

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase		Product code : 11506320	
				Catalog # : 12536XT3G444TS	
Frame : 444/5TS		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 : 2039 lb			
Protection degree : IP55		Moment of inertia (J) : 31.2 sq.ft.lb			
Design : B					
Output [HP]	125	100	100	100	100
Poles	2	2	2	2	2
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	460	380	400	415	415
Rated current [A]	134	134	128	125	125
L. R. Amperes [A]	884	831	870	925	925
LRC [A]	6.6x(Code G)	6.2x(Code F)	6.8x(Code G)	7.4x(Code H)	7.4x(Code H)
No load current [A]	32.5	32.1	34.1	35.5	35.5
Rated speed [RPM]	3575	2975	2975	2980	2980
Slip [%]	0.69	0.83	0.83	0.67	0.67
Rated torque [ft.lb]	184	177	177	176	176
Locked rotor torque [%]	200	190	210	229	229
Breakdown torque [%]	250	229	260	290	290
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	39s (cold) 22s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)
Noise level ²	86.0 dB(A)	83.0 dB(A)	83.0 dB(A)	83.0 dB(A)	83.0 dB(A)
Efficiency (%)	25%	92.4	93.5	93.0	92.4
	50%	93.0	93.6	93.6	93.0
	75%	94.5	94.5	94.5	94.5
	100%	95.0	94.5	95.0	95.0
Power Factor	25%	0.61	0.60	0.57	0.55
	50%	0.83	0.83	0.81	0.79
	75%	0.88	0.88	0.87	0.86
	100%	0.89	0.90	0.89	0.88
Bearing type		Drive end : 6314 C3	Non drive end : 6314 C3	Foundation loads	
Sealing		: Oil Seal	: Lip Seal	Max. traction : 342 lb	
Lubrication interval		: 3604 h	: 3604 h	Max. compression : 2381 lb	
Lubricant amount		: 27 g	: 27 g		
Lubricant type		: Mobil Polyrex EM			
Notes					
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



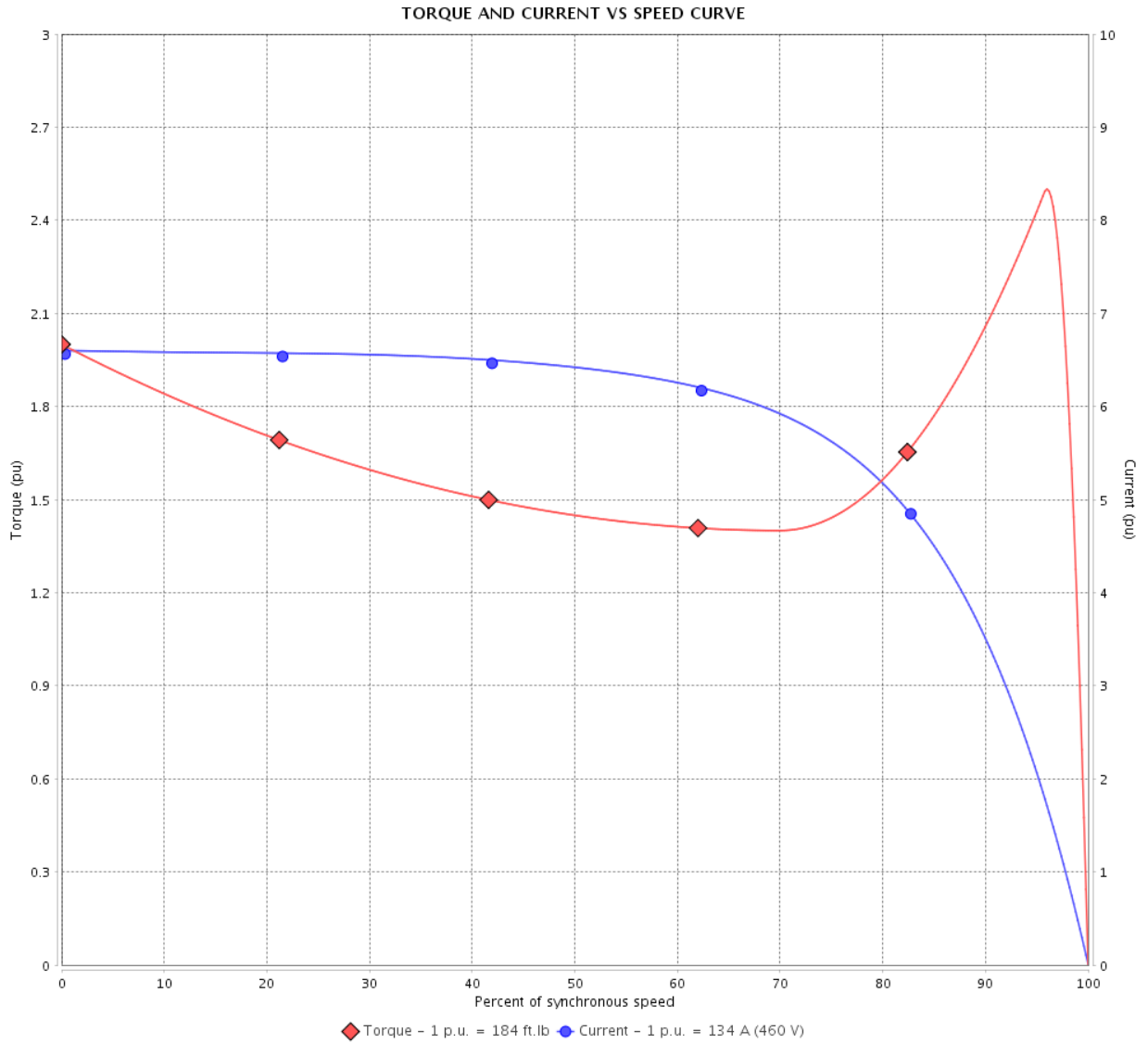
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11506320

Catalog # : 12536XT3G444TS



Performance : 460 V 60 Hz 2P

Rated current	: 134 A	Moment of inertia (J)	: 31.2 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 184 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 3575 rpm	Design	: B

Locked rotor time : 39s (cold) 22s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



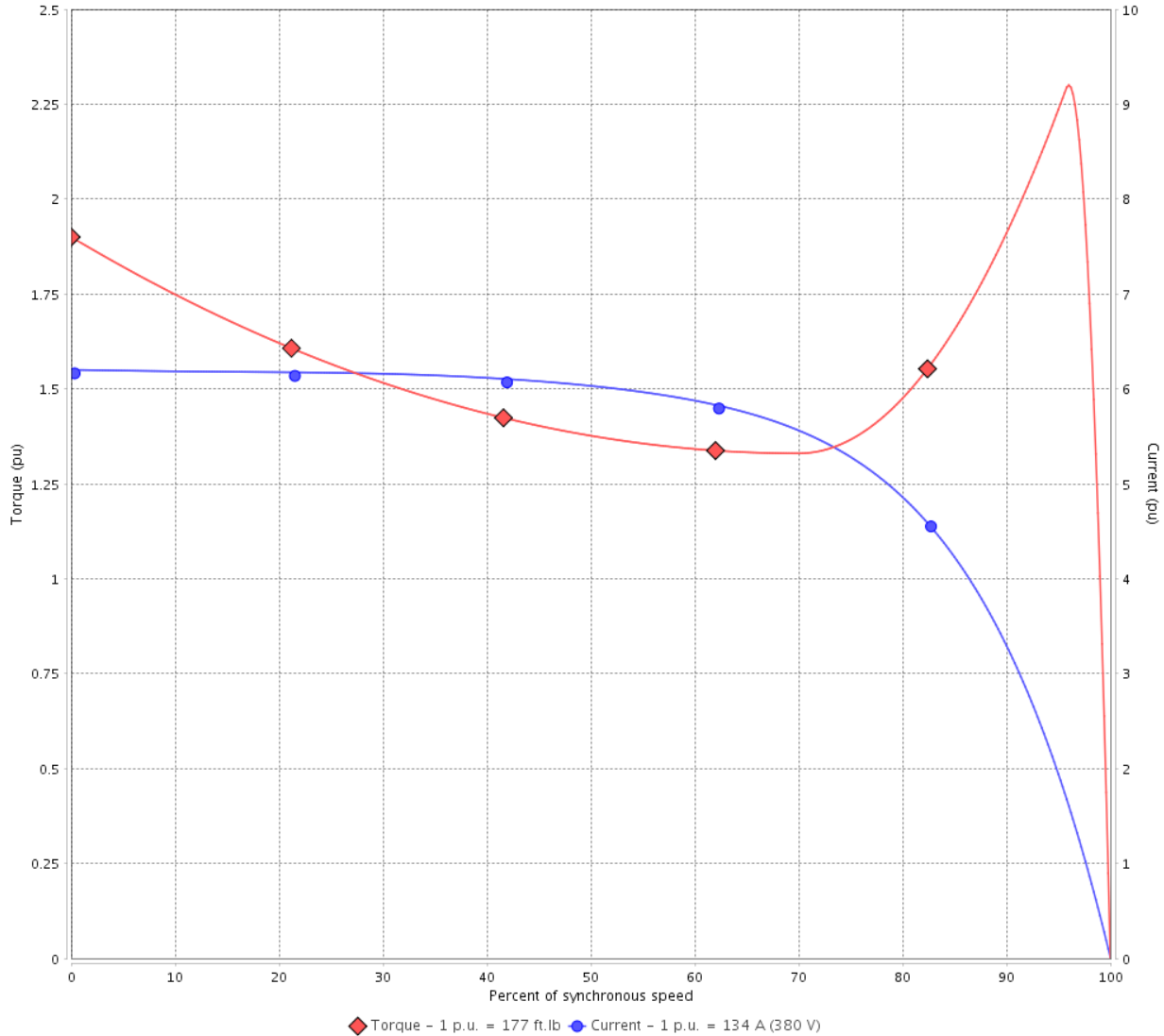
Customer :

