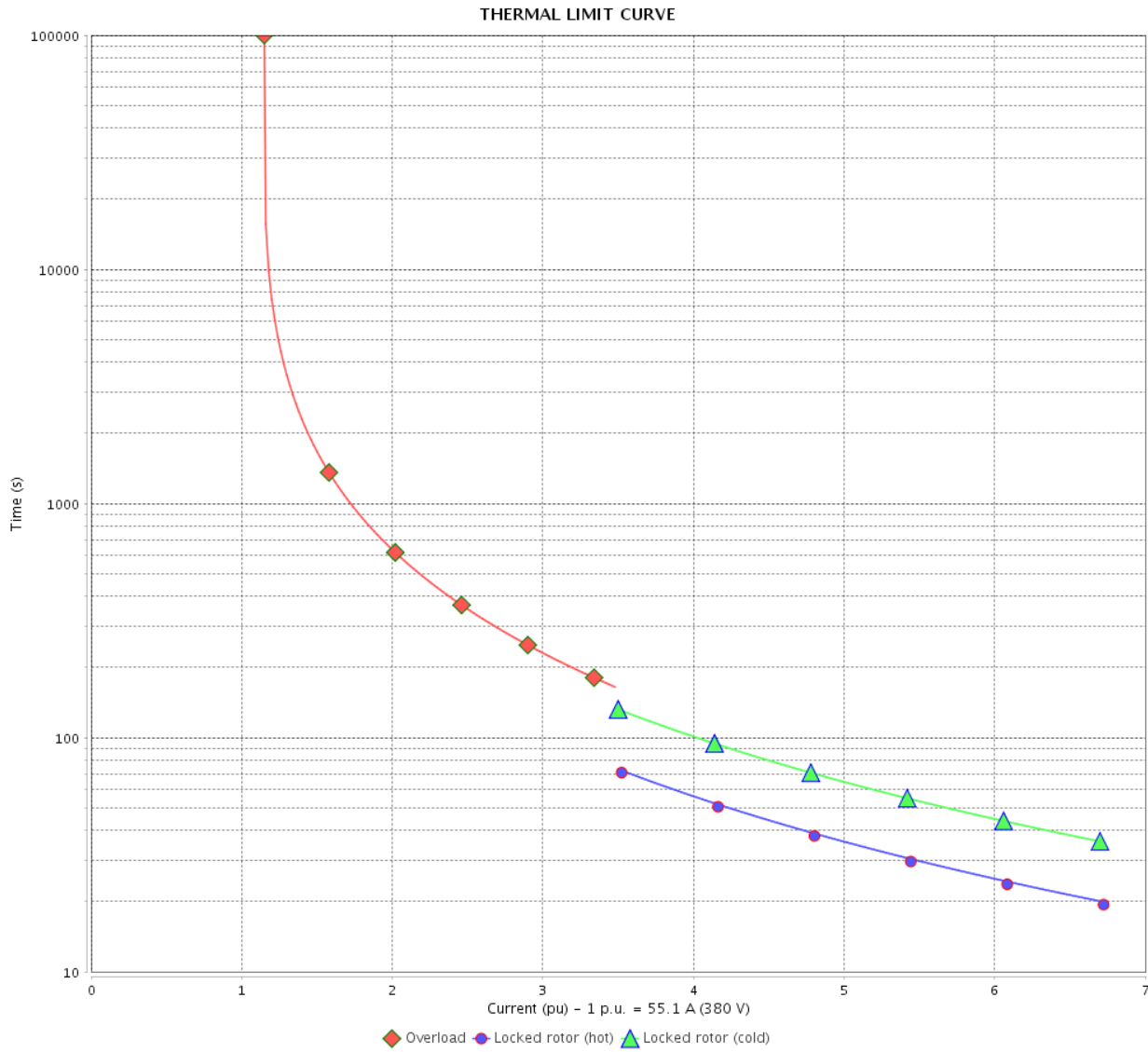
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Locked rotor torque : 270 %	Service factor : 1.00
