

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line		: NEMA Premium Efficiency Three-Phase	Product code :	13472772
			Catalog # :	30018ET3G449TC-W22
Frame	: 447/9TC	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	: 2865 lb	
Protection degree	: IP55	Moment of inertia (J)	: 89.6 sq.ft.lb	
Design	: B			
Output [HP]	300	250	250	250
Poles	4	4	4	4
Frequency [Hz]	60	50	50	50
Rated voltage [V]	460	380	400	415
Rated current [A]	330	337	320	311
L. R. Amperes [A]	2145	2056	2144	2239
LRC [A]	6.5x(Code G)	6.1x(Code F)	6.7x(Code G)	7.2x(Code H)
No load current [A]	105	104	111	116
Rated speed [RPM]	1780	1480	1480	1485
Slip [%]	1.11	1.33	1.33	1.00
Rated torque [ft.lb]	885	887	887	884
Locked rotor torque [%]	250	210	240	260
Breakdown torque [%]	250	220	250	270
Service factor	1.15	1.00	1.00	1.00
Temperature rise	80 K	105 K	105 K	105 K
Locked rotor time	28s (cold) 16s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)
Noise level ²	75.0 dB(A)	71.0 dB(A)	71.0 dB(A)	71.0 dB(A)
Efficiency (%)	25%			
	50%	95.8	95.8	95.8
	75%	96.2	95.8	96.2
	100%	96.2	96.0	96.0
Power Factor	25%			
	50%	0.77	0.78	0.75
	75%	0.84	0.84	0.83
	100%	0.87	0.87	0.87
Bearing type	: <u>Drive end</u> 6322 C3 <u>Non drive end</u> 6319 C3	Foundation loads		
Sealing	: WSeal WSeal	Max. traction	: 4931 lb	
Lubrication interval	: 6000 h 8000 h	Max. compression	: 7796 lb	
Lubricant amount	: 60 g 45 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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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



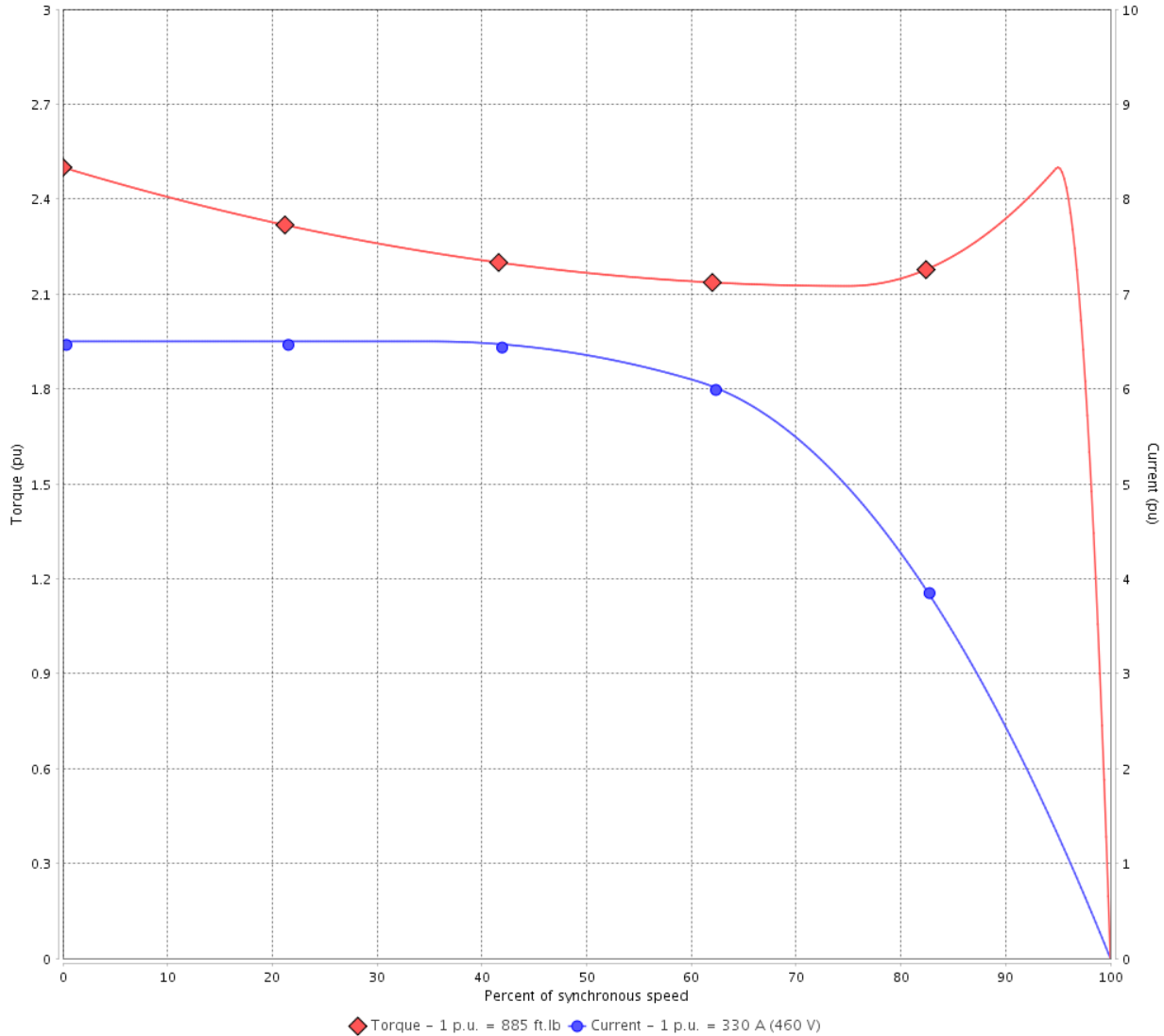
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472772

Catalog # : 30018ET3G449TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 330 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 885 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1780 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



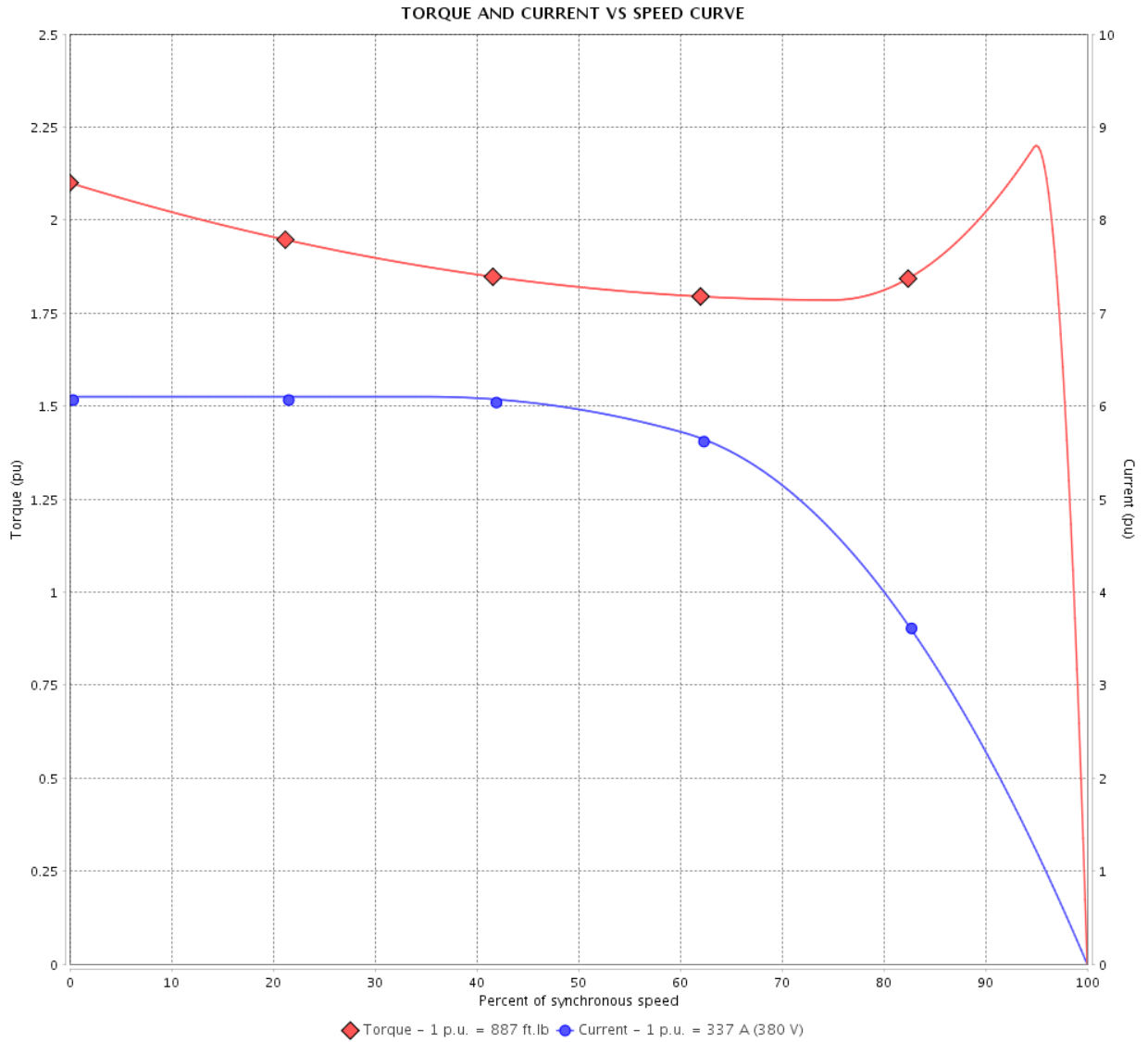
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472772

