

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	11684303		
		Catalog # :	00309ST3QIE215T-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	: 193 lb		
Protection degree	: IP55	Moment of inertia (J)	: 2.11 sq.ft.lb		
Design	: B				
Output [HP]	3	3	3	3	
Poles	8	8	8	8	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	4.55	5.33	5.20	5.06	
L. R. Amperes [A]	30.9	28.2	31.2	32.9	
LRC [A]	6.8x(Code K)	5.3x(Code G)	6.0x(Code J)	6.5x(Code J)	
No load current [A]	2.71	2.68	2.86	3.00	
Rated speed [RPM]	870	710	715	720	
Slip [%]	3.33	5.33	4.67	4.00	
Rated torque [ft.lb]	18.1	22.2	22.0	21.9	
Locked rotor torque [%]	229	180	220	260	
Breakdown torque [%]	275	200	240	270	
Service factor	1.25	1.25	1.25	1.25	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	79s (cold) 44s (hot)	59s (cold) 33s (hot)	59s (cold) 33s (hot)	59s (cold) 33s (hot)	
Noise level ²	52.0 dB(A)	52.0 dB(A)	52.0 dB(A)	52.0 dB(A)	
Efficiency (%)	25%				
	50%	84.0	84.0	84.0	82.5
	75%	85.5	84.0	84.0	84.0
	100%	85.5	82.5	82.5	84.0
Power Factor	25%				
	50%	0.50	0.57	0.54	0.51
	75%	0.63	0.70	0.67	0.64
	100%	0.71	0.76	0.74	0.72
Bearing type	: <u>Drive end</u> 6308 C3 <u>Non drive end</u> 6207 C3	Foundation loads			
Sealing	: Inpro/Seal Inpro/Seal	Max. traction	: 237 lb		
Lubrication interval	: 20000 h 20000 h	Max. compression	: 430 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



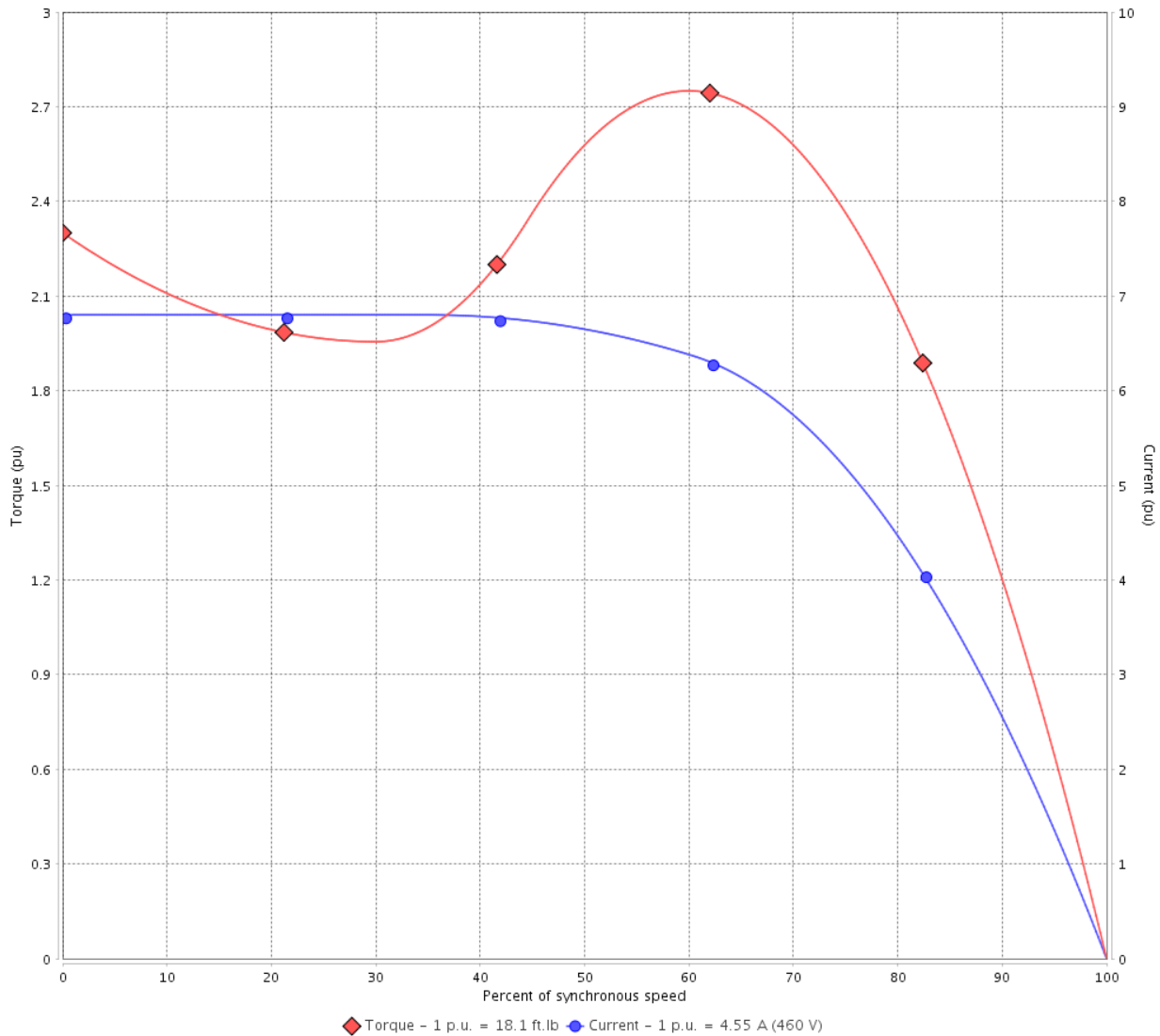
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11684303

Catalog # : 00309ST3QIE215T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 8P

Rated current	: 4.55 A	Moment of inertia (J)	: 2.11 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 18.1 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.25
Breakdown torque	: 275 %	Temperature rise	: 80 K
Rated speed	: 870 rpm	Design	: B

Locked rotor time : 79s (cold) 44s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