Product line : NEMA Premium Efficiency Three-Phase

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Catalog # : 12536XT3G444TS

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 2P IE2

Rated current	: 134 A	Moment of inertia (J)	: 31.2 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 177 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 2975 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



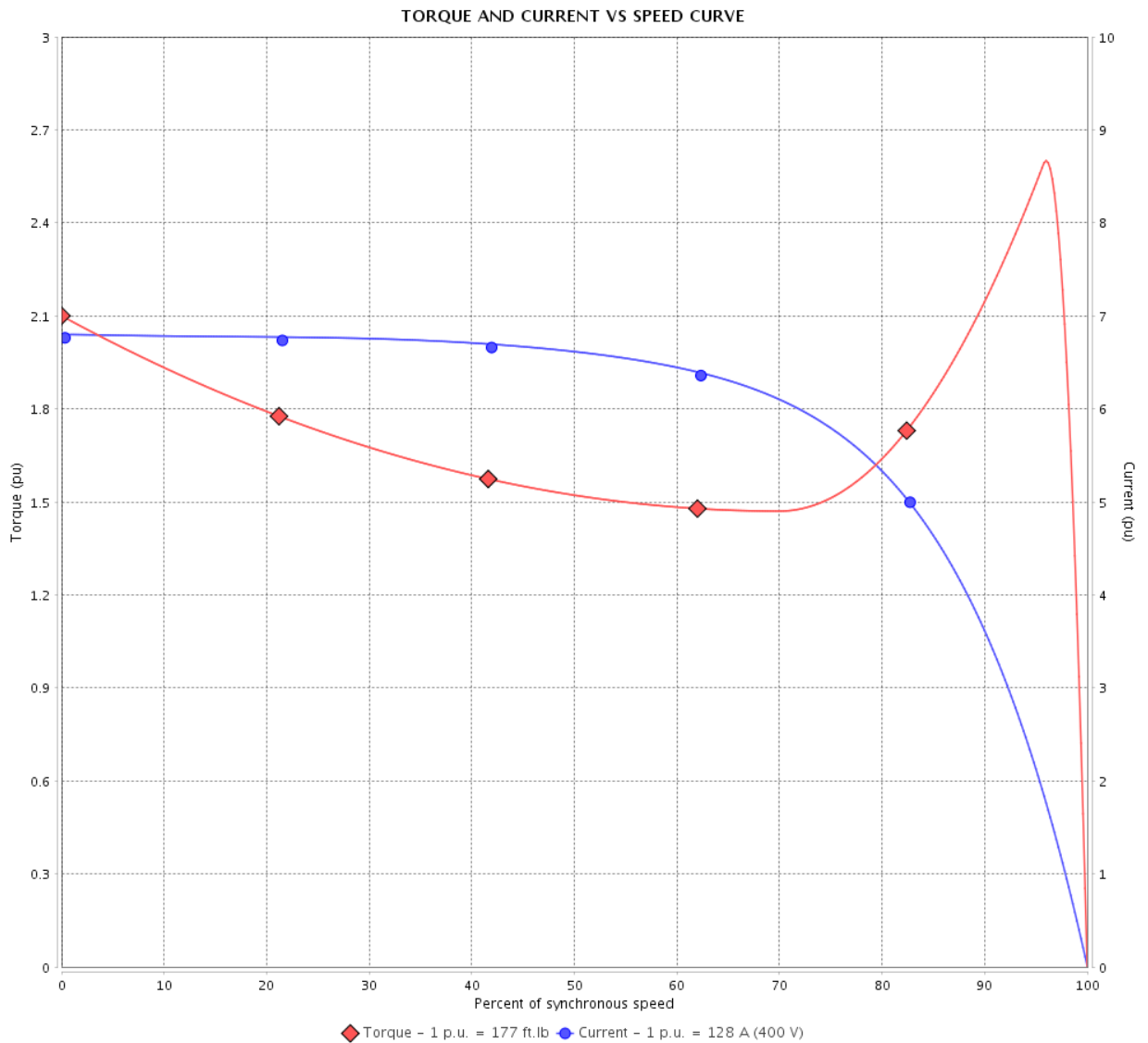
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11506320

Catalog # : 12536XT3G444TS



Performance : 400 V 50 Hz 2P IE3

Rated current	: 128 A	Moment of inertia (J)	: 31.2 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 177 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 2975 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



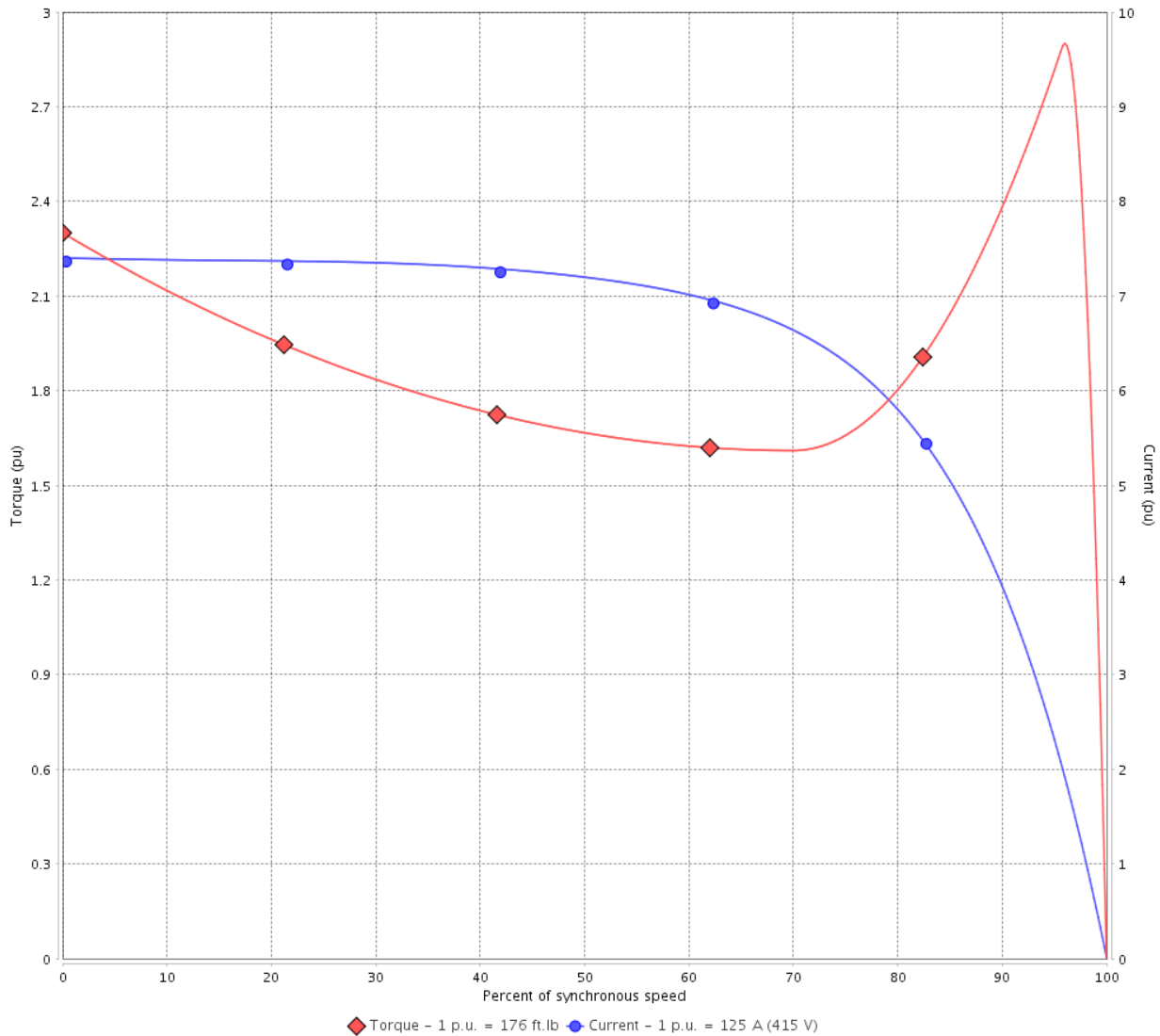
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Product line : NEMA Premium Efficiency Three-Phase

Product code : 11506320

Catalog # : 12536XT3G444TS

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 2P IE3

Rated current	: 125 A	Moment of inertia (J)	: 31.2 sq.ft.lb
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 176 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 2980 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

