

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line	: NEMA Premium Efficiency Three-Phase	Product code	: 14390090		
		Catalog #	: 02518XT3E284T		
Frame	: 284T	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	: 476 lb		
Protection degree	: IP55	Moment of inertia (J)	: 4.54 sq.ft.lb		
Design	: B				
Output [HP]	25	25	25	25	25
Poles	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	59.8/29.9	36.5	34.8	34.0	34.0
L. R. Amperes [A]	490/245	234	247	258	258
LRC [A]	8.2x(Code G)	6.4x(Code F)	7.1x(Code F)	7.6x(Code G)	7.6x(Code G)
No load current [A]	25.0/12.5	12.5	13.4	14.5	14.5
Rated speed [RPM]	1770	1460	1465	1470	1470
Slip [%]	1.67	2.67	2.33	2.00	2.00
Rated torque [ft.lb]	74.2	90.2	89.9	89.6	89.6
Locked rotor torque [%]	320	229	240	260	260
Breakdown torque [%]	320	240	250	270	270
Service factor	1.15	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)
Noise level ²	68.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)
Efficiency (%)	25%	92.2	92.8	92.2	92.2
	50%	92.4	92.4	92.4	92.4
	75%	93.6	92.4	92.4	92.4
	100%	93.6	91.7	92.4	92.4
Power Factor	25%	0.42	0.47	0.45	0.42
	50%	0.67	0.72	0.70	0.68
	75%	0.78	0.81	0.79	0.78
	100%	0.83	0.84	0.83	0.82
Bearing type	: <u>Drive end</u> 6311 C3 <u>Non drive end</u> 6211 C3	Foundation loads			
Sealing	: Oil Seal Lip Seal	Max. traction : 814 lb			
Lubrication interval	: 20000 h 20000 h	Max. compression : 1289 lb			
Lubricant amount	: 18 g 11 g				
Lubricant type	: Mobil Polyrex EM				
Notes					
USABLE @208V 64.5A SF 1.15 SFA 74.2A					
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



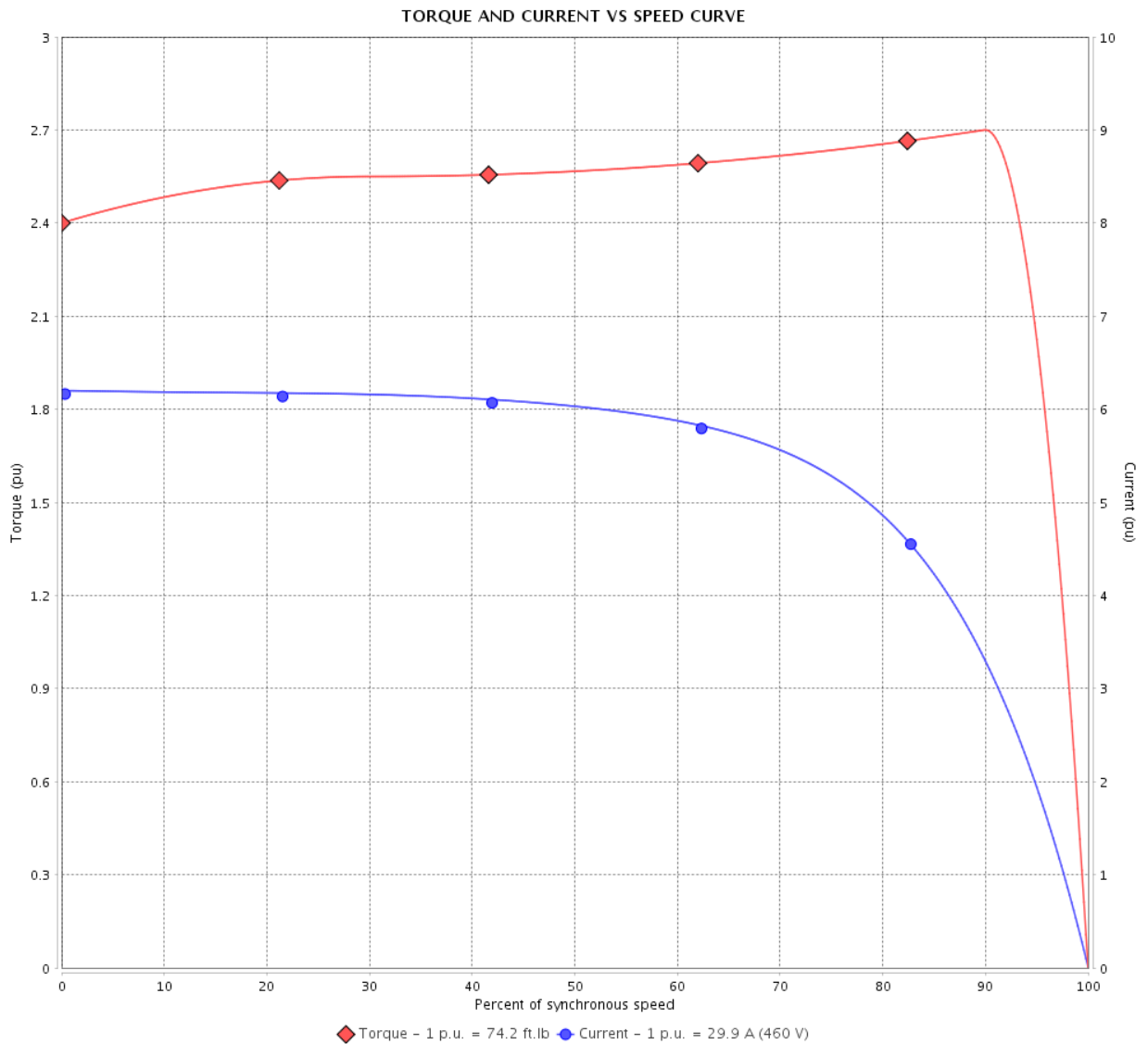
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14390090

Catalog # : 02518XT3E284T



Performance : 230/460 V 60 Hz 4P

Rated current : 59.8/29.9 A
 LRC : 8.2
 Rated torque : 74.2 ft.lb
 Locked rotor torque : 320 %
 Breakdown torque : 320 %
 Rated speed : 1770 rpm

Moment of inertia (J) : 4.54 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



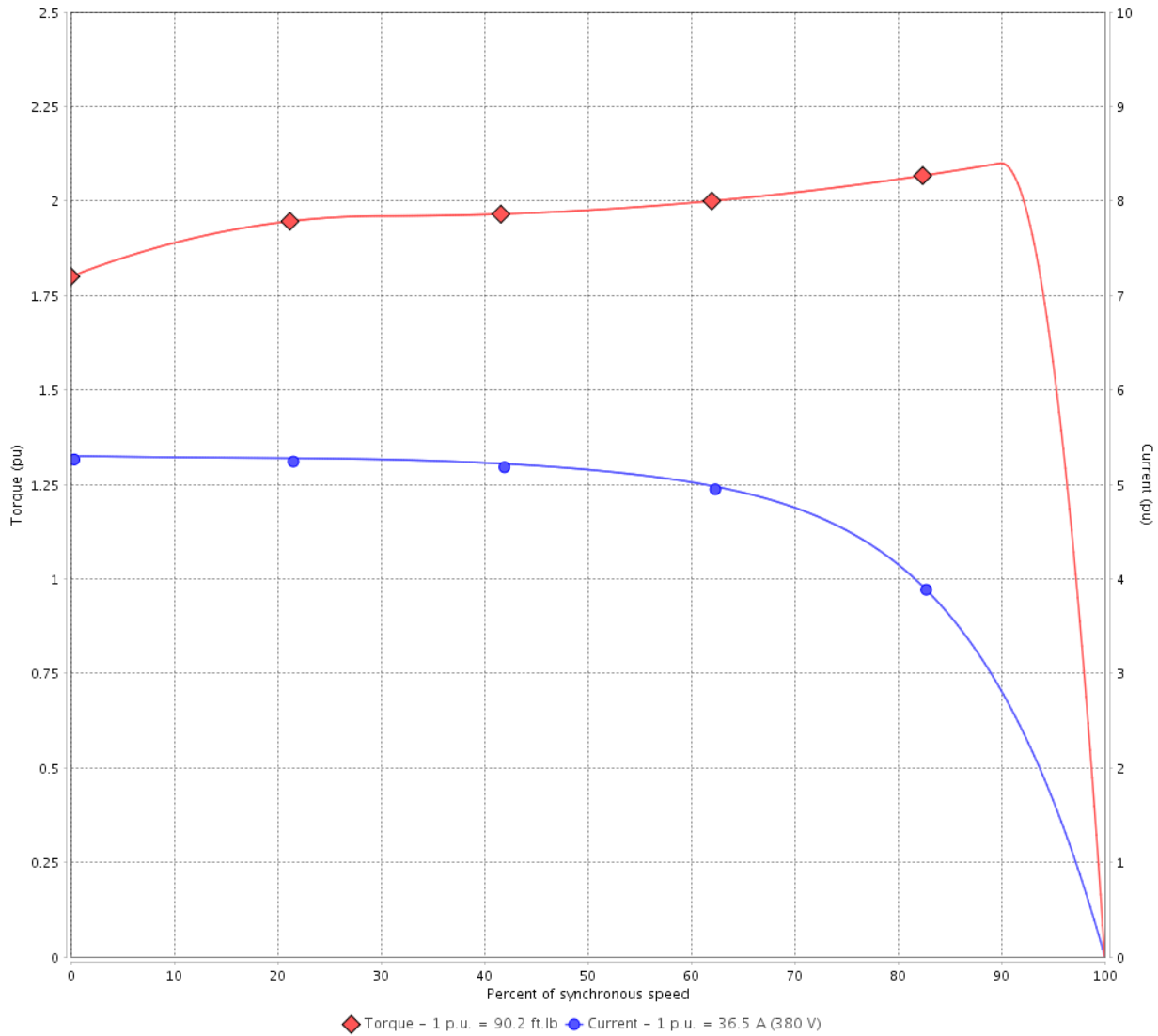
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE2