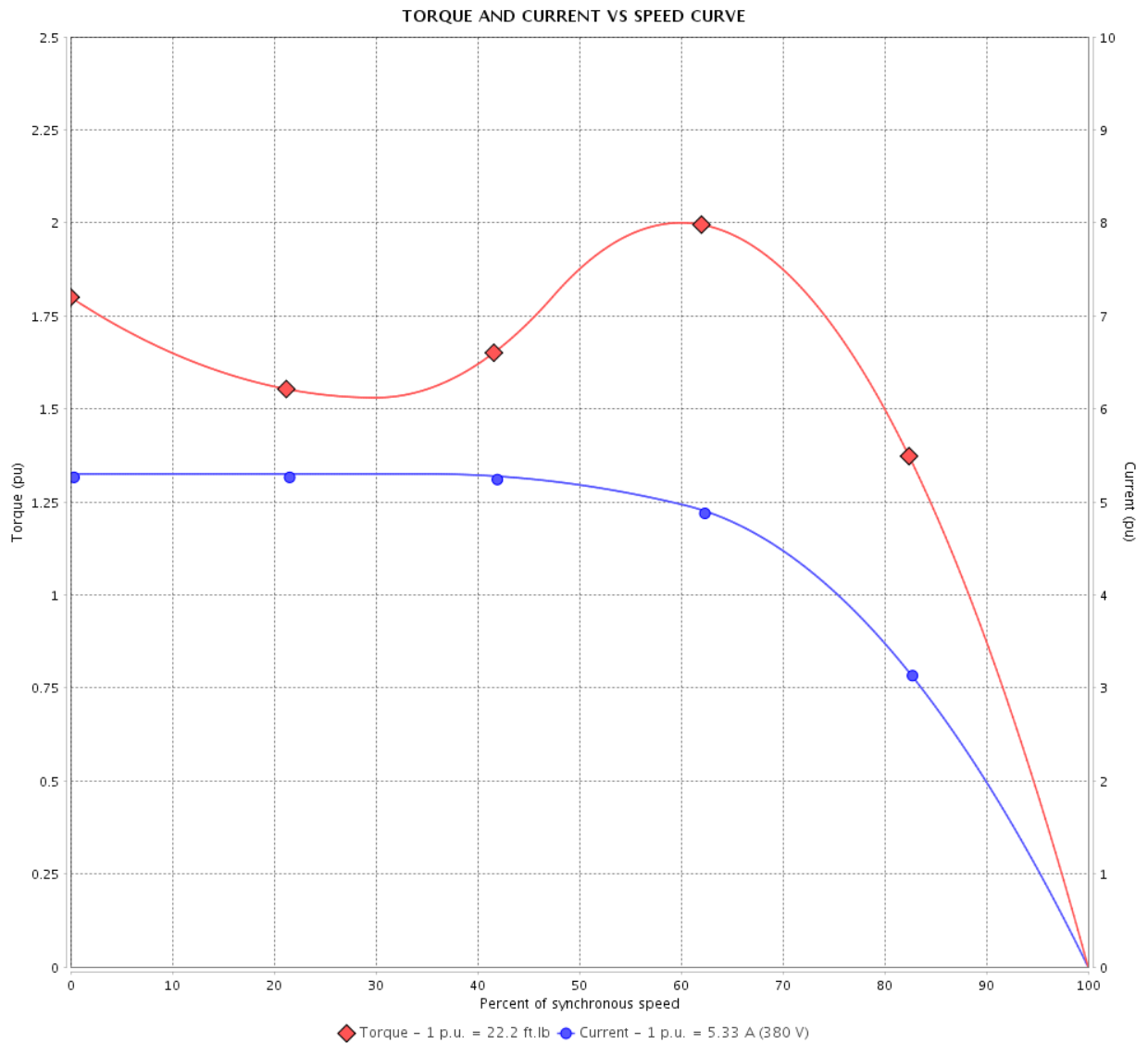
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11684303

Catalog # : 00309ST3QIE215T-W22



Performance : 380 V 50 Hz 8P IE3

Rated current : 5.33 A
 LRC : 5.3
 Rated torque : 22.2 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 200 %
 Rated speed : 710 rpm

Moment of inertia (J) : 2.11 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

Locked rotor time : 59s (cold) 33s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



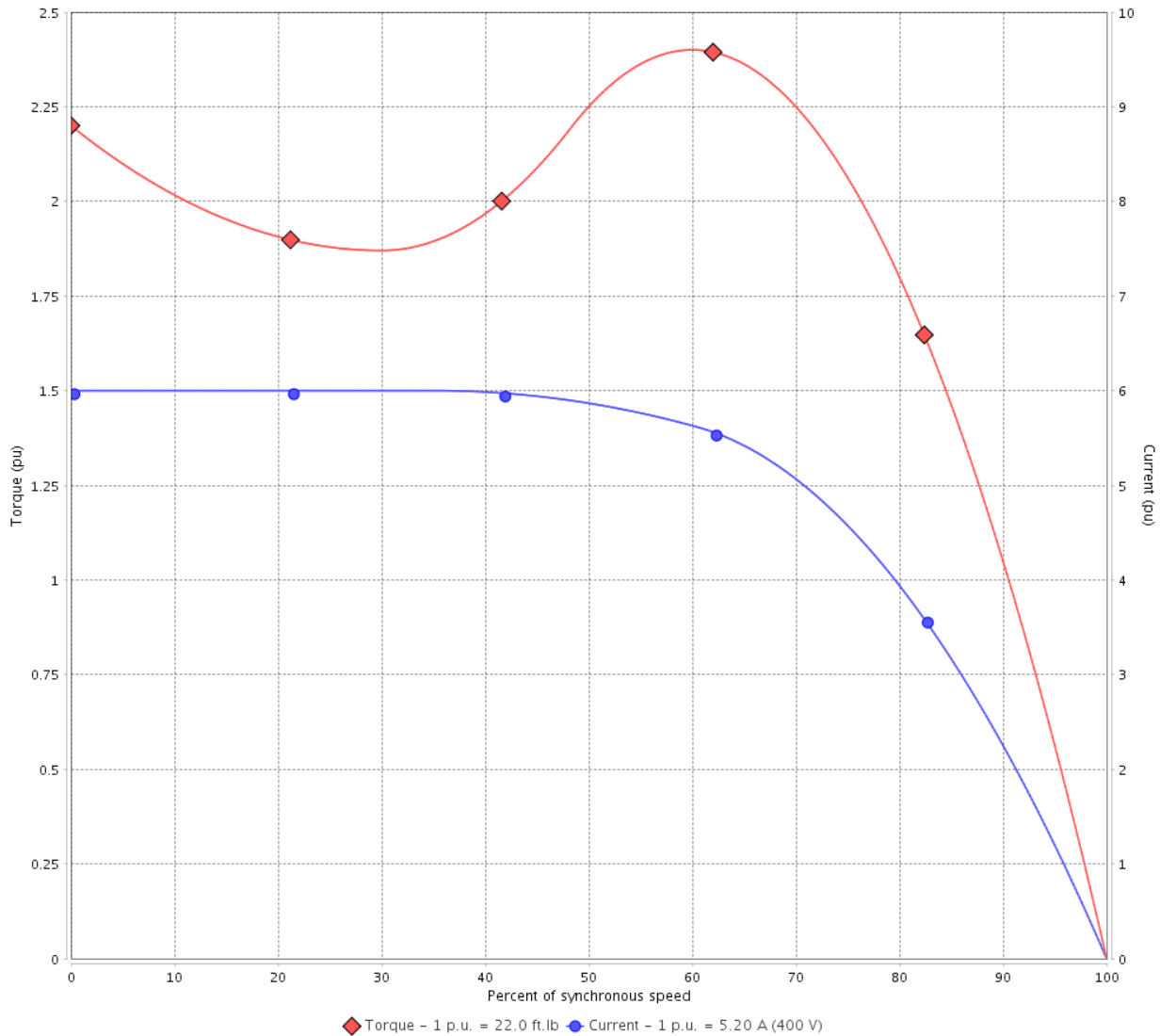
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11684303

Catalog # : 00309ST3QIE215T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 8P IE3

Rated current	: 5.20 A	Moment of inertia (J)	: 2.11 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 22.0 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 715 rpm	Design	: B

Locked rotor time : 59s (cold) 33s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



