

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	12408375		
		Catalog # :	10036XT3G405TS		
Frame	: 404/5TS	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	: 1186 lb		
Protection degree	: IP55	Moment of inertia (J)	: 13.2 sq.ft.lb		
Design	: B				
Output [HP]	100	75	75	75	
Poles	2	2	2	2	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	110	98.3	94.4	91.0	
L. R. Amperes [A]	715	649	699	728	
LRC [A]	6.5x(Code G)	6.6x(Code G)	7.4x(Code H)	8.0x(Code H)	
No load current [A]	25.0	26.0	27.0	28.0	
Rated speed [RPM]	3550	2955	2960	2965	
Slip [%]	1.39	1.50	1.33	1.17	
Rated torque [ft.lb]	148	133	133	133	
Locked rotor torque [%]	250	200	220	240	
Breakdown torque [%]	280	280	310	330	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	37s (cold) 21s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	
Noise level ²	85.0 dB(A)	82.0 dB(A)	82.0 dB(A)	82.0 dB(A)	
Efficiency (%)	25%	93.4	93.0	93.4	93.4
	50%	93.6	93.6	93.6	93.6
	75%	95.0	94.0	94.5	94.5
	100%	95.0	94.5	94.5	94.5
Power Factor	25%	0.62	0.59	0.57	0.55
	50%	0.85	0.84	0.82	0.80
	75%	0.89	0.88	0.87	0.87
	100%	0.90	0.90	0.89	0.89
Bearing type	: <u>Drive end</u> 6314 C3 <u>Non drive end</u> 6314 C3	Foundation loads			
Sealing	: Oil Seal Lip Seal	Max. traction	: 721 lb		
Lubrication interval	: 3604 h 3604 h	Max. compression	: 1907 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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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



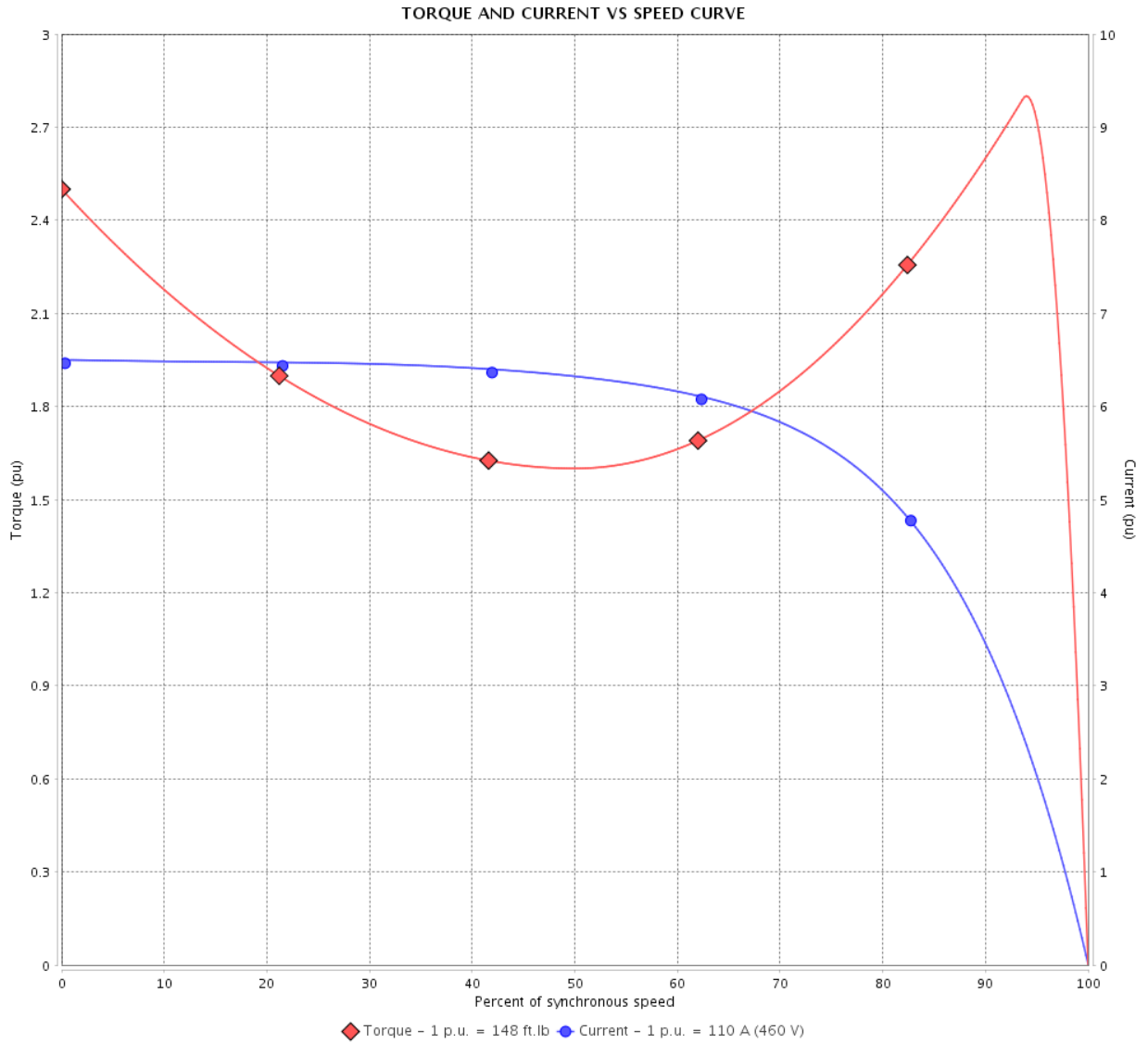
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408375

Catalog # : 10036XT3G405TS



Performance : 460 V 60 Hz 2P

Rated current	: 110 A	Moment of inertia (J)	: 13.2 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 148 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.15
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 3550 rpm	Design	: B

Locked rotor time : 37s (cold) 21s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



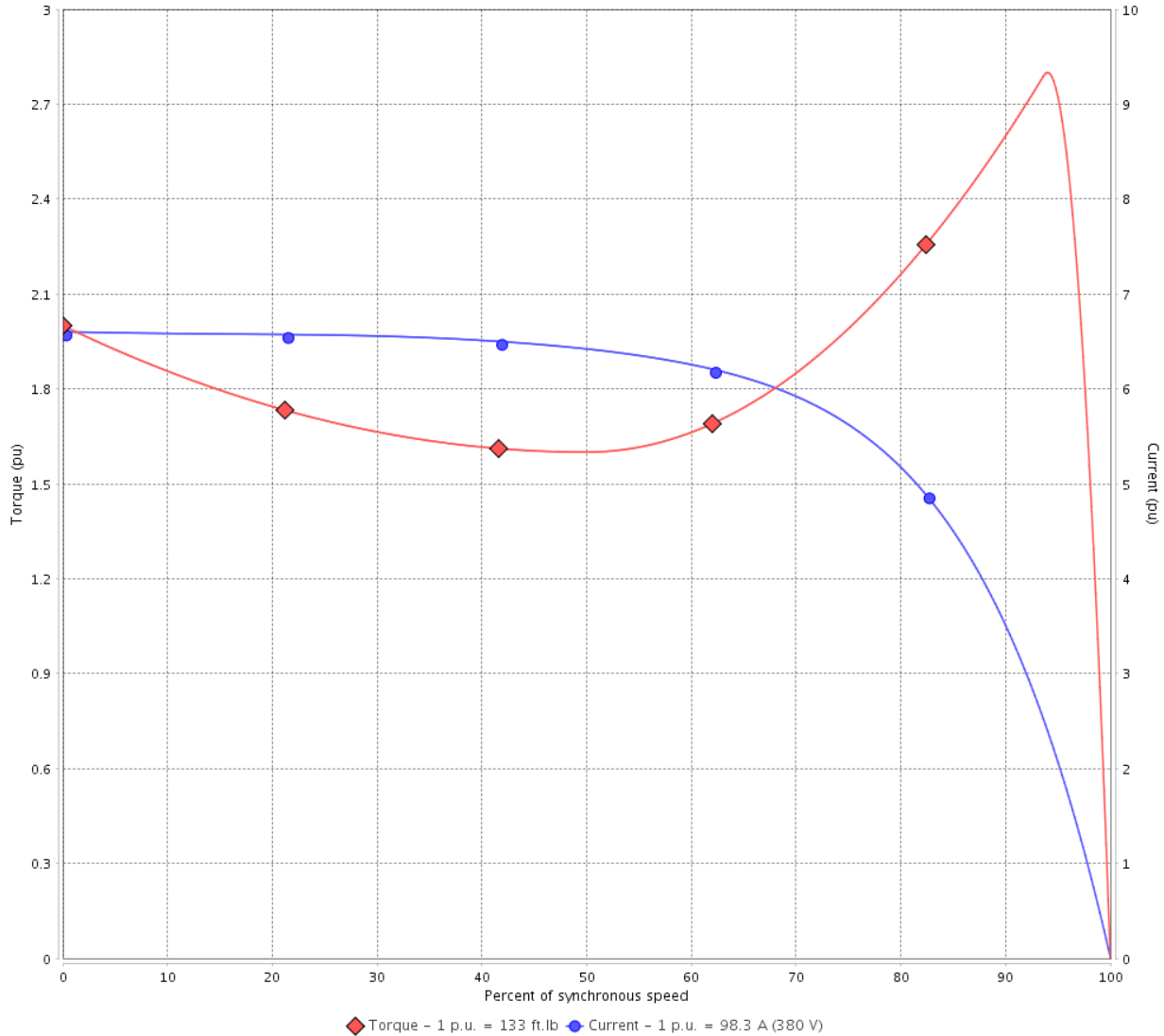
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408375

