

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	11439870		
		Catalog # :	10012XT3E444T		
Frame	: 444/5T	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	: 2102 lb		
Protection degree	: IP55	Moment of inertia (J)	: 87.3 sq.ft.lb		
Design	: B				
Output [HP]	100	75	75	75	
Poles	6	6	6	6	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	242/121	110	108	105	
L. R. Amperes [A]	1644/822	770	842	872	
LRC [A]	6.8x(Code H)	7.0x(Code H)	7.8x(Code J)	8.3x(Code K)	
No load current [A]	97.5/48.7	48.2	51.6	54.1	
Rated speed [RPM]	1190	990	990	995	
Slip [%]	0.83	1.00	1.00	0.50	
Rated torque [ft.lb]	441	398	398	396	
Locked rotor torque [%]	229	240	260	290	
Breakdown torque [%]	260	260	320	350	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	88s (cold) 49s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	
Noise level ²	70.0 dB(A)	66.0 dB(A)	66.0 dB(A)	66.0 dB(A)	
Efficiency (%)	25%	94.0	93.5	92.8	92.8
	50%	94.1	93.6	93.0	93.0
	75%	95.0	94.1	94.5	94.5
	100%	95.0	94.1	94.5	94.5
Power Factor	25%	0.41	0.39	0.36	0.33
	50%	0.66	0.63	0.59	0.56
	75%	0.76	0.74	0.71	0.68
	100%	0.82	0.81	0.78	0.77
Bearing type	: <u>Drive end</u> 6219 C3 <u>Non drive end</u> 6316 C3	Foundation loads			
Sealing	: Oil Seal Lip Seal	Max. traction	: 2642 lb		
Lubrication interval	: 12202 h 12823 h	Max. compression	: 4744 lb		
Lubricant amount	: 28 g 34 g				
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 267A SF 1.00 SFA 267A					
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



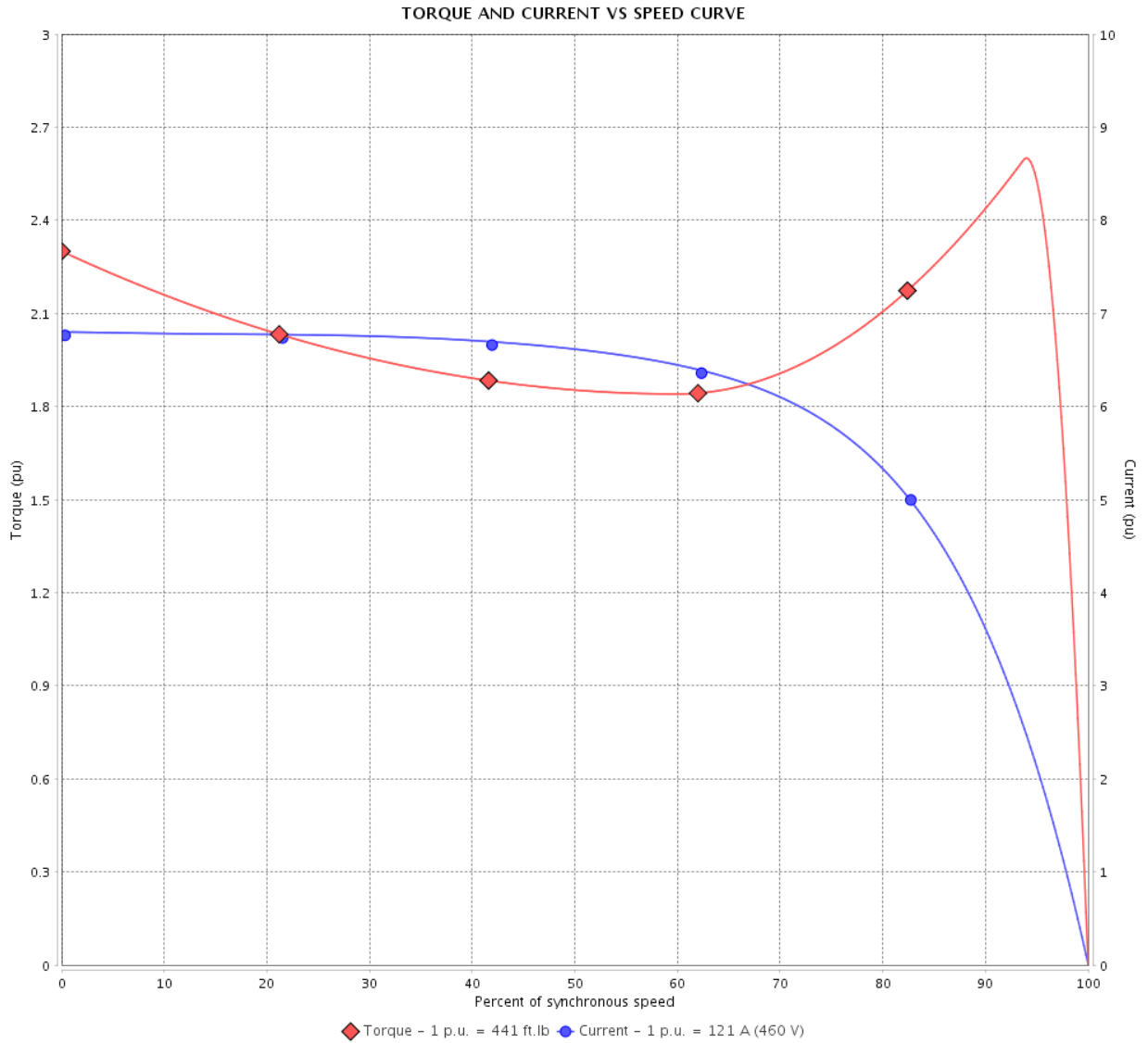
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439870

Catalog # : 10012XT3E444T



Performance : 230/460 V 60 Hz 6P

Rated current : 242/121 A
 LRC : 6.8
 Rated torque : 441 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 260 %
 Rated speed : 1190 rpm

Moment of inertia (J) : 87.3 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 88s (cold) 49s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



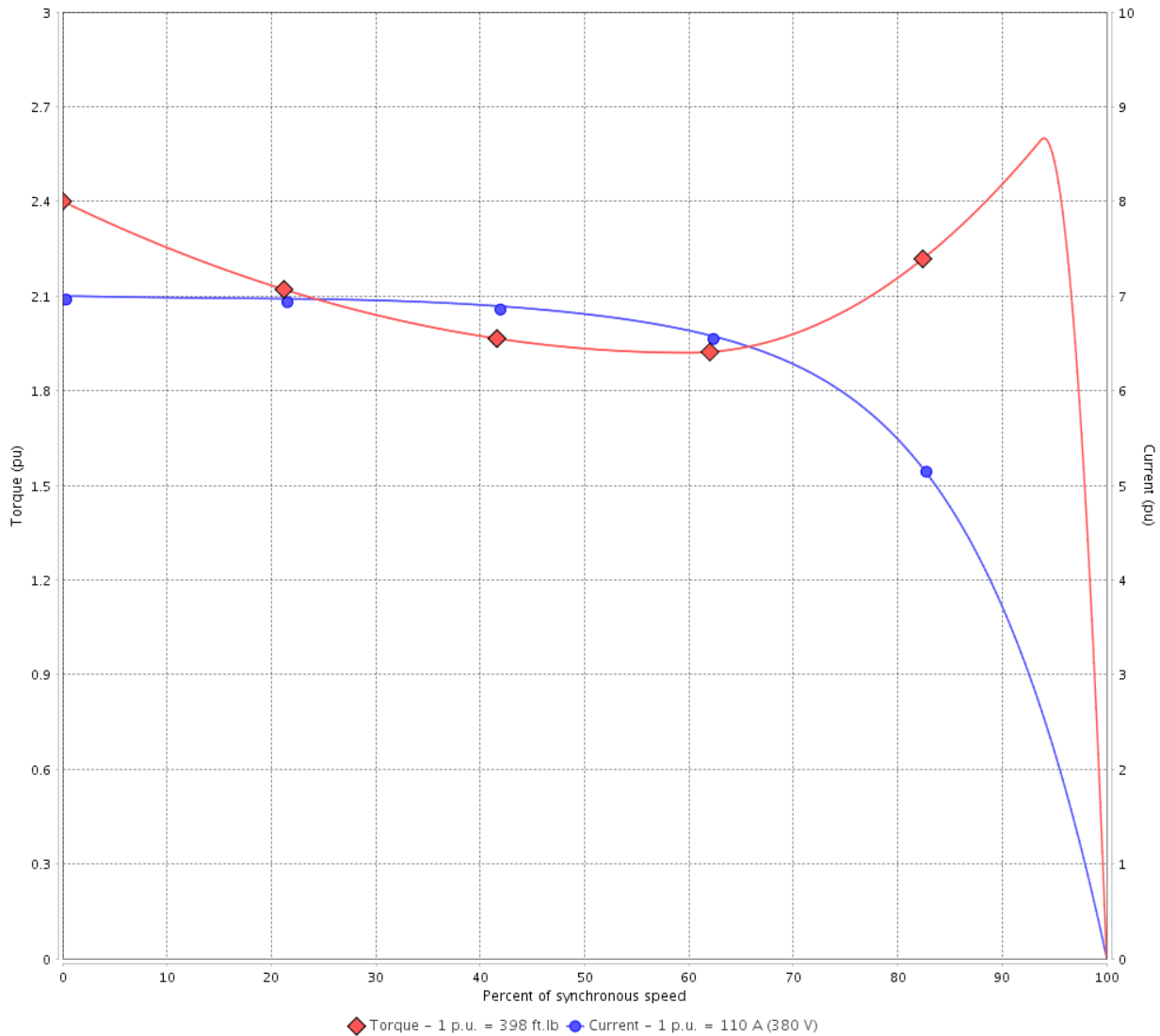
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439870

