

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	11408289		
		Catalog # :	40036ET3G449TS-W22		
Frame	: L447/9TS	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	: 3189 lb		
Protection degree	: IP55	Moment of inertia (J)	: 91.9 sq.ft.lb		
Design	: A				
Output [HP]	400	350	350	350	350
Poles	2	2	2	2	2
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	460	380	400	415	415
Rated current [A]	442	458	435	424	424
L. R. Amperes [A]	3845	3618	3872	4070	4070
LRC [A]	8.7x(Code J)	7.9x(Code H)	8.9x(Code J)	9.6x(Code K)	9.6x(Code K)
No load current [A]	118	115	122	129	129
Rated speed [RPM]	3583	2982	2984	2985	2985
Slip [%]	0.47	0.60	0.53	0.50	0.50
Rated torque [ft.lb]	586	616	616	616	616
Locked rotor torque [%]	260	250	270	290	290
Breakdown torque [%]	290	260	290	320	320
Service factor	1.15	1.00	1.00	1.00	1.00
Temperature rise	80 K	105 K	105 K	105 K	105 K
Locked rotor time	45s (cold) 25s (hot)	36s (cold) 20s (hot)	32s (cold) 18s (hot)	30s (cold) 17s (hot)	30s (cold) 17s (hot)
Noise level ²	88.0 dB(A)	86.0 dB(A)	86.0 dB(A)	86.0 dB(A)	86.0 dB(A)
Efficiency (%)	25%	95.3	95.3	95.3	95.3
	50%	95.4	95.4	95.4	95.4
	75%	95.8	95.8	95.8	95.8
	100%	95.8	95.8	95.8	95.8
Power Factor	25%	0.56	0.56	0.55	0.53
	50%	0.80	0.80	0.80	0.78
	75%	0.85	0.85	0.85	0.85
	100%	0.89	0.90	0.90	0.89
Bearing type	: <u>Drive end</u> 6314 C3 <u>Non drive end</u> 6314 C3	Foundation loads			
Sealing	: WSeal WSeal	Max. traction : 3658 lb			
Lubrication interval	: 4000 h 4000 h	Max. compression : 6847 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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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



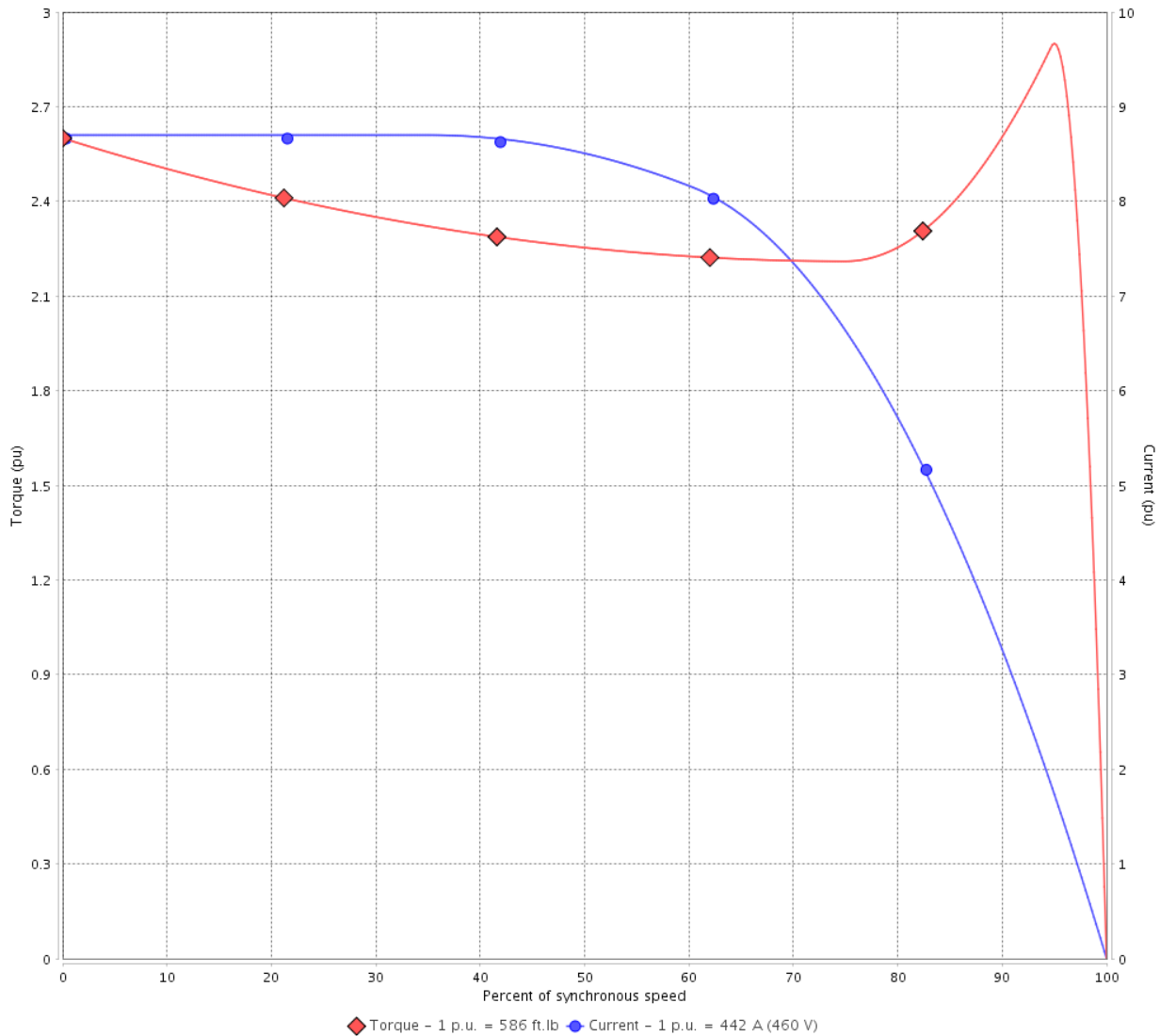
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408289

Catalog # : 40036ET3G449TS-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 2P

Rated current	: 442 A	Moment of inertia (J)	: 91.9 sq.ft.lb
LRC	: 8.7	Duty cycle	: Cont.(S1)
Rated torque	: 586 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.15
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 3583 rpm	Design	: A

Locked rotor time : 45s (cold) 25s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



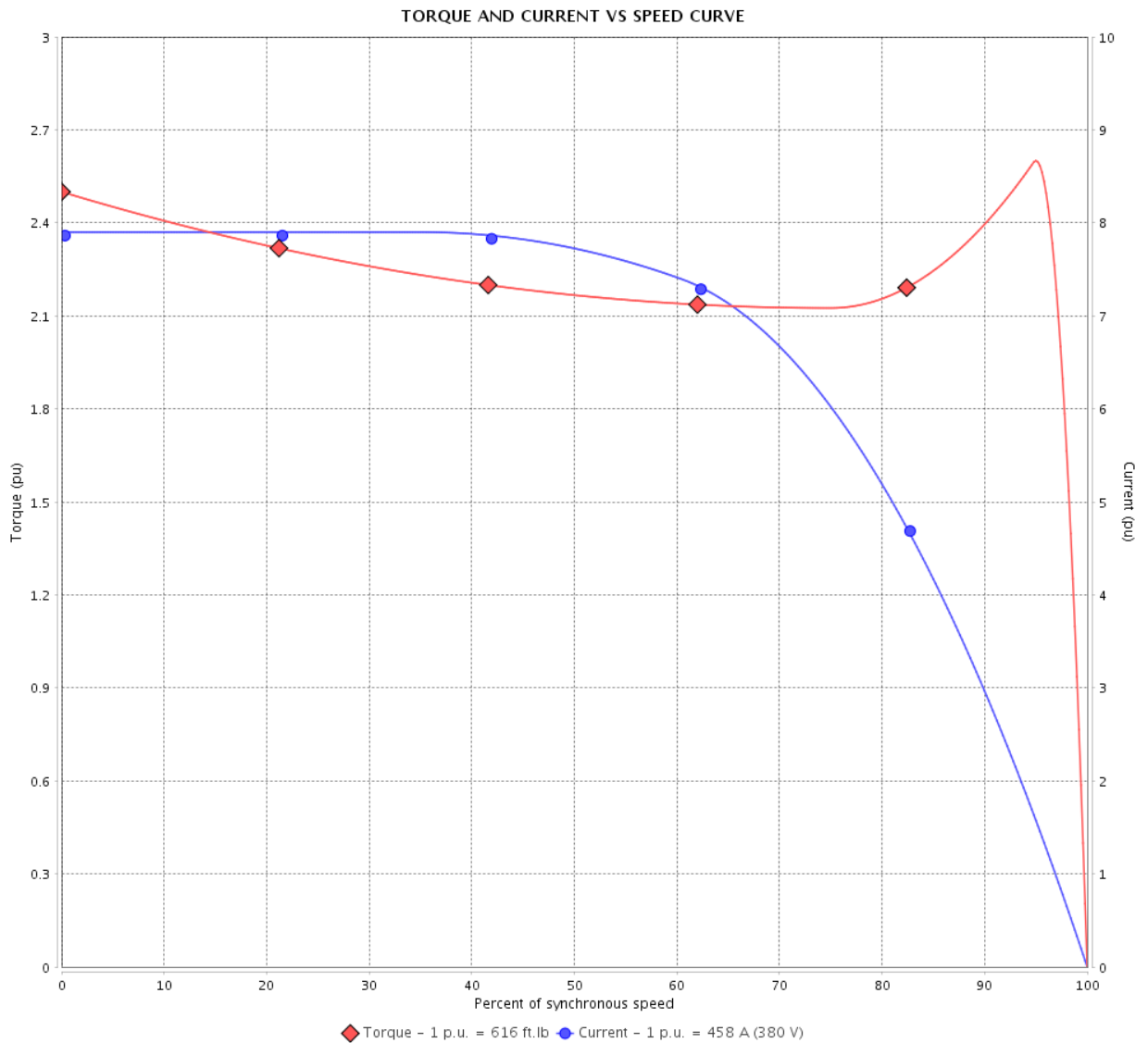
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408289