Catalog # : 10036XT3G405TS

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 2P IE3

Rated current	: 98.3 A	Moment of inertia (J)	: 13.2 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 133 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 2955 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



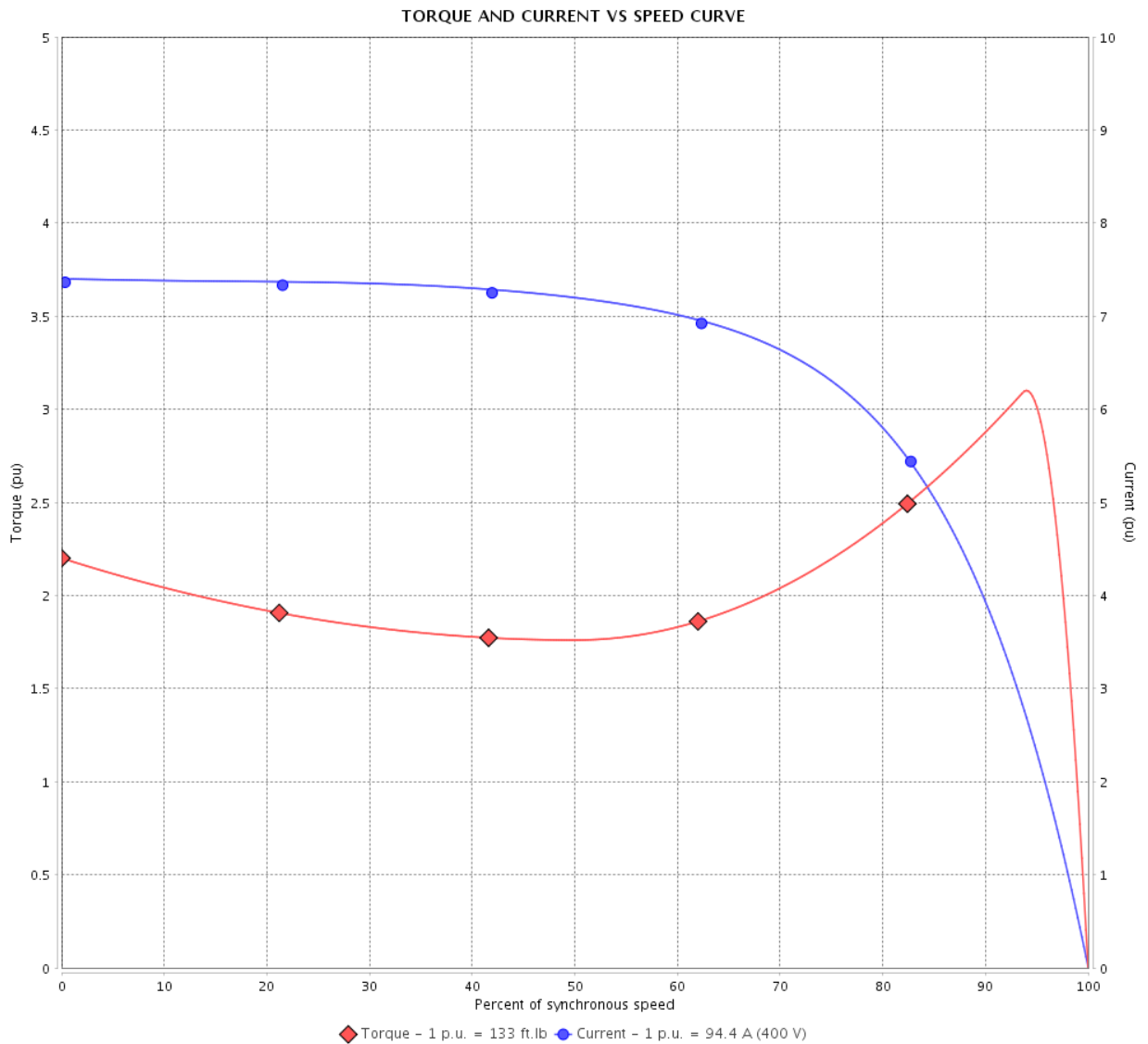
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408375

Catalog # : 10036XT3G405TS



Performance : 400 V 50 Hz 2P IE3

Rated current	: 94.4 A	Moment of inertia (J)	: 13.2 sq.ft.lb
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 133 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 2960 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



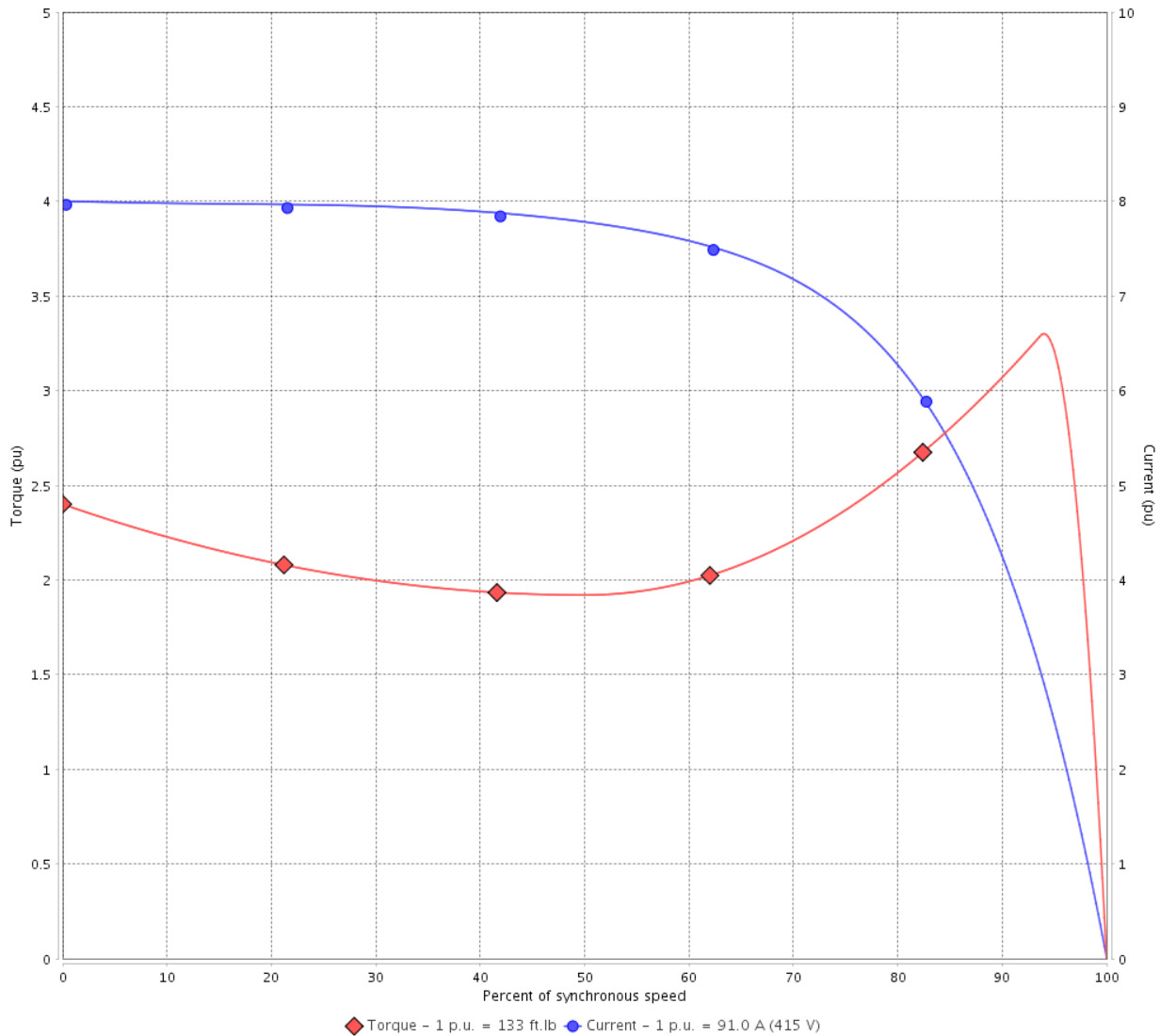
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Catalog # : 10036XT3G405TS

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 2P IE3

Rated current	: 91.0 A	Moment of inertia (J)	: 13.2 sq.ft.lb
LRC	: 8.0	Duty cycle	: Cont.(S1)
Rated torque	: 133 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 2965 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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LOAD PERFORMANCE CURVE

