

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	11408291		
		Catalog # :	40018ET3G449T-W22		
Frame	: L447/9T	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	: 3240 lb		
Protection degree	: IP55	Moment of inertia (J)	: 136 sq.ft.lb		
Design	: B				
Output [HP]	400	350	350	350	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	445	461	448	437	
L. R. Amperes [A]	2893	2766	3002	3146	
LRC [A]	6.5x(Code G)	6.0x(Code F)	6.7x(Code G)	7.2x(Code H)	
No load current [A]	125	125	140	155	
Rated speed [RPM]	1785	1485	1485	1485	
Slip [%]	0.83	1.00	1.00	1.00	
Rated torque [ft.lb]	1180	1240	1240	1240	
Locked rotor torque [%]	250	229	250	280	
Breakdown torque [%]	260	240	270	290	
Service factor	1.15	1.15	1.15	1.15	
Temperature rise	80 K	105 K	80 K	80 K	
Locked rotor time	37s (cold) 21s (hot)	43s (cold) 24s (hot)	37s (cold) 21s (hot)	32s (cold) 18s (hot)	
Noise level ²	79.0 dB(A)	74.0 dB(A)	74.0 dB(A)	74.0 dB(A)	
Efficiency (%)	25%	94.9	95.4	94.9	94.9
	50%	95.4	95.8	95.4	95.4
	75%	95.8	95.8	95.8	95.8
	100%	96.2	96.2	96.2	96.2
Power Factor	25%	0.55	0.56	0.52	0.48
	50%	0.80	0.81	0.77	0.74
	75%	0.85	0.86	0.84	0.82
	100%	0.88	0.89	0.87	0.86
Bearing type	: <u>Drive end</u> 6322 C3 <u>Non drive end</u> 6319 C3	Foundation loads			
Sealing	: WSeal WSeal	Max. traction	: 7949 lb		
Lubrication interval	: 6000 h 8000 h	Max. compression	: 11189 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



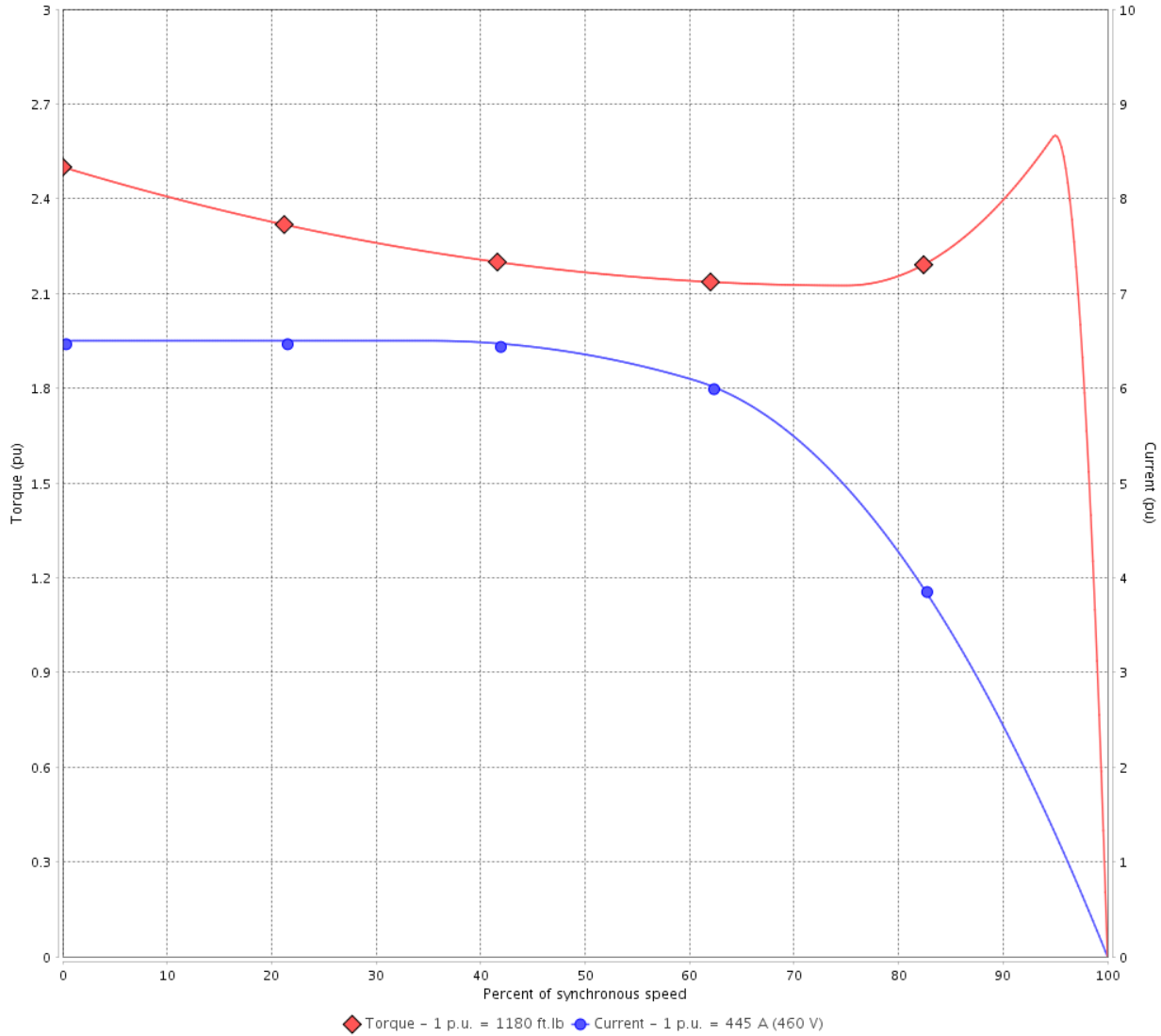
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408291

Catalog # : 40018ET3G449T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 445 A	Moment of inertia (J)	: 136 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 1180 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.15
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1785 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



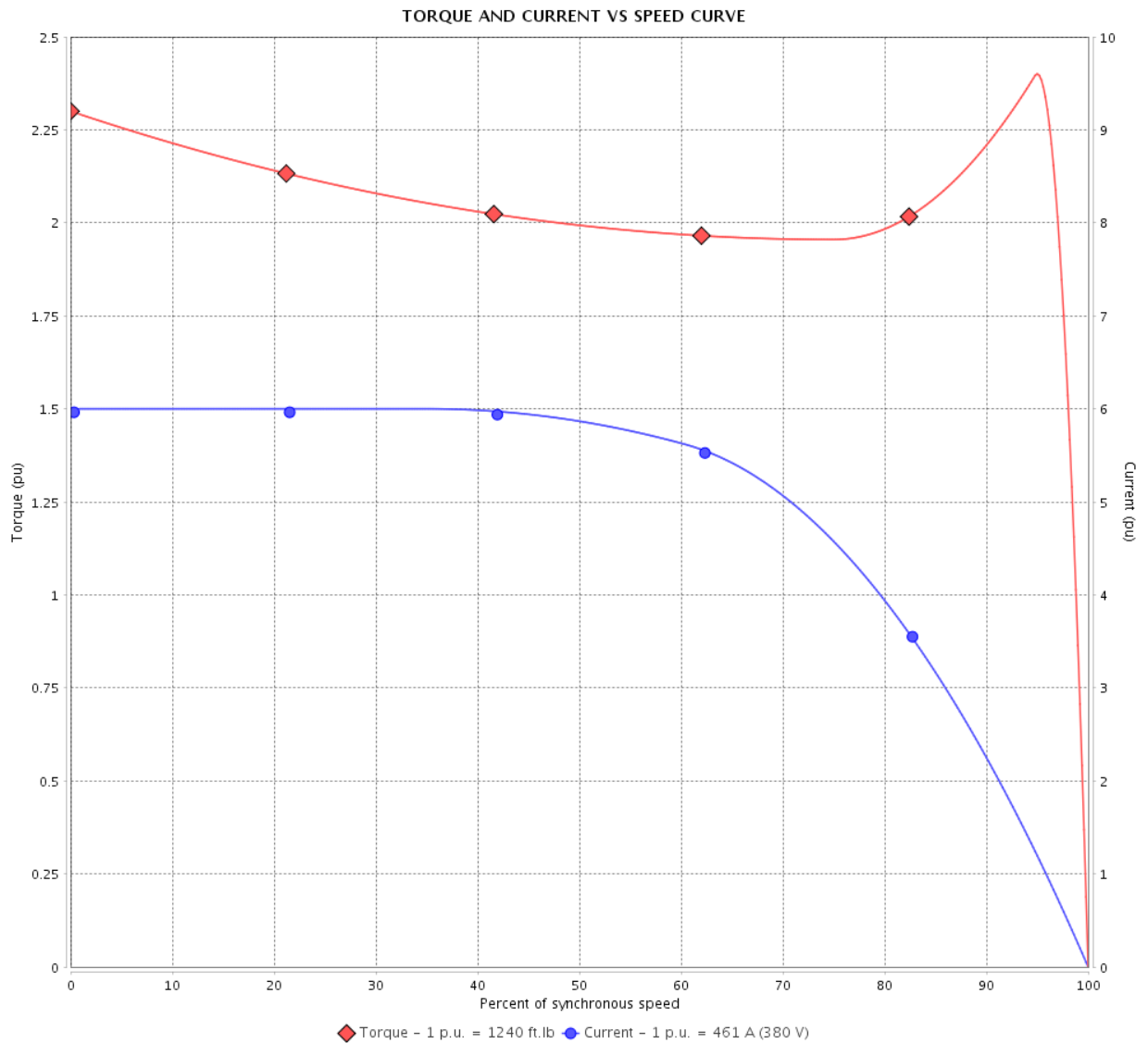
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408291