Rated current	: 36.5 A	Moment of inertia (J)	: 4.54 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 90.2 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



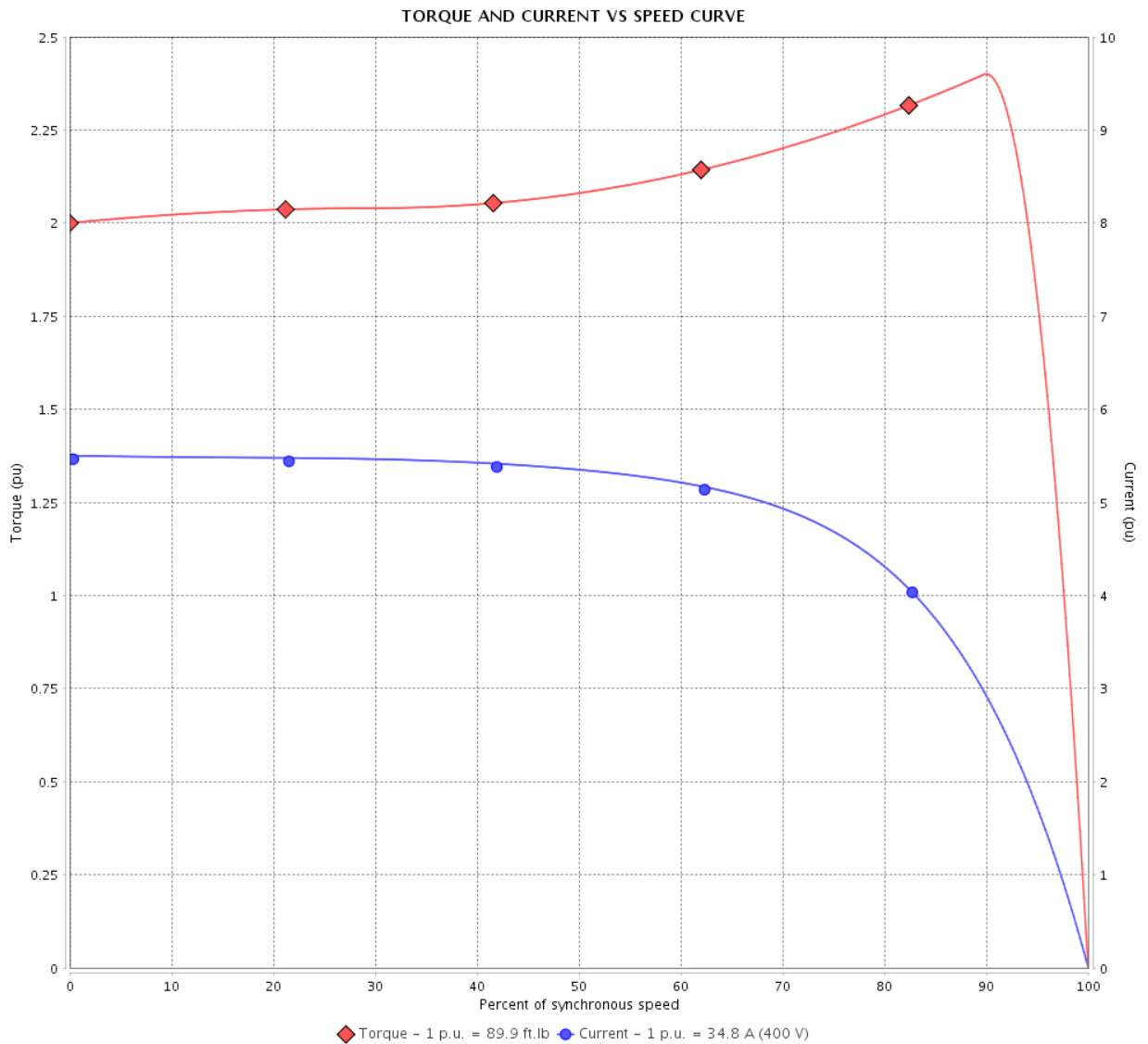
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14390090

Catalog # : 02518XT3E284T



Performance : 400 V 50 Hz 4P IE2

Rated current	: 34.8 A	Moment of inertia (J)	: 4.54 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 89.9 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1465 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



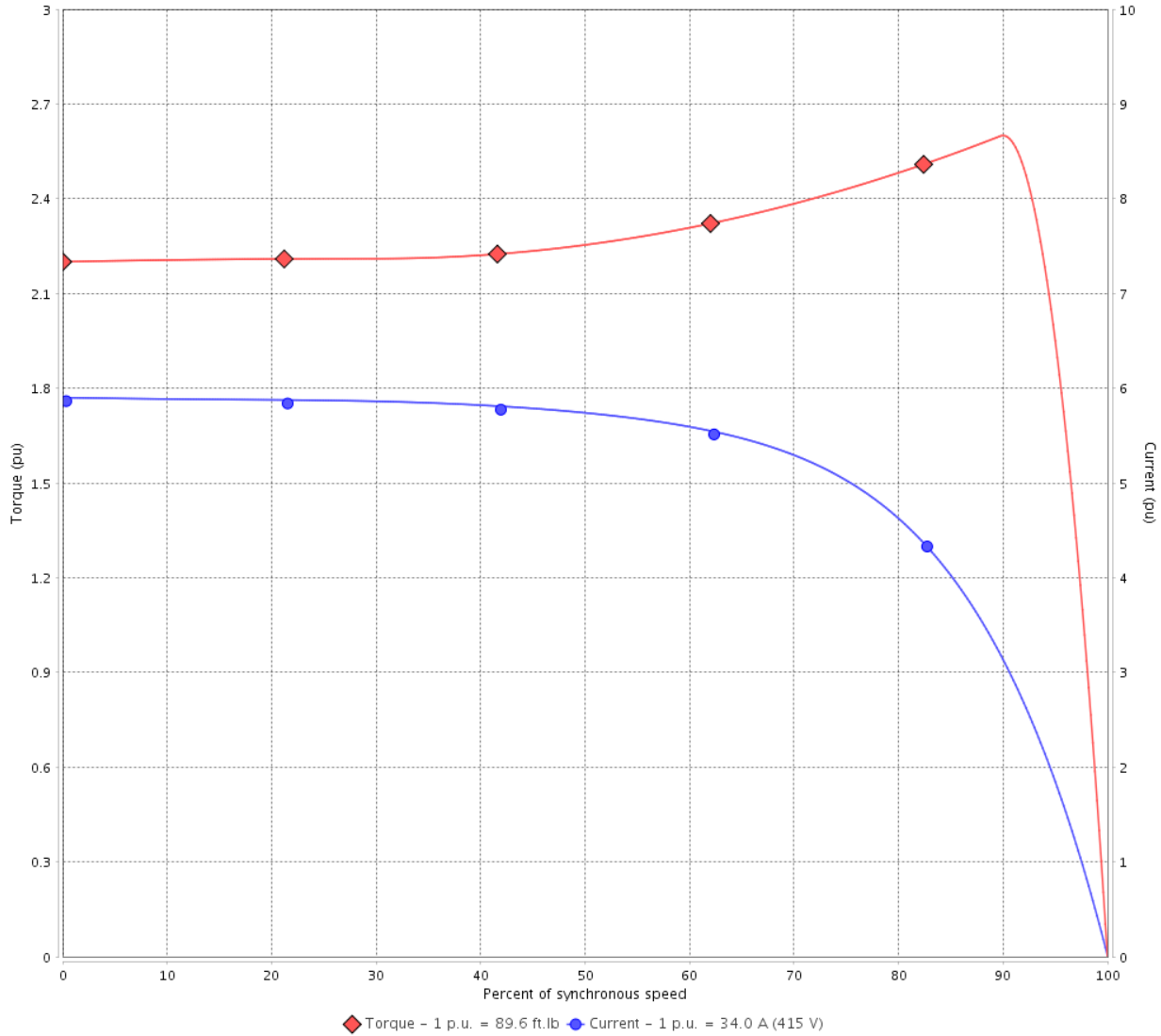
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE2