Catalog # : 40036ET3G449TS-W22



Performance : 380 V 50 Hz 2P IE3

Rated current	: 458 A	Moment of inertia (J)	: 91.9 sq.ft.lb
LRC	: 7.9	Duty cycle	: Cont.(S1)
Rated torque	: 616 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 105 K
Rated speed	: 2982 rpm	Design	: A

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

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



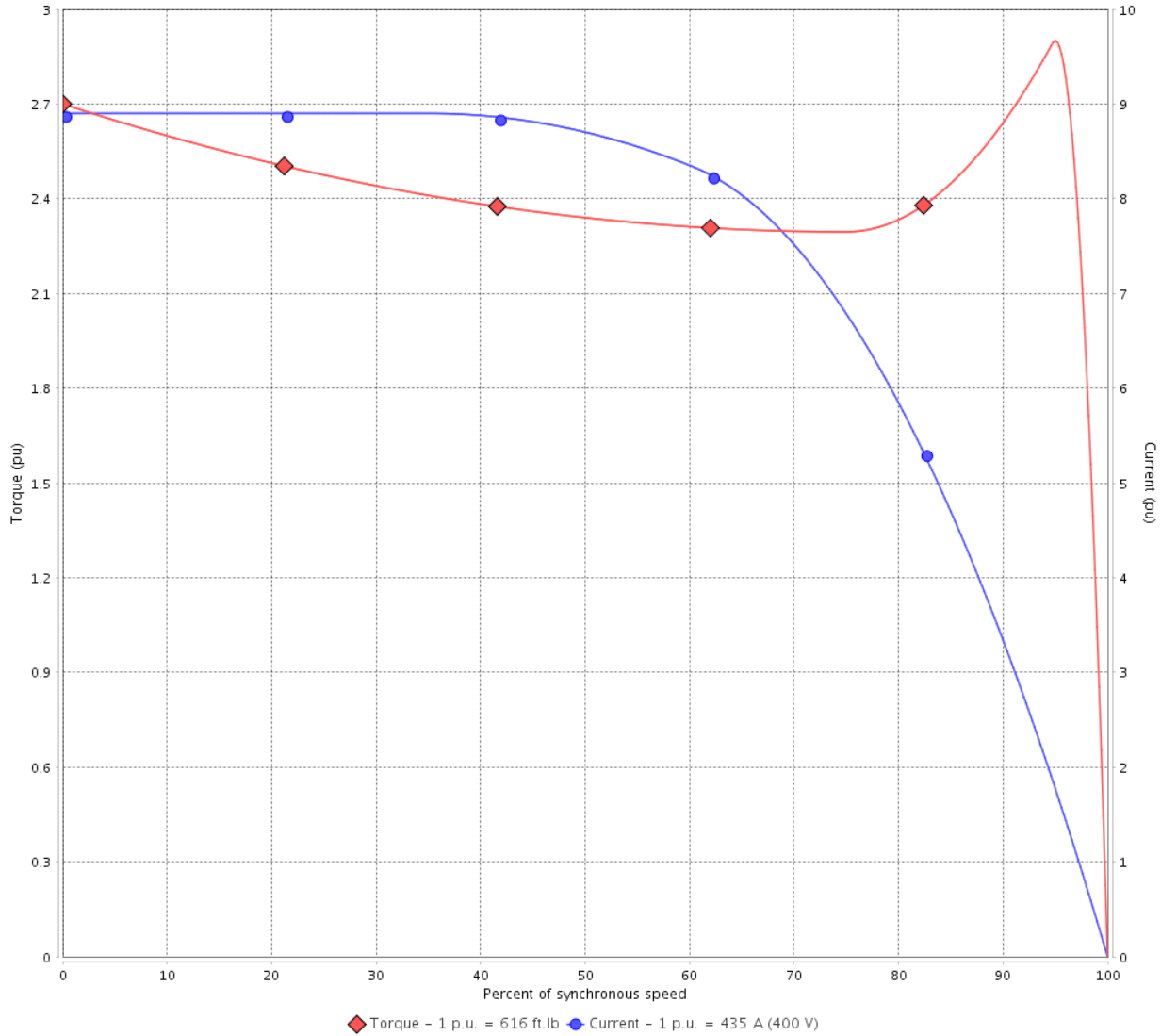
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408289

Catalog # : 40036ET3G449TS-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 2P IE3

Rated current	: 435 A	Moment of inertia (J)	: 91.9 sq.ft.lb
LRC	: 8.9	Duty cycle	: Cont.(S1)
Rated torque	: 616 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 105 K
Rated speed	: 2984 rpm	Design	: A

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

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TORQUE AND CURRENT VS SPEED CURVE



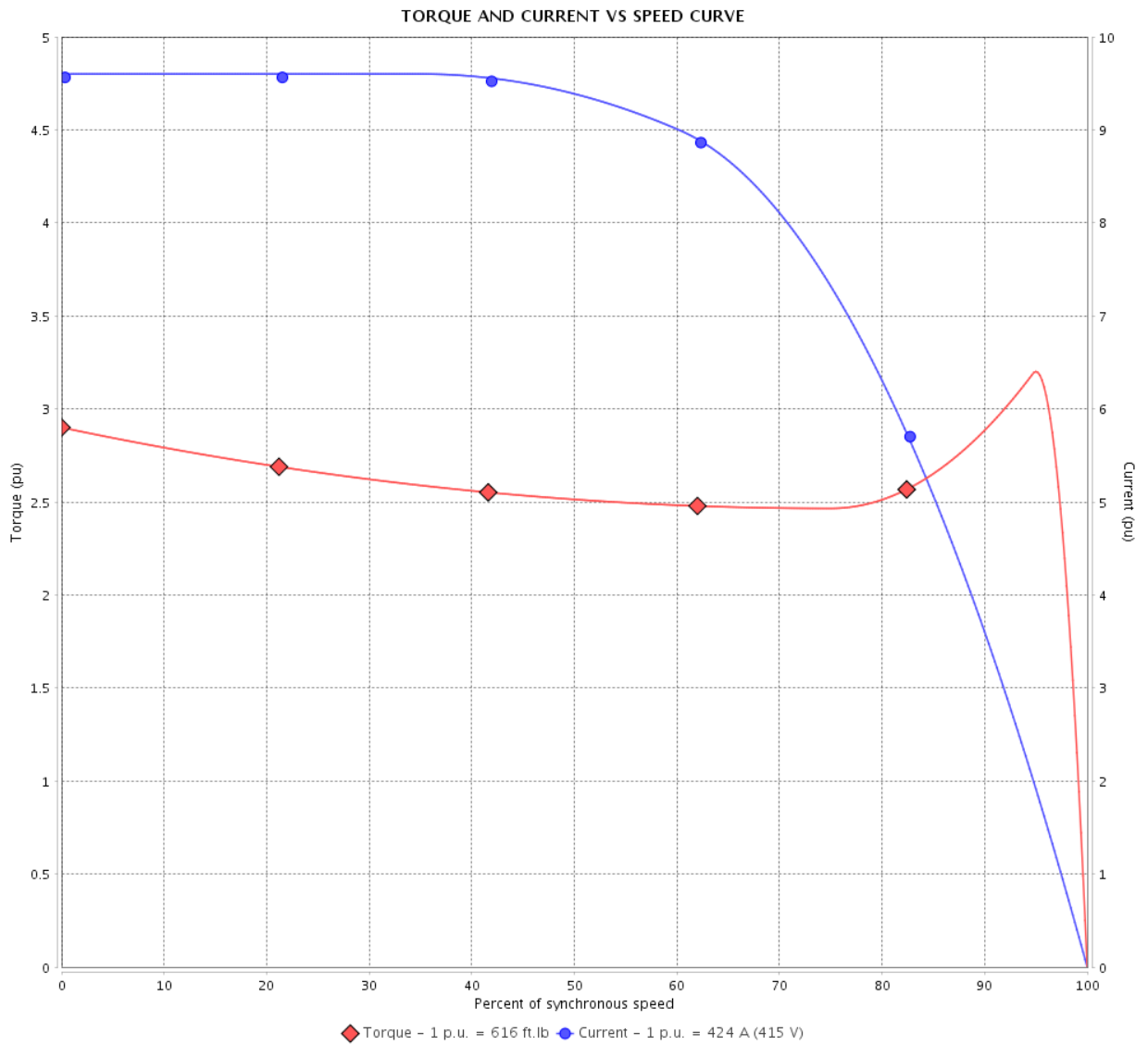
Three Phase Induction Motor - Squirrel Cage

