

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line	: NEMA Premium Efficiency Three-Phase	Product code	: 13465763		
		Catalog #	: 35018ST3QIE449T-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	: 3209 lb		
Protection degree	: IP55	Moment of inertia (J)	: 131 sq.ft.lb		
Design	: B				
Output [HP]	350	300	300	300	300
Poles	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	460	380	400	415	415
Rated current [A]	394	404	388	379	379
L. R. Amperes [A]	2719	2868	3065	3222	3222
LRC [A]	6.9x(Code G)	7.1x(Code G)	7.9x(Code H)	8.5x(Code J)	8.5x(Code J)
No load current [A]	115	110	116	122	122
Rated speed [RPM]	1787	1486	1488	1490	1490
Slip [%]	0.72	0.93	0.80	0.67	0.67
Rated torque [ft.lb]	1030	1060	1060	1060	1060
Locked rotor torque [%]	260	240	260	290	290
Breakdown torque [%]	229	229	250	280	280
Service factor	1.15	1.15	1.15	1.15	1.15
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	81s (cold) 45s (hot)	88s (cold) 49s (hot)	75s (cold) 42s (hot)	68s (cold) 38s (hot)	68s (cold) 38s (hot)
Noise level ²	77.0 dB(A)	77.0 dB(A)	77.0 dB(A)	77.0 dB(A)	77.0 dB(A)
Efficiency (%)	25%	95.7	96.1	95.8	95.5
	50%	95.8	96.2	95.9	95.6
	75%	96.2	96.3	96.3	96.2
	100%	96.2	96.3	96.3	96.2
Power Factor	25%	0.52	0.52	0.48	0.45
	50%	0.76	0.74	0.70	0.66
	75%	0.83	0.82	0.80	0.78
	100%	0.86	0.86	0.85	0.84
Bearing type	: <u>Drive end</u> 6322 C3 <u>Non drive end</u> 6319 C3	Foundation loads			
Sealing	: Inpro/Seal Inpro/Seal	Max. traction : 6288 lb			
Lubrication interval	: 6000 h 8000 h	Max. compression : 9497 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



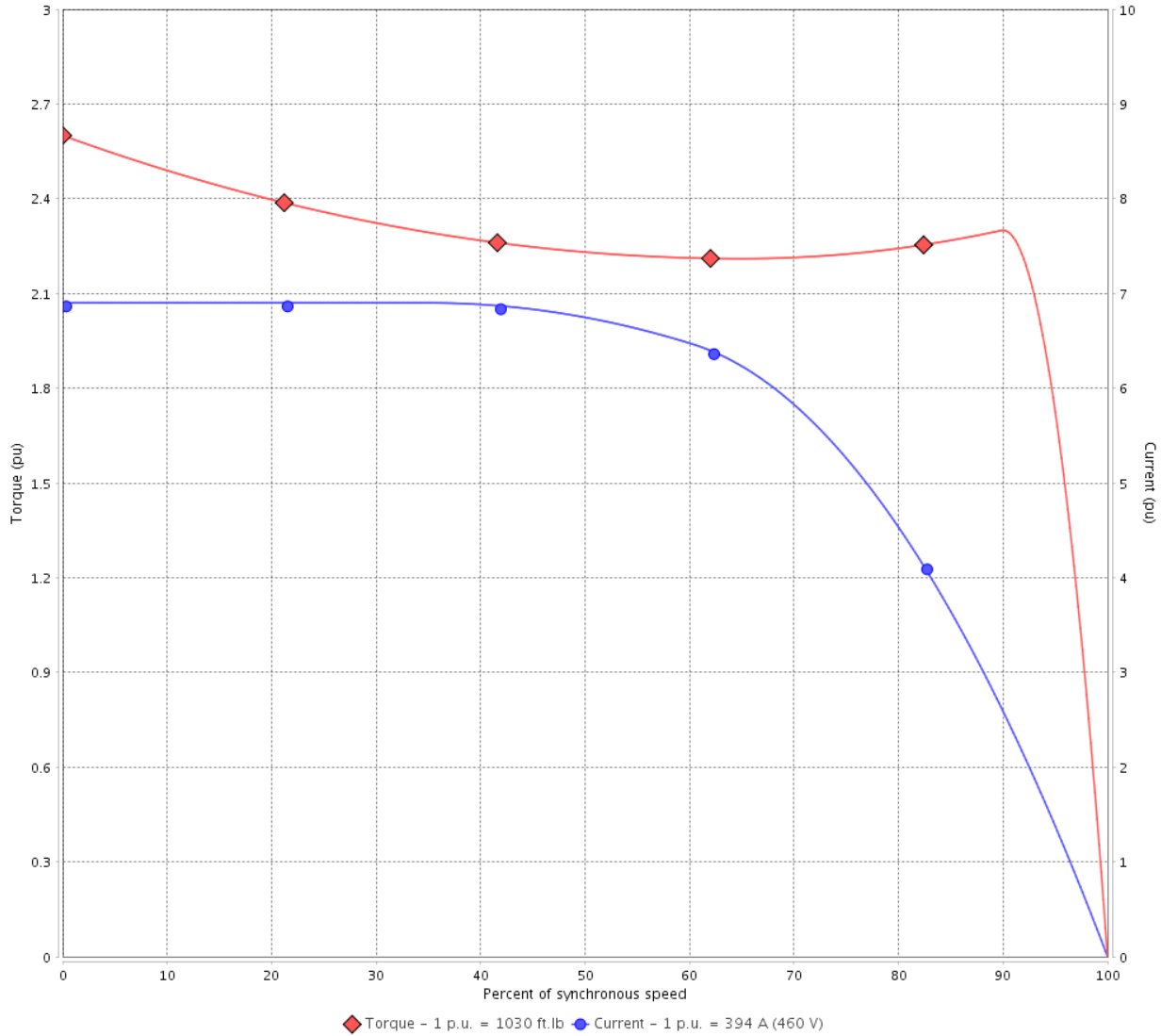
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13465763

Catalog # : 35018ST3QIE449T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 394 A	Moment of inertia (J)	: 131 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 1030 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1787 rpm	Design	: B

Locked rotor time : 81s (cold) 45s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



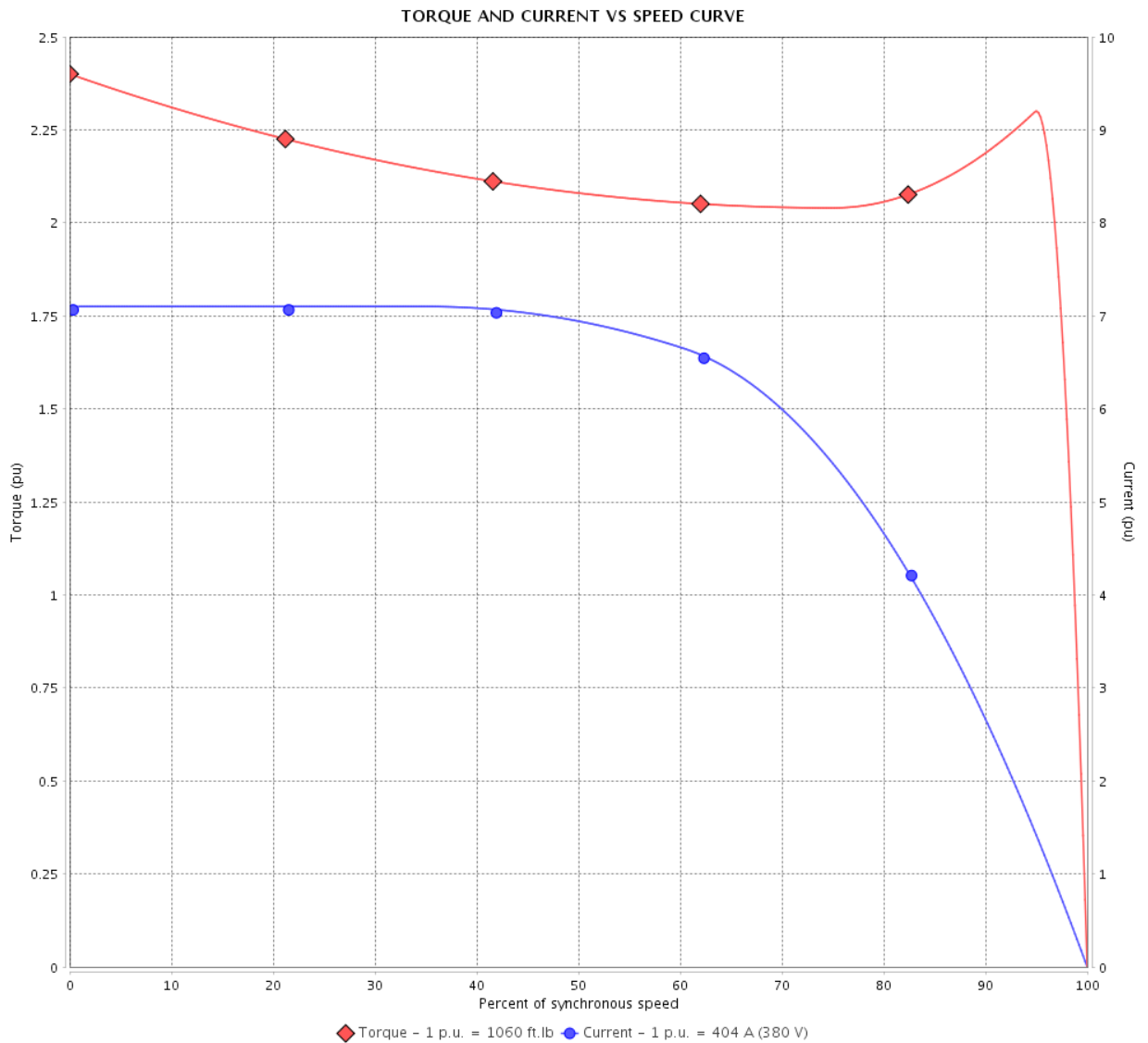
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13465763