Rated current	: 34.0 A	Moment of inertia (J)	: 4.54 sq.ft.lb
LRC	: 7.6	Duty cycle	: Cont.(S1)
Rated torque	: 89.6 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1470 rpm	Design	: B

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

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LOAD PERFORMANCE CURVE

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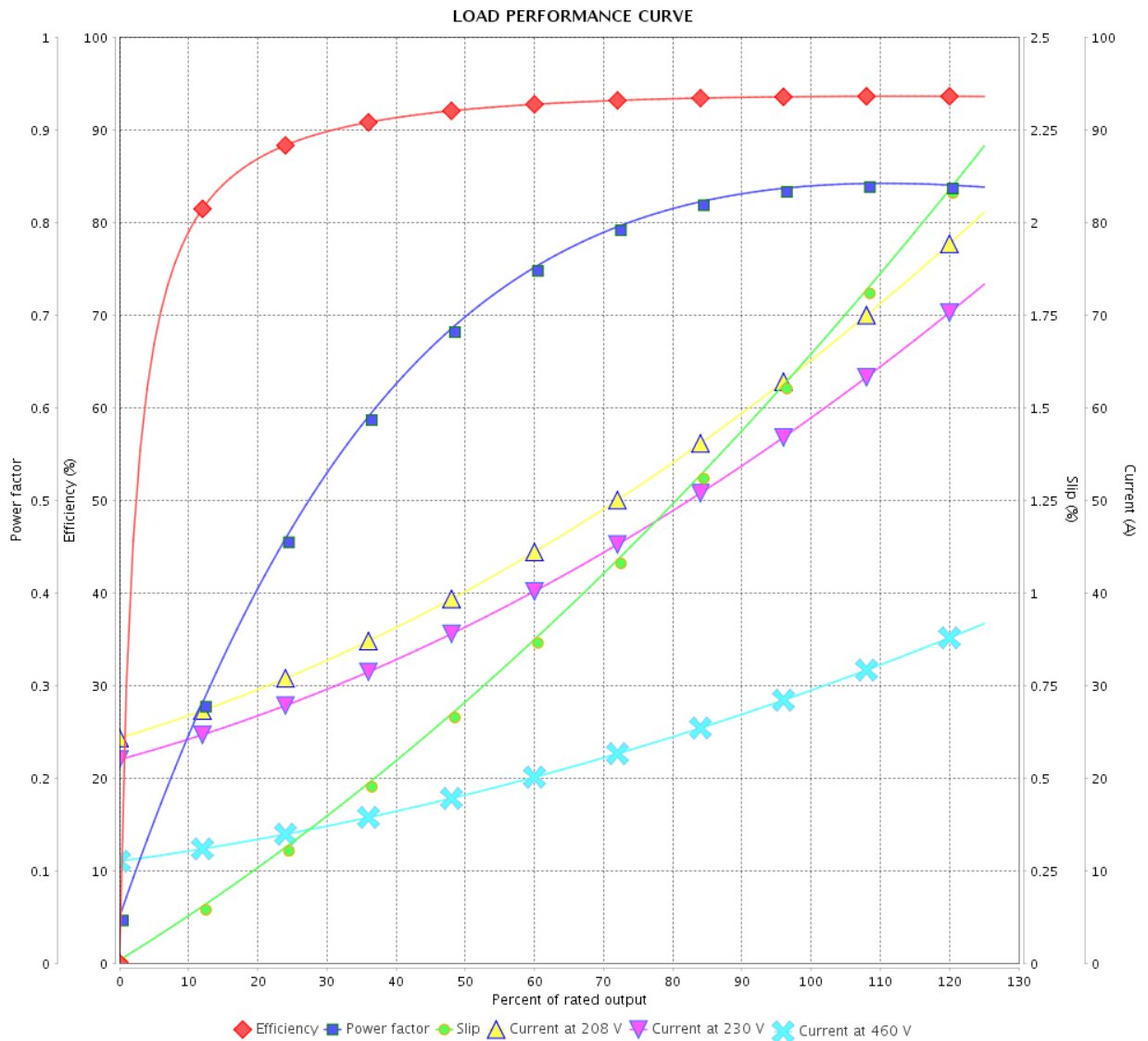


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Performance : 230/460 V 60 Hz 4P

Rated current : 59.8/29.9 A
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 Rated speed : 1770 rpm

Moment of inertia (J) : 4.54 sq.ft.lb
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 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
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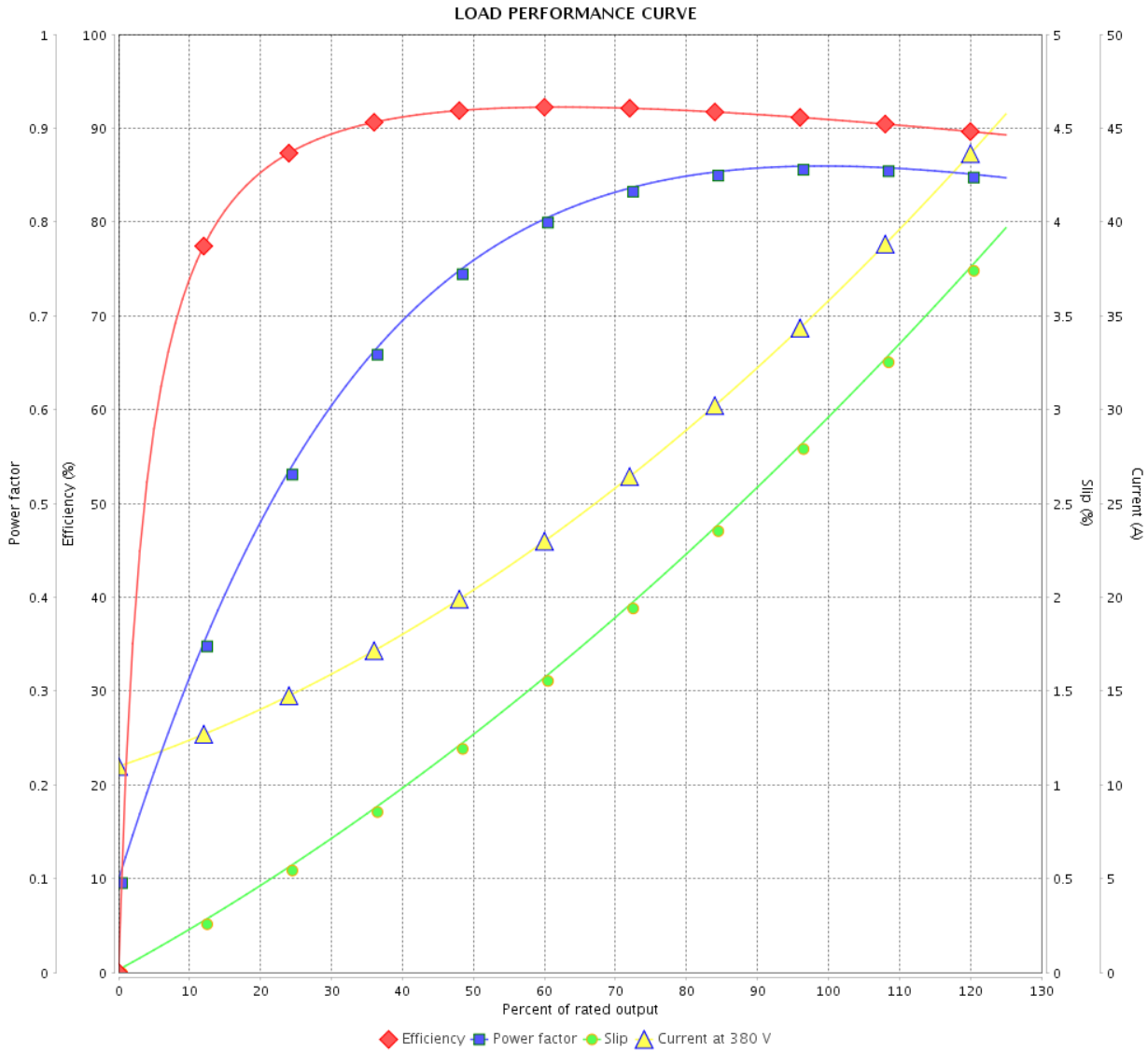