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Product code : 11408289

Catalog # : 40036ET3G449TS-W22



Performance : 415 V 50 Hz 2P IE3

Rated current	: 424 A	Moment of inertia (J)	: 91.9 sq.ft.lb
LRC	: 9.6	Duty cycle	: Cont.(S1)
Rated torque	: 616 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 105 K
Rated speed	: 2985 rpm	Design	: A

Locked rotor time : 30s (cold) 17s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

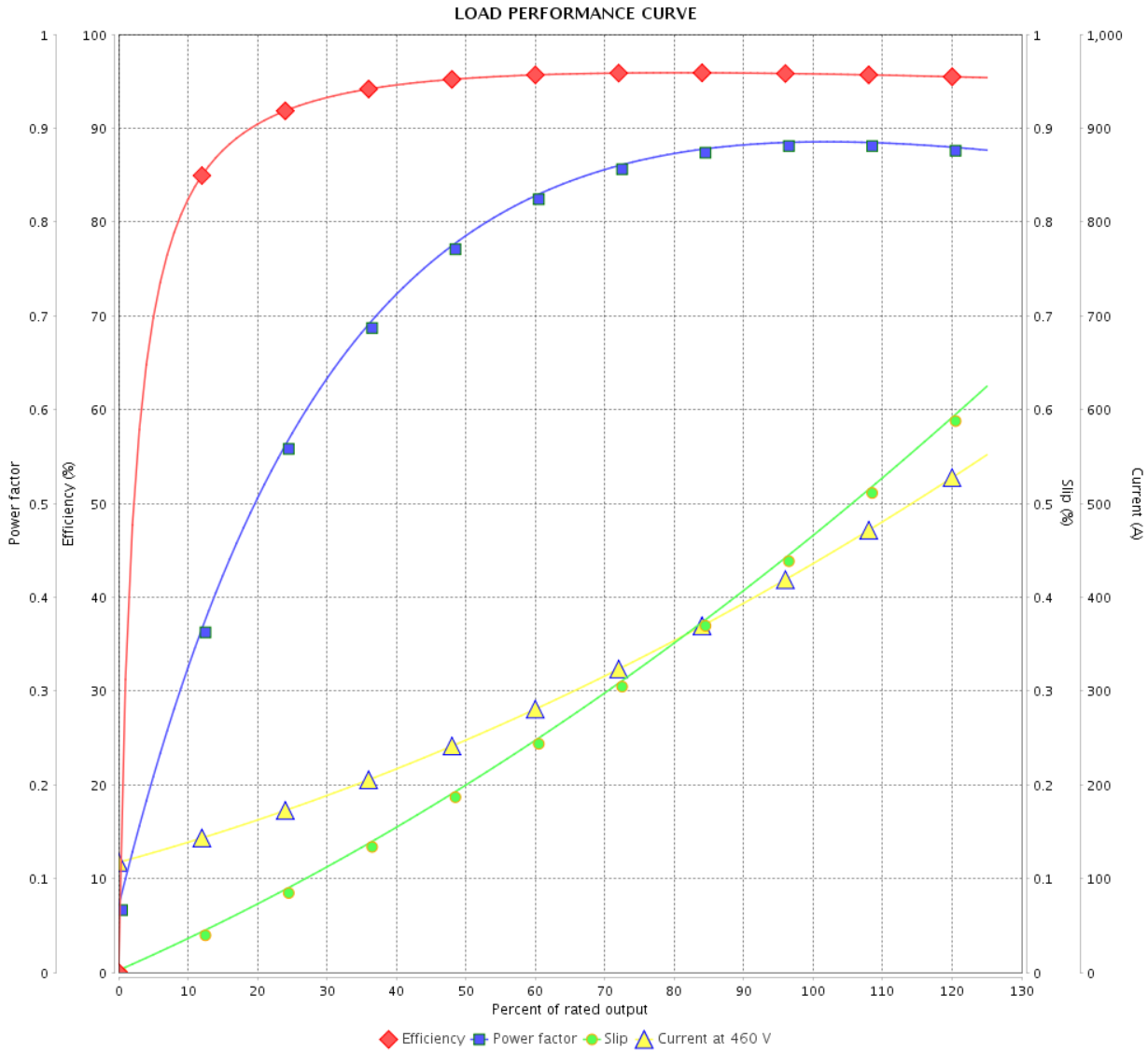


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408289

Catalog # : 40036ET3G449TS-W22



Performance : 460 V 60 Hz 2P

Rated current : 442 A
 LRC : 8.7
 Rated torque : 586 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 290 %
 Rated speed : 3583 rpm

Moment of inertia (J) : 91.9 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : A

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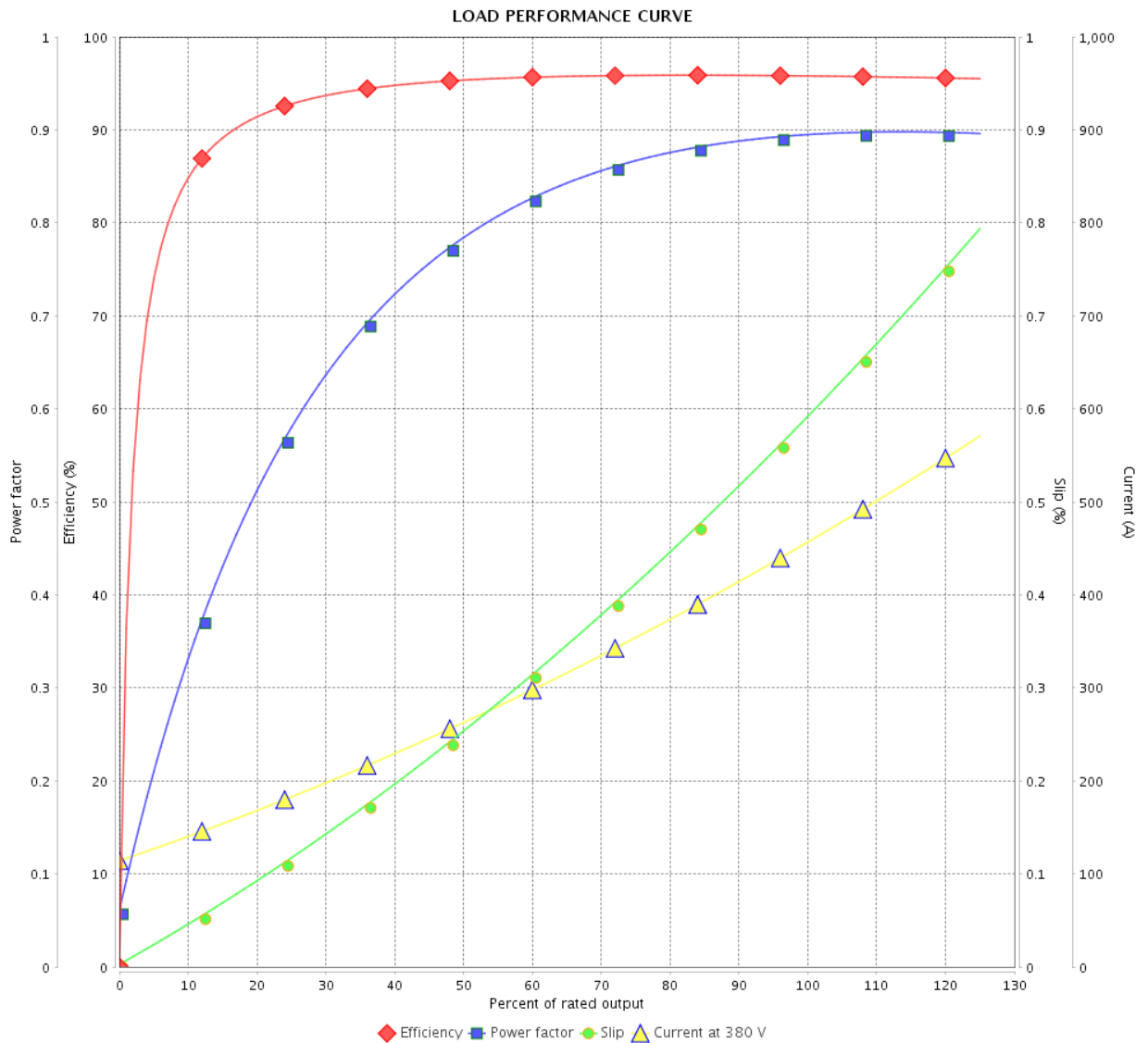


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Performance : 380 V 50 Hz 2P IE3

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 Rated torque : 616 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 260 %
 Rated speed : 2982 rpm

Moment of inertia (J) : 91.9 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : A