Breakdown torque : 280 %	Temperature rise : 80 K
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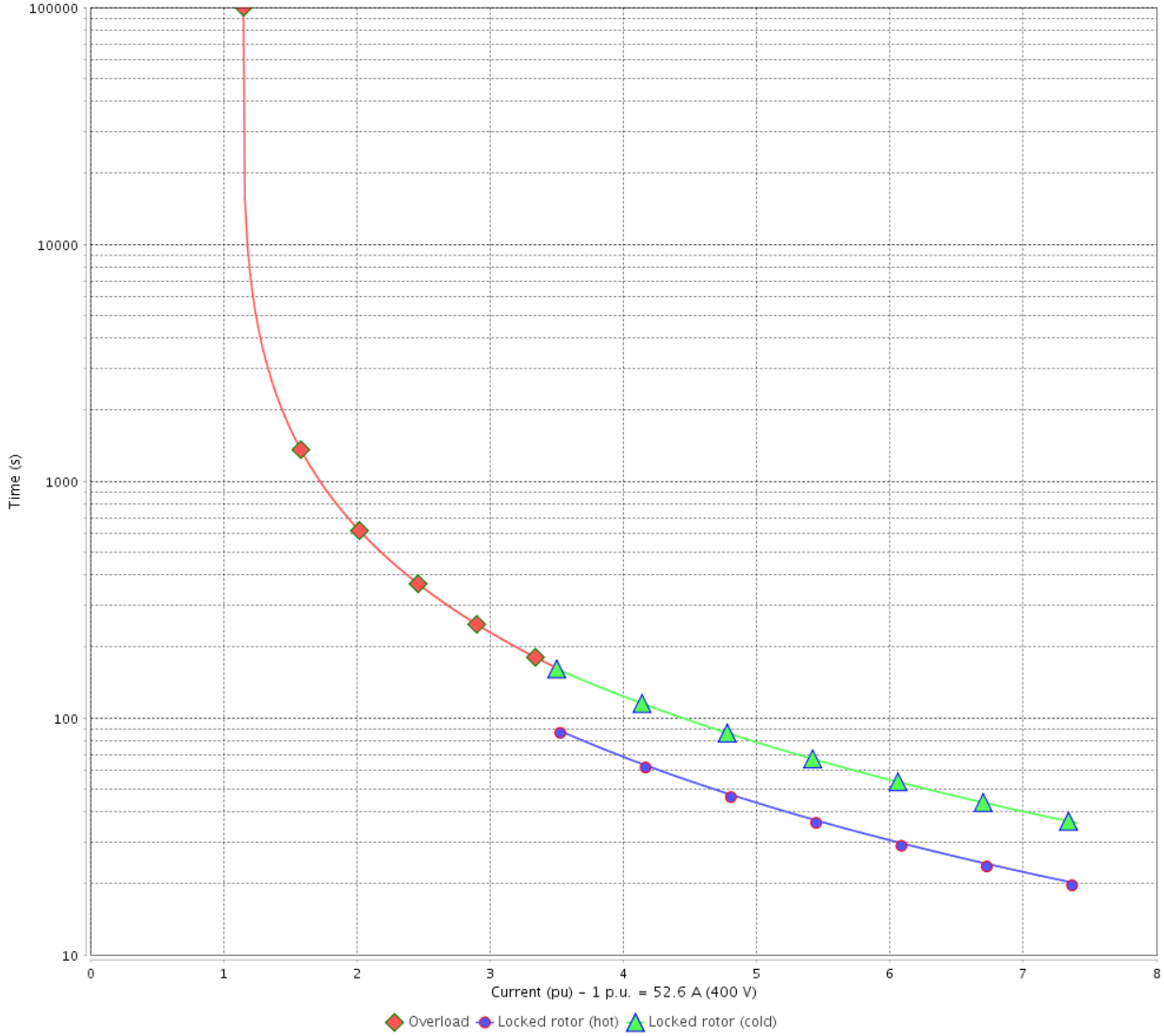