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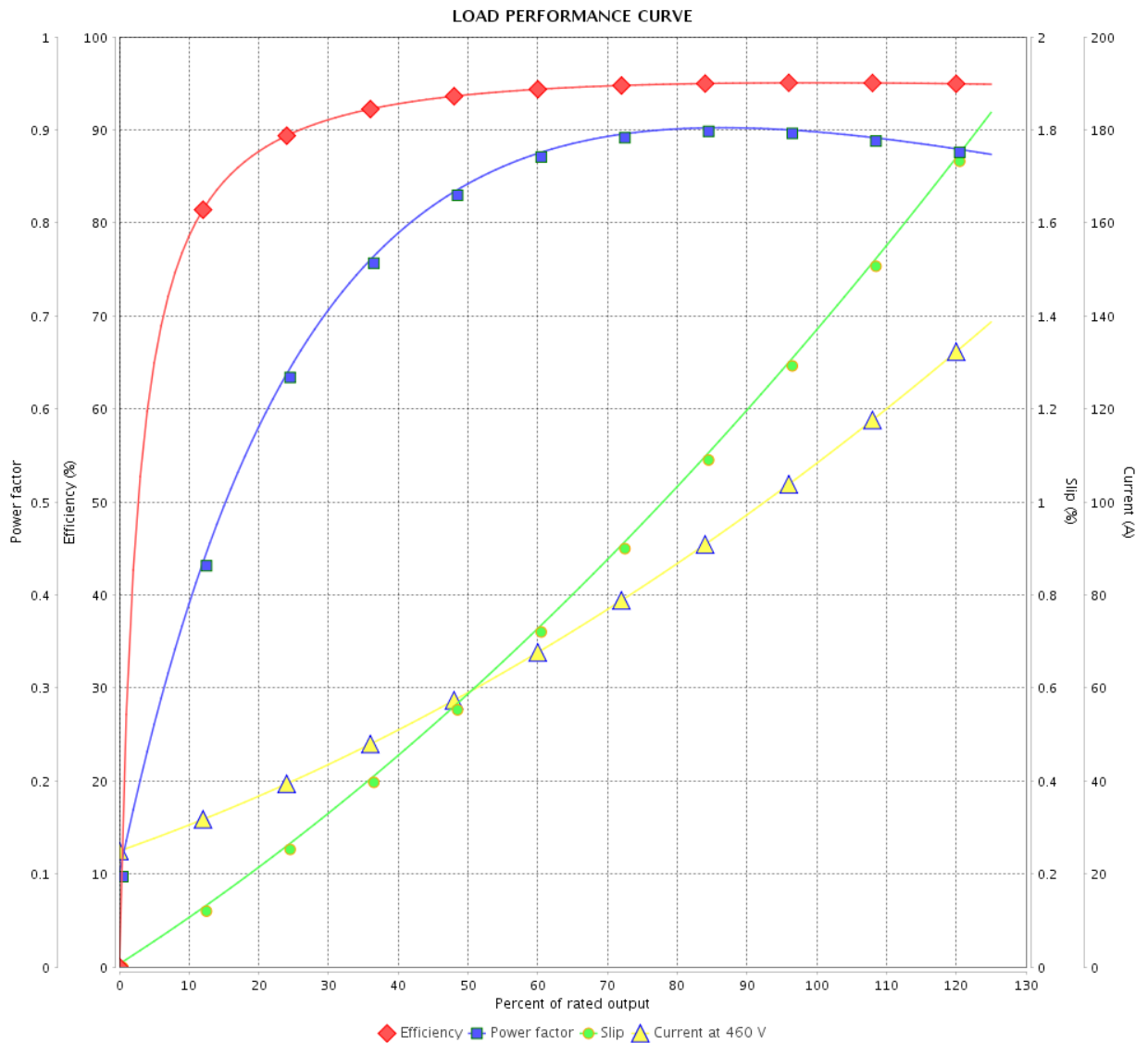


Customer :

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Performance : 460 V 60 Hz 2P

Rated current : 110 A
 LRC : 6.5
 Rated torque : 148 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 280 %
 Rated speed : 3550 rpm

Moment of inertia (J) : 13.2 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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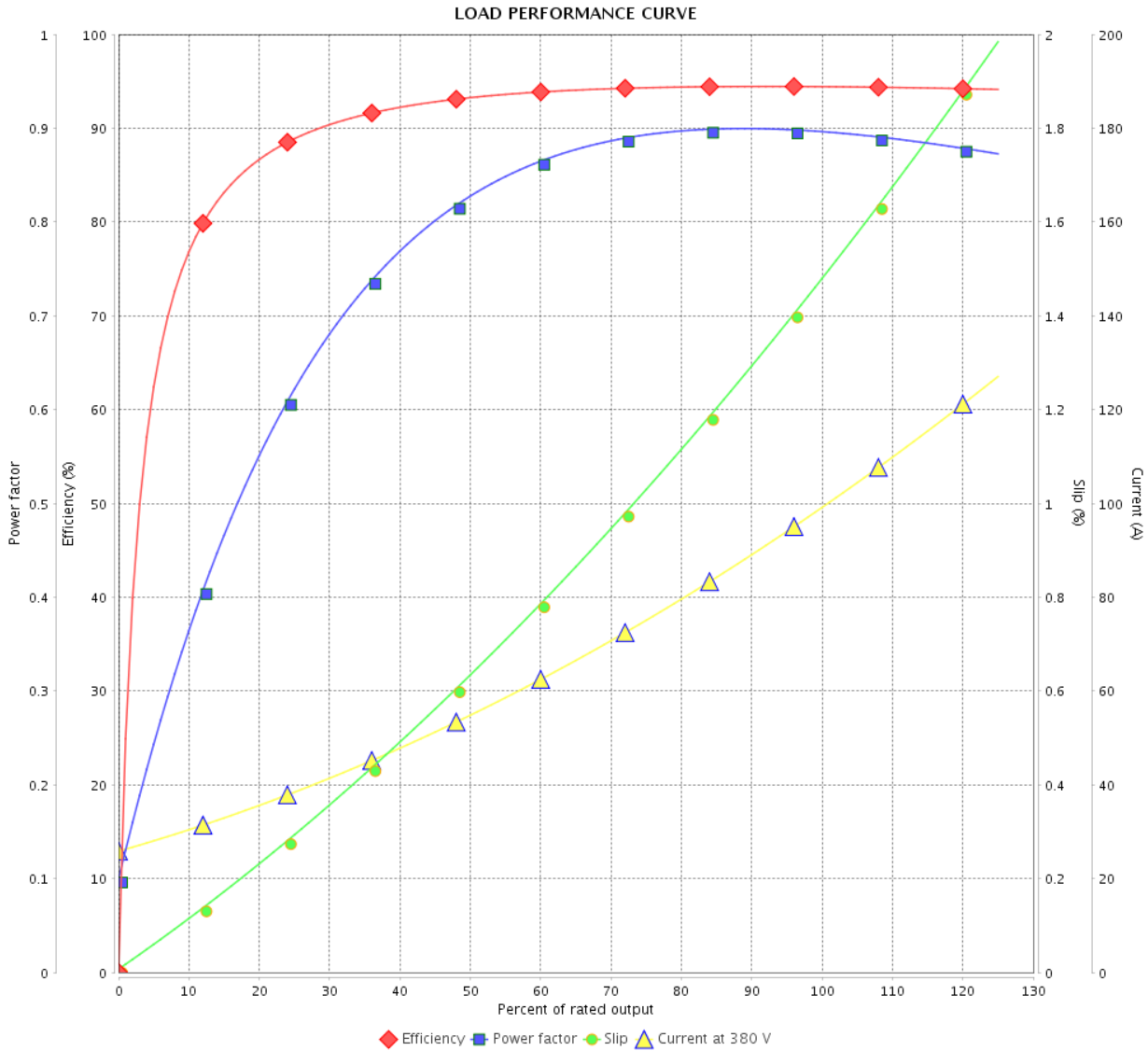


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Performance : 380 V 50 Hz 2P IE3

Rated current : 98.3 A
 LRC : 6.6
 Rated torque : 133 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 280 %
 Rated speed : 2955 rpm

Moment of inertia (J) : 13.2 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