Catalog # : 30018ET3G449TC-W22



Performance : 380 V 50 Hz 4P IE3

Rated current	: 337 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 887 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 105 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



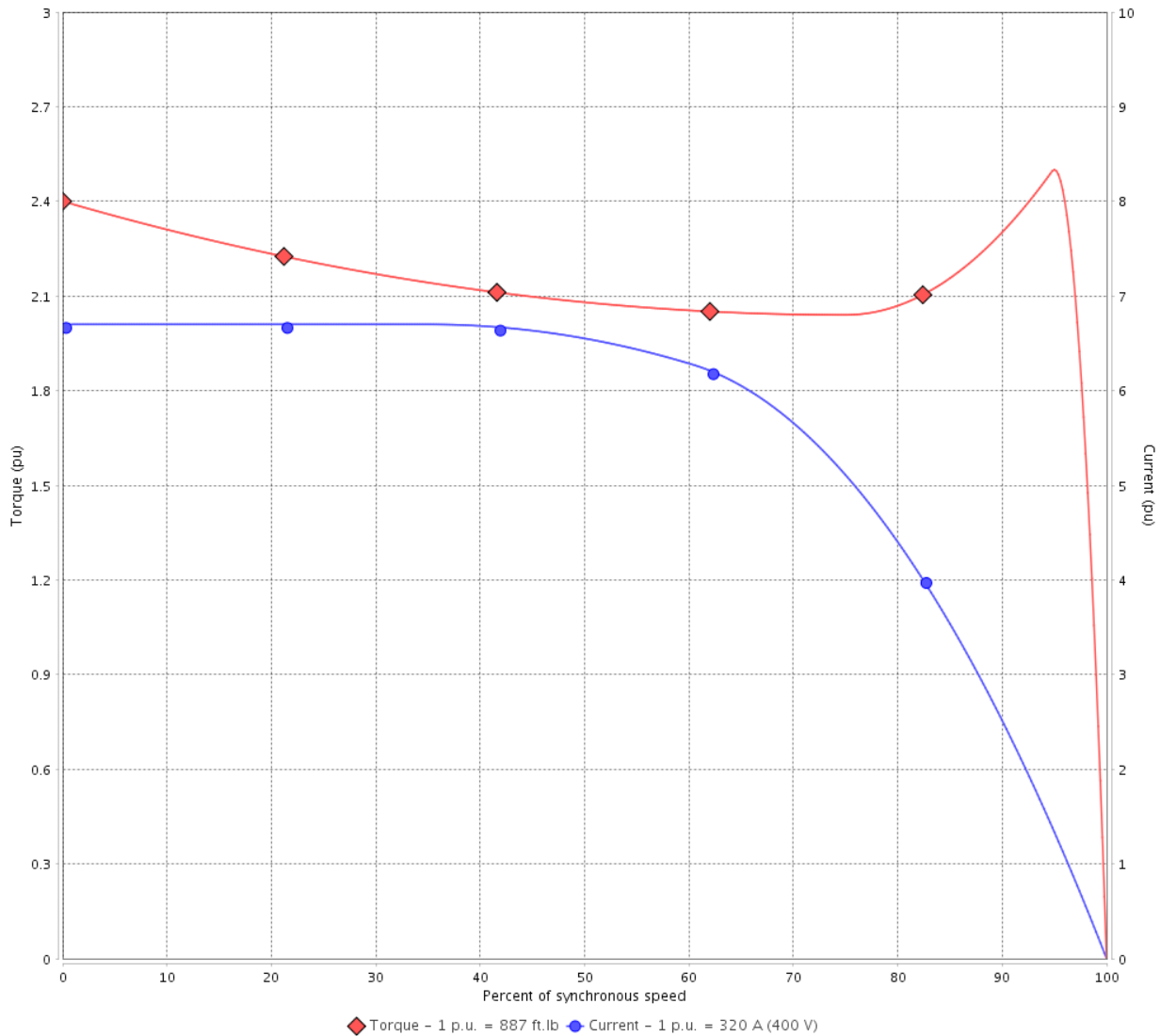
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472772

Catalog # : 30018ET3G449TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 320 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 887 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 105 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



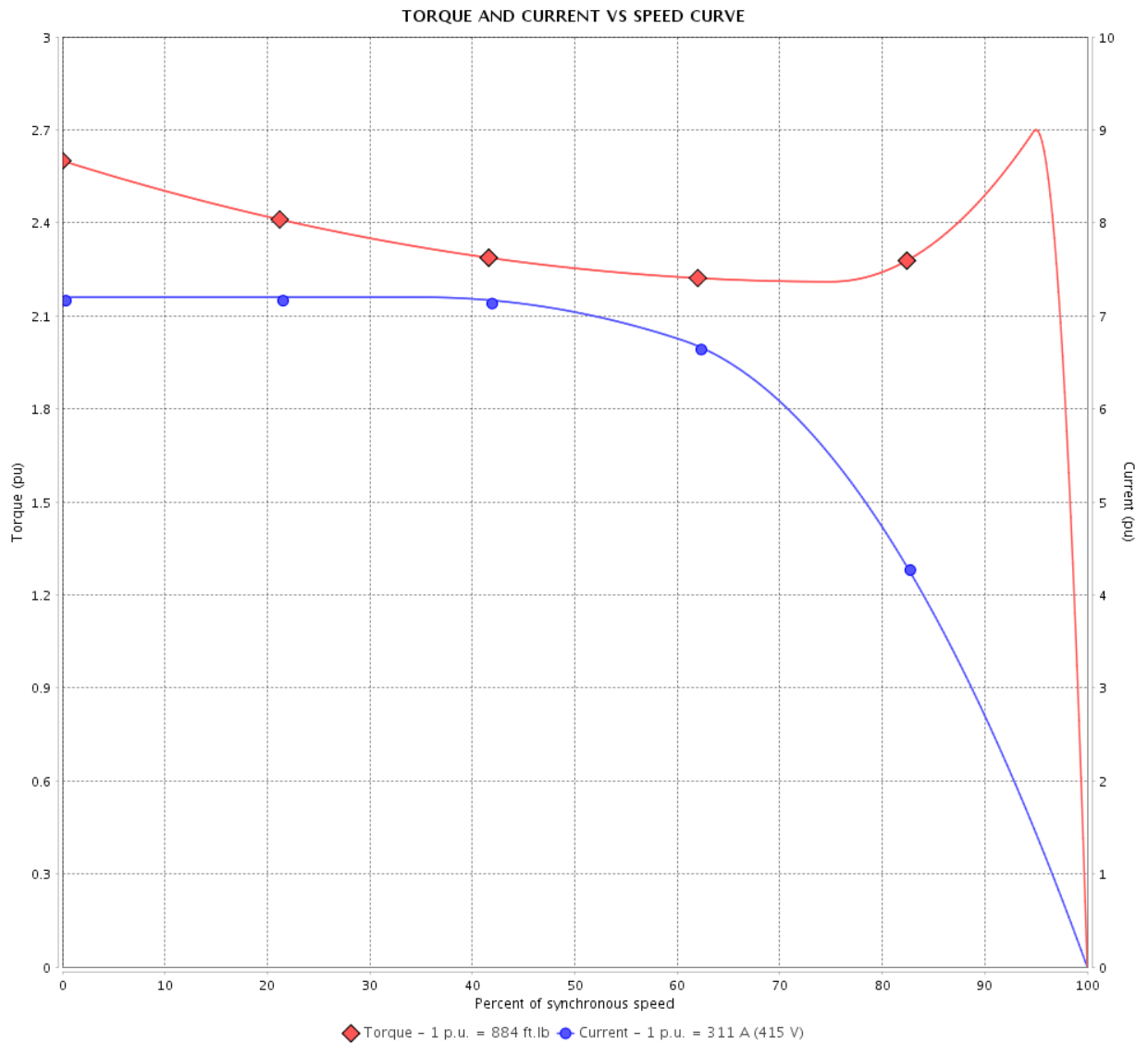
Three Phase Induction Motor - Squirrel Cage

Customer :

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Product code : 13472772

Catalog # : 30018ET3G449TC-W22



Performance : 415 V 50 Hz 4P IE3

Rated current	: 311 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 884 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 105 K
Rated speed	: 1485 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