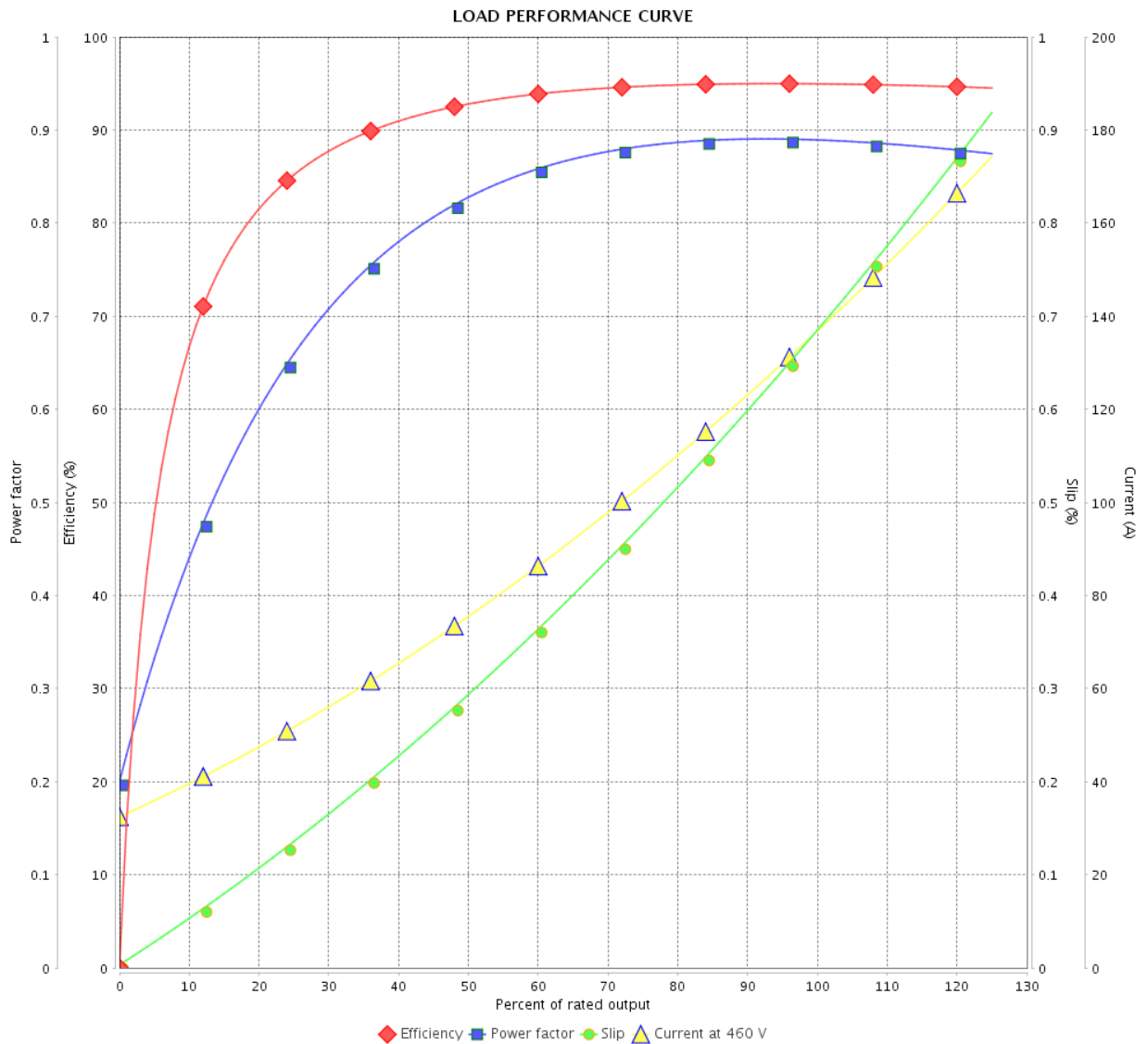


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11506320

Catalog # : 12536XT3G444TS



Performance : 460 V 60 Hz 2P

Rated current : 134 A
 LRC : 6.6
 Rated torque : 184 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 250 %
 Rated speed : 3575 rpm

Moment of inertia (J) : 31.2 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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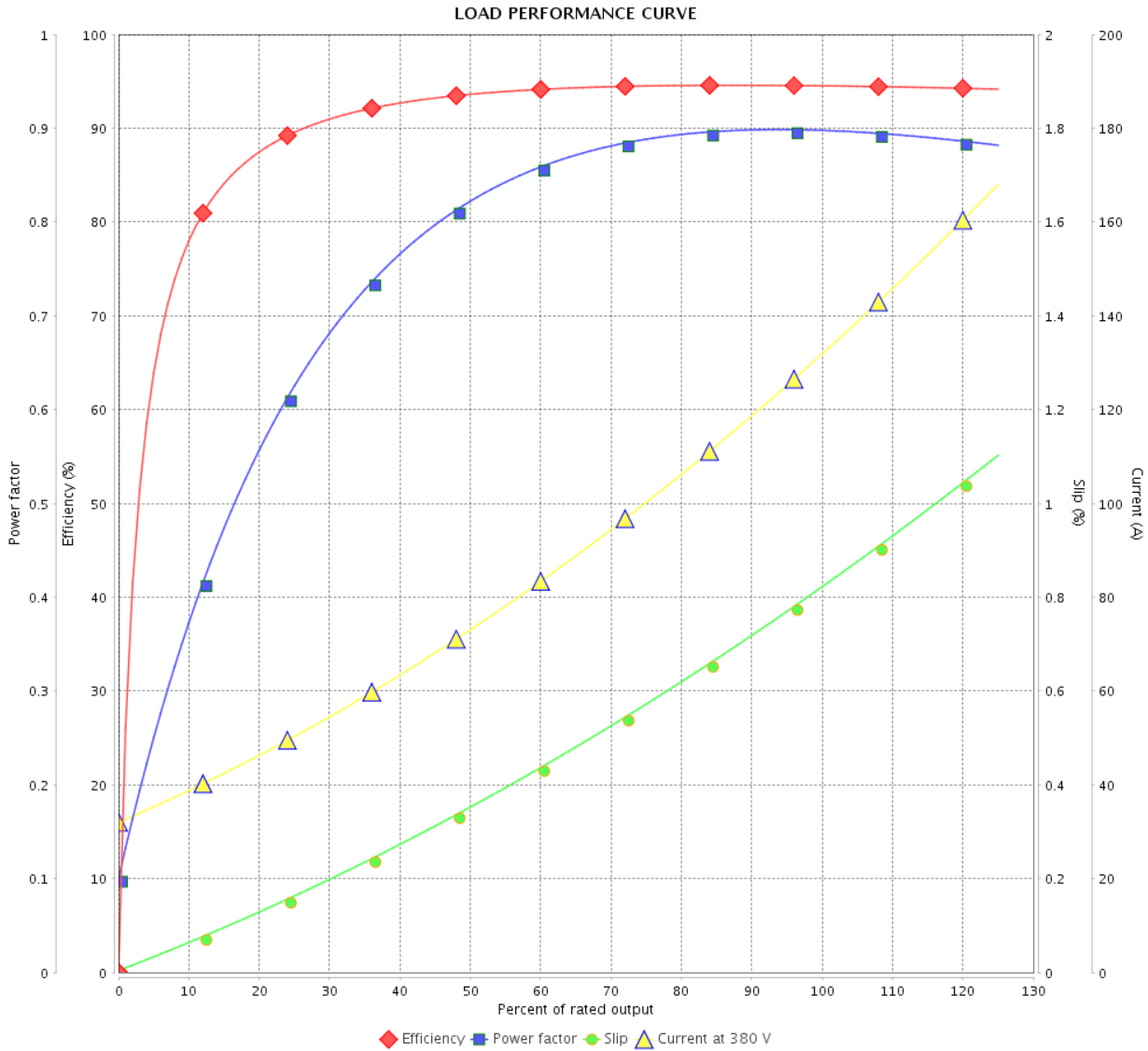


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Performance : 380 V 50 Hz 2P IE2