Catalog # : 10012XT3E444T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 6P IE3

Rated current	: 110 A	Moment of inertia (J)	: 87.3 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 398 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 990 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



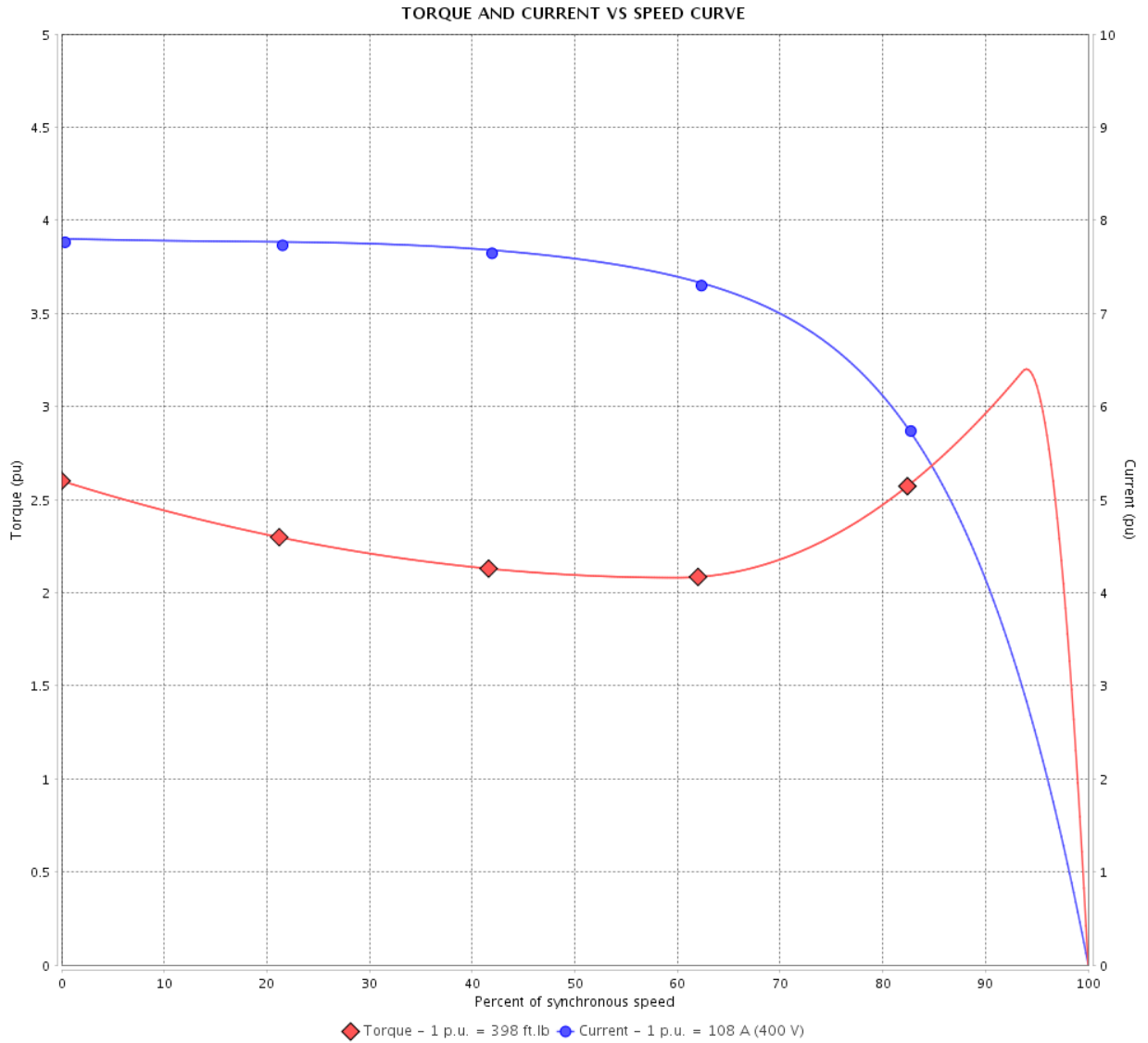
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439870

Catalog # : 10012XT3E444T



Performance : 400 V 50 Hz 6P IE3

Rated current	: 108 A	Moment of inertia (J)	: 87.3 sq.ft.lb
LRC	: 7.8	Duty cycle	: Cont.(S1)
Rated torque	: 398 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 990 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



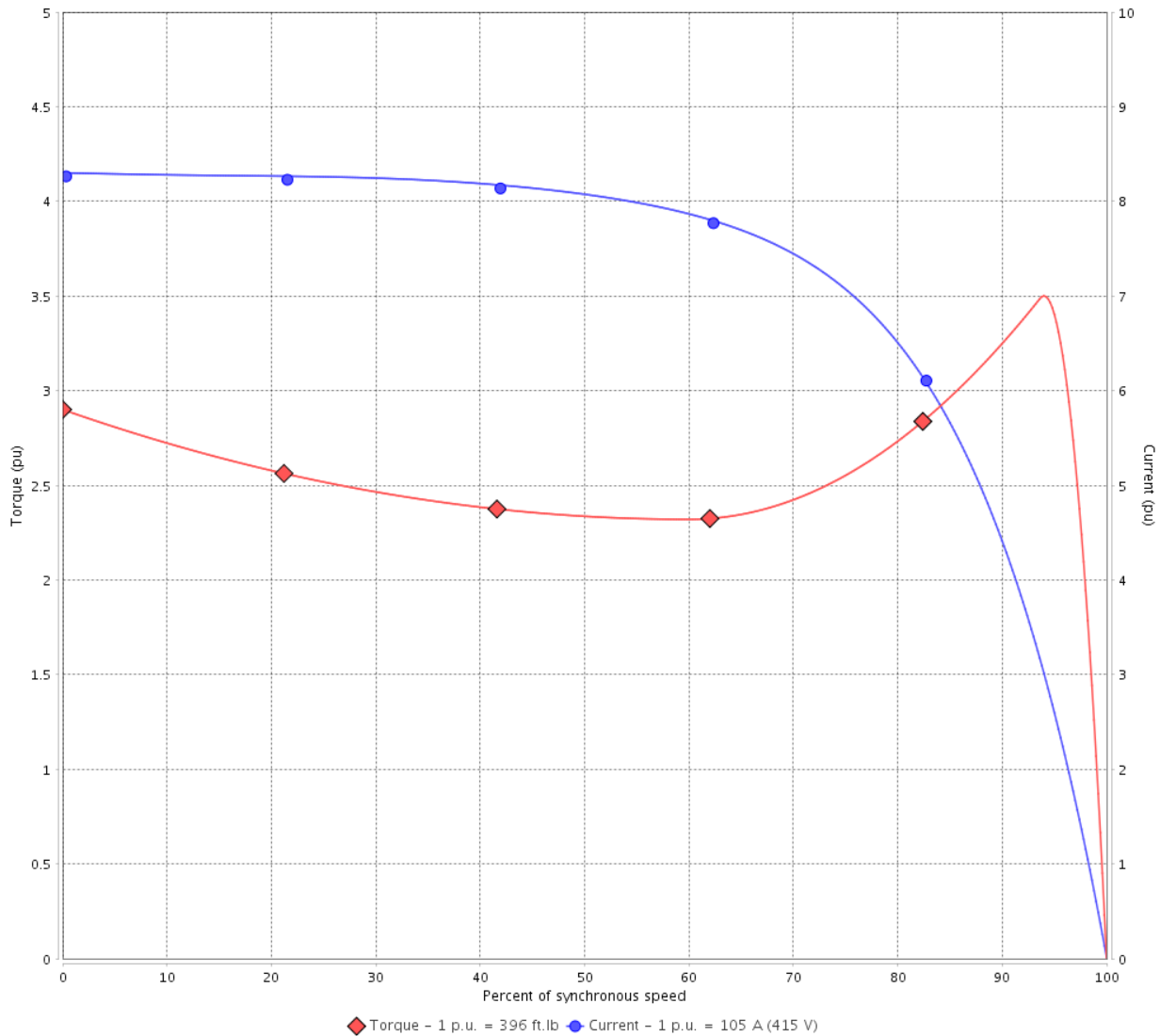
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439870

Catalog # : 10012XT3E444T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 6P IE3

Rated current	: 105 A	Moment of inertia (J)	: 87.3 sq.ft.lb
LRC	: 8.3	Duty cycle	: Cont.(S1)
Rated torque	: 396 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 995 rpm	Design	: B

