

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	12752064		
		Catalog # :	40012ET3G449T-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	: 3633 lb		
Protection degree	: IP55	Moment of inertia (J)	: 278 sq.ft.lb		
Output [HP]	400	350	350	350	
Poles	6	6	6	6	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	477	497	478	472	
L. R. Amperes [A]	3291	3081	3346	3540	
LRC [A]	6.9x(Code H)	6.2x(Code G)	7.0x(Code H)	7.5x(Code J)	
No load current [A]	200	190	210	225	
Rated speed [RPM]	1190	990	990	990	
Slip [%]	0.83	1.00	1.00	1.00	
Rated torque [ft.lb]	1770	1860	1860	1860	
Locked rotor torque [%]	240	200	220	240	
Breakdown torque [%]	250	240	260	280	
Service factor	1.00	1.00	1.00	1.00	
Temperature rise	105 K	105 K	105 K	105 K	
Locked rotor time	23s (cold) 13s (hot)	32s (cold) 18s (hot)	28s (cold) 16s (hot)	25s (cold) 14s (hot)	
Noise level ²	71.0 dB(A)	70.0 dB(A)	70.0 dB(A)	70.0 dB(A)	
Efficiency (%)	25%	95.3	95.3	94.5	
	50%	95.4	95.4	95.0	
	75%	95.8	95.8	95.4	
	100%	95.8	95.8	95.8	
Power Factor	25%	0.42	0.45	0.37	
	50%	0.68	0.70	0.62	
	75%	0.78	0.80	0.74	
	100%	0.82	0.83	0.80	
Bearing type	: <u>Drive end</u> 6322 C3 <u>Non drive end</u> 6319 C3	Foundation loads			
Sealing	: WSeal WSeal	Max. traction	: 12042 lb		
Lubrication interval	: 11000 h 13000 h	Max. compression	: 15675 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



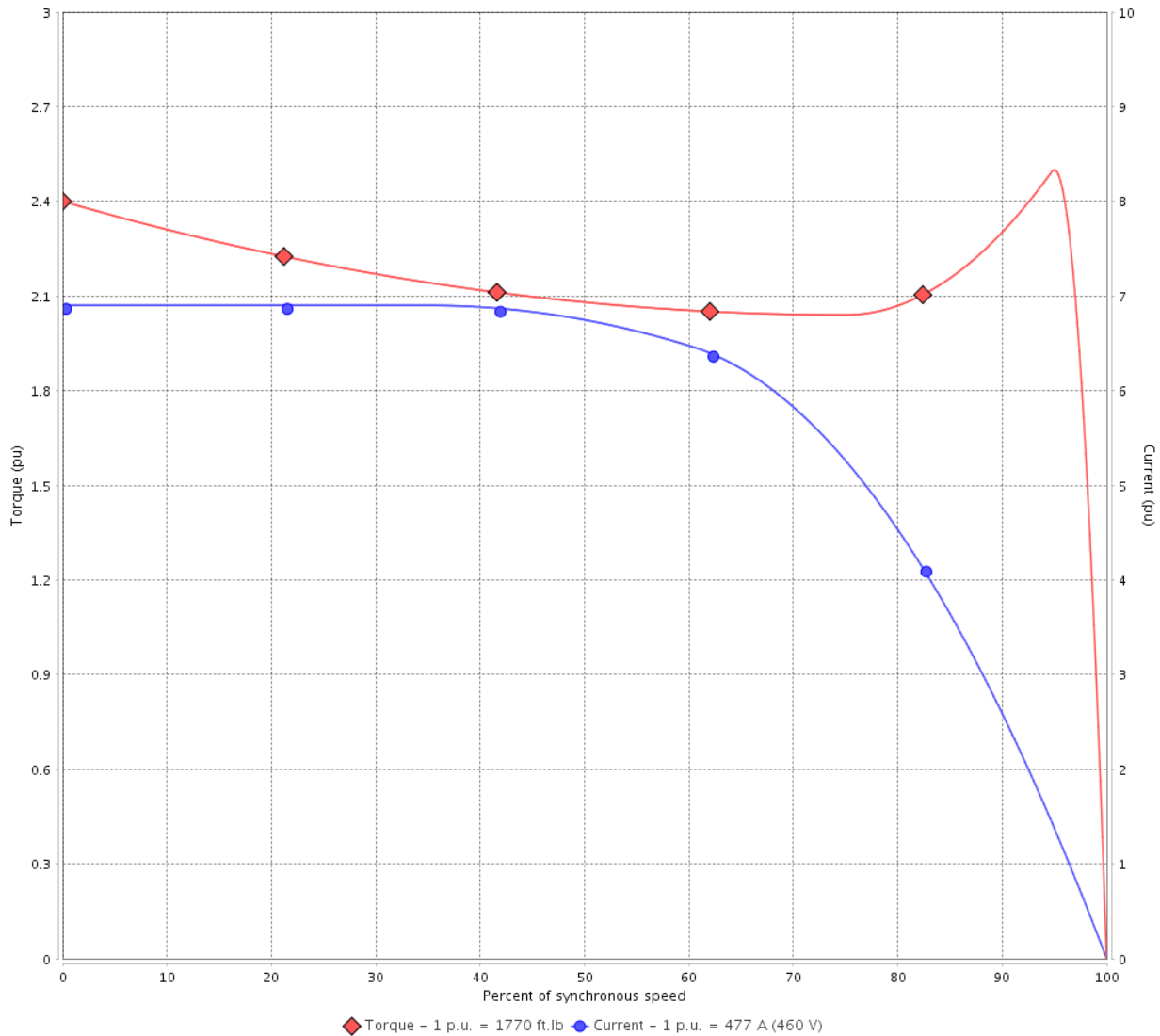
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12752064

Catalog # : 40012ET3G449T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 6P

Rated current	: 477 A	Moment of inertia (J)	: 278 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 1770 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 105 K
Rated speed	: 1190 rpm		

Locked rotor time : 23s (cold) 13s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



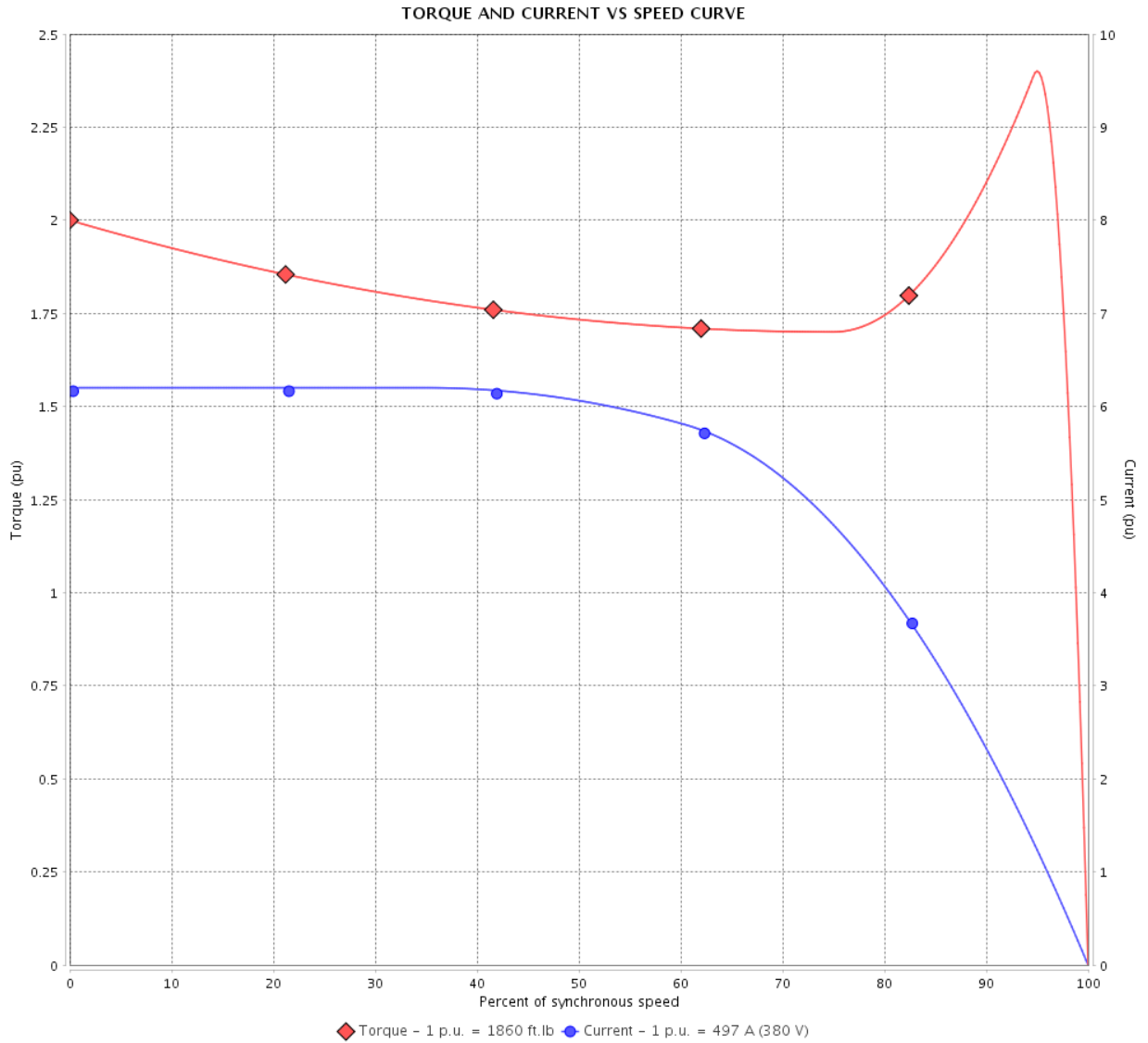
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12752064