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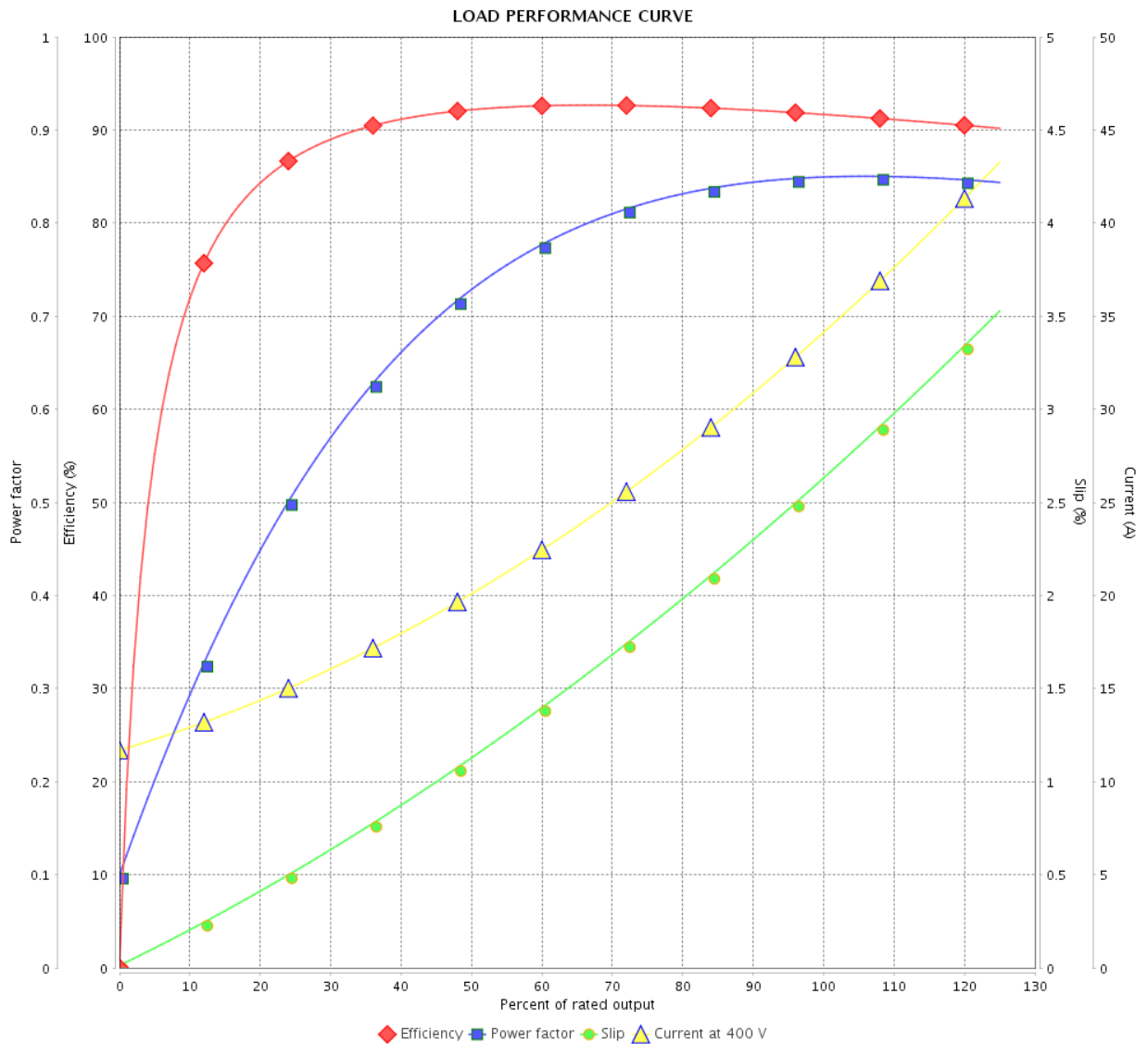


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Three Phase Induction Motor - Squirrel Cage



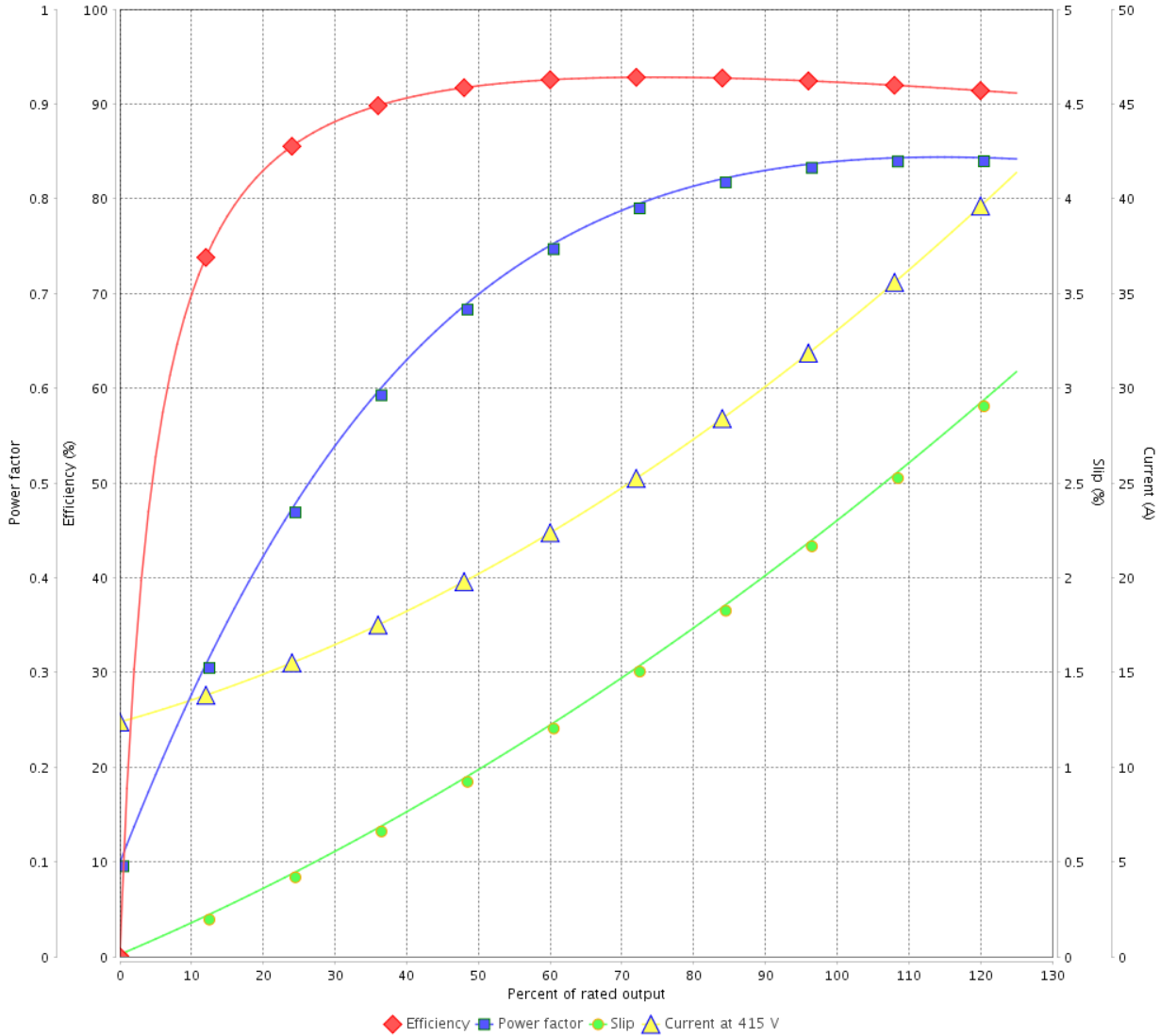
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THERMAL LIMIT CURVE



