

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :			
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	12376409
		Catalog # :	00312ST3QIE213T-W22
Frame	: 213/5T	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	: 168 lb
Protection degree	: IP55	Moment of inertia (J)	: 1.20 sq.ft.lb
Design	: B		
Output [HP]	3	3	3
Poles	6	6	6
Frequency [Hz]	60	50	50
Rated voltage [V]	460	380	400
Rated current [A]	4.41	5.09	4.92
L. R. Amperes [A]	30.9	29.5	31.5
LRC [A]	7.0x(Code K)	5.8x(Code H)	6.4x(Code J)
No load current [A]	2.75	2.72	2.91
Rated speed [RPM]	1175	965	970
Slip [%]	2.08	3.50	3.00
Rated torque [ft.lb]	13.4	16.3	16.2
Locked rotor torque [%]	200	170	200
Breakdown torque [%]	280	210	240
Service factor	1.25	1.00	1.00
Temperature rise	80 K	80 K	80 K
Locked rotor time	104s (cold) 58s (hot)	72s (cold) 40s (hot)	72s (cold) 40s (hot)
Noise level ²	55.0 dB(A)	53.0 dB(A)	53.0 dB(A)
Efficiency (%)	25%		
	50%	86.5	87.5
	75%	88.5	88.5
	100%	89.5	87.5
Power Factor	25%		
	50%	0.50	0.57
	75%	0.63	0.70
	100%	0.70	0.75
Bearing type	: <u>Drive end</u> 6308 C3 <u>Non drive end</u> 6207 C3	Foundation loads	
Sealing	: Inpro/Seal Inpro/Seal	Max. traction	: 163 lb
Lubrication interval	: 20000 h 20000 h	Max. compression	: 331 lb
Lubricant amount	: 11 g 7 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



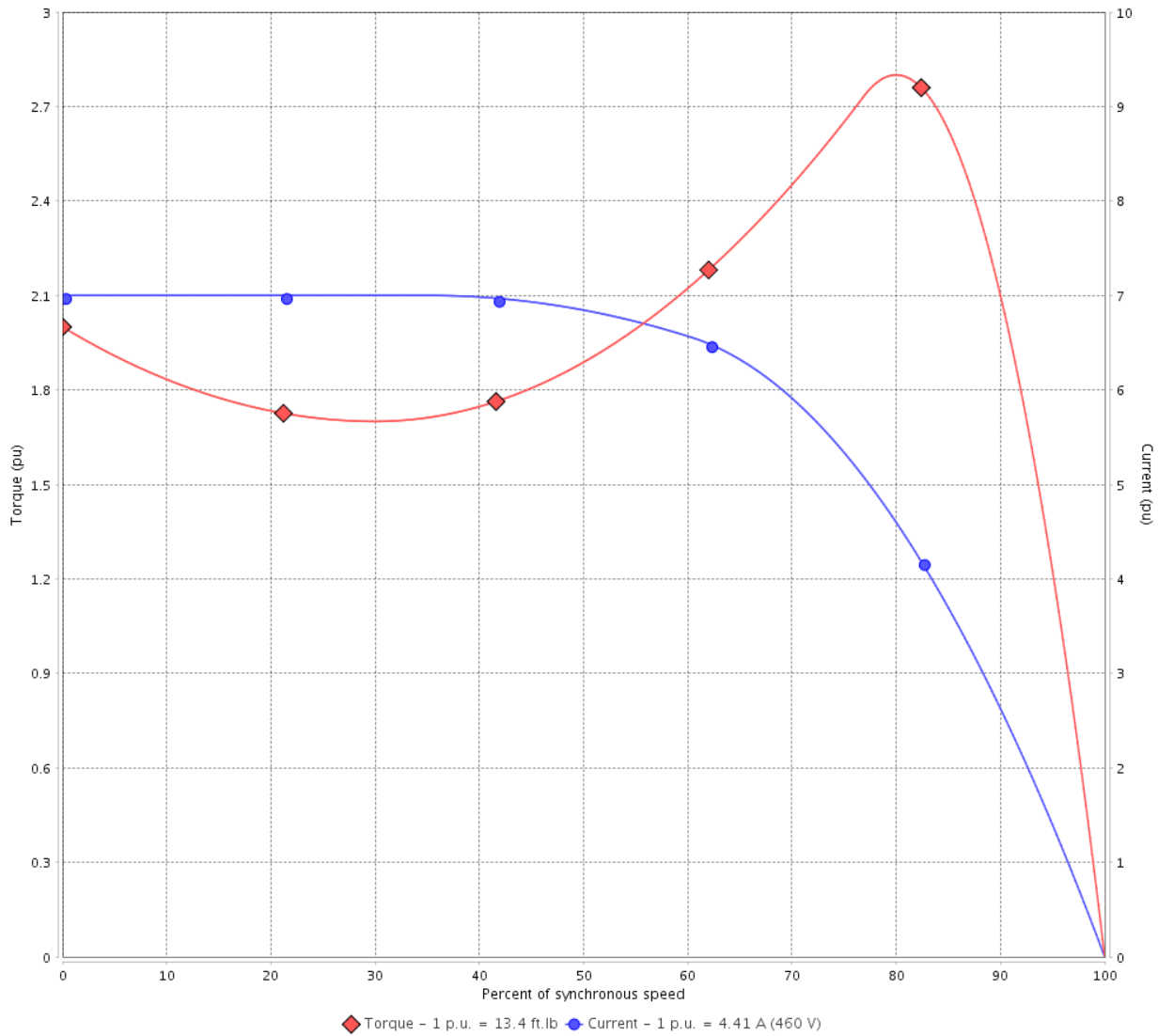
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12376409

Catalog # : 00312ST3QIE213T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 6P

Rated current	: 4.41 A	Moment of inertia (J)	: 1.20 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 13.4 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1175 rpm	Design	: B

Locked rotor time : 104s (cold) 58s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



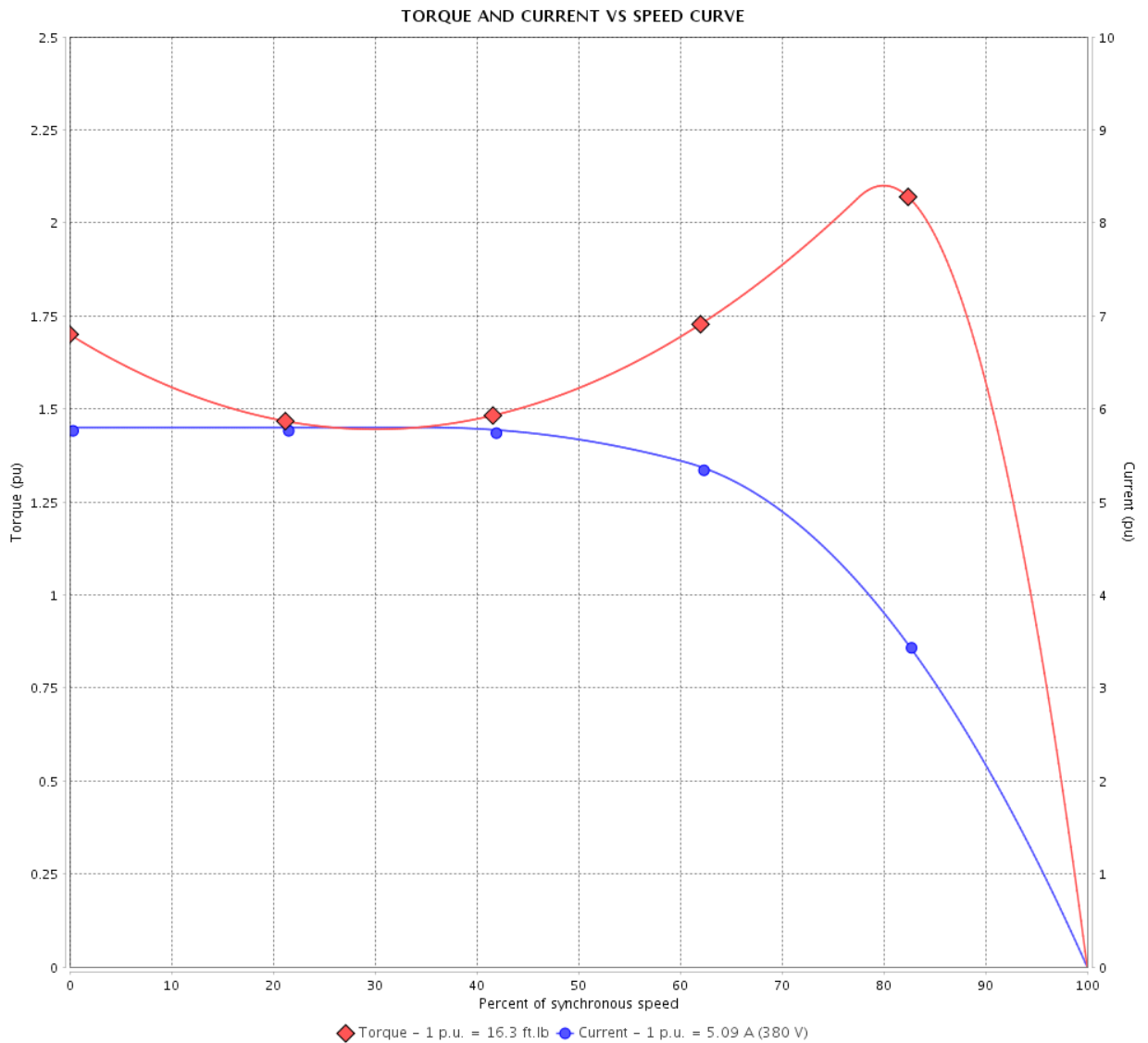
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12376409