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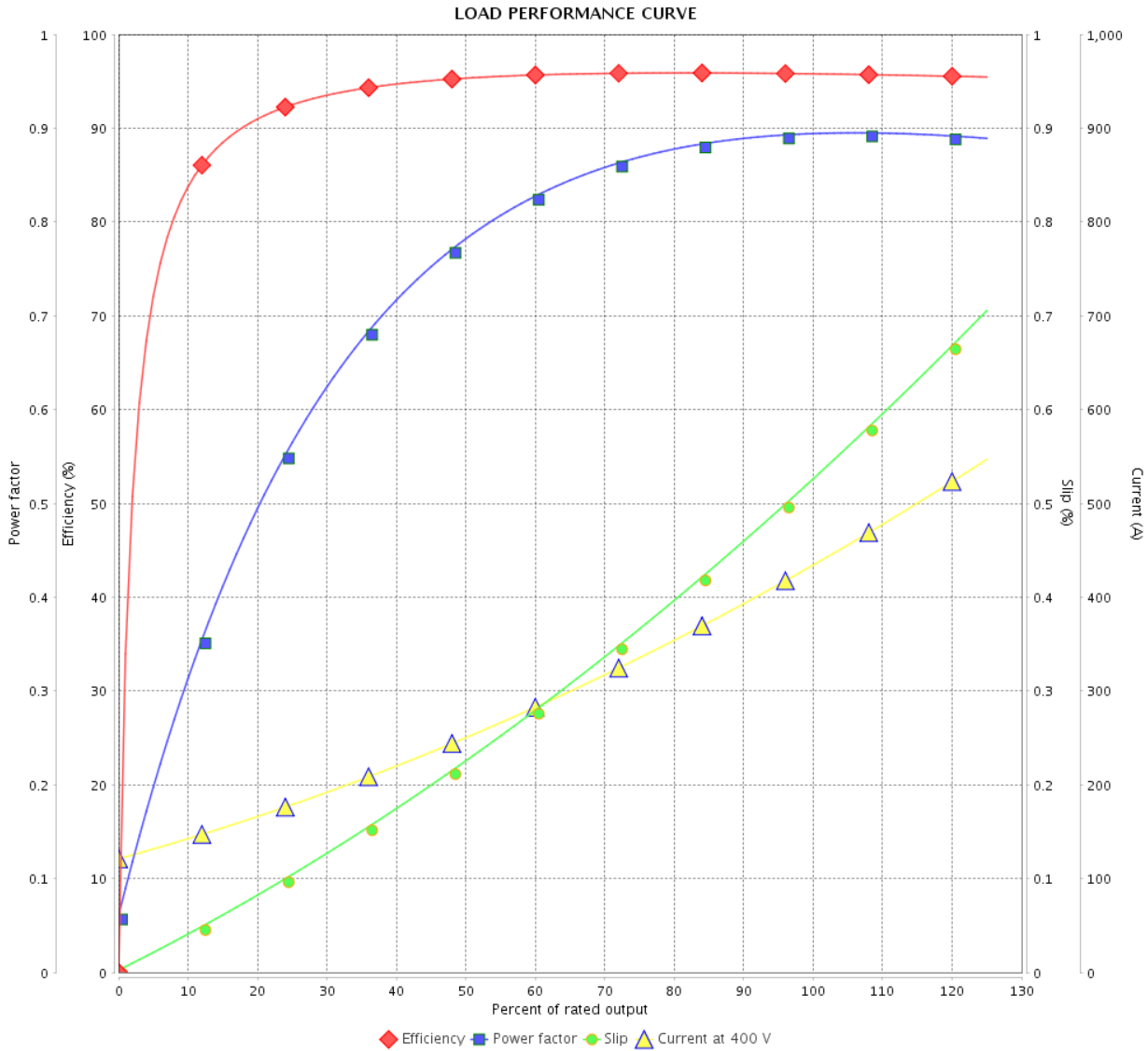


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Performance : 400 V 50 Hz 2P IE3

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 Locked rotor torque : 270 %
 Breakdown torque : 290 %
 Rated speed : 2984 rpm

Moment of inertia (J) : 91.9 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : A

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

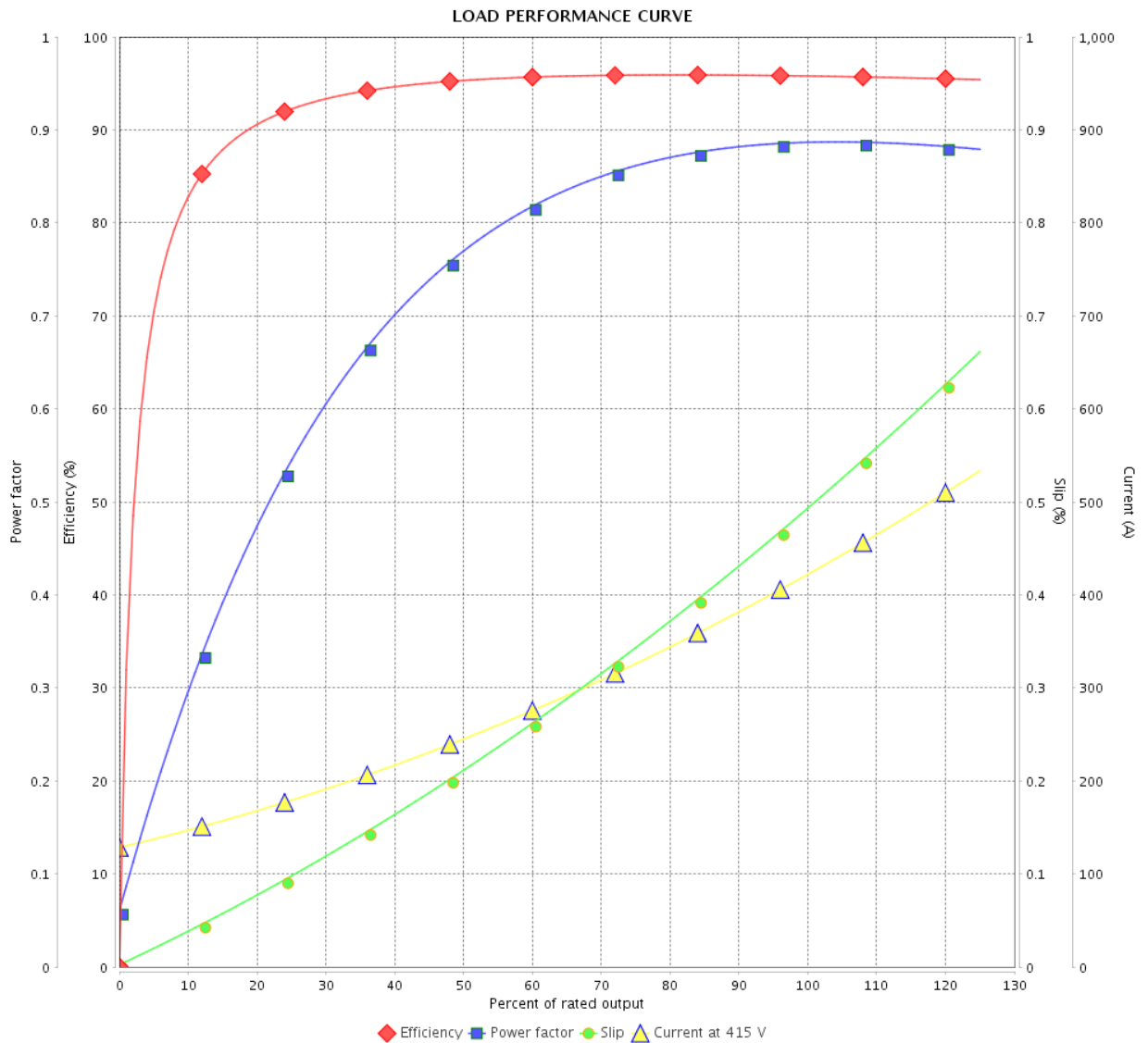


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THERMAL LIMIT CURVE



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Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 3583 rpm	Design	: A