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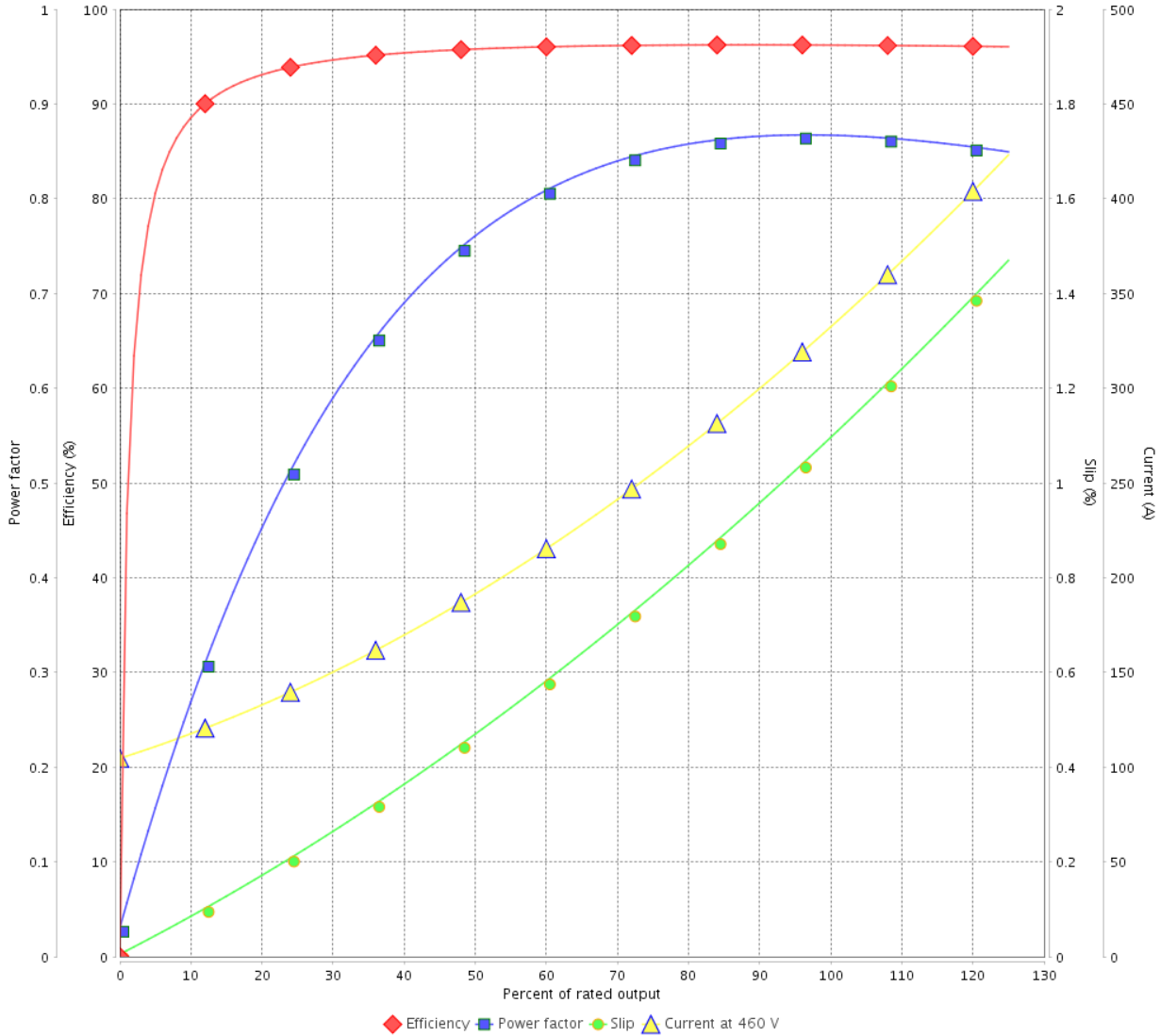
Customer : _____

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Product code : 13472772

Catalog # : 30018ET3G449TC-W22

LOAD PERFORMANCE CURVE



Performance : 460 V 60 Hz 4P

Rated current : 330 A
 LRC : 6.5
 Rated torque : 885 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 250 %
 Rated speed : 1780 rpm

Moment of inertia (J) : 89.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

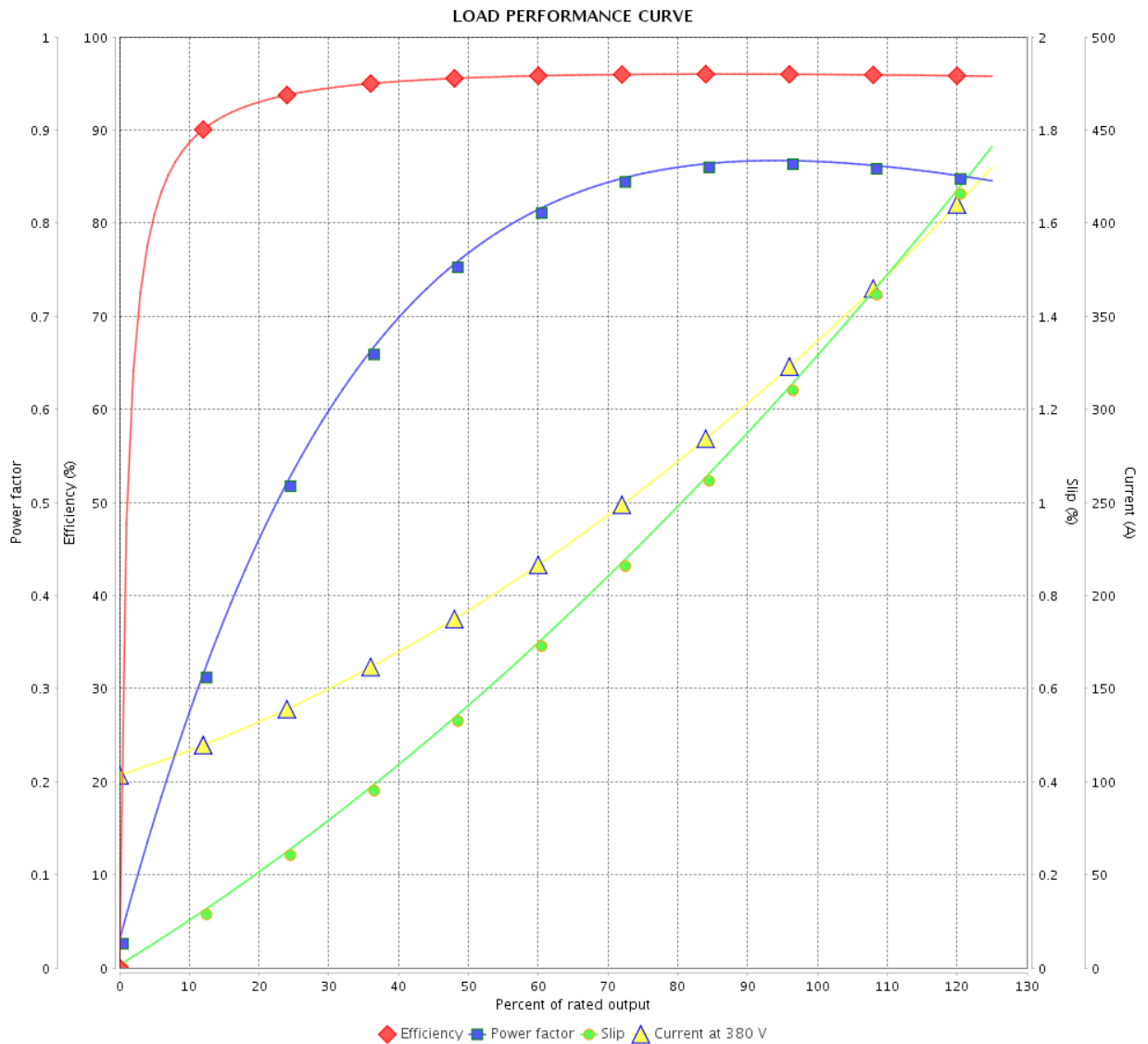


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Performance : 380 V 50 Hz 4P IE3

Rated current : 337 A
 LRC : 6.1
 Rated torque : 887 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 220 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 89.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
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 Temperature rise : 105 K
 Design : B