Catalog # : 40012ET3G449T-W22



Performance : 380 V 50 Hz 6P IE3

Rated current : 497 A
 LRC : 6.2
 Rated torque : 1860 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 990 rpm

Moment of inertia (J) : 278 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K

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

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



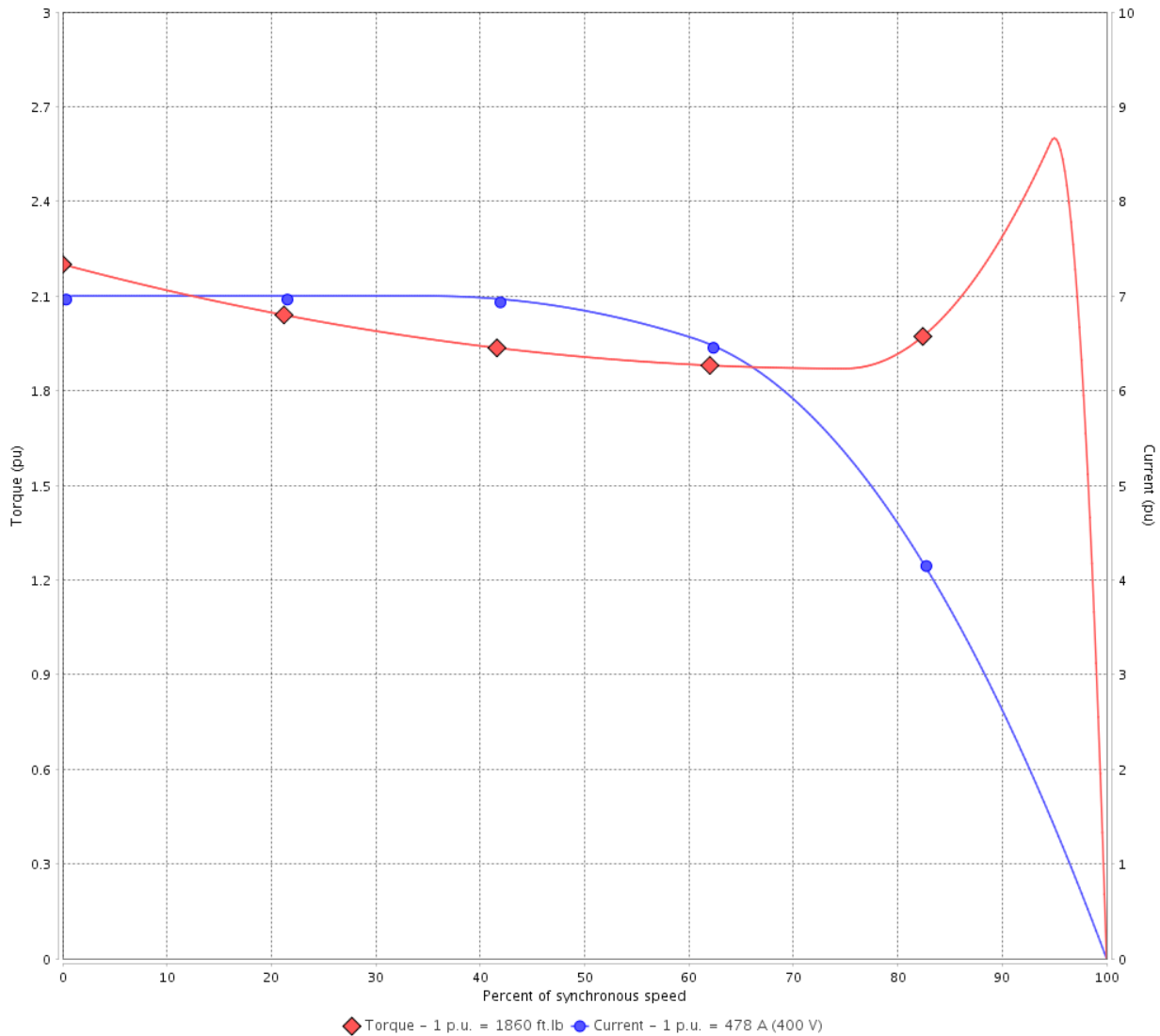
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12752064

Catalog # : 40012ET3G449T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 478 A	Moment of inertia (J)	: 278 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 1860 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 105 K
Rated speed	: 990 rpm		

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

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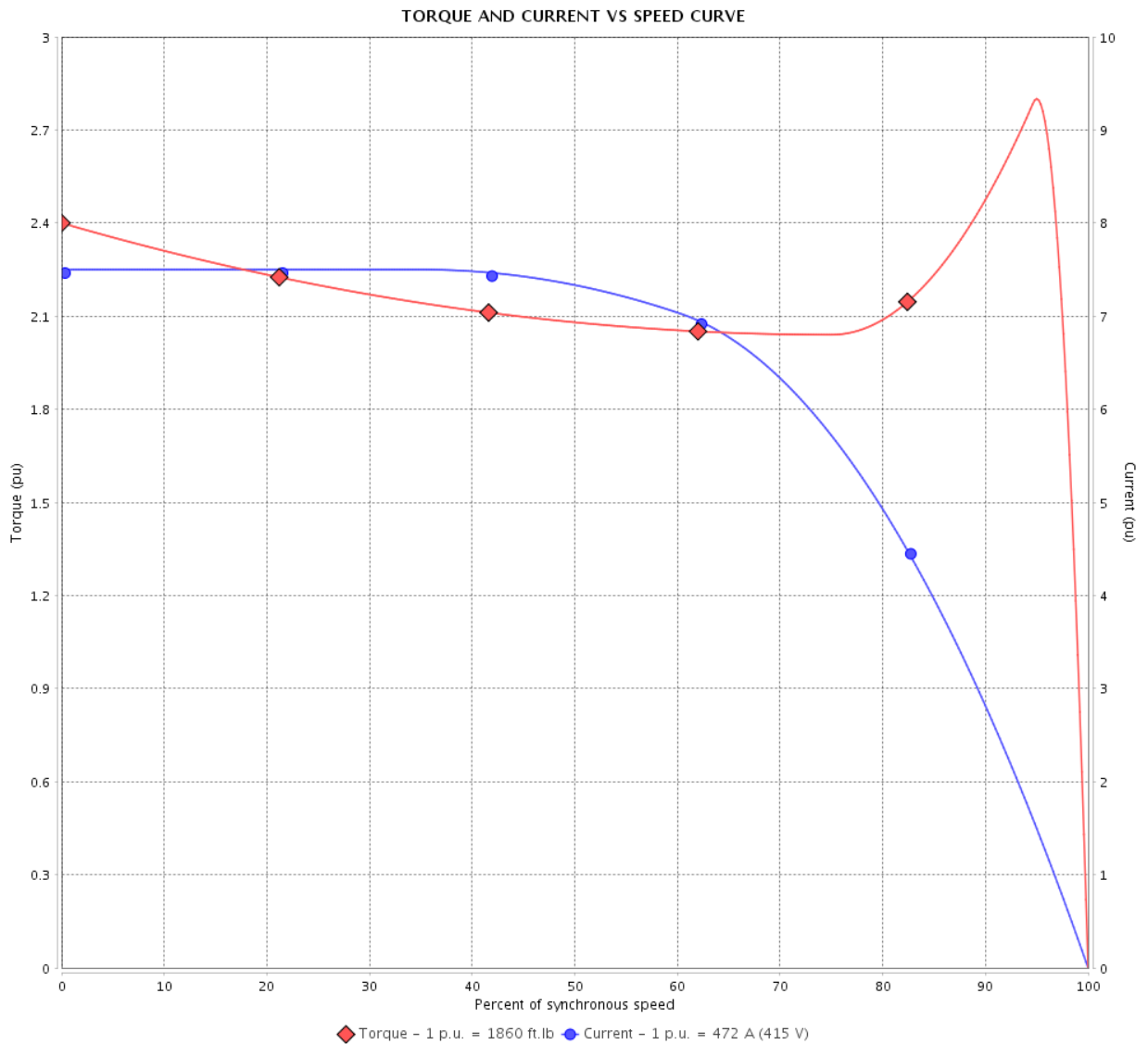
TORQUE AND CURRENT VS SPEED CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
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Performance : 415 V 50 Hz 6P IE3

Rated current	: 472 A	Moment of inertia (J)	: 278 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 1860 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 105 K
Rated speed	: 990 rpm		