Catalog # : 35018ST3QIE449T-W22



Performance : 380 V 50 Hz 4P IE3

Rated current	: 404 A	Moment of inertia (J)	: 131 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 1060 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1486 rpm	Design	: B

Locked rotor time : 88s (cold) 49s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



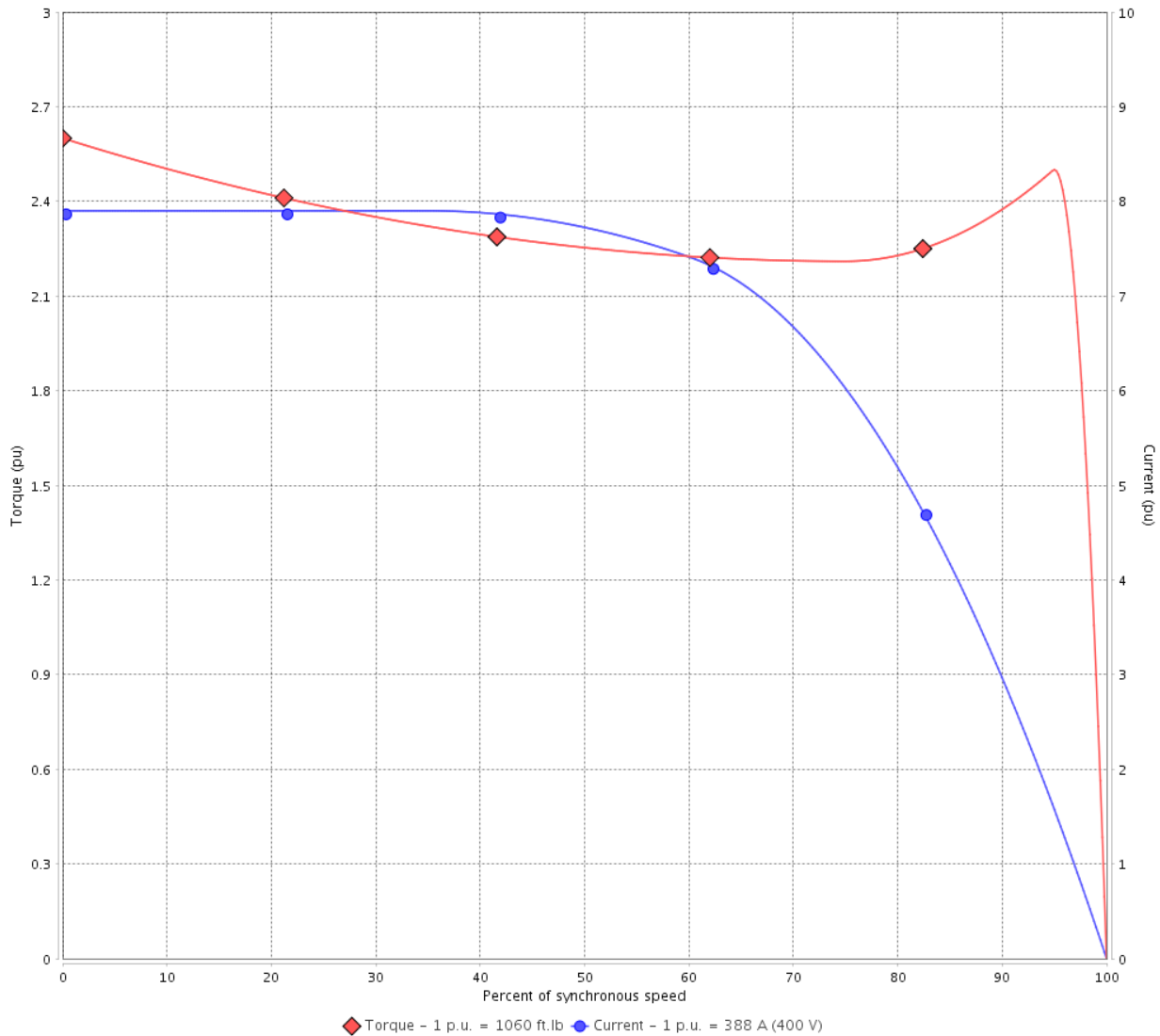
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13465763

Catalog # : 35018ST3QIE449T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 388 A	Moment of inertia (J)	: 131 sq.ft.lb
LRC	: 7.9	Duty cycle	: Cont.(S1)
Rated torque	: 1060 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1488 rpm	Design	: B

Locked rotor time : 75s (cold) 42s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



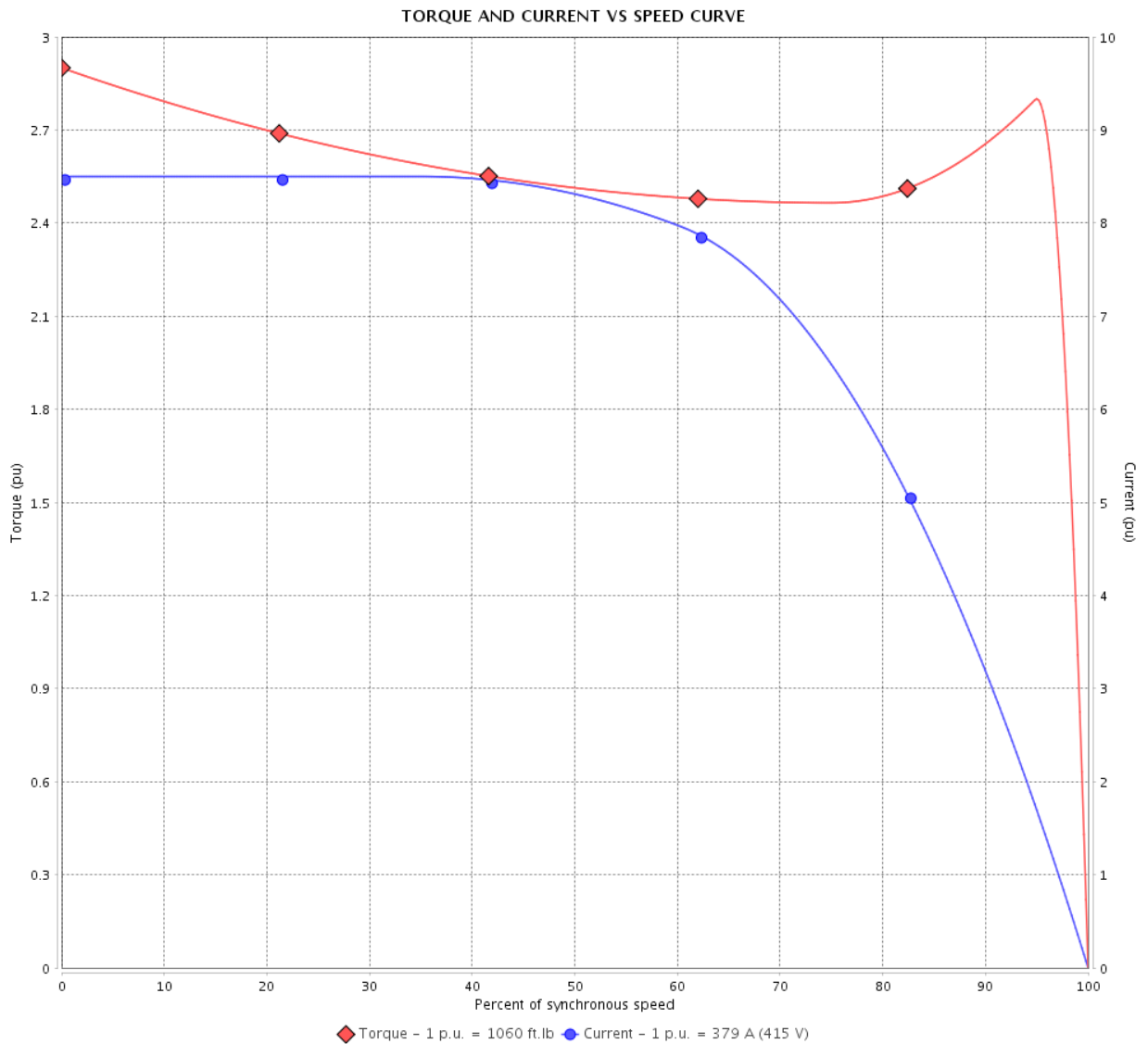
Three Phase Induction Motor - Squirrel Cage