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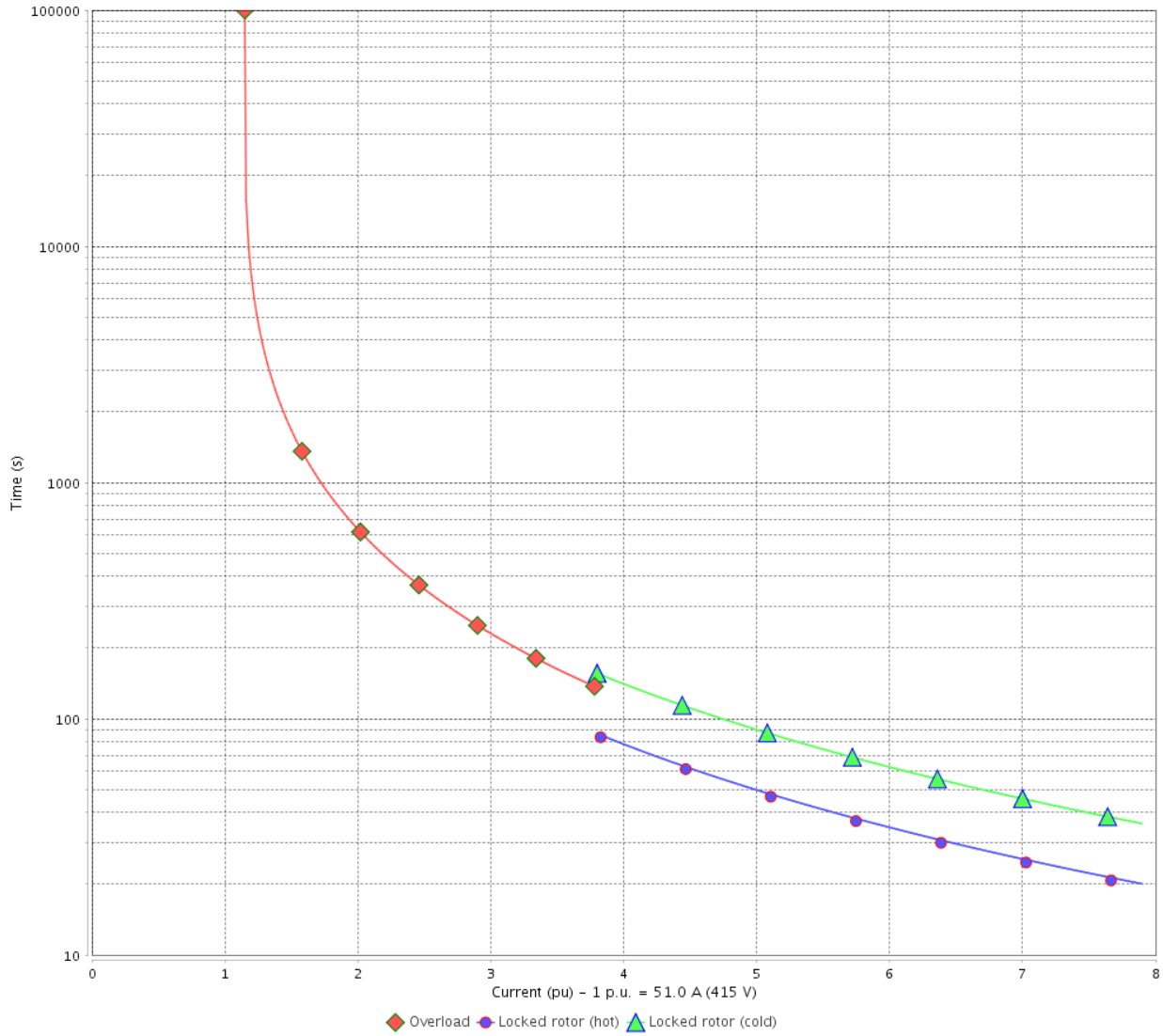
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