Locked rotor time : 25s (cold) 14s (hot)

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LOAD PERFORMANCE CURVE

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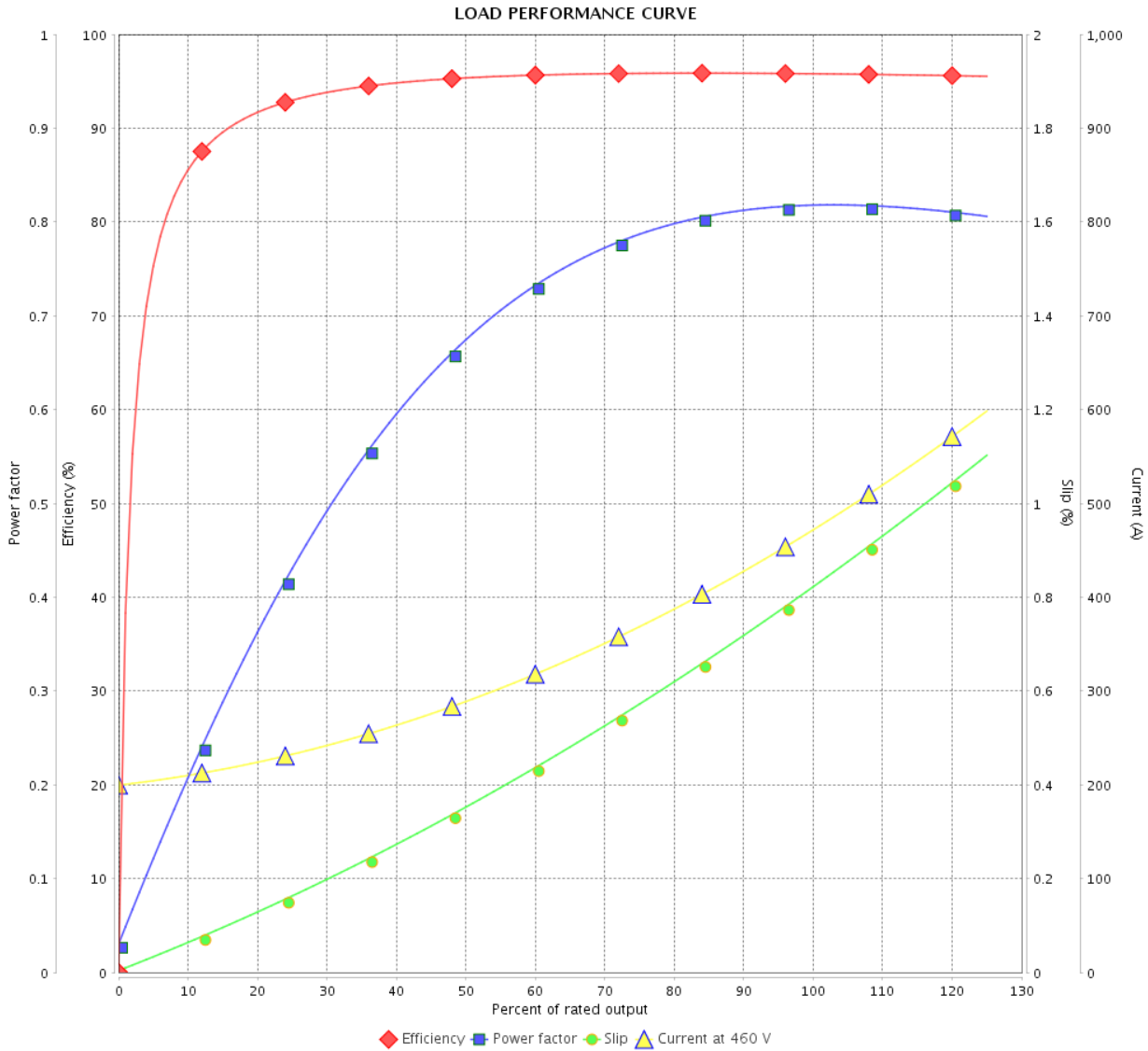


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12752064

Catalog # : 40012ET3G449T-W22



Performance : 460 V 60 Hz 6P

Rated current : 477 A
 LRC : 6.9
 Rated torque : 1770 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 250 %
 Rated speed : 1190 rpm

Moment of inertia (J) : 278 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K

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Three Phase Induction Motor - Squirrel Cage

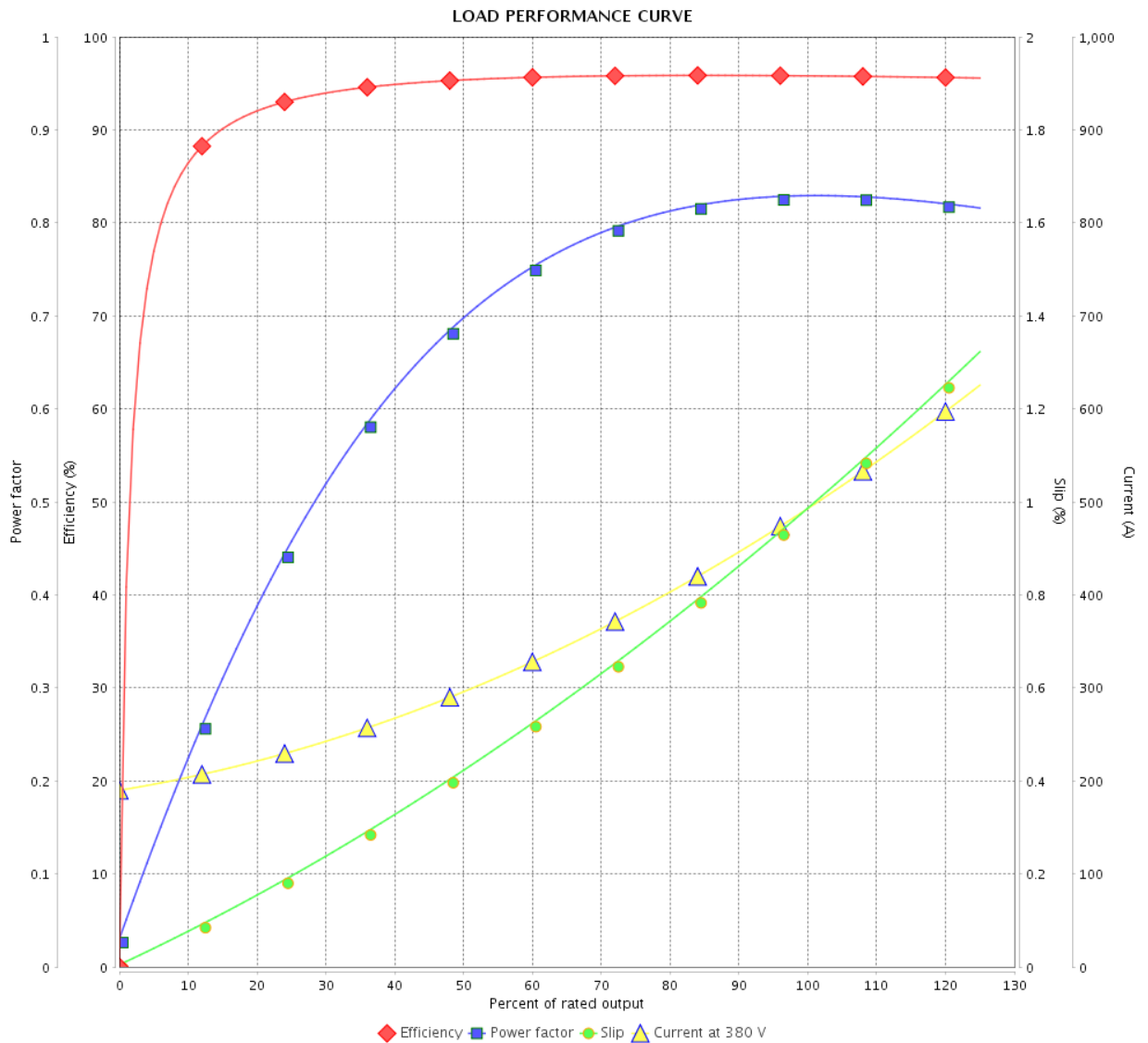


Customer :

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Performance : 380 V 50 Hz 6P IE3

Rated current : 497 A
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 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 990 rpm

Moment of inertia (J) : 278 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K

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Three Phase Induction Motor - Squirrel Cage