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

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

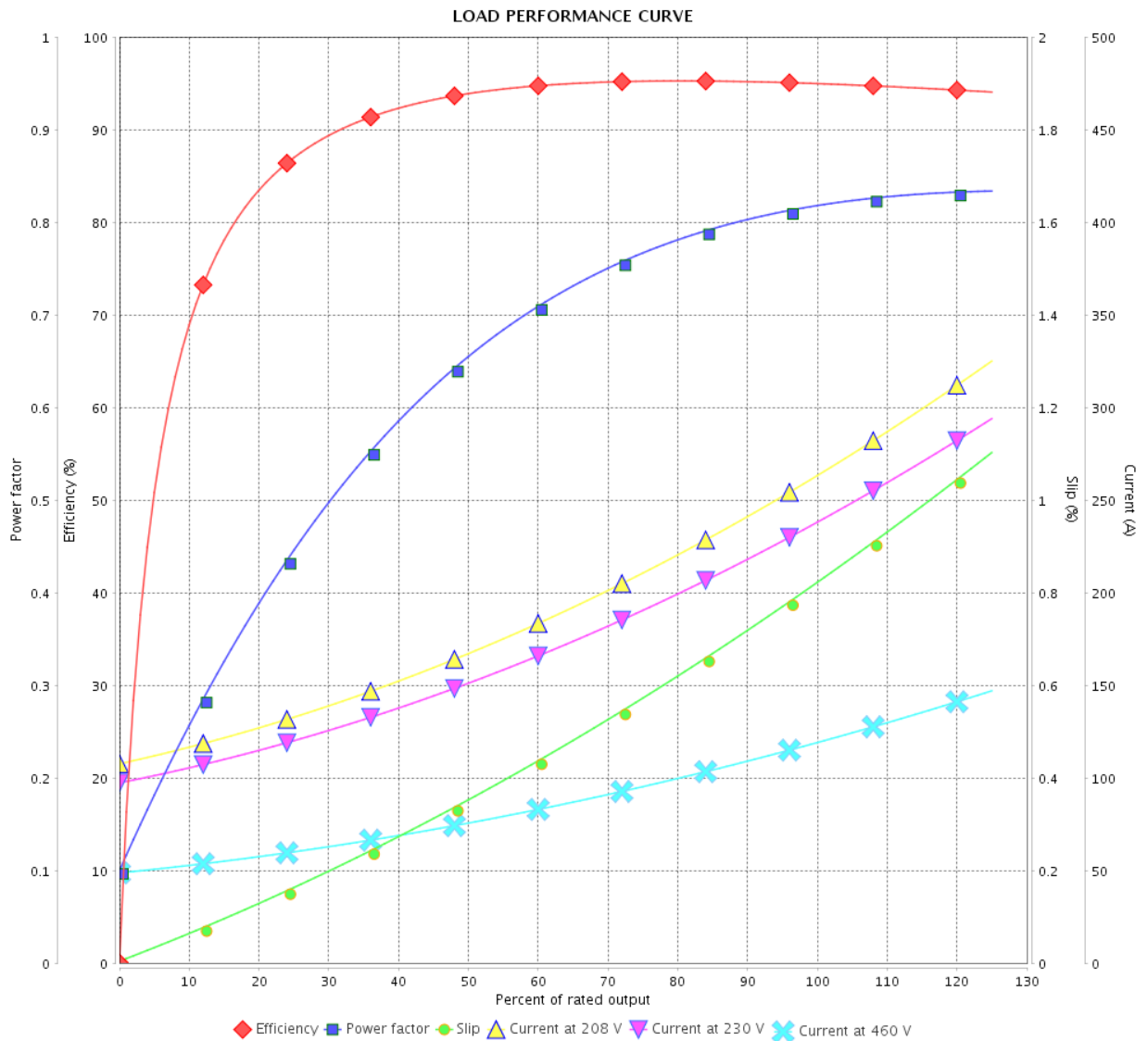


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439870

Catalog # : 10012XT3E444T



Performance : 230/460 V 60 Hz 6P

Rated current : 242/121 A
 LRC : 6.8
 Rated torque : 441 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 260 %
 Rated speed : 1190 rpm

Moment of inertia (J) : 87.3 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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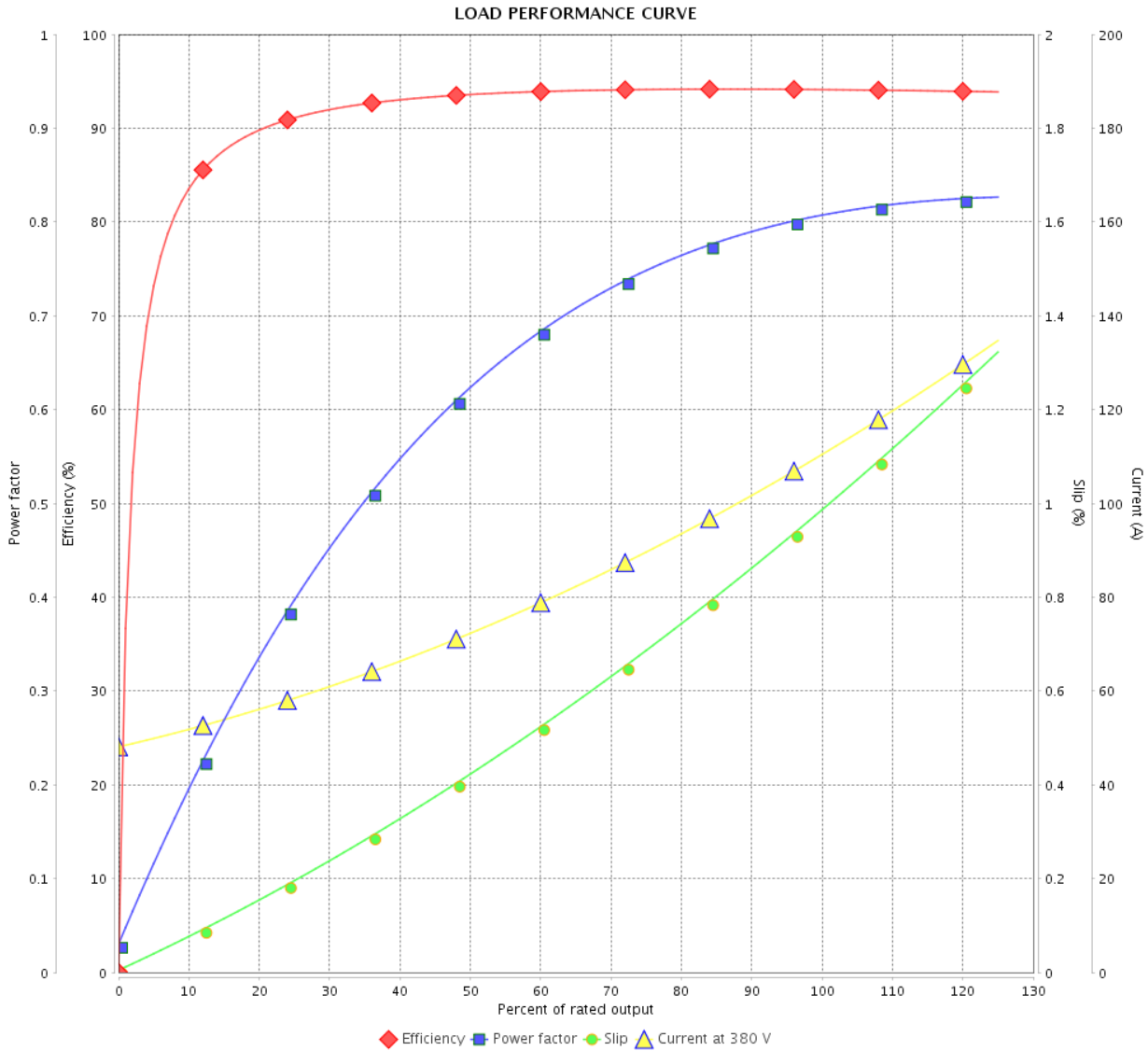


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439870

Catalog # : 10012XT3E444T



Performance : 380 V 50 Hz 6P IE3

Rated current	: 110 A	Moment of inertia (J)	: 87.3 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 398 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 990 rpm	Design	: B

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Three Phase Induction Motor - Squirrel Cage