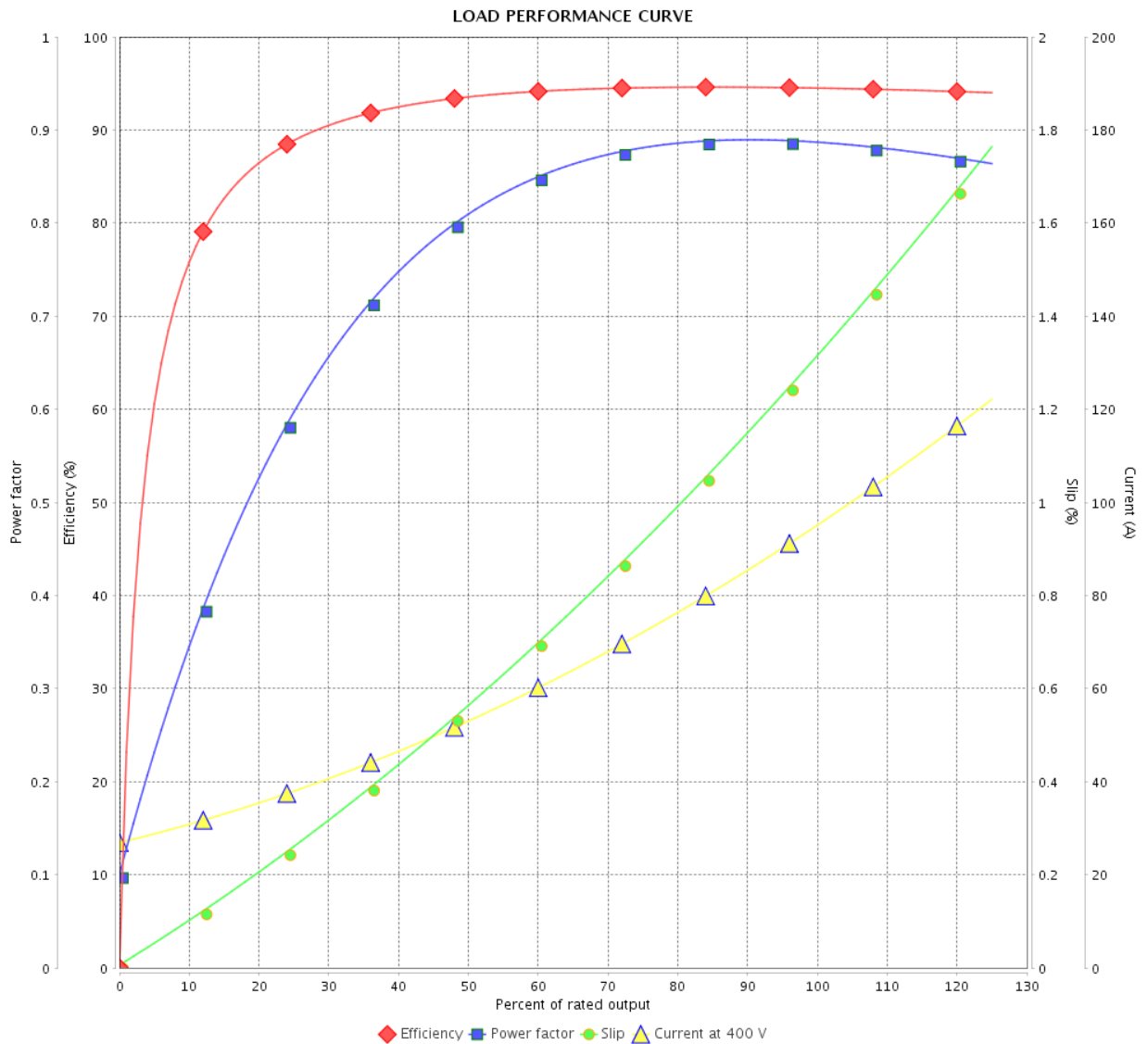


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 Breakdown torque : 310 %
 Rated speed : 2960 rpm

Moment of inertia (J) : 13.2 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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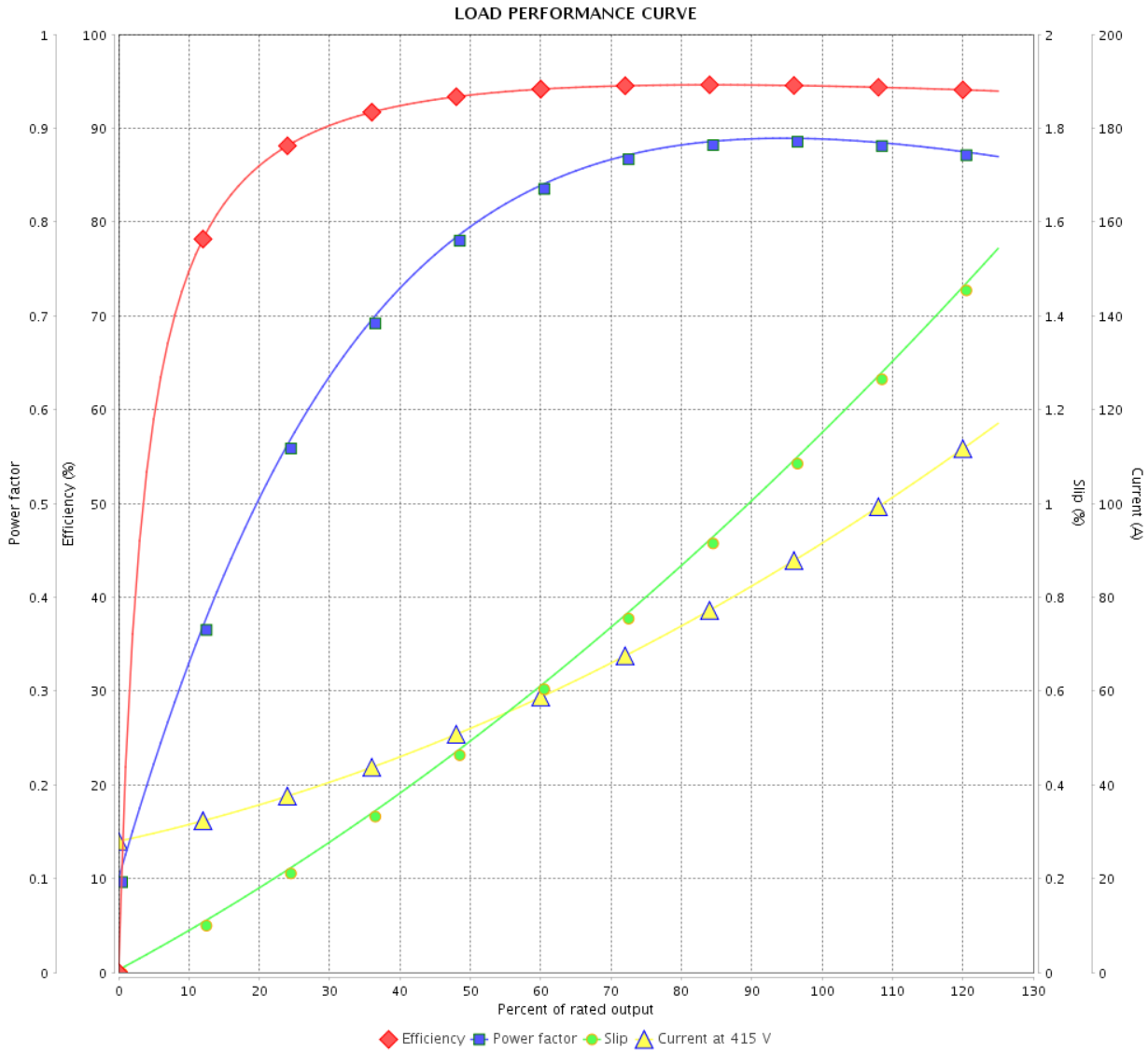


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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE



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Rated torque : 148 ft.lb	Insulation class : F
Locked rotor torque : 250 %	Service factor : 1.15
Breakdown torque : 280 %	Temperature rise : 80 K
Rated speed : 3550 rpm	Design : B

Heating constant

Cooling constant

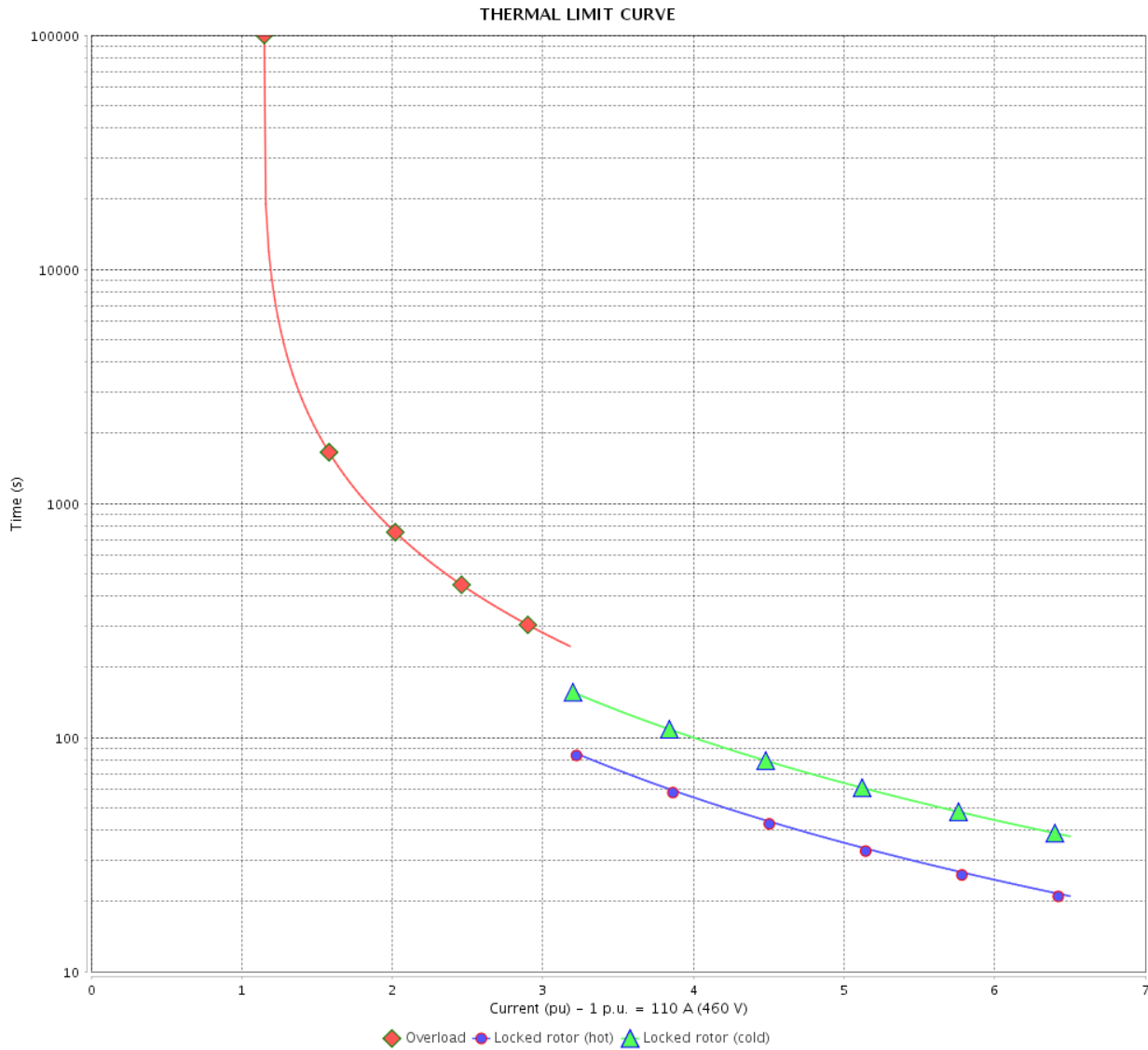
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Heating constant