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Product code : 13465763

Catalog # : 35018ST3QIE449T-W22



Performance : 415 V 50 Hz 4P IE3

Rated current	: 379 A	Moment of inertia (J)	: 131 sq.ft.lb
LRC	: 8.5	Duty cycle	: Cont.(S1)
Rated torque	: 1060 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.15
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1490 rpm	Design	: B

Locked rotor time : 68s (cold) 38s (hot)

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LOAD PERFORMANCE CURVE

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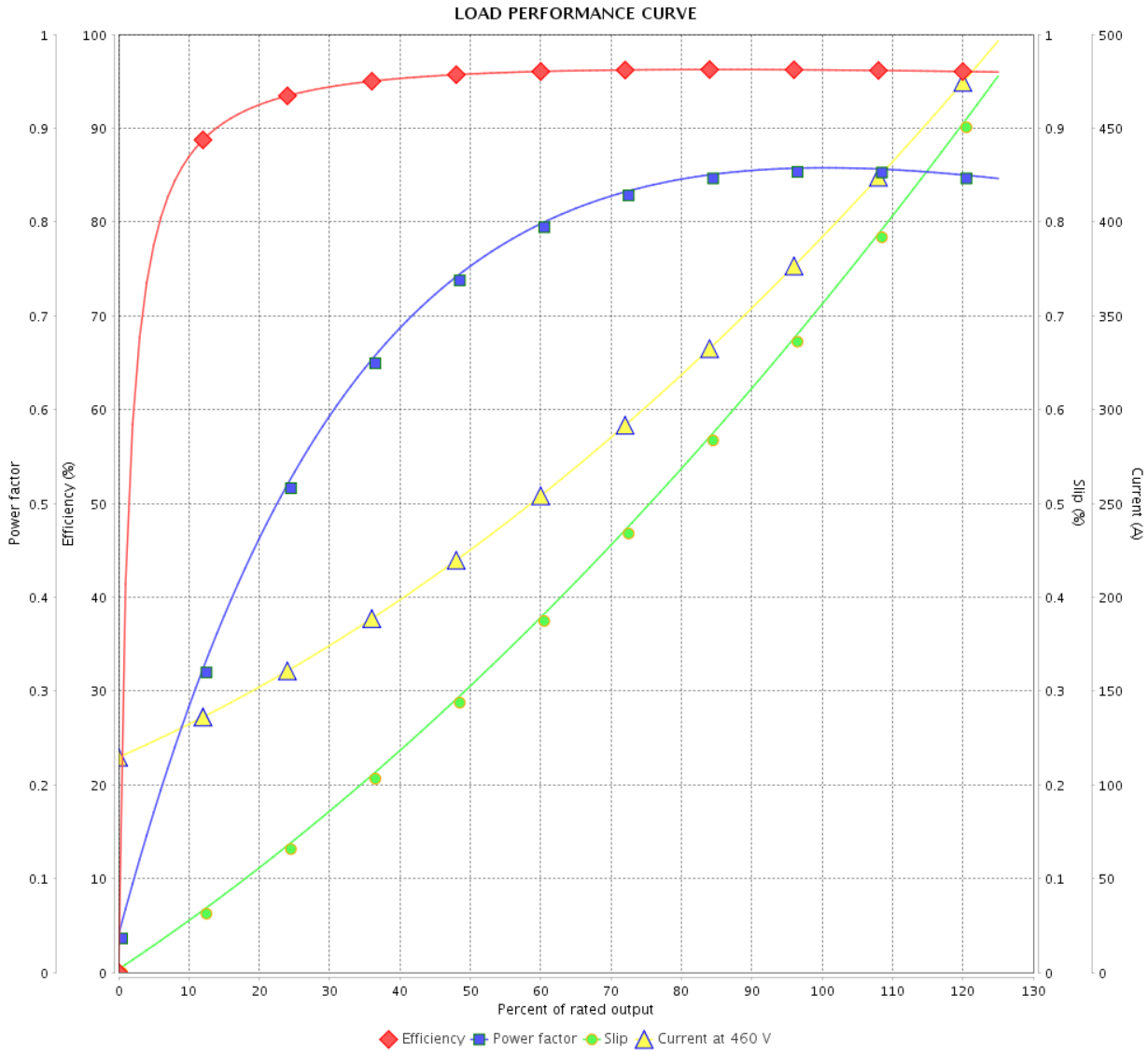


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Performance : 460 V 60 Hz 4P

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Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1787 rpm	Design	: B

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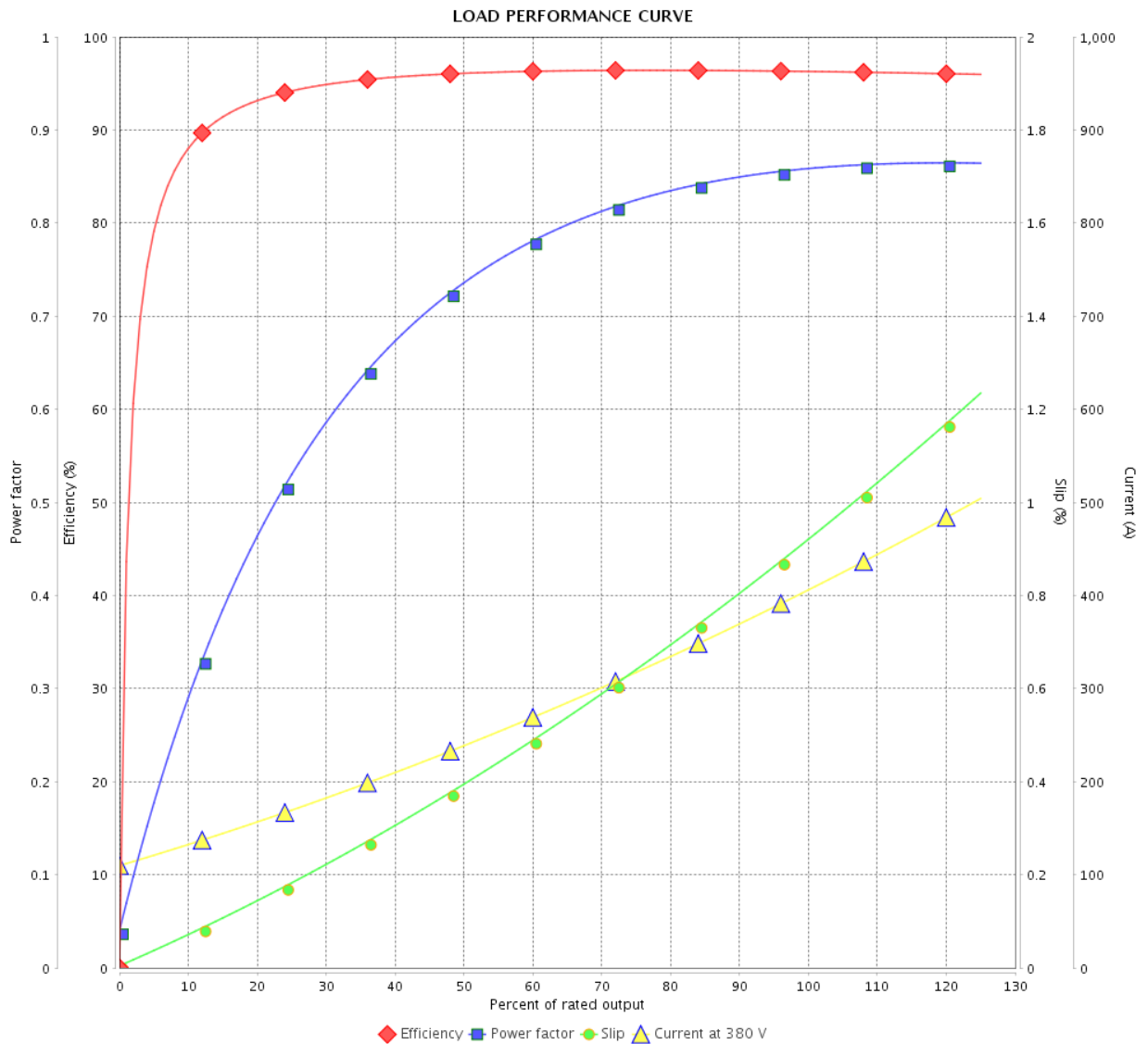


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Performance : 380 V 50 Hz 4P IE3

Rated current : 404 A
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 Rated torque : 1060 ft.lb
 Locked rotor torque : 240 %
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 Rated speed : 1486 rpm