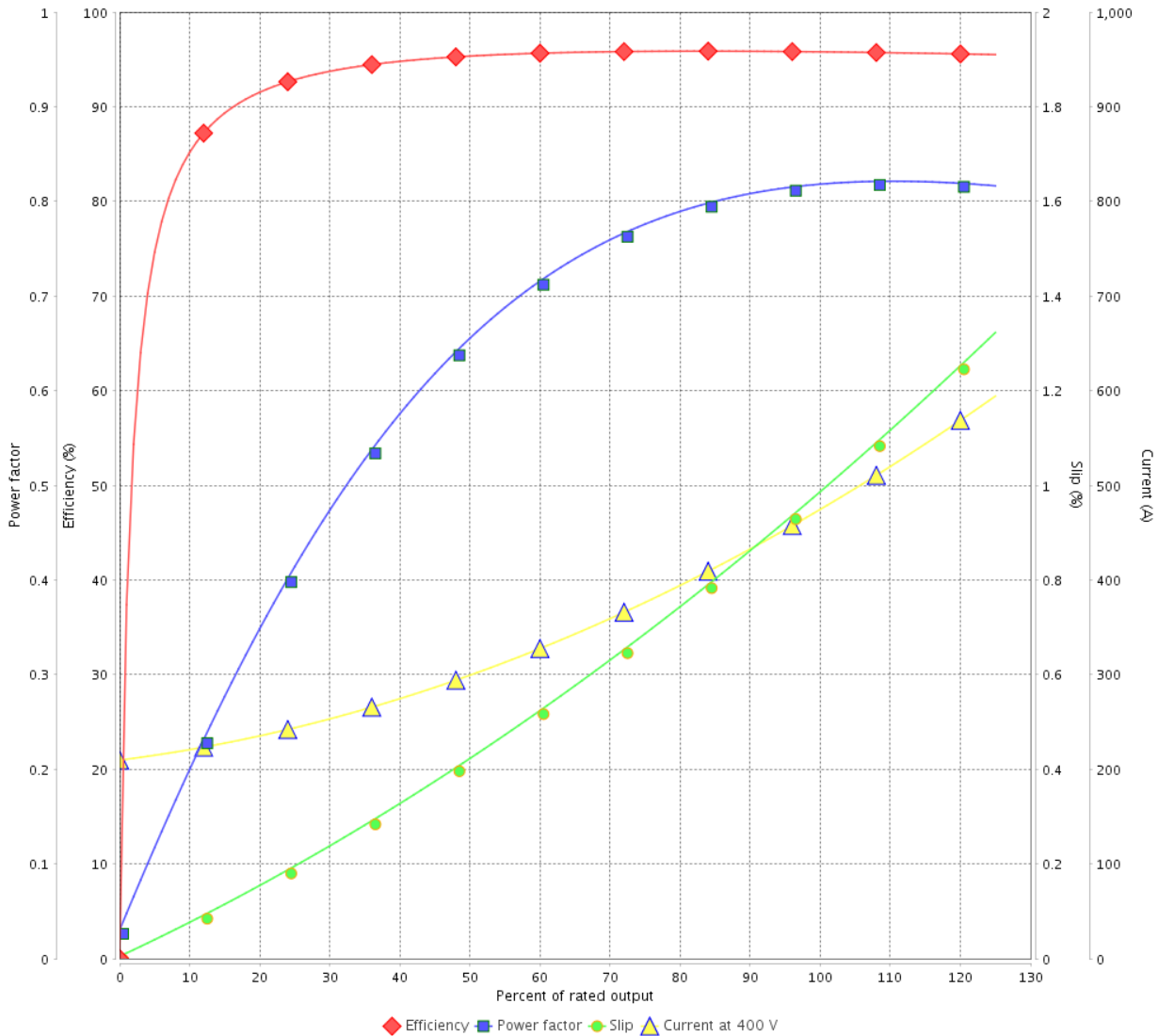
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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE3

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 Locked rotor torque : 220 %
 Breakdown torque : 260 %
 Rated speed : 990 rpm

Moment of inertia (J) : 278 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K

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Three Phase Induction Motor - Squirrel Cage

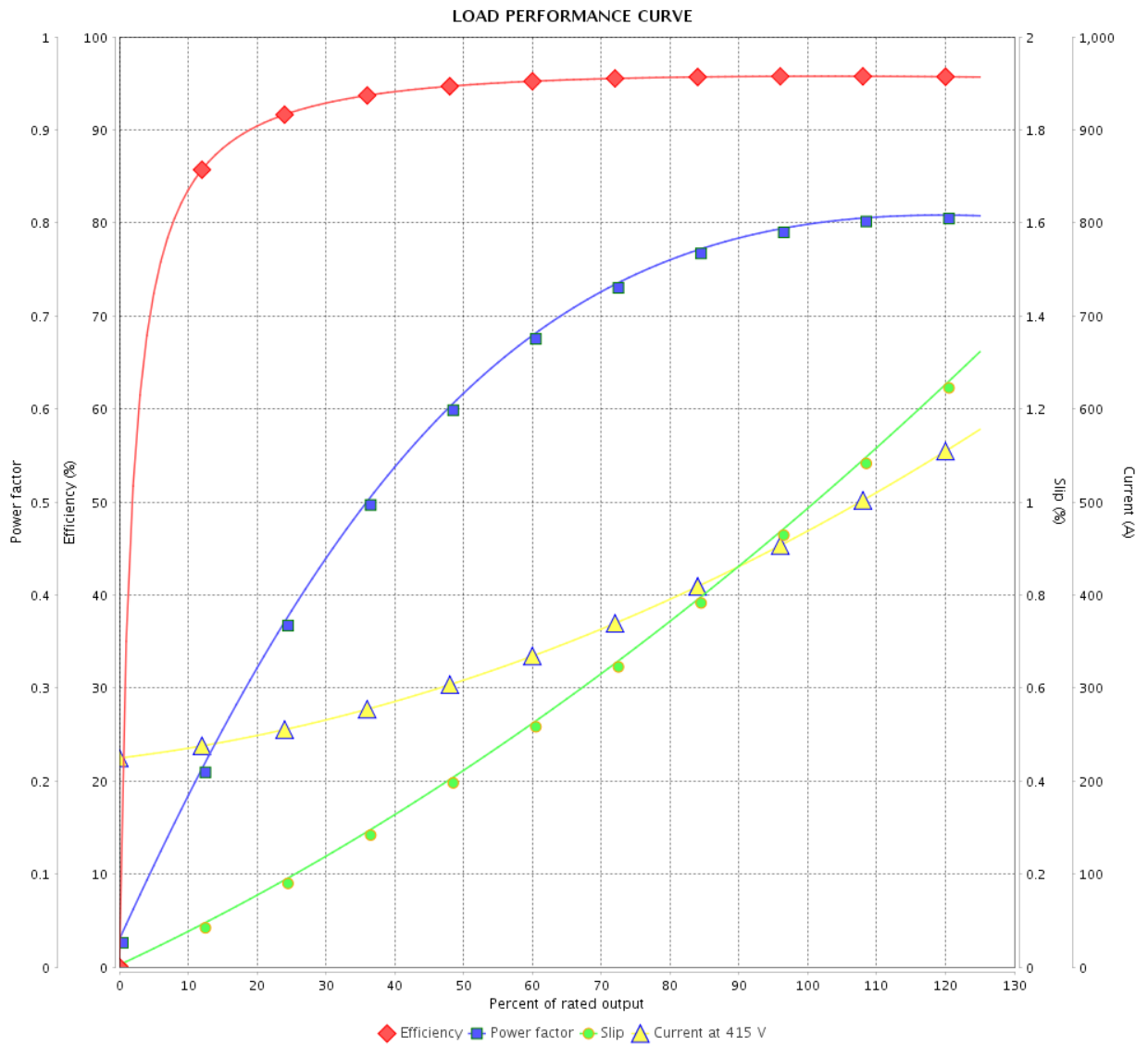


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 Locked rotor torque : 240 %
 Breakdown torque : 280 %
 Rated speed : 990 rpm

Moment of inertia (J) : 278 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K

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THERMAL LIMIT CURVE



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Breakdown torque	: 250 %	Temperature rise	: 105 K
Rated speed	: 1190 rpm		