Cooling constant

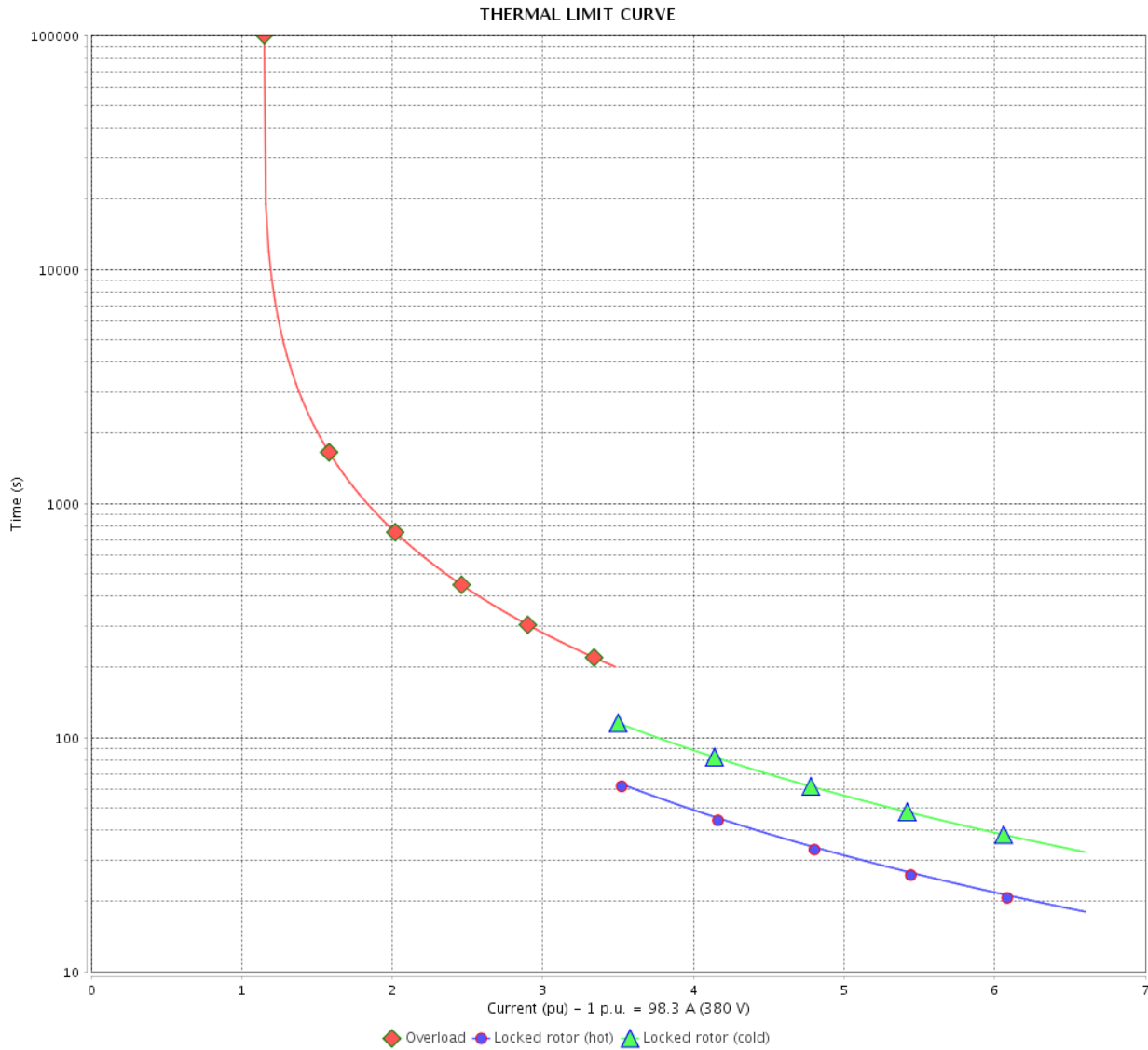
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LRC : 7.4	Duty cycle : Cont.(S1)
Rated torque : 133 ft.lb	Insulation class : F
Locked rotor torque : 220 %	Service factor : 1.00
Breakdown torque : 310 %	Temperature rise : 80 K
Rated speed : 2960 rpm	Design : B

Heating constant

Cooling constant

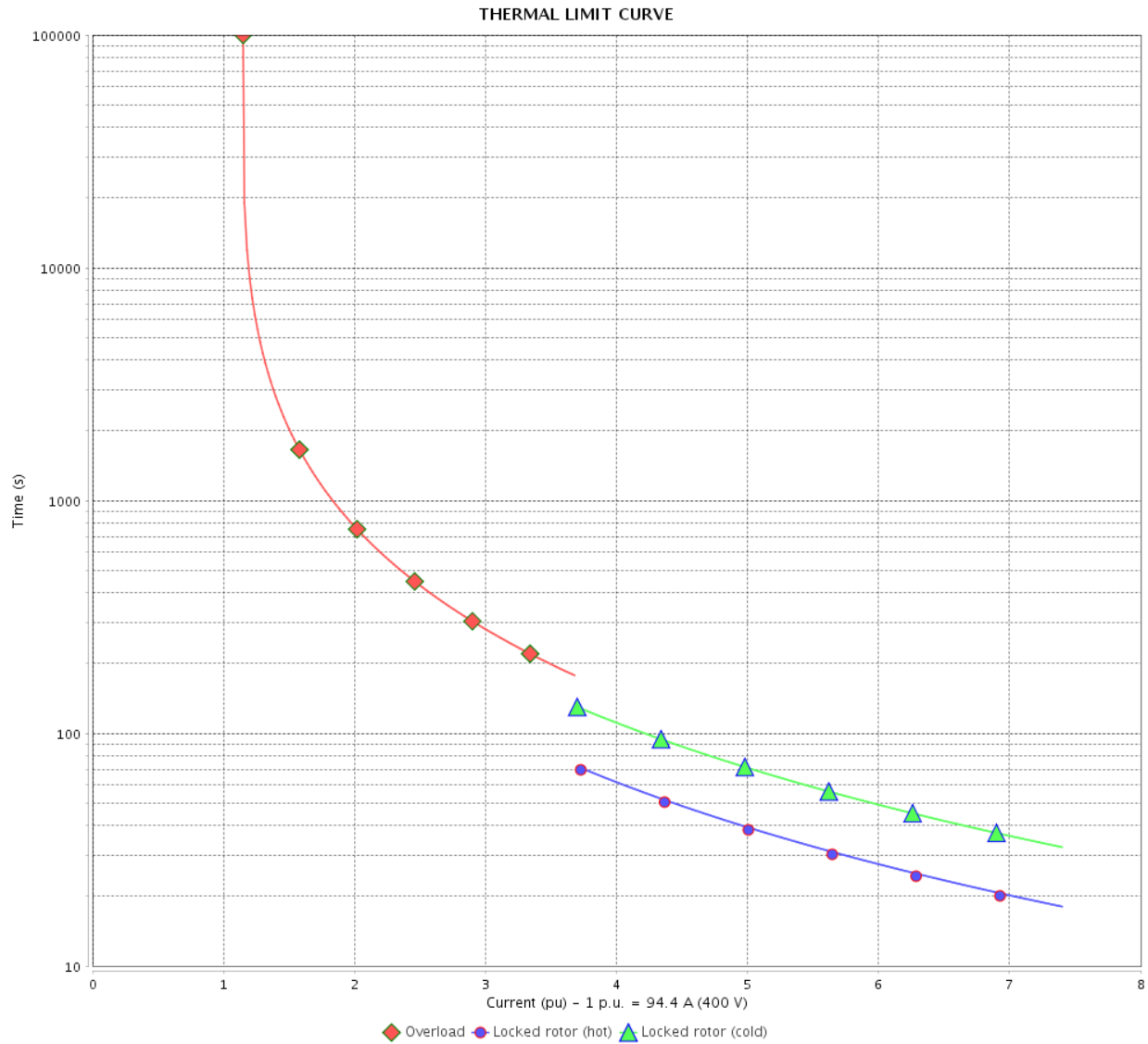
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Product code : 12408375

Catalog # : 10036XT3G405TS

Performance : 415 V 50 Hz 2P IE3

Rated current : 91.0 A
 LRC : 8.0
 Rated torque : 133 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 330 %
 Rated speed : 2965 rpm

Moment of inertia (J) : 13.2 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Heating constant