Catalog # : 00312ST3QIE213T-W22



Performance : 380 V 50 Hz 6P IE4

Rated current	: 5.09 A	Moment of inertia (J)	: 1.20 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 16.3 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

Locked rotor time : 72s (cold) 40s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



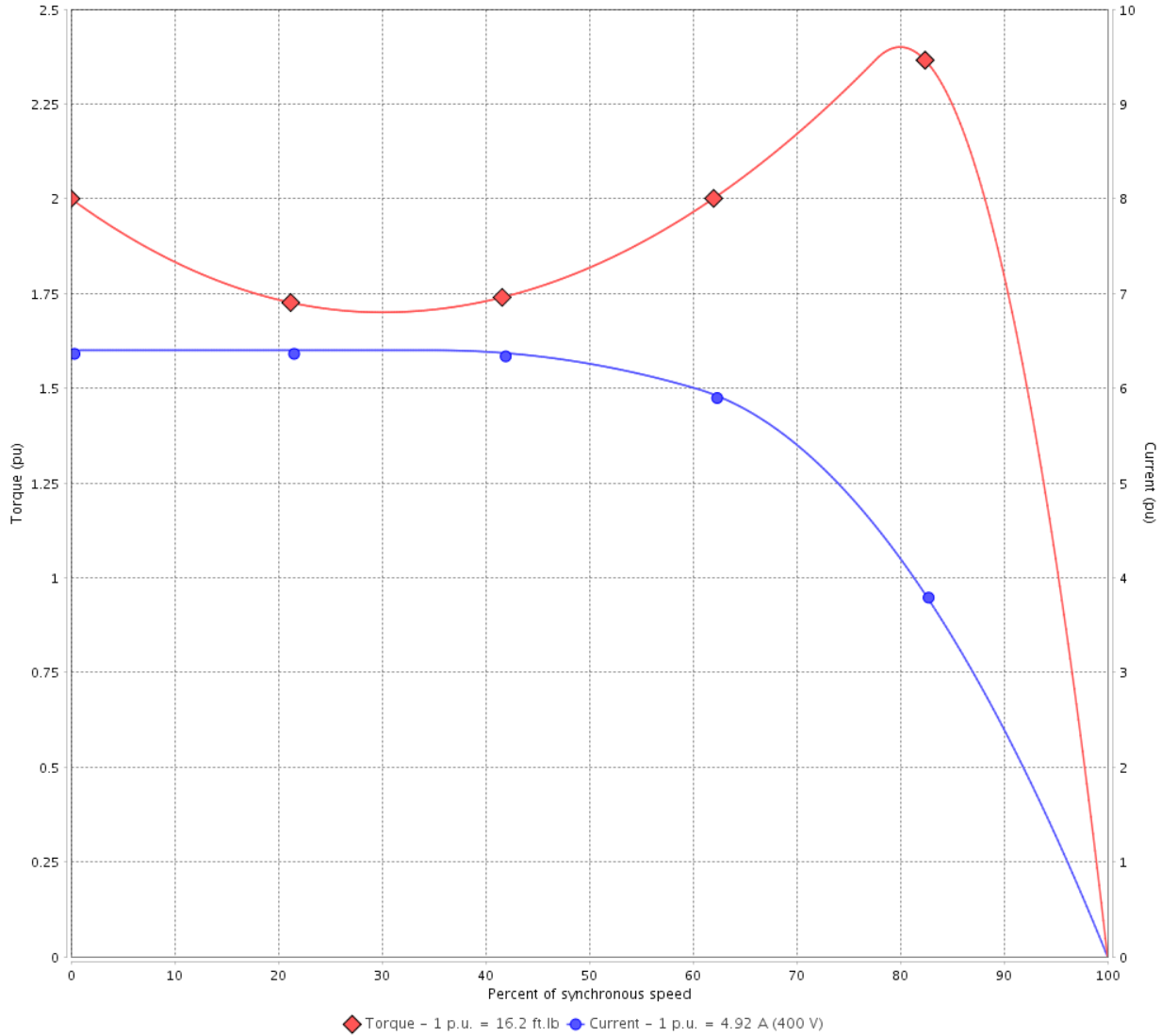
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12376409

Catalog # : 00312ST3QIE213T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE4

Rated current	: 4.92 A	Moment of inertia (J)	: 1.20 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 16.2 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

Locked rotor time : 72s (cold) 40s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



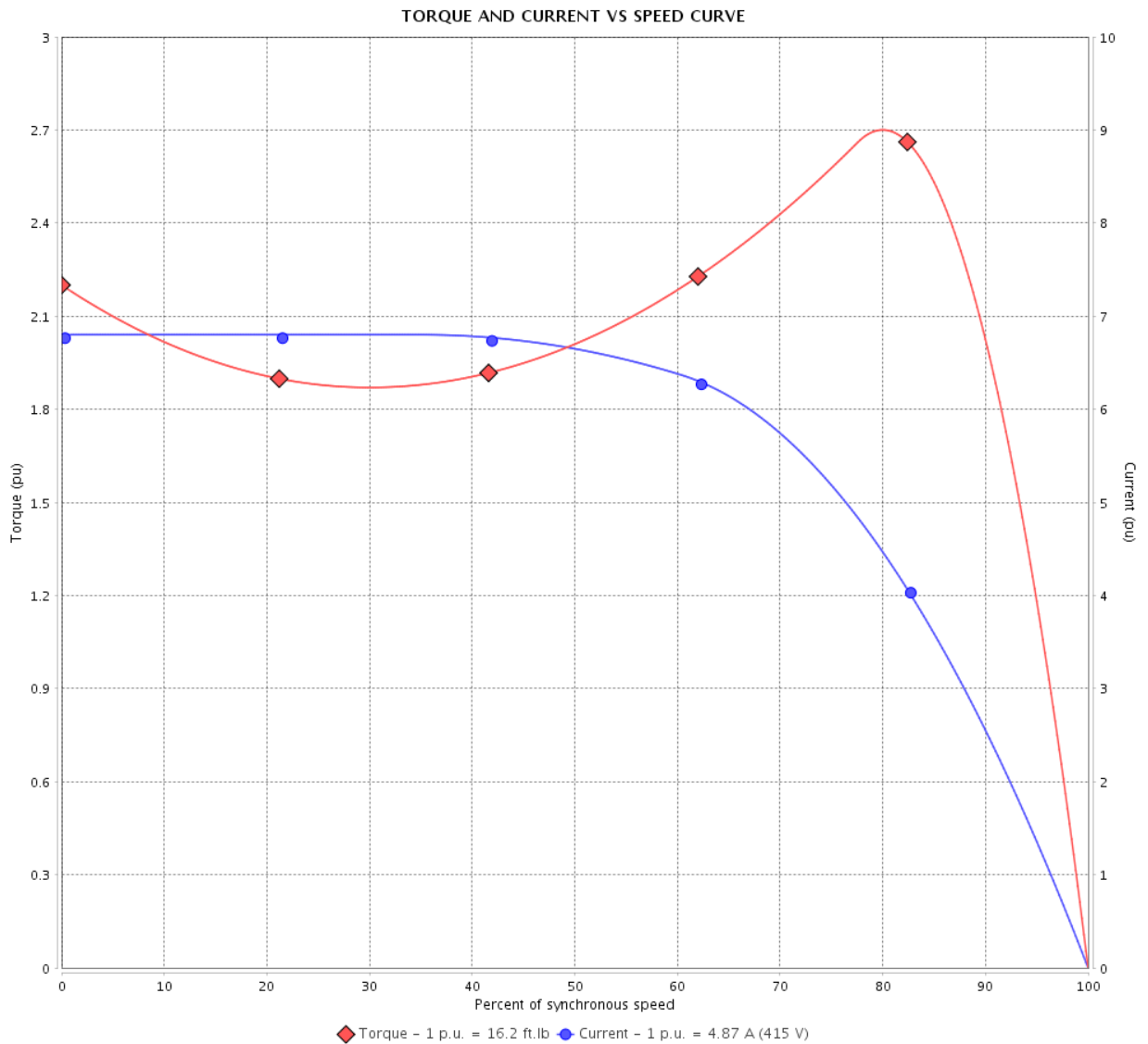
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Rated current	: 4.87 A	Moment of inertia (J)	: 1.20 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 16.2 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