Heating constant

Cooling constant

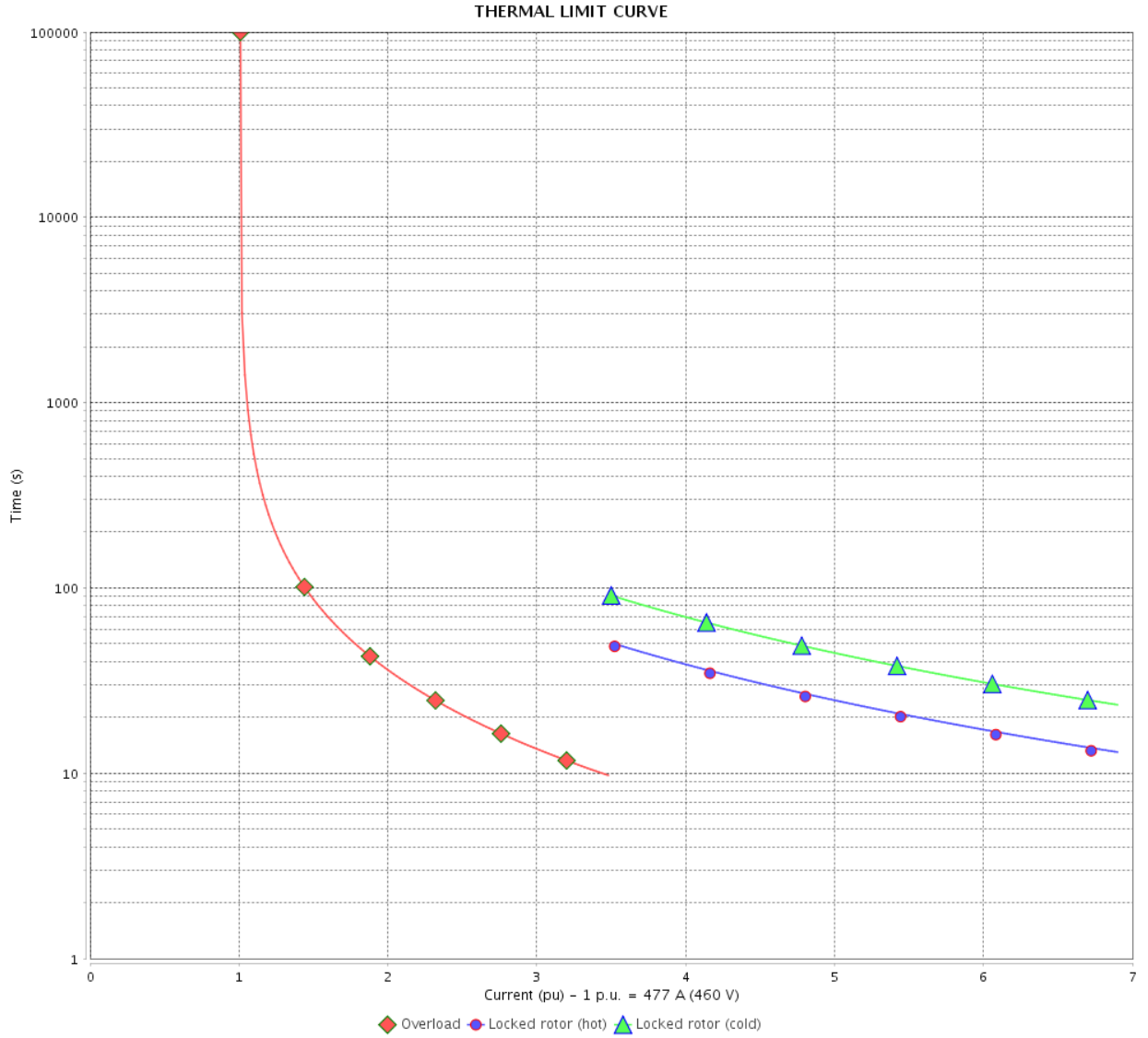
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THERMAL LIMIT CURVE

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Cooling constant

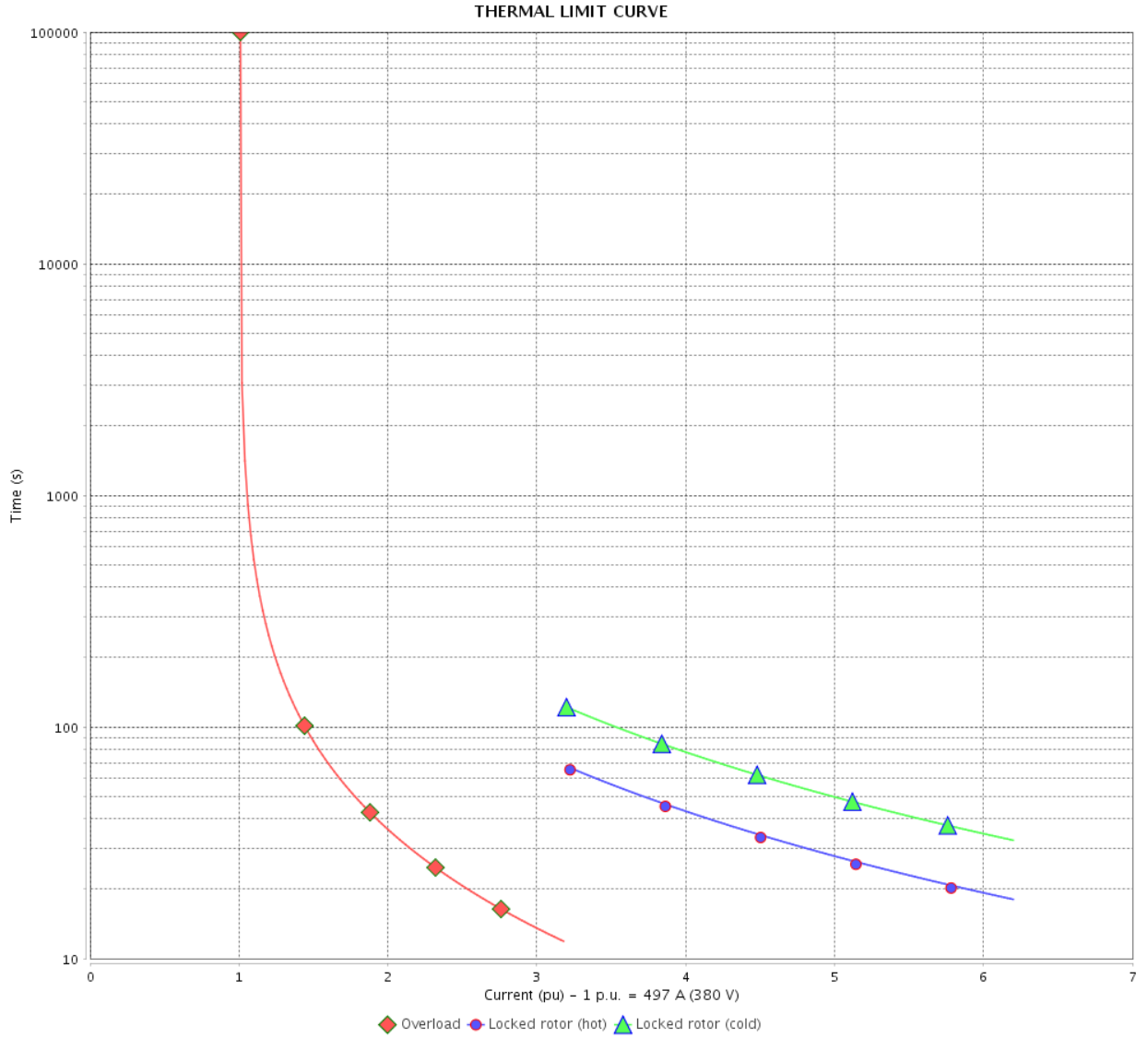
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Rated torque	: 1860 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 105 K
Rated speed	: 990 rpm		

Heating constant

Cooling constant

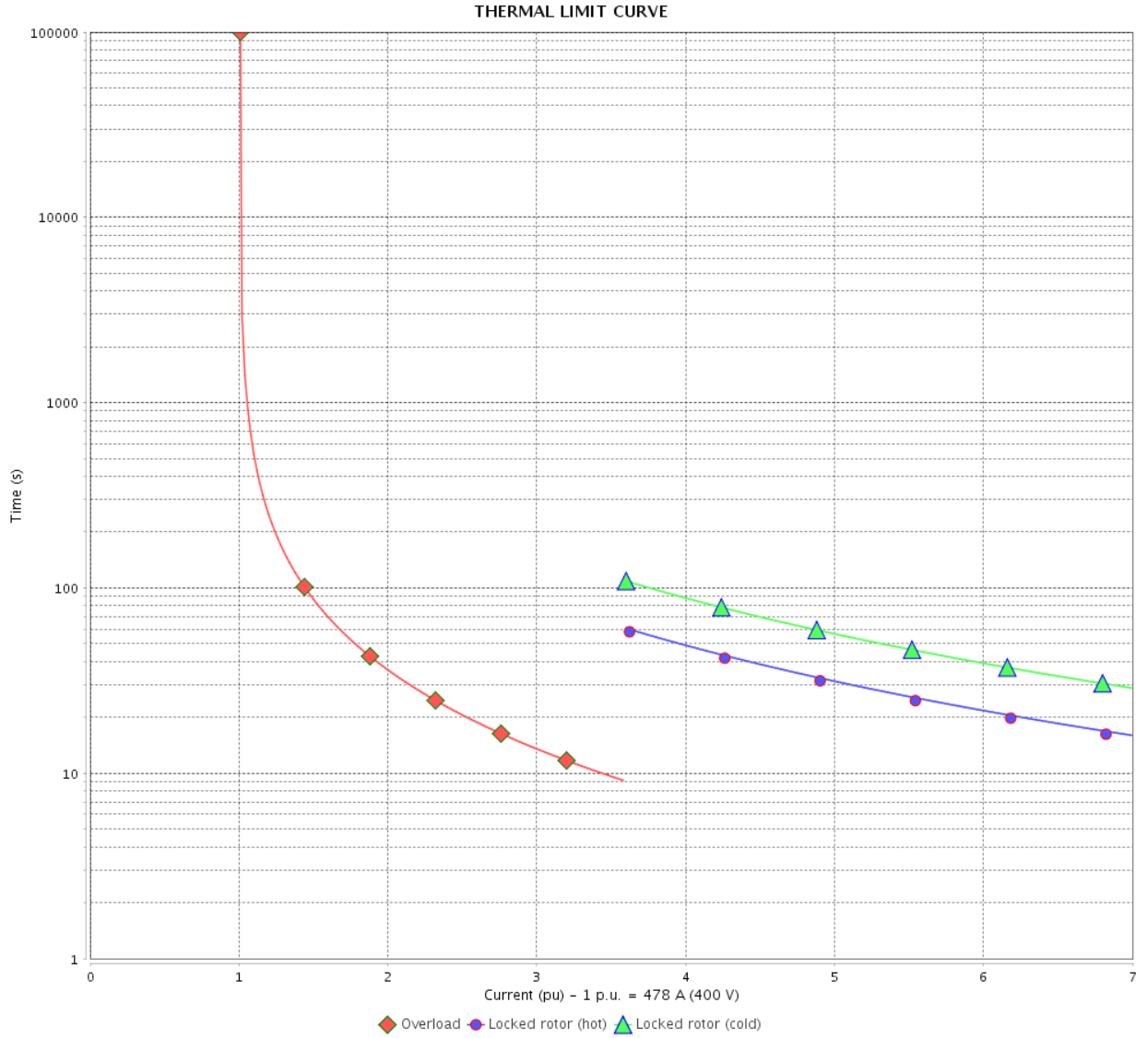
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Breakdown torque	: 280 %	Temperature rise	: 105 K
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Heating constant