Catalog # : 40018ET3G449T-W22



Performance : 380 V 50 Hz 4P IE3

Rated current	: 461 A	Moment of inertia (J)	: 136 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 1240 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 1485 rpm	Design	: B

Locked rotor time : 43s (cold) 24s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



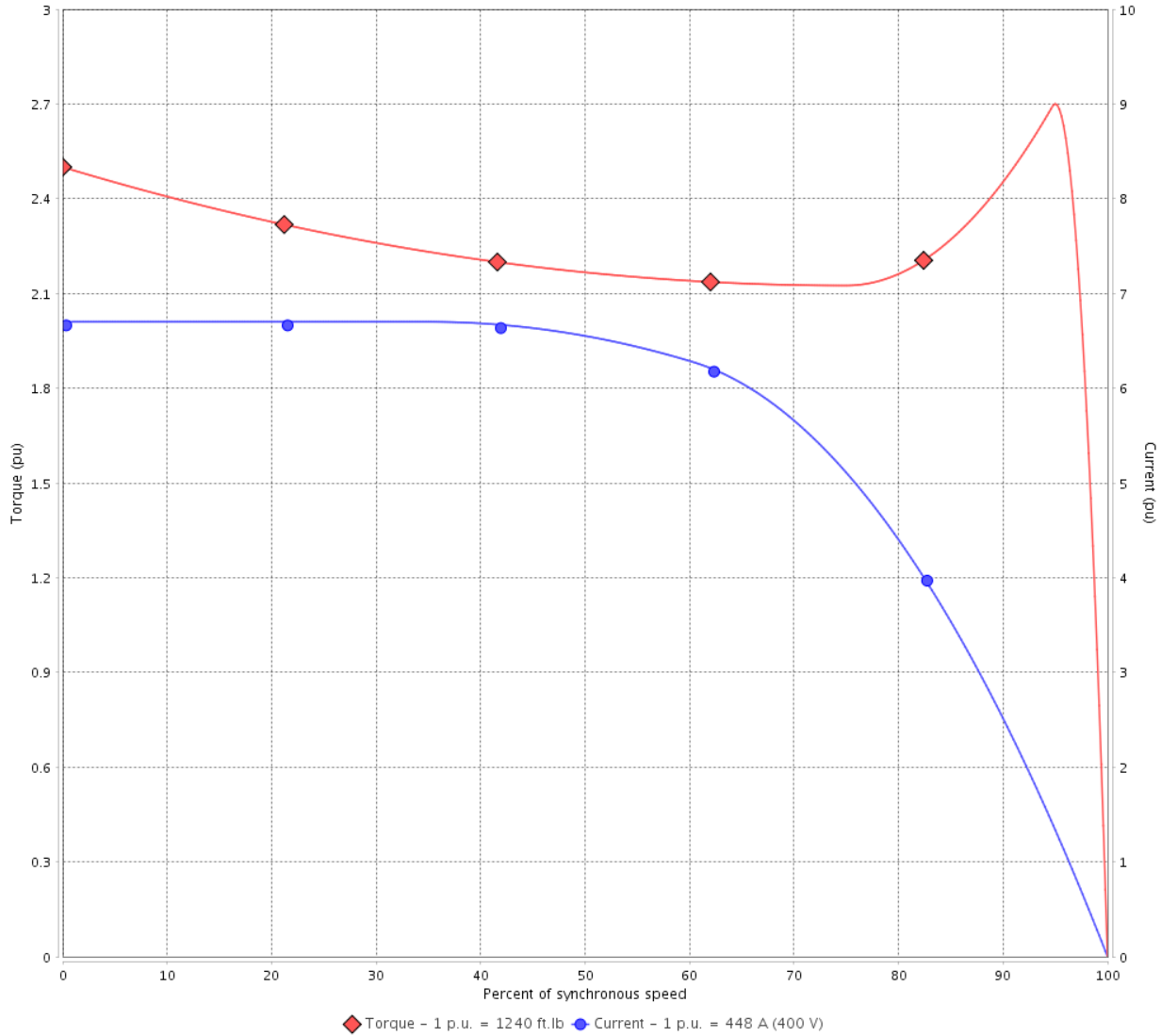
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408291

Catalog # : 40018ET3G449T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 448 A	Moment of inertia (J)	: 136 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 1240 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.15
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



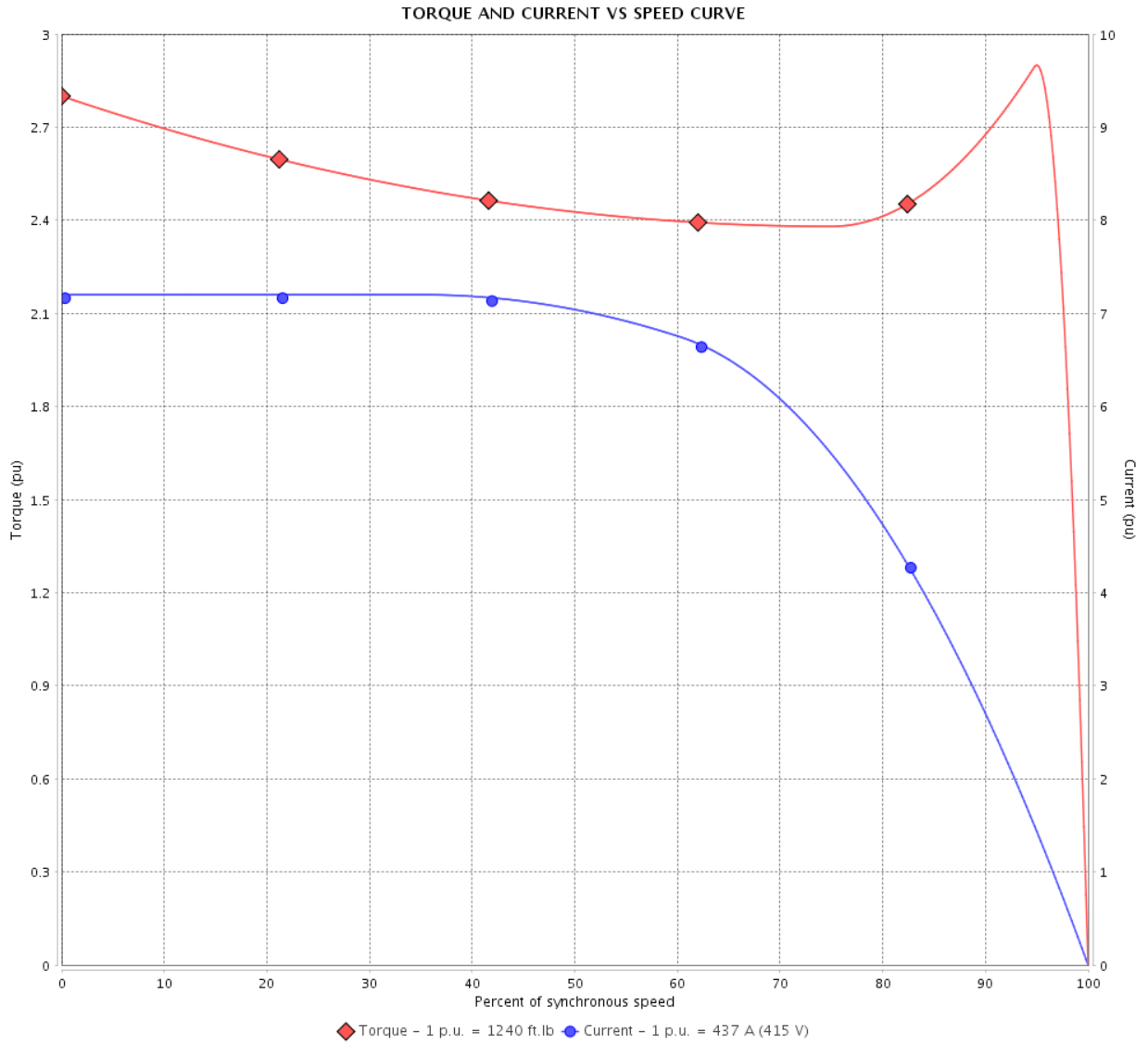
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408291

Catalog # : 40018ET3G449T-W22



Performance : 415 V 50 Hz 4P IE3

Rated current	: 437 A	Moment of inertia (J)	: 136 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 1240 ft.lb	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.15
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