Locked rotor time : 72s (cold) 40s (hot)

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LOAD PERFORMANCE CURVE

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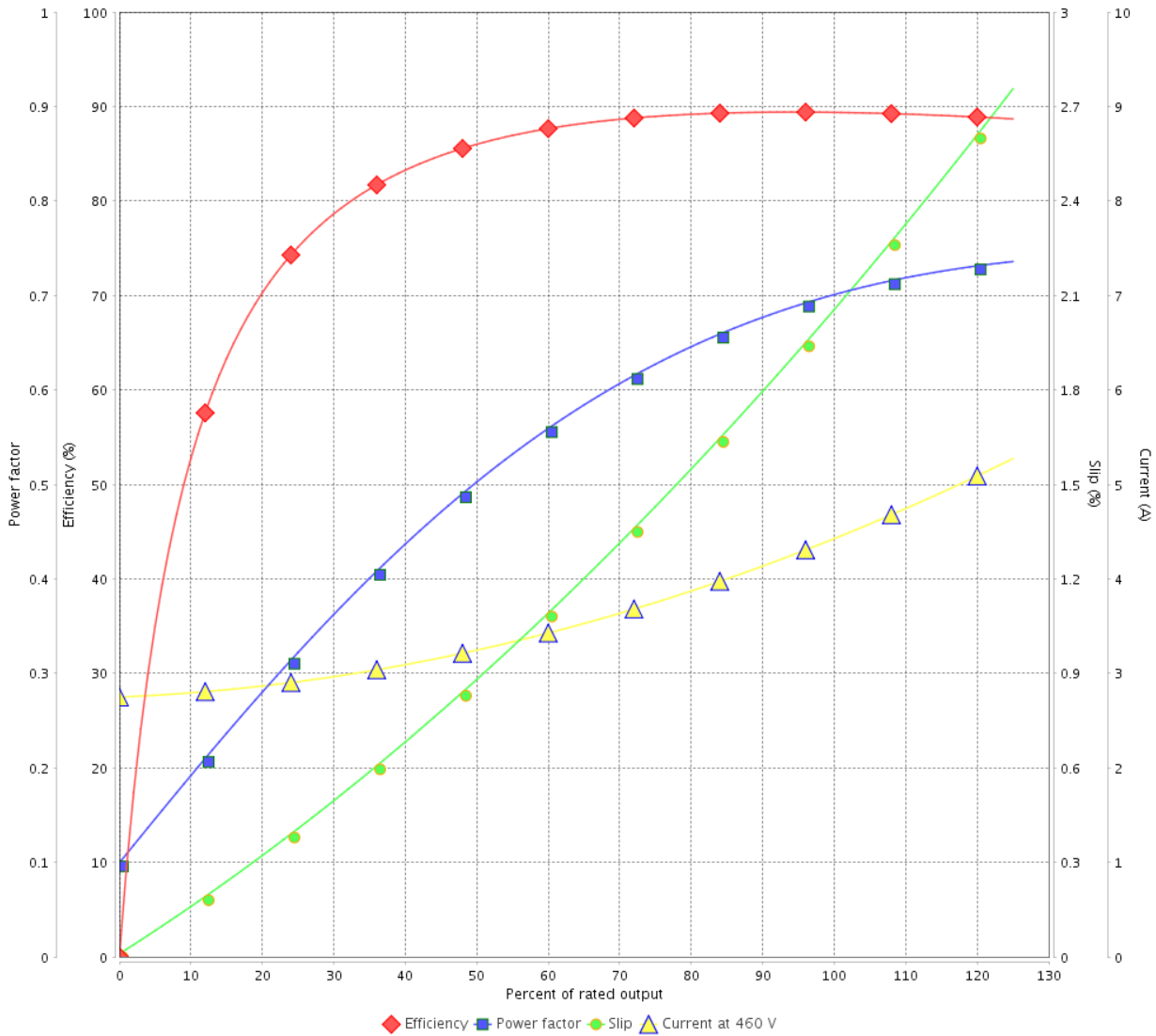
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LOAD PERFORMANCE CURVE



Performance : 460 V 60 Hz 6P

Rated current : 4.41 A
 LRC : 7.0
 Rated torque : 13.4 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 280 %
 Rated speed : 1175 rpm

Moment of inertia (J) : 1.20 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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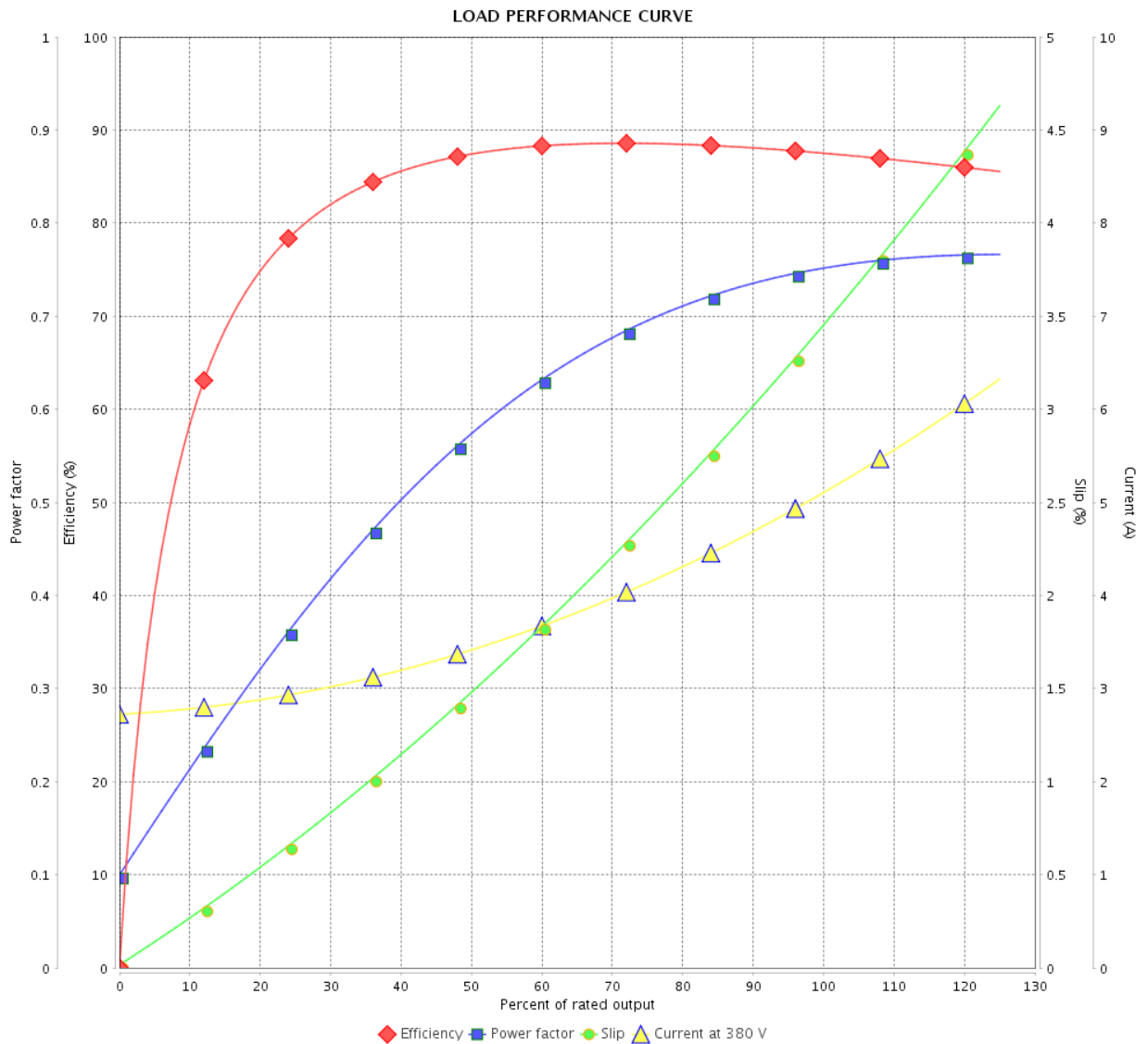


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Performance : 380 V 50 Hz 6P IE4

Rated current : 5.09 A
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 Locked rotor torque : 170 %
 Breakdown torque : 210 %
 Rated speed : 965 rpm