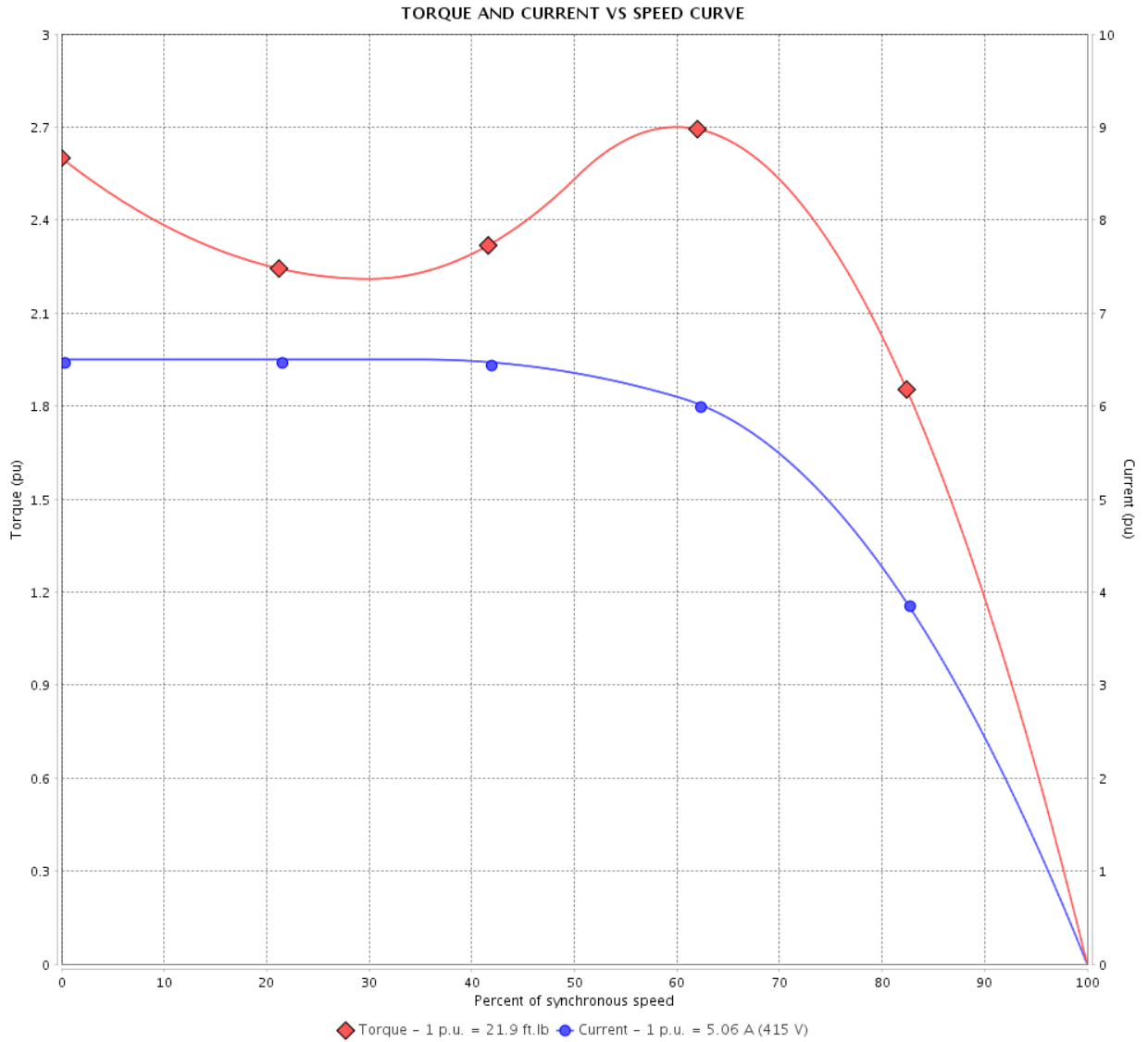
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Customer :

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Product code : 11684303

Catalog # : 00309ST3QIE215T-W22



Performance : 415 V 50 Hz 8P IE3

Rated current	: 5.06 A	Moment of inertia (J)	: 2.11 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 21.9 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.25
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 720 rpm	Design	: B

Locked rotor time : 59s (cold) 33s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



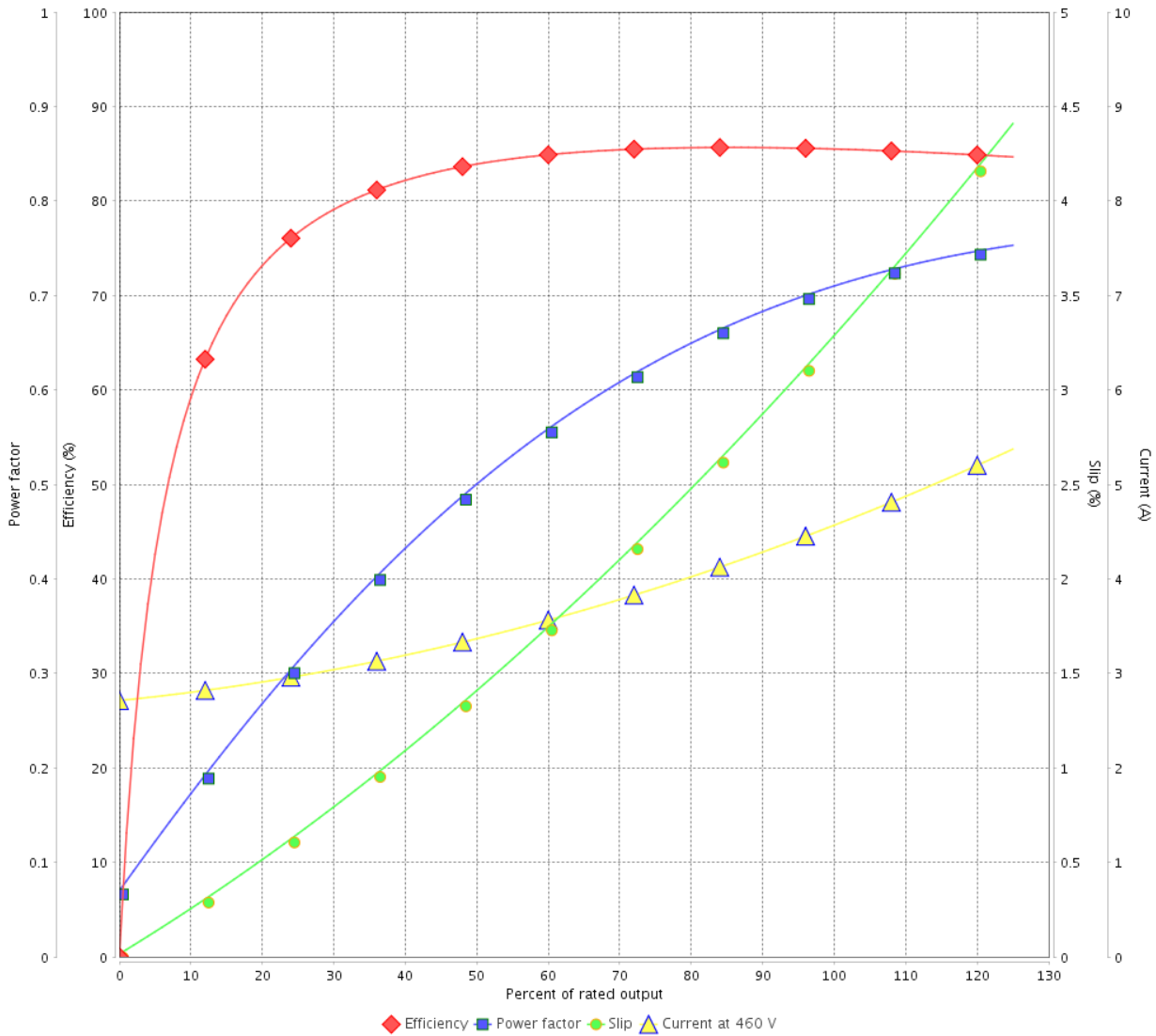
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LOAD PERFORMANCE CURVE



Performance : 460 V 60 Hz 8P

Rated current	: 4.55 A	Moment of inertia (J)	: 2.11 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 18.1 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.25
Breakdown torque	: 275 %	Temperature rise	: 80 K
Rated speed	: 870 rpm	Design	: B

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Three Phase Induction Motor - Squirrel Cage