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Moment of inertia (J) : 31.2 sq.ft.lb
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 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
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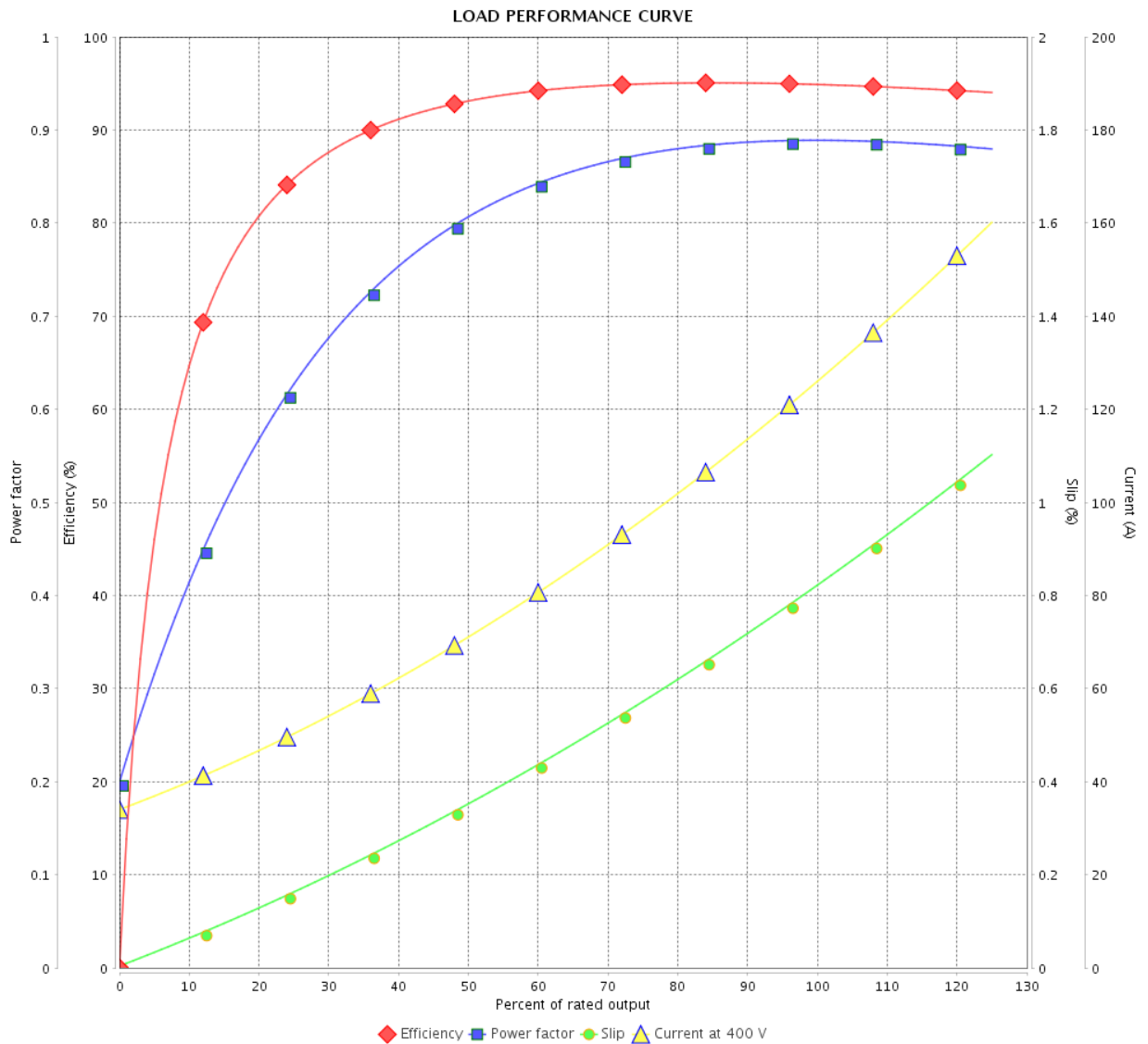


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Performance : 400 V 50 Hz 2P IE3

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 Locked rotor torque : 210 %
 Breakdown torque : 260 %
 Rated speed : 2975 rpm

Moment of inertia (J) : 31.2 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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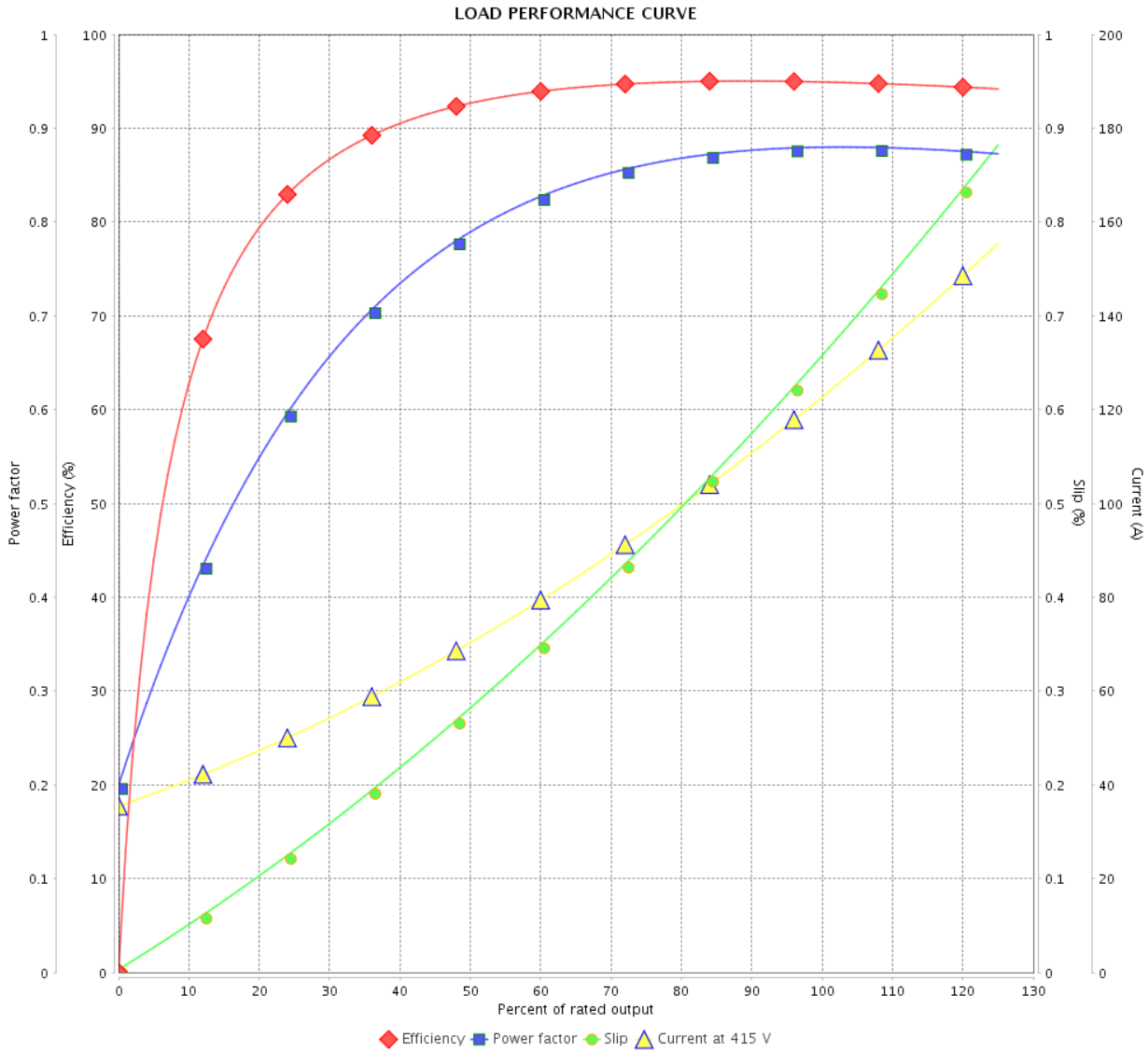


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Rated speed	: 2980 rpm	Design	: B