Moment of inertia (J) : 1.20 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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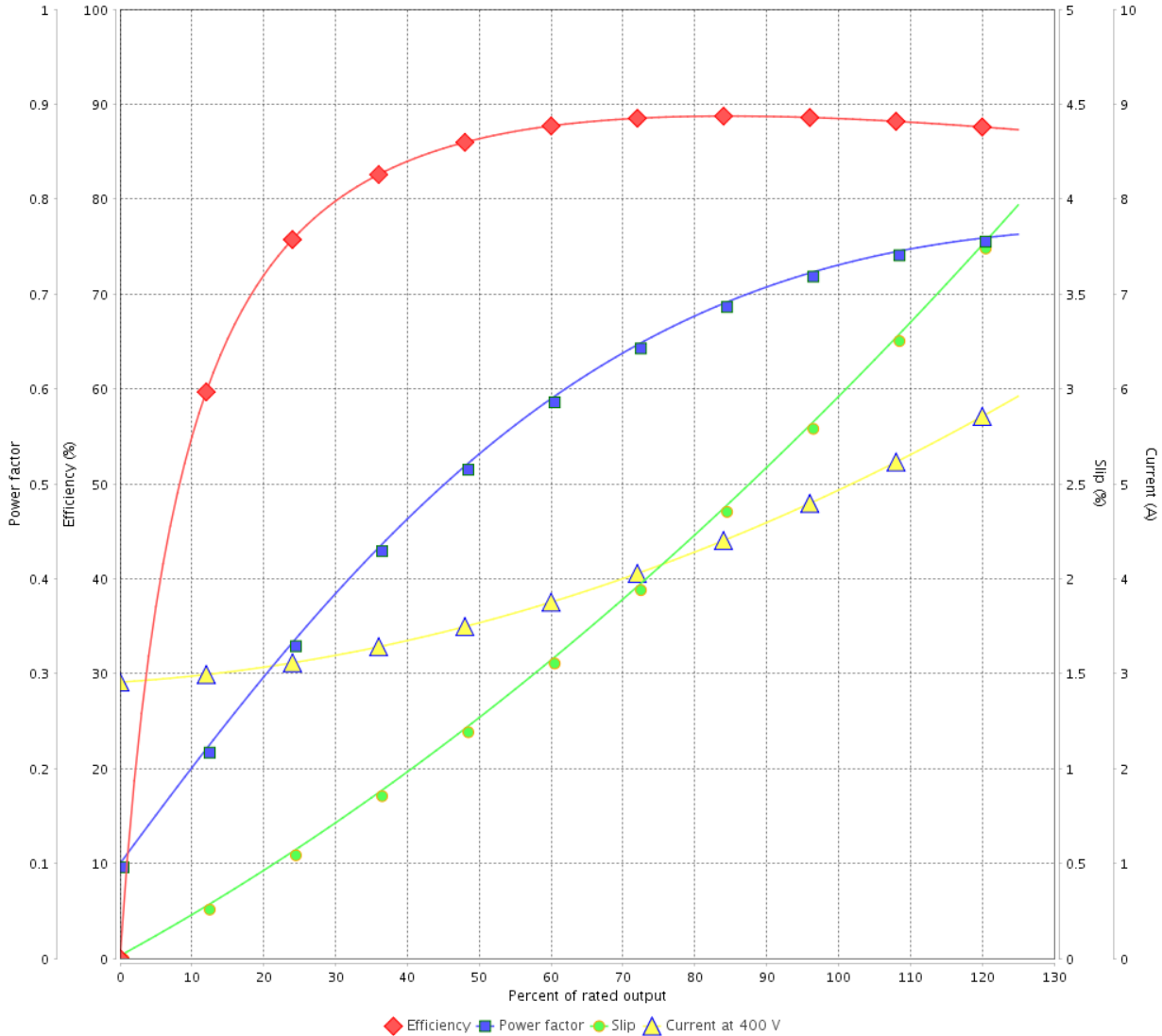
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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE4

Rated current : 4.92 A
 LRC : 6.4
 Rated torque : 16.2 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 970 rpm

Moment of inertia (J) : 1.20 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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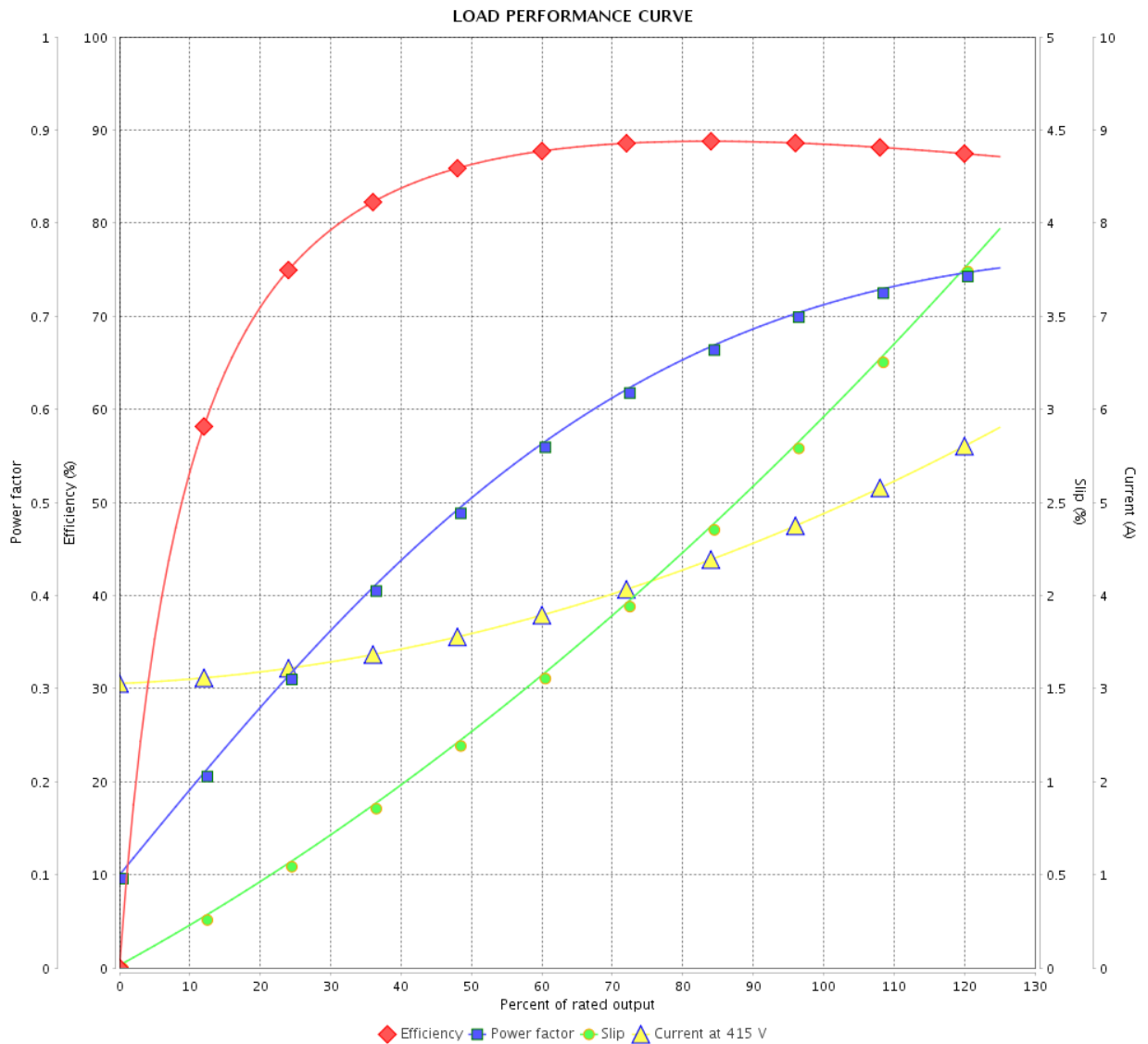


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 Rated speed : 970 rpm

Moment of inertia (J) : 1.20 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE



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Rated speed	: 1175 rpm	Design	: B