Cooling constant

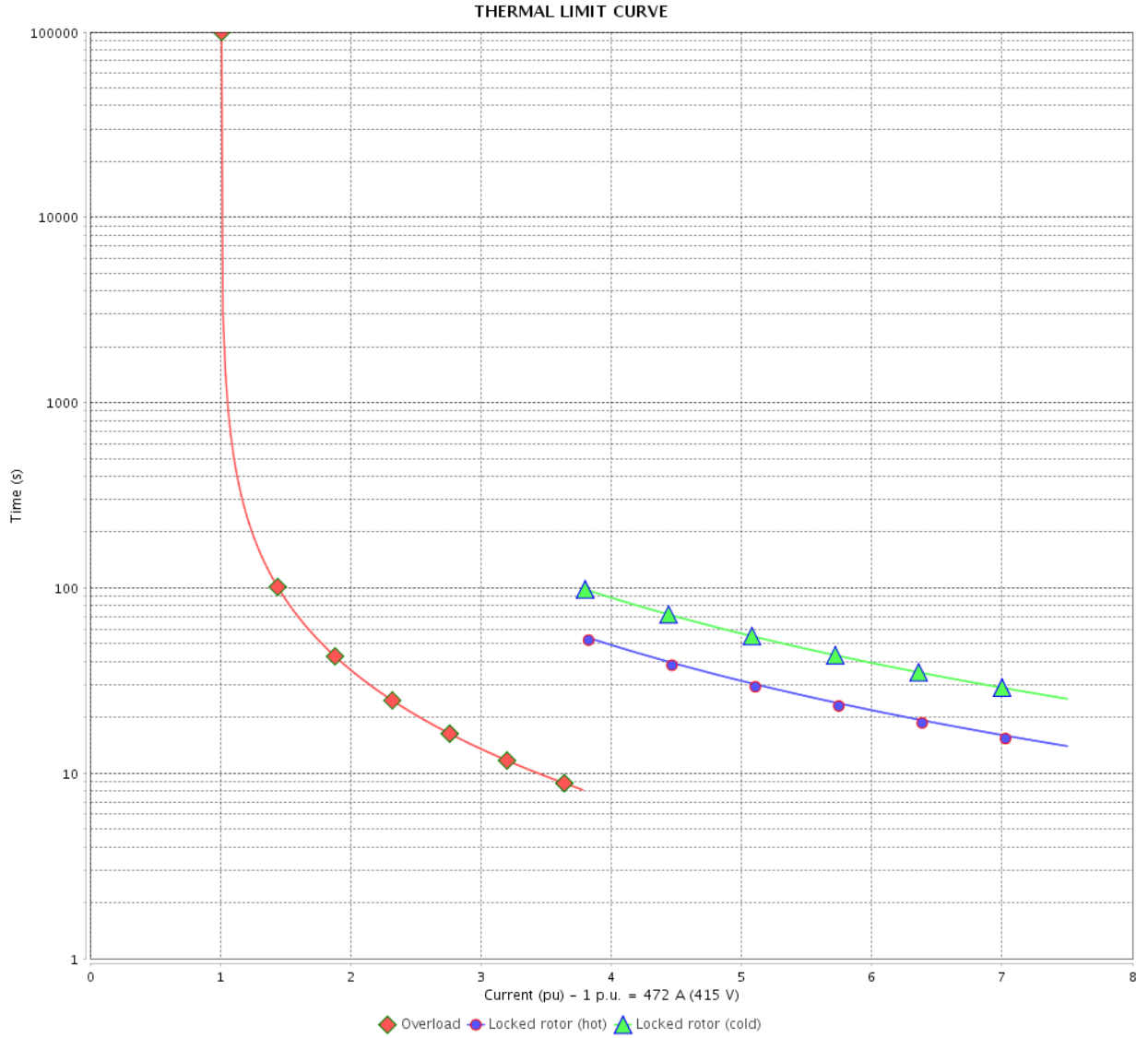
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



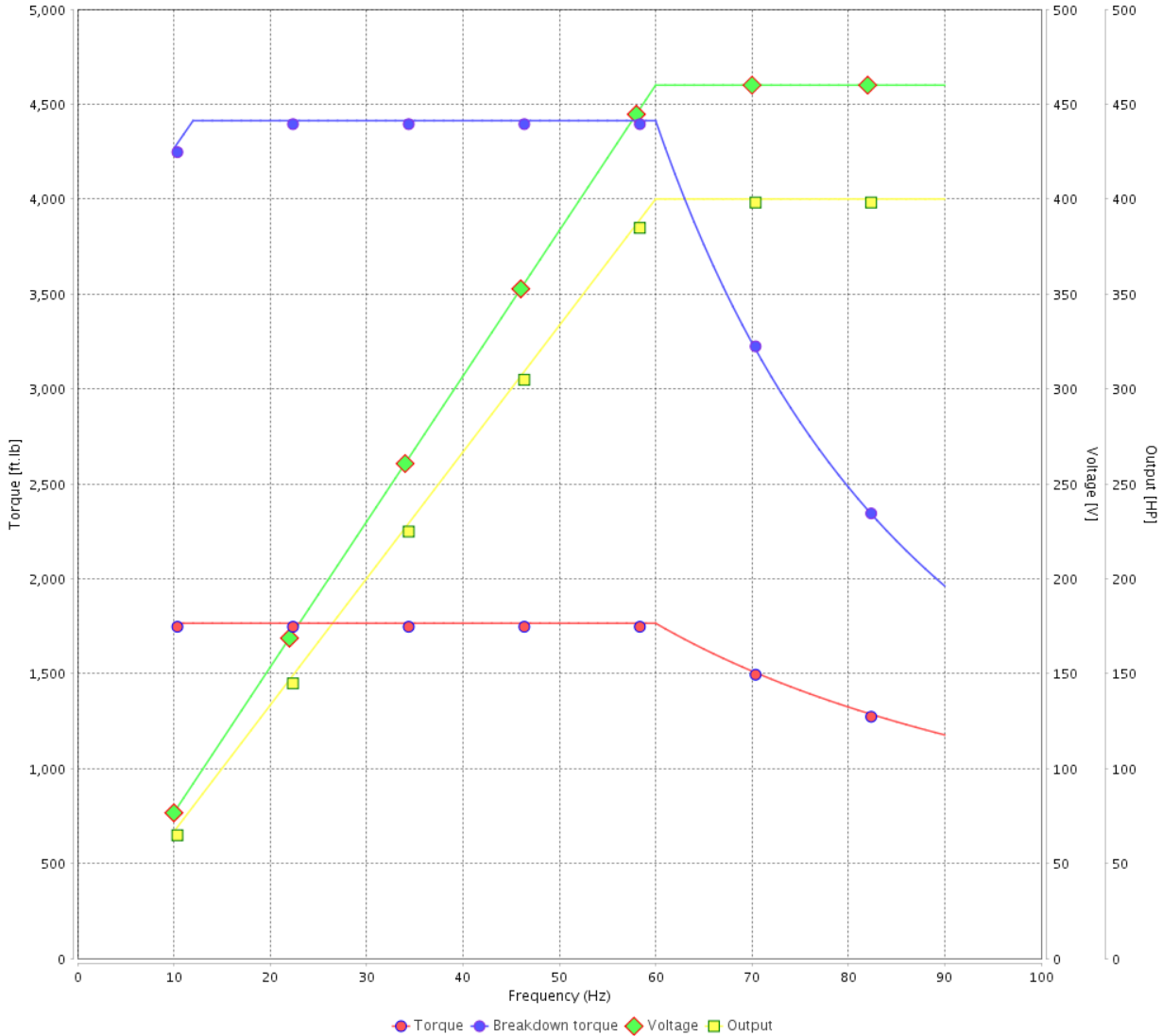
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VFD OPERATION CURVE