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

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

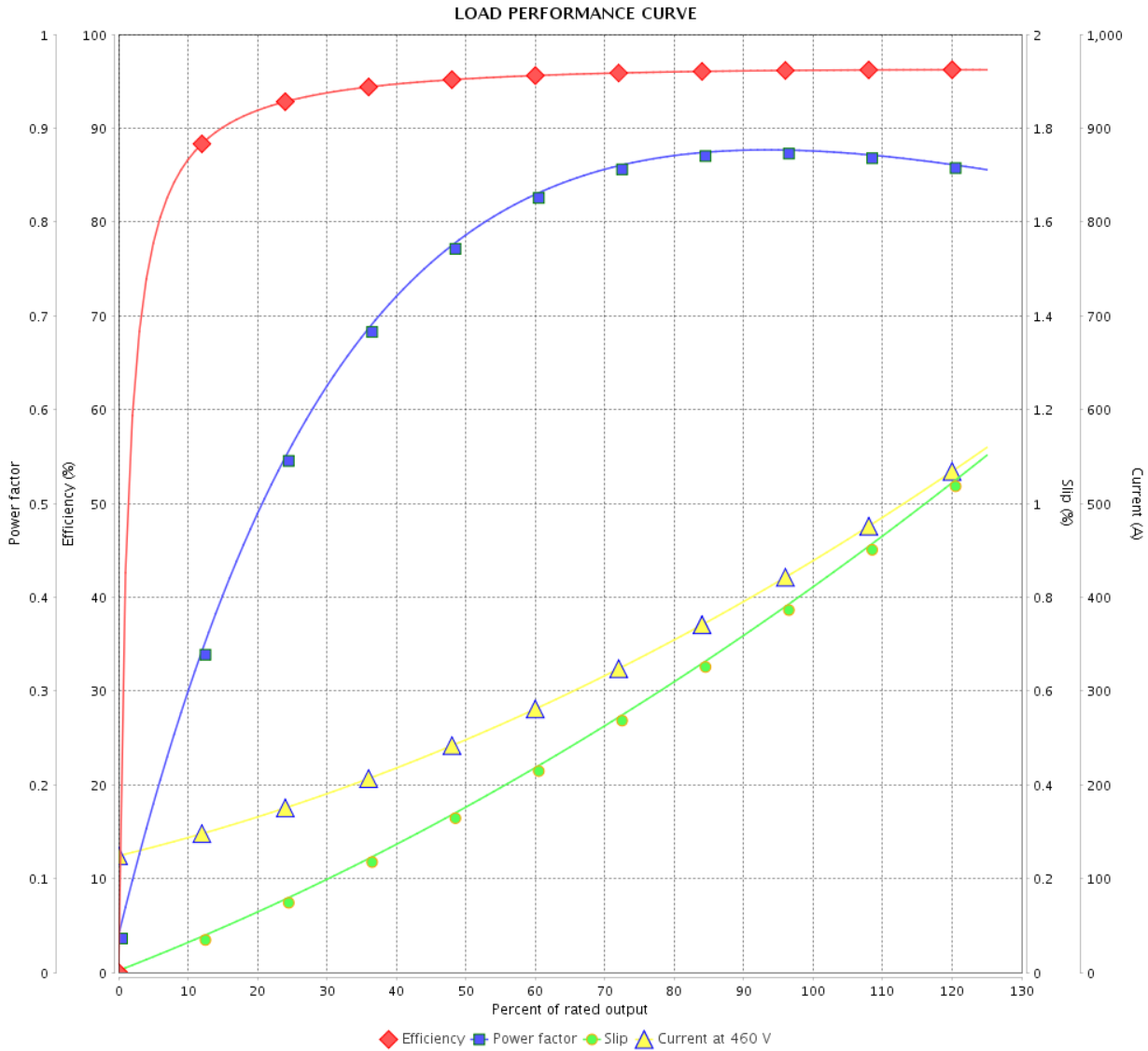


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Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408291

Catalog # : 40018ET3G449T-W22



Performance : 460 V 60 Hz 4P

Rated current	: 445 A	Moment of inertia (J)	: 136 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 1180 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.15
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1785 rpm	Design	: B

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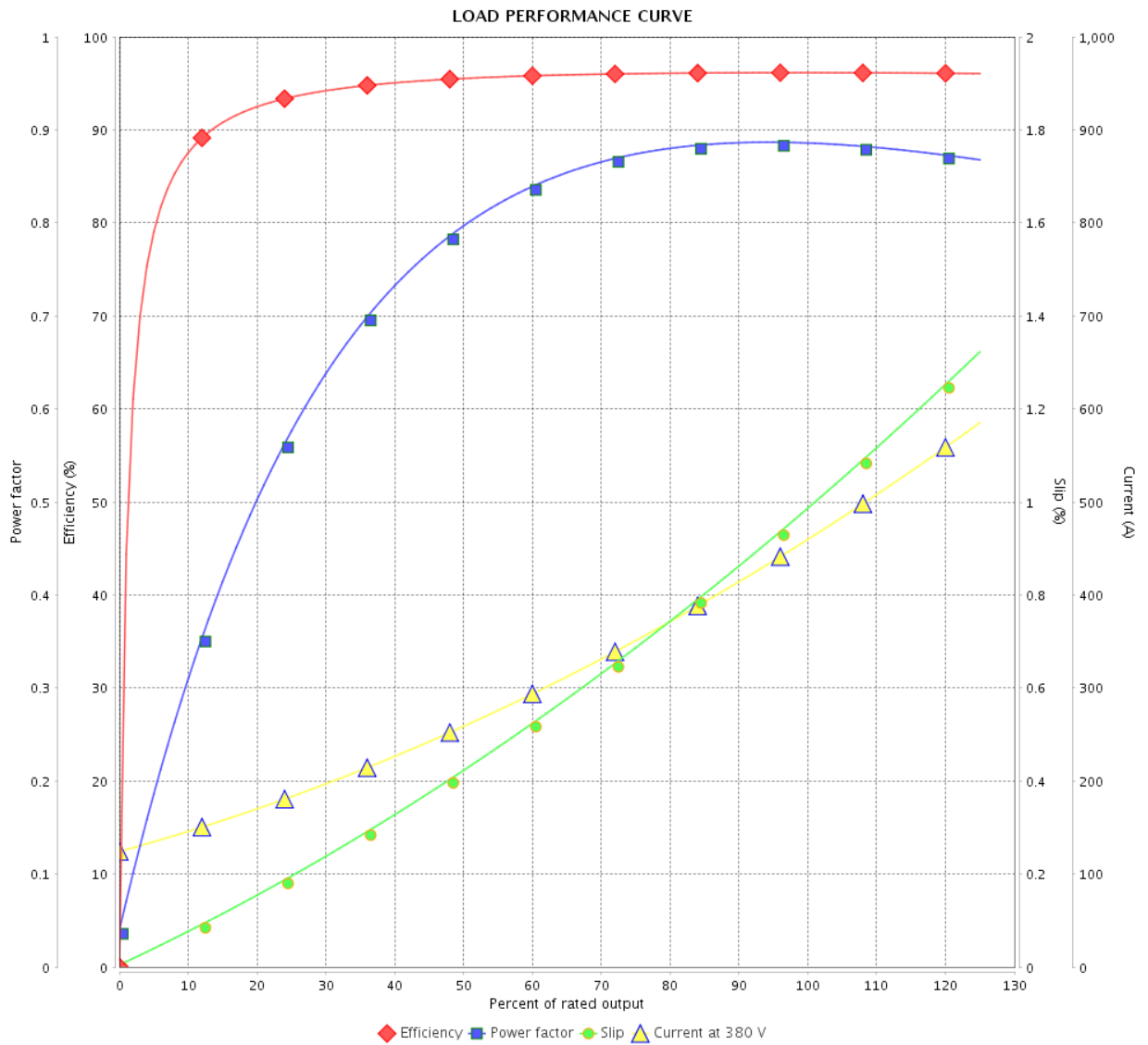


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Performance : 380 V 50 Hz 4P IE3

Rated current : 461 A
 LRC : 6.0
 Rated torque : 1240 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 240 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 136 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 105 K
 Design : B