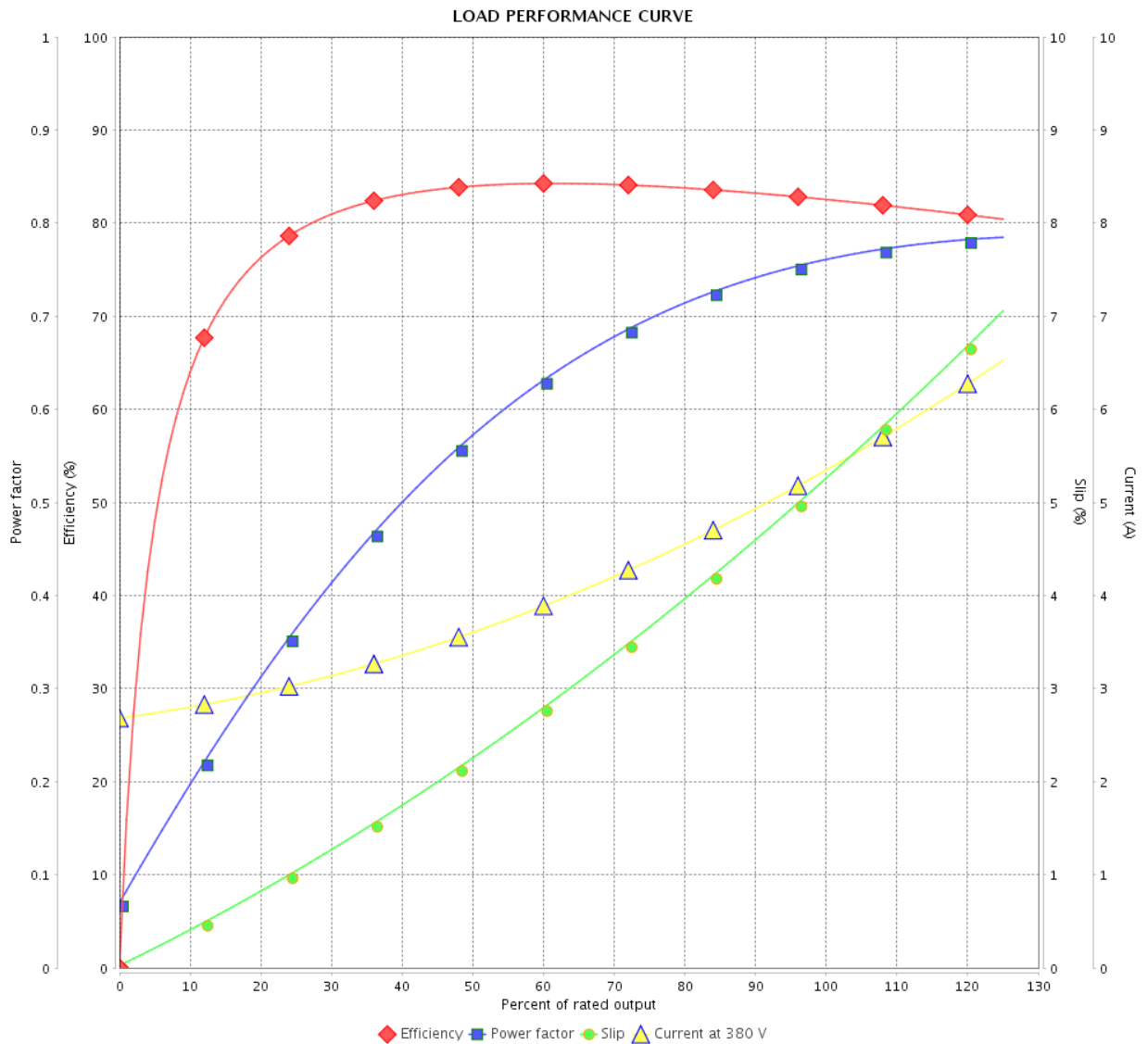


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Performance : 380 V 50 Hz 8P IE3

Rated current : 5.33 A
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 Rated torque : 22.2 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 200 %
 Rated speed : 710 rpm

Moment of inertia (J) : 2.11 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage



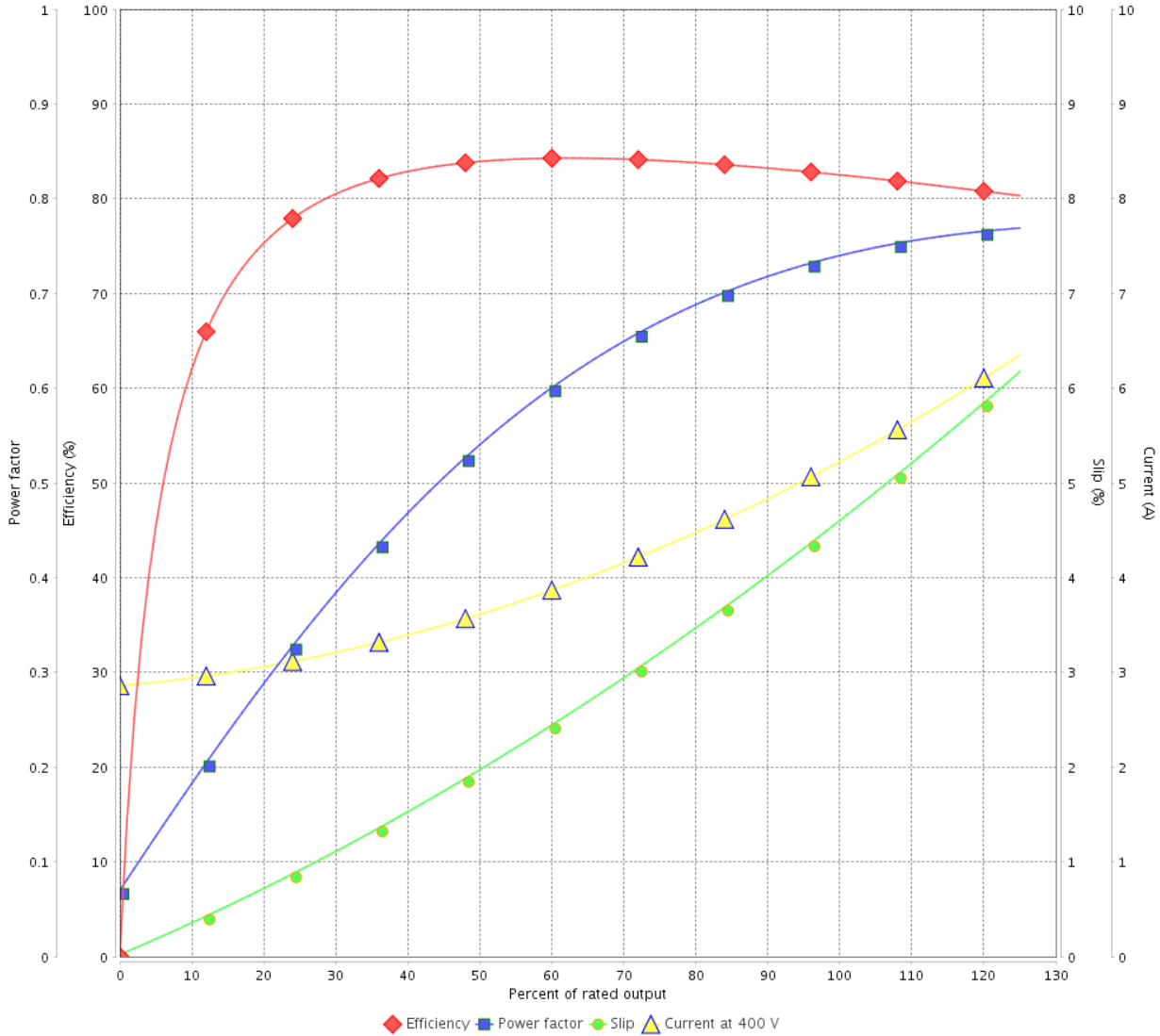
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Product code : 11684303

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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 8P IE3

Rated current : 5.20 A
 LRC : 6.0
 Rated torque : 22.0 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 240 %
 Rated speed : 715 rpm