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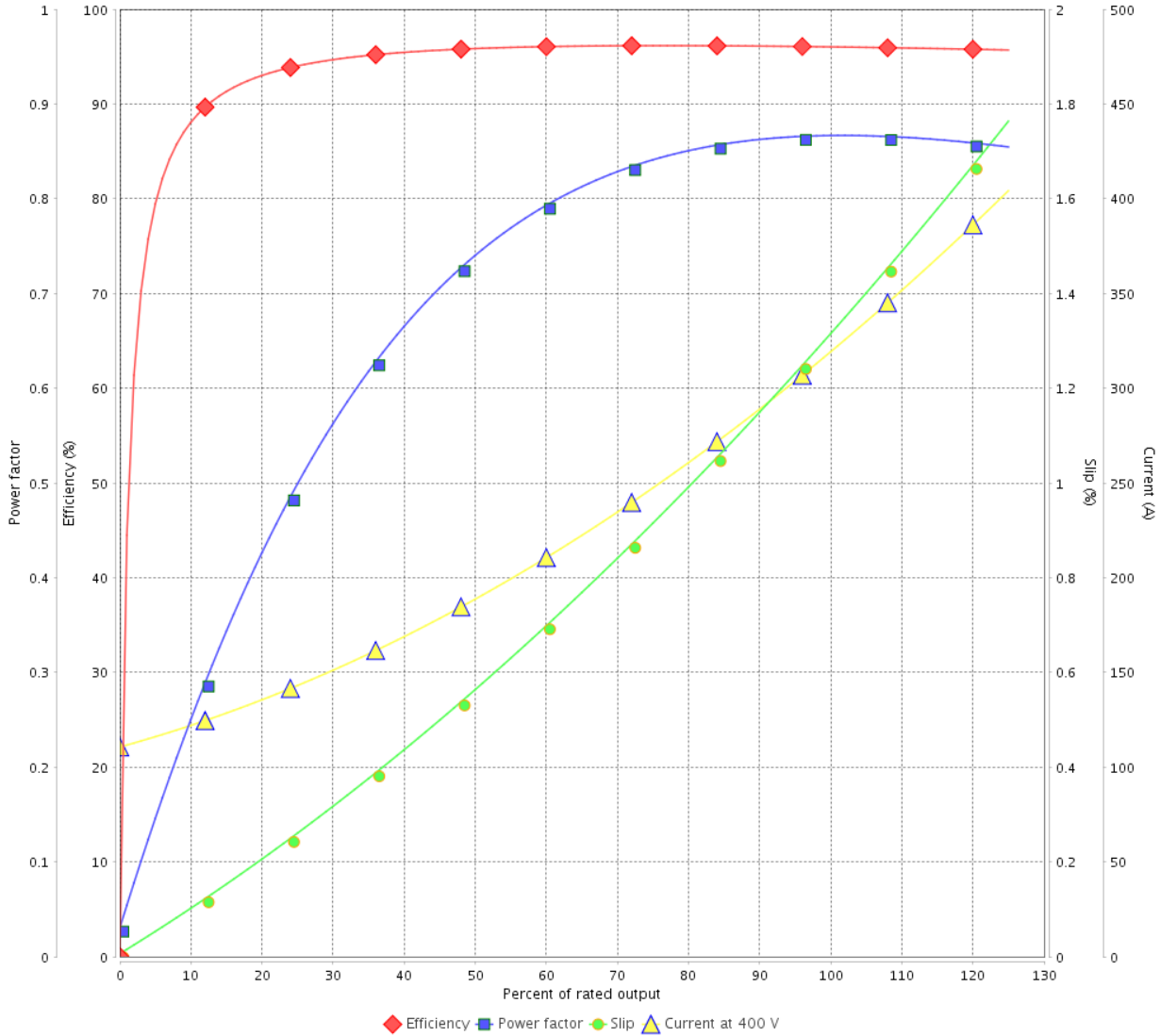
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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 320 A
 LRC : 6.7
 Rated torque : 887 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 250 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 89.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

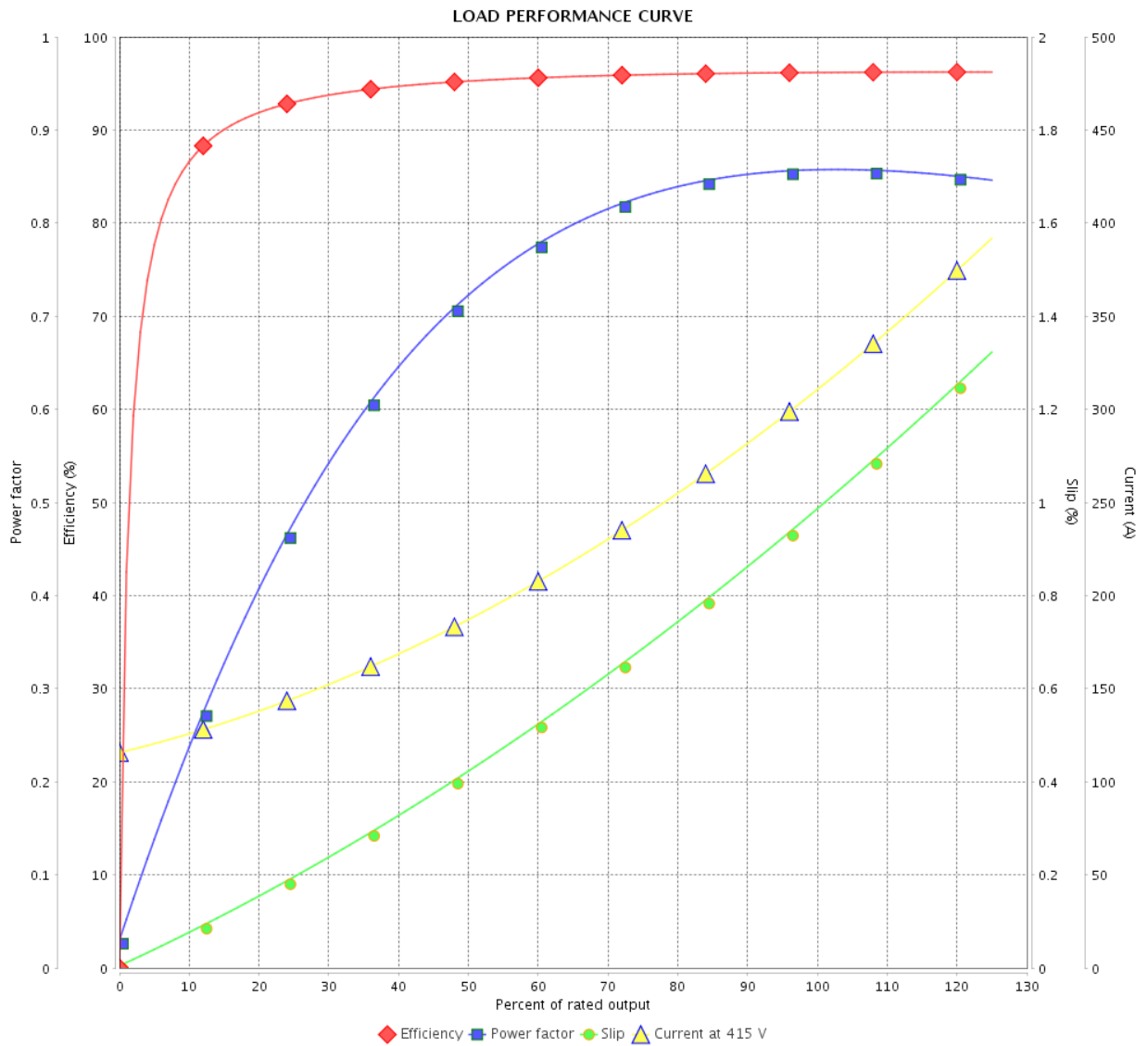


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Performance : 415 V 50 Hz 4P IE3

Rated current : 311 A
 LRC : 7.2
 Rated torque : 884 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 270 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 89.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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THERMAL LIMIT CURVE