Heating constant

Cooling constant

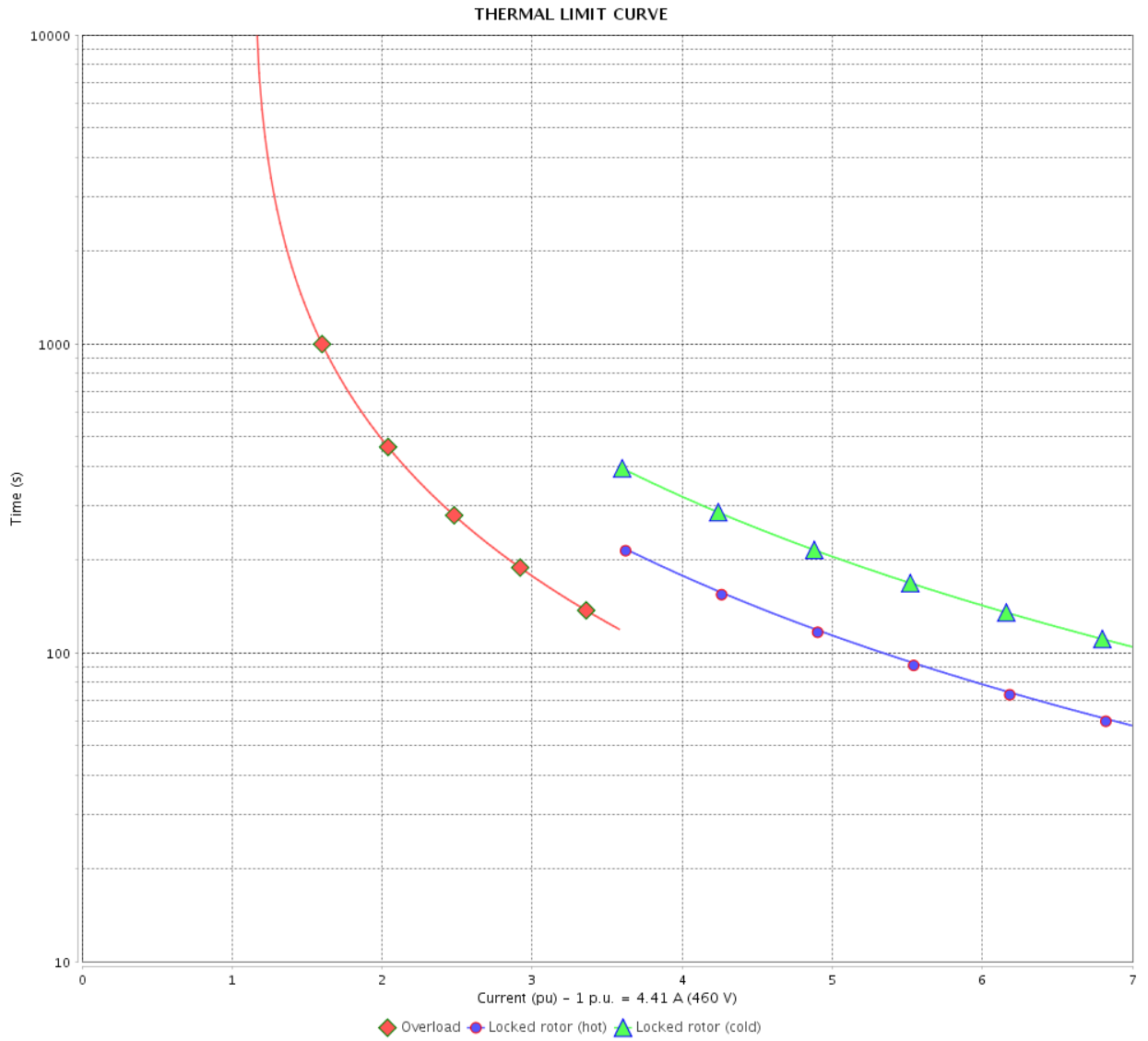
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Locked rotor torque	: 170 %	Service factor	: 1.00
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Rated speed	: 965 rpm	Design	: B

Heating constant

Cooling constant

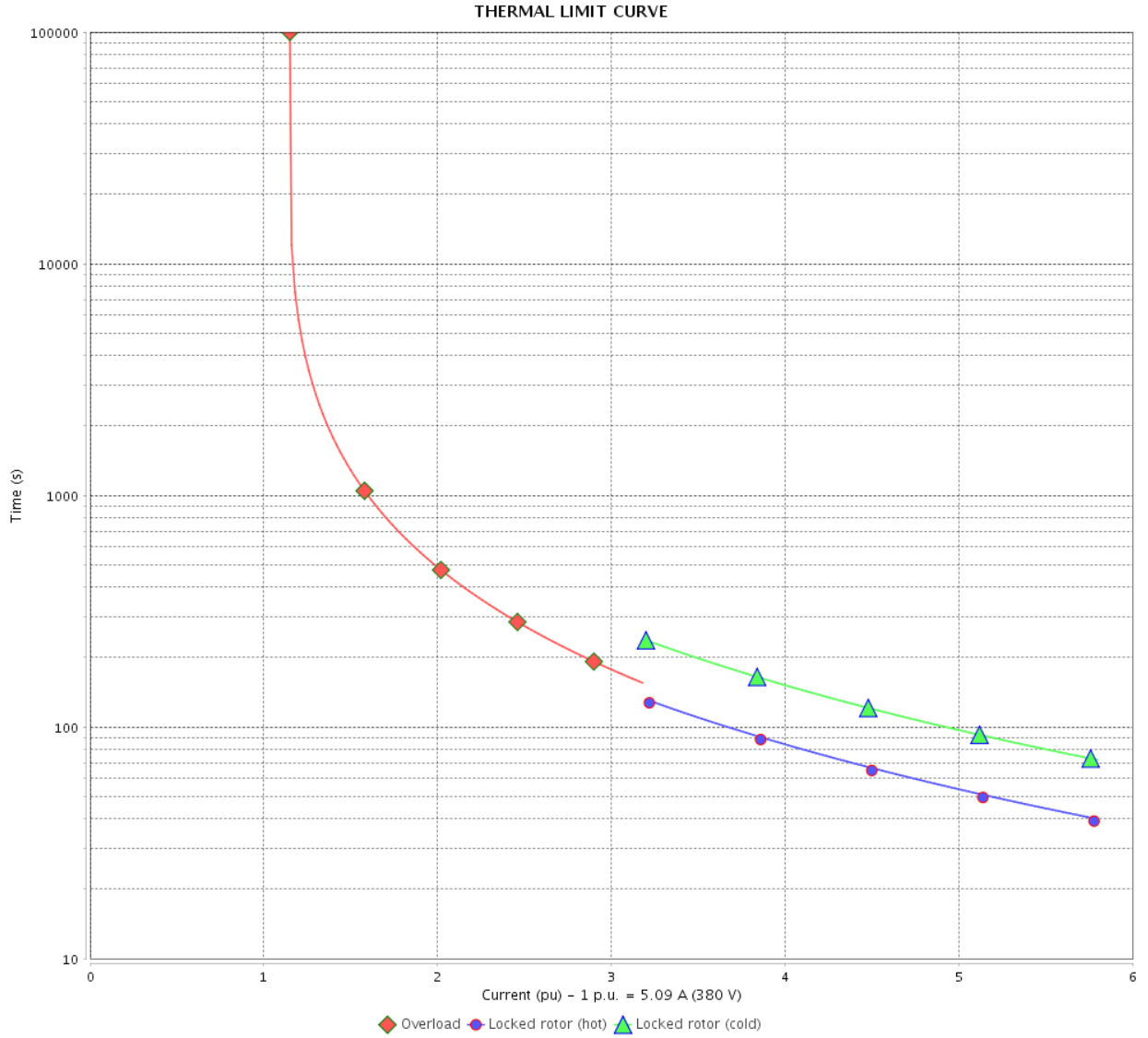
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Locked rotor torque	: 200 %	Service factor	: 1.00
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Cooling constant

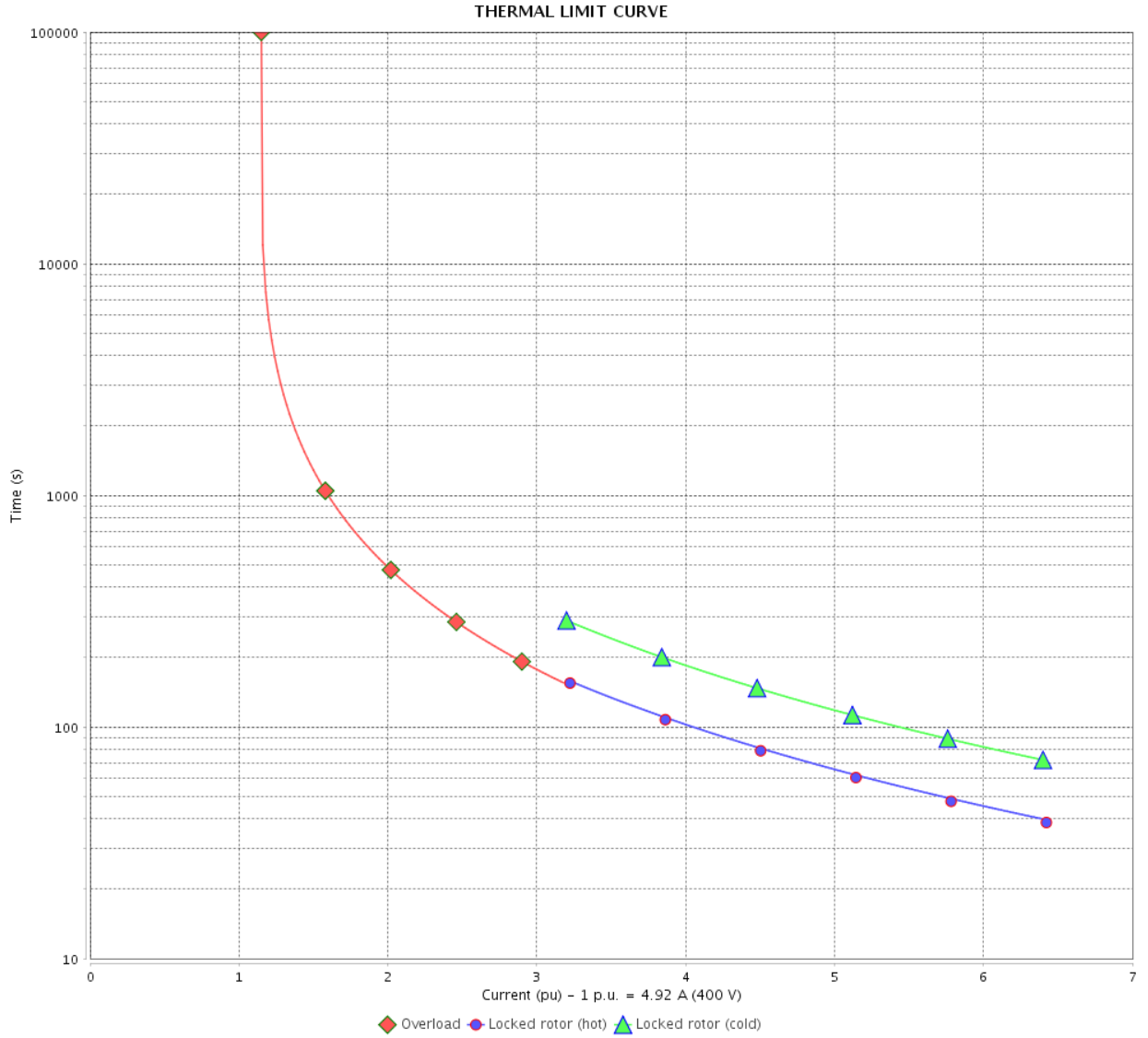
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Rated speed	: 970 rpm	Design	: B