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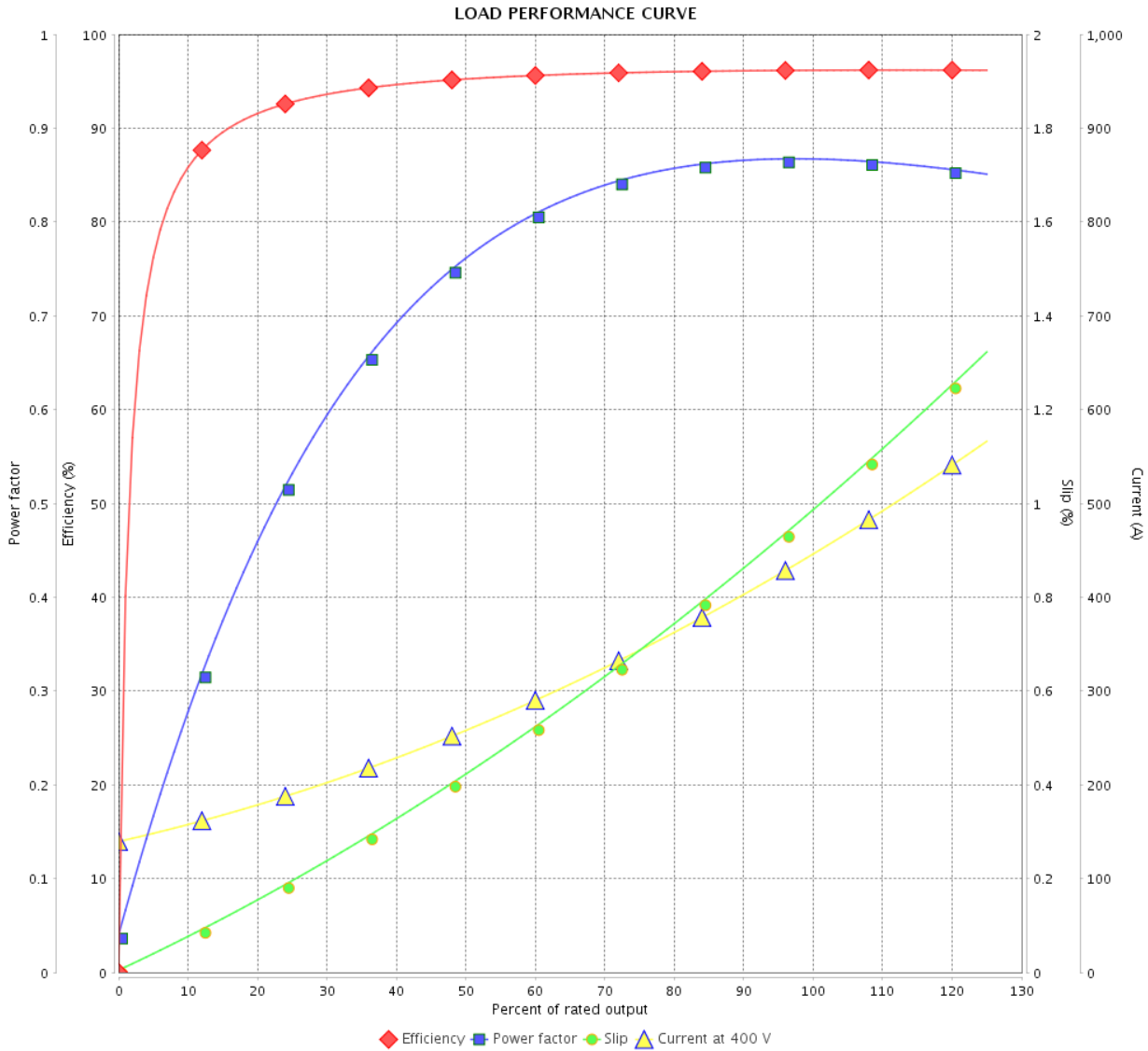


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Locked rotor torque : 250 %	Service factor : 1.15
Breakdown torque : 270 %	Temperature rise : 80 K
Rated speed : 1485 rpm	Design : B

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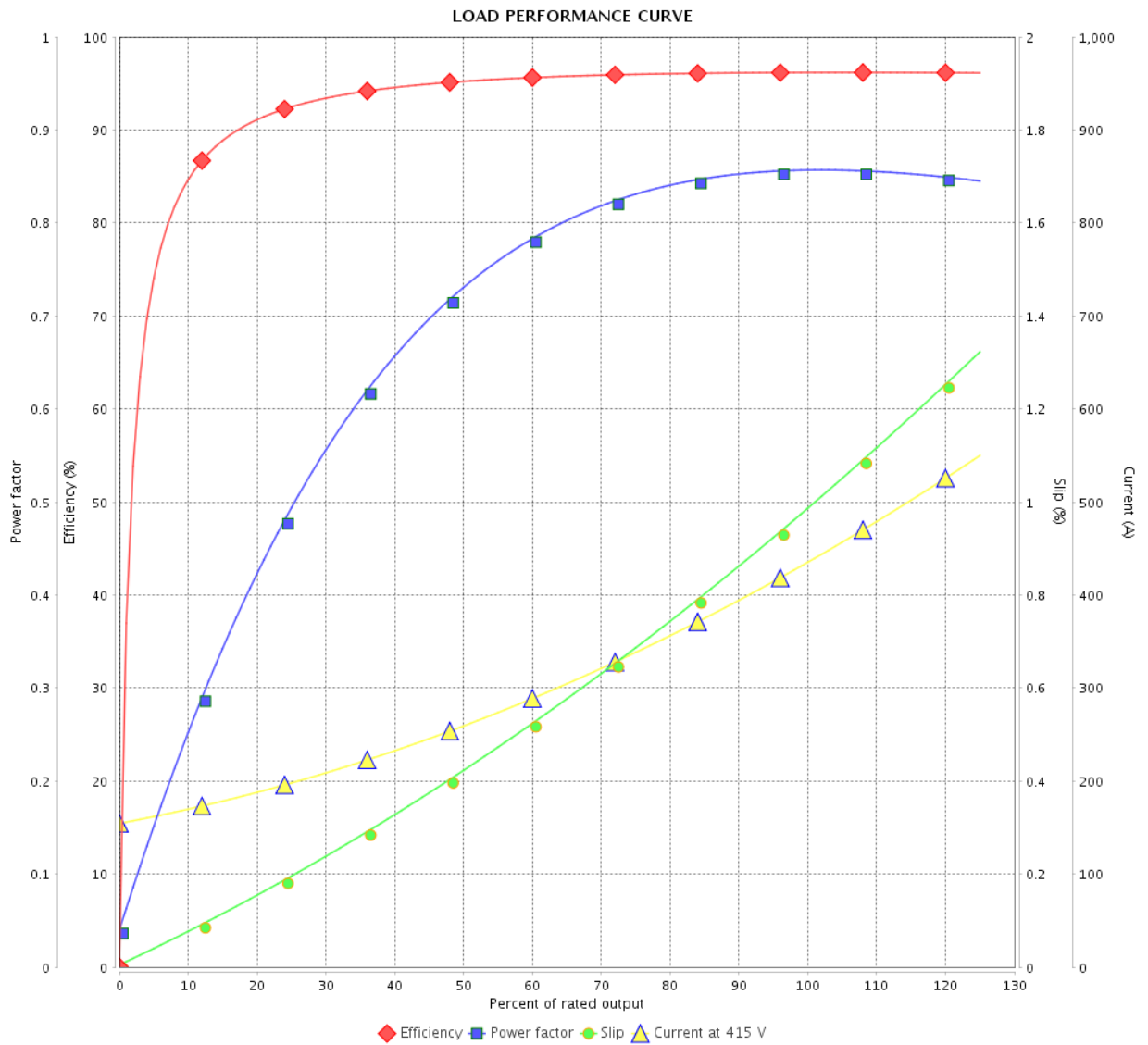


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Performance : 415 V 50 Hz 4P IE3

Rated current : 437 A
 LRC : 7.2
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 Locked rotor torque : 280 %
 Breakdown torque : 290 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 136 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE