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Heating constant

Cooling constant

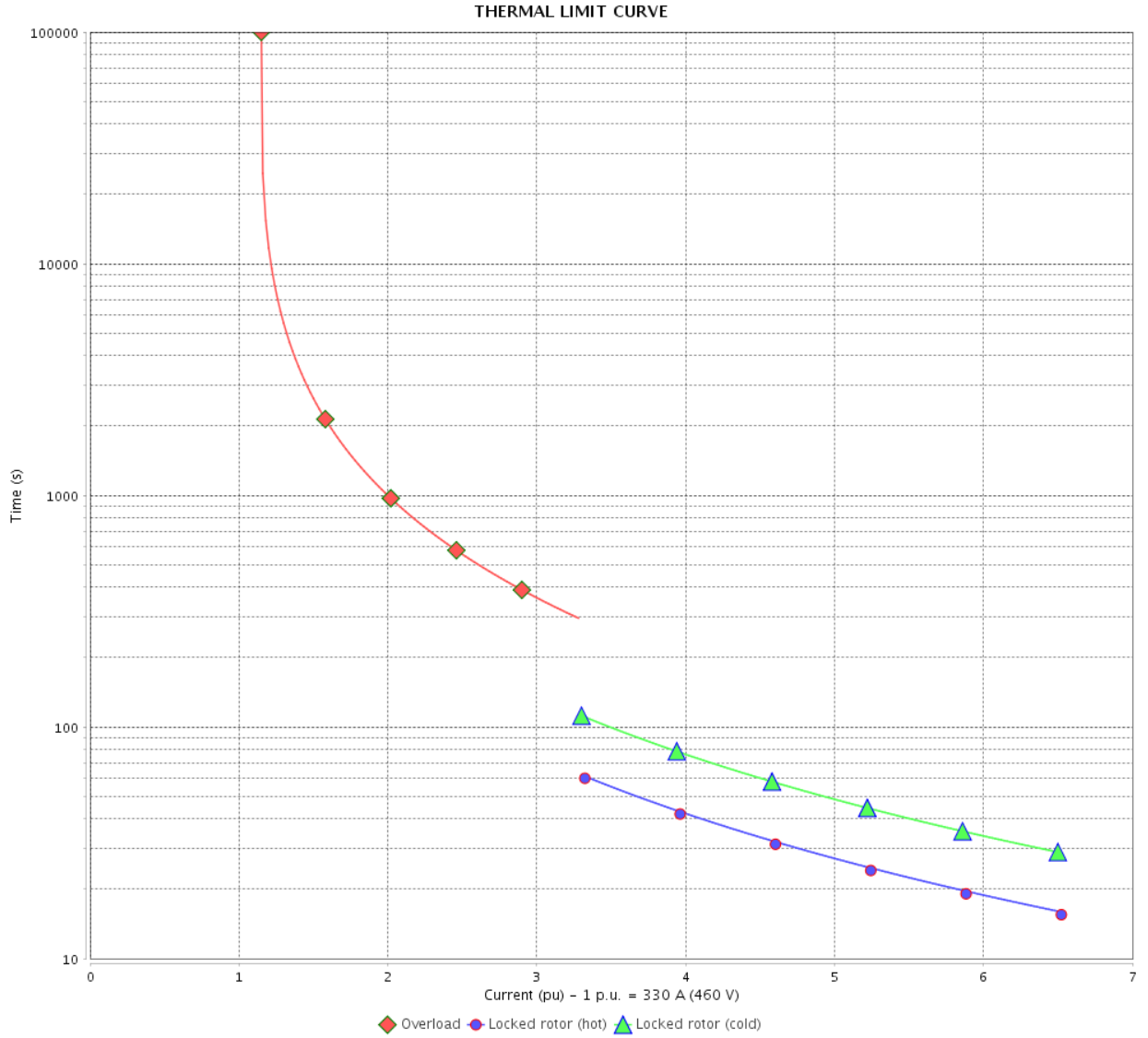
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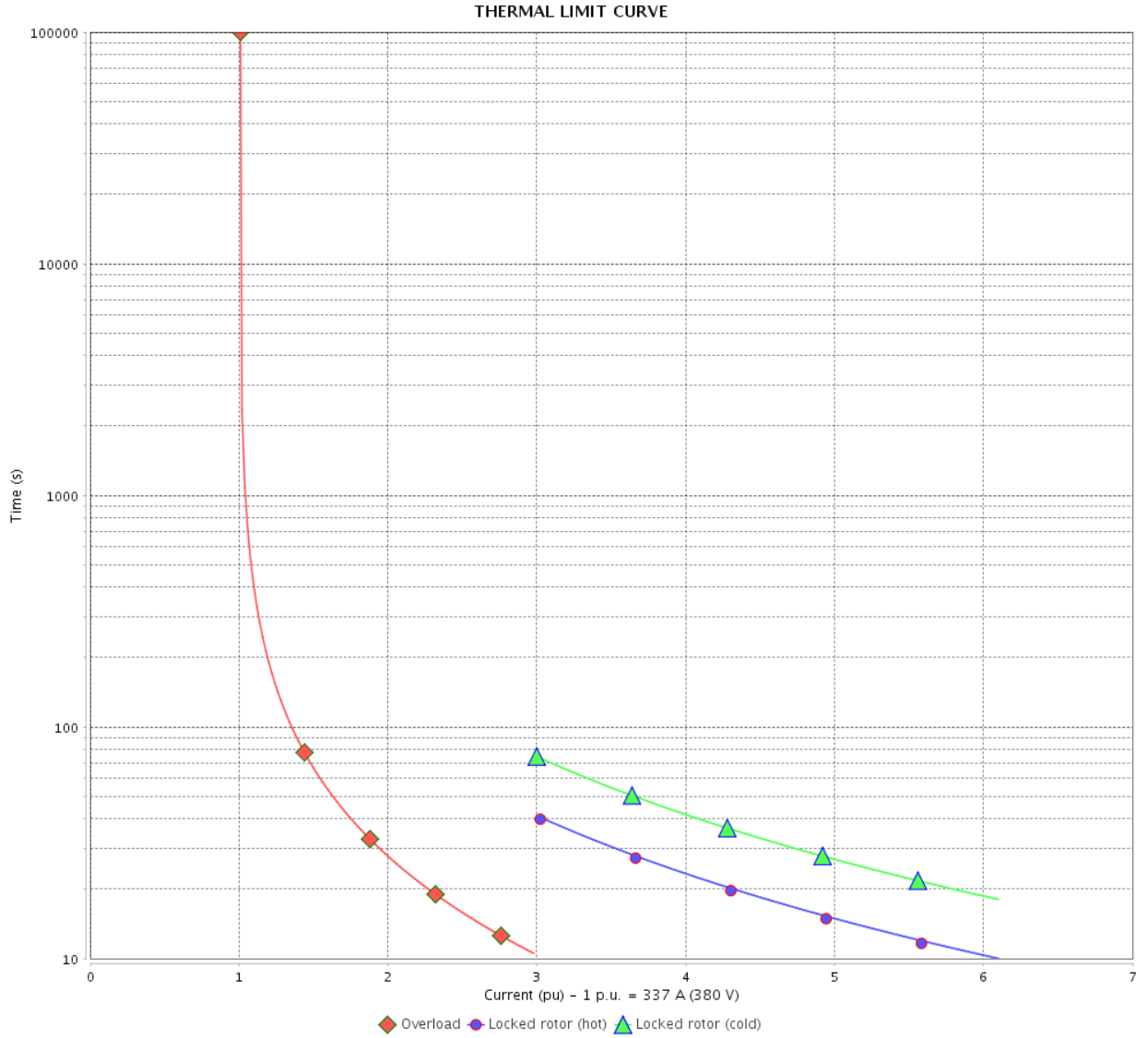
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Locked rotor torque	: 240 %	Service factor	: 1.00
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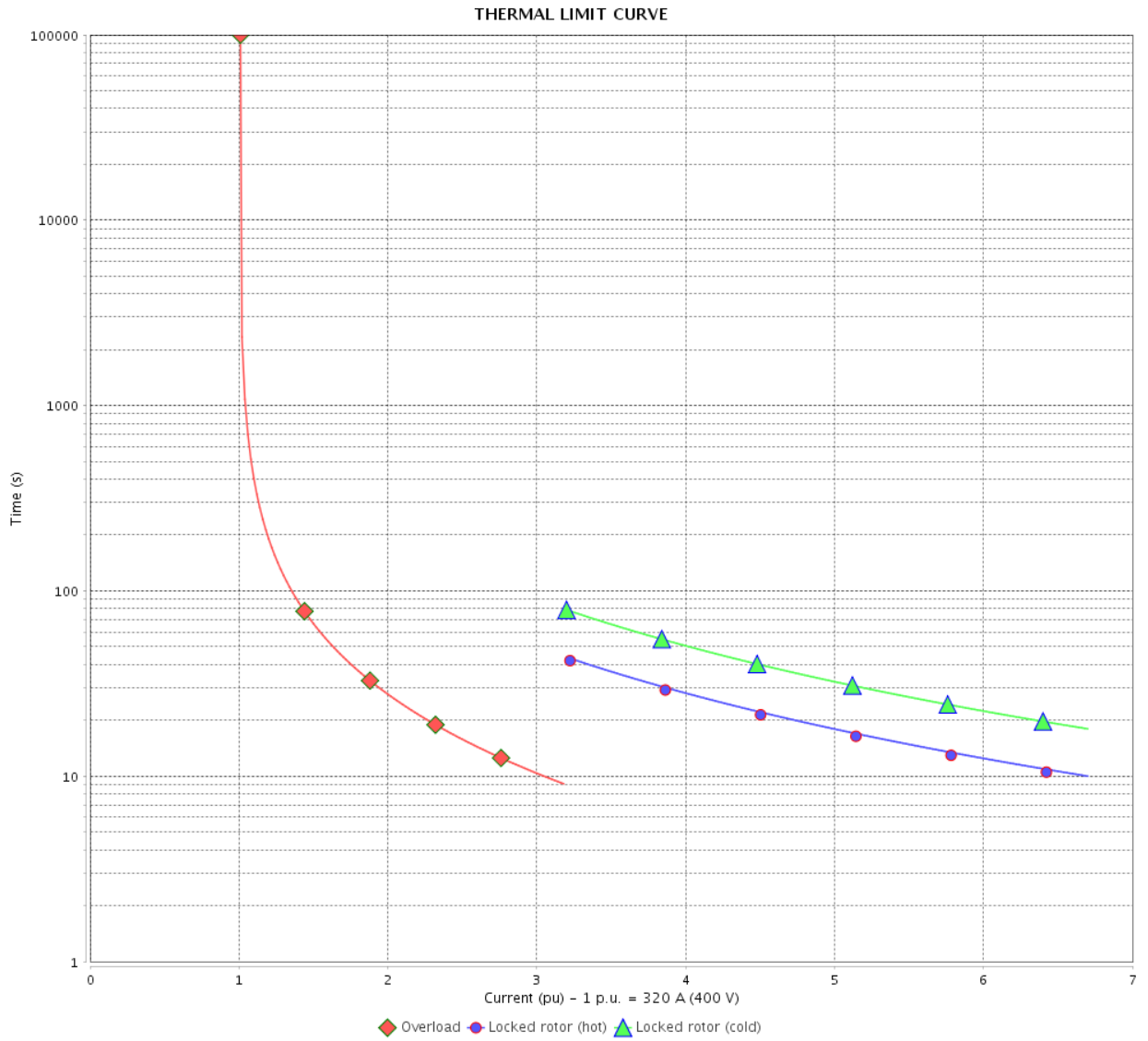
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Rated current	: 311 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 884 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 105 K
Rated speed	: 1485 rpm	Design	: B