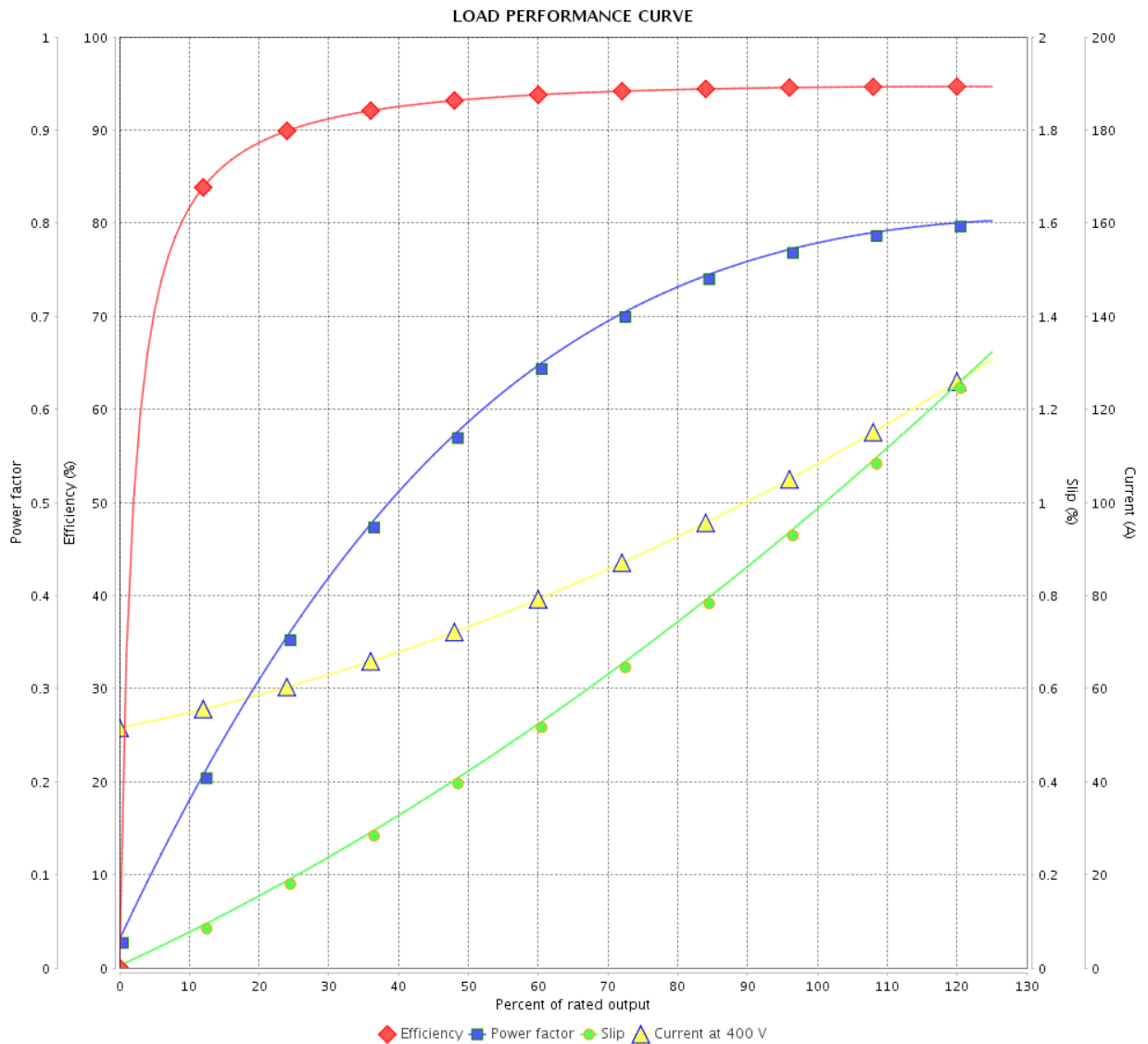


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439870

Catalog # : 10012XT3E444T



Performance : 400 V 50 Hz 6P IE3

Rated current : 108 A
 LRC : 7.8
 Rated torque : 398 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 320 %
 Rated speed : 990 rpm

Moment of inertia (J) : 87.3 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

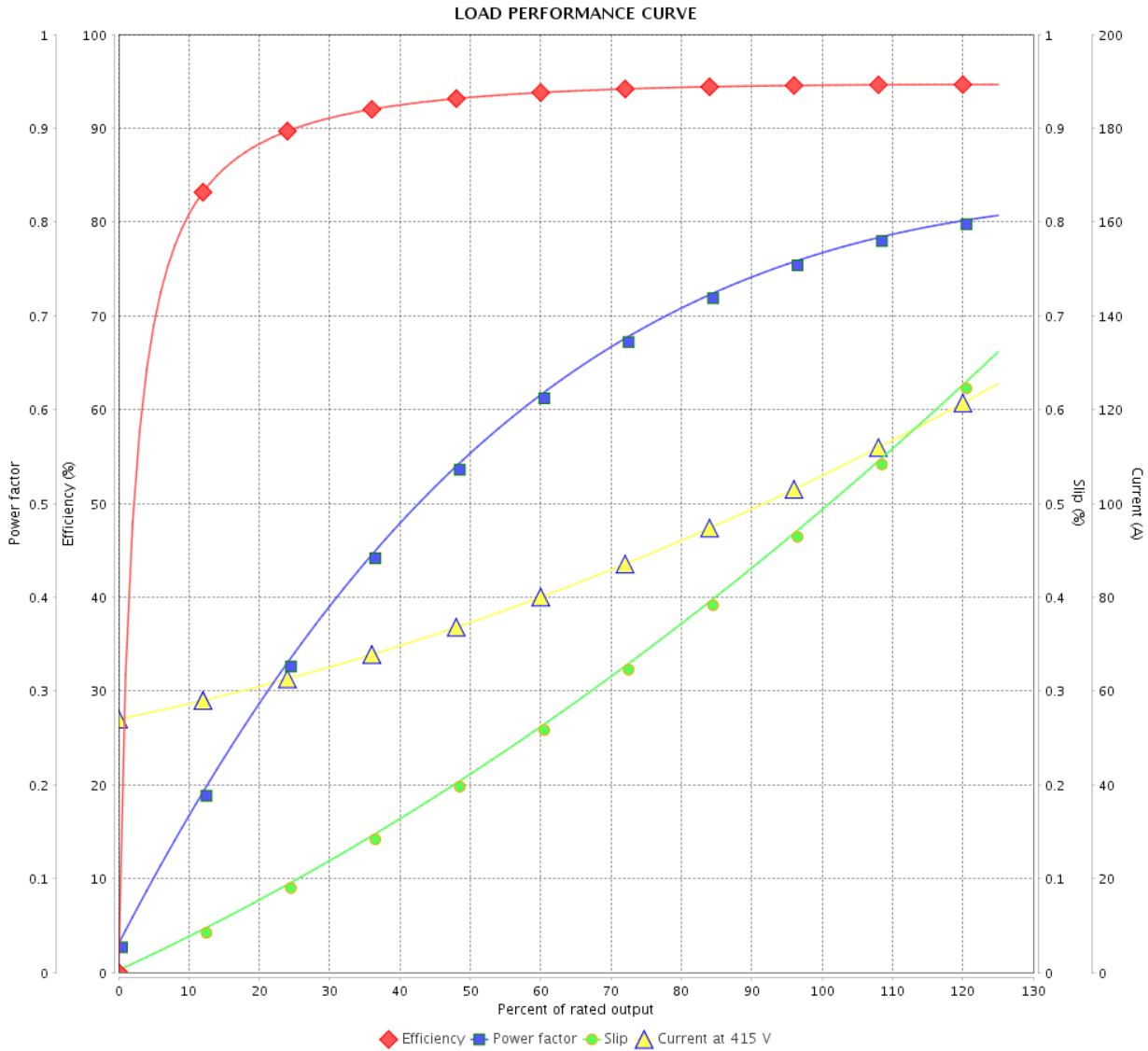


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 Insulation class : F
 Service factor : 1.00
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THERMAL LIMIT CURVE



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Locked rotor torque : 229 %	Service factor : 1.15
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 1190 rpm	Design : B

Heating constant

Cooling constant

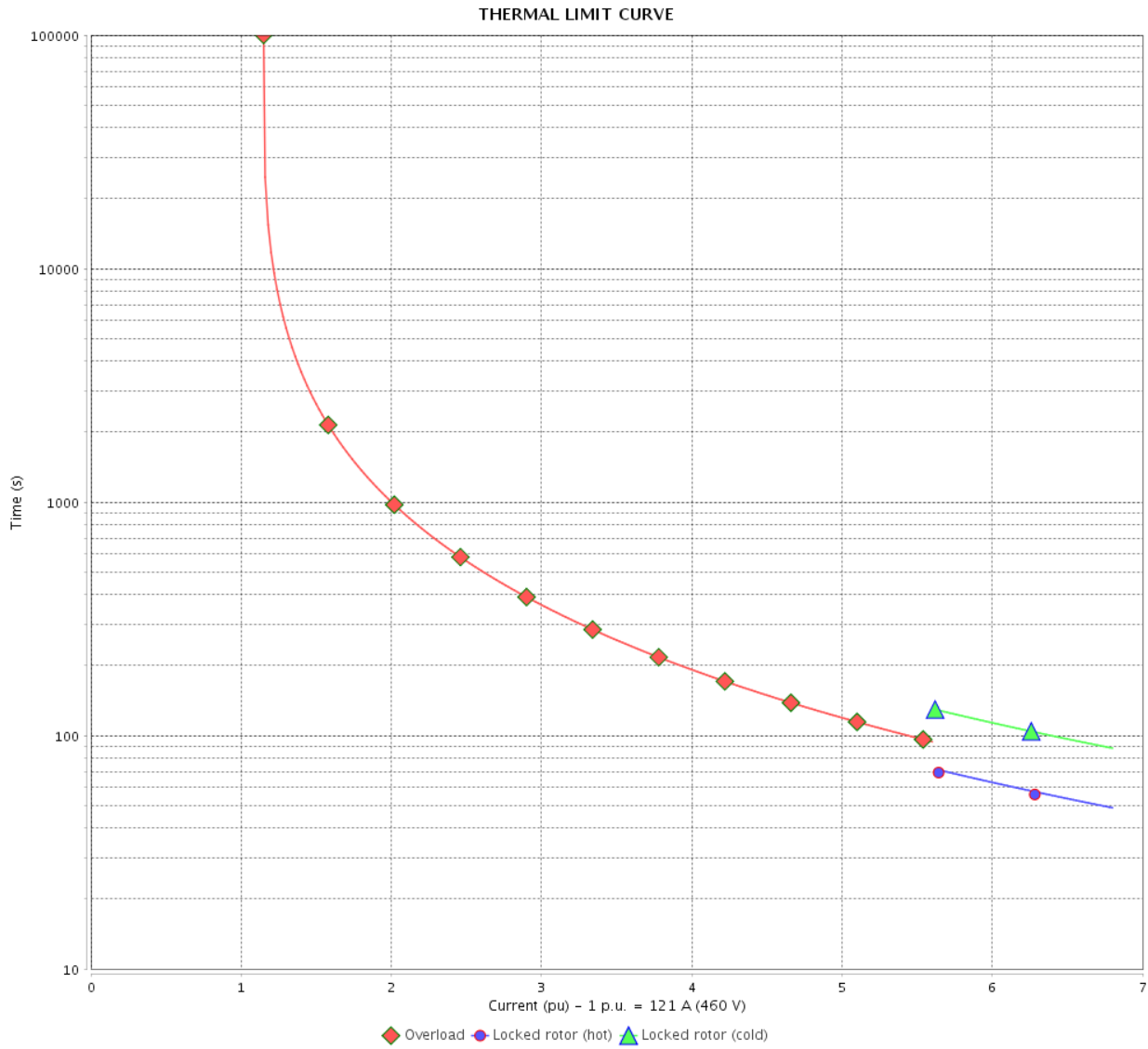
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THERMAL LIMIT CURVE