Moment of inertia (J) : 2.11 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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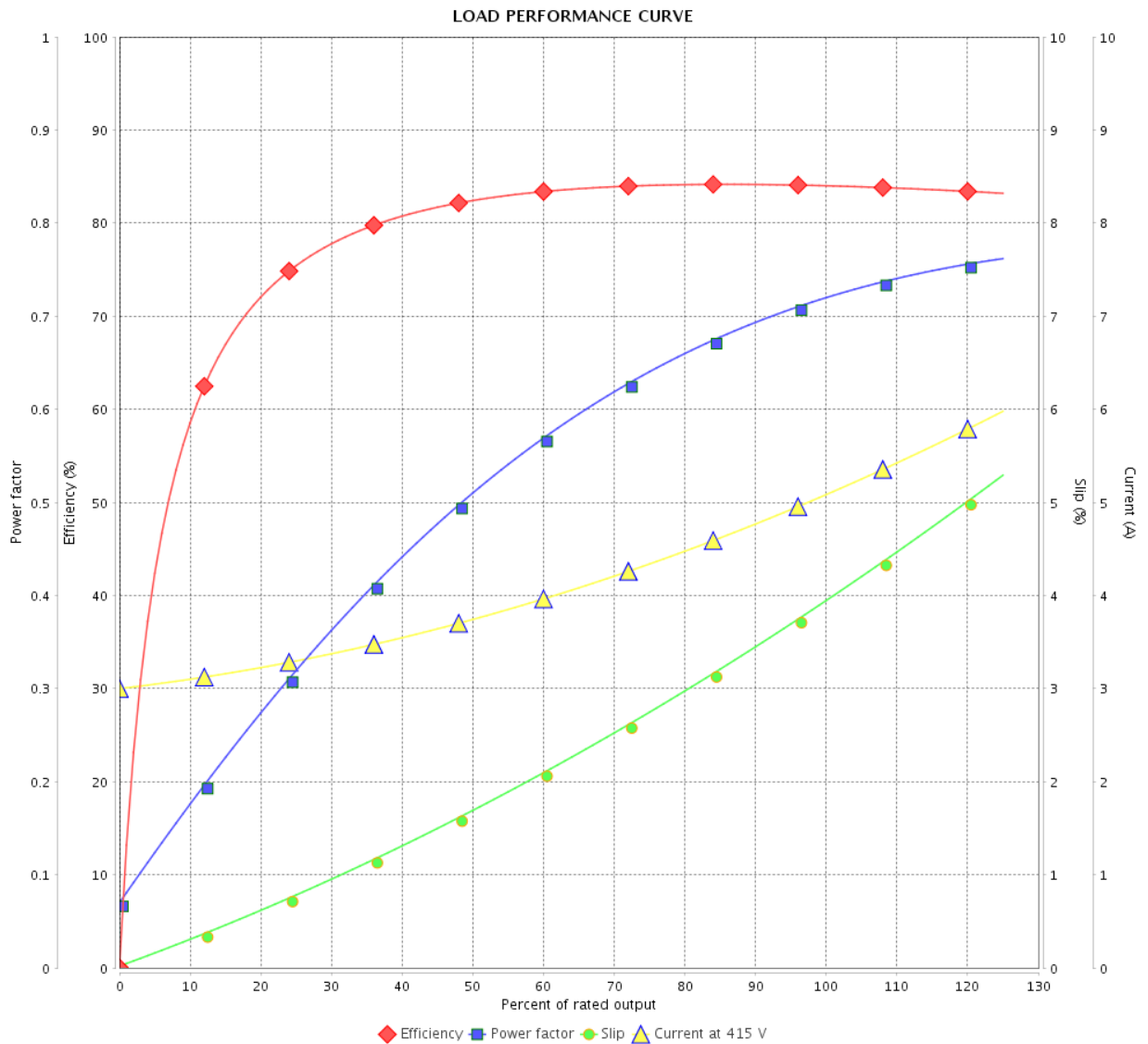


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THERMAL LIMIT CURVE

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Breakdown torque	: 275 %	Temperature rise	: 80 K
Rated speed	: 870 rpm	Design	: B

Heating constant

Cooling constant

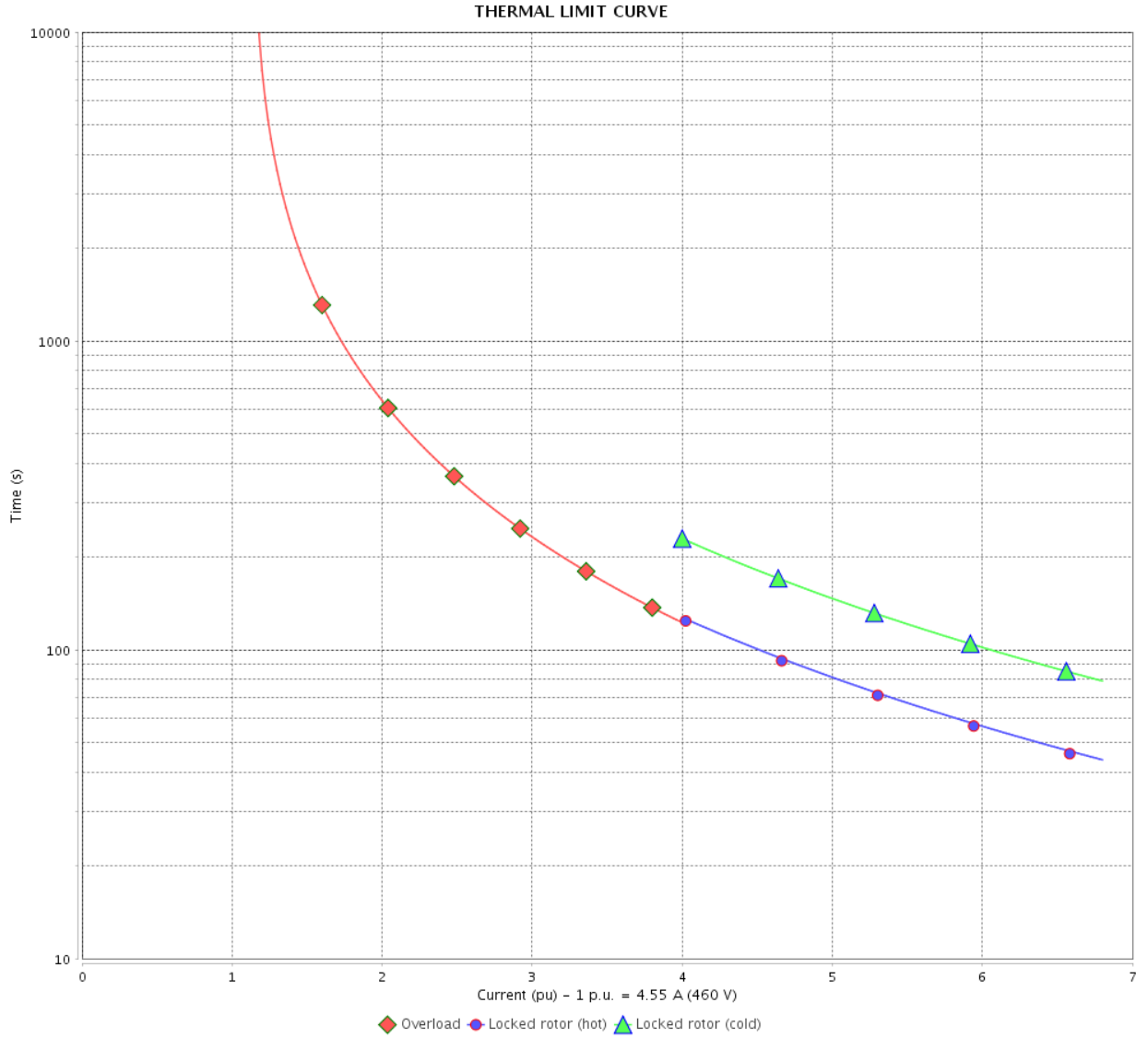
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THERMAL LIMIT CURVE

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LRC	: 5.3	Duty cycle	: Cont.(S1)
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Locked rotor torque	: 180 %	Service factor	: 1.25
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 710 rpm	Design	: B