Moment of inertia (J) : 131 sq.ft.lb
 Duty cycle : Cont.(S1)
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 Service factor : 1.15
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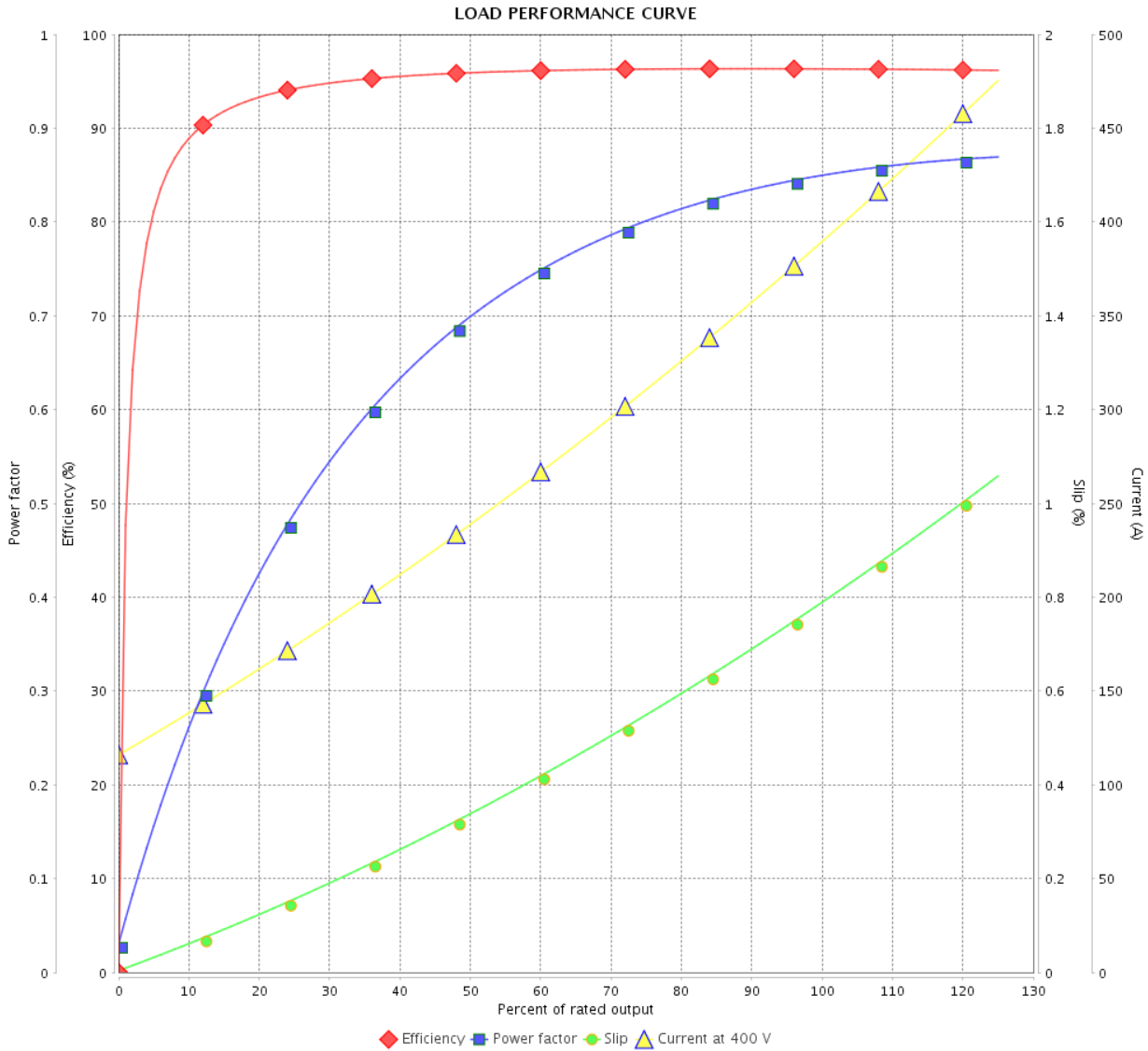


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Breakdown torque	: 250 %	Temperature rise	: 80 K
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Three Phase Induction Motor - Squirrel Cage

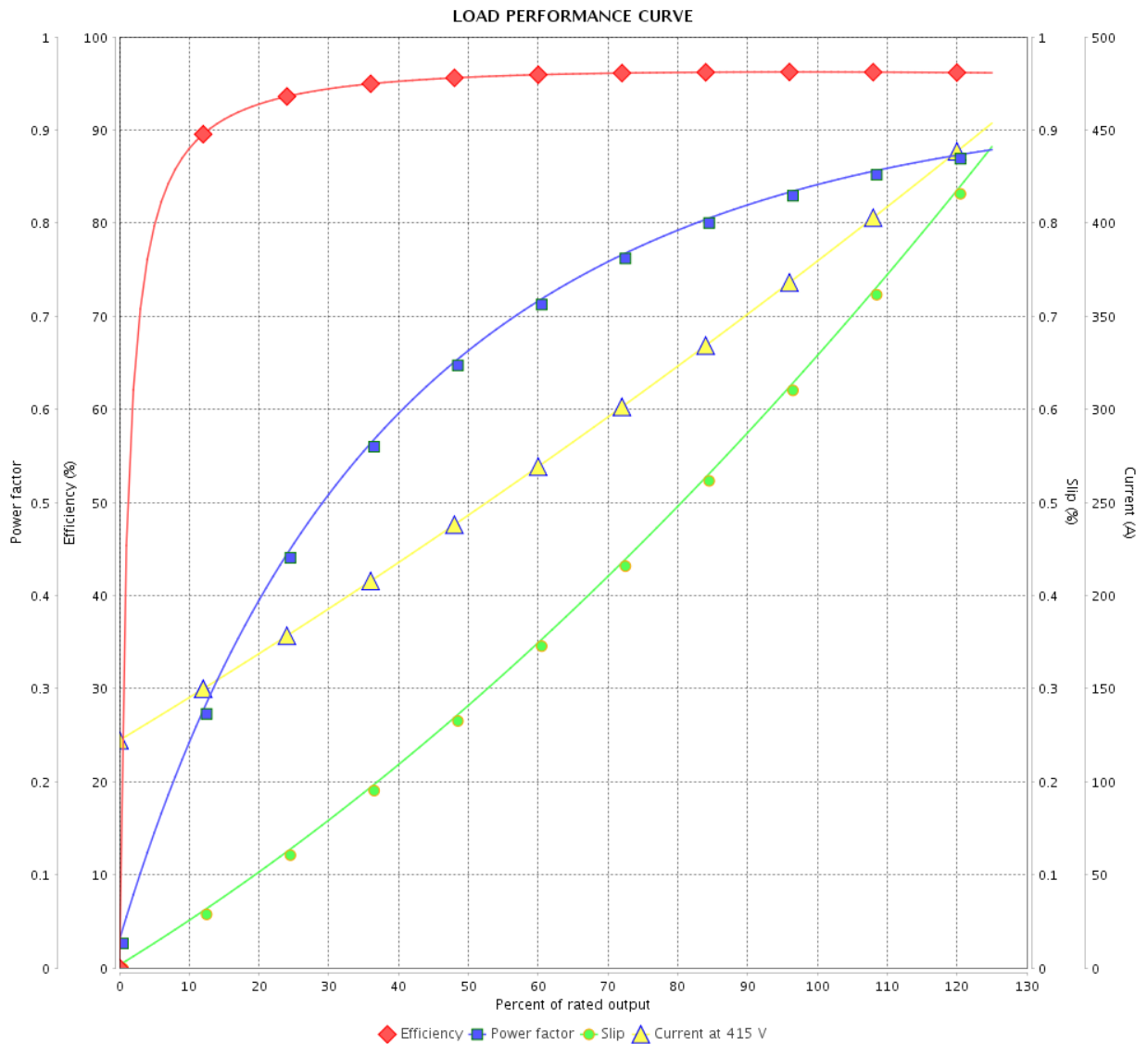


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 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
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THERMAL LIMIT CURVE

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Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1787 rpm	Design	: B