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THERMAL LIMIT CURVE



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LRC : 7.0	Duty cycle : Cont.(S1)
Rated torque : 398 ft.lb	Insulation class : F
Locked rotor torque : 240 %	Service factor : 1.00
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 990 rpm	Design : B

Heating constant

Cooling constant

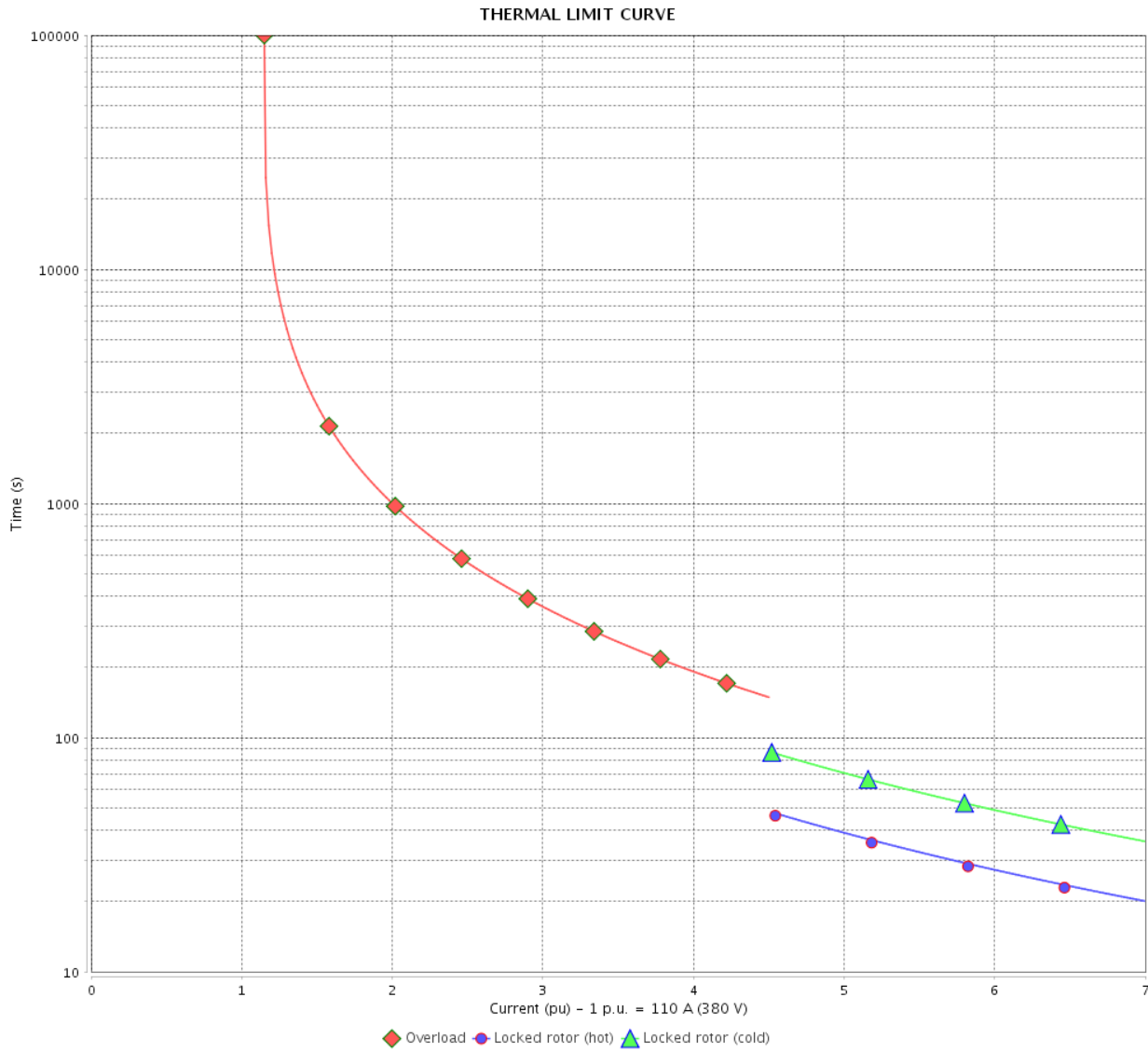
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Locked rotor torque : 260 %	Service factor : 1.00
Breakdown torque : 320 %	Temperature rise : 80 K
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Heating constant

Cooling constant

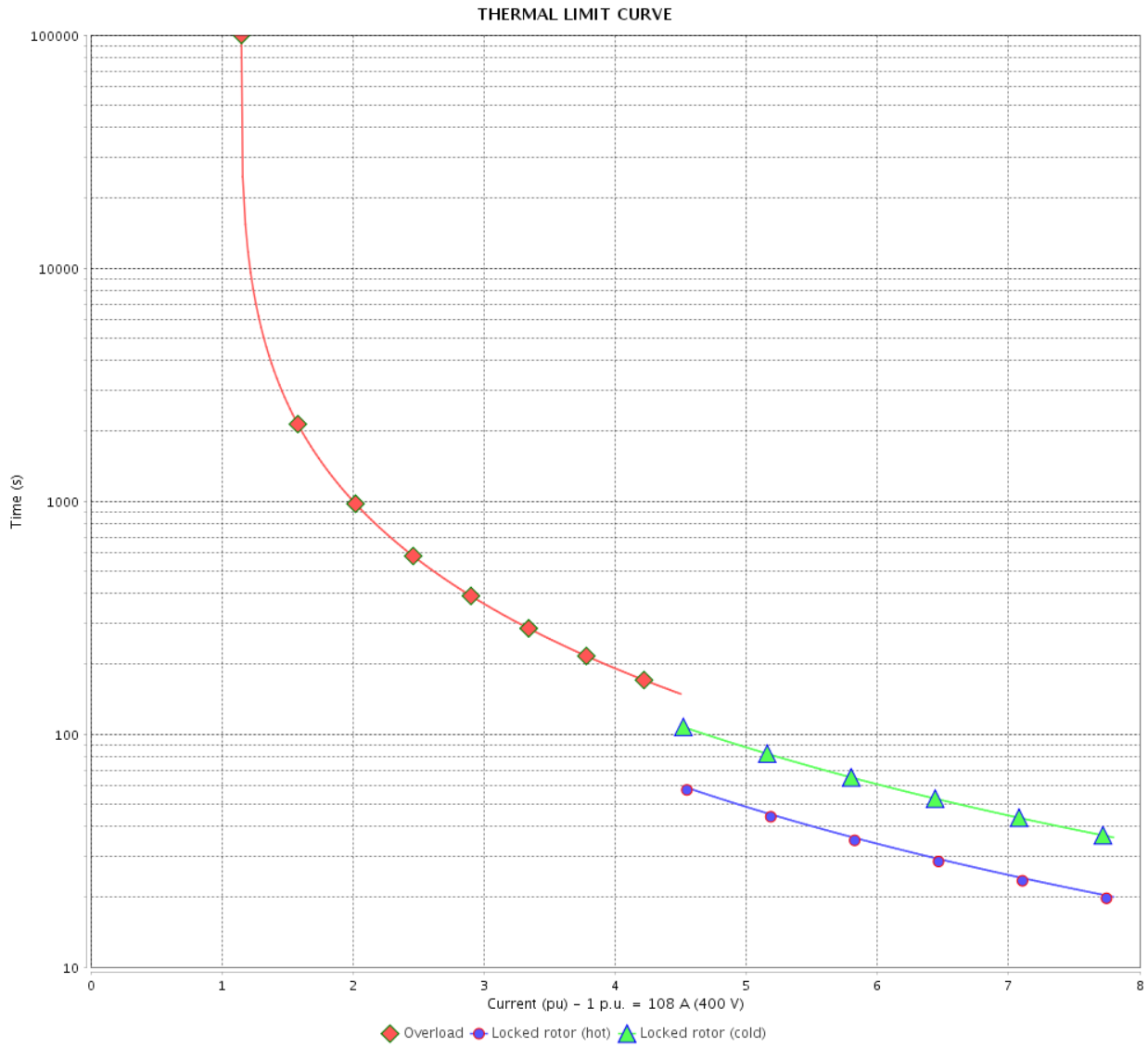
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

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 Product code : 11439870
 Catalog # : 10012XT3E444T

