

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :		14406916
			Catalog # :		02518XT3E284TC
Frame		: 284TC	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		: 483 lb
Protection degree		: IP55	Moment of inertia (J)		: 4.54 sq.ft.lb
Design		: B			
Output [HP]	25	25	25	25	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	59.8/29.9	36.5	34.8	34.0	
L. R. Amperes [A]	490/245	234	247	258	
LRC [A]	8.2x(Code G)	6.4x(Code F)	7.1x(Code F)	7.6x(Code G)	
No load current [A]	25.0/12.5	12.5	13.4	14.5	
Rated speed [RPM]	1770	1460	1465	1470	
Slip [%]	1.67	2.67	2.33	2.00	
Rated torque [ft.lb]	74.2	90.2	89.9	89.6	
Locked rotor torque [%]	320	229	240	260	
Breakdown torque [%]	320	240	250	270	
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)	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)	
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 : 810 lb	
Lubrication interval		: 20000 h	20000 h	Max. compression : 1293 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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DATA SHEET

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



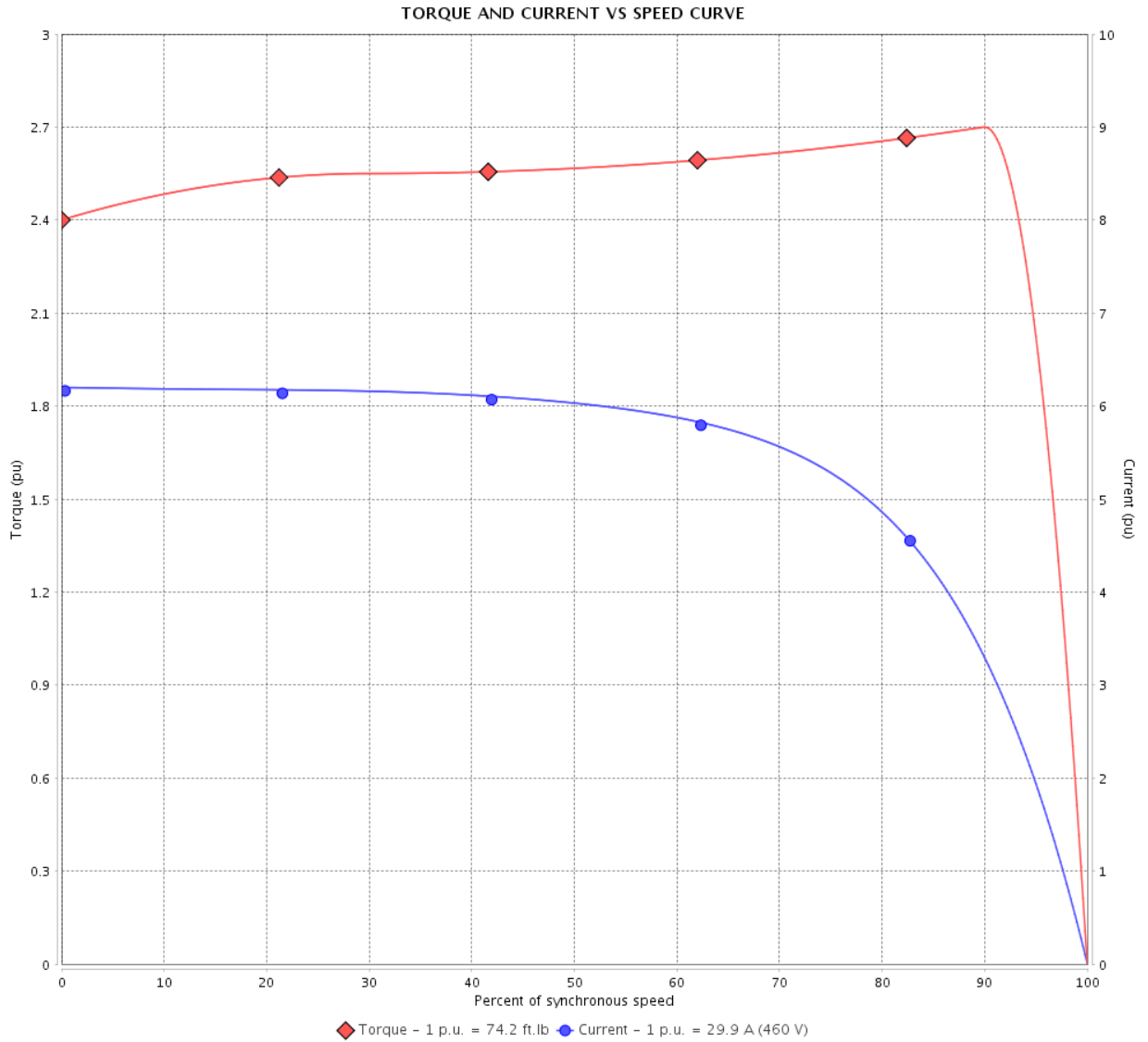
Three Phase Induction Motor - Squirrel Cage

Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406916

Catalog # : 02518XT3E284TC



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



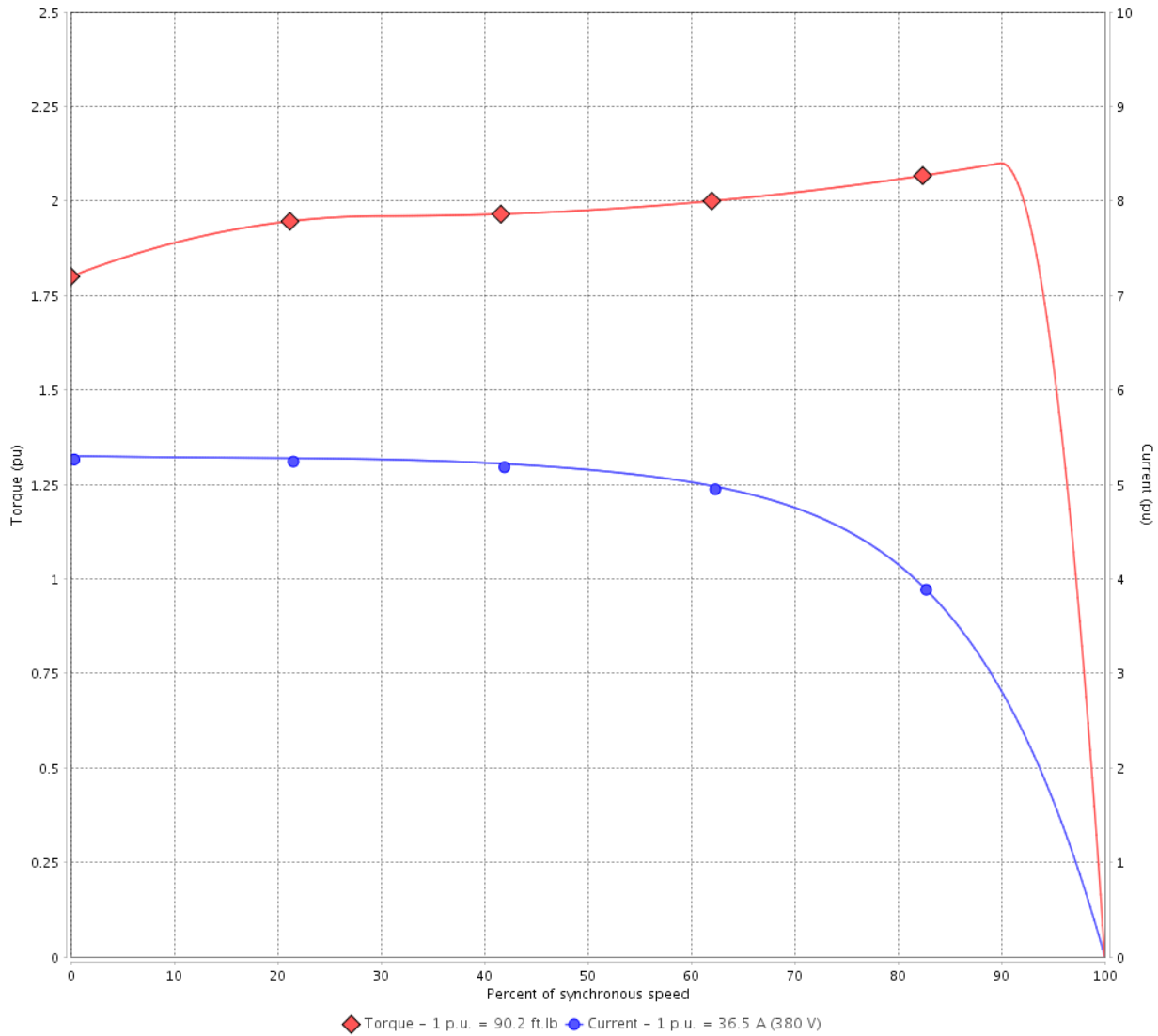
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406916