Cooling constant

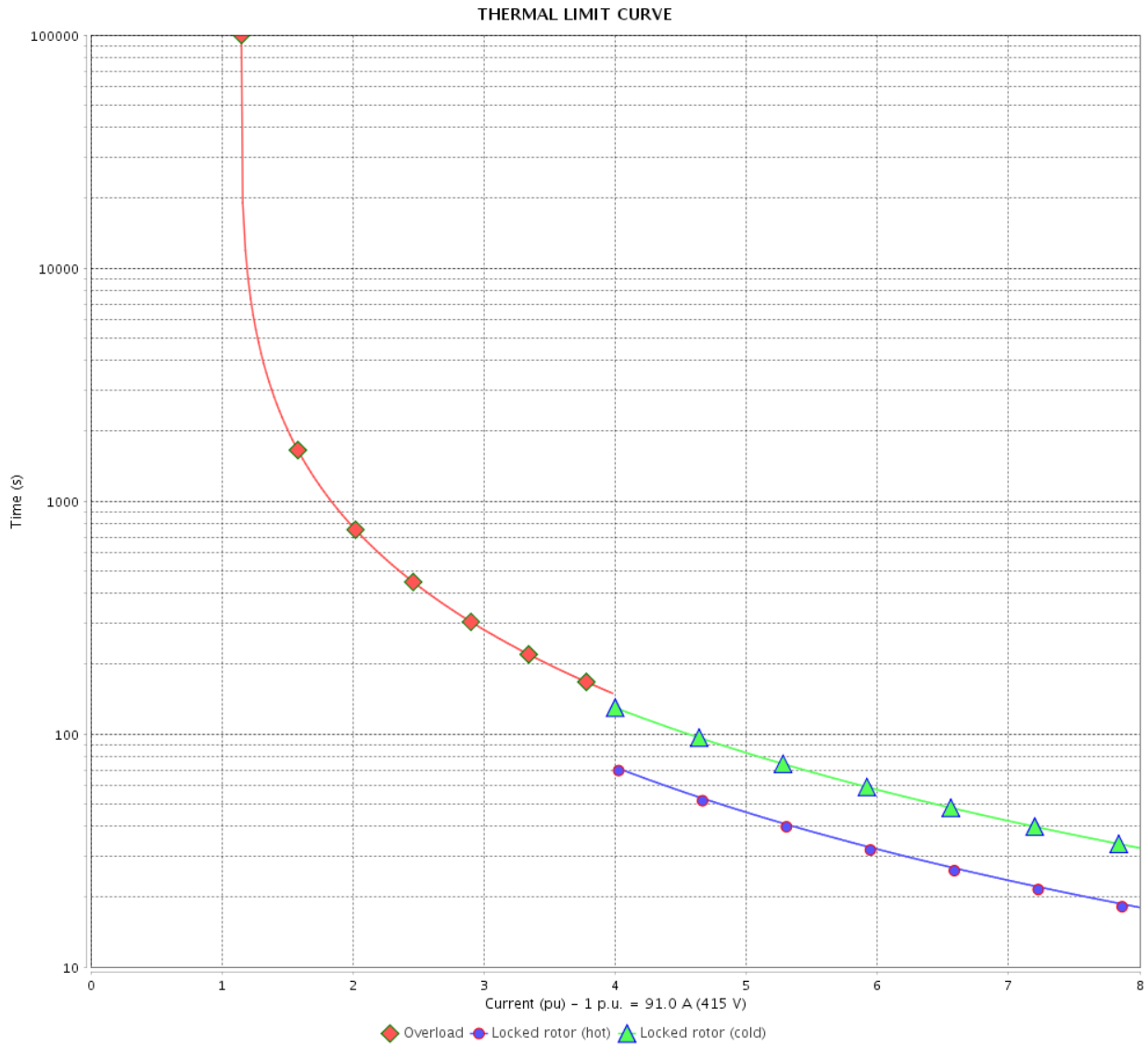
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

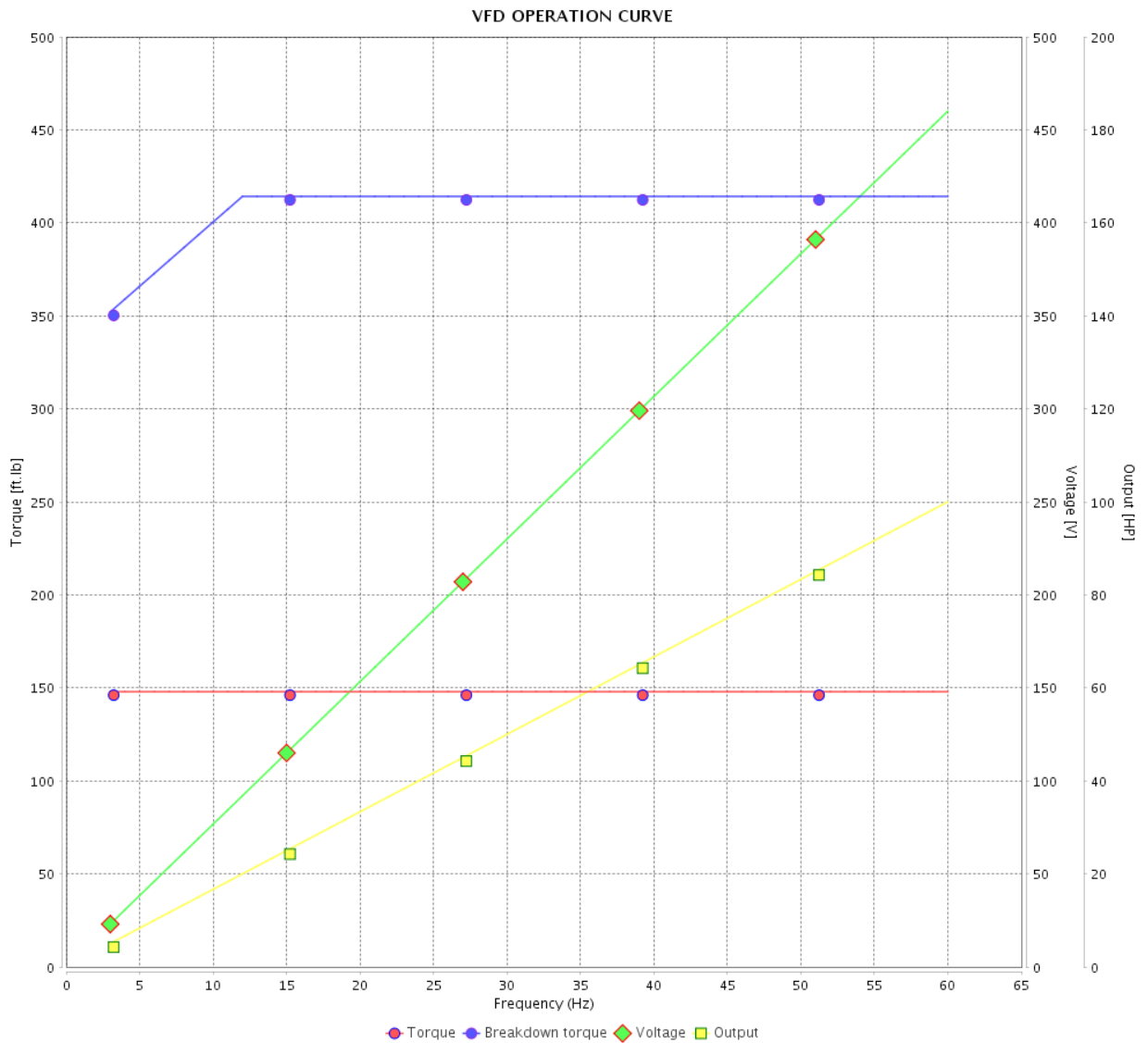


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Performance : 460 V 60 Hz 2P

Rated current : 110 A
 LRC : 6.5
 Rated torque : 148 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 280 %
 Rated speed : 3550 rpm

Moment of inertia (J) : 13.2 sq.ft.lb
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 Insulation class : F
 Service factor : 1.15
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 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