Heating constant

Cooling constant

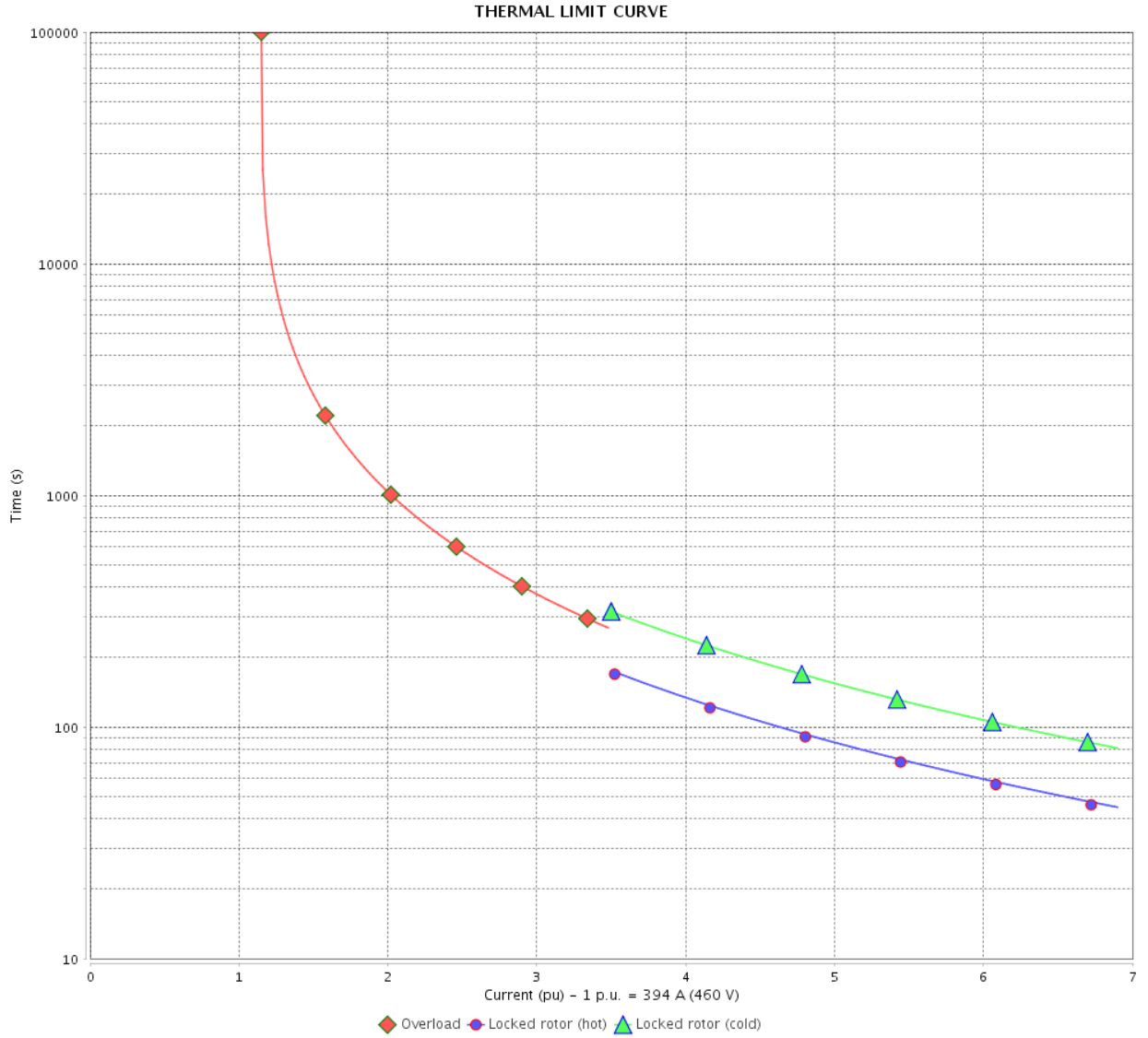
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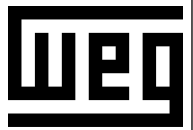
Heating constant

Cooling constant

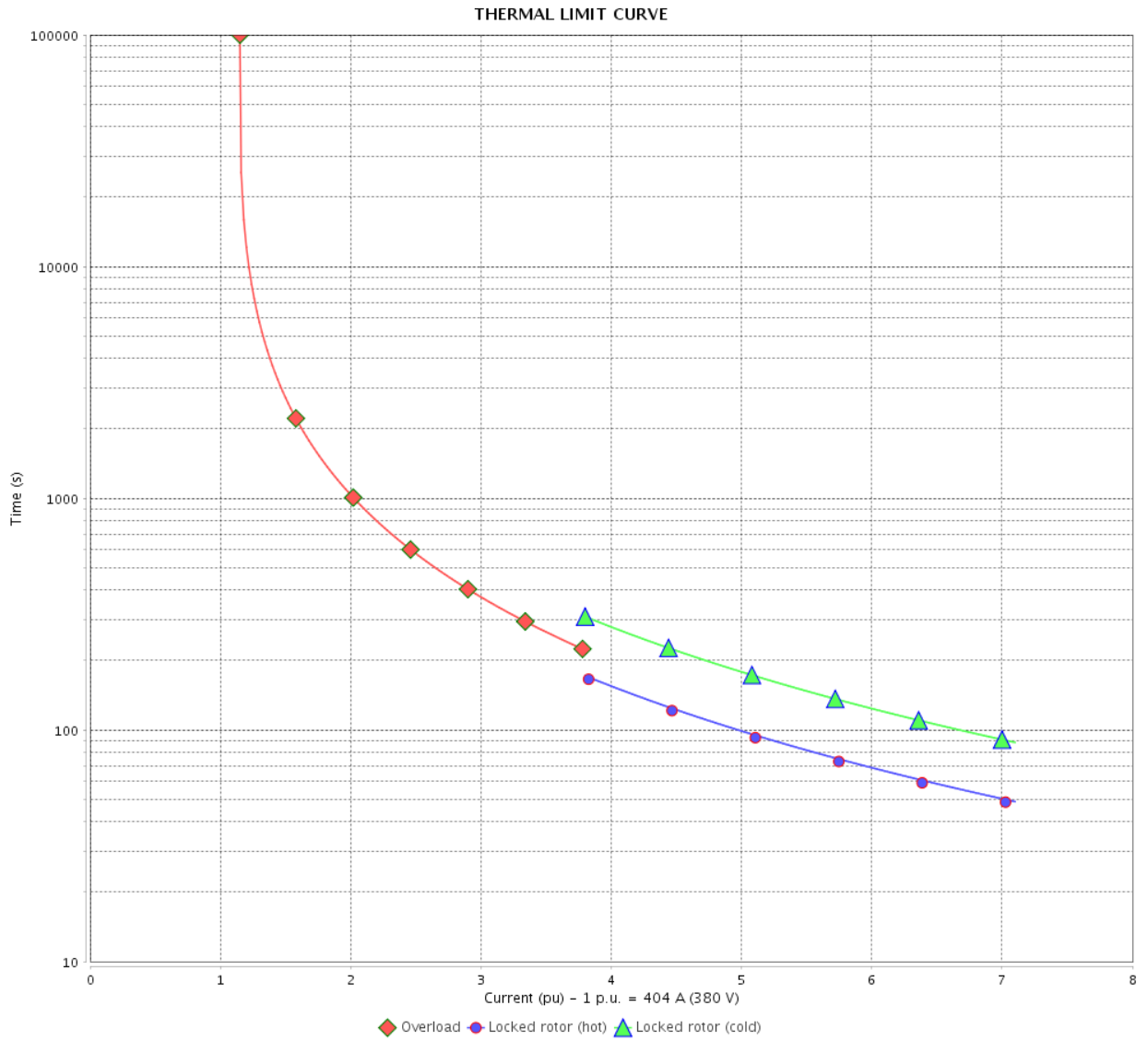
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Rated torque	: 1060 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1488 rpm	Design	: B

Heating constant

Cooling constant

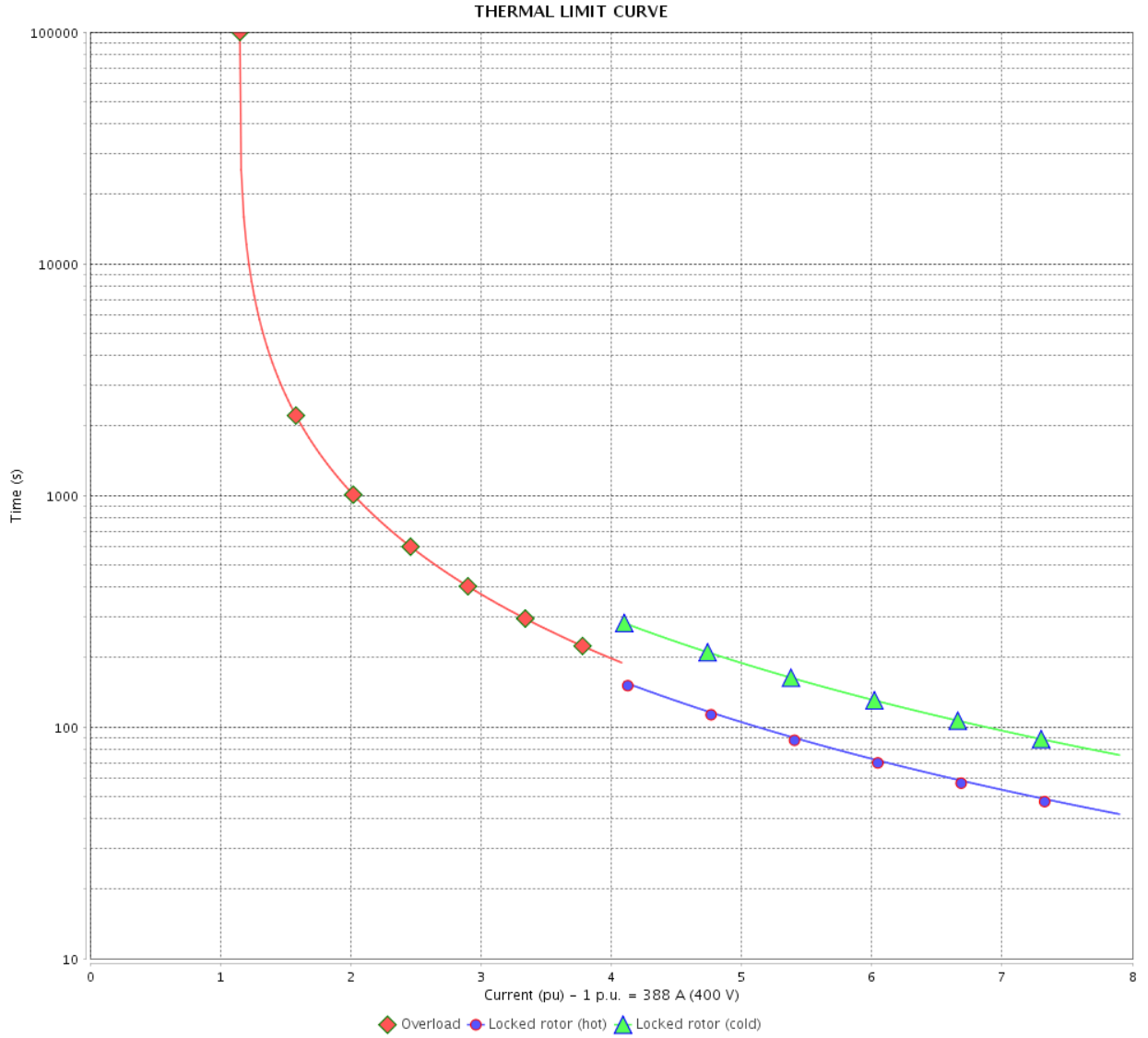
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Customer : _____