Catalog # : 02518XT3E284TC

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



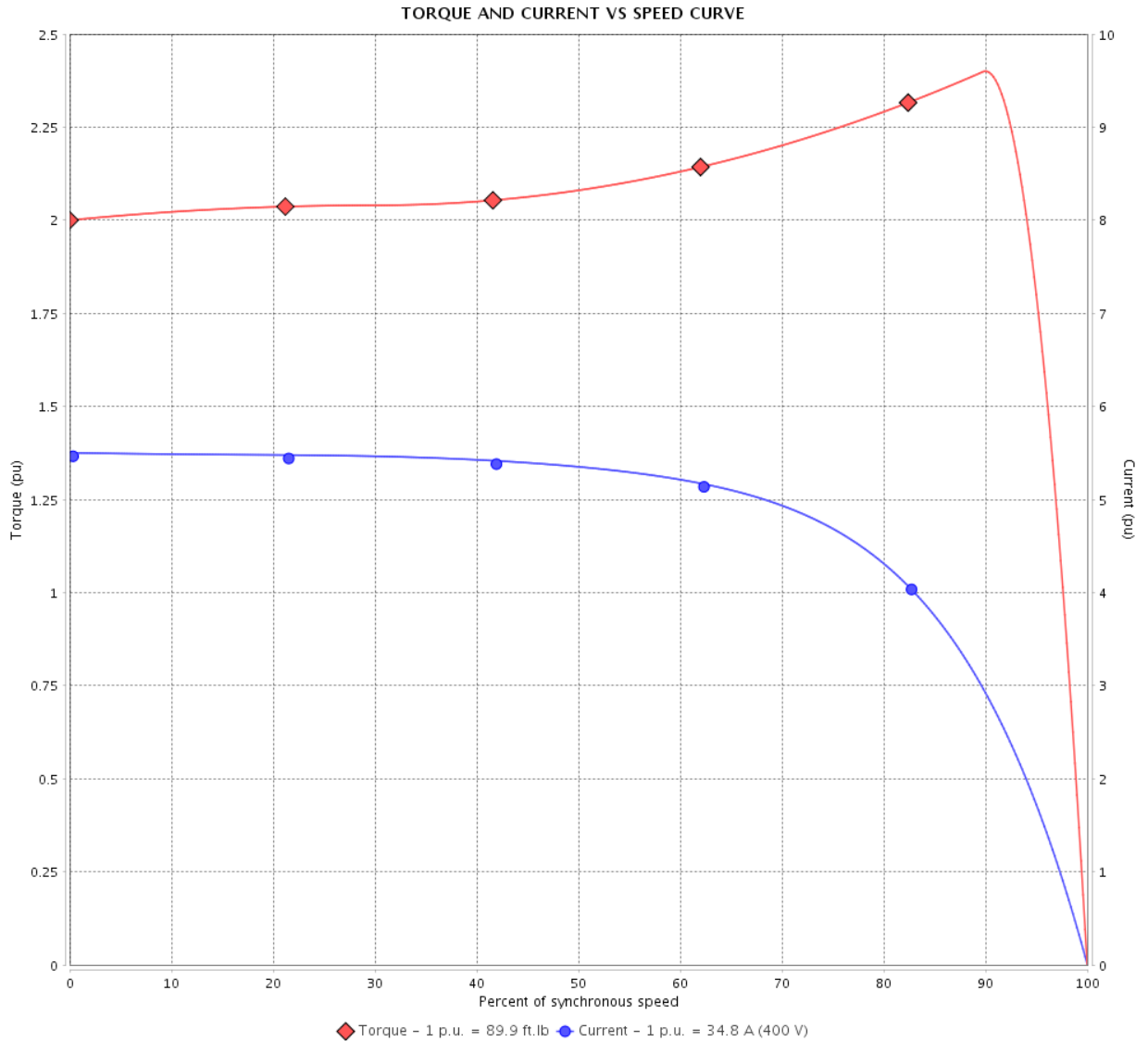
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406916

Catalog # : 02518XT3E284TC



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



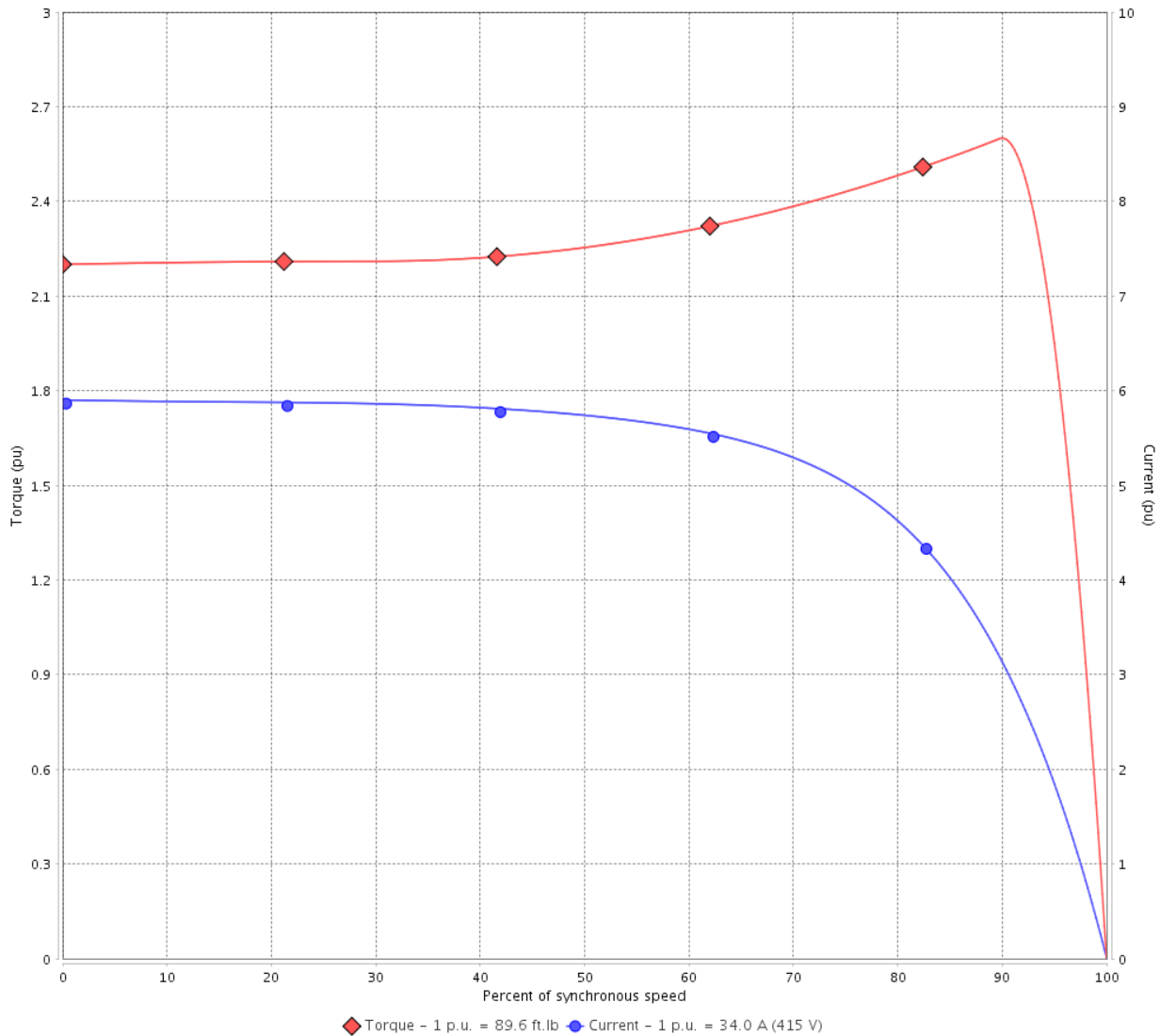
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Catalog # : 02518XT3E284TC