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Heating constant

Cooling constant

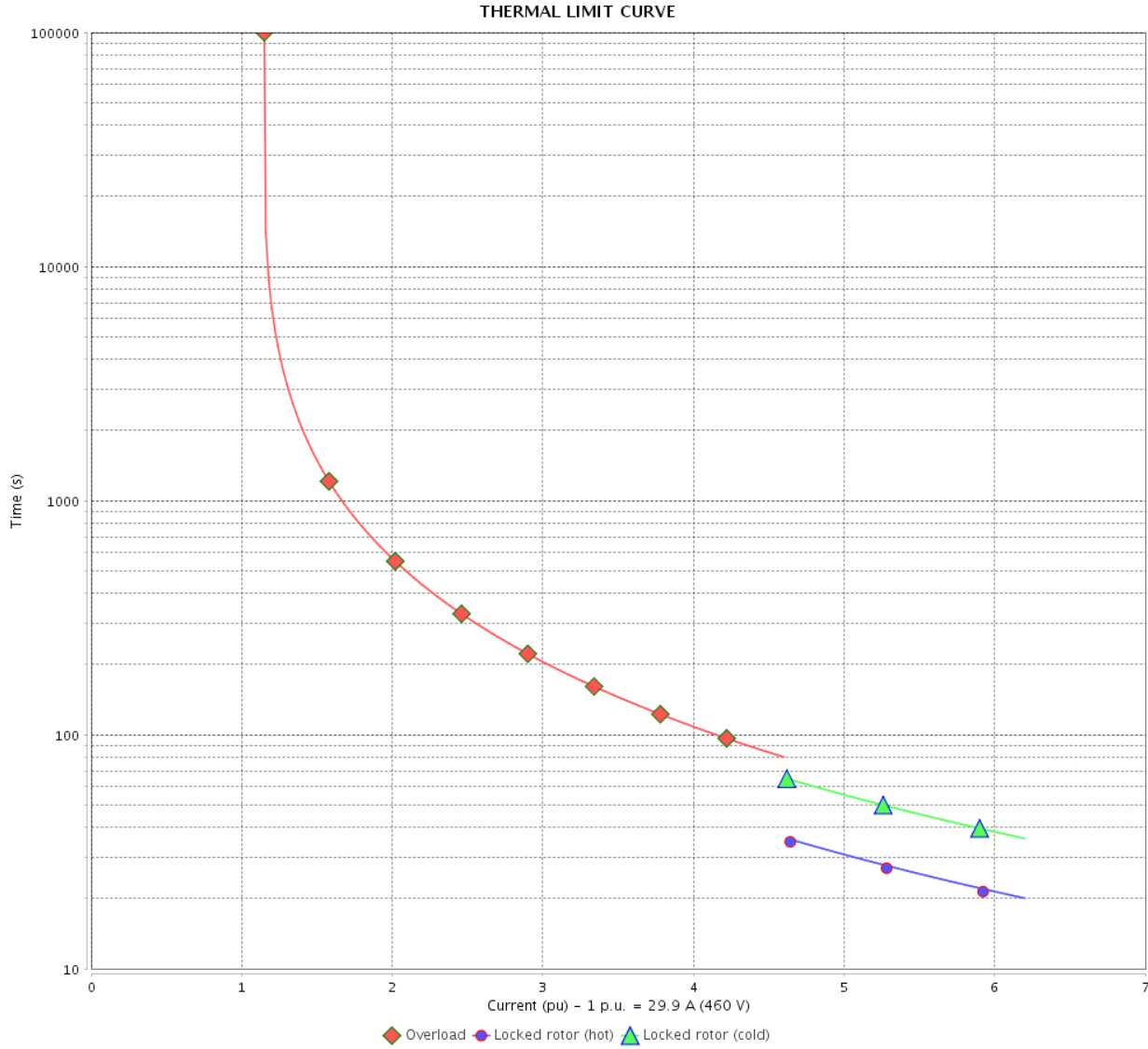
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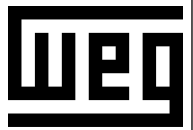


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Cooling constant

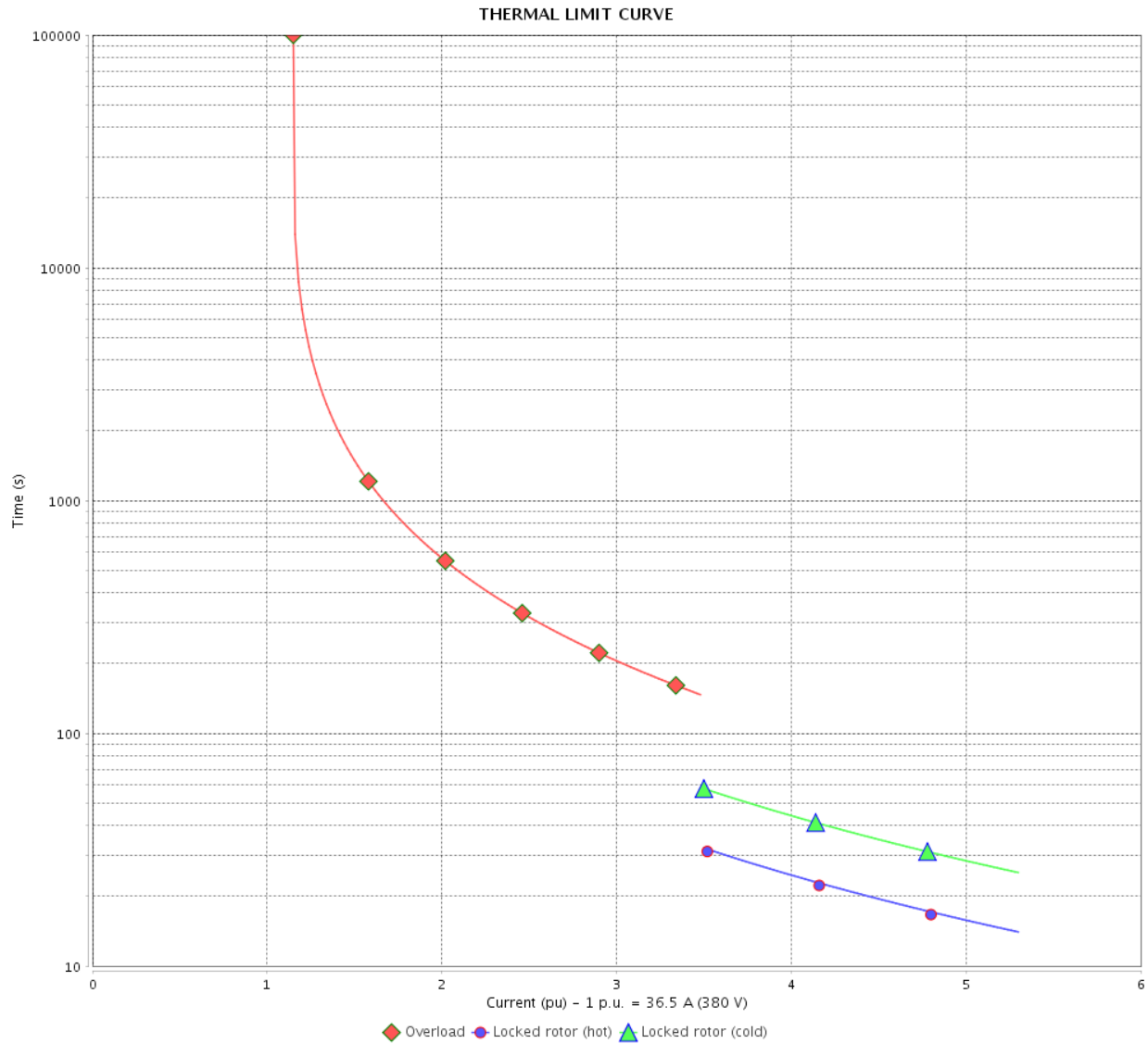
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Cooling constant