Performance : 415 V 50 Hz 6P IE3

Rated current : 105 A	Moment of inertia (J) : 87.3 sq.ft.lb
LRC : 8.3	Duty cycle : Cont.(S1)
Rated torque : 396 ft.lb	Insulation class : F
Locked rotor torque : 290 %	Service factor : 1.00
Breakdown torque : 350 %	Temperature rise : 80 K
Rated speed : 995 rpm	Design : B

Heating constant

Cooling constant

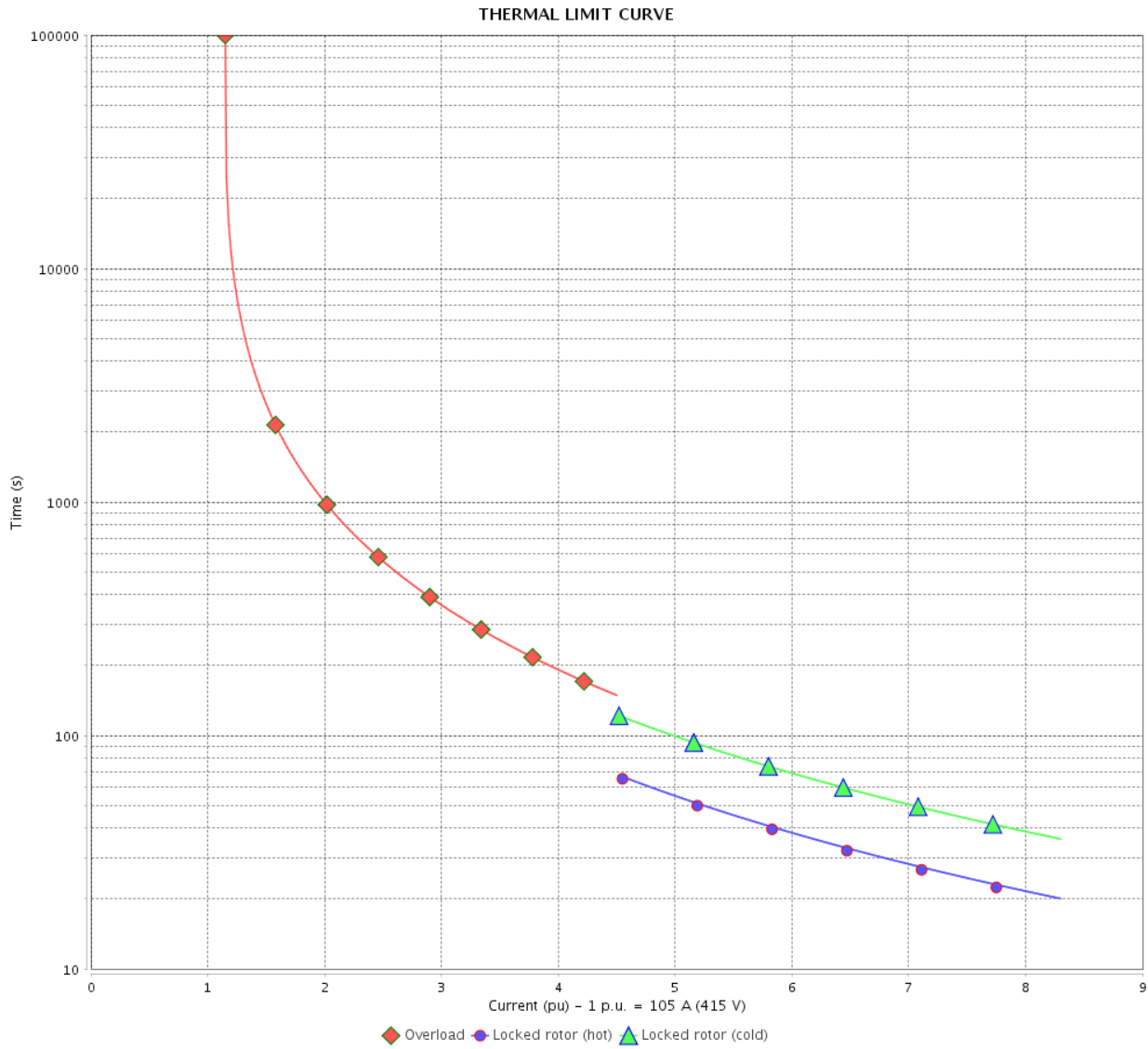
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

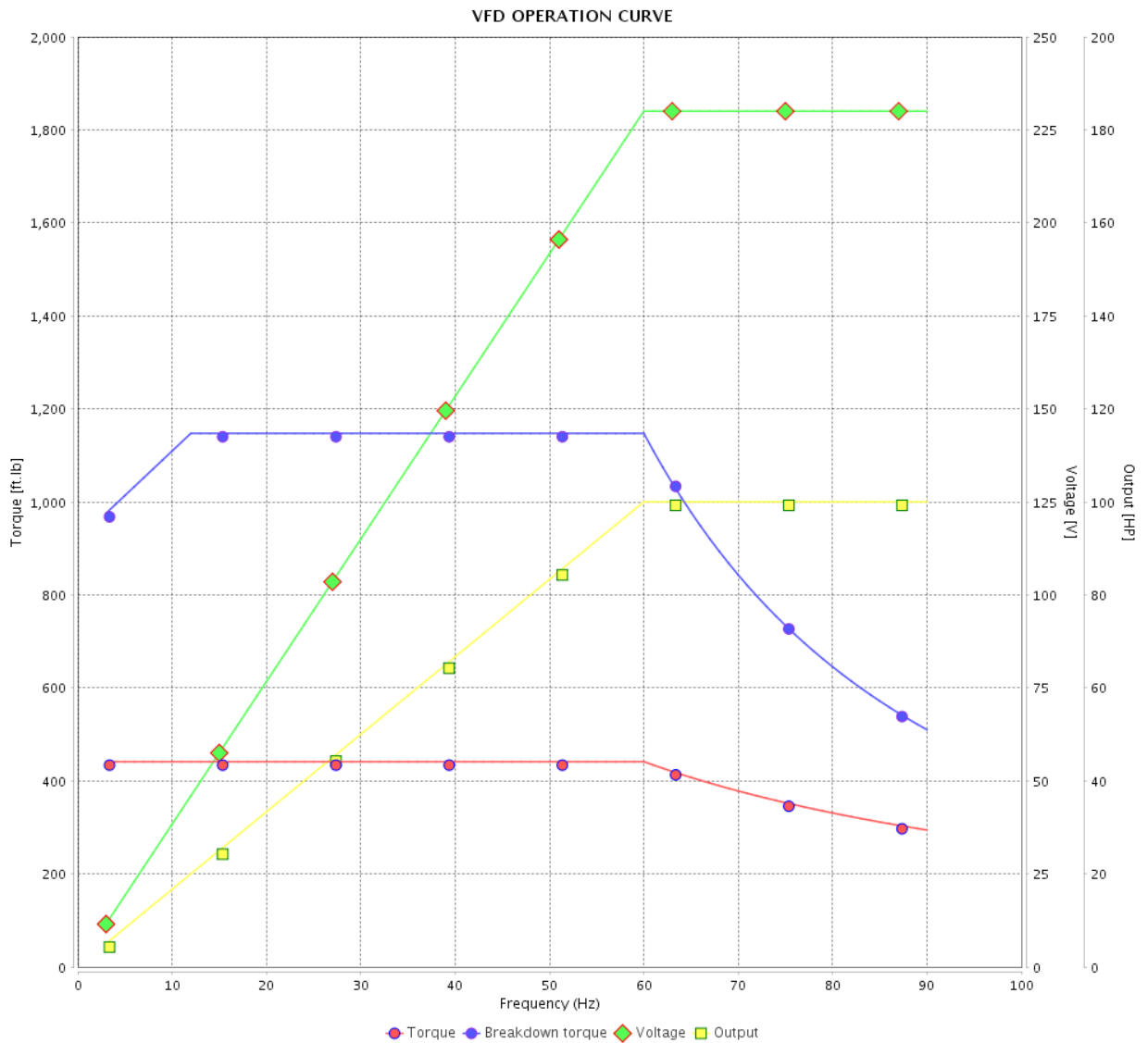


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Performance : 230/460 V 60 Hz 6P

Rated current : 242/121 A
 LRC : 6.8
 Rated torque : 441 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 260 %
 Rated speed : 1190 rpm

Moment of inertia (J) : 87.3 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