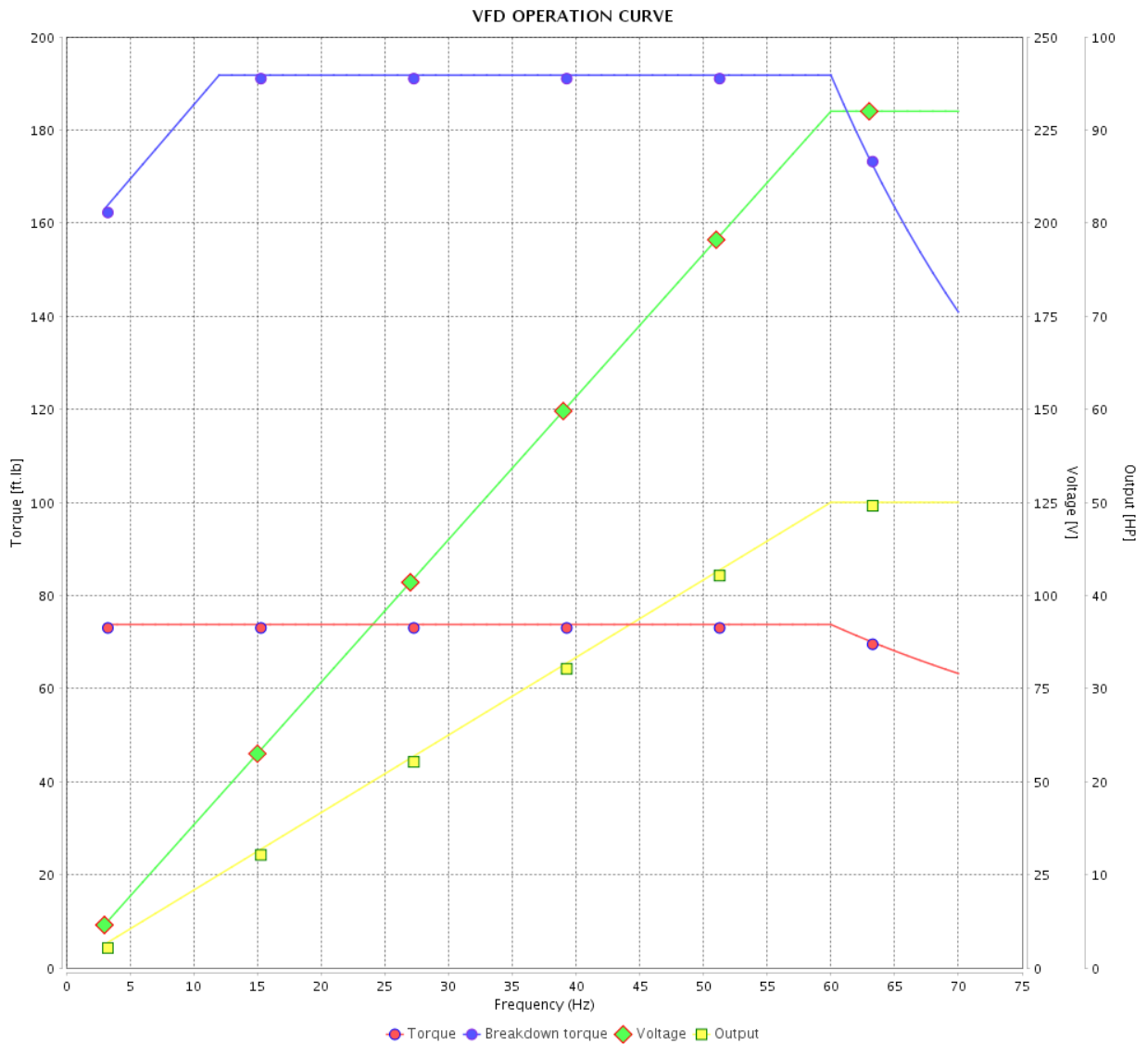


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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