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Date				

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Performance : 415 V 50 Hz 4P IE3

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LRC	: 8.5	Duty cycle	: Cont.(S1)
Rated torque	: 1060 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.15
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1490 rpm	Design	: B

Heating constant

Cooling constant

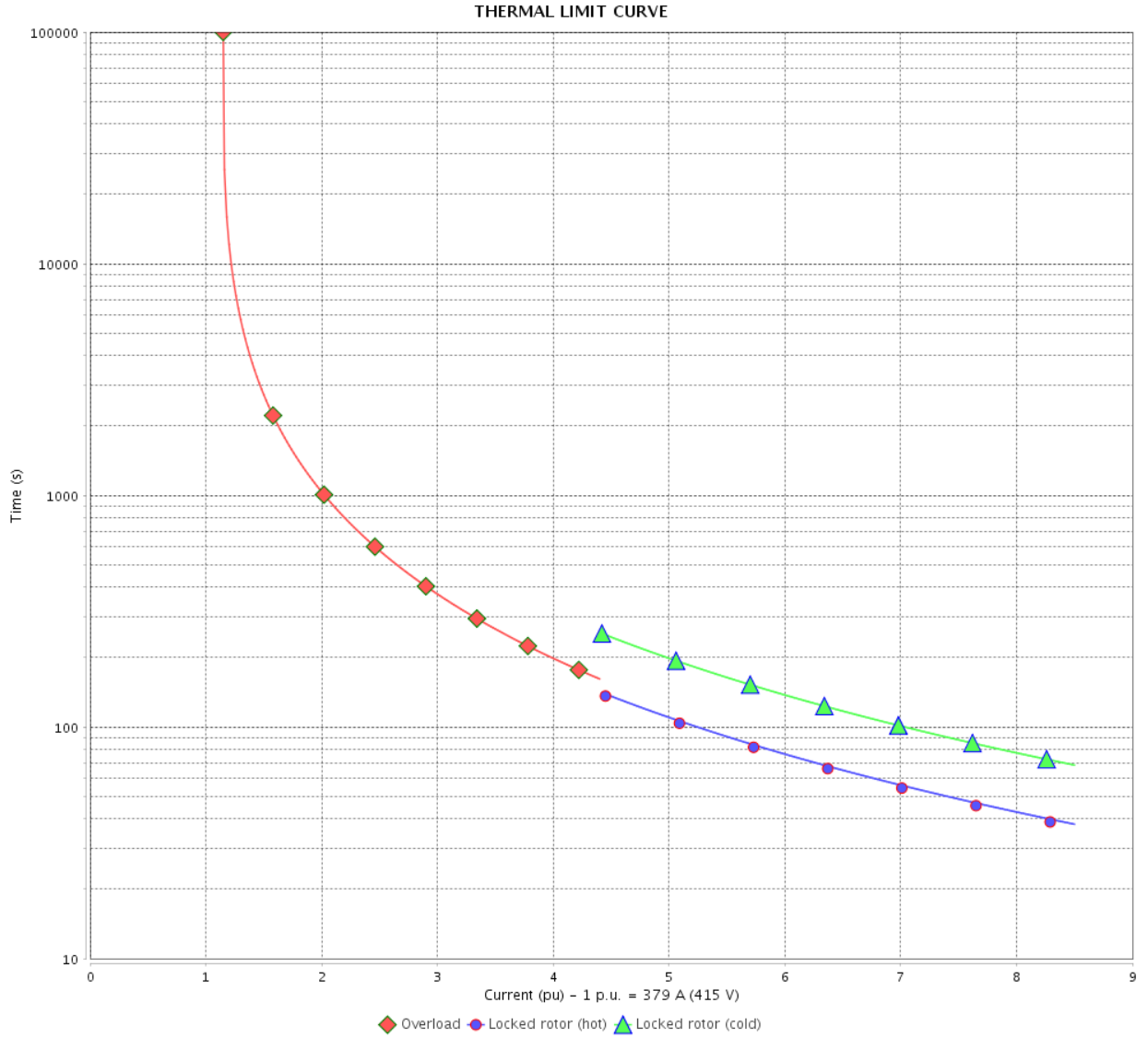
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Performed by				
Checked by			Page	Revision
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Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



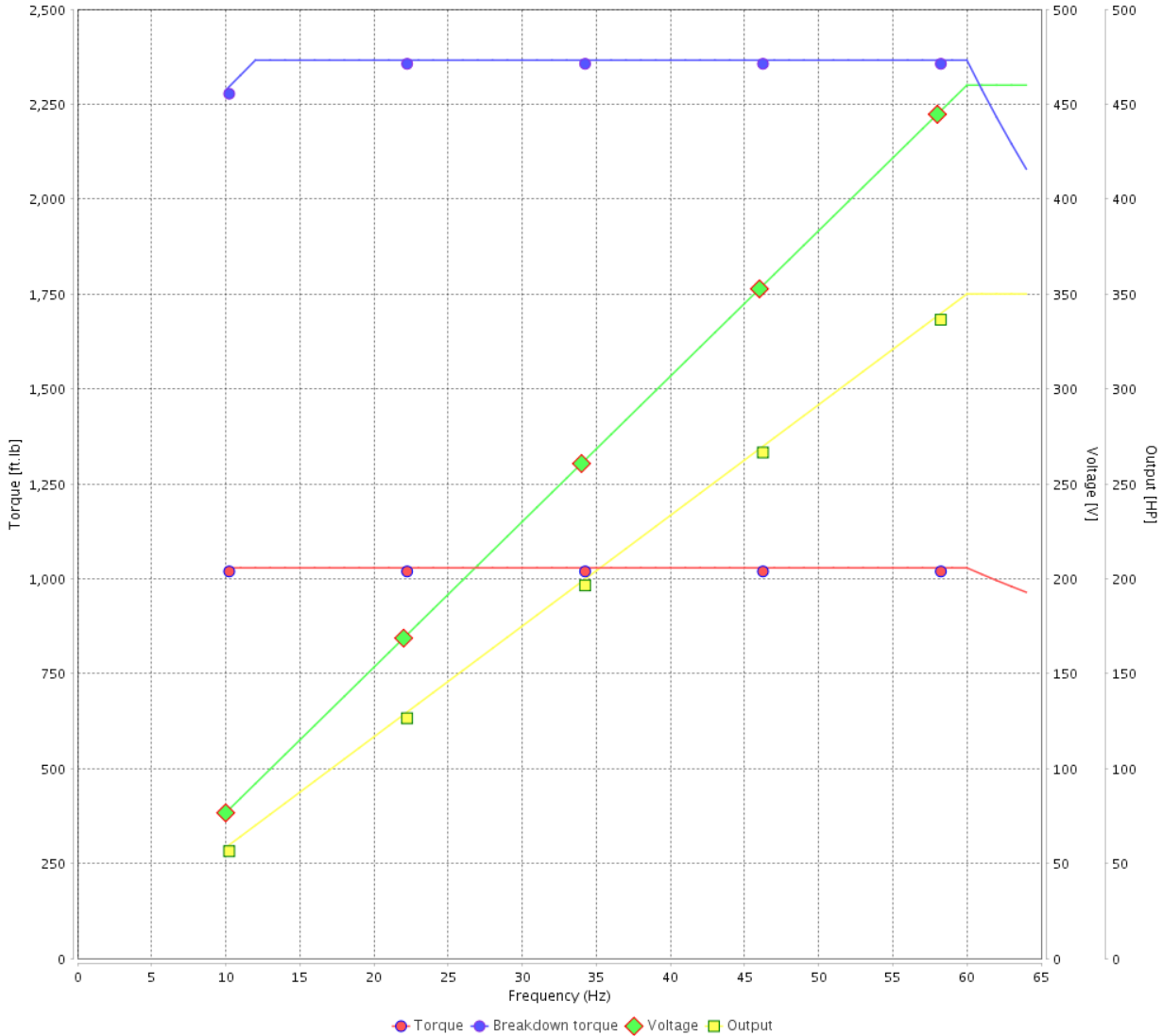
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VFD OPERATION CURVE