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Cooling constant

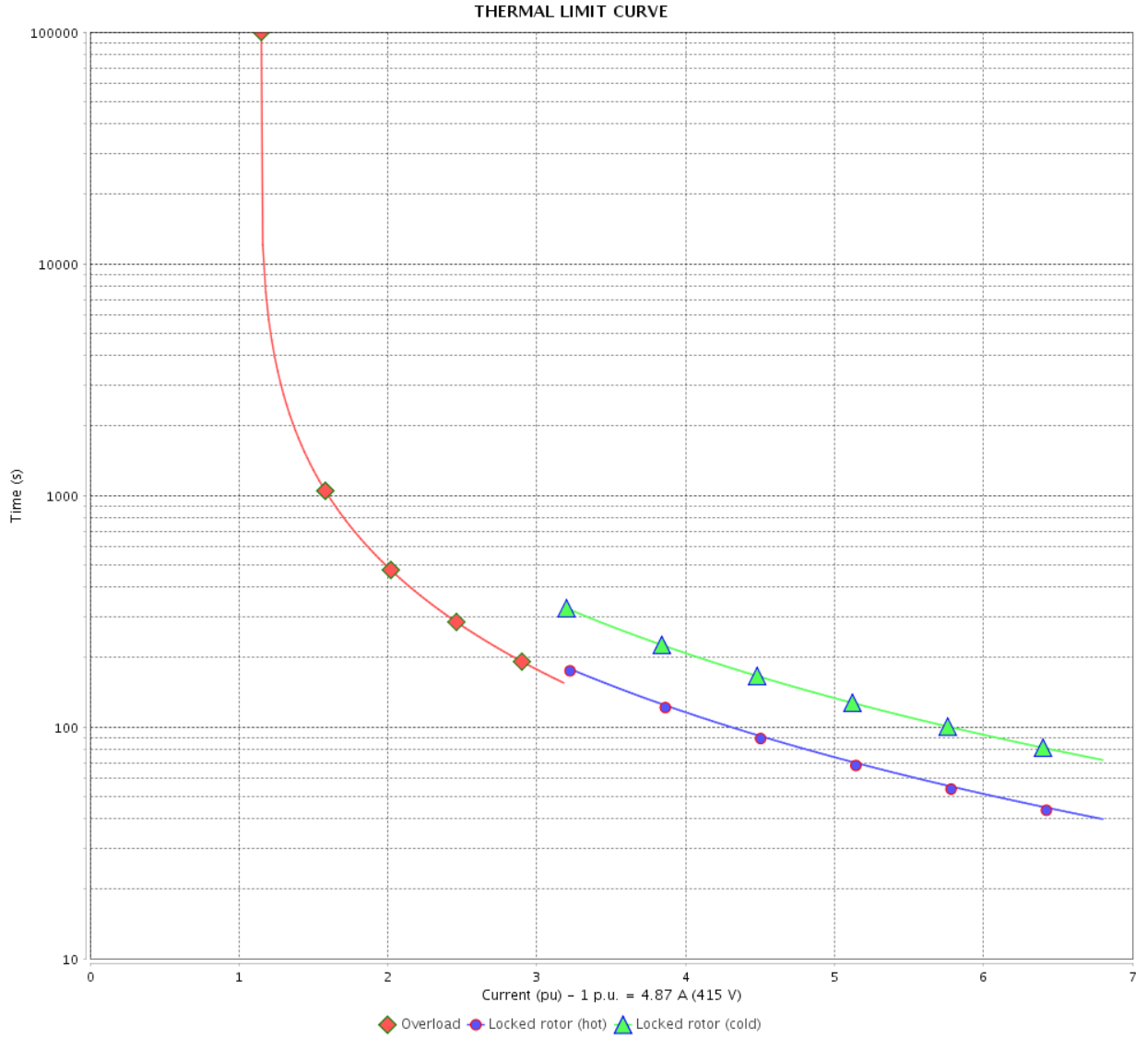
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