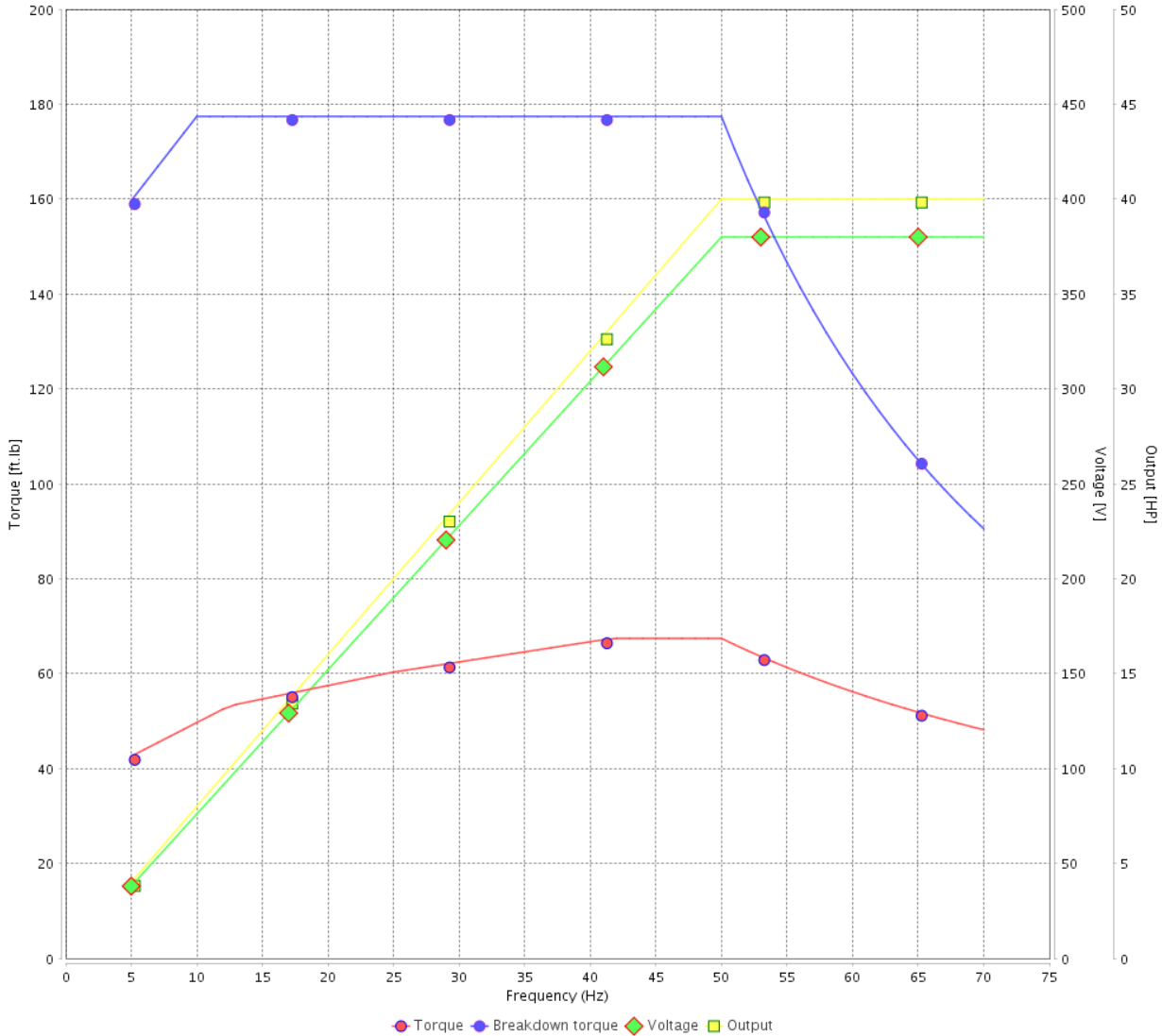
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VFD OPERATION CURVE



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