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 Breakdown torque : 229 %
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Moment of inertia (J) : 131 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

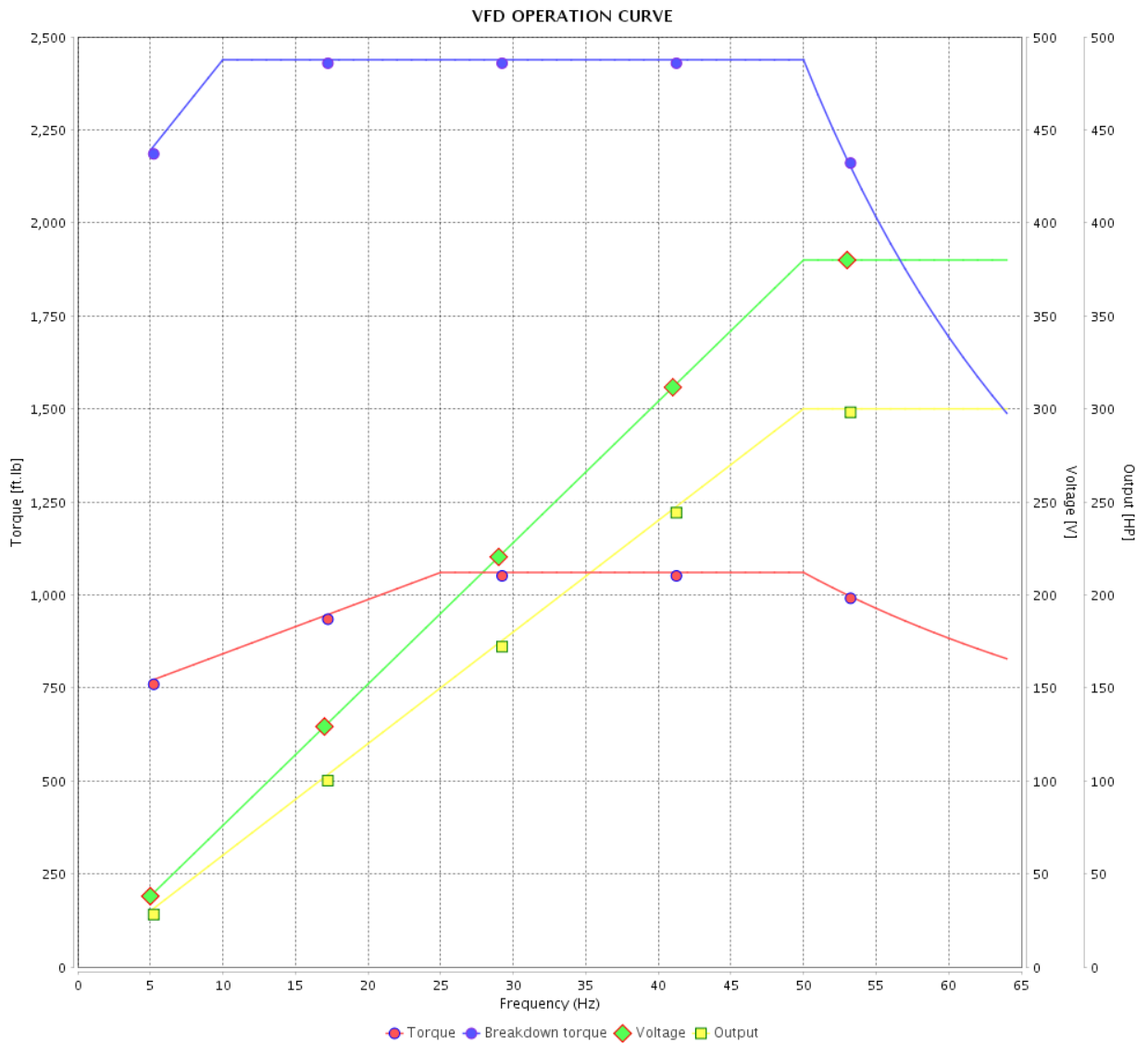


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Performance : 380 V 50 Hz 4P IE3

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 Breakdown torque : 229 %
 Rated speed : 1486 rpm

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



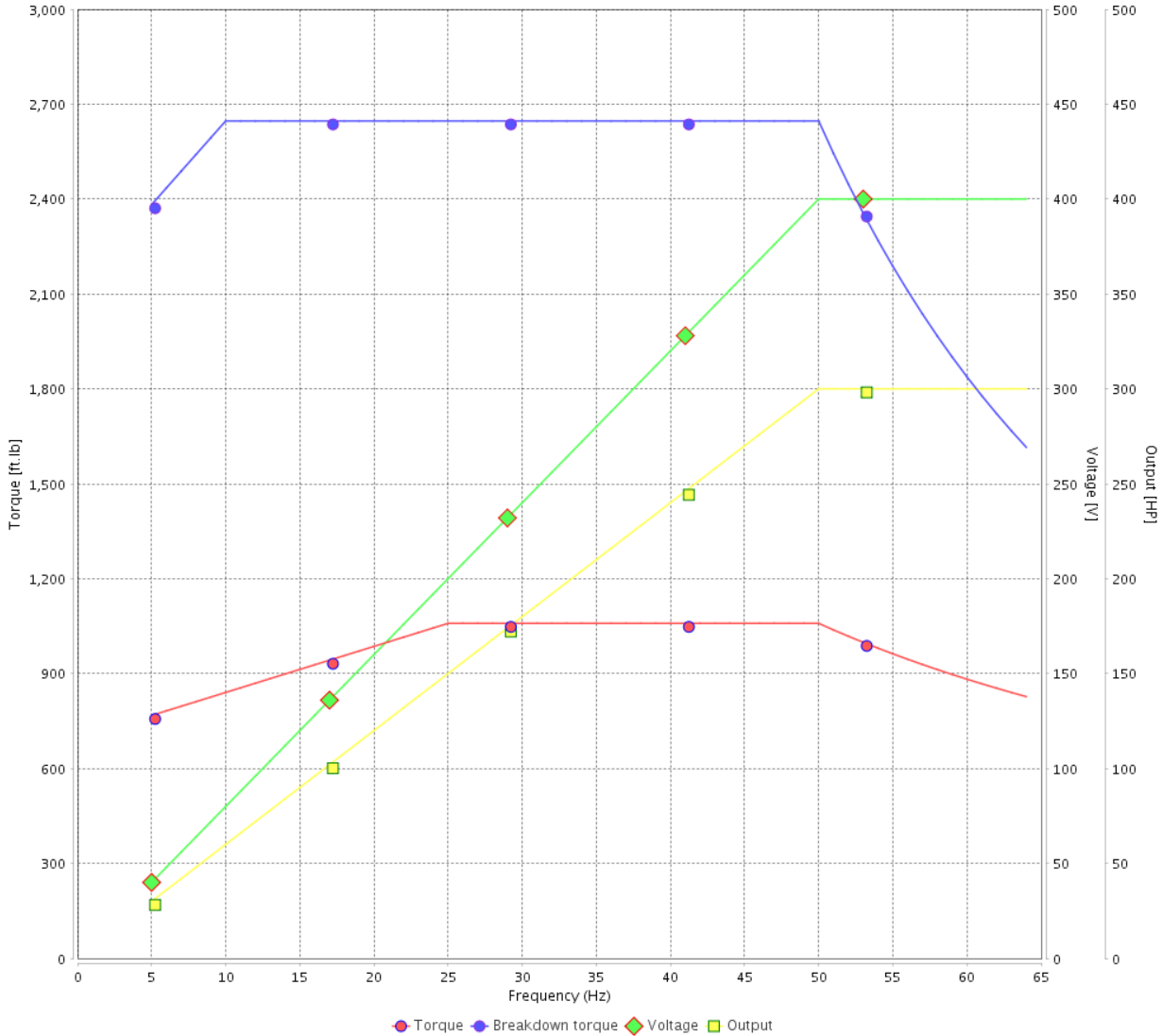
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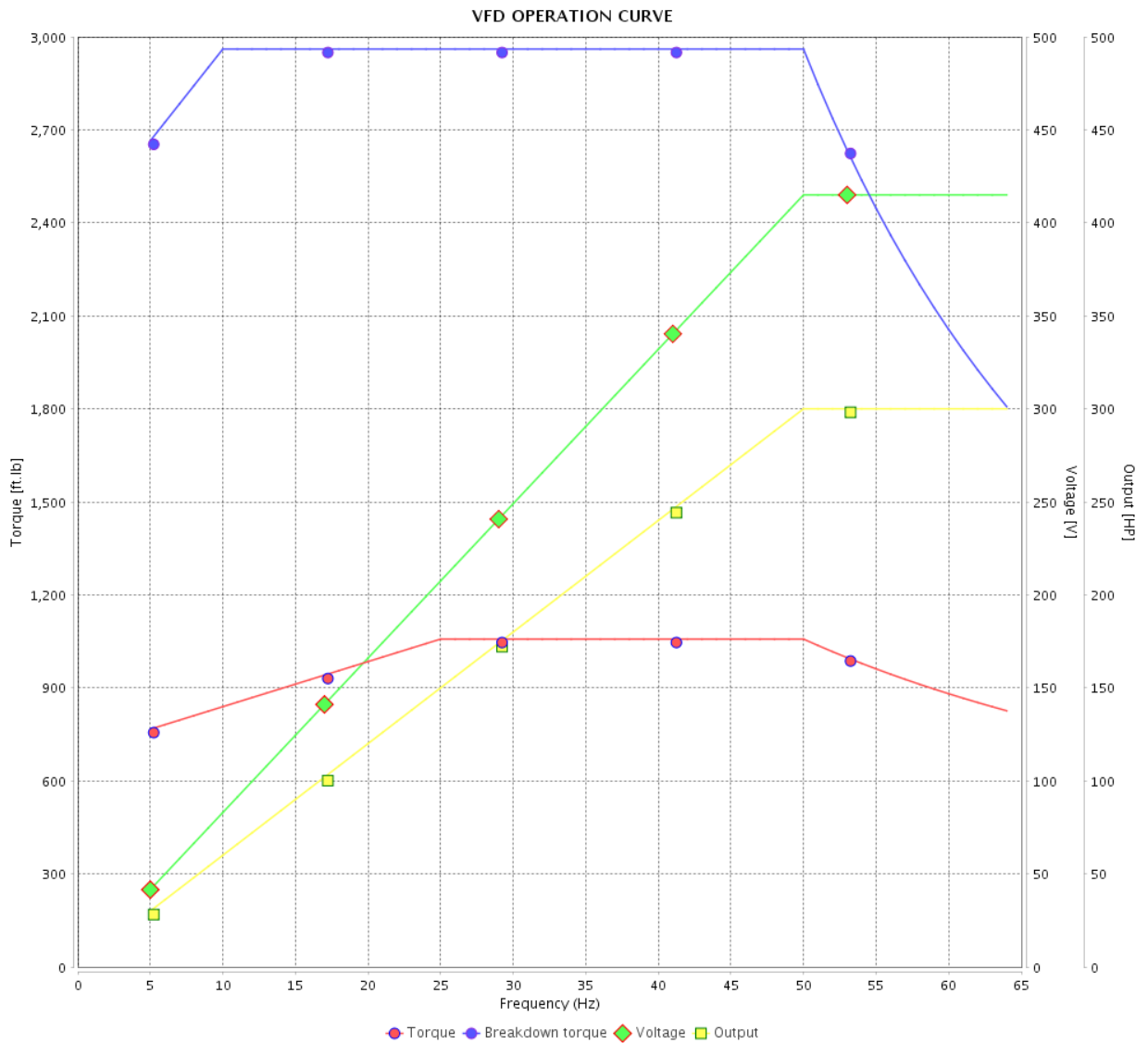