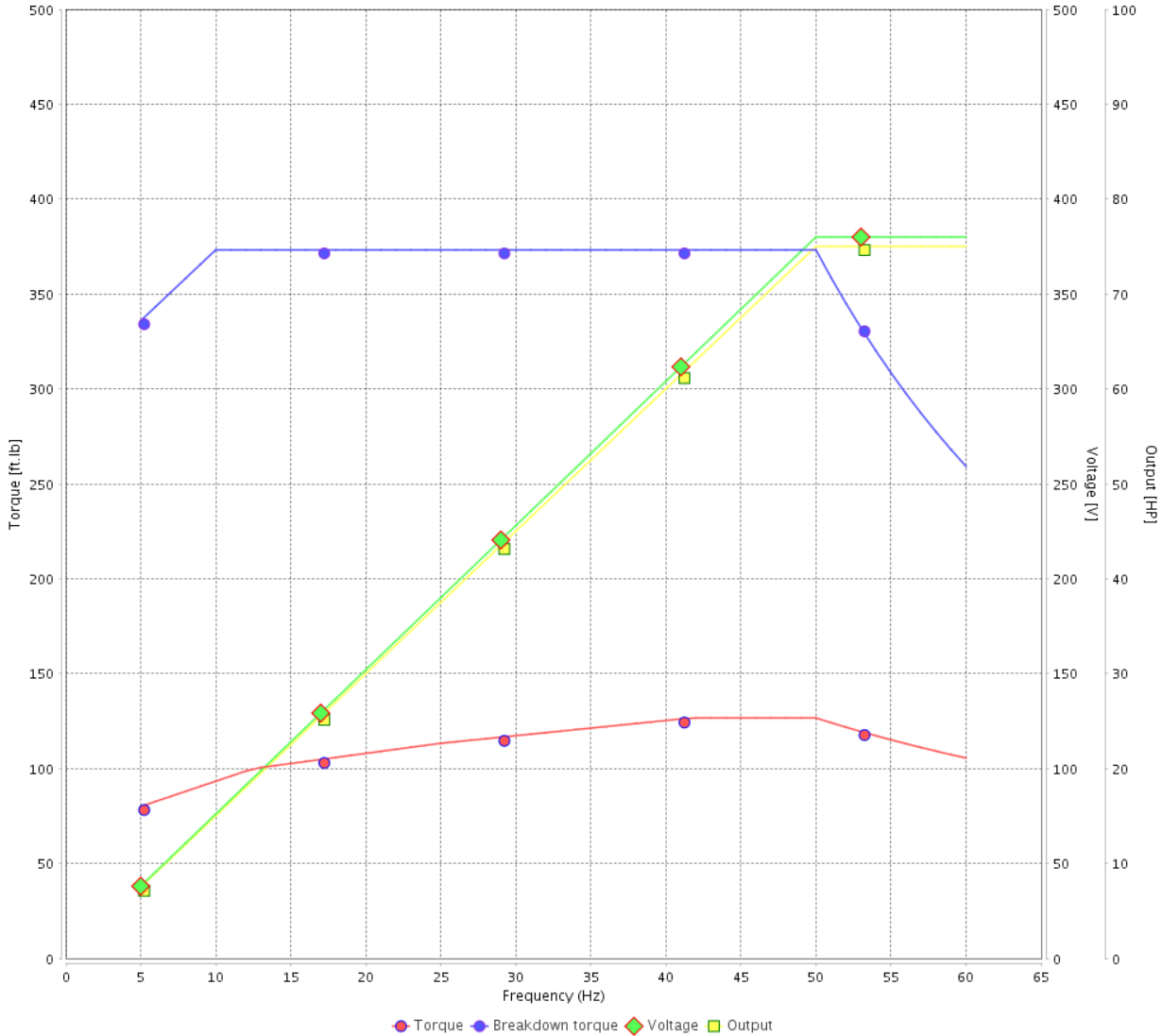
Customer :

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VFD OPERATION CURVE



Performance : 380 V 50 Hz 2P IE3

Rated current	: 98.3 A	Moment of inertia (J)	: 13.2 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 133 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 2955 rpm	Design	: B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

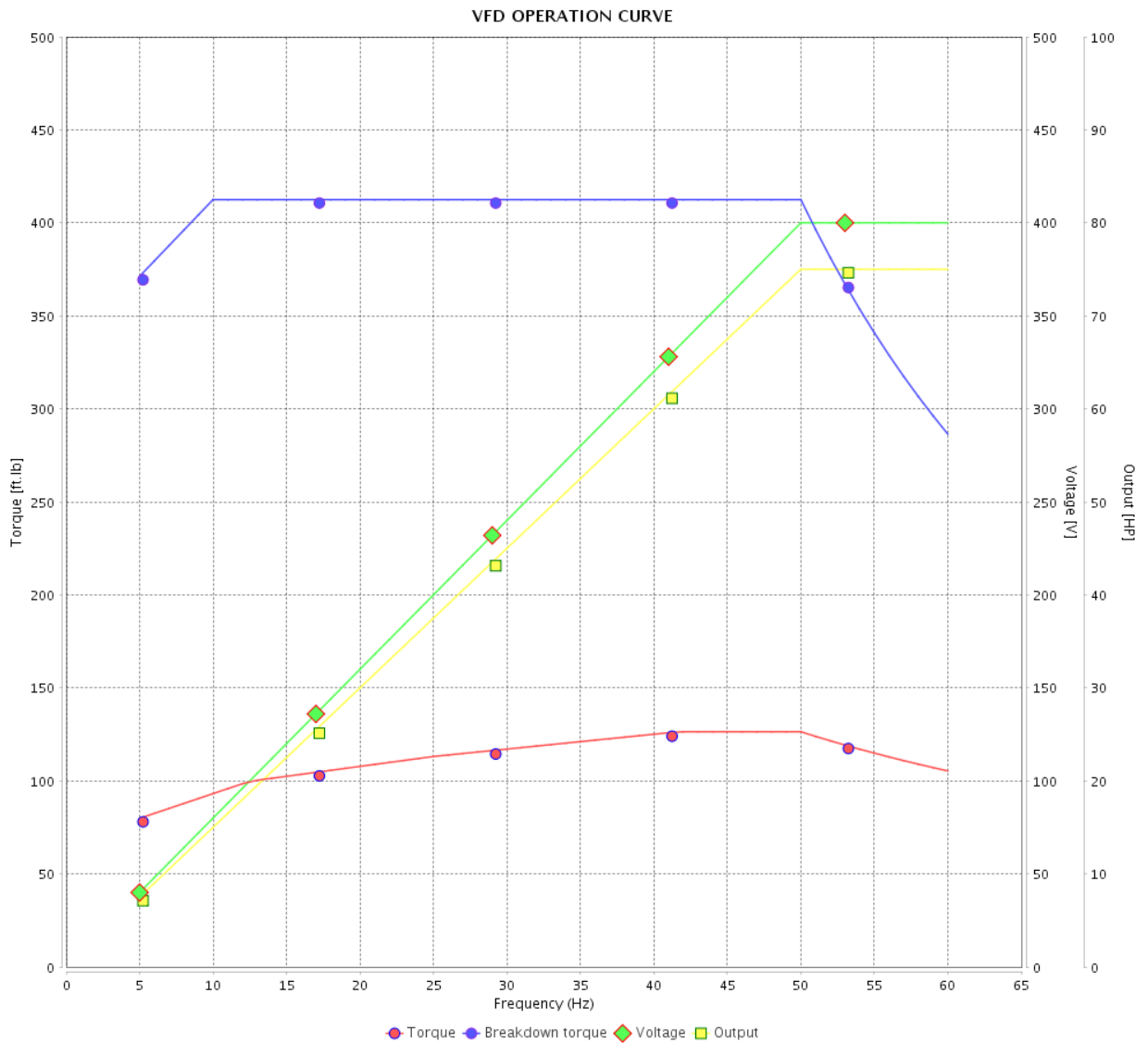


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Performance : 400 V 50 Hz 2P IE3

Rated current : 94.4 A
 LRC : 7.4
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 Locked rotor torque : 220 %
 Breakdown torque : 310 %
 Rated speed : 2960 rpm

Moment of inertia (J) : 13.2 sq.ft.lb
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 Service factor : 1.00
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 Design : B

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VFD OPERATION CURVE

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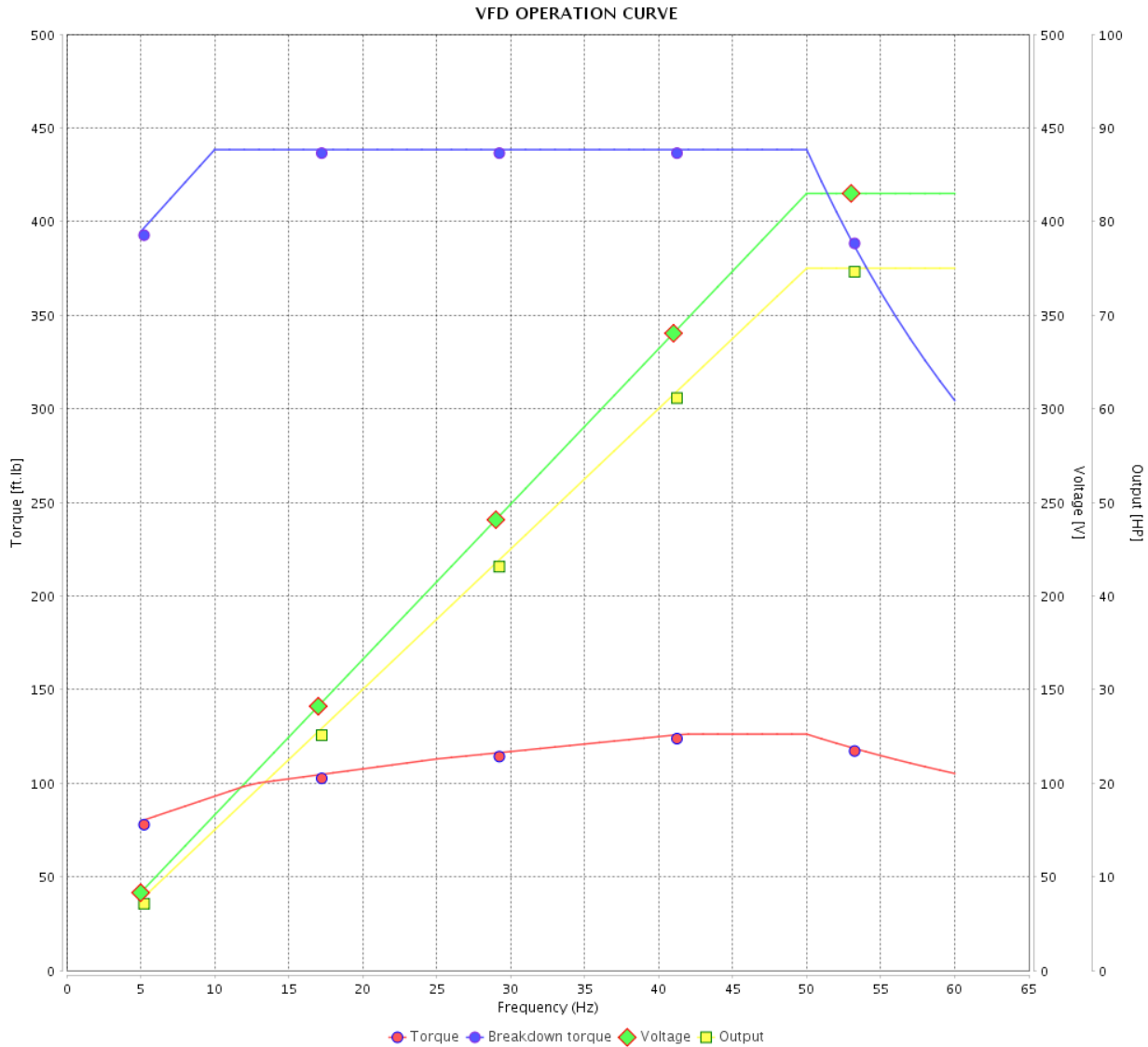