Heating constant

Cooling constant

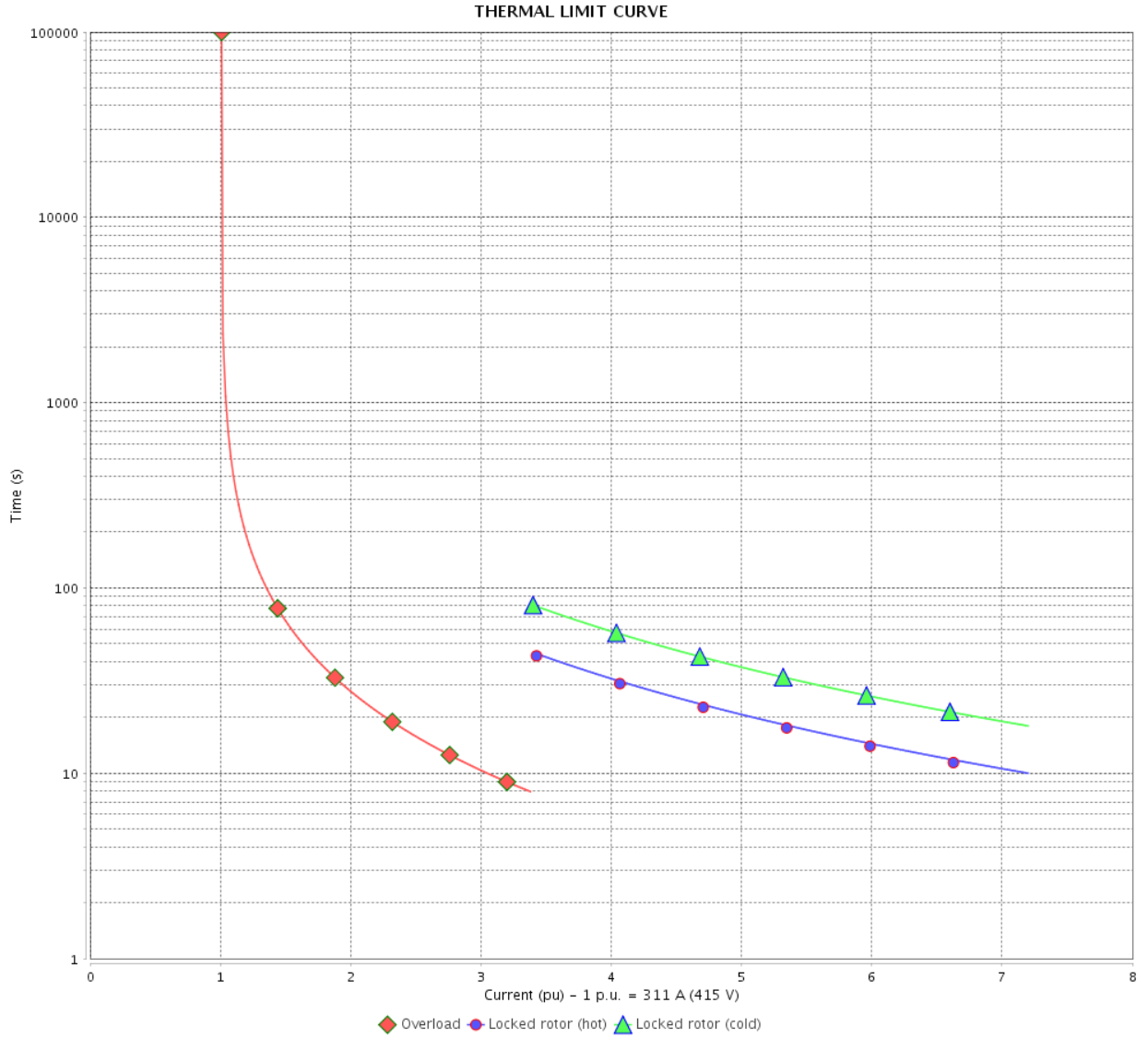
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



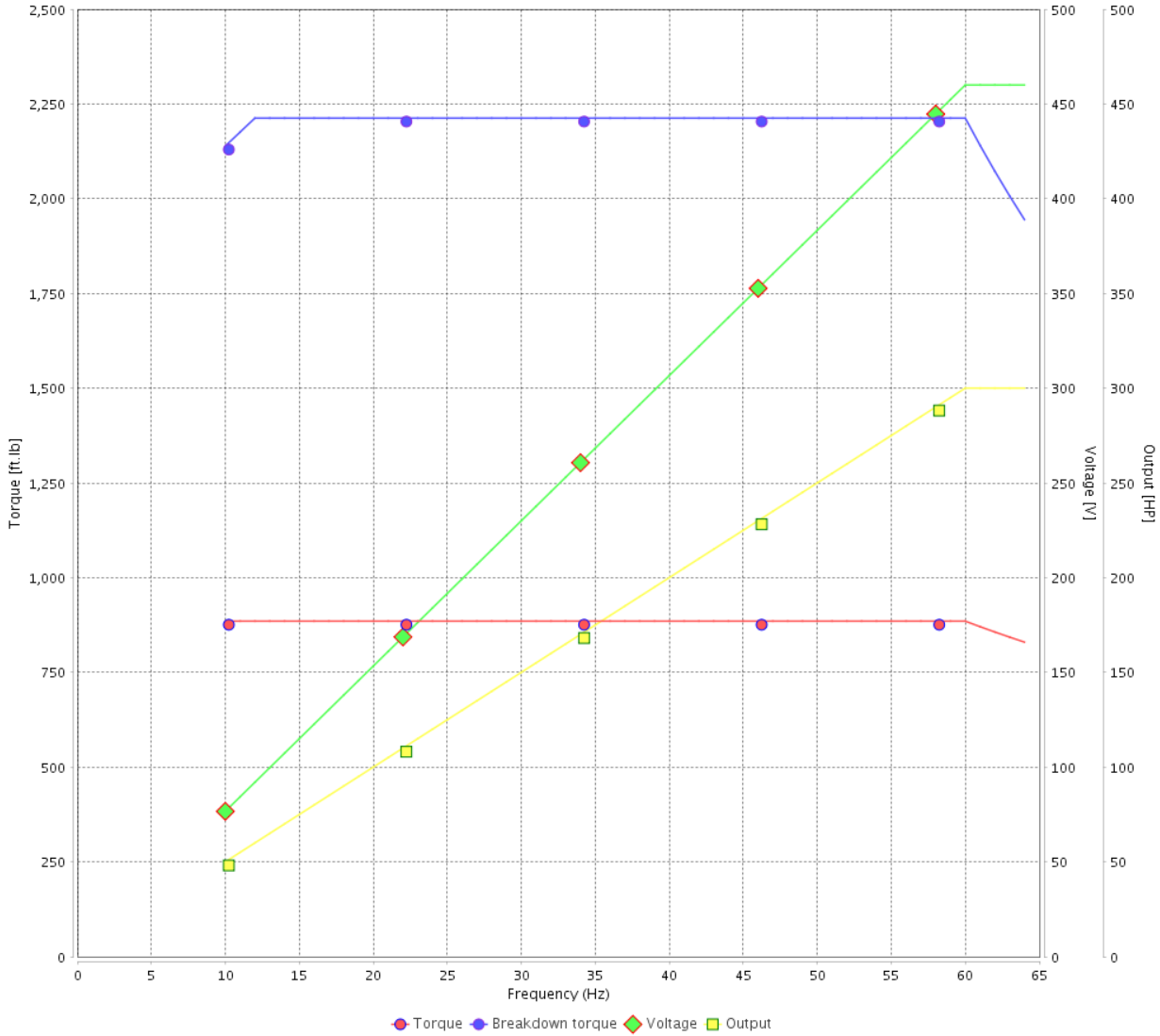
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VFD OPERATION CURVE