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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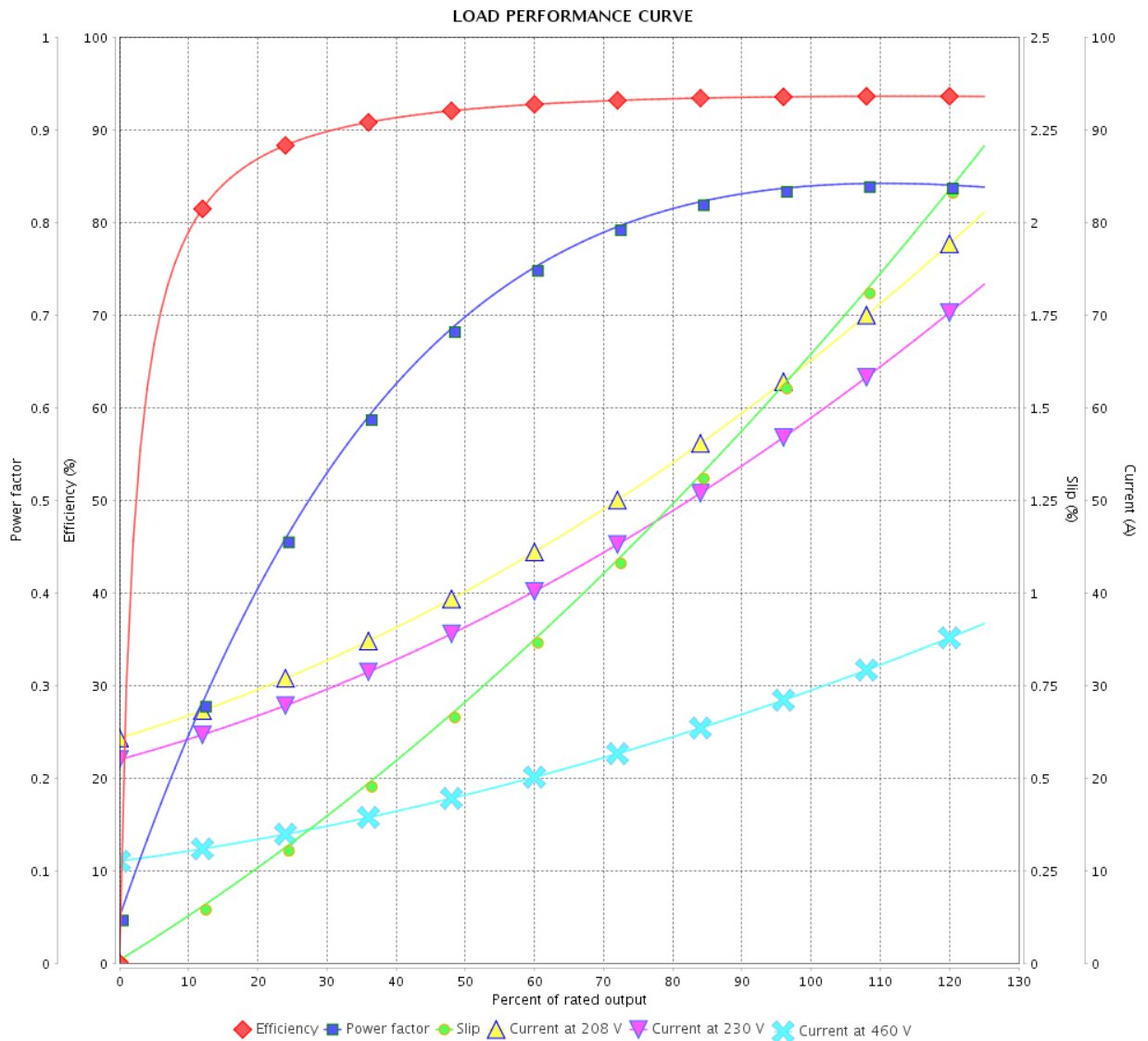


Customer :

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Product code : 14406916

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Performance : 230/460 V 60 Hz 4P

Rated current : 59.8/29.9 A
 LRC : 8.2
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Moment of inertia (J) : 4.54 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
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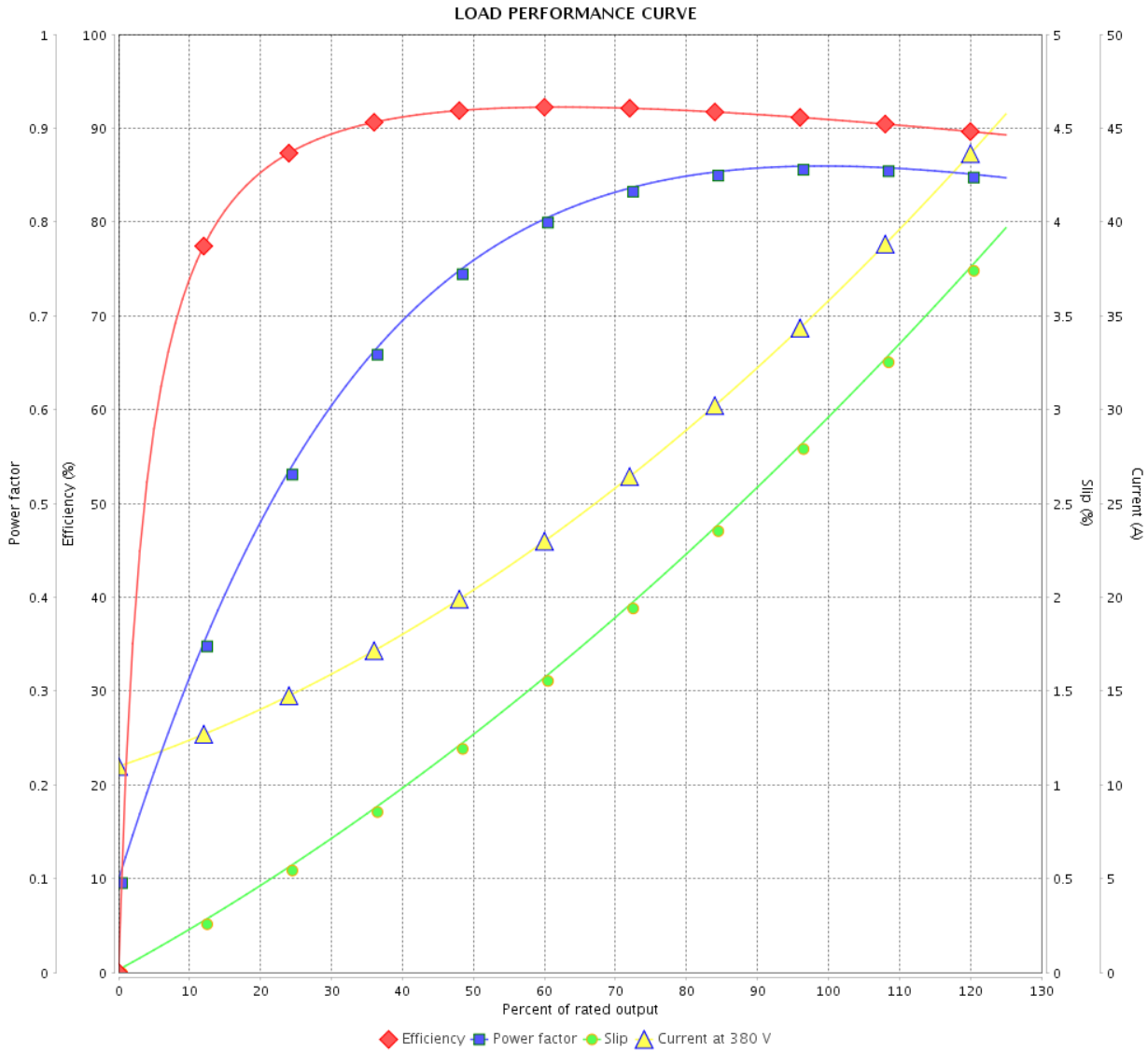


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Three Phase Induction Motor - Squirrel Cage