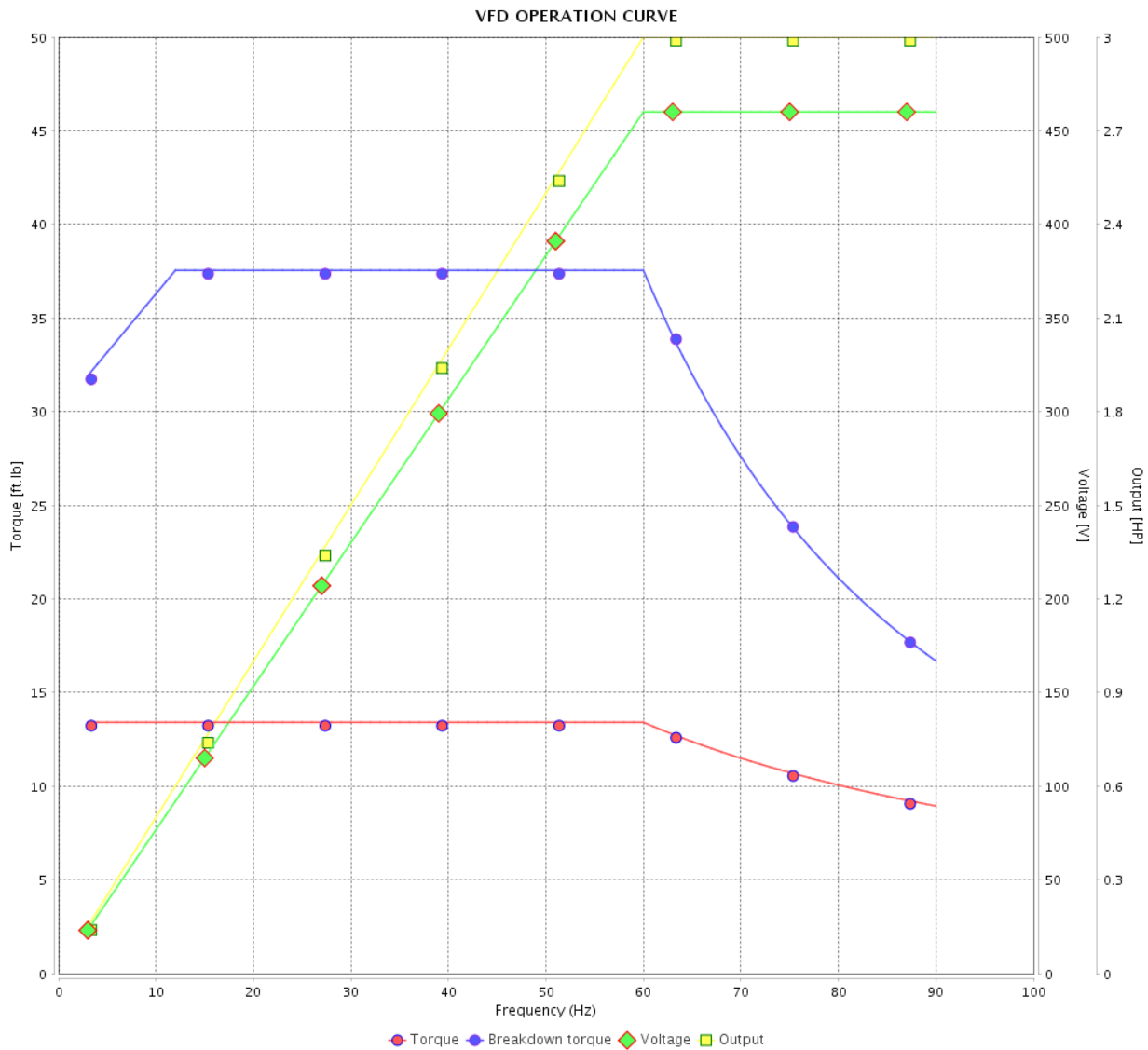


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 Rated speed : 1175 rpm

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Date				

VFD OPERATION CURVE

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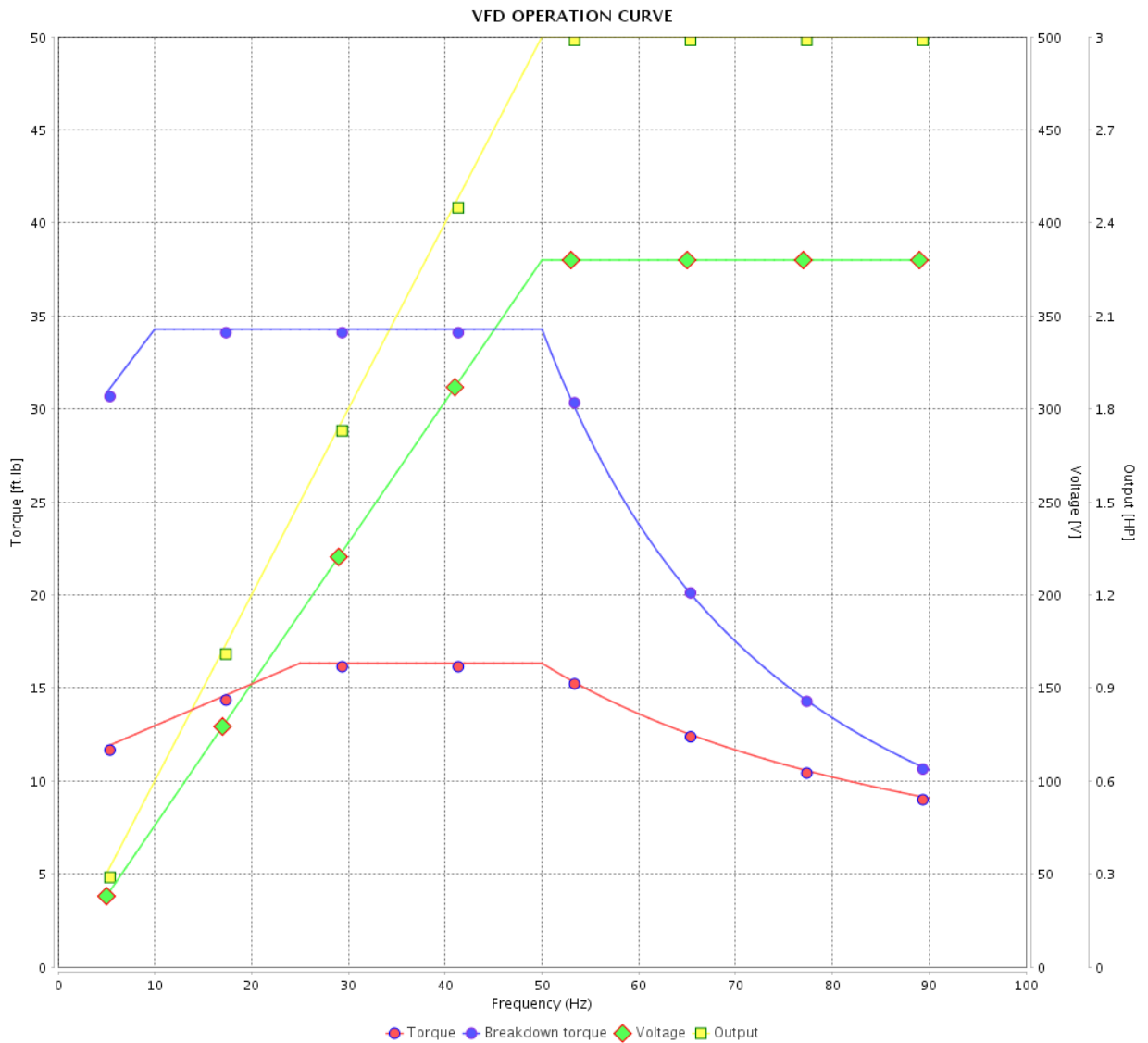


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Performance : 380 V 50 Hz 6P IE4

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 Breakdown torque : 210 %
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 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

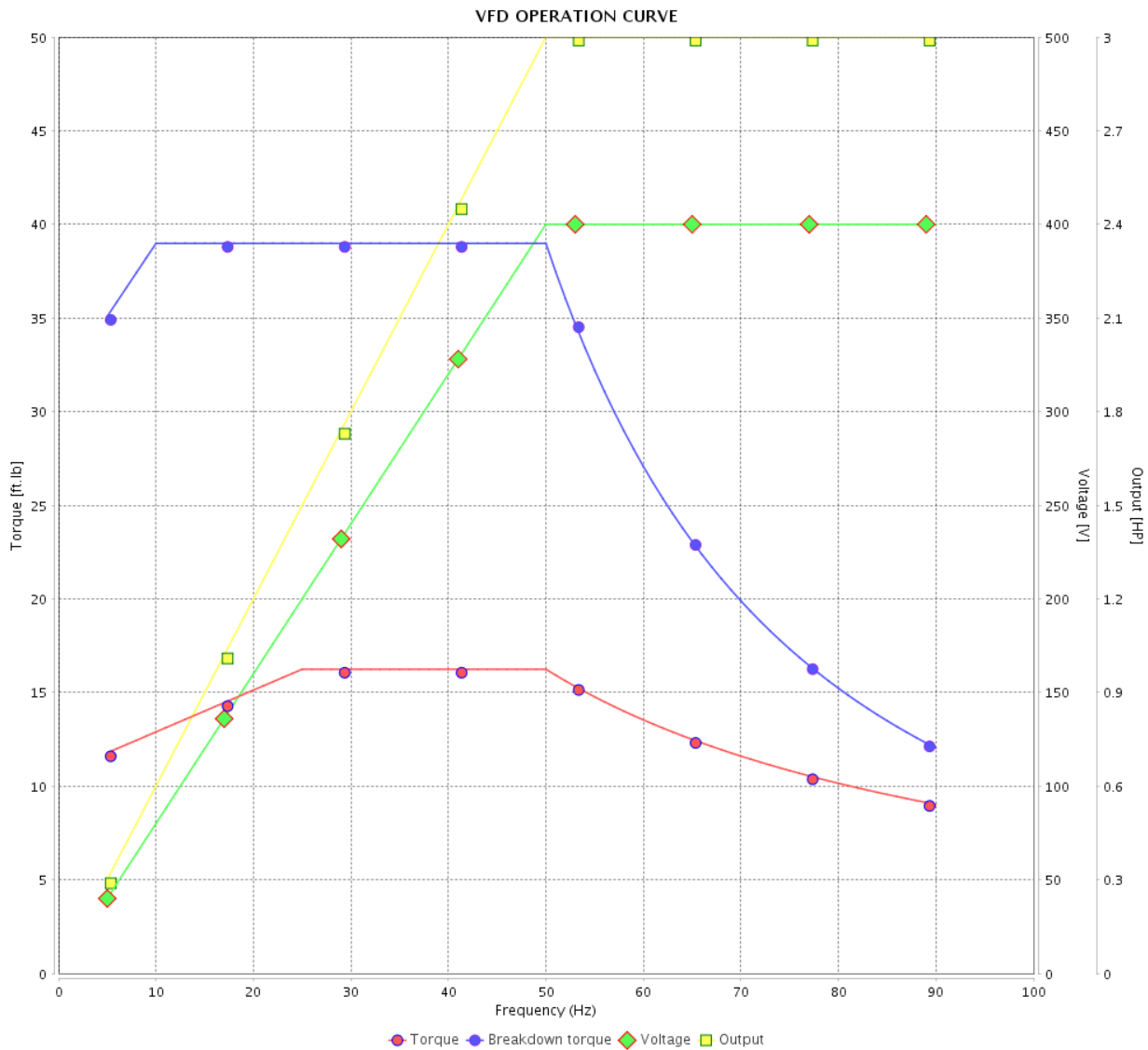


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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