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 Insulation class : F
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

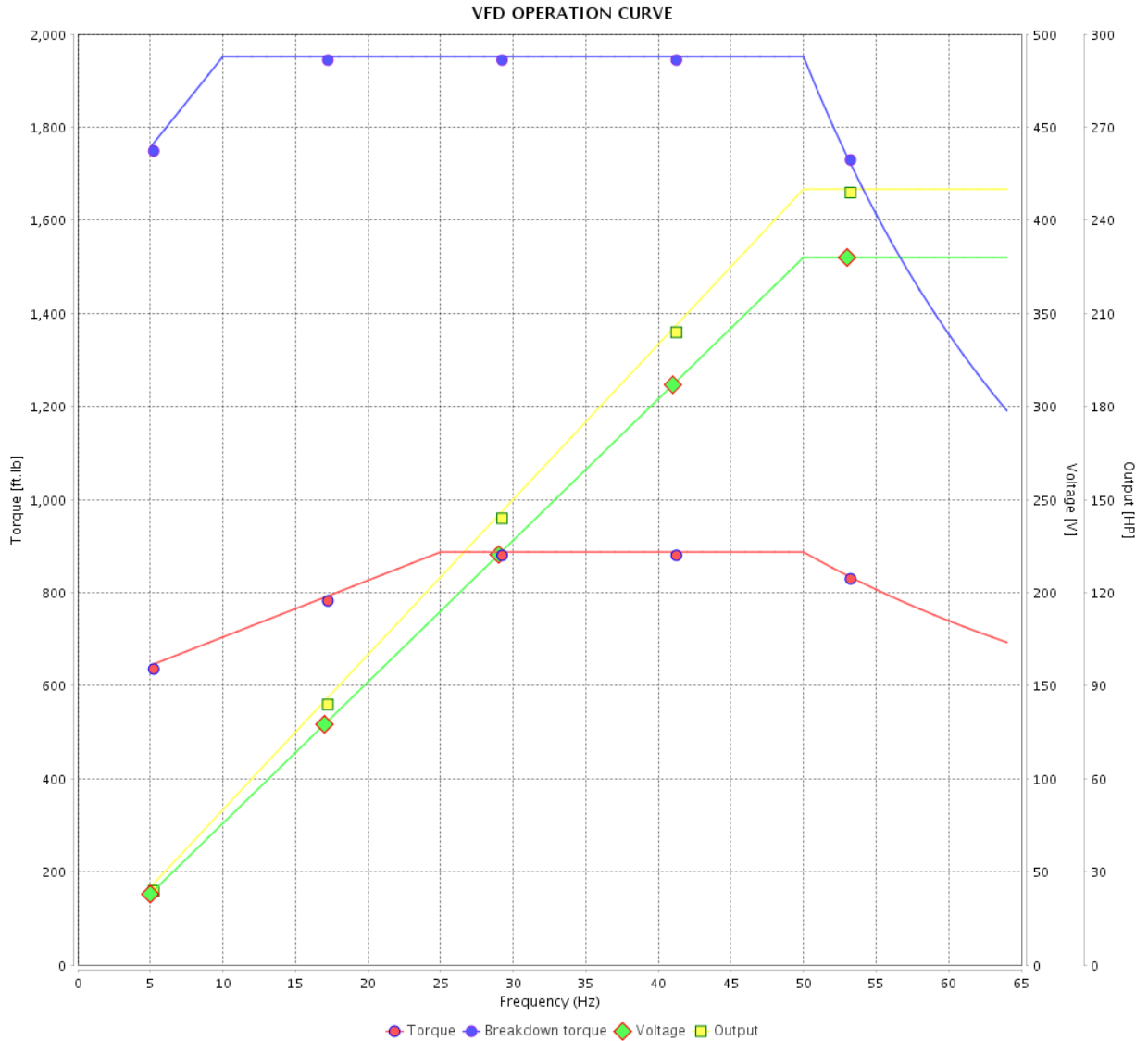


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Performance : 380 V 50 Hz 4P IE3

Rated current : 337 A
 LRC : 6.1
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 Locked rotor torque : 210 %
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 Rated speed : 1480 rpm

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



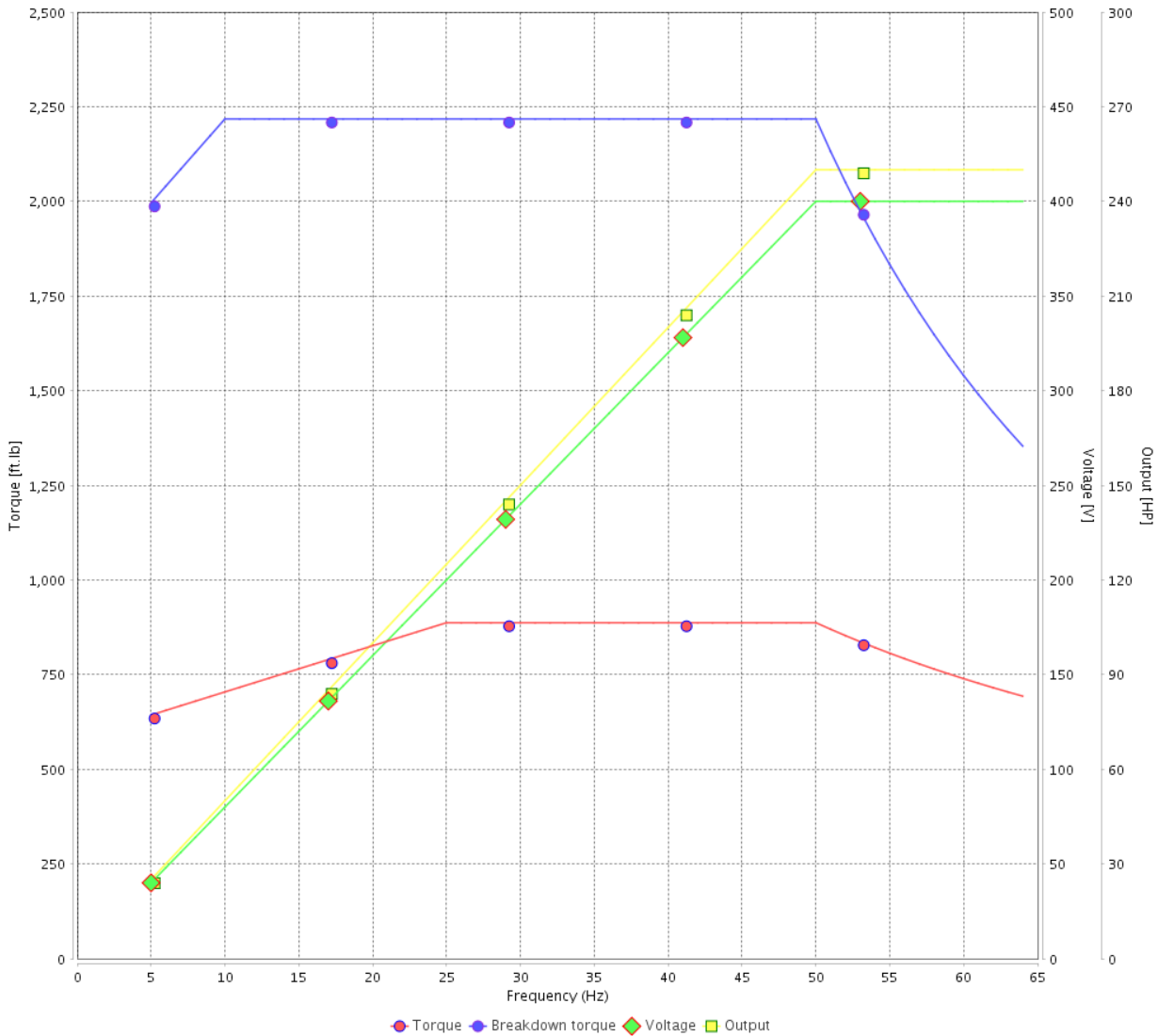
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