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THERMAL LIMIT CURVE



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Heating constant

Cooling constant

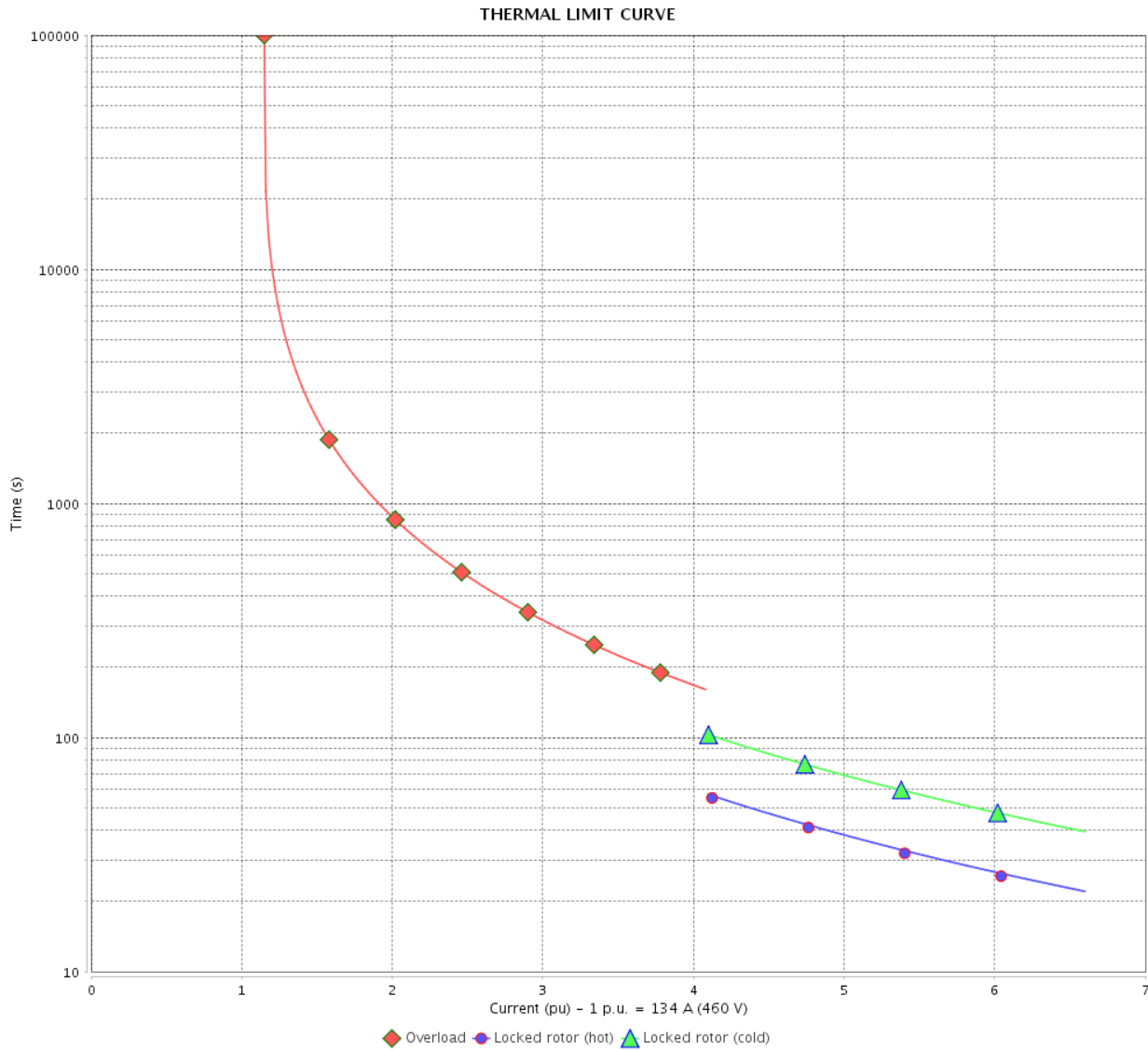
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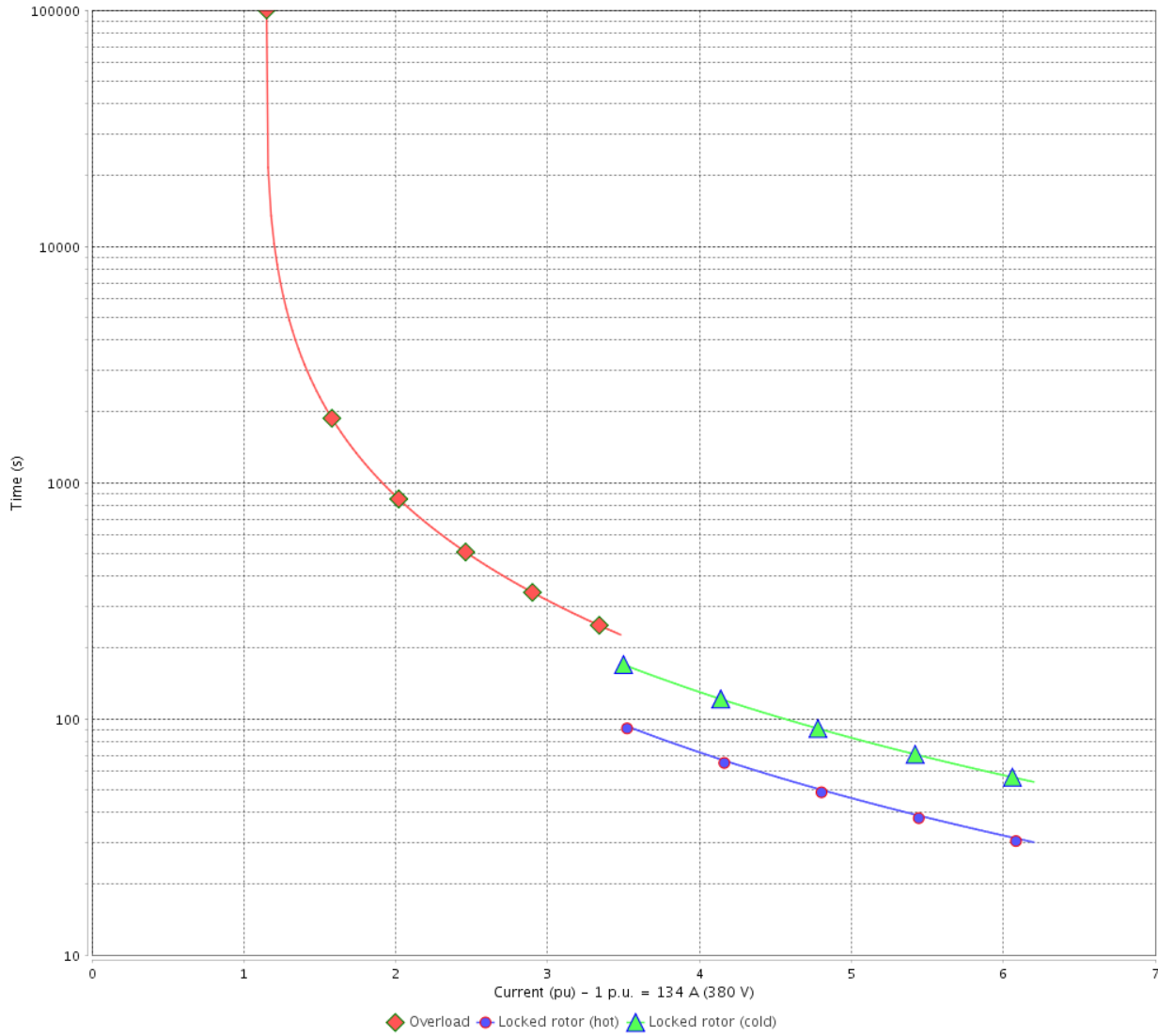
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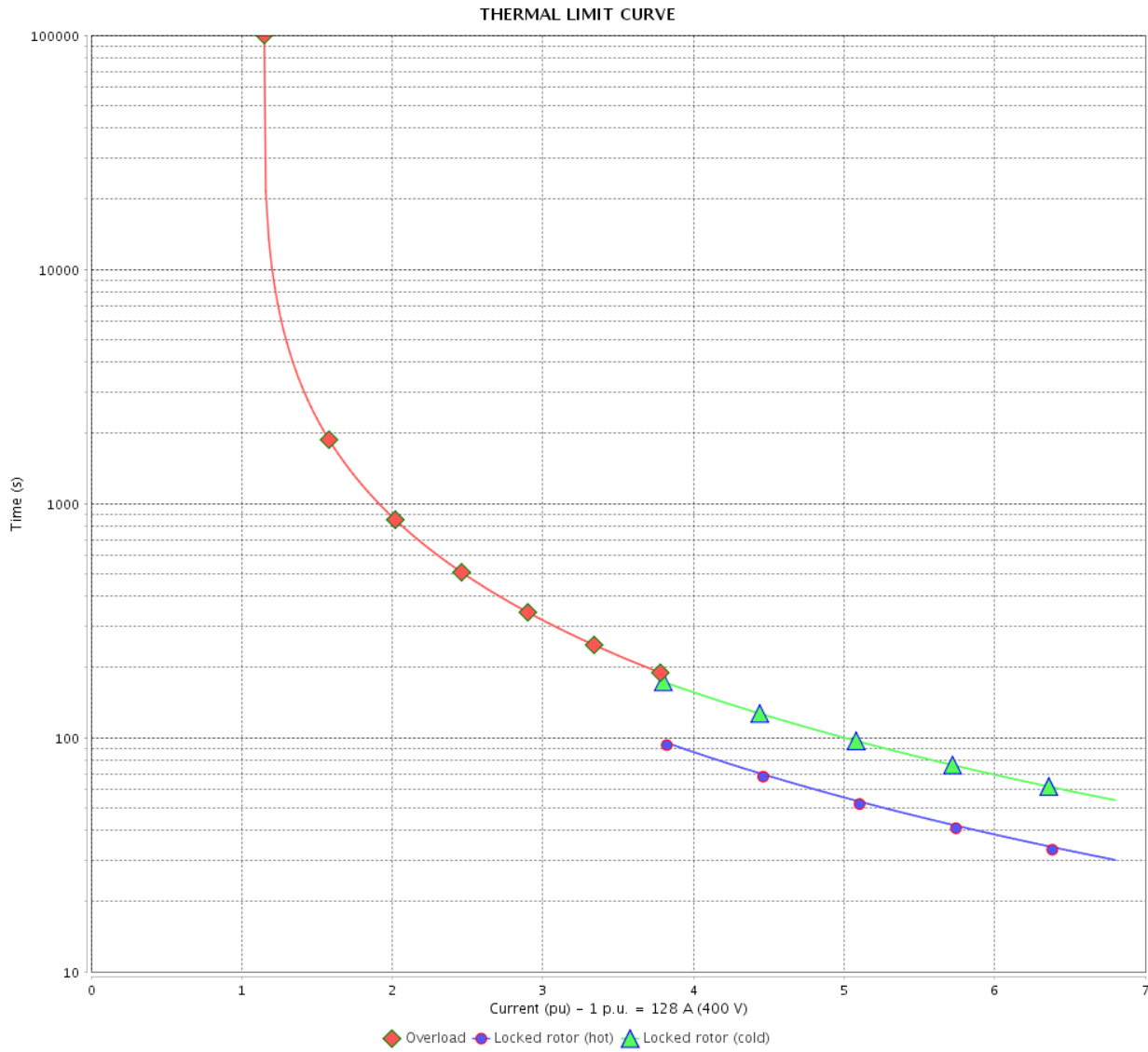
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Rated current : 125 A
LRC : 7.4
Rated torque : 176 ft.lb
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Breakdown torque : 290 %
Rated speed : 2980 rpm