VFD OPERATION CURVE

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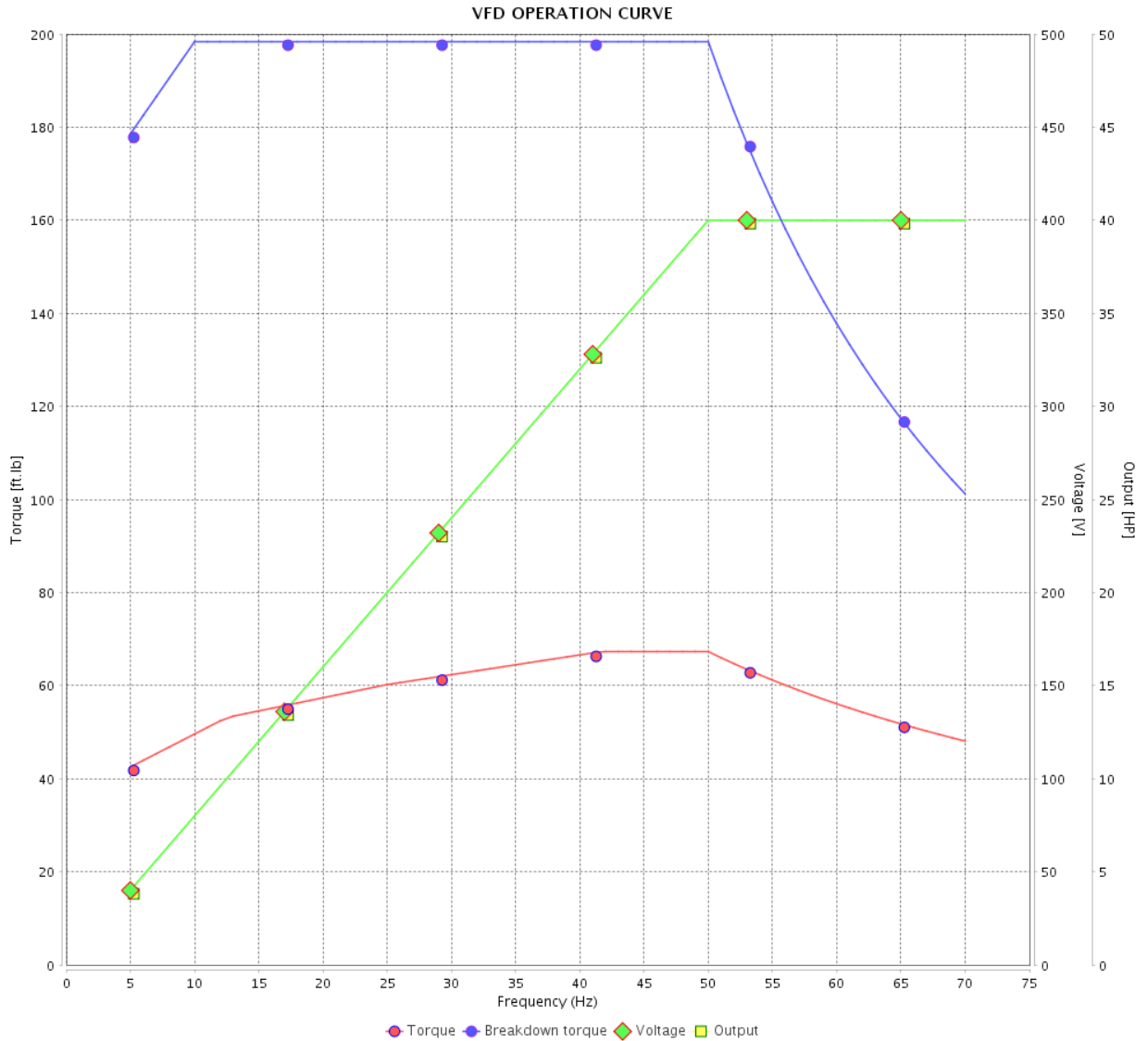