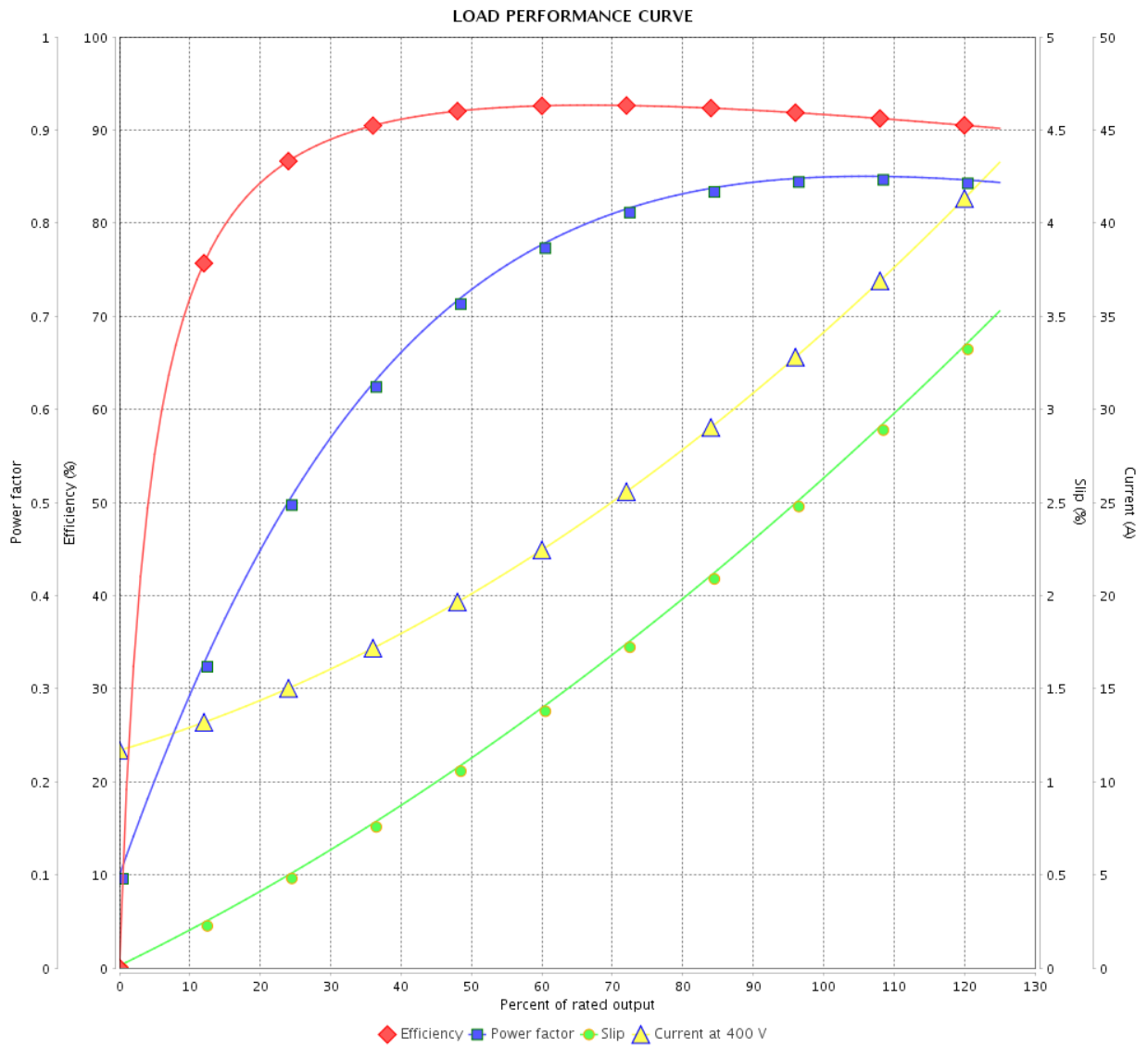


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Performance : 400 V 50 Hz 4P IE2

Rated current : 34.8 A
 LRC : 7.1
 Rated torque : 89.9 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 250 %
 Rated speed : 1465 rpm

Moment of inertia (J) : 4.54 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage



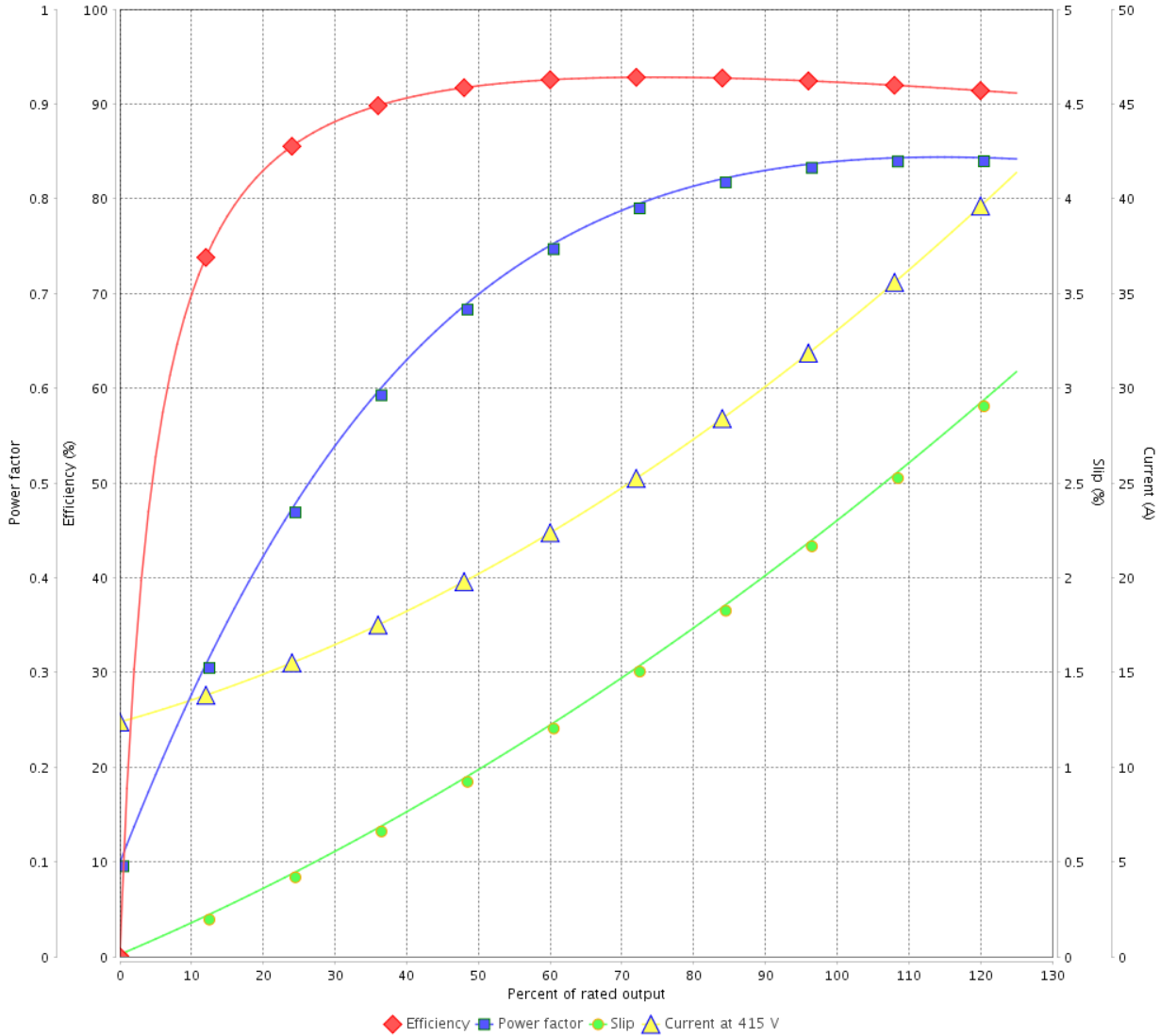
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THERMAL LIMIT CURVE



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Locked rotor torque : 320 %	Service factor : 1.15
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Rated speed : 1770 rpm	Design : B

Heating constant

Cooling constant

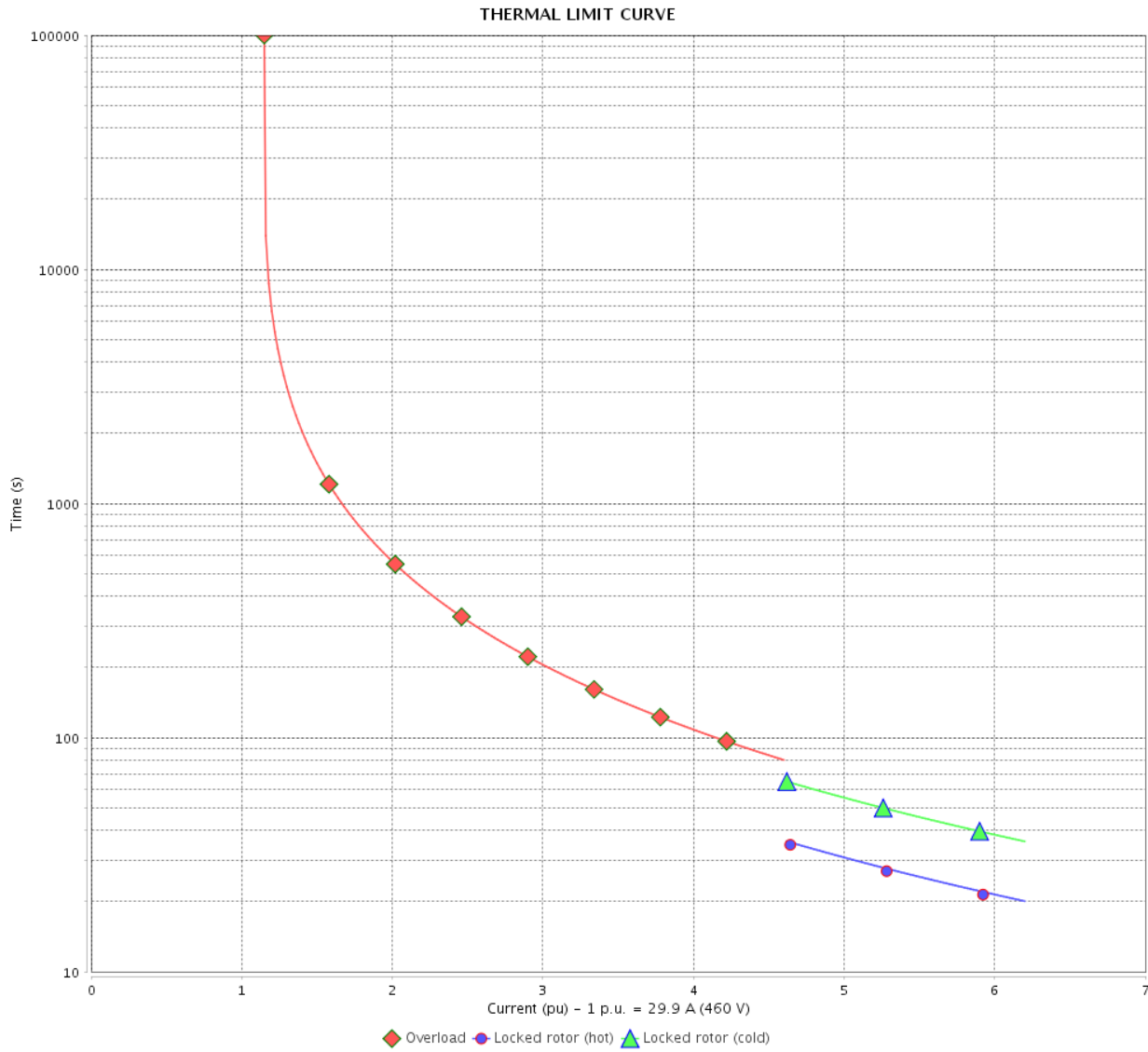
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Locked rotor torque	: 229 %	Service factor	: 1.00
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Heating constant