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Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
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Cooling constant

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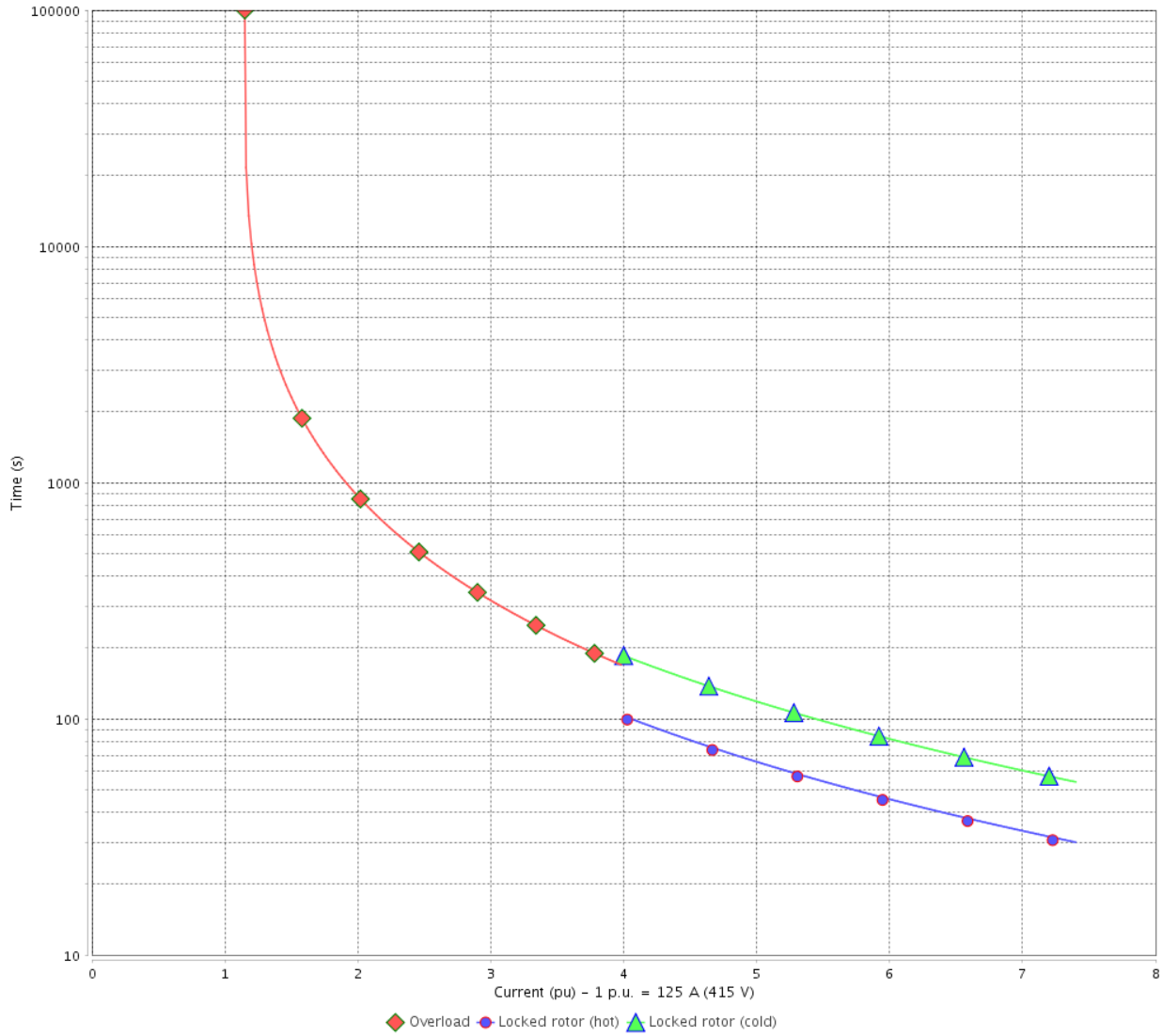
THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____

THERMAL LIMIT CURVE



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

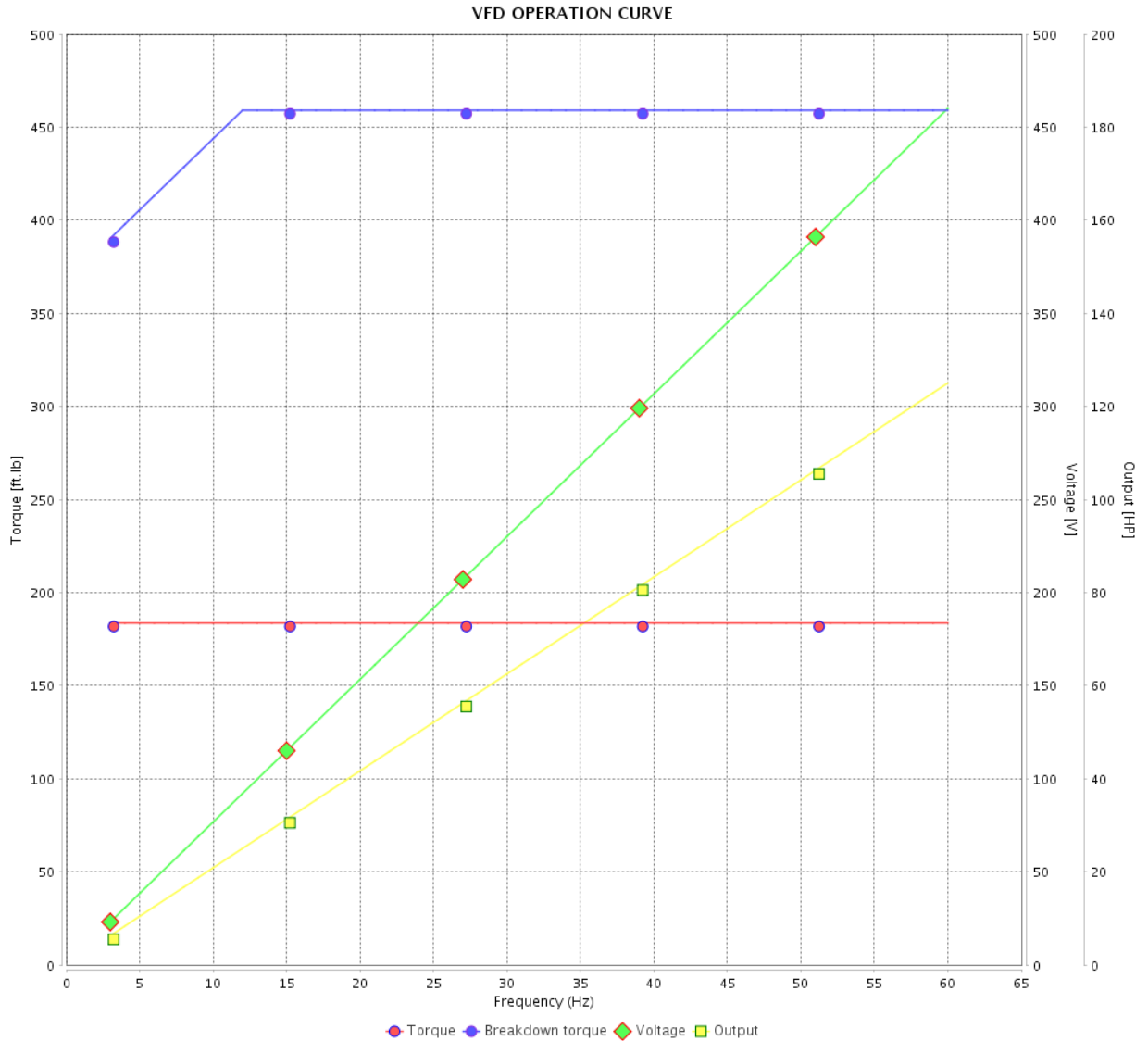


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Performance : 460 V 60 Hz 2P

Rated current : 134 A
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 Rated torque : 184 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 250 %
 Rated speed : 3575 rpm