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VFD OPERATION CURVE

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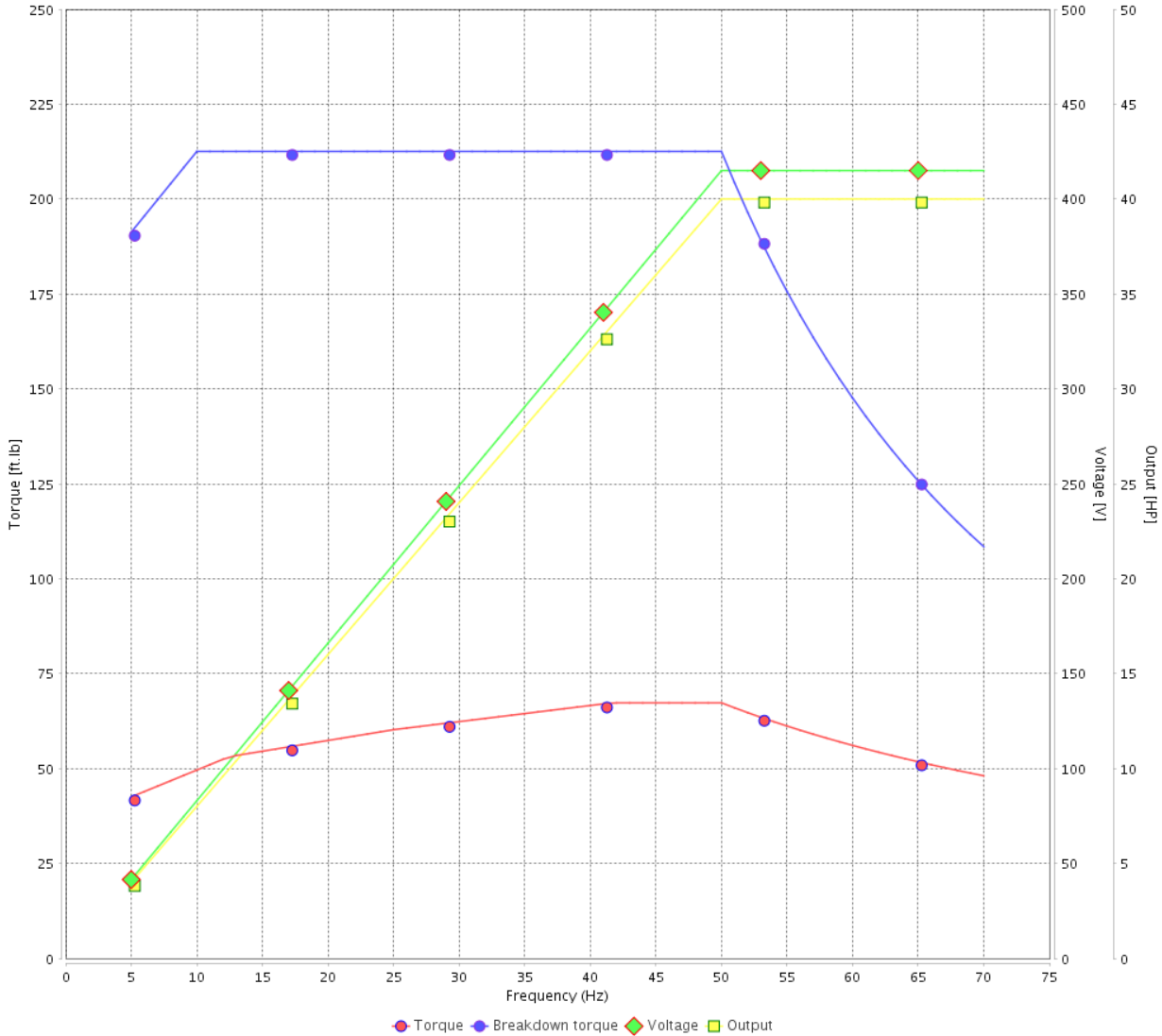
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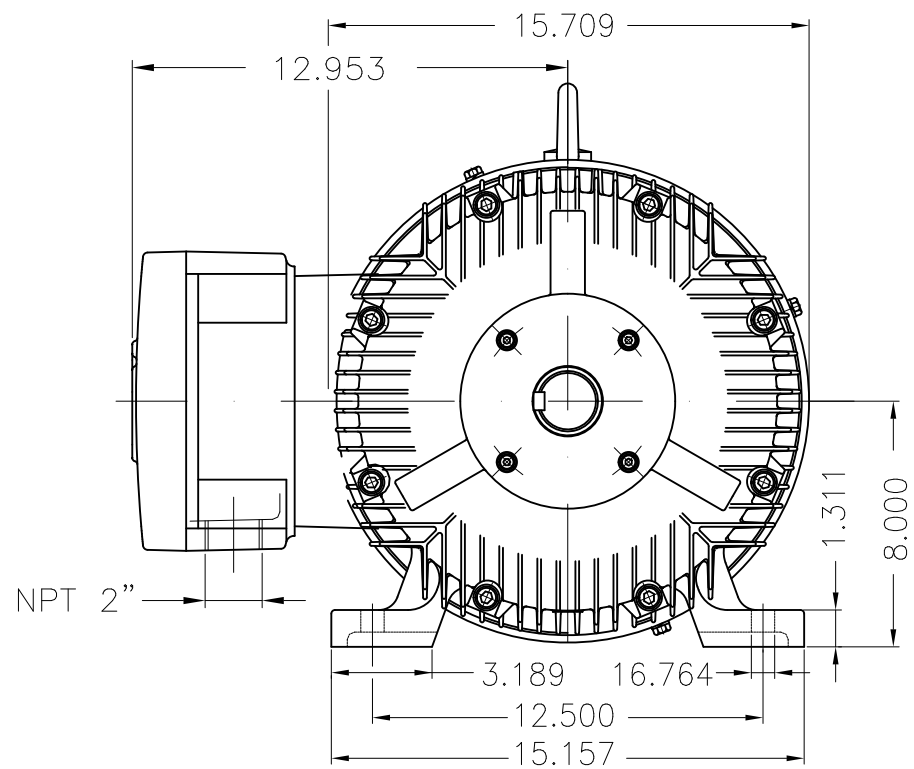
VFD OPERATION CURVE