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Heating constant

Cooling constant

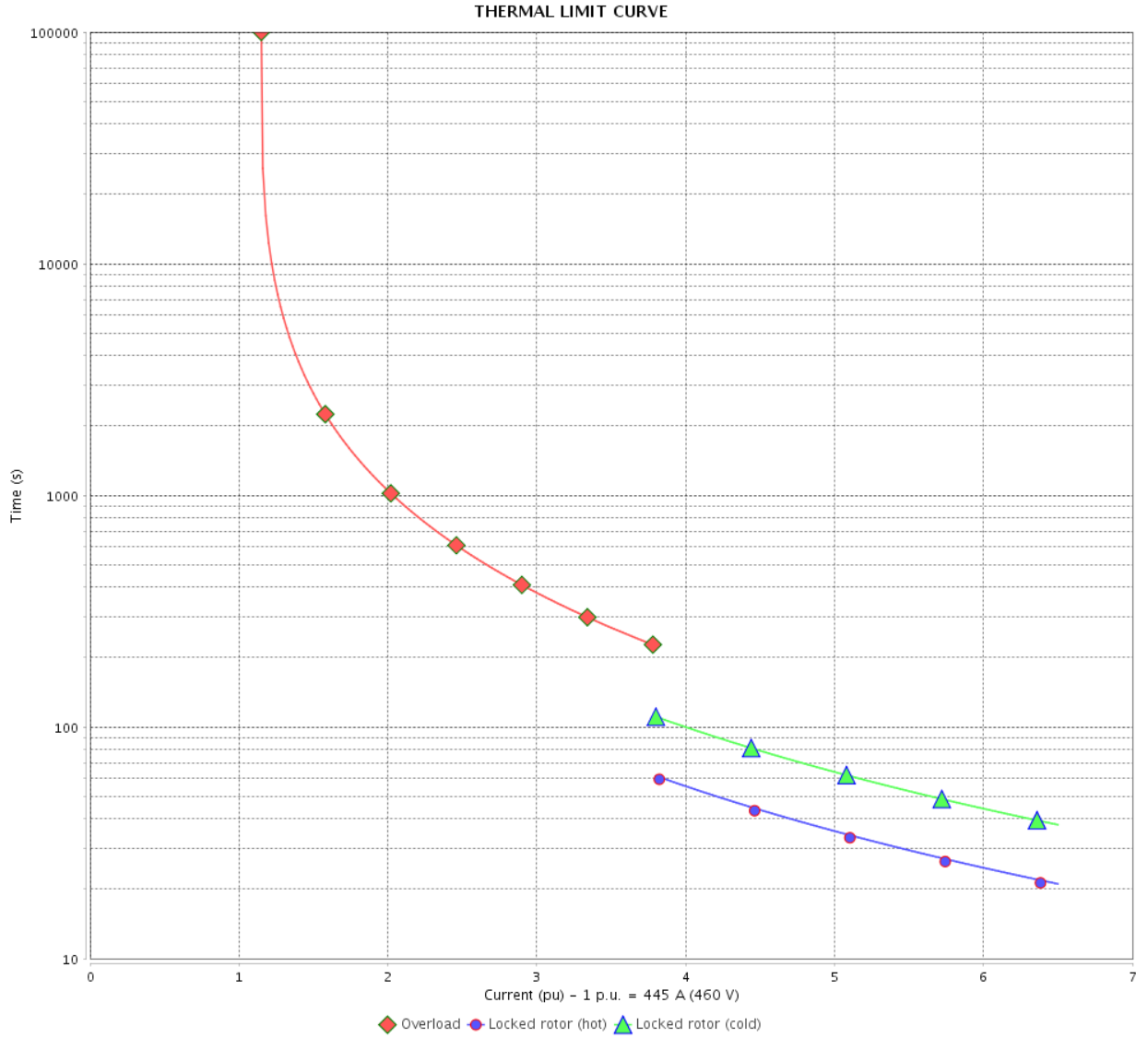
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Breakdown torque	: 240 %	Temperature rise	: 105 K
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Cooling constant

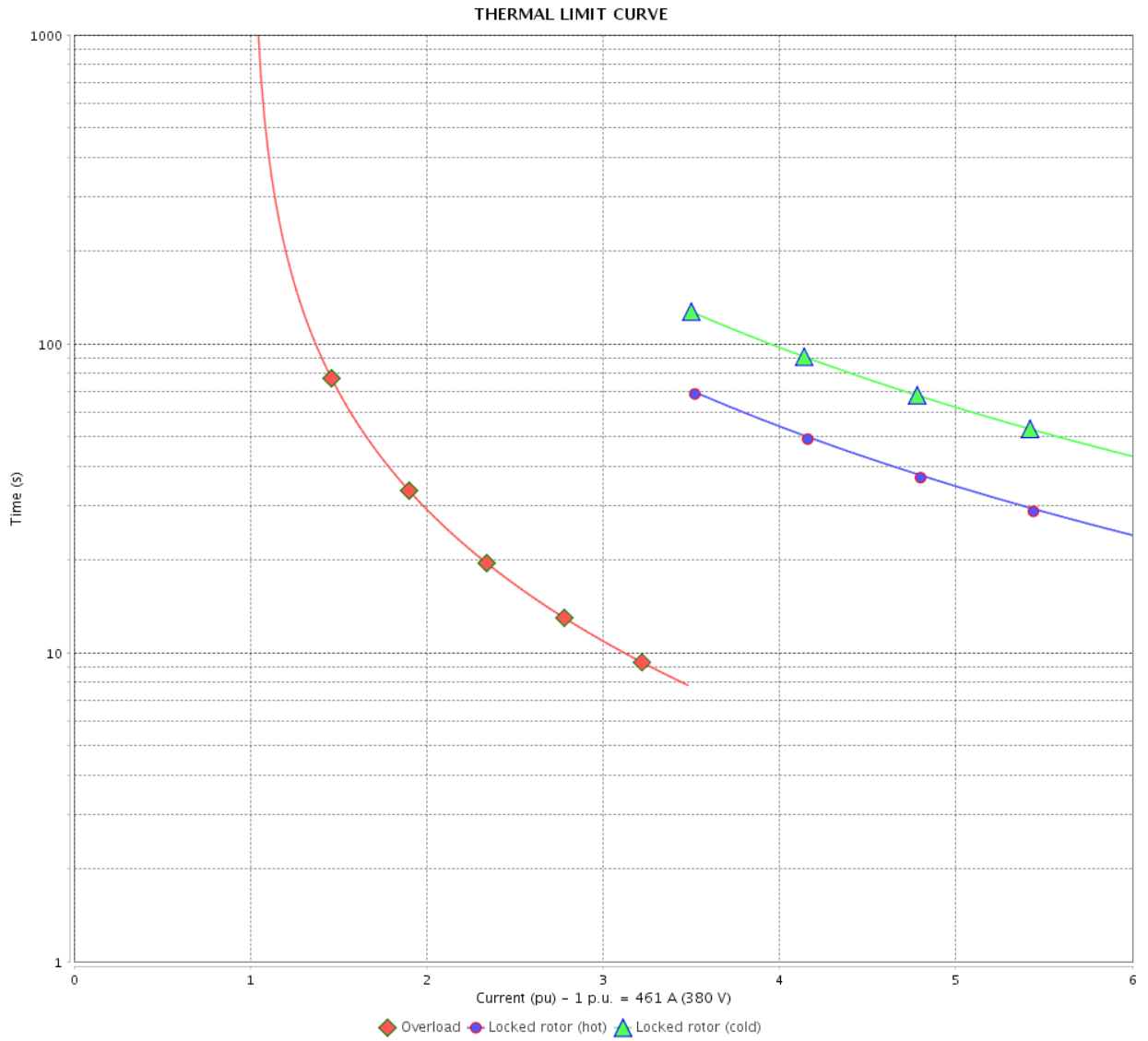
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Rated speed	: 1485 rpm	Design	: B

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Cooling constant

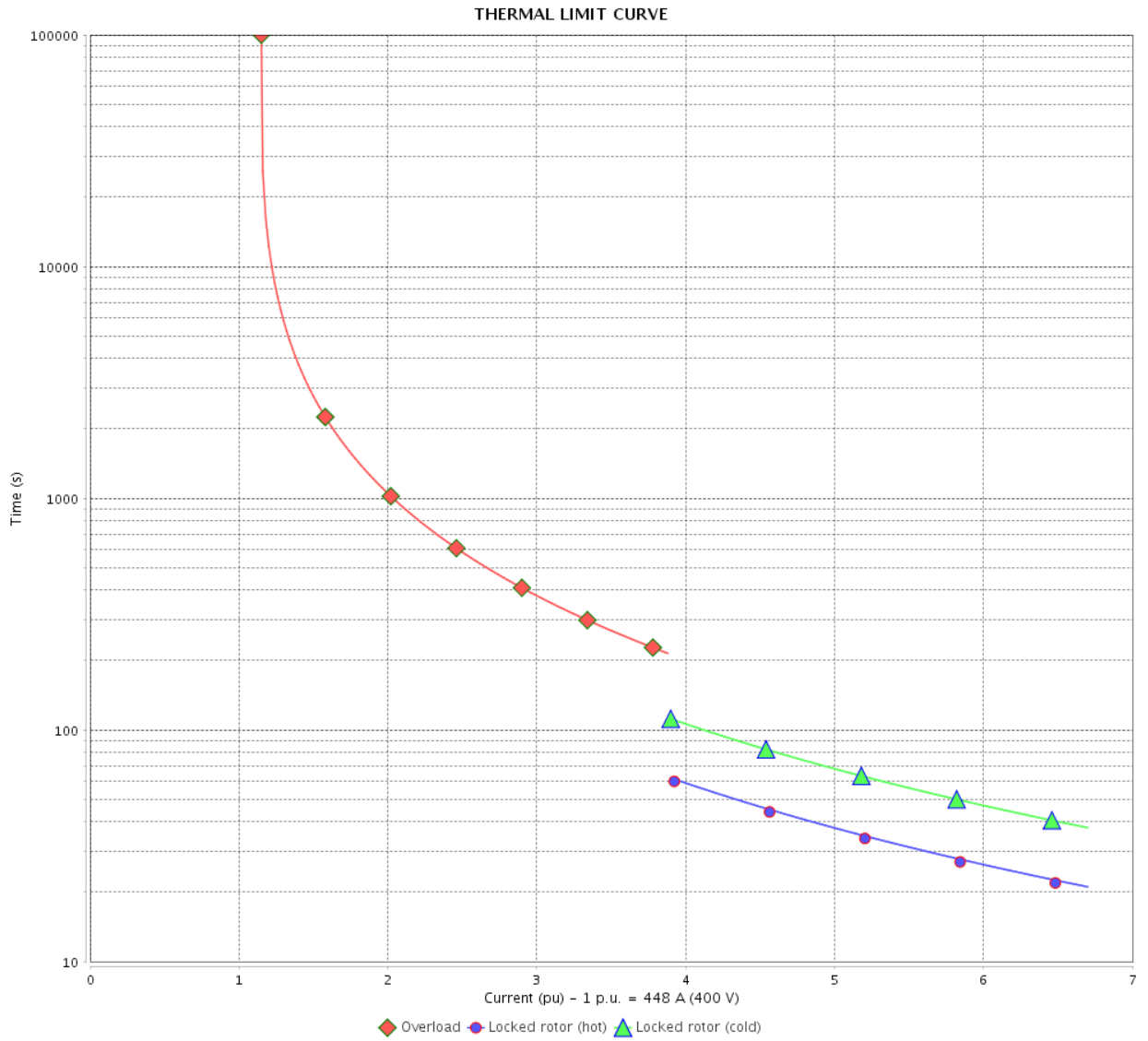
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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