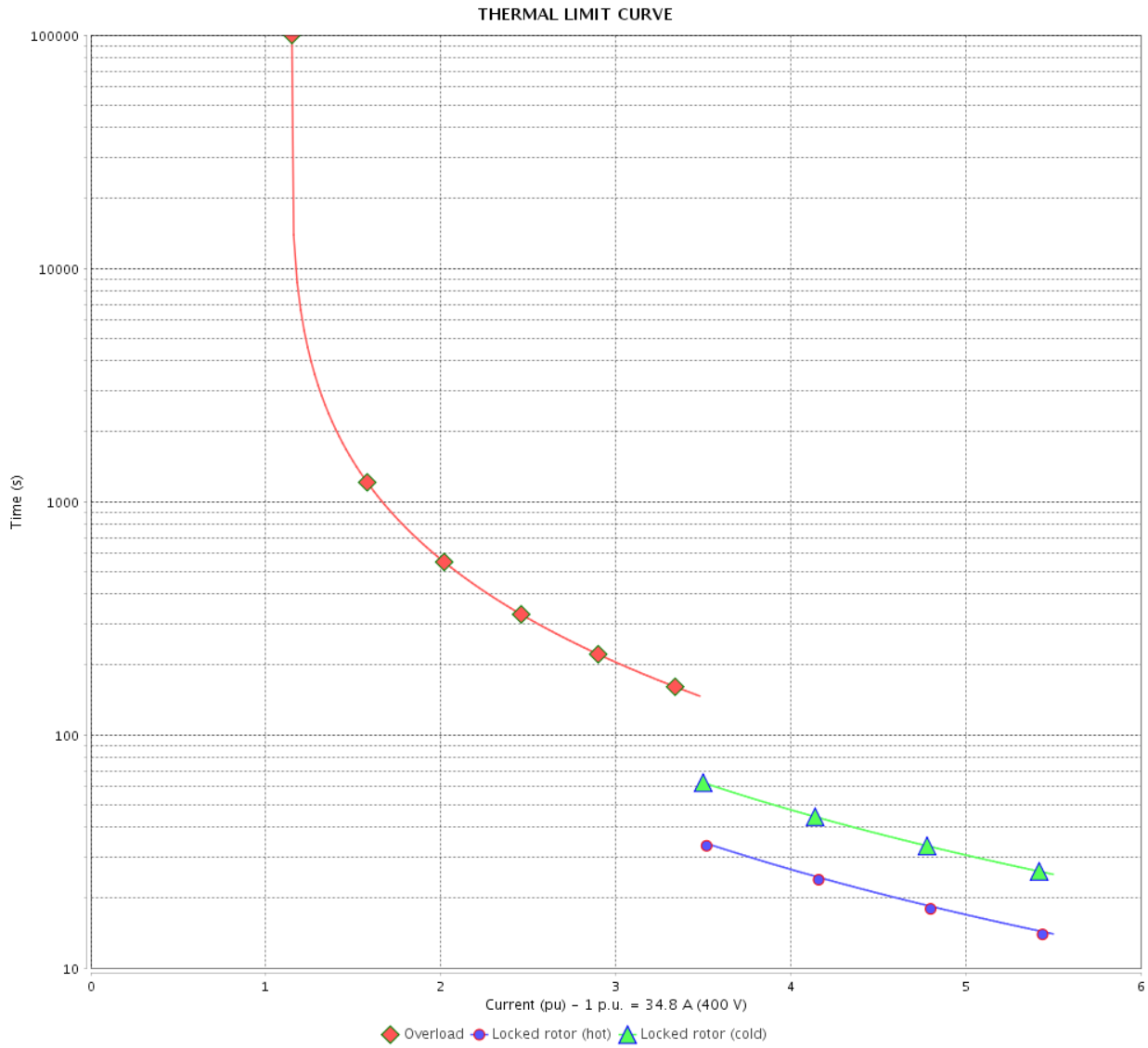
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Locked rotor torque : 260 %	Service factor : 1.00
Breakdown torque : 270 %	Temperature rise : 80 K
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Cooling constant

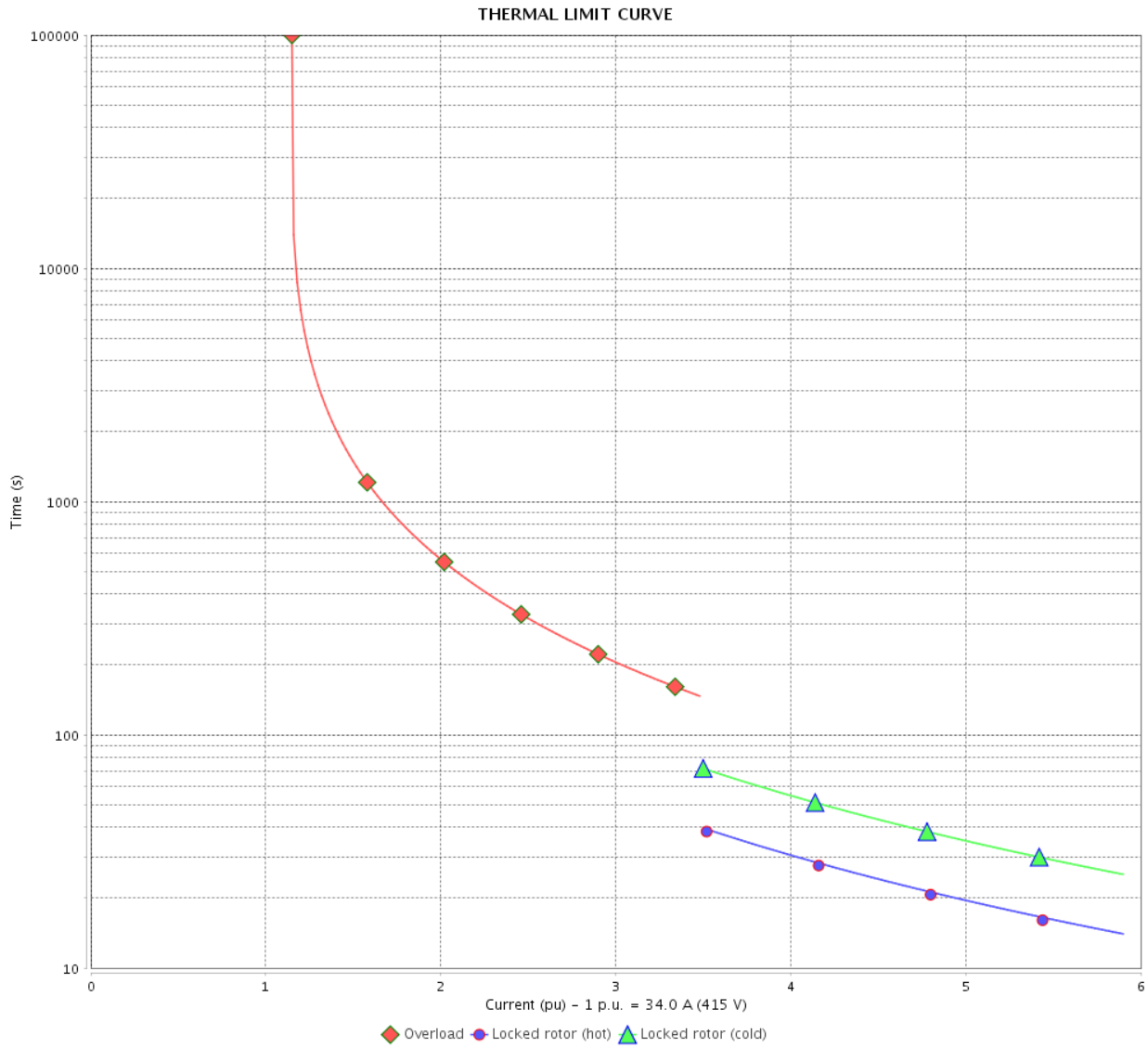
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Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

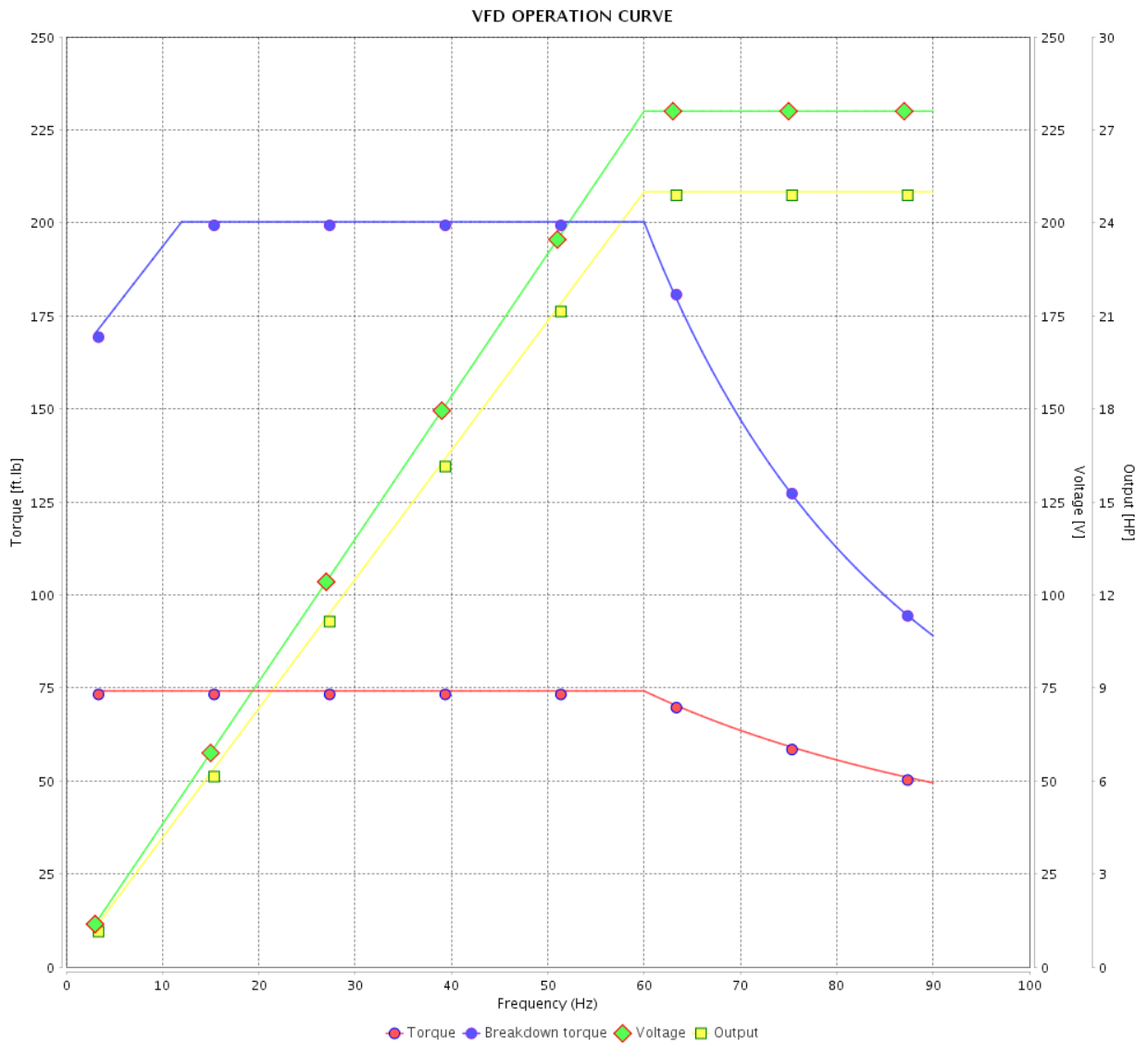


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Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