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

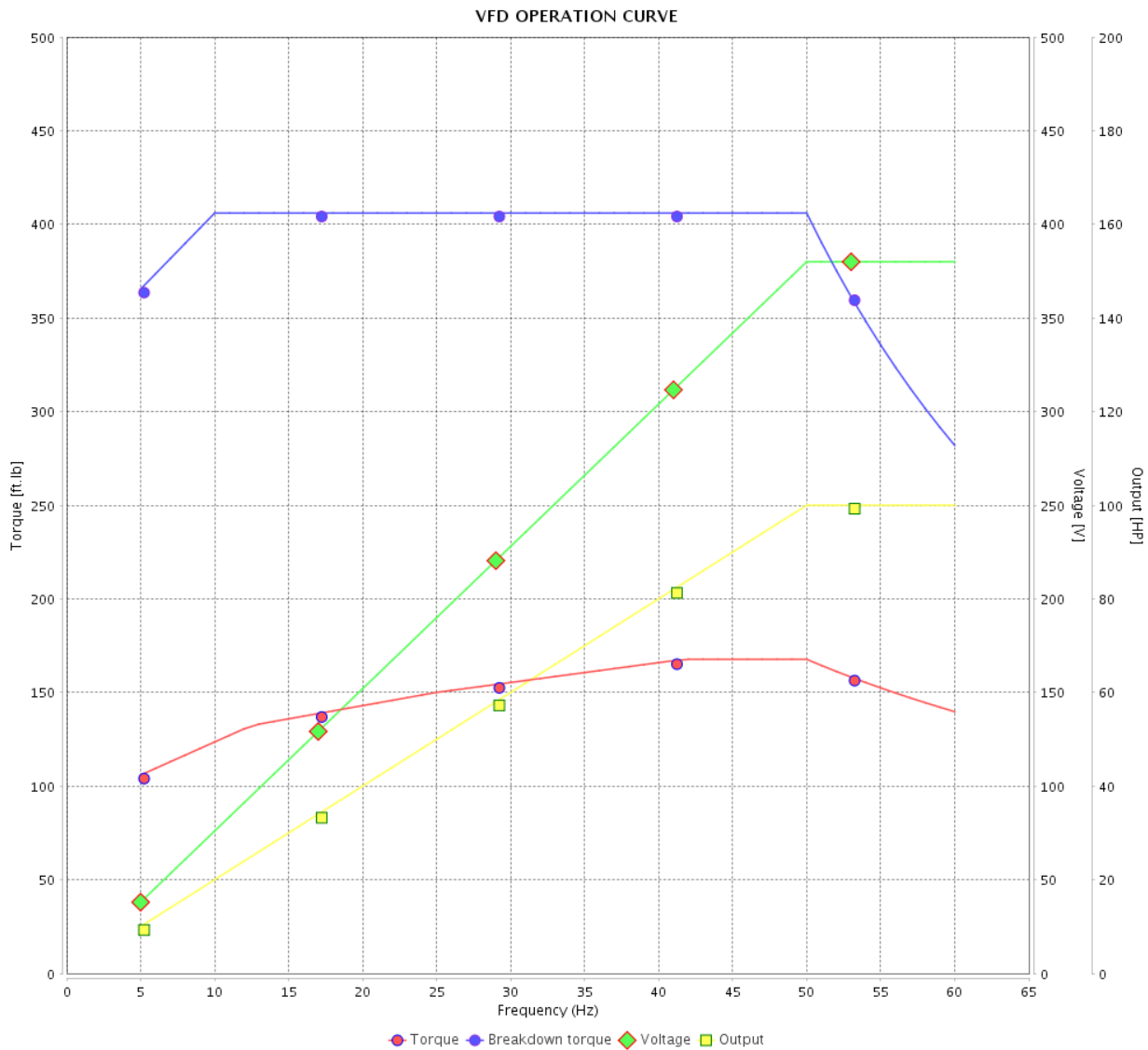


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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

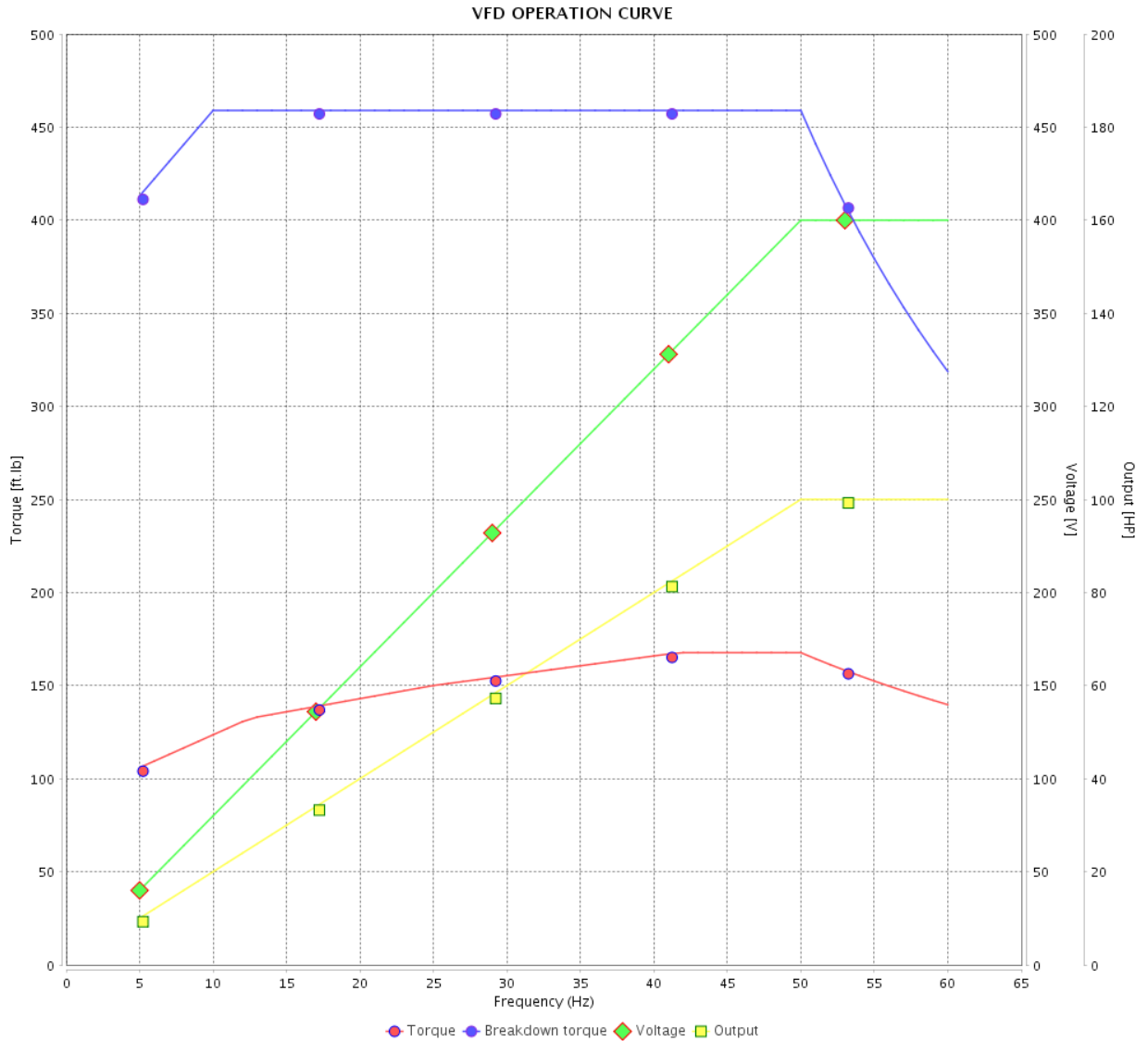


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Performance : 400 V 50 Hz 2P IE3