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Product code : 11408291
Catalog # : 40018ET3G449T-W22

Performance : 415 V 50 Hz 4P IE3

Rated current	: 437 A	Moment of inertia (J)	: 136 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 1240 ft.lb	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.15
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Heating constant

Cooling constant

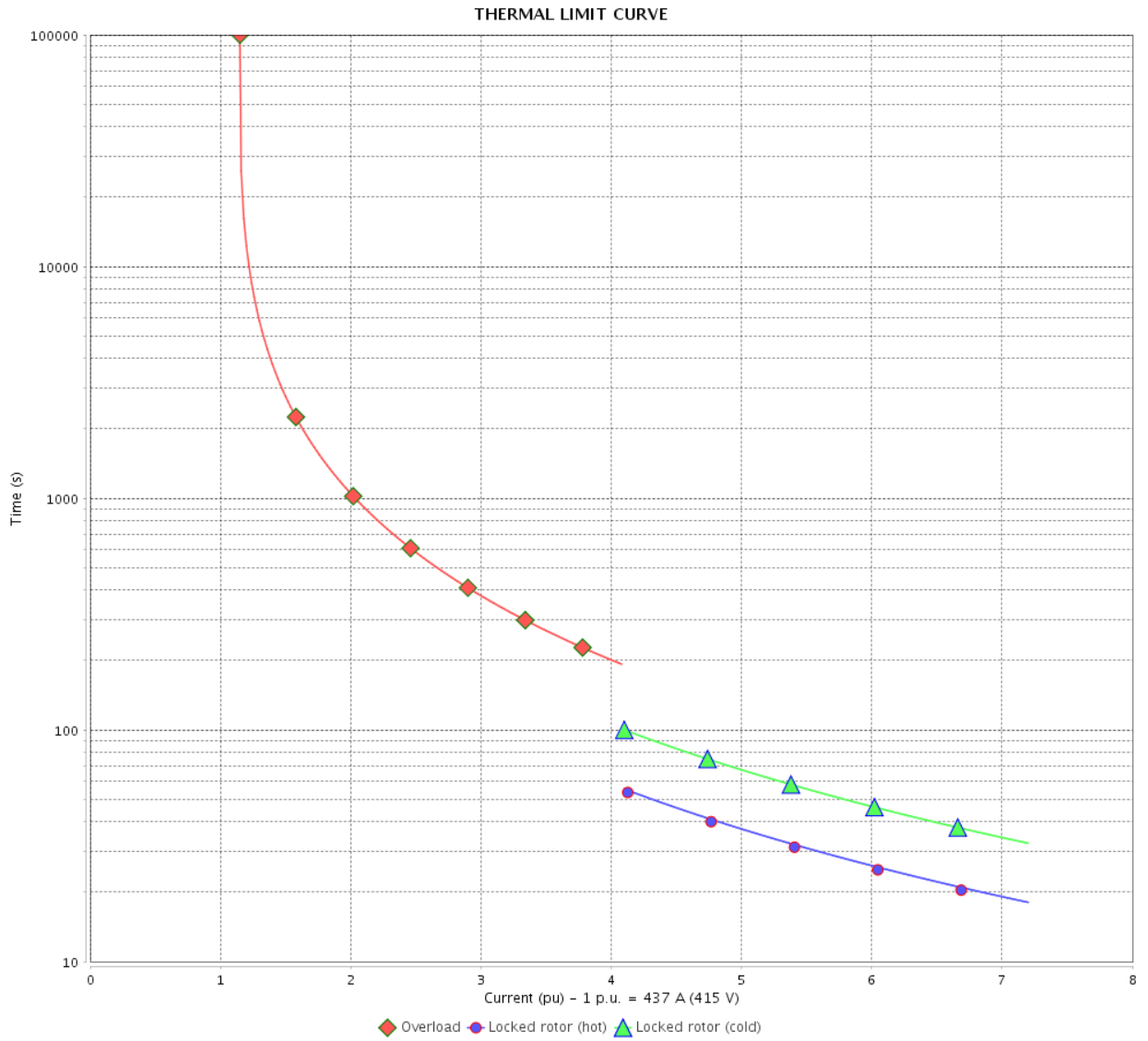
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



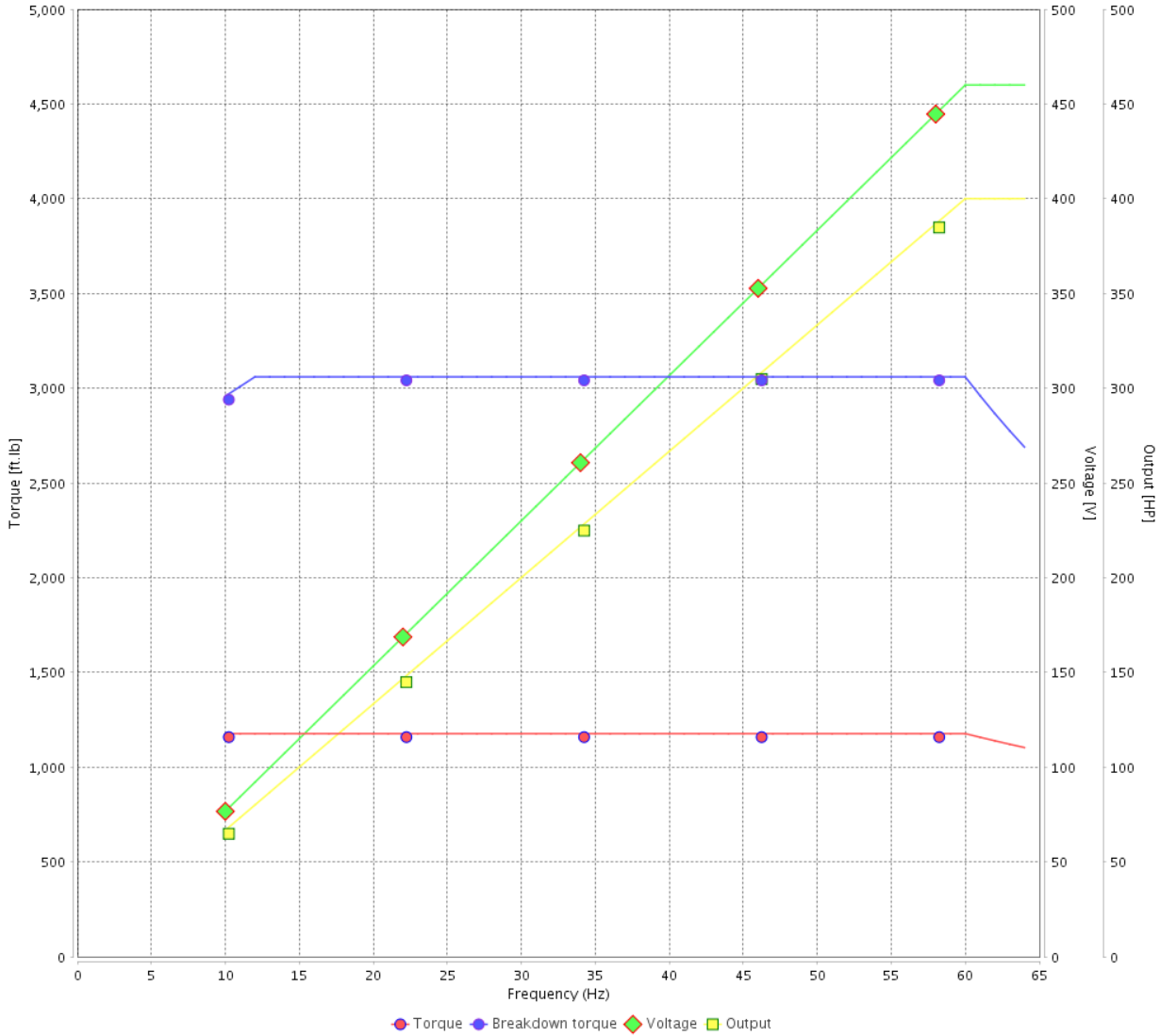
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VFD OPERATION CURVE