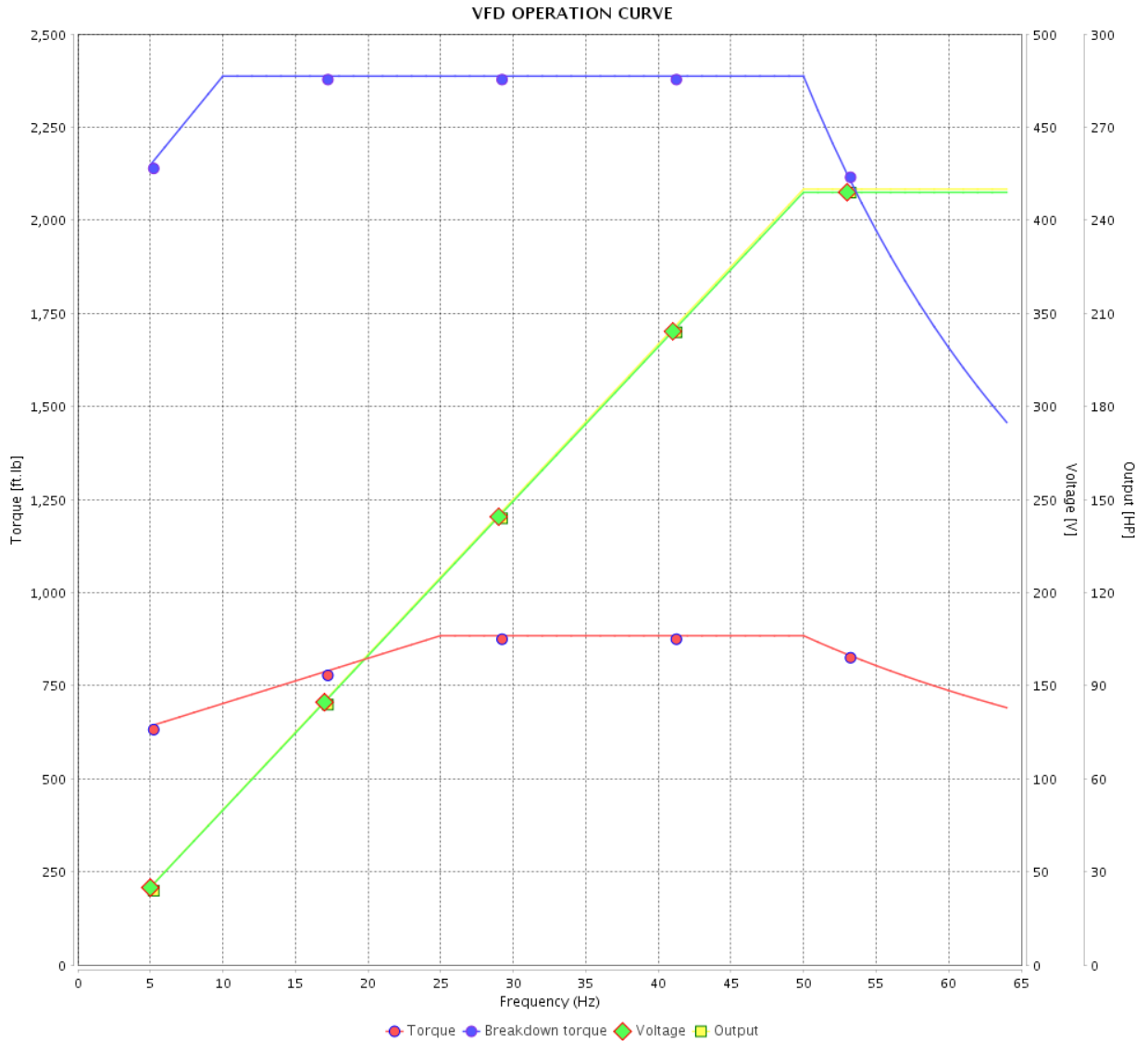


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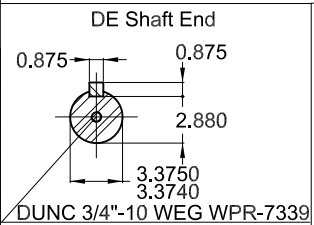
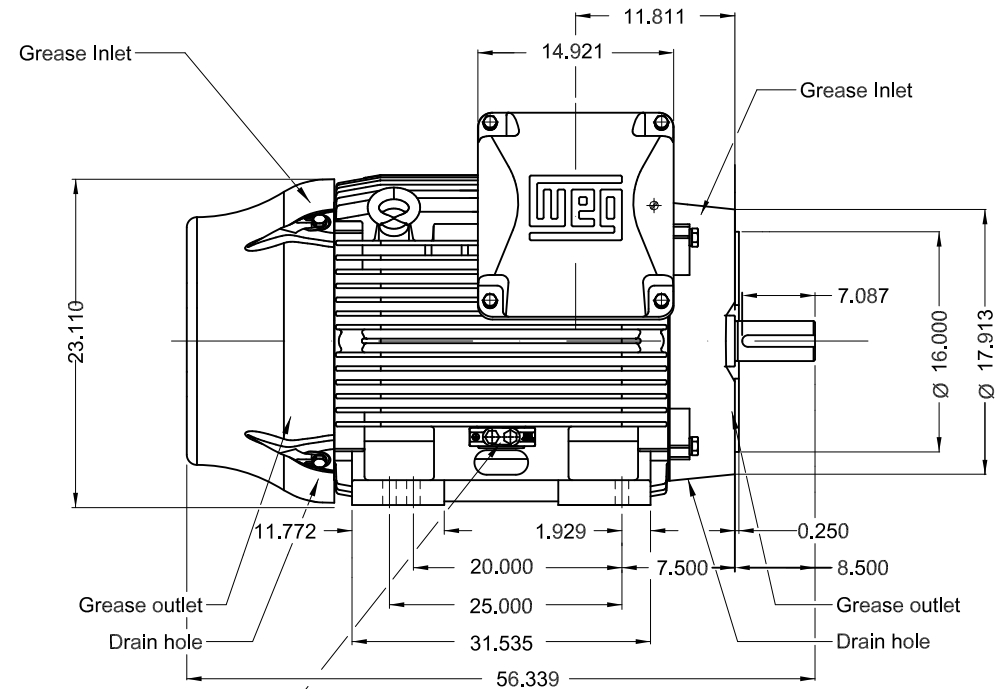
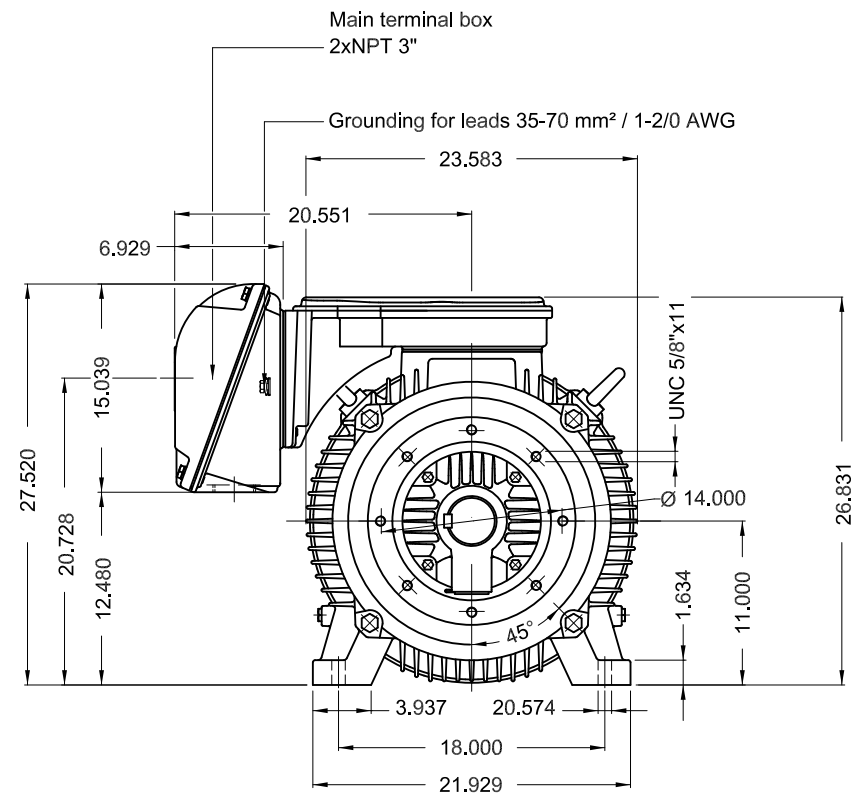


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Without vertical jackscrews
Color RAL 5009
Painting plan 203A
Mounting NEMA F-1
Mounting B34R(D)

300 HP 04 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W22 PREM. EFF.					
CHECKED		FRAME 447/9TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD



MADE IN MEXICO
13472772



FOR SAFE AREA
Mod.TE1BFOXON
CC029A

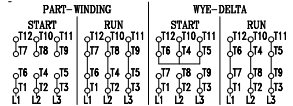




Class I, Div 2, Gr A, B, C and D - T3
Class I, Zone 2, IIC - T3
Class II, Div 2, Gr F and G - T3C
For use on PWM: Gr. A, B, C, D and F,
VT 1000:1, CT 6:1, 1.00SF - T3


MODEL 30018ET3G449TC-W22

Inverter Duty Motor
Severe Duty

PH3	60Hz	Fr. 447/9TC	1000m.a.s.l.	IP55	TEFC	2869lb
V 460				A 330		
HP 300				kW 220		
SF 1.15				SFA 379		
RPM 1780				PF 0.87		
AMB 40°C				INS cl. F DT80K	NEMA NOM EFF 96.2%	
DUTY CONT.				DES B Code G		



-  → 6322-C3 (60g)
-  → 6319-C3 (45g)

 MOBIL POLYREX EM (6000h)