Cooling constant

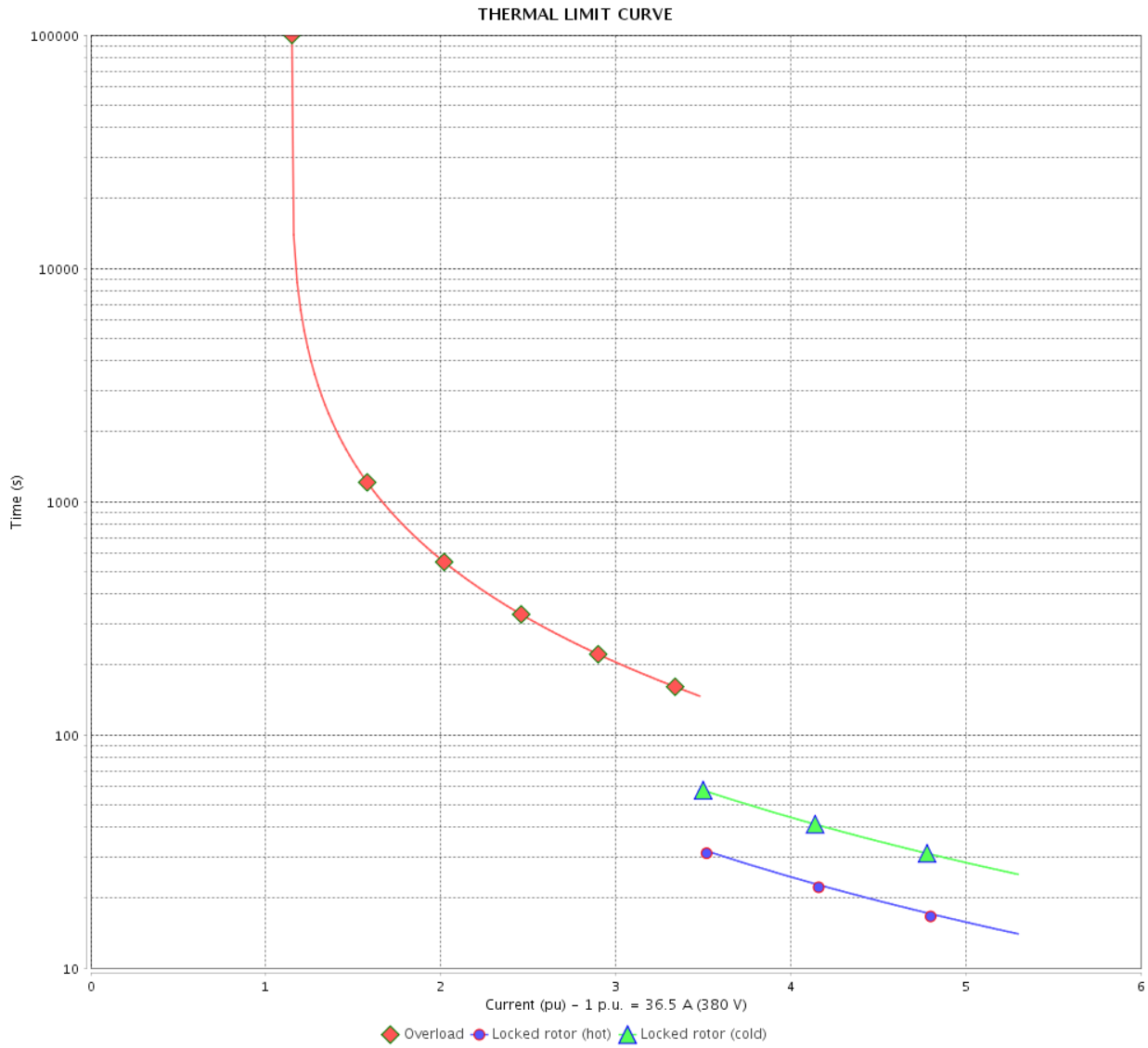
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Customer : _____



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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 14406916
 Catalog # : 02518XT3E284TC

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

Heating constant

Cooling constant

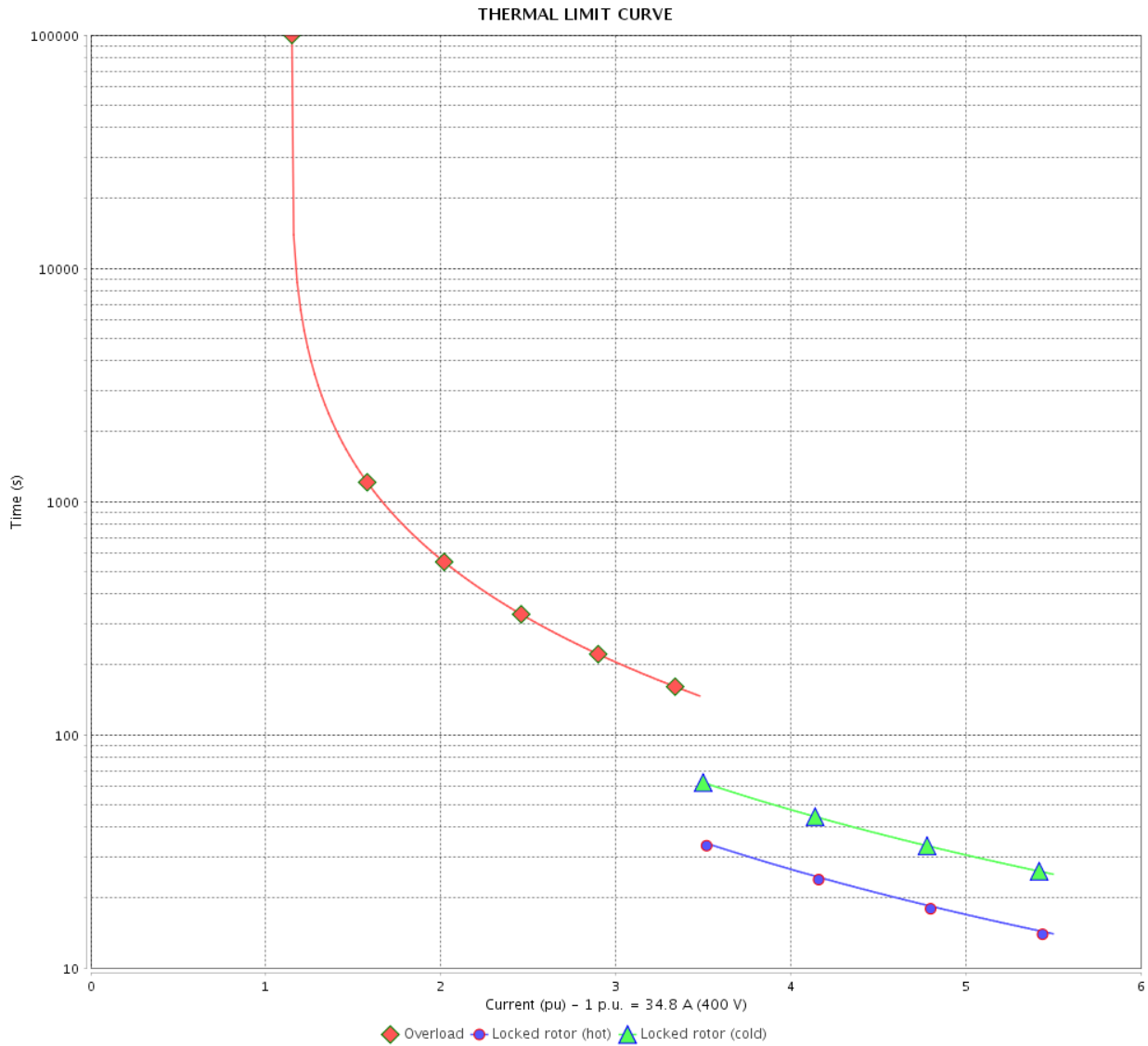
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Customer : _____



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Three Phase Induction Motor - Squirrel Cage



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LRC : 7.6
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Service factor : 1.00
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Cooling constant