Heating constant

Cooling constant

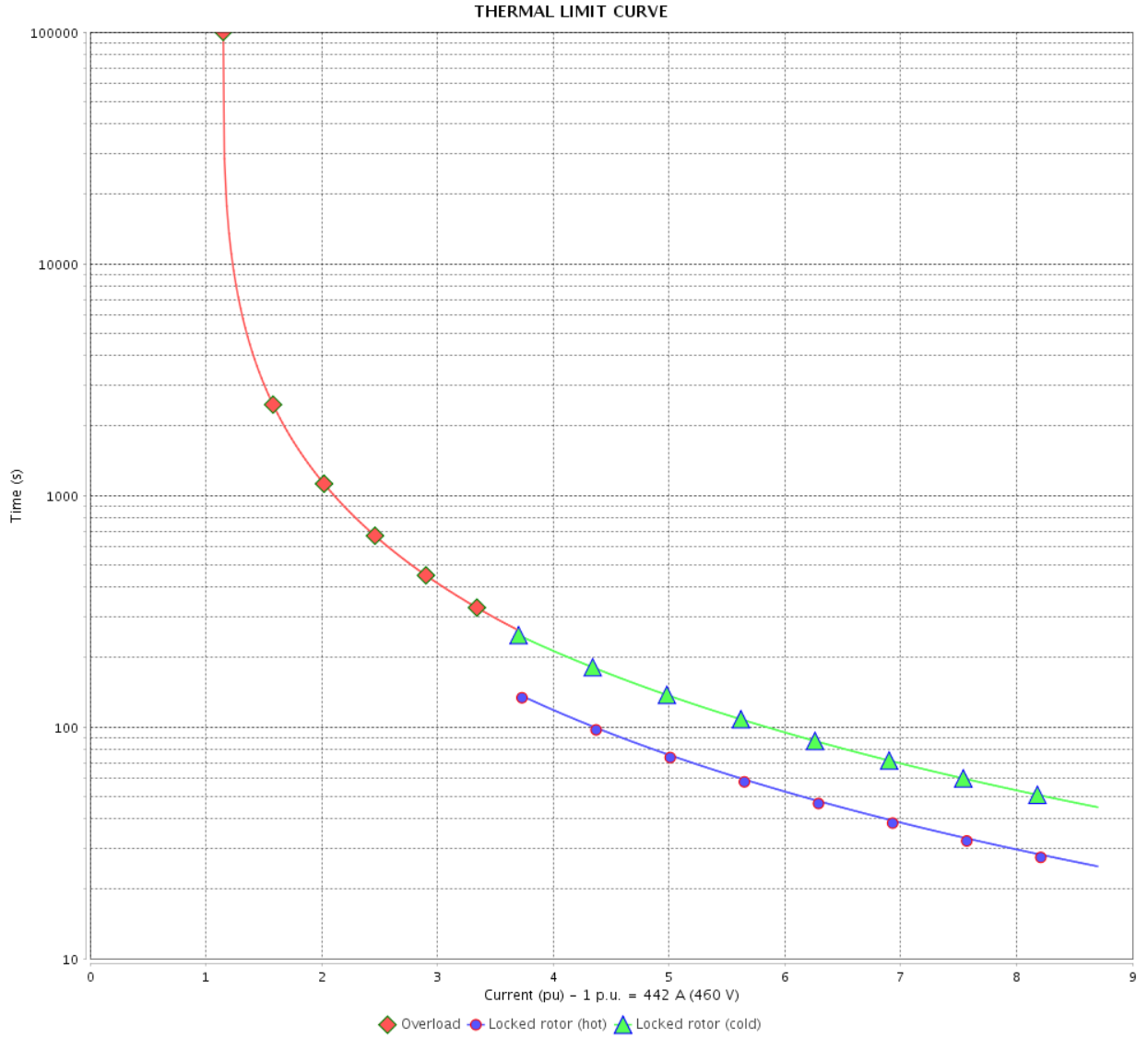
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THERMAL LIMIT CURVE

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Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 105 K
Rated speed	: 2982 rpm	Design	: A

Heating constant

Cooling constant

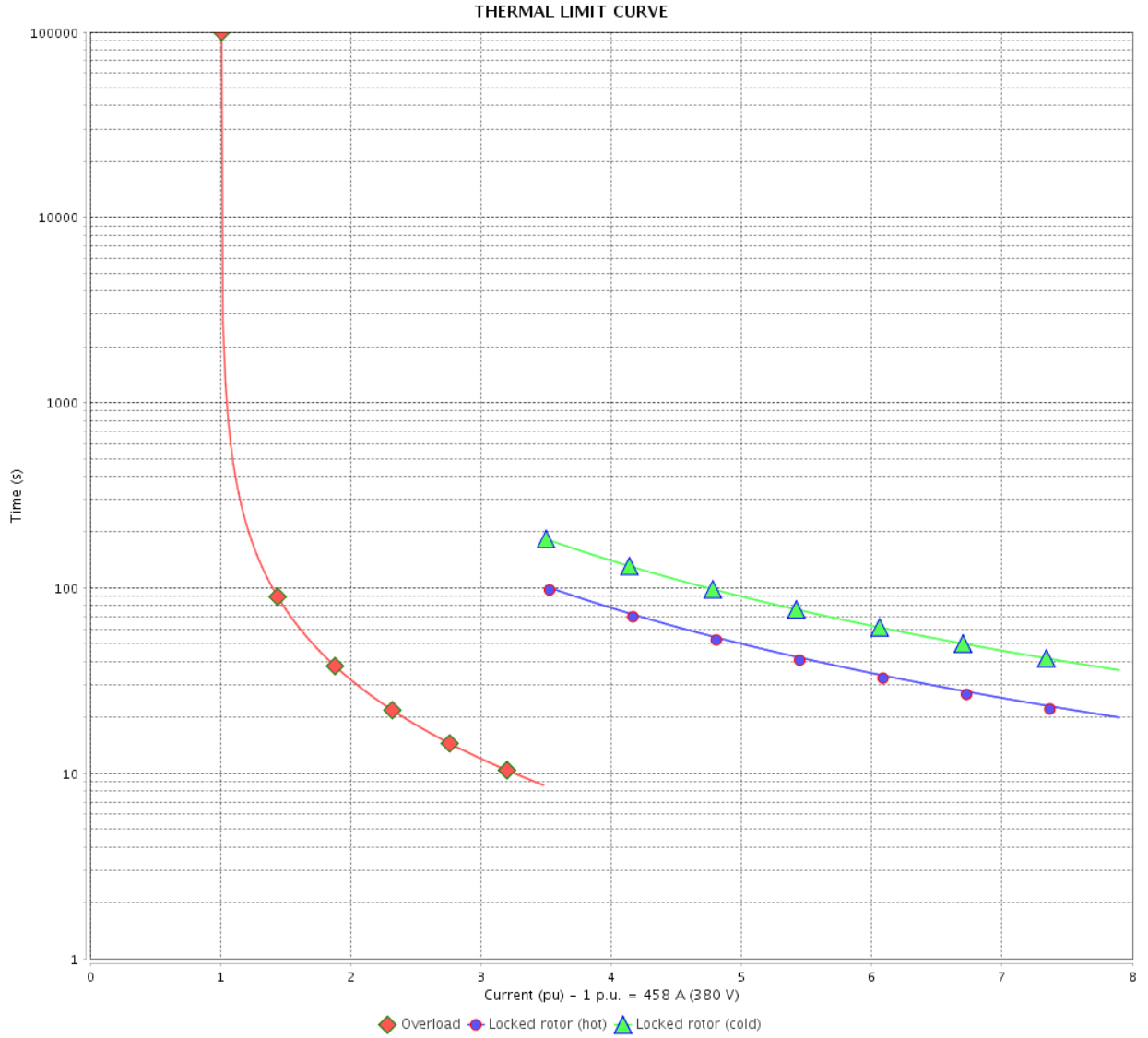
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LRC	: 8.9	Duty cycle	: Cont.(S1)
Rated torque	: 616 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 105 K
Rated speed	: 2984 rpm	Design	: A

Heating constant

Cooling constant

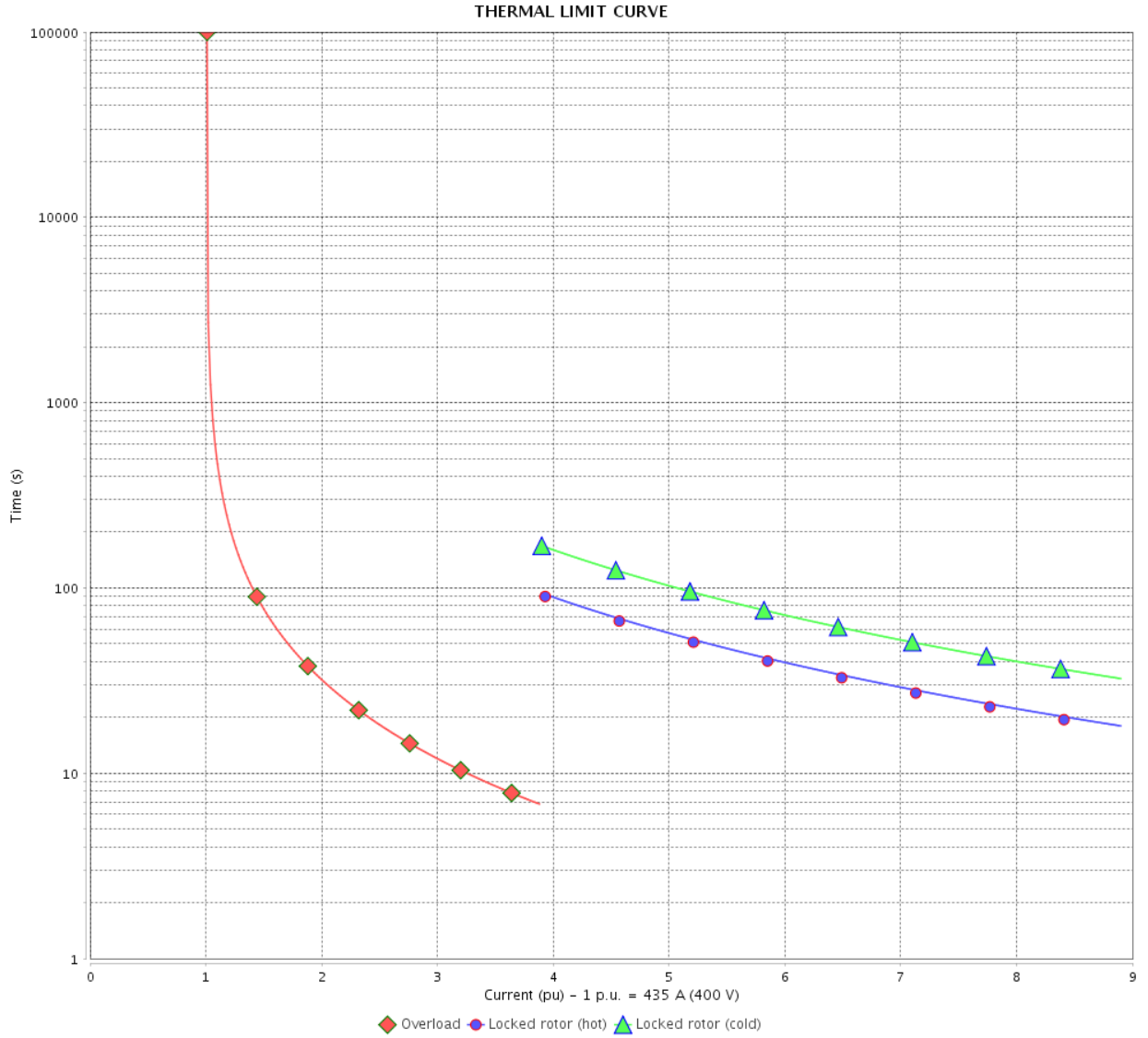
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THERMAL LIMIT CURVE