Performance : 460 V 60 Hz 6P

Rated current : 477 A
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 Insulation class : F
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Rev.	Changes Summary	Performed	Checked	Date
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Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

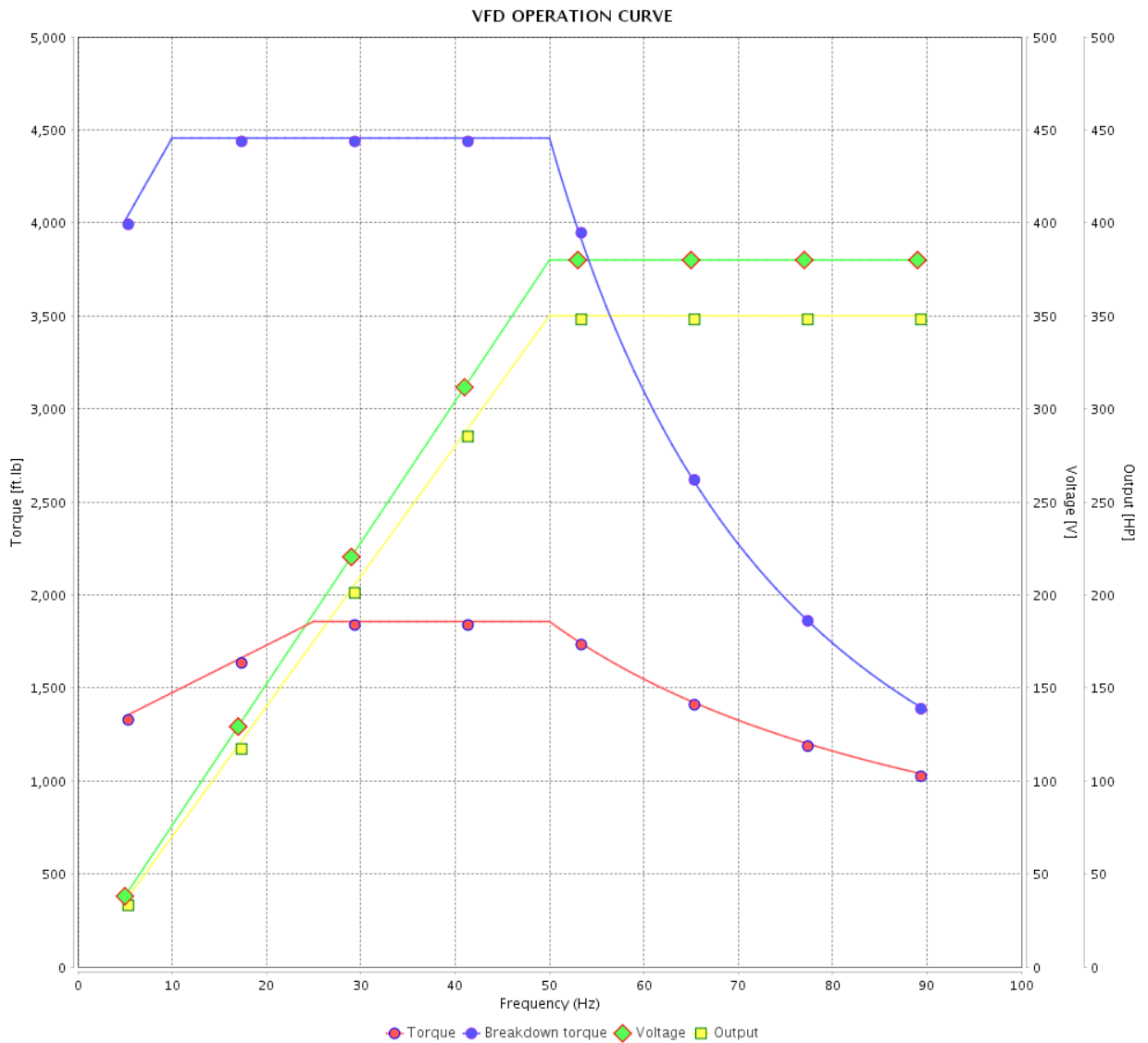


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 Insulation class : F
 Service factor : 1.00
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

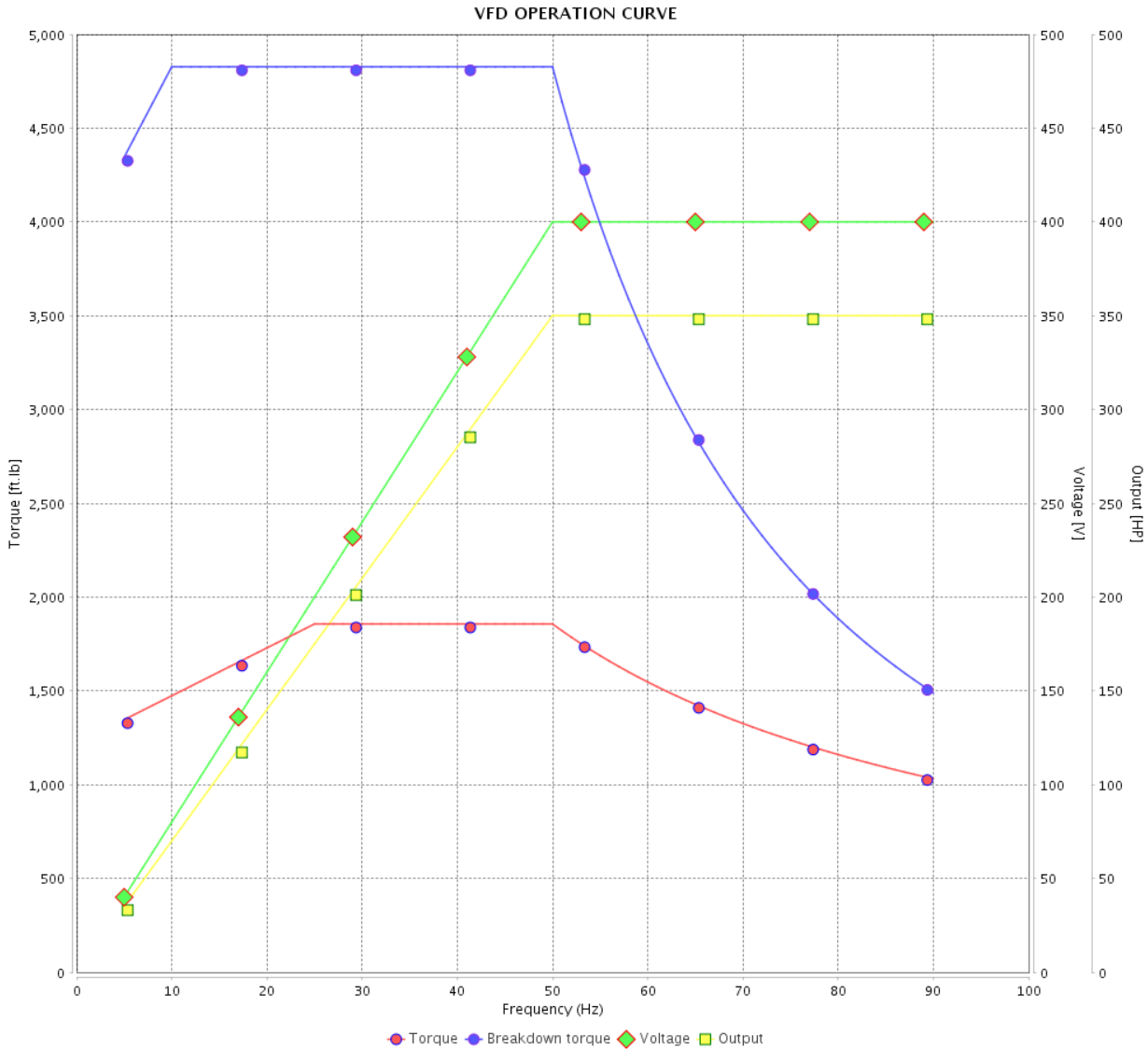


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Performance : 400 V 50 Hz 6P IE3