Heating constant

Cooling constant

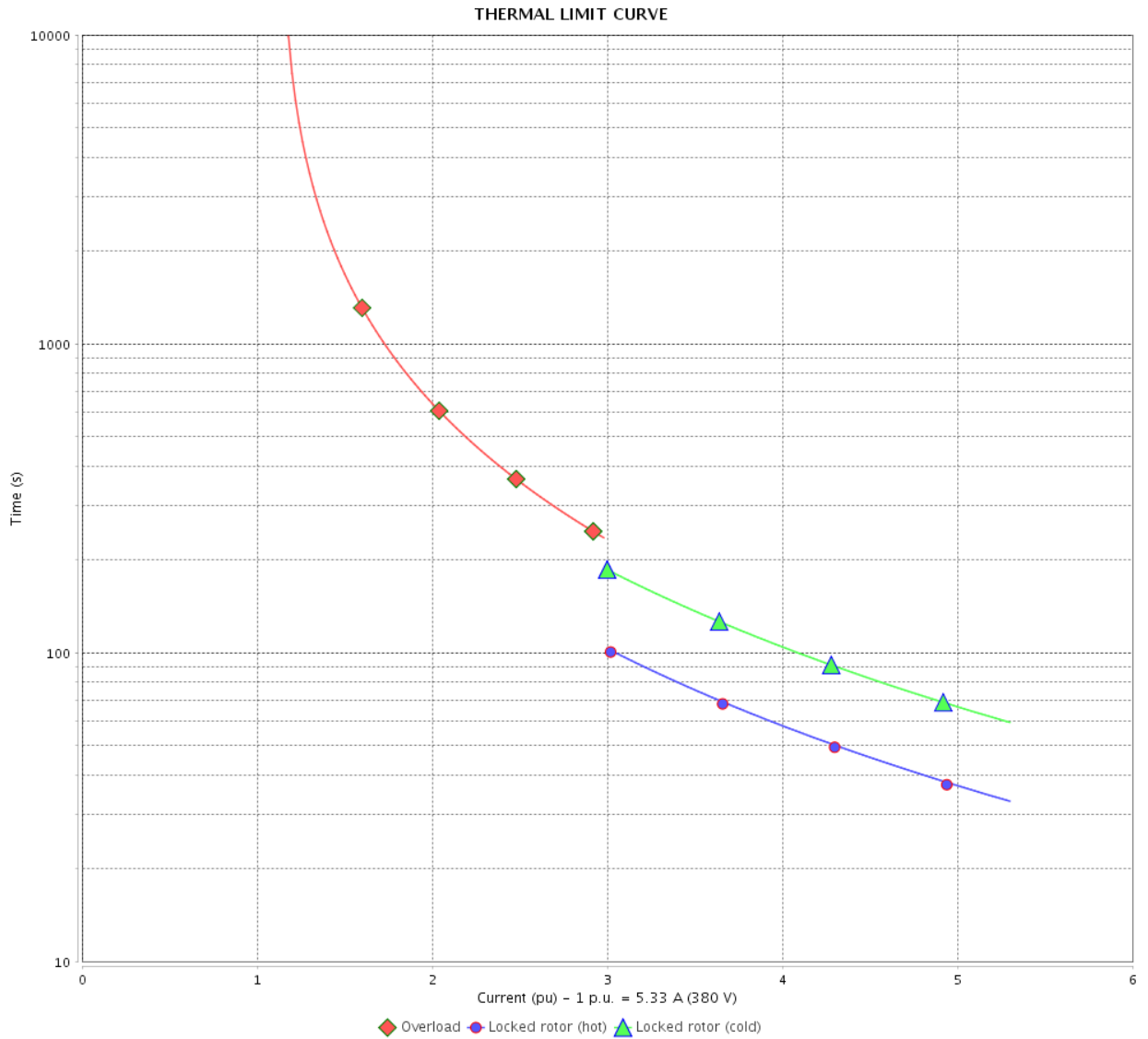
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Rated torque	: 22.0 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 715 rpm	Design	: B

Heating constant

Cooling constant

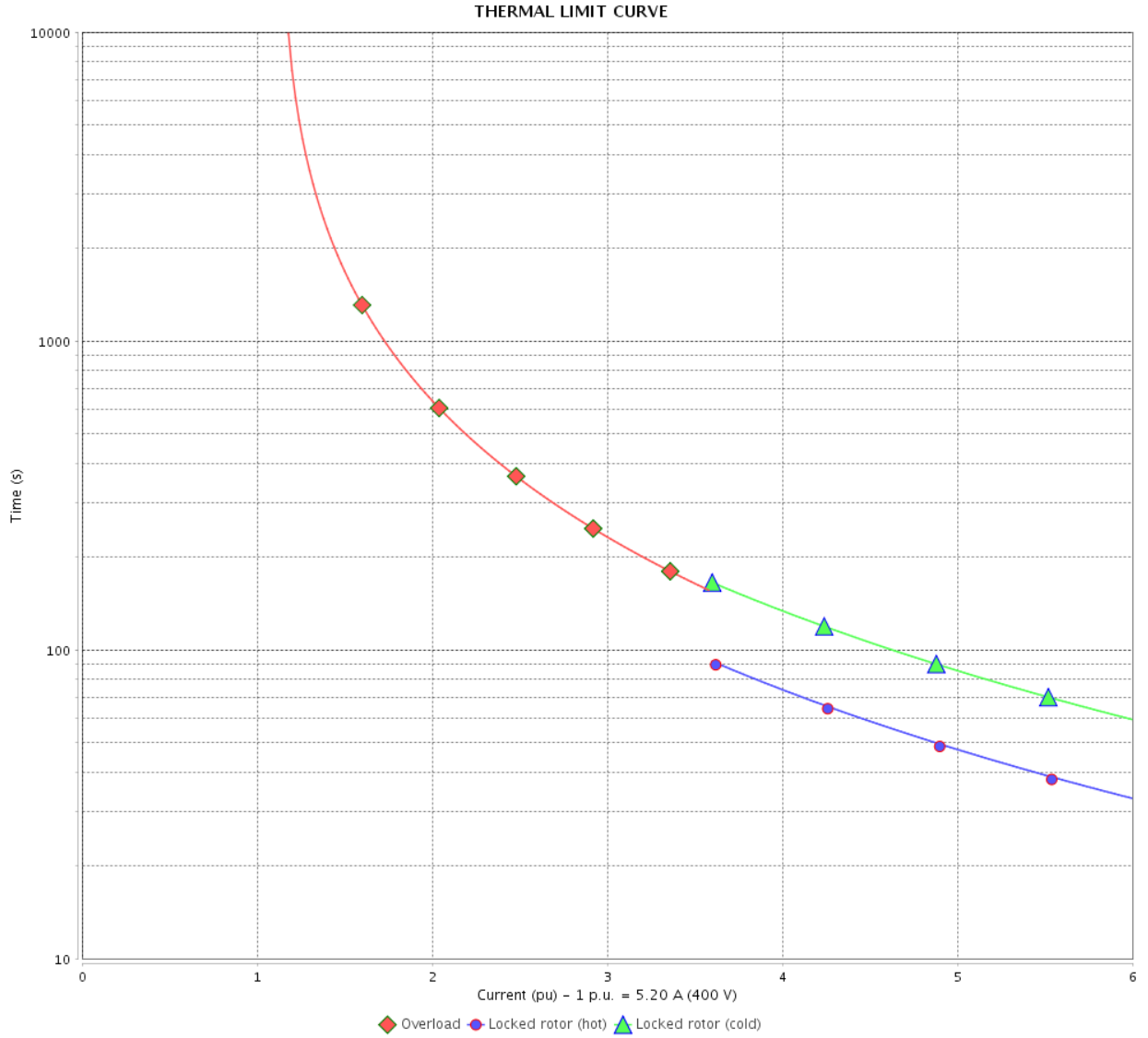
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Three Phase Induction Motor - Squirrel Cage



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Rated current	: 5.06 A	Moment of inertia (J)	: 2.11 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 21.9 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.25
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 720 rpm	Design	: B