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Customer : _____



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Catalog # : 40036ET3G449TS-W22

Performance : 415 V 50 Hz 2P IE3

Rated current	: 424 A	Moment of inertia (J)	: 91.9 sq.ft.lb
LRC	: 9.6	Duty cycle	: Cont.(S1)
Rated torque	: 616 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 105 K
Rated speed	: 2985 rpm	Design	: A

Heating constant

Cooling constant

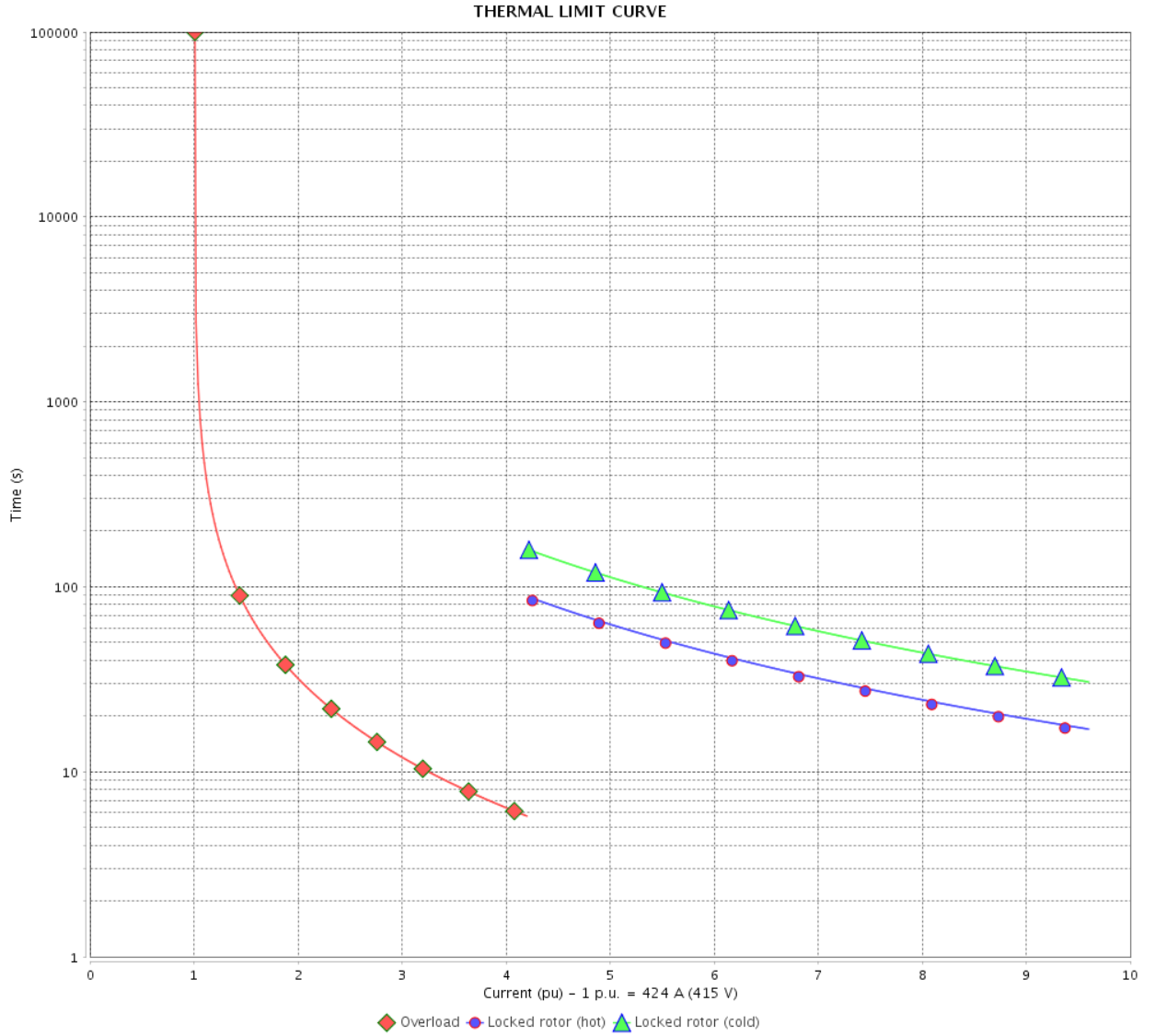
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



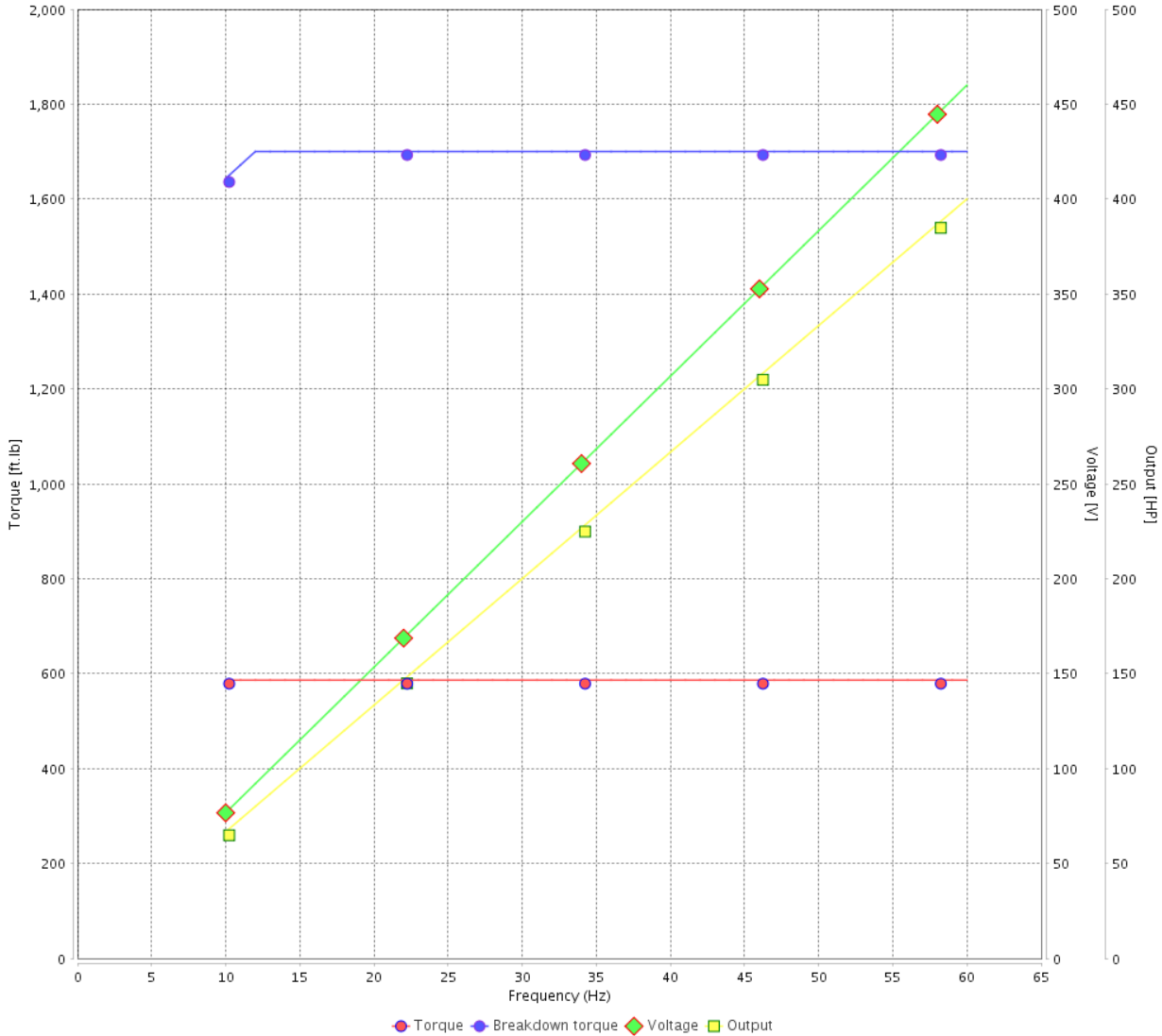
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VFD OPERATION CURVE