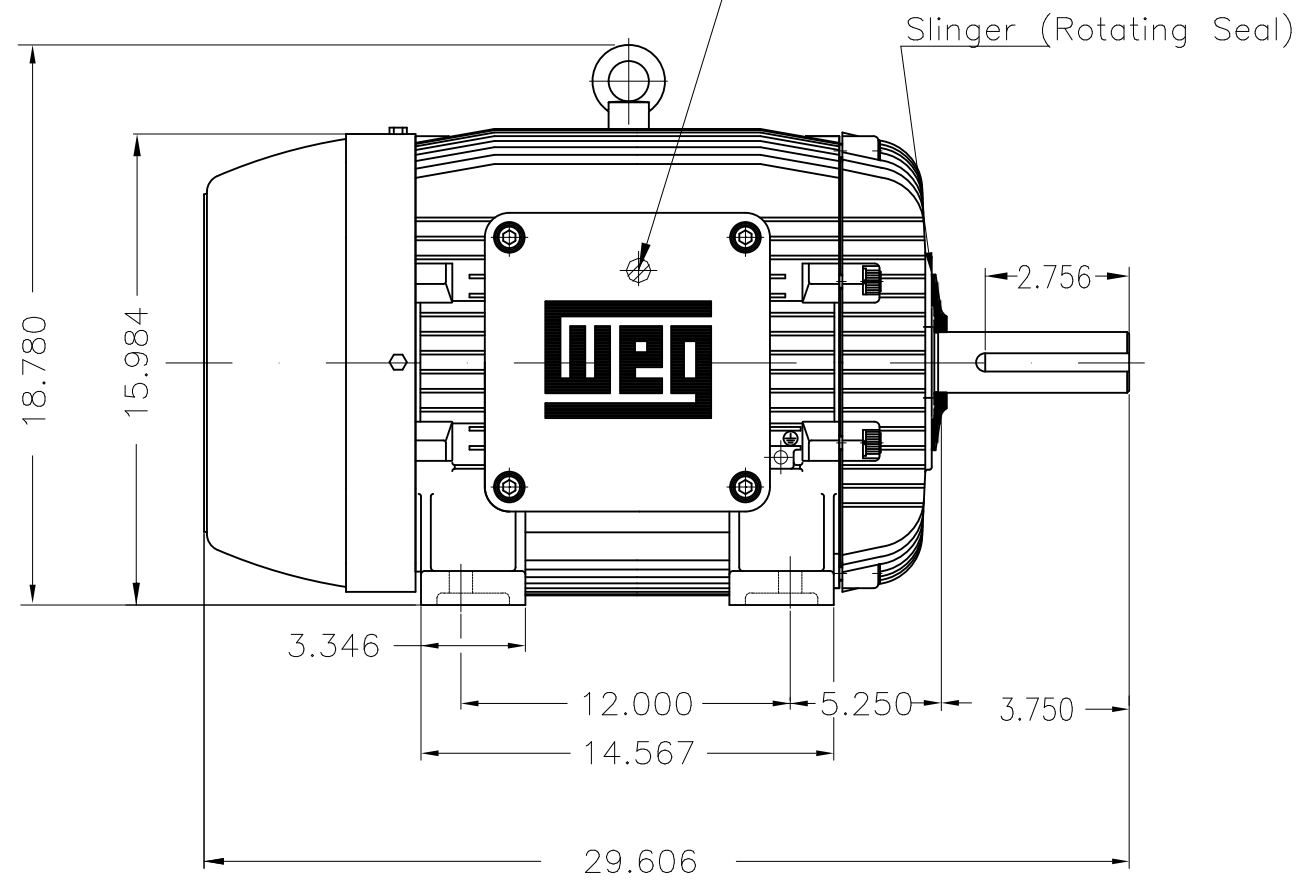
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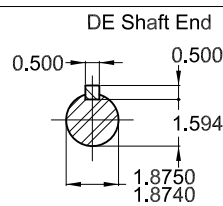
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Grounding for leads 5.2–35 mm² / 10–2 AWG



Color RAL 5009
 Painting plan 202P
 Mounting NEMA F-1
 Mounting B3R(D)



50 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 326TS IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
 WDD



SHEET 1 / 1

Dimensions in inches XME A3

MADE IN BRAZIL

**W21X NEMA**
Premium

14504503



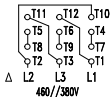
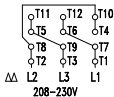
LISTED

CC029A

Inverter Duty Motor
Severe Duty

MODEL 05036XT3E326TS

PH 3	FR 326TS		
HP(kW) 50.0(37.0)		HZ 60	IP55
V 230/460		A 111/55.5	
RPM 3560		NEMA NOM EFF 94.1%	
PF 0.89		SFA 128/63.8	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	123 A	SF 1.00
AMB 55°C SF1.0 -bearings lub interval reduced by a factor of 50%			
40HP 30kW 50Hz 380V 55.1A 2960RPM SF1.00 EFF 93.0% (IE2)			



→ 6312-C3 MOBIL POLYREX EM
→ 6212-C3 21 g 9829 h

670 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.