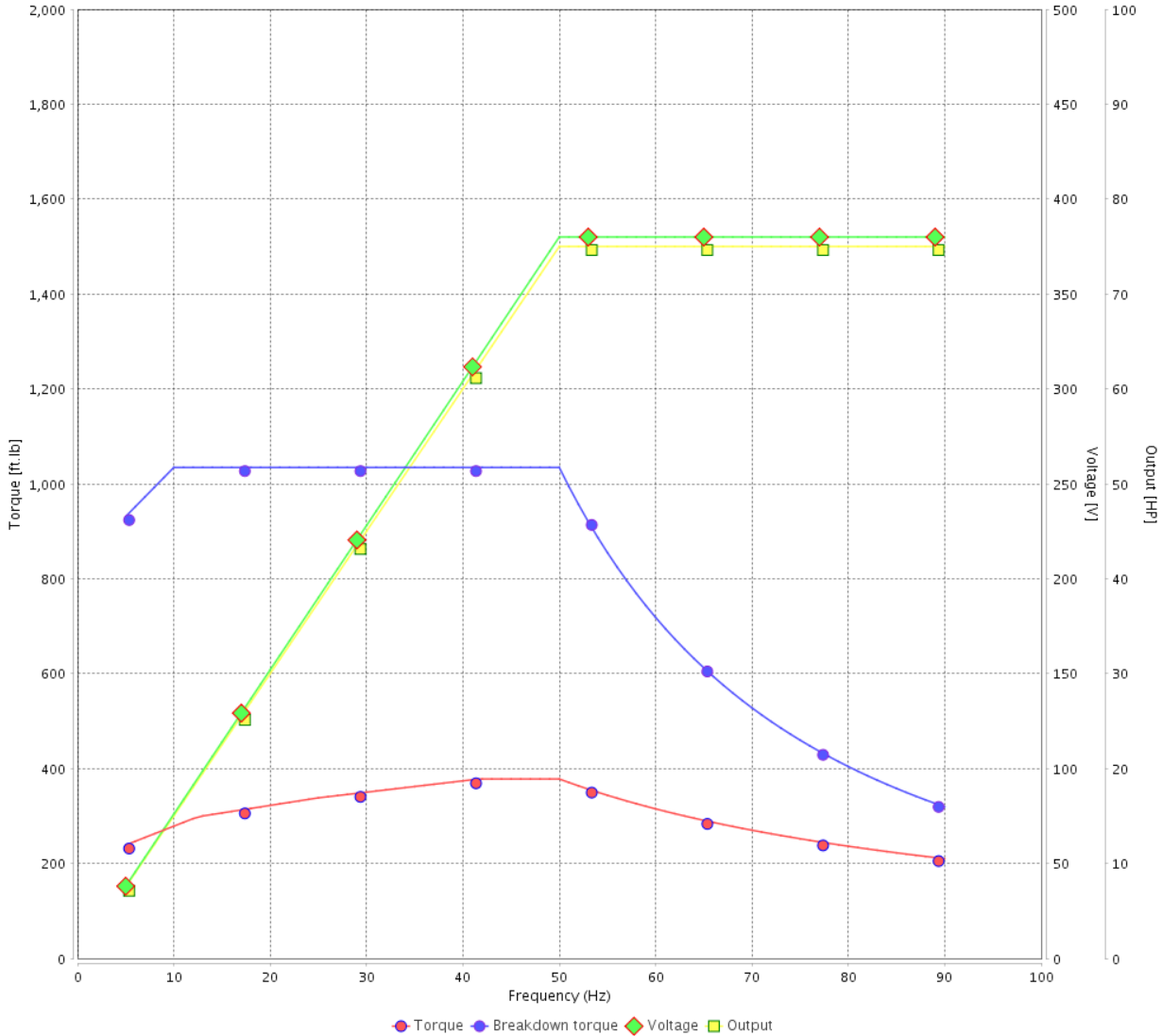
Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11439870

Catalog # : 10012XT3E444T

VFD OPERATION CURVE



Performance : 380 V 50 Hz 6P IE3

Rated current : 110 A
 LRC : 7.0
 Rated torque : 398 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 260 %
 Rated speed : 990 rpm

Moment of inertia (J) : 87.3 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

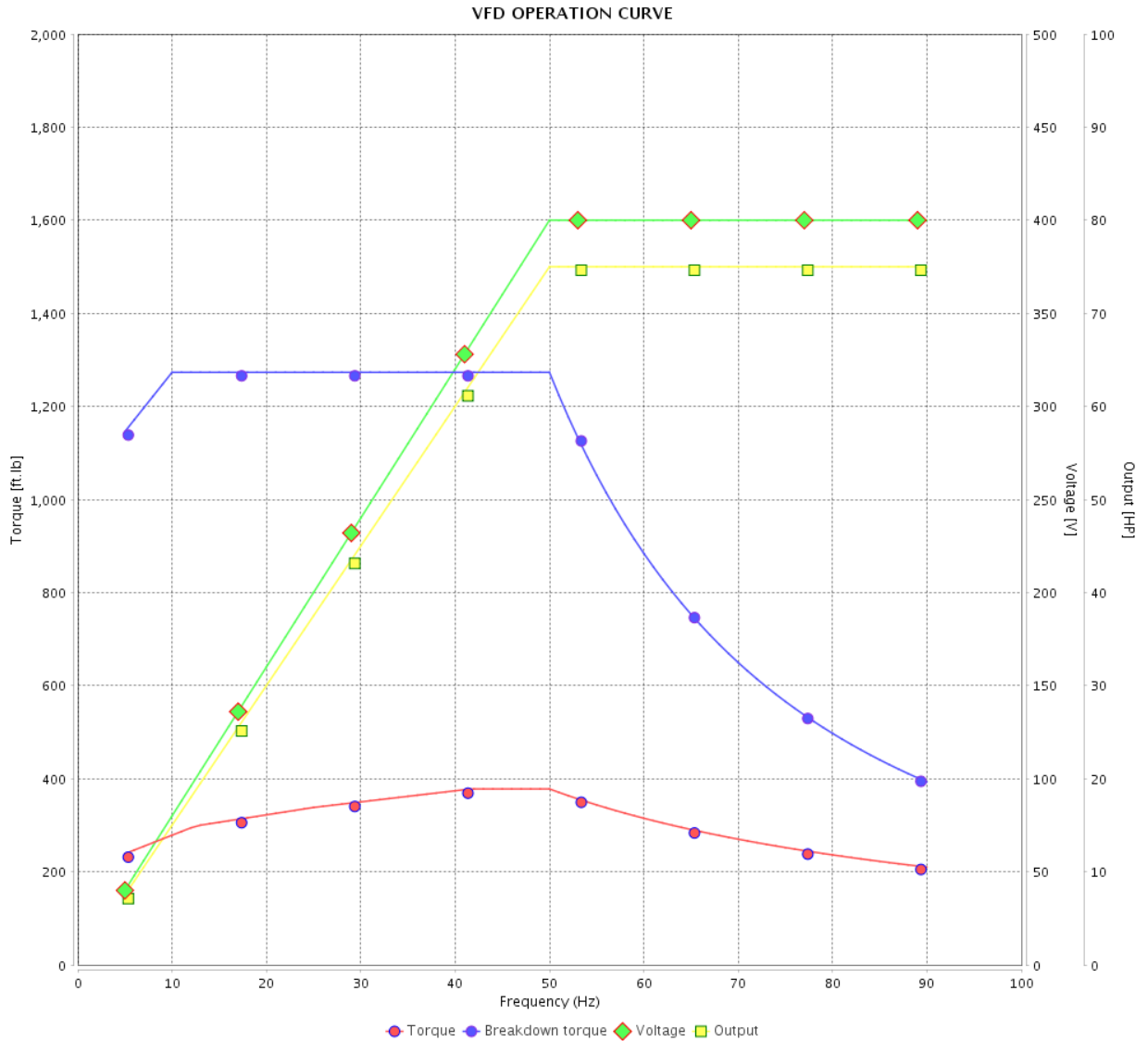


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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



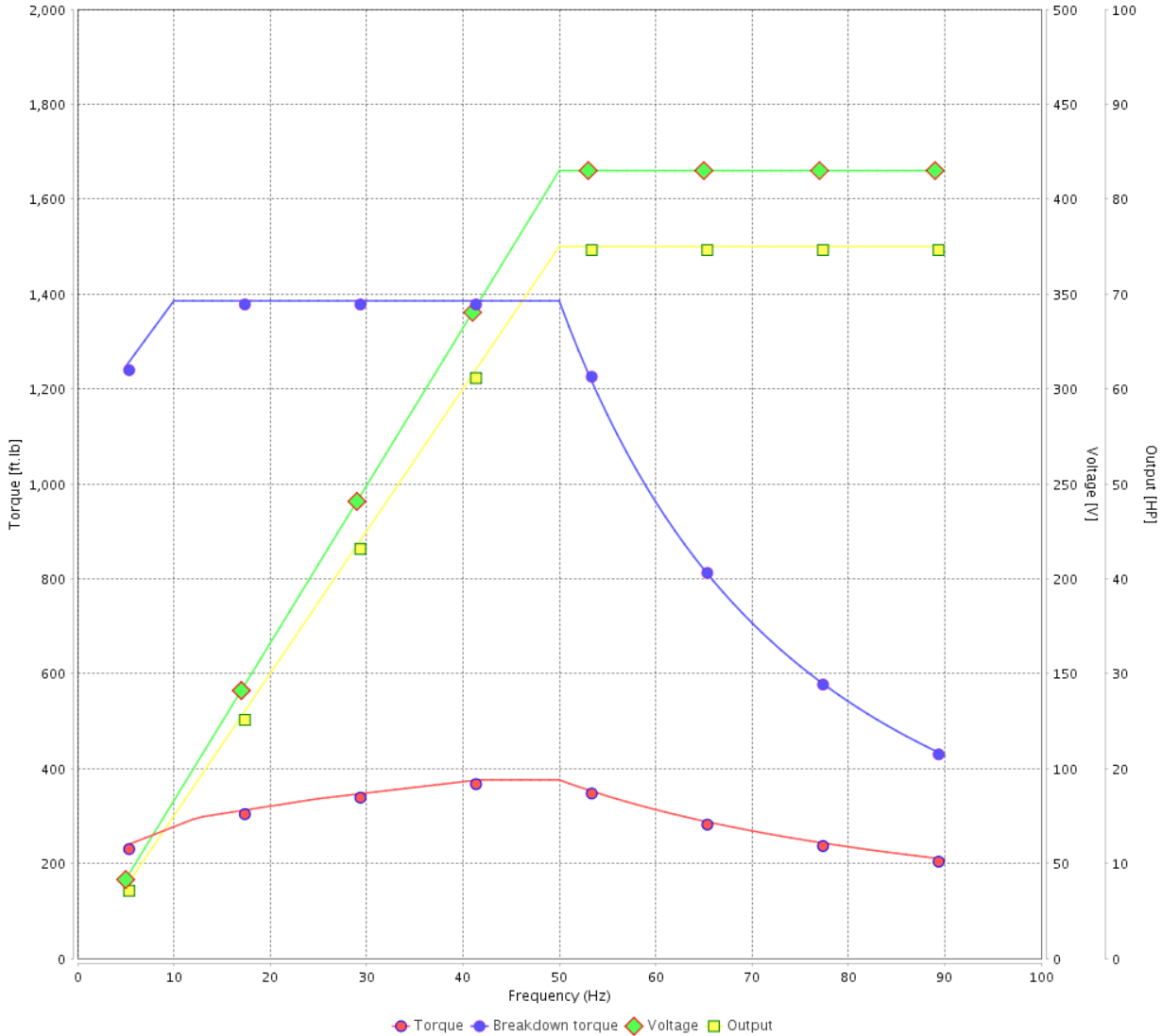
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VFD OPERATION CURVE