Performance : 460 V 60 Hz 2P

Rated current	: 442 A	Moment of inertia (J)	: 91.9 sq.ft.lb
LRC	: 8.7	Duty cycle	: Cont.(S1)
Rated torque	: 586 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.15
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 3583 rpm	Design	: A

Rev.	Changes Summary	Performed	Checked	Date
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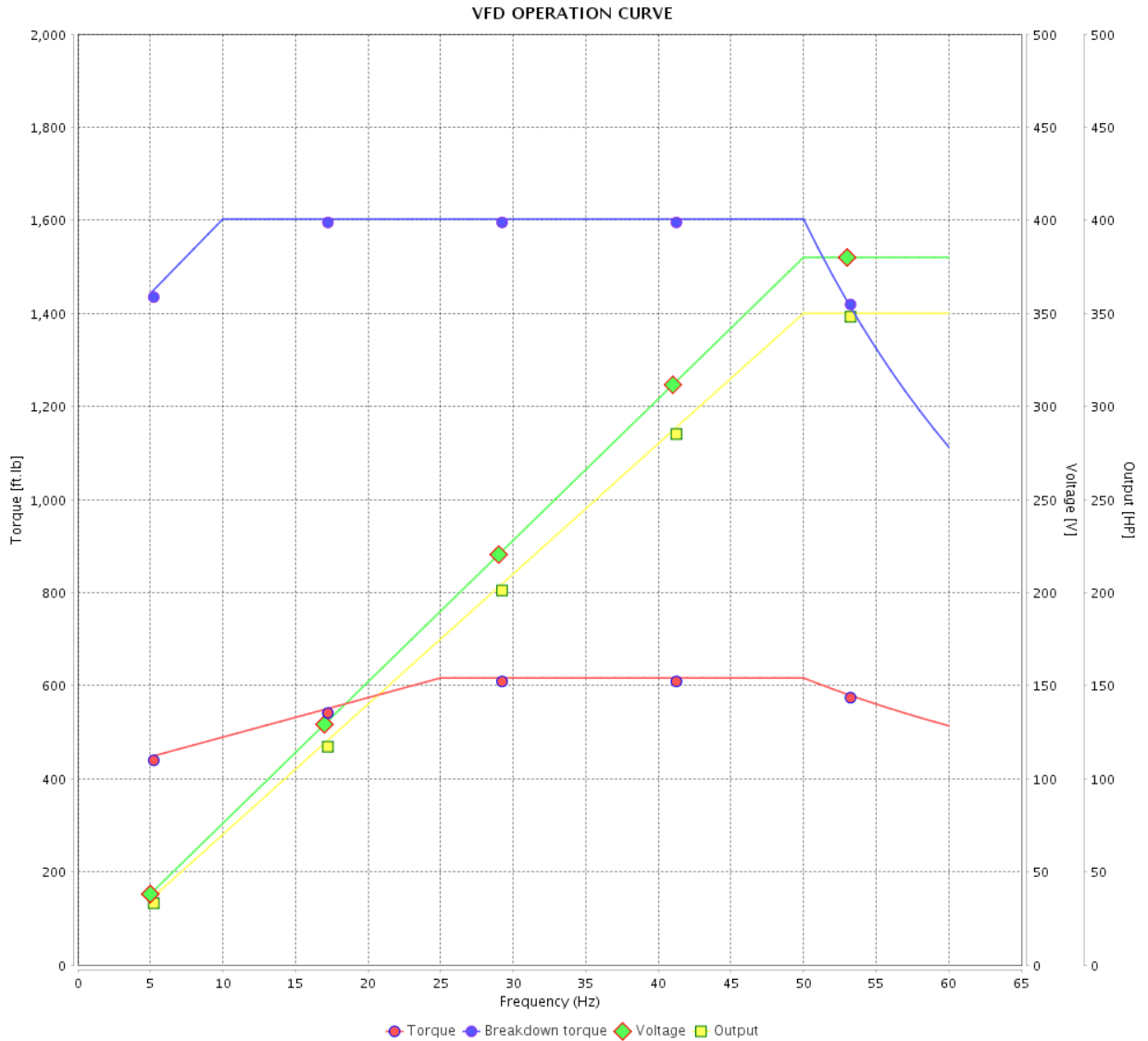
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Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 380 V 50 Hz 2P IE3

Rated current : 458 A	Moment of inertia (J) : 91.9 sq.ft.lb
LRC : 7.9	Duty cycle : Cont.(S1)
Rated torque : 616 ft.lb	Insulation class : F
Locked rotor torque : 250 %	Service factor : 1.00
Breakdown torque : 260 %	Temperature rise : 105 K
Rated speed : 2982 rpm	Design : A

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

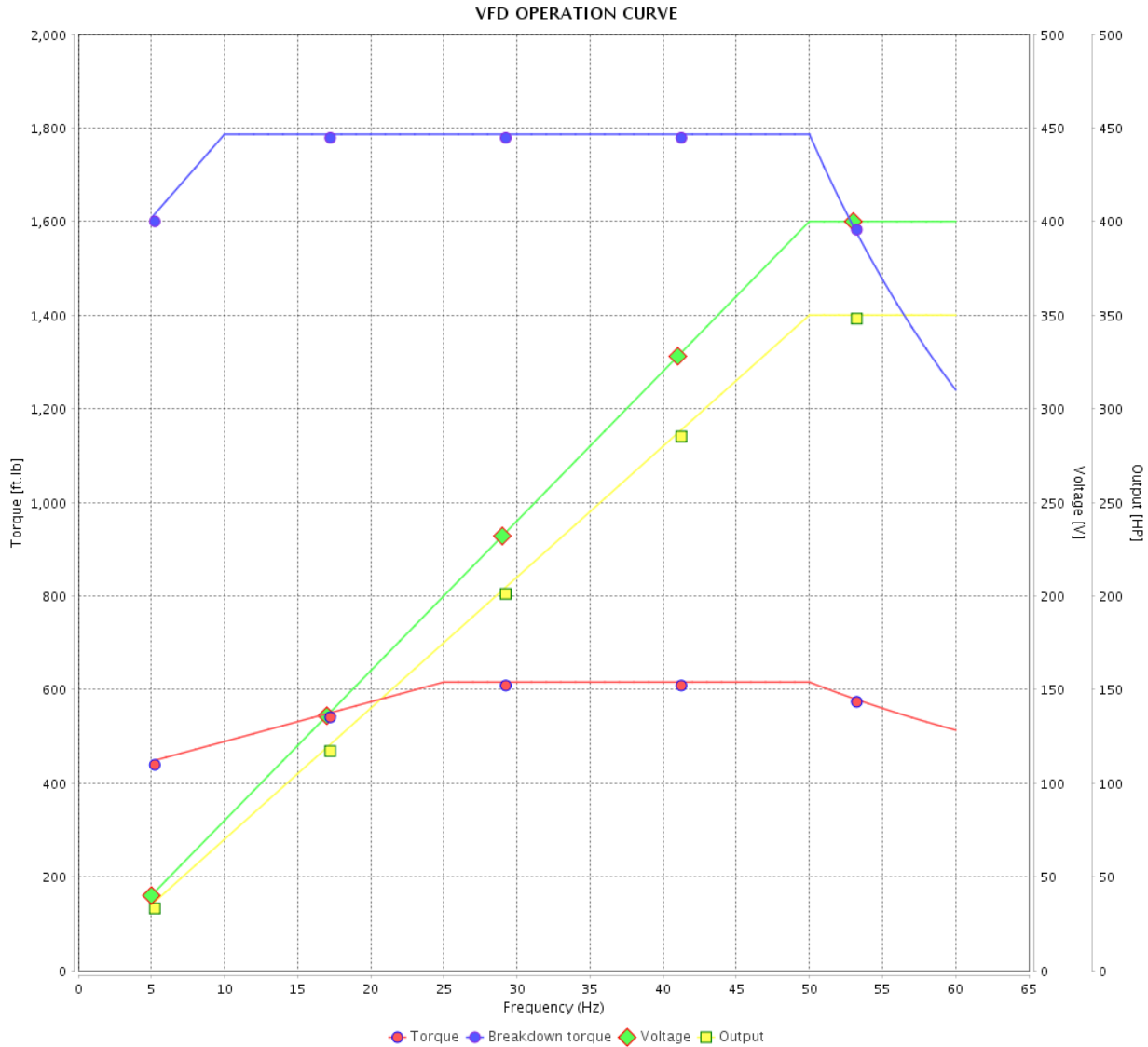


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Rated torque	: 616 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 105 K
Rated speed	: 2984 rpm	Design	: A