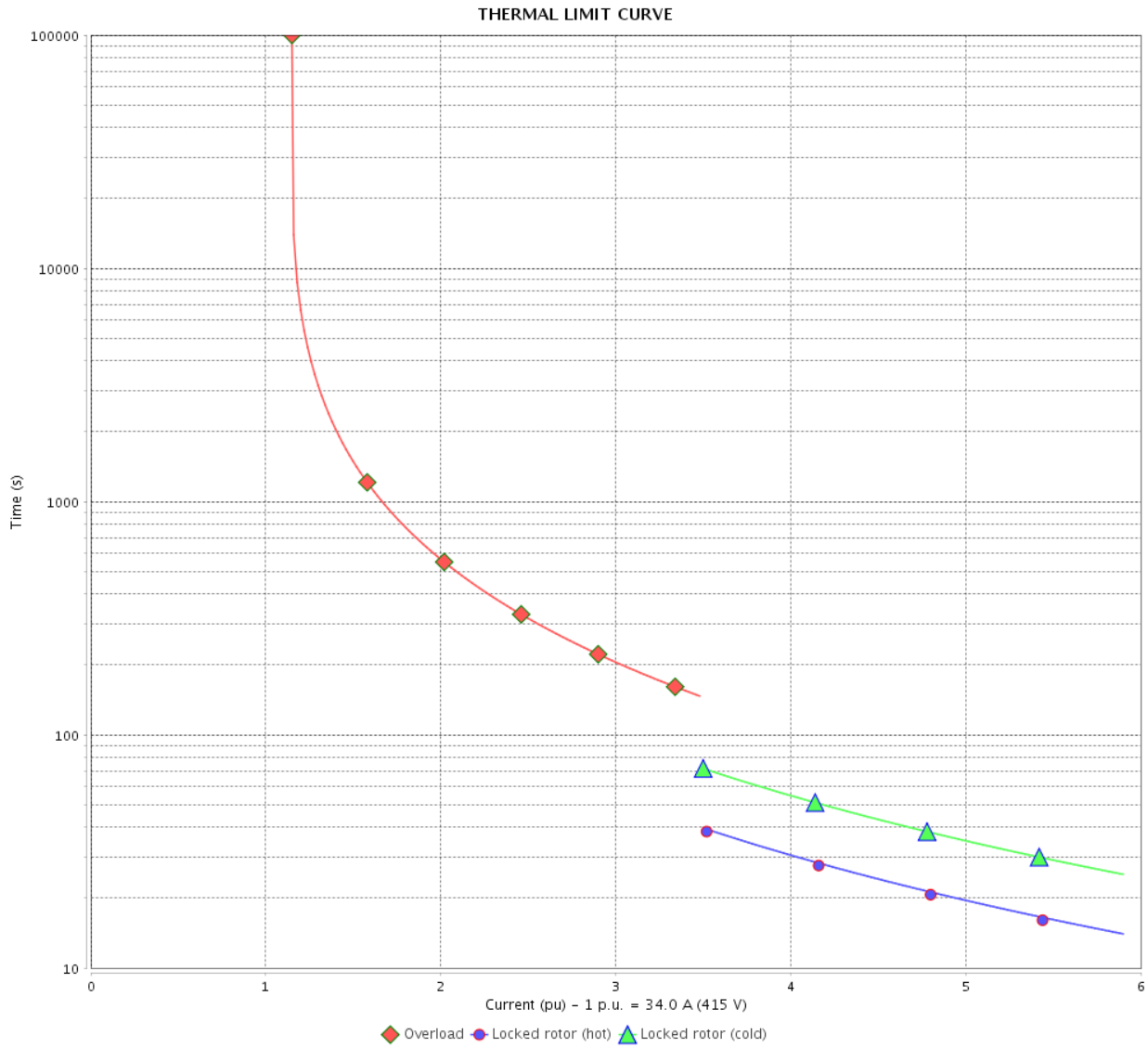
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

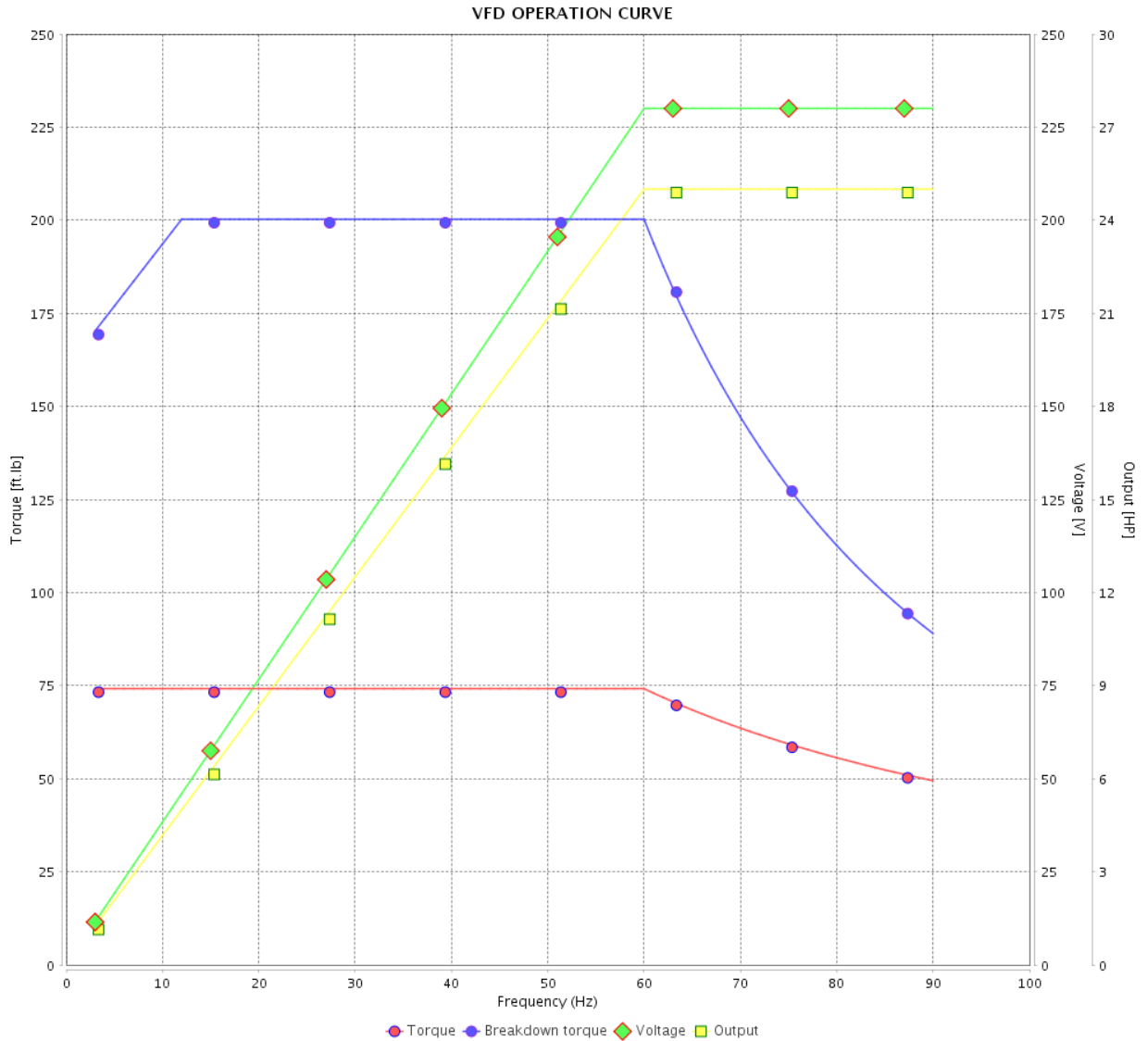


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Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