Performance : 460 V 60 Hz 4P

Rated current : 445 A
 LRC : 6.5
 Rated torque : 1180 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 260 %
 Rated speed : 1785 rpm

Moment of inertia (J) : 136 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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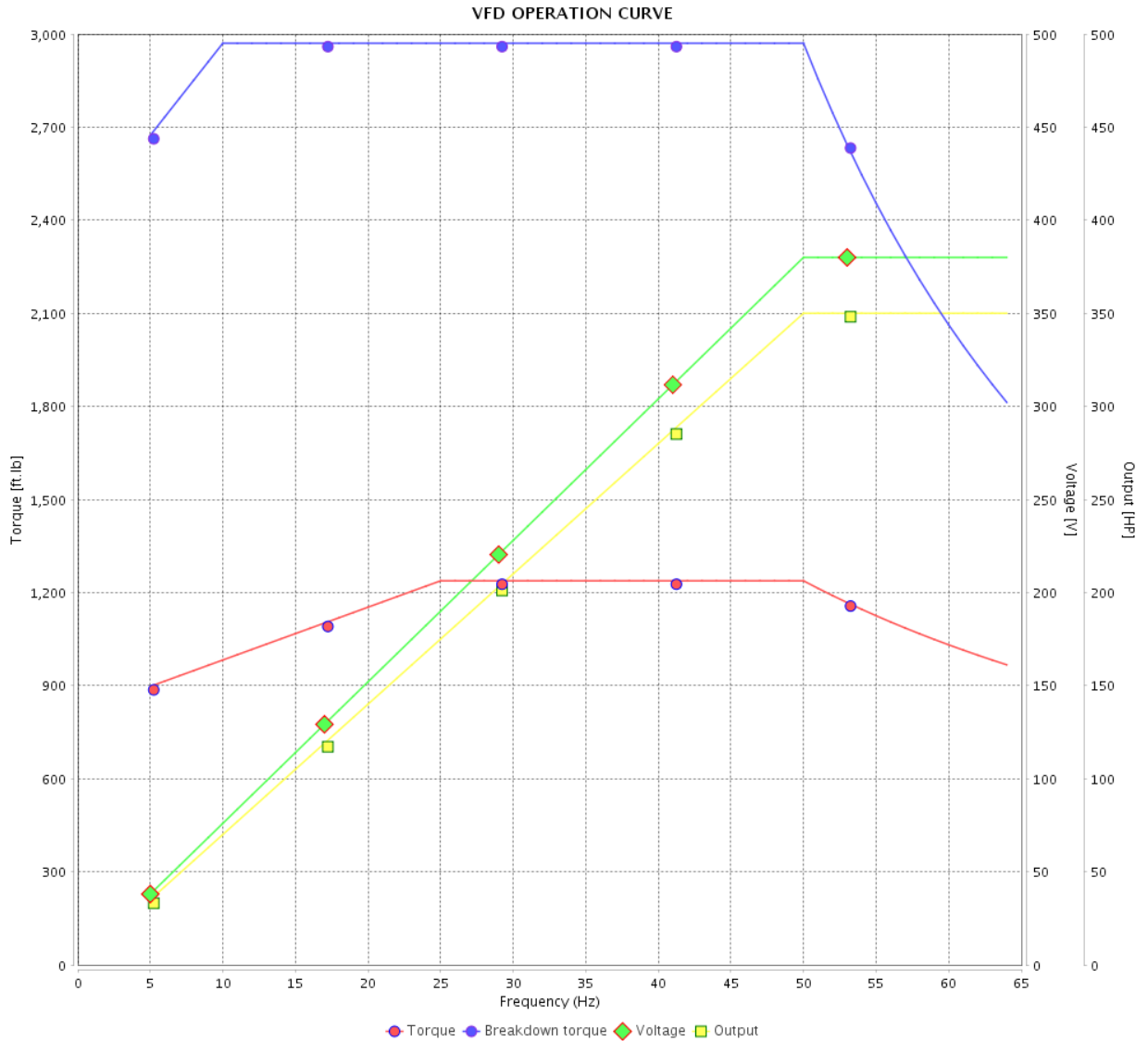
VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



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Performance : 380 V 50 Hz 4P IE3

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Rated torque	: 1240 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 1485 rpm	Design	: B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



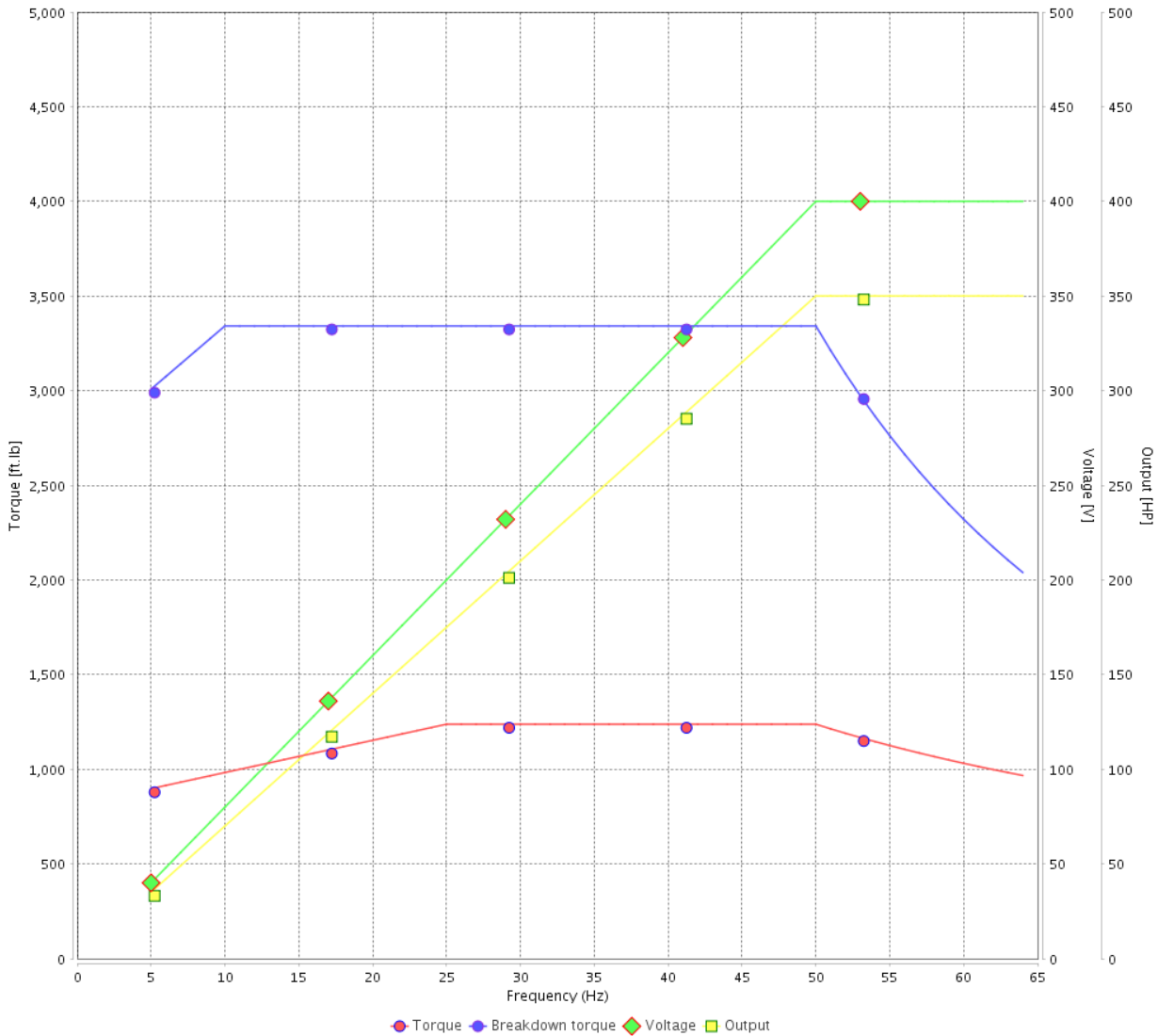
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VFD OPERATION CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 448 A
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 Locked rotor torque : 250 %
 Breakdown torque : 270 %
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Moment of inertia (J) : 136 sq.ft.lb
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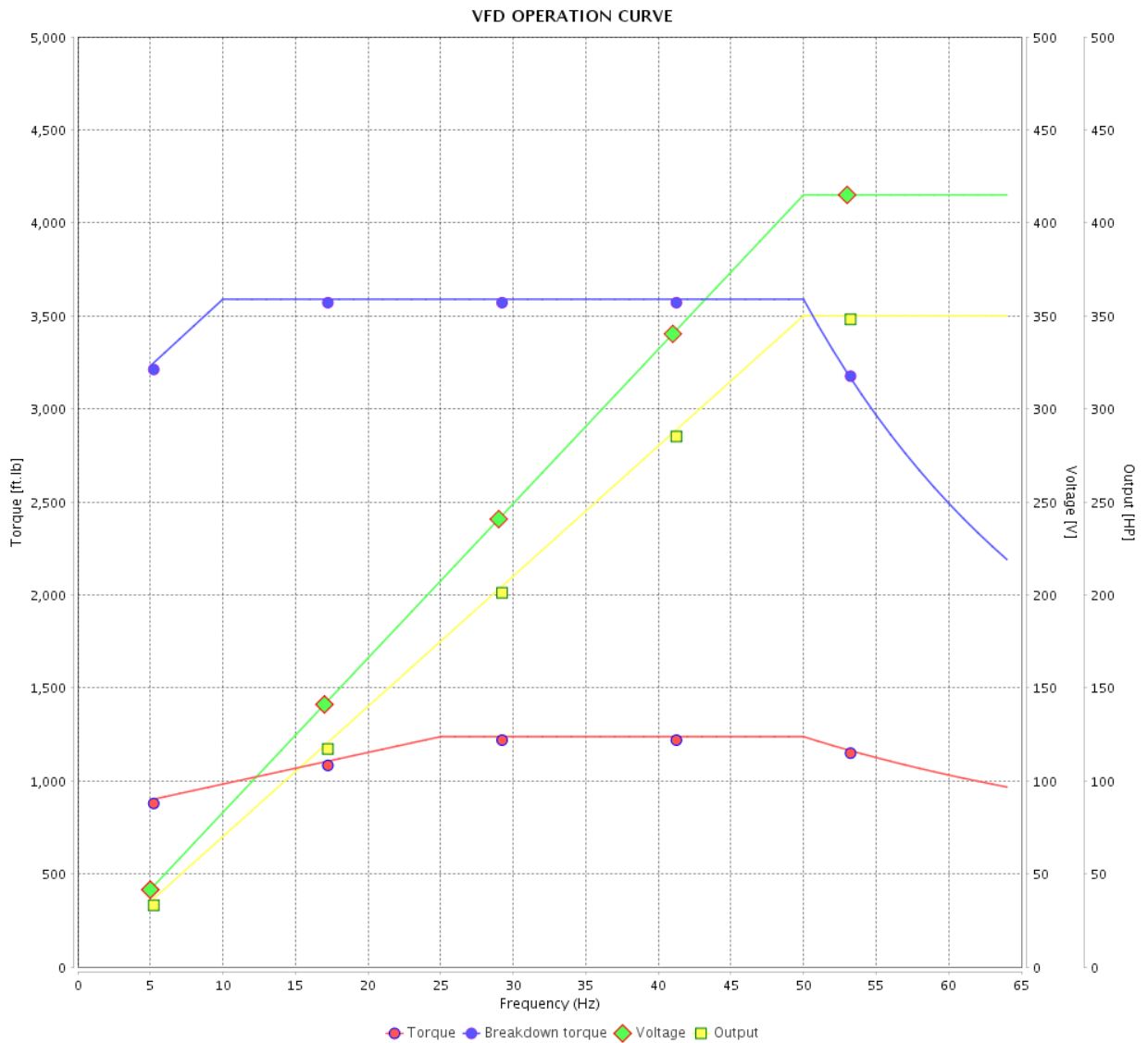
VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