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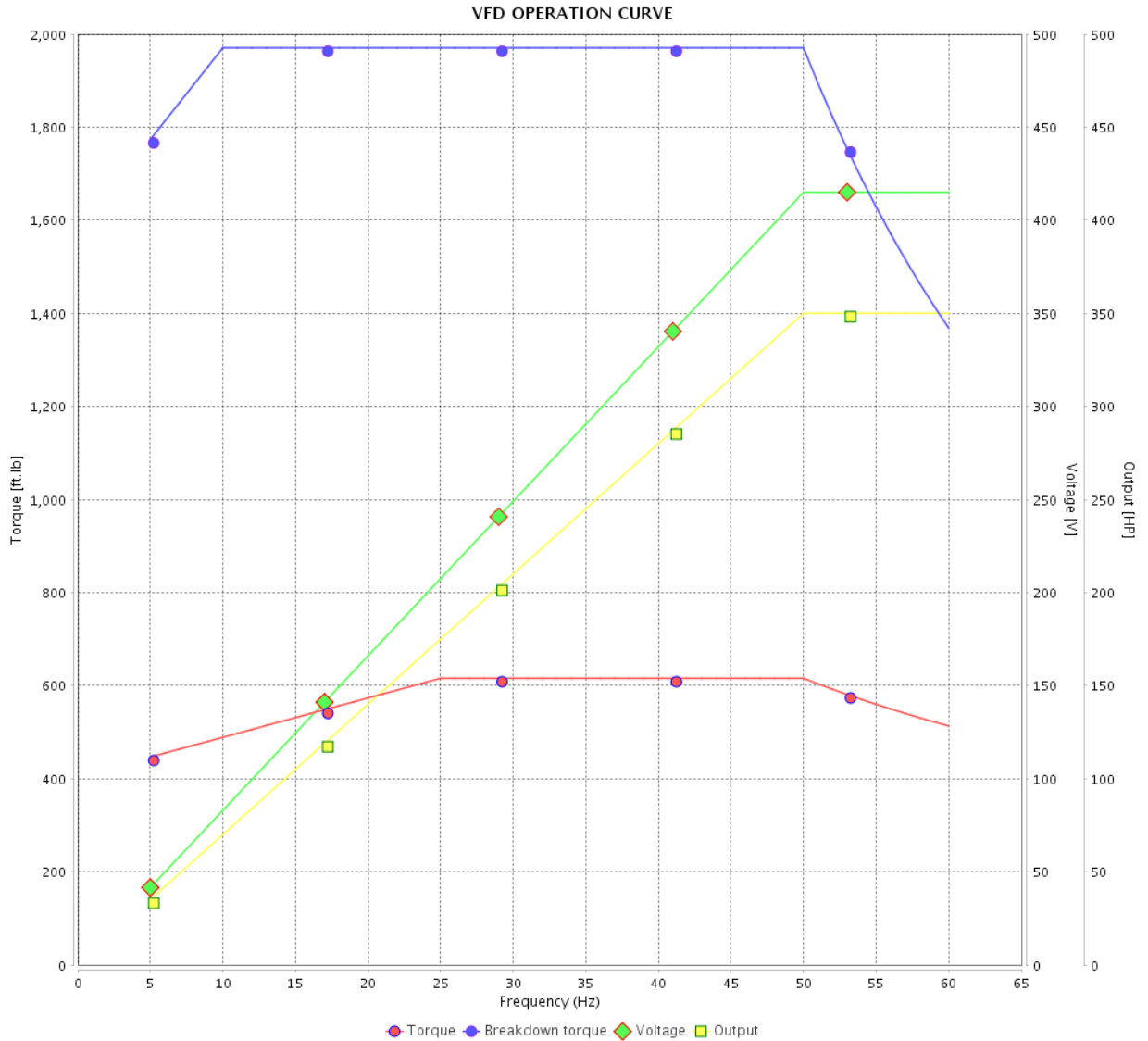
VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



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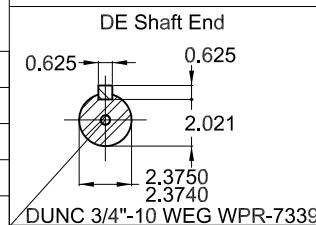
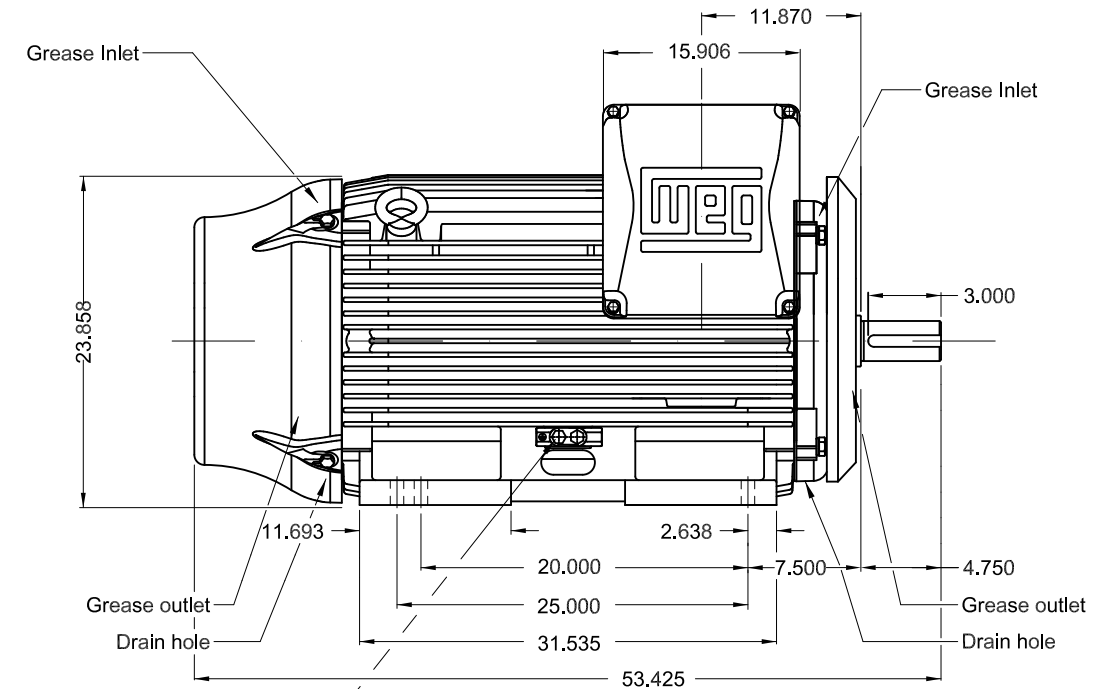
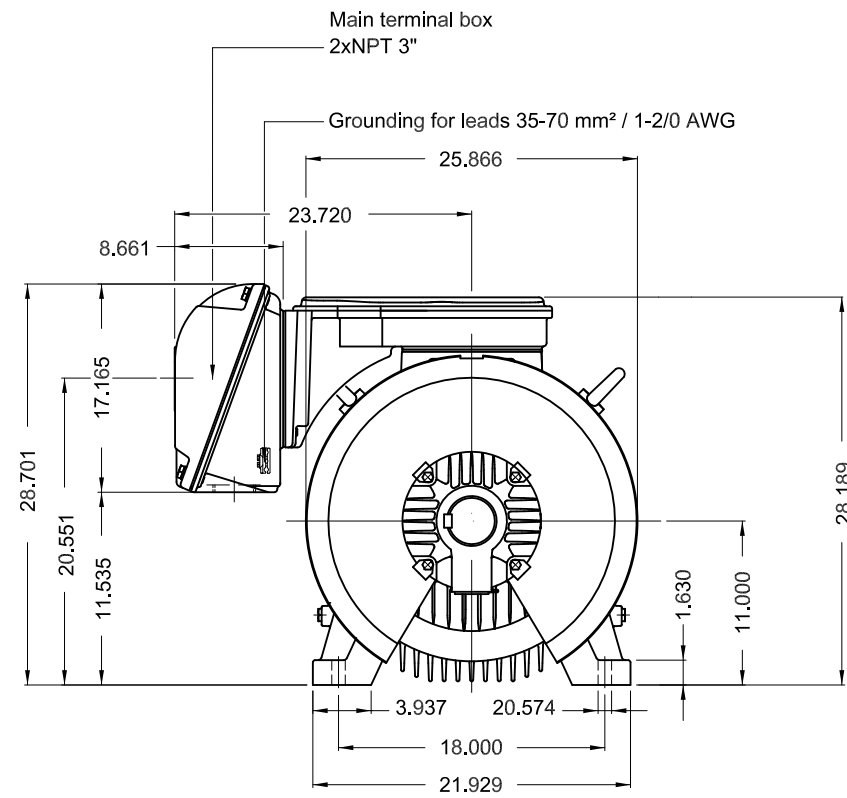
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Rated speed : 2985 rpm	Design : A

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- NDE endshield with electrically insulated bearing hub
- Drive-End Air Deflector
- Color RAL 5009
- Painting plan 203A
- Mounting B3R(D)

400 HP 02 Poles 60 Hz

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W22 PREM. EFF.					
CHECKED		FRAME L447/9TS IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD



MADE IN MEXICO
11408289



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 40036ET3G449TS-W22

Inverter Duty Motor
Severe Duty

PH3 60Hz Fr. L447/9TS 1000m.a.s.l. IP55 TEFC 3186lb

V 460

A 442

HP 400

kW 300

SF 1.15

SFA 508

RPM 3583

PF 0.89

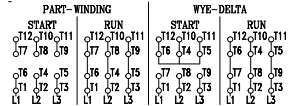
AMB 40°C

INS cl. F DT80K

NEMA NOM EFF 95.8%

DUTY CONT.

DES A Code K



→ 6314-C3 (27g)

→ 6314-C3 (27g)



MOBIL POLYREX EM (4000h)