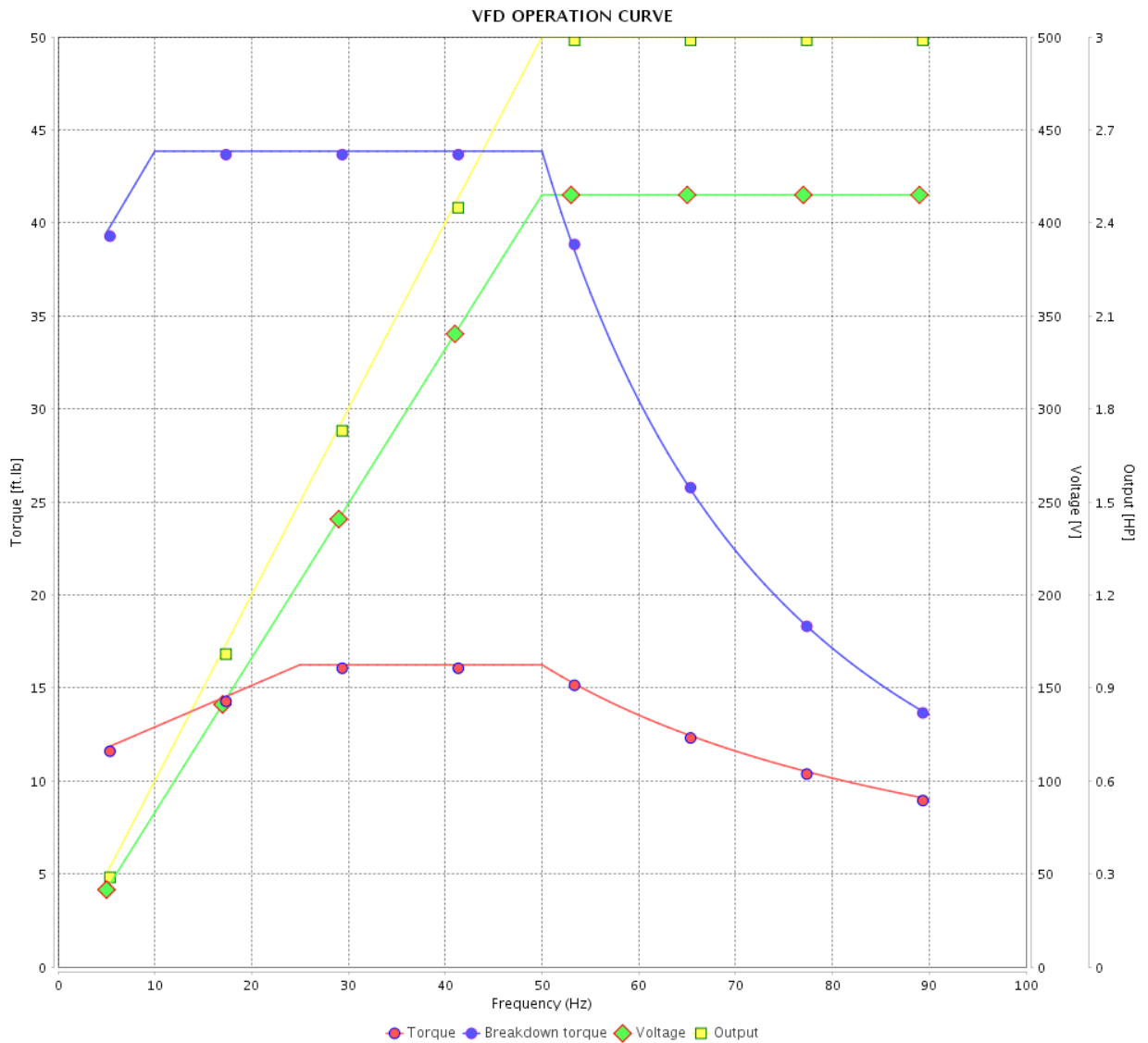


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 Breakdown torque : 270 %
 Rated speed : 970 rpm

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 Duty cycle : Cont.(S1)
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 Temperature rise : 80 K
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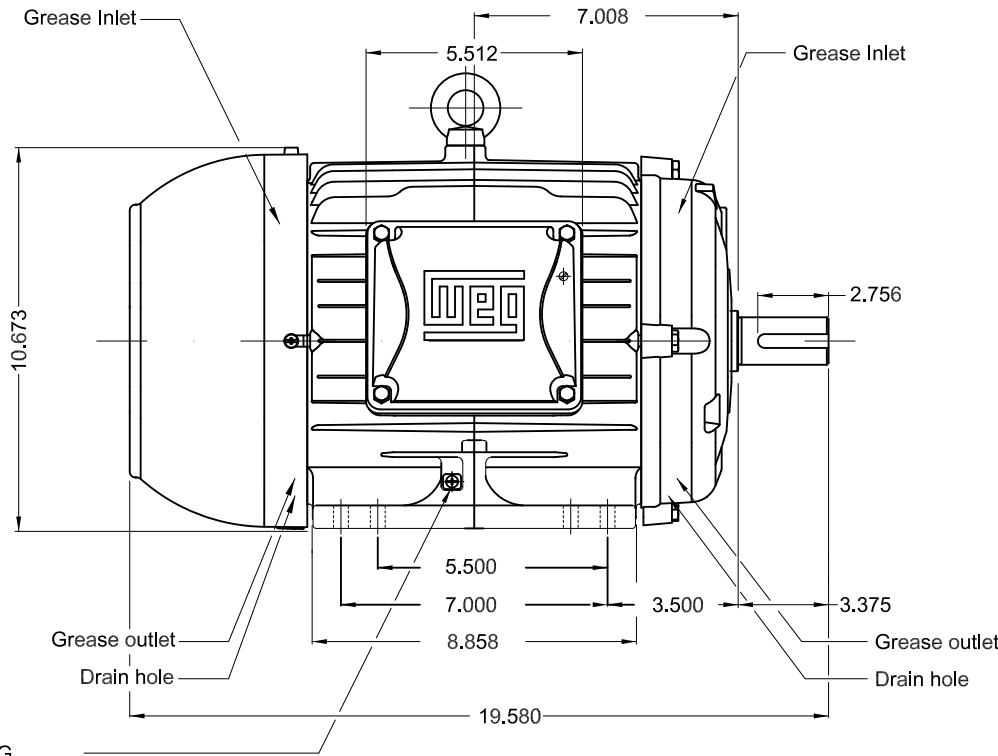
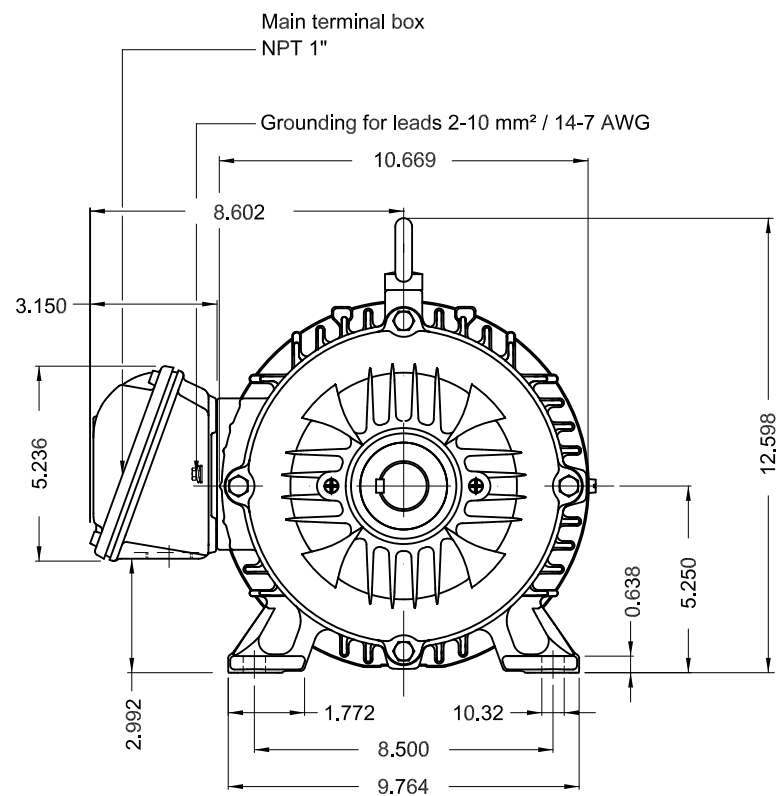
Rev.	Changes Summary	Performed	Checked	Date
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Date		14/04/2022		

1 2 3 4 5 6

A

B

C

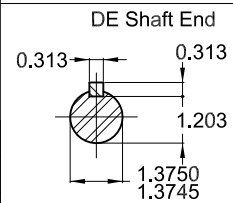


Grounding for leads 2-10 mm² / 14-7 AWG

D

E

Color RAL 5009
 Painting plan 202E
 Mounting B3R(D)



3 HP 06 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR IEEE 841 W22 PREM. EFF. FRAME 213/5T IP55 TEFC					
CHECKED							
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD



Dimensions in inches XME A3

MADE IN BRAZIL
12376409



NEMA
Premium



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 - T4
For use on PWM: Gr. A, B, C, D and F,
VT 1000:1, CT 20:1, 1.00SF - T3A

MODEL 00312ST3QIE213T-W22

Inverter Duty Motor
Severe Duty

IEEE
841-2009



FOR SAFE AREA
Mod. TE1BFOXON
CC029A

PH3 60Hz Fr. 213/5T 1000m.a.s.l. IP55 TEFC 168lb

V 460

A 4.41

HP 3.0

kW 2.2

SF 1.25

SFA 5.51

RPM 1175

PF 0.70

AMB 40°C

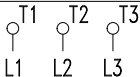
INS cl. F DT80K

NEMA NOM EFF 89.5%

DUTY CONT.

DES B Code K

GUARANT. EFF 87.5%



460V



→ 6308-C3 (11g) 40BC03X30

→ 6207-C3 (7g) 35BC02X30

MOBIL POLYREX EM (20000h)