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

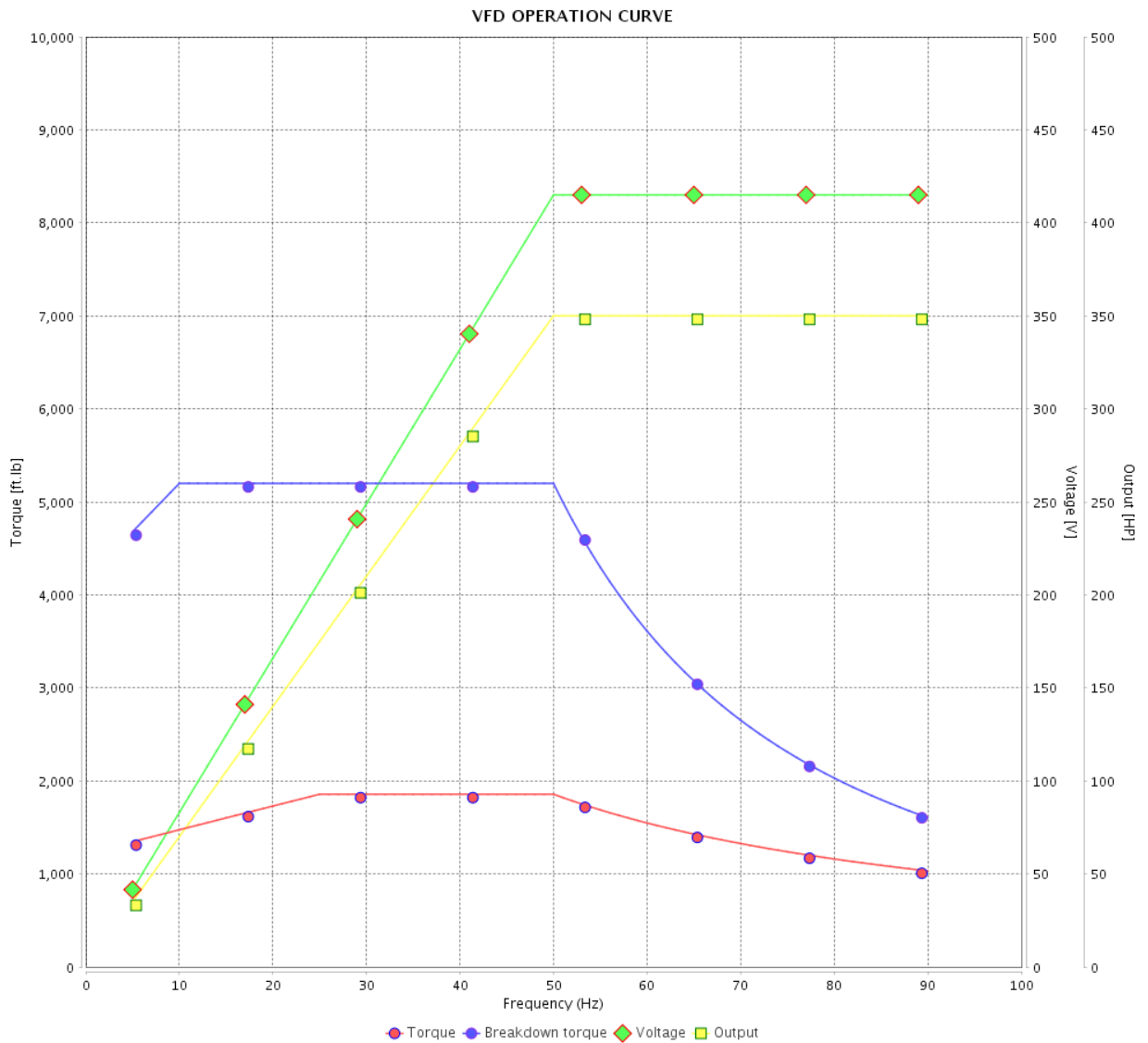


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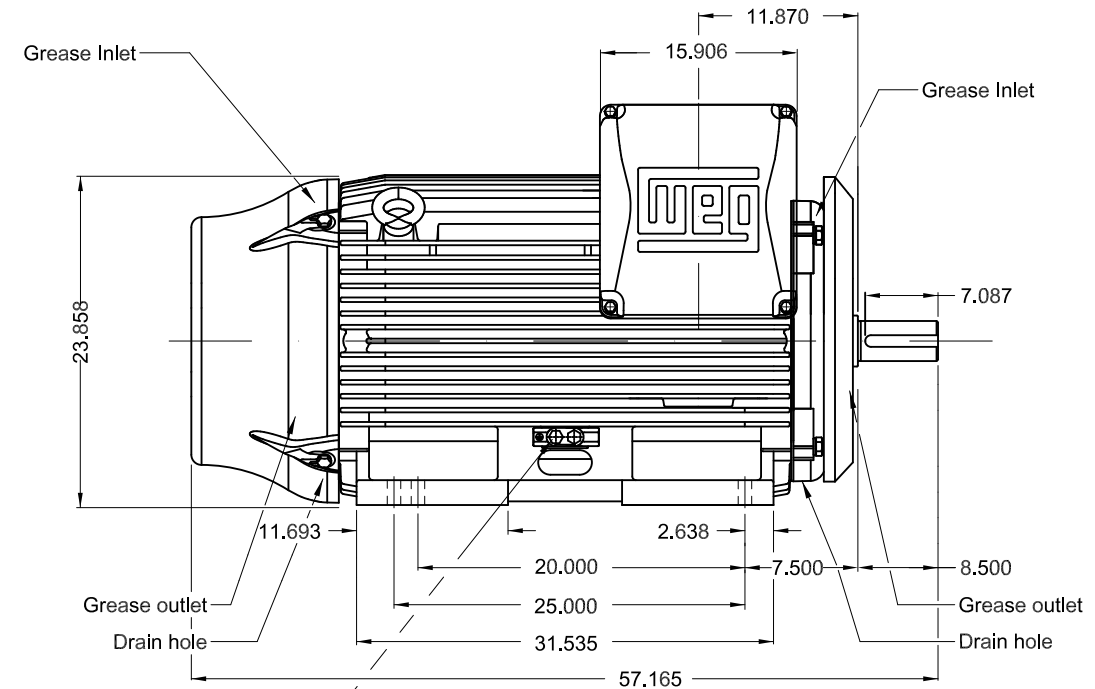
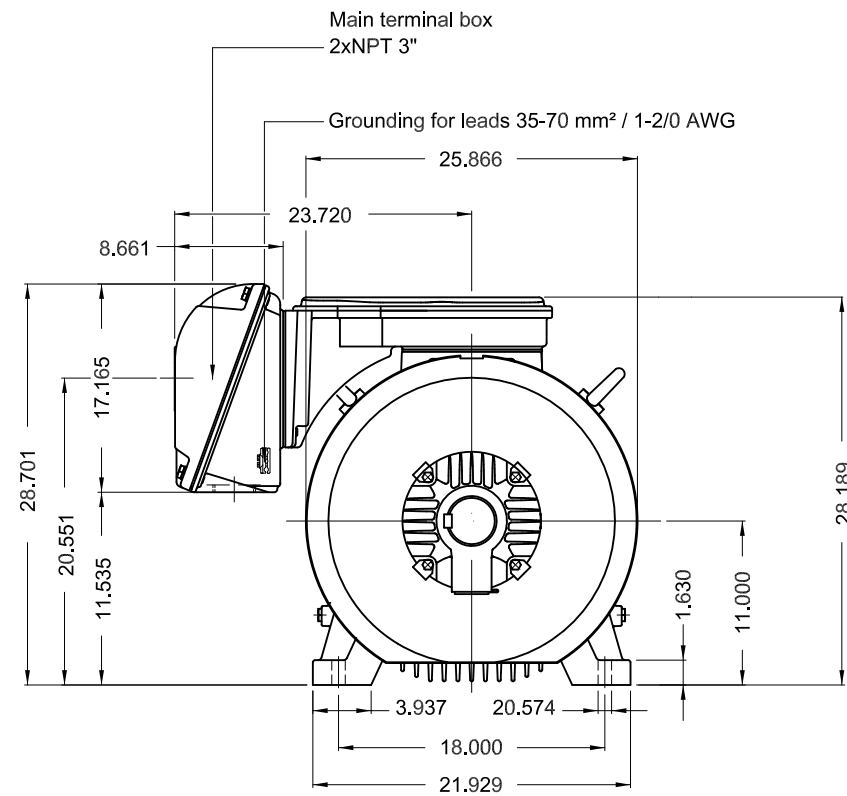


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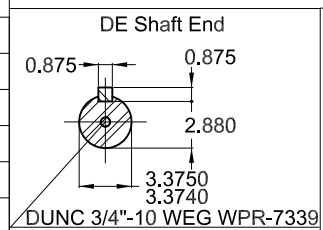


Grounding for leads 25-185 mm² / 3AWG-350MCM

400 HP 06 Poles 60 Hz

Dimensions in inches

- NDE endshield with electrically insulated bearing hub
- Drive-End Air Deflector
- Color RAL 5009
- Painting plan 203A
- Mounting NEMA F-1
- Mounting B3R(D)



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

PREVIEW
WDD





NEMA
Premium
W22



FOR SAFE AREA
Mod.TE1BFOXON



Class I, Div 2, Gr A, B, C and D - T2D
Class I, Zone 2, IIC - T2D
Class II, Div 2, Gr F and G - T4

MODEL 40012ET3G449T-W22

Electric Motor
Severe Duty

PH3 60Hz Fr. L447/9T 1000m.a.s.l. IP55 TEFC 3632lb

V 460

A 477

HP 400

kW 300

SF 1.00

SFA -

RPM 1190

PF 0.82

AMB 40°C

INS cl. F

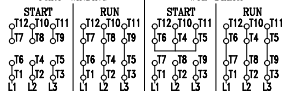
NEMA NOM EFF 95.8%

DUTY CONT.

DES - Code H

PART-WINDING

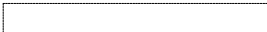
WYE-DELTA



→ 6322-C3 (60g)

→ 6319-C3 (45g)

MOBIL POLYREX EM (11000h)



MADE IN BRAZIL
12752064