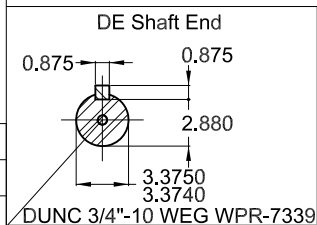
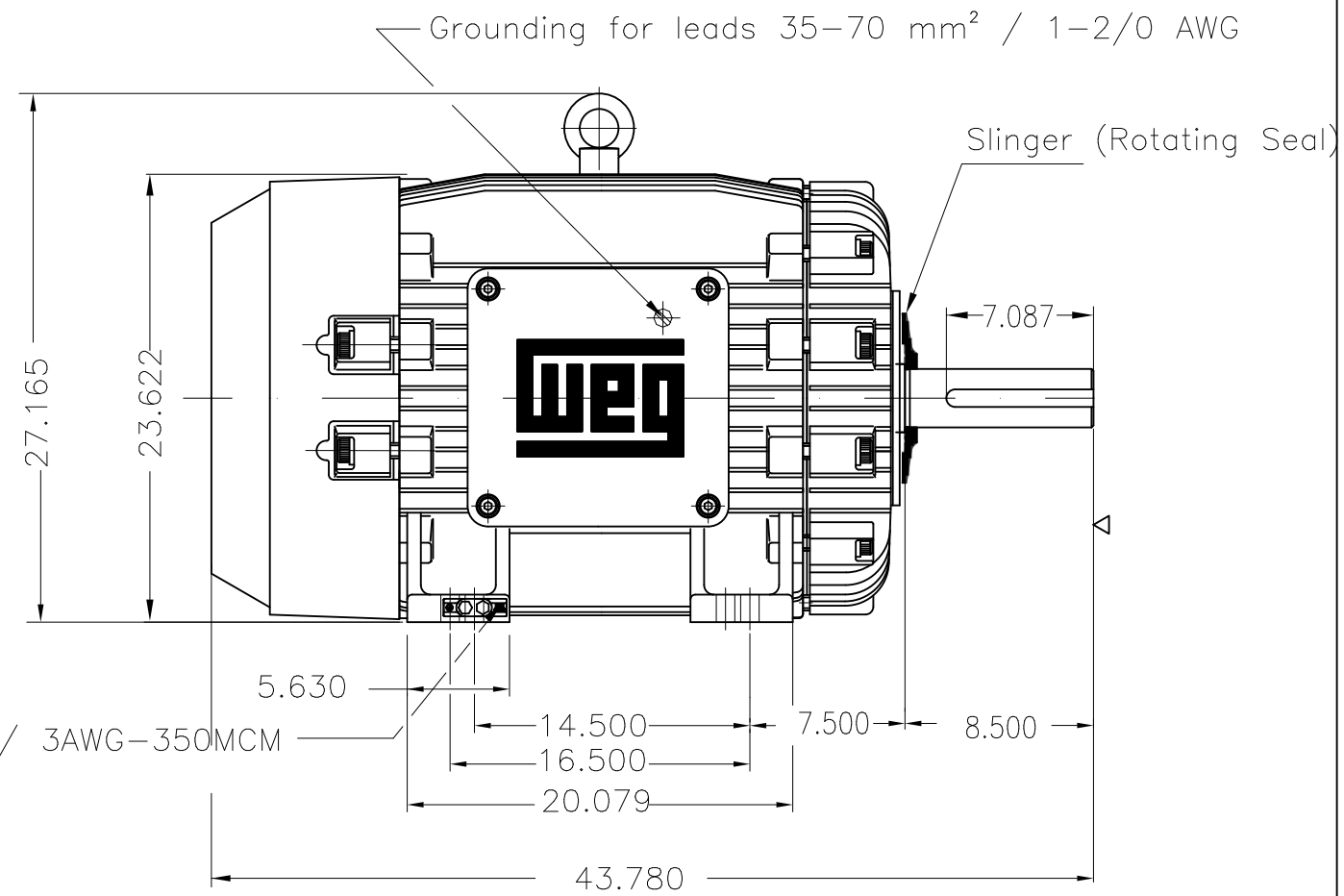
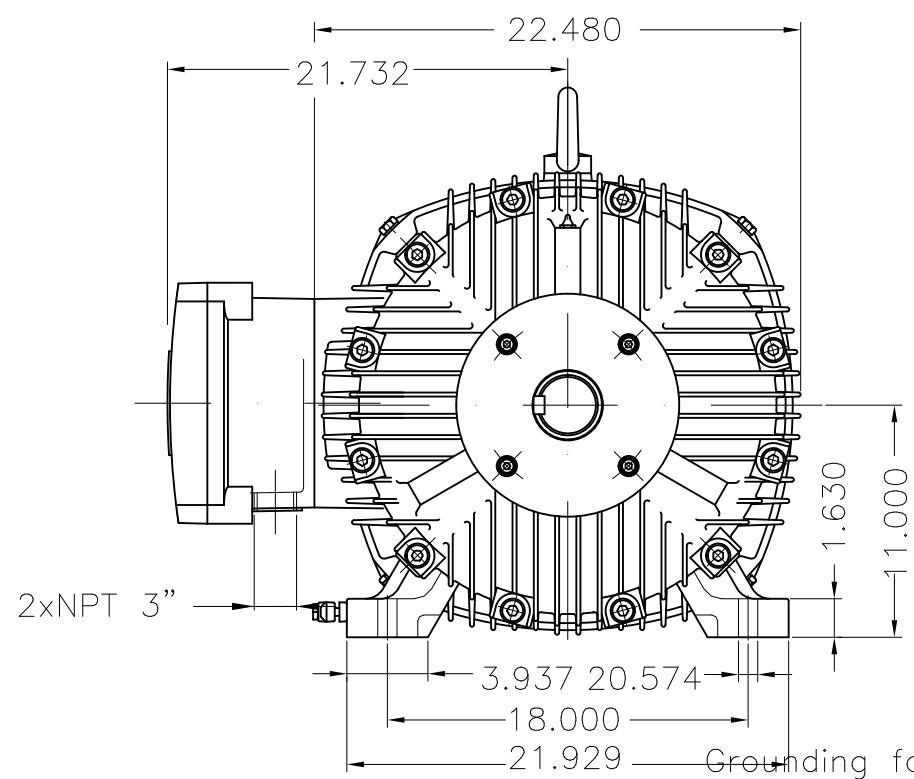


Performance : 415 V 50 Hz 6P IE3

Rated current : 105 A
 LRC : 8.3
 Rated torque : 396 ft.lb
 Locked rotor torque : 290 %
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Color RAL 5009
 Painting plan 202P
 Mounting B3R(D)

100 HP 06 Poles 60 Hz

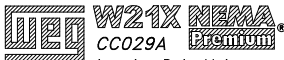
ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 444/5T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
 WDD



SHEET 1 / 1

Dimensions in inches XME A3



W21X
CC029A

NEMA
Premium

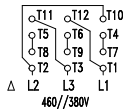
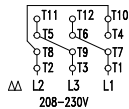
*Inverter Duty Motor
Severe Duty*



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 10012XT3E444T
 MADE IN BRAZIL
 11439870

PH 3	FR 444/5T	HP(kW) 100.0(75.0)	Hz 60
V 230/460	A 242/121	RPM 1190	
NEMA NOM. EFF. 95.0%	INS CL F	ΔT 80 K	IP55
PF 0.82	DUTY CONT.	CODE H	
ENCL. TEFC	SF 1.15	SFA 278/139	
AMB 40°C	DES B	USABLE @208V 267 A SF 1.00	
AMB 55°C SF1.0	-bearings lub interval reduced by a factor of 50%		
75HP 55kW 50Hz 380V 110A 990RPM SF1.00 EFF 94.1% (IE3)			



→ 6219-C3(28g)
 → 6316-C3(34g)

MOBIL POLYREX EM
 12202 h

ALT 1000 m.a.s.l | 2099 Lbs