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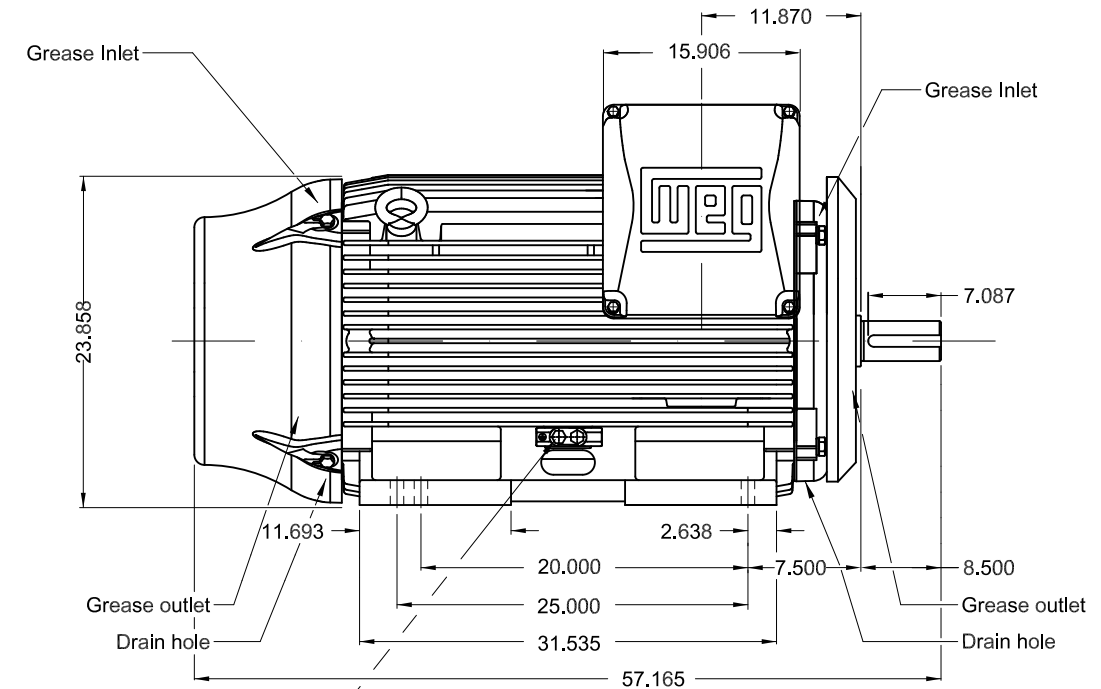
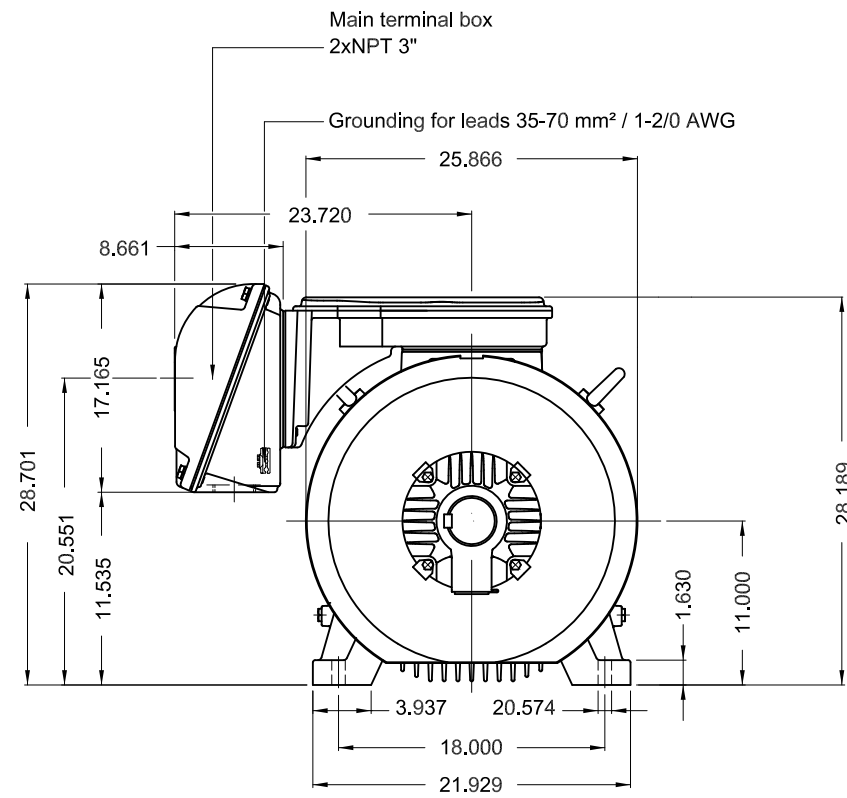
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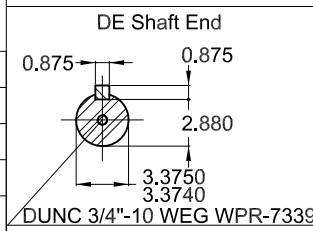


Grounding for leads 25-185 mm² / 3AWG-350MCM

400 HP 04 Poles 60 Hz

Dimensions in inches

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



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

MADE IN MEXICO
11408291



FOR SAFE AREA
Mod.TE1BFOXON
CC029A

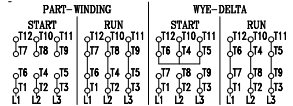


Class I, Div 2, Gr A, B, C and D - T3
Class I, Zone 2, IIC - T3
Class II, Div 2, Gr F and G - T3C
For use on PWM: Gr. A, B, C, D and F,
VT 1000:1, CT 6:1, 1.00SF - T3

MODEL 40018ET3G449T-W22

Inverter Duty Motor
Severe Duty

PH3	60Hz	Fr. L447/9T	1000m.a.s.l.	IP55	TEFC	3237lb
V 460				A 445		
HP 400				kW 300		
SF 1.15				SFA 512		
RPM 1785				PF 0.88		
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)