Heating constant

Cooling constant

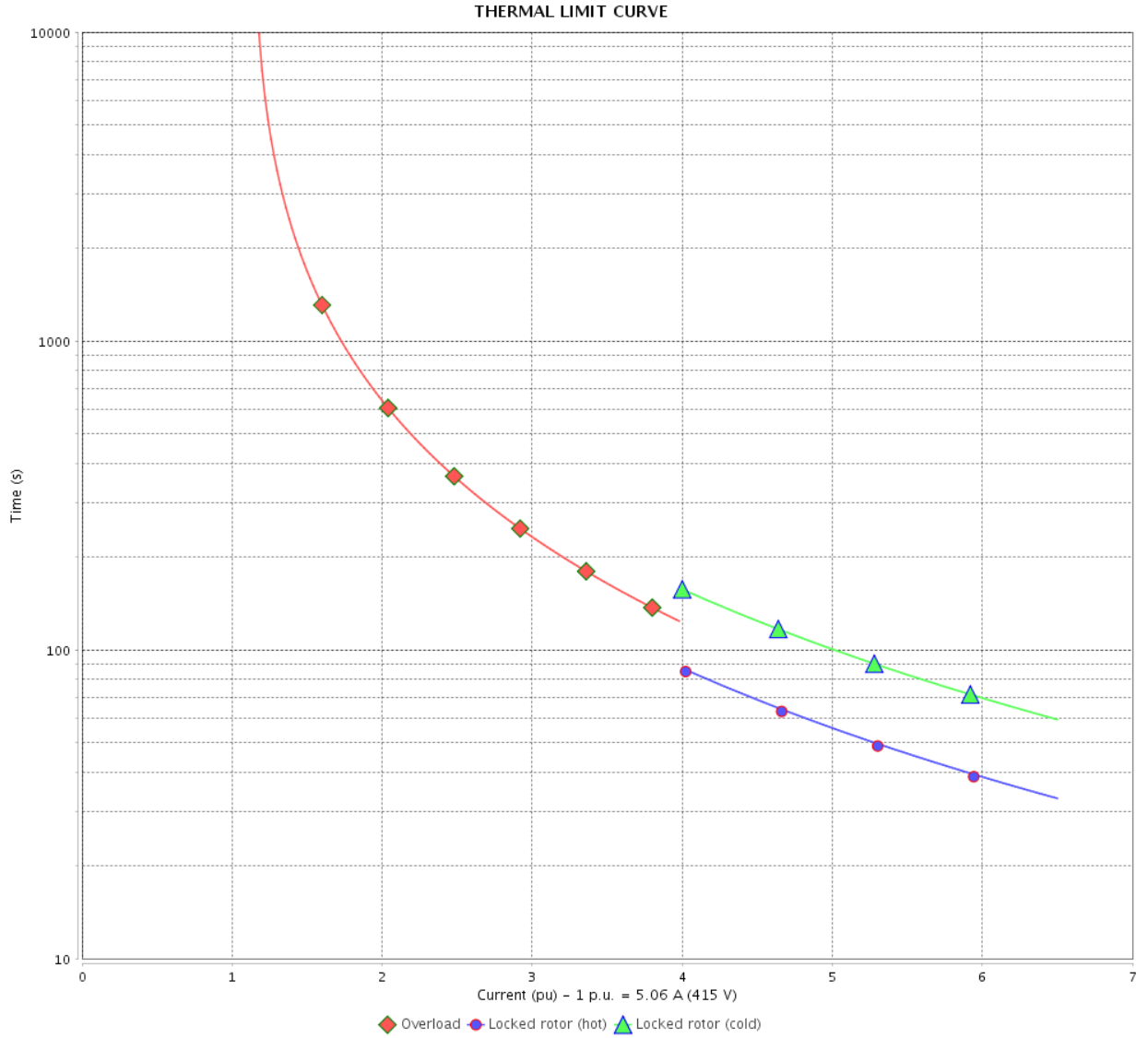
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Performed by				
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

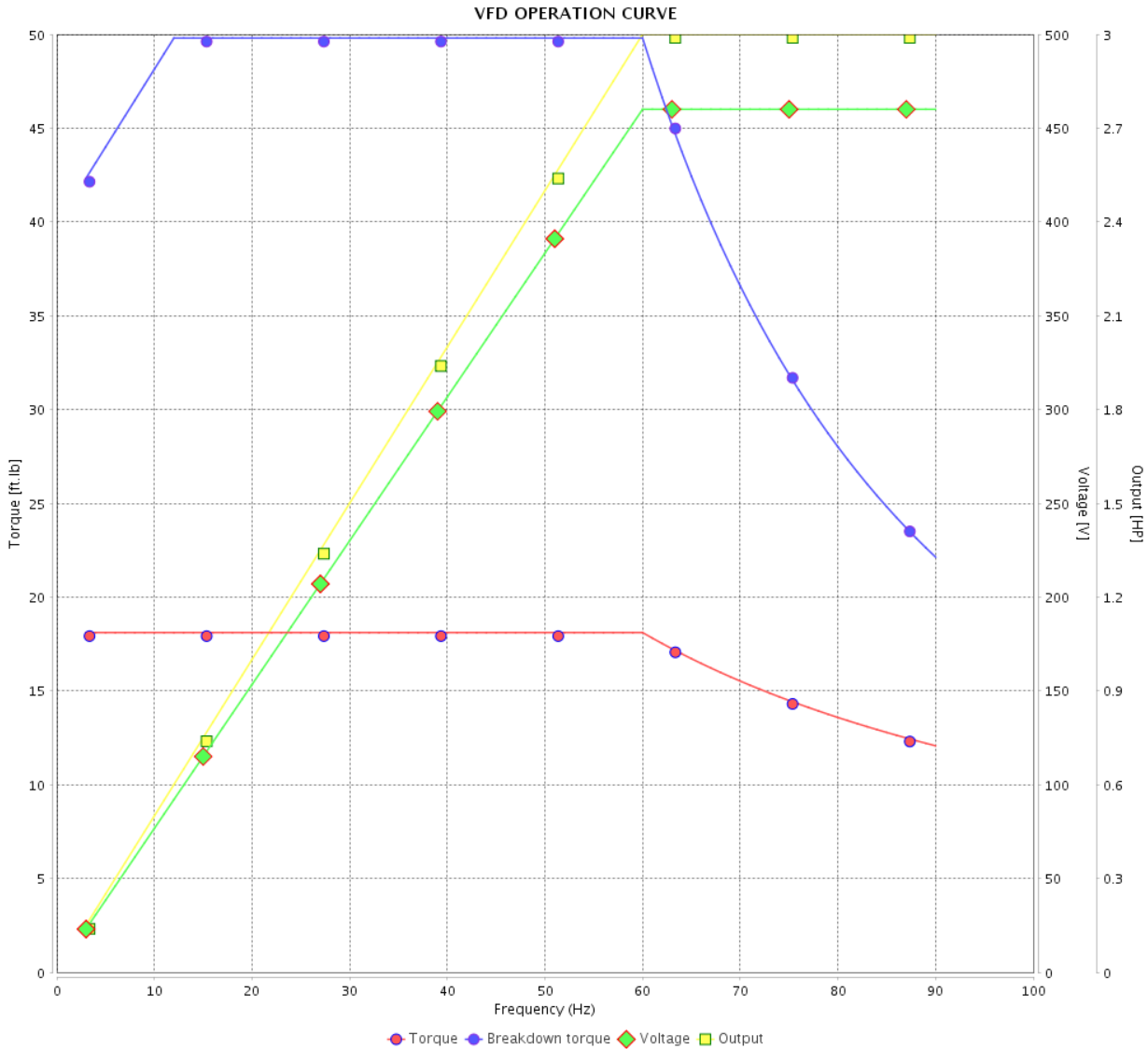


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Performance : 460 V 60 Hz 8P

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 LRC : 6.8
 Rated torque : 18.1 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 275 %
 Rated speed : 870 rpm

Moment of inertia (J) : 2.11 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