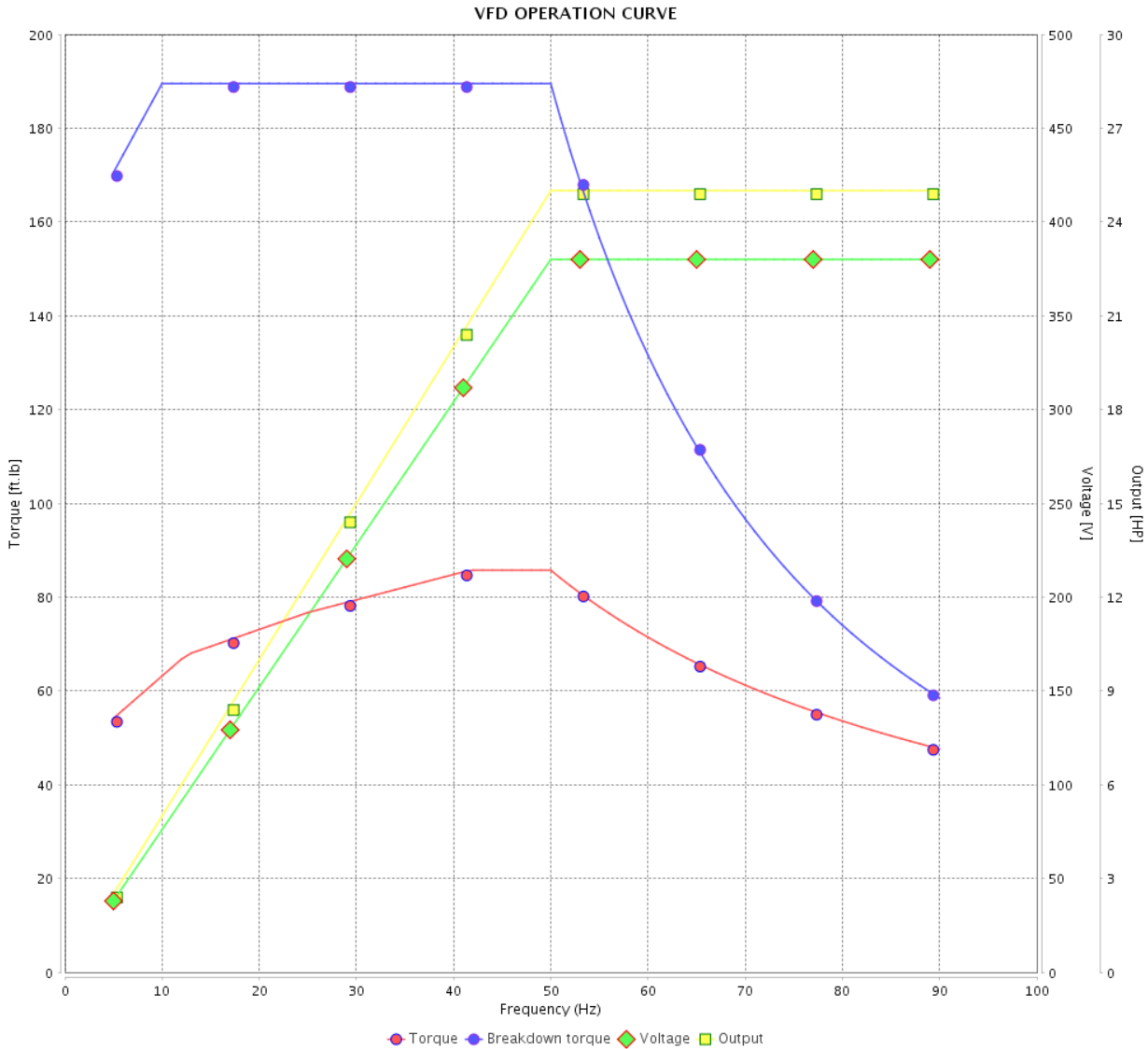


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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

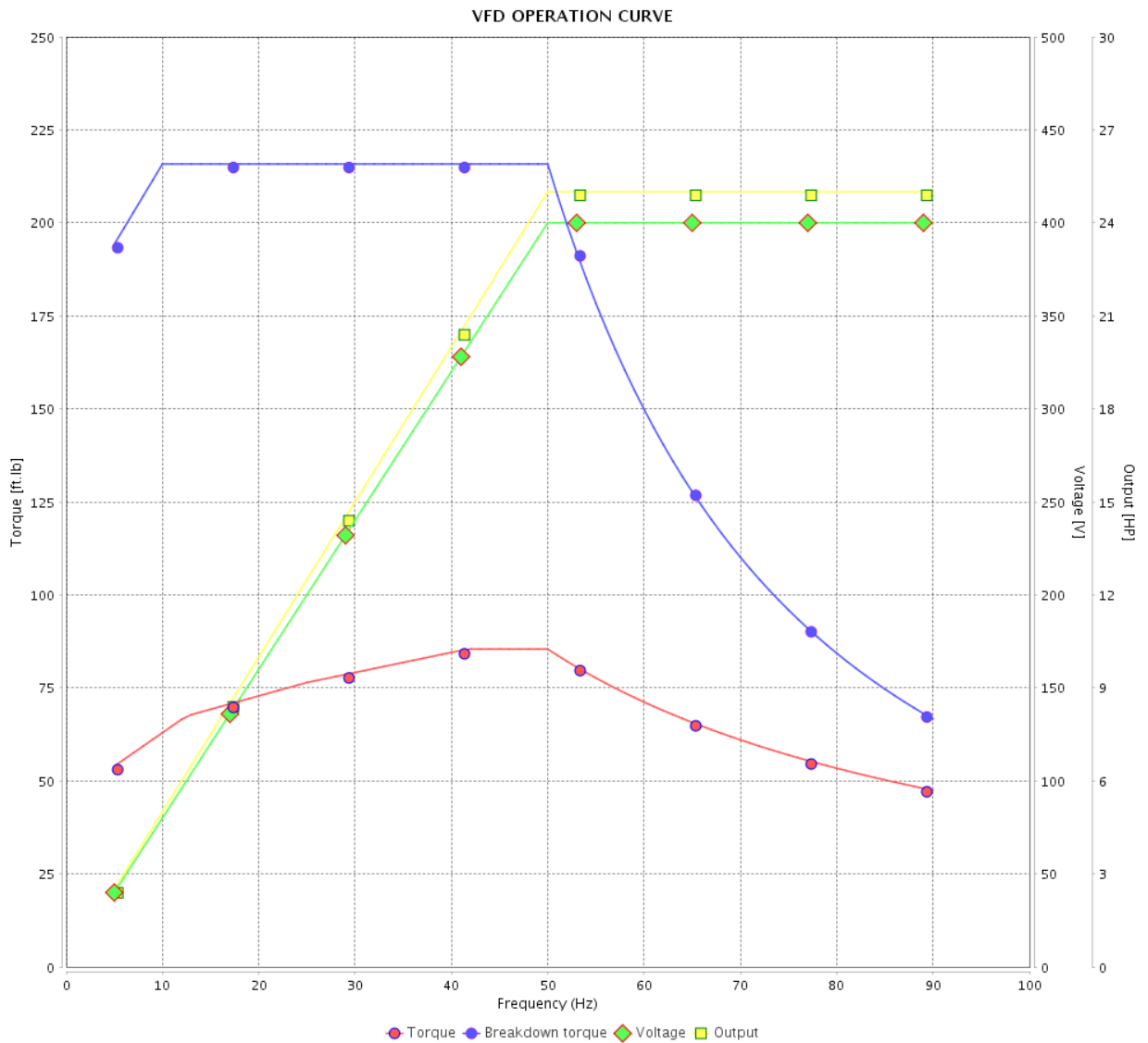


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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