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VFD OPERATION CURVE

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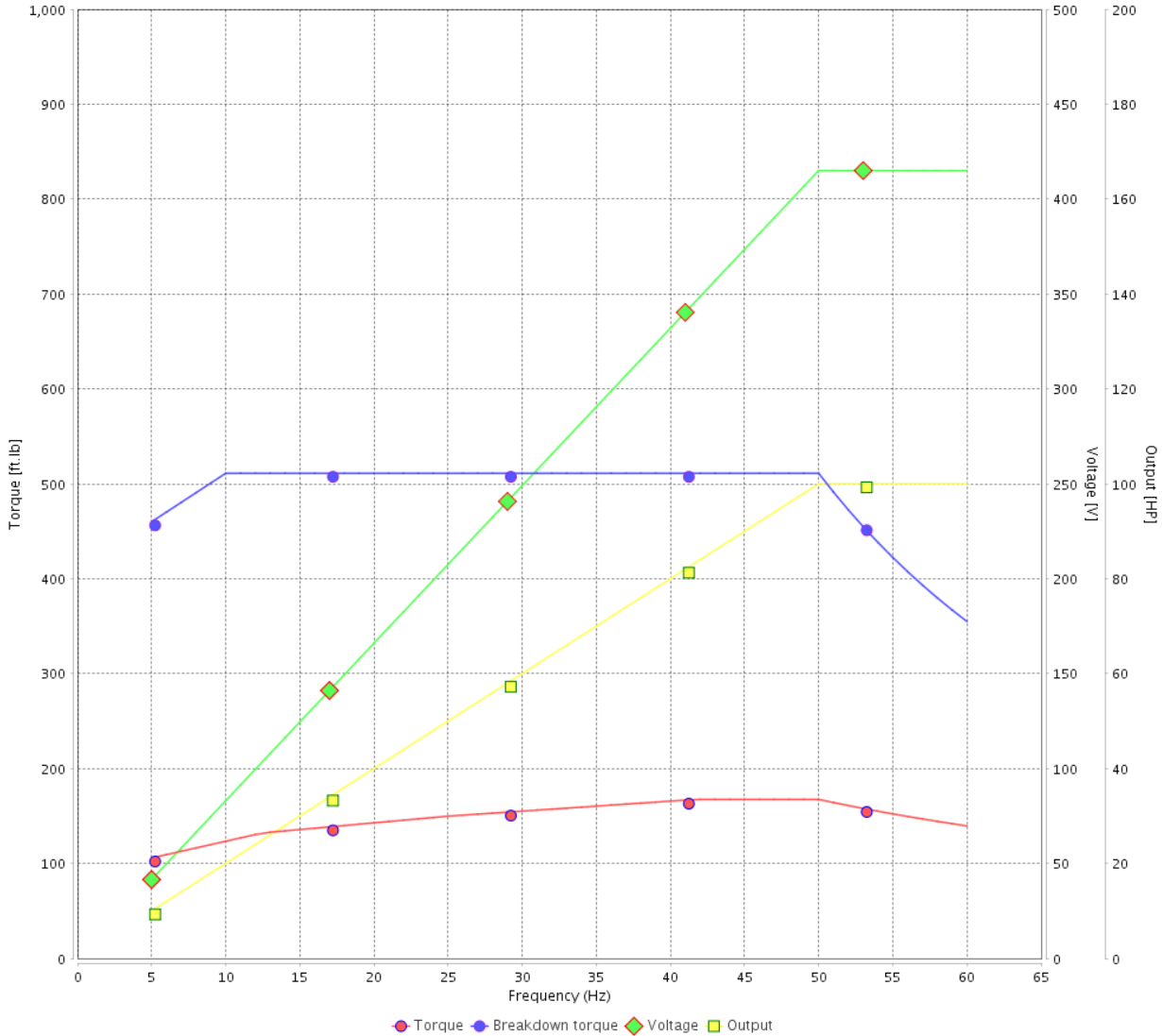
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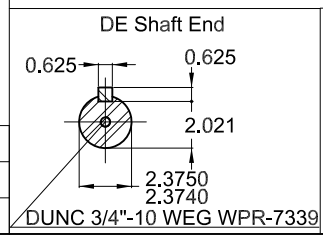
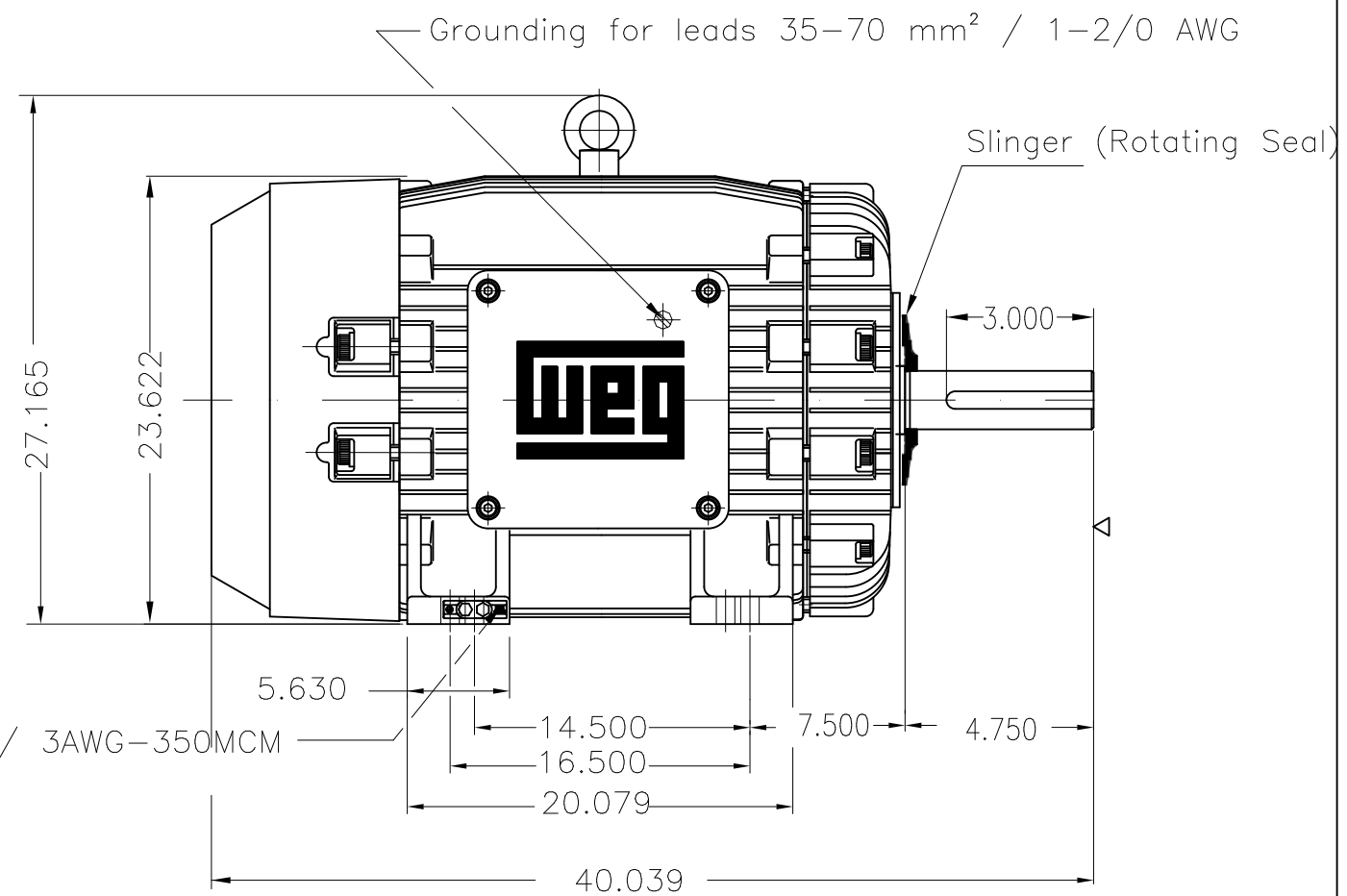
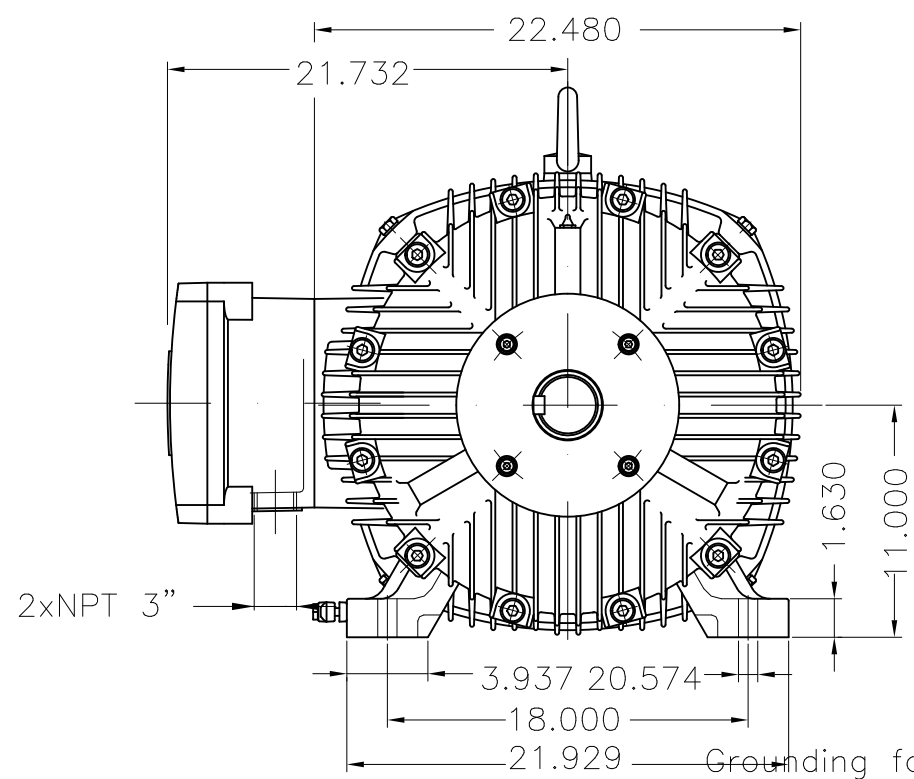


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Color RAL 5009
 Painting plan 202P
 Mounting B3R(D)

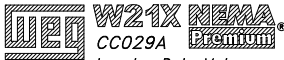
125 HP 02 Poles 60 Hz A

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

PREVIEW

WDD

SHEET 1 / 1



W21X NEMA
CC029A 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 12536XT3G444TS
 MADE IN BRAZIL
 11506320

PH 3	FR 444/5TS	HP(kW) 125(90)	Hz 60
V 460	A 134	RPM 3575	
NEMA NOM. EFF. 95.0%		INS CL F Δ T 80 K	IP55
PF 0.89	DUTY CONT.	CODE G	
ENCL. TEFC	SF 1.15	SFA 154	
AMB 40°C	DES B		
AMB 55°C SF1.0	-bearings lub interval reduced by a factor of 50%		

PART-WINDING						WYE-DELTA					
START			RUN			START			RUN		
○T12	○T10	○T11	○T12	○T10	○T11	○T12	○T10	○T11	○T12	○T10	○T11
○T7	○T8	○T9	○T7	○T8	○T9	○T6	○T4	○T5	○T6	○T4	○T5
○T6	○T4	○T5	○T6	○T4	○T5	○T7	○T8	○T9	○T7	○T8	○T9
○T1	○T2	○T3	○T1	○T2	○T3	○T1	○T2	○T3	○T1	○T2	○T3
L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3

→ 6314-C3(27g) MOBIL POLYREX EM
 → 6314-C3(27g) 3604 h

ALT 1000 m.a.s.l 2039 Lbs