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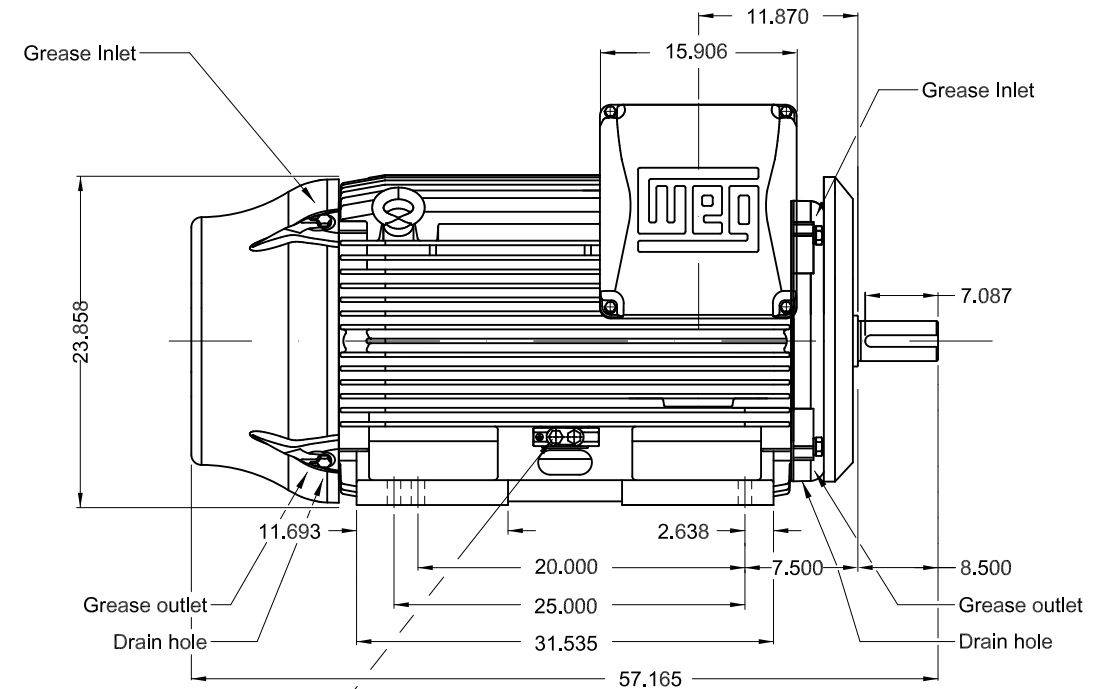
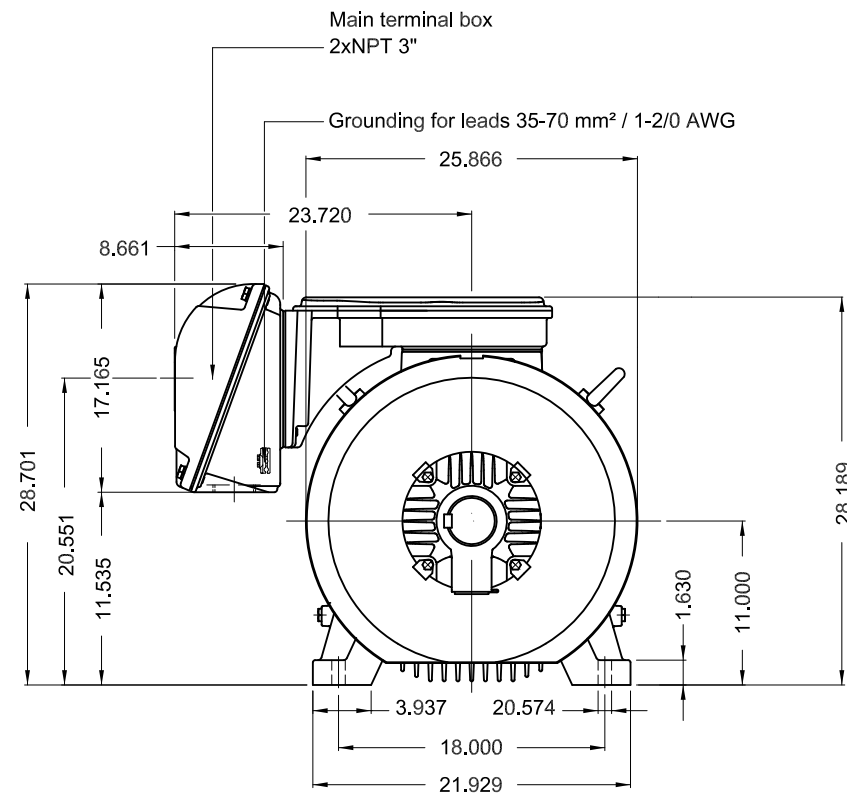


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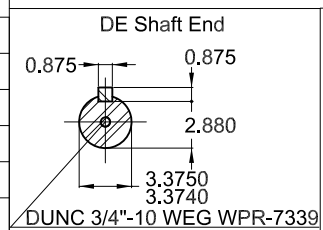


Grounding for leads 25-185 mm² / 3AWG-350MCM

350 HP 04 Poles 60 Hz

Dimensions in inches

- NDE endshield with electrically insulated bearing hub
- Drive-End Air Deflector
- Color RAL 5009
- Painting plan 202E
- Mounting NEMA F-1
- Mounting B3R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR IEEE 841 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
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 35018ST3QIE449T-W22



Inverter Duty Motor
Severe Duty

MADE IN BRAZIL
13465763

PH3 60Hz Fr. L447/9T 1000m.a.s.l. IP55 TEFC 3209lb

V 460

A 394

HP 350

kW 260

SF 1.15

SFA 453

RPM 1787

PF 0.86

AMB 40°C

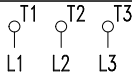
INS cl. F DT80K

NEMA NOM EFF 96.2%

DUTY CONT.

DES B Code G

GUARANT. EFF 95.4%



460V



→ 6322-C3 (60g) 110BC03X30

→ 6319-C3 (45g) 95BC03X30



MOBIL POLYREX EM (6000h)