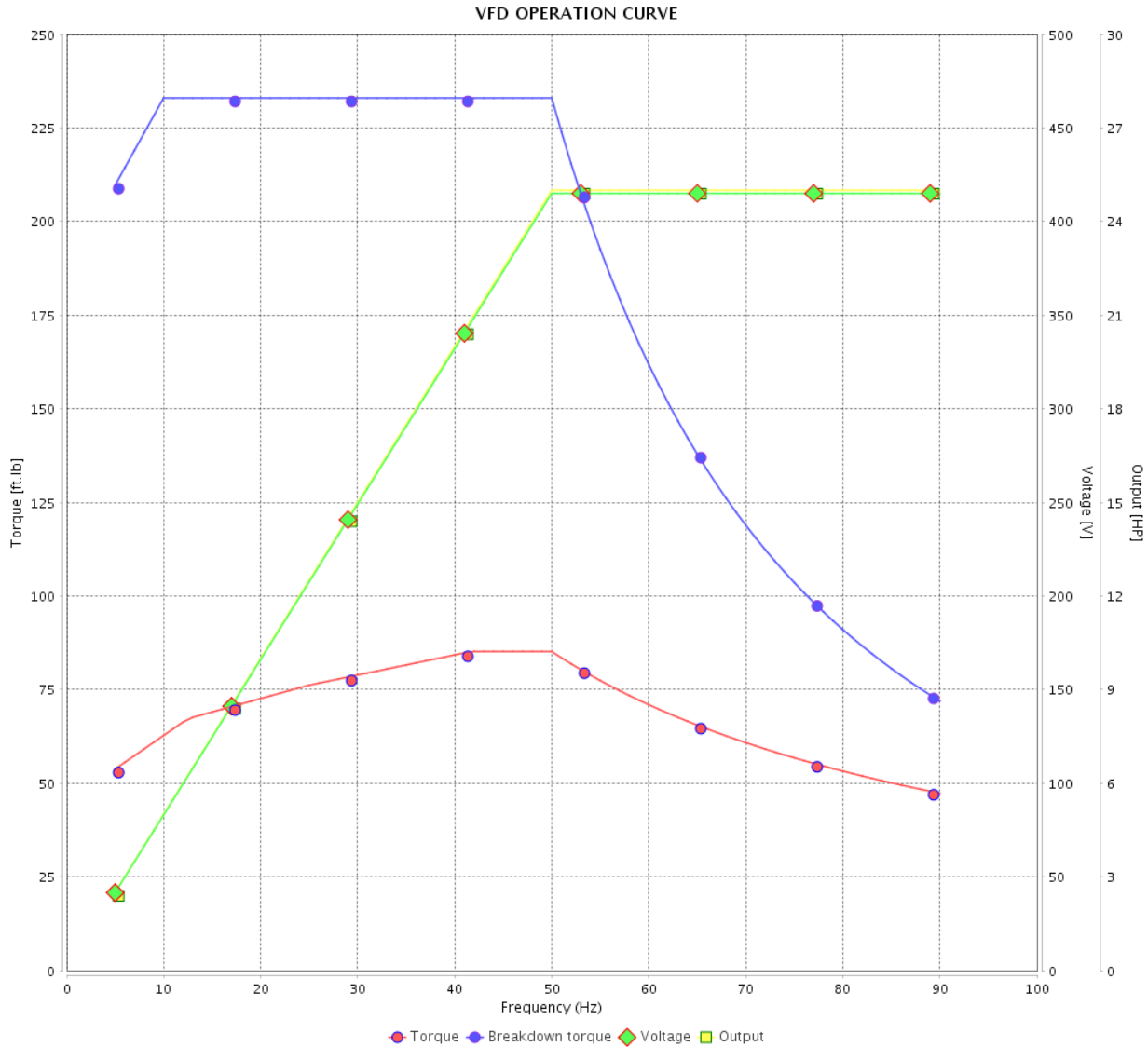


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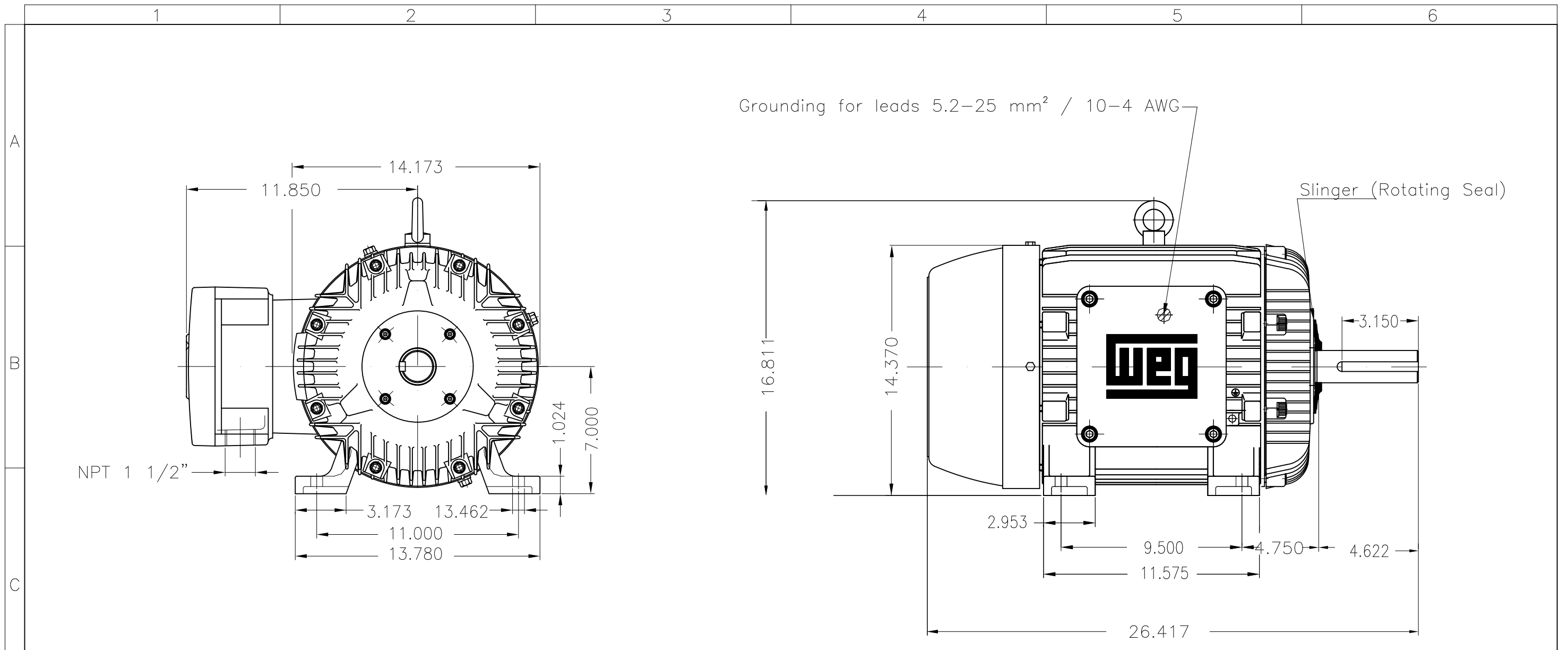
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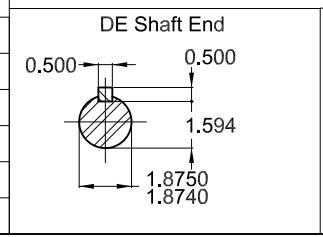
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25 HP 04 Poles 60 Hz										A

C3 NDE bearing
C3 DE bearing
Color RAL 5009
Painting plan 202P
Mounting NEMA F-1
Mounting B3R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 284T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW

WDD

Dimensions in inches XME A3

MADE IN BRAZIL


W21X NEMA
Premium

14390090



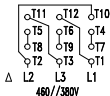
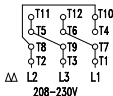
LISTED

CC029A

Inverter Duty Motor
Severe Duty

HX025404NPW21X

PH 3	FR 284T		
HP(kW) 25.0(18.5)		HZ 60	IP55
V 230/460		A 59.0/29.5	
RPM 1770		NEMA NOM EFF 93.6%	
PF 0.84		SFA 67.8/33.9	DES B
INS CL F Δ T 80 K		SF 1.15	ENCL TEFC
DUTY CONT.		CODE G	ALT 1000 m.a.s.l.
AMB 40°C	USABLE @208V	64.5 A	SF 1.15 SFA 74.2
AMB 55°C SF1.0			
25HP 18.5kW 50Hz 380V 35.9A 1455RPM SF1.00 EFF 91.0% (IE1)			



→ 6311-C3 MOBIL POLYREX EM
 → 6211-C3 18 g 20000 h

445 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.