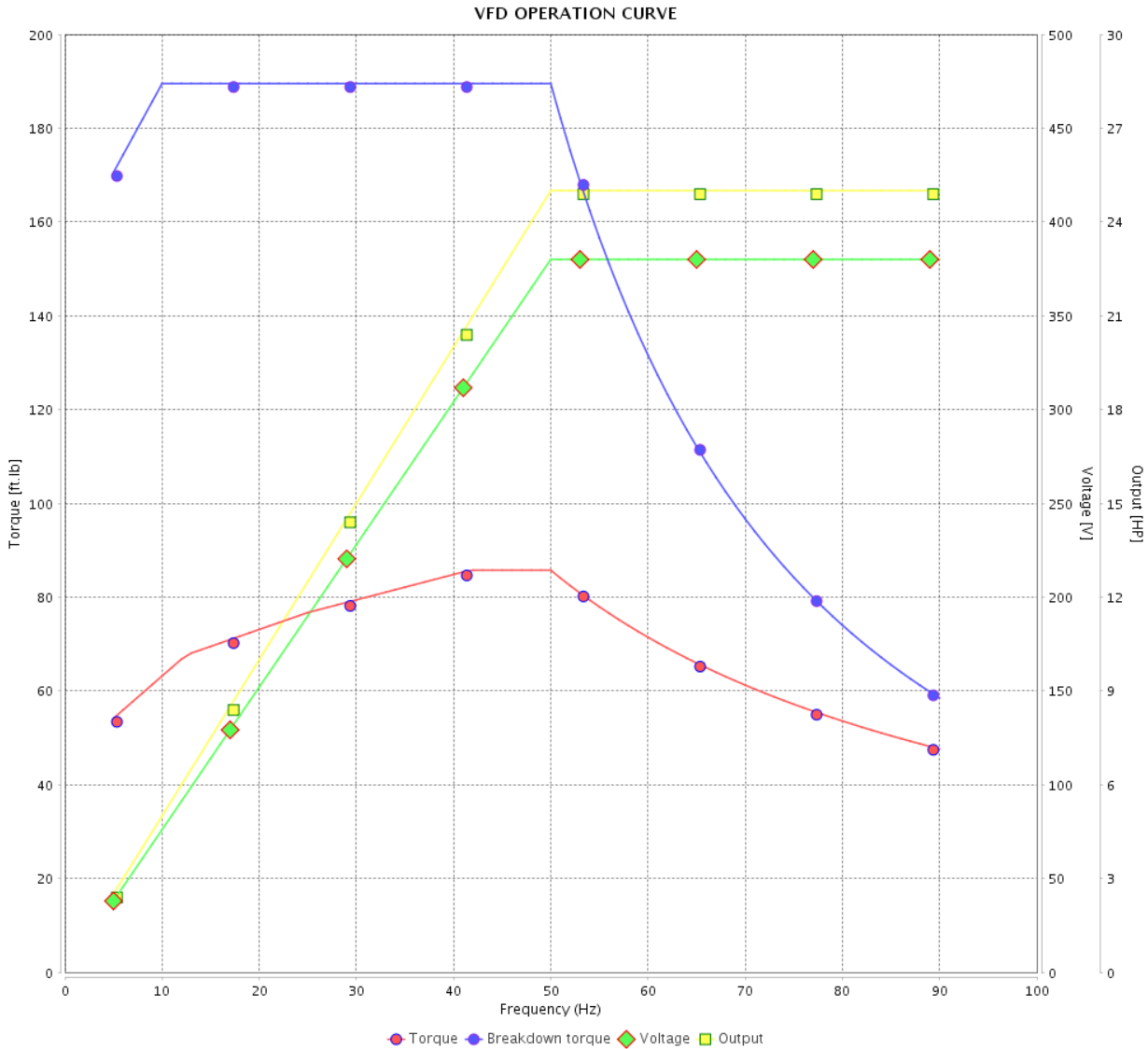


Customer :

Product line : NEMA Premium Efficiency Three-Phase

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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

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

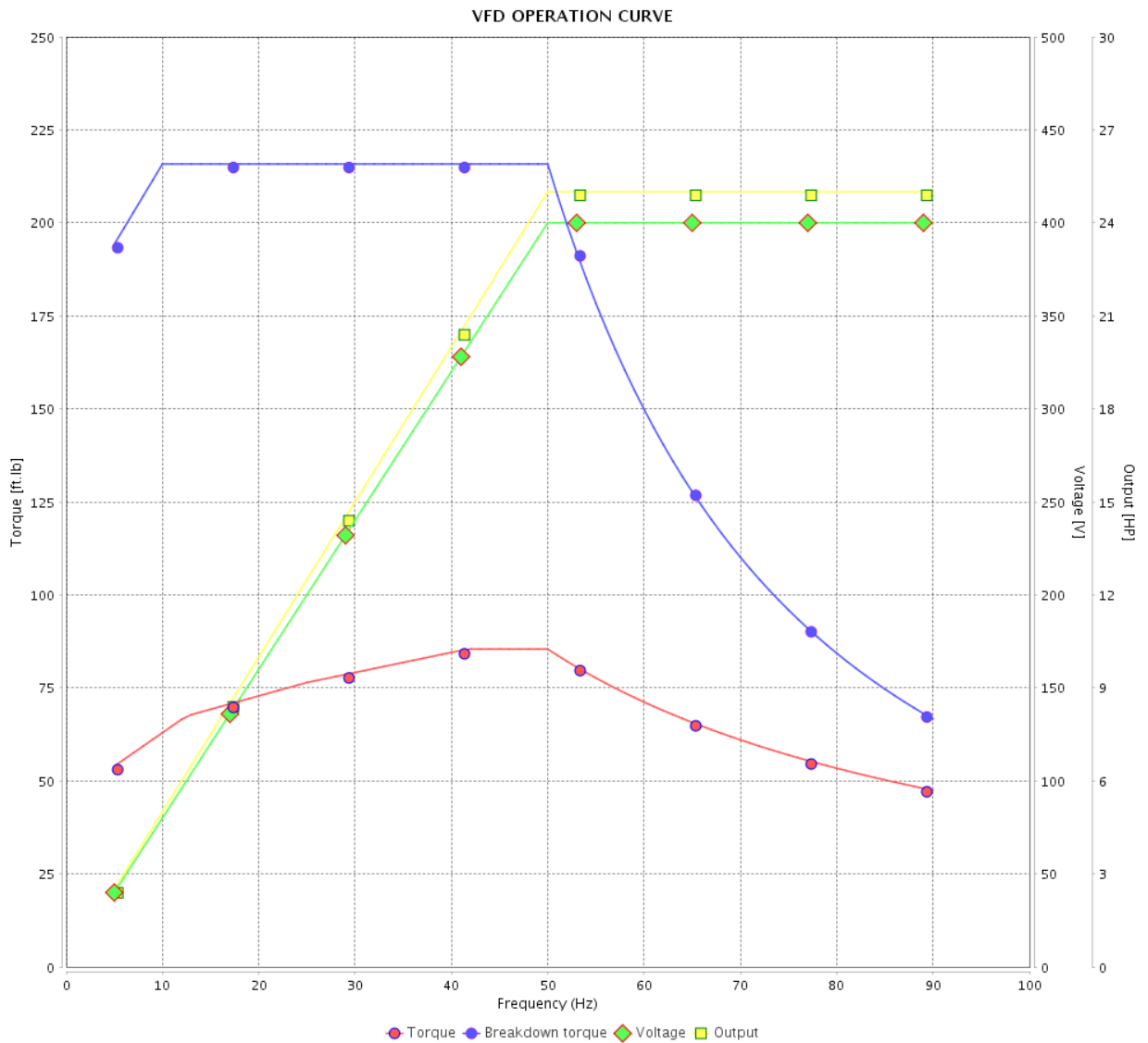


Customer :

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Performance : 400 V 50 Hz 4P IE2

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 Breakdown torque : 250 %
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 Insulation class : F
 Service factor : 1.00
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