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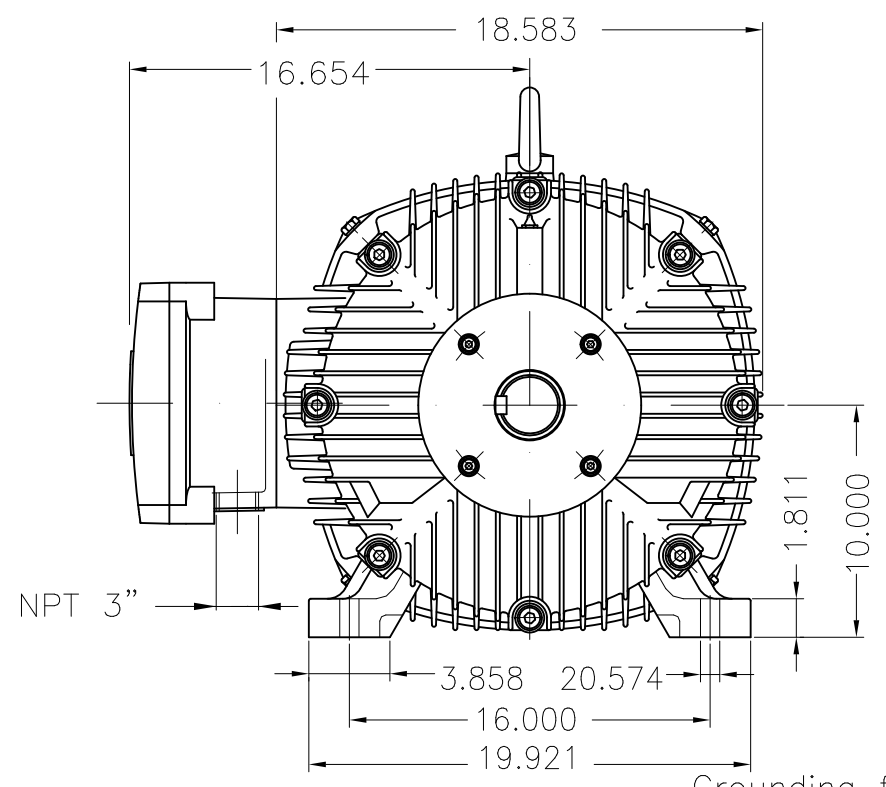


Performance : 415 V 50 Hz 2P IE3

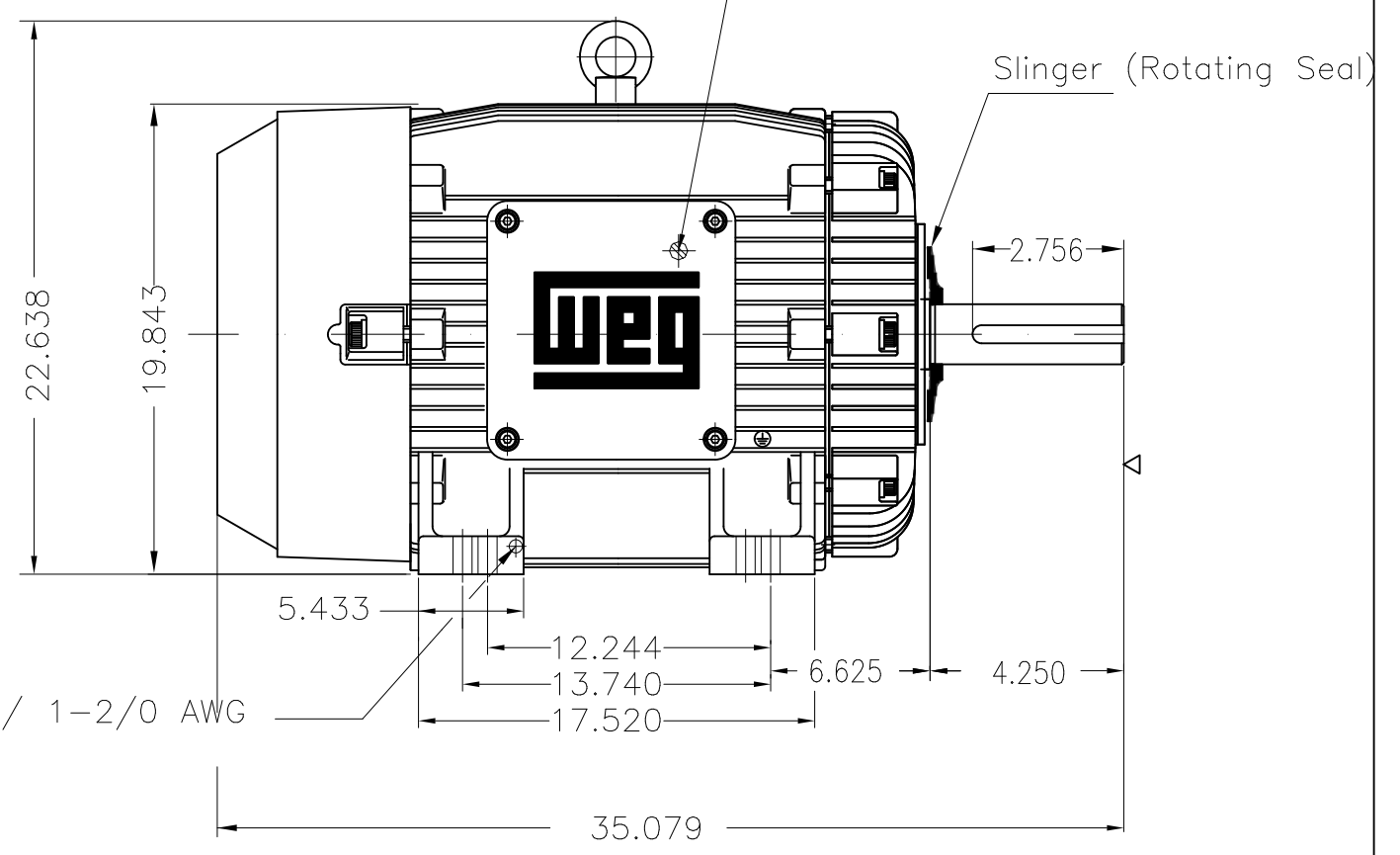
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 Service factor : 1.00
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 Design : B

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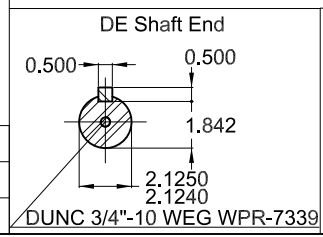
Grounding for leads 25–50 mm² / 3–1 AWG



Grounding for leads 35–70 mm² / 1–2/0 AWG

Slinger (Rotating Seal)

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



100 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 404/STS 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*



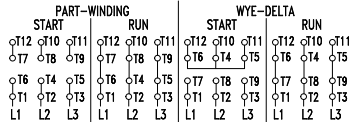
TEMP CODE T3C
 CSA/UL: Class I - Div. 1 - Groups C and D
 CSA: Class II - Div. 1 - Groups F and G
 CSA: Class I - Zone 1 - IIB

EXPLOSION PROOF MOTOR

FOR USE ON VPWM VFD 1000:1VT, 2:1CT, 1.0SF, T3C, AMB 40°C.

MODEL 10036XT3G405TS
 MADE IN BRAZIL
 12408375

PH 3	FR 404/5TS	HP(kW) 100(75)	Hz 60
V 460	A 110	RPM 3550	
NEMA NOM. EFF. 95.0%		INS CL F Δ T 80 K	IP55
PF 0.90	DUTY CONT.		CODE G
ENCL. TEFC	SF 1.15	SFA 126	
AMB 40°C	DES B		
AMB 55°C SF1.0	-bearings lub interval reduced by a factor of 50%		



→ 6314-C3(27g)
 → 6314-C3(27g)

MOBIL POLYREX EM
 3604 h

ALT 1000 m.a.s.l | 1186 Lbs