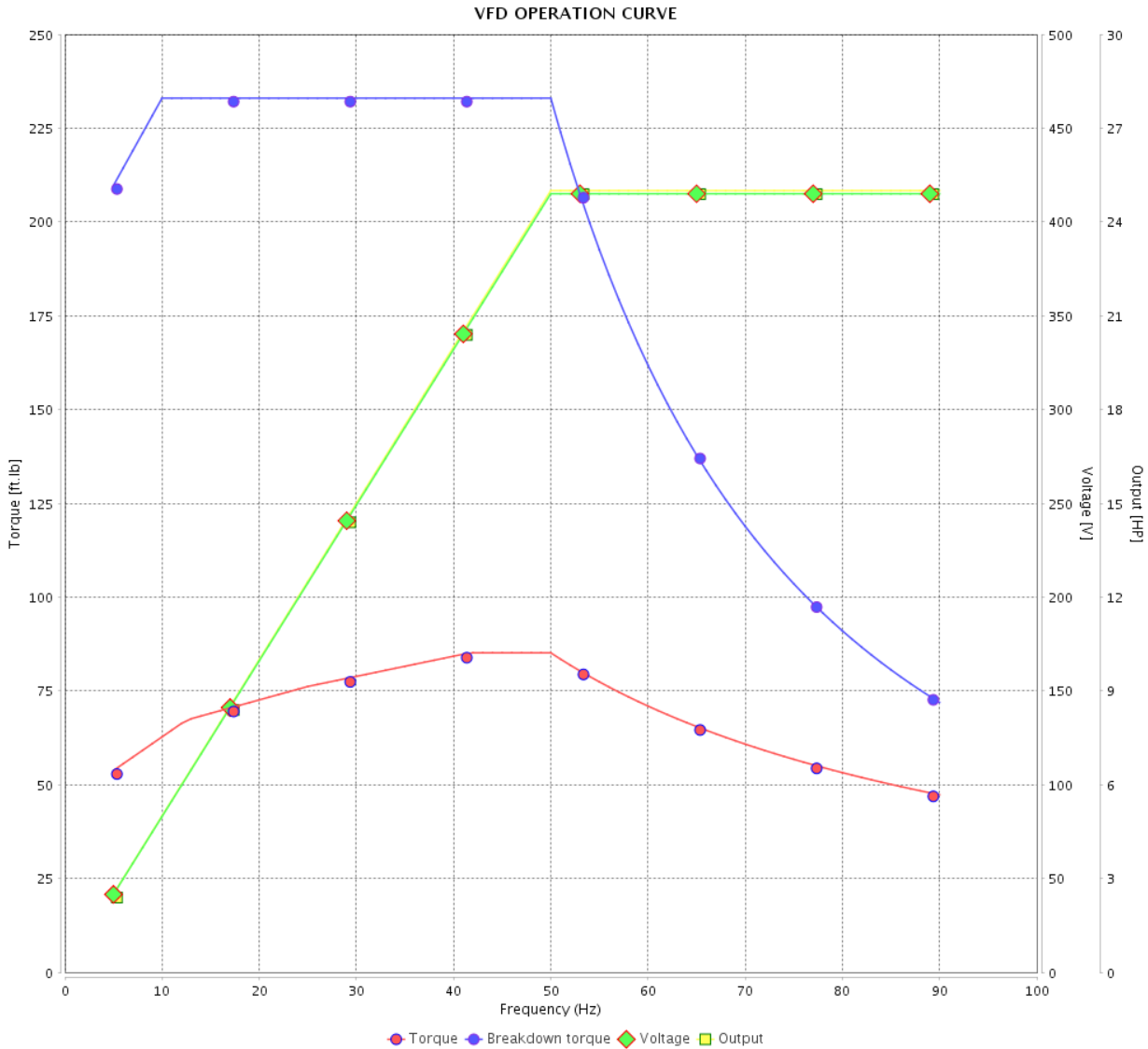


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Rated current : 34.0 A
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 Breakdown torque : 270 %
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Rev.	Changes Summary	Performed	Checked	Date
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A

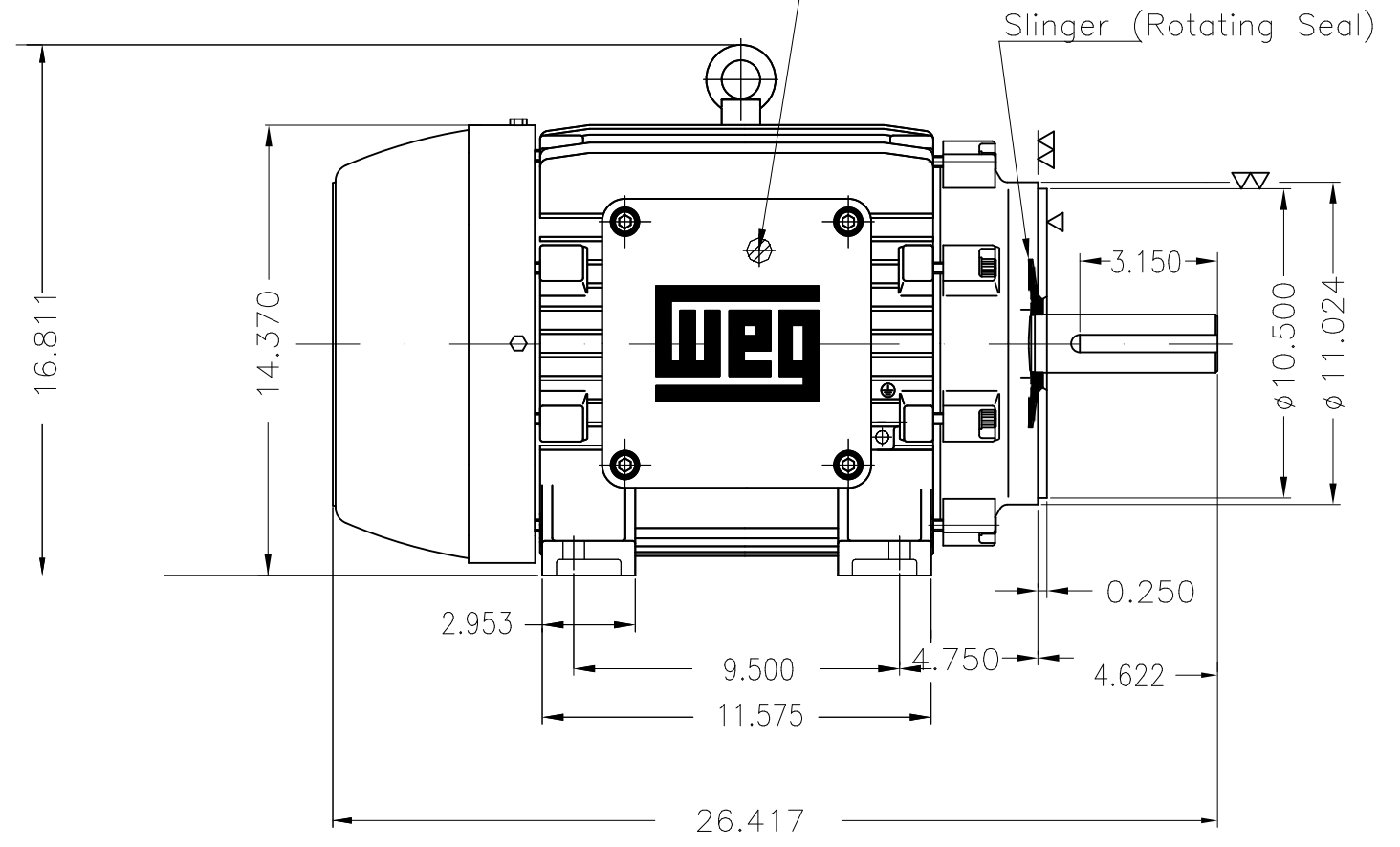
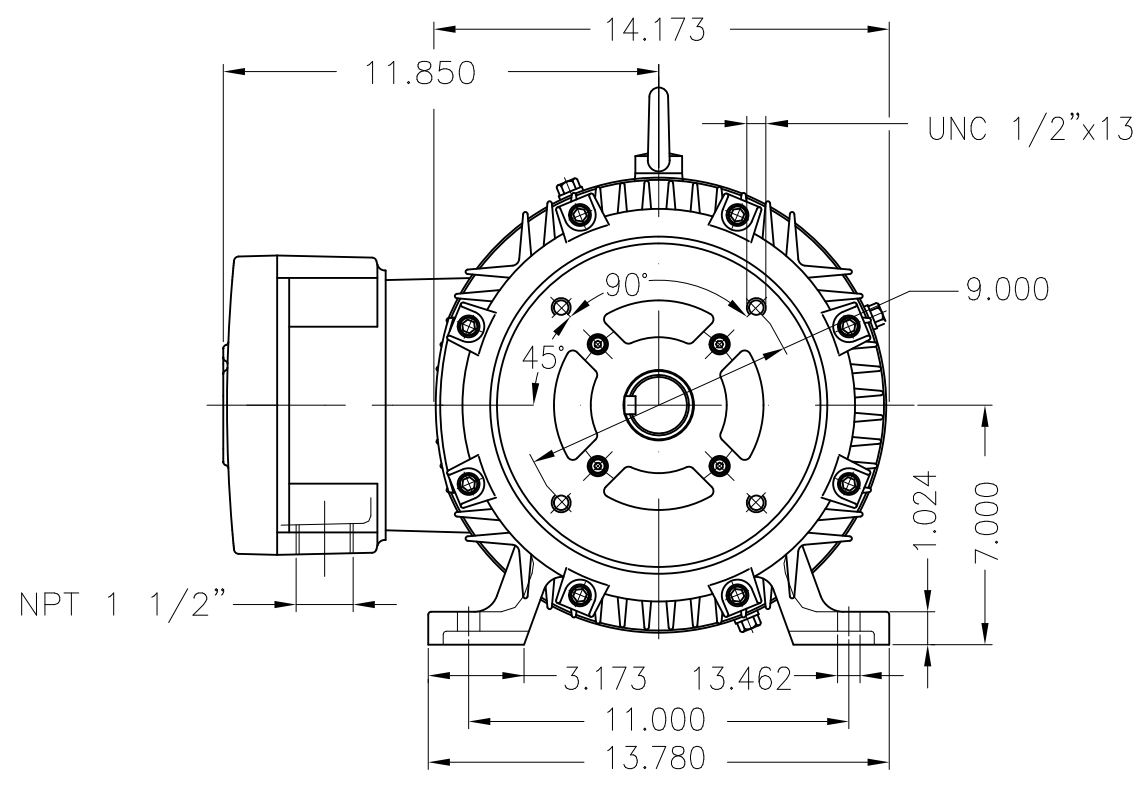
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C

D

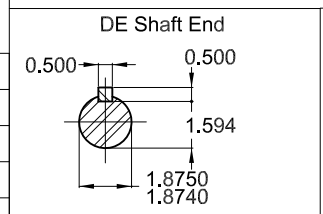
E

Grounding for leads 5.2–25 mm² / 10–4 AWG



25 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 284TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	PREVIEW	WDD		



PREVIEW
WDD
SHEET 1 / 1

Dimensions in inches XME A3

MADE IN BRAZIL

**W21X NEMA**
Premium

14406916



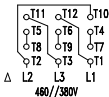
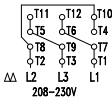
LISTED

CC029A

Inverter Duty Motor
Severe Duty

MODEL 02518XT3E284TC

PH 3	FR 284TC		
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

452 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.