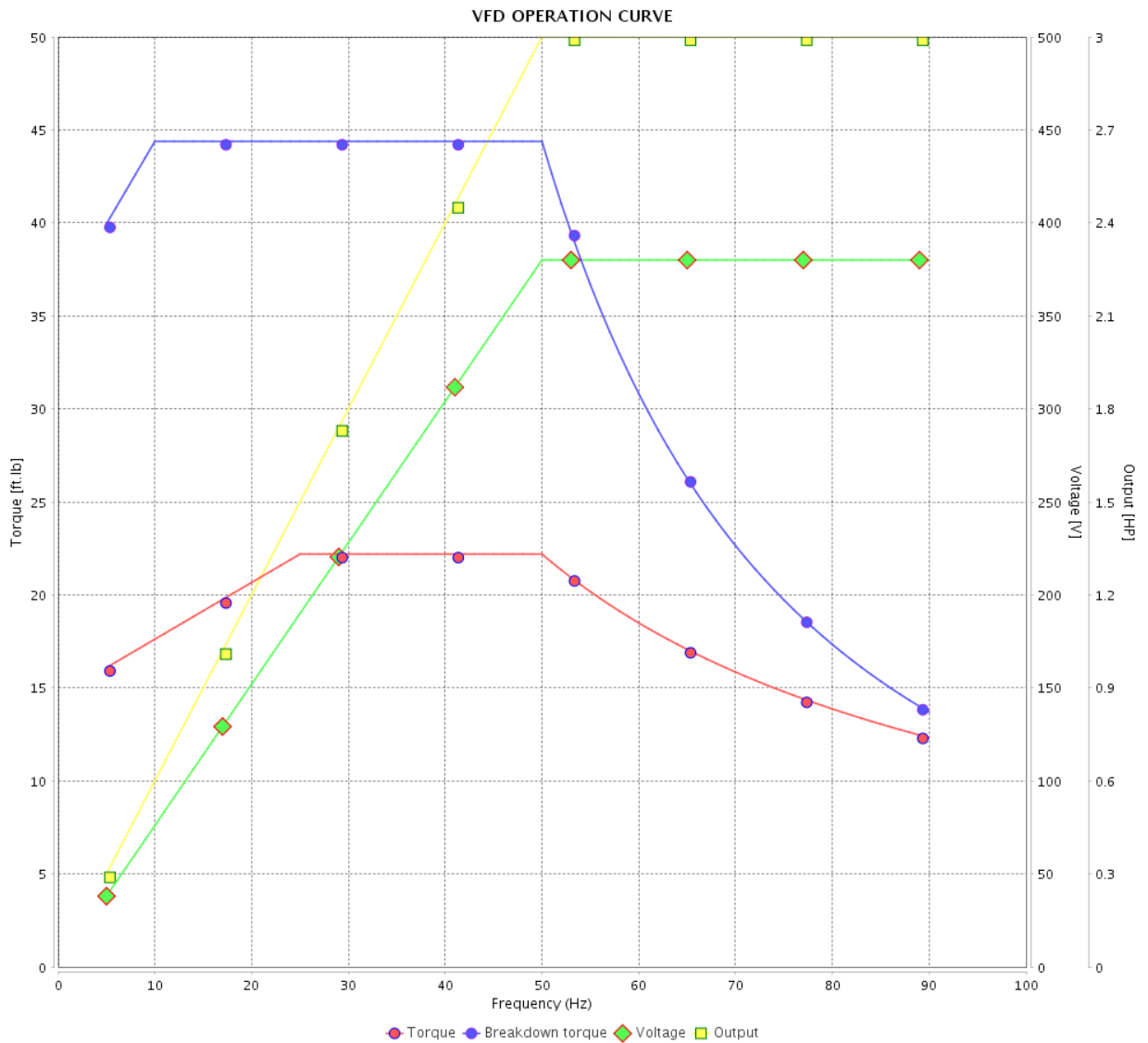


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Performance : 380 V 50 Hz 8P IE3

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Moment of inertia (J) : 2.11 sq.ft.lb
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 Insulation class : F
 Service factor : 1.25
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 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

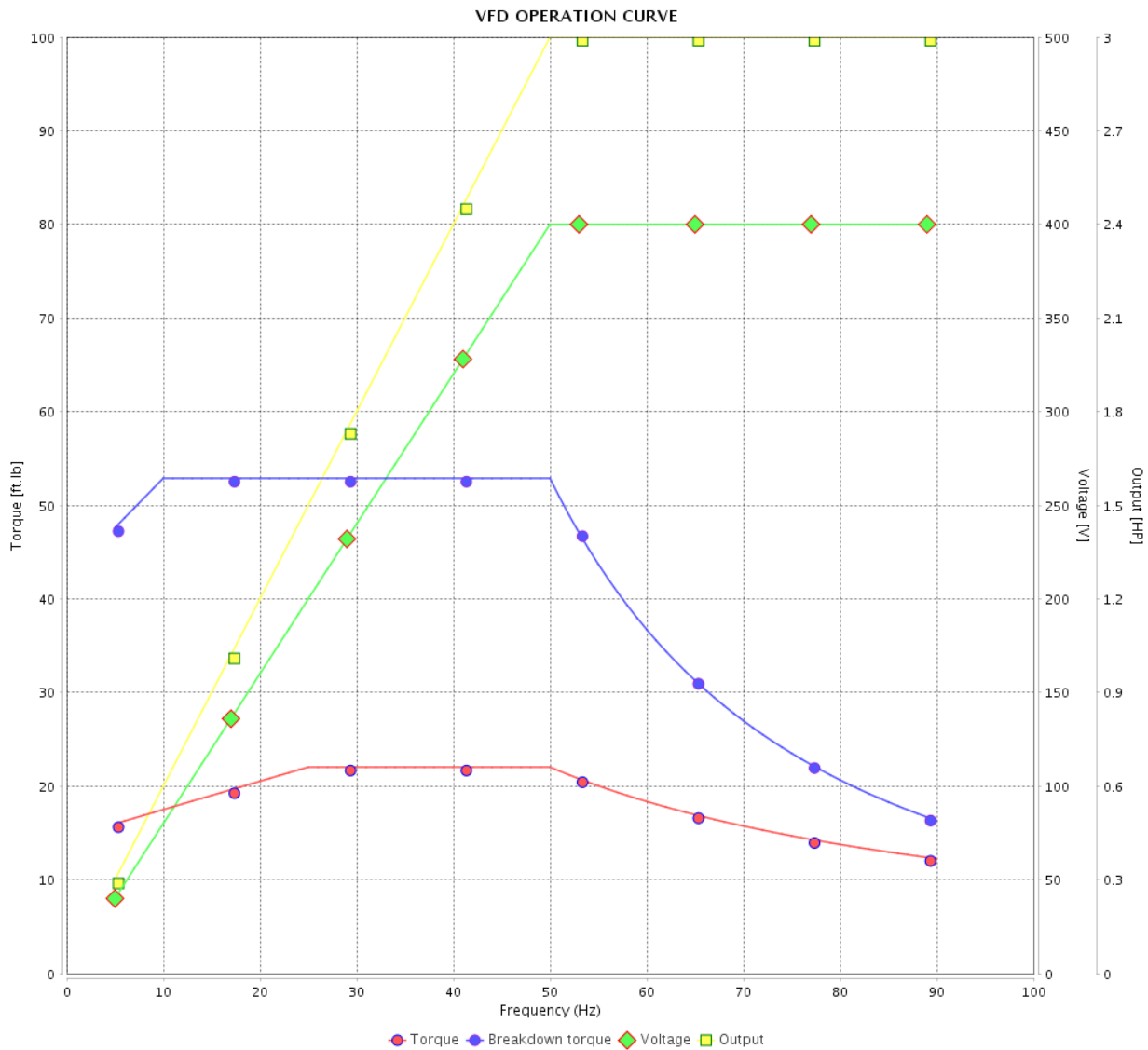


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Performance : 400 V 50 Hz 8P IE3

Rated current	: 5.20 A	Moment of inertia (J)	: 2.11 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 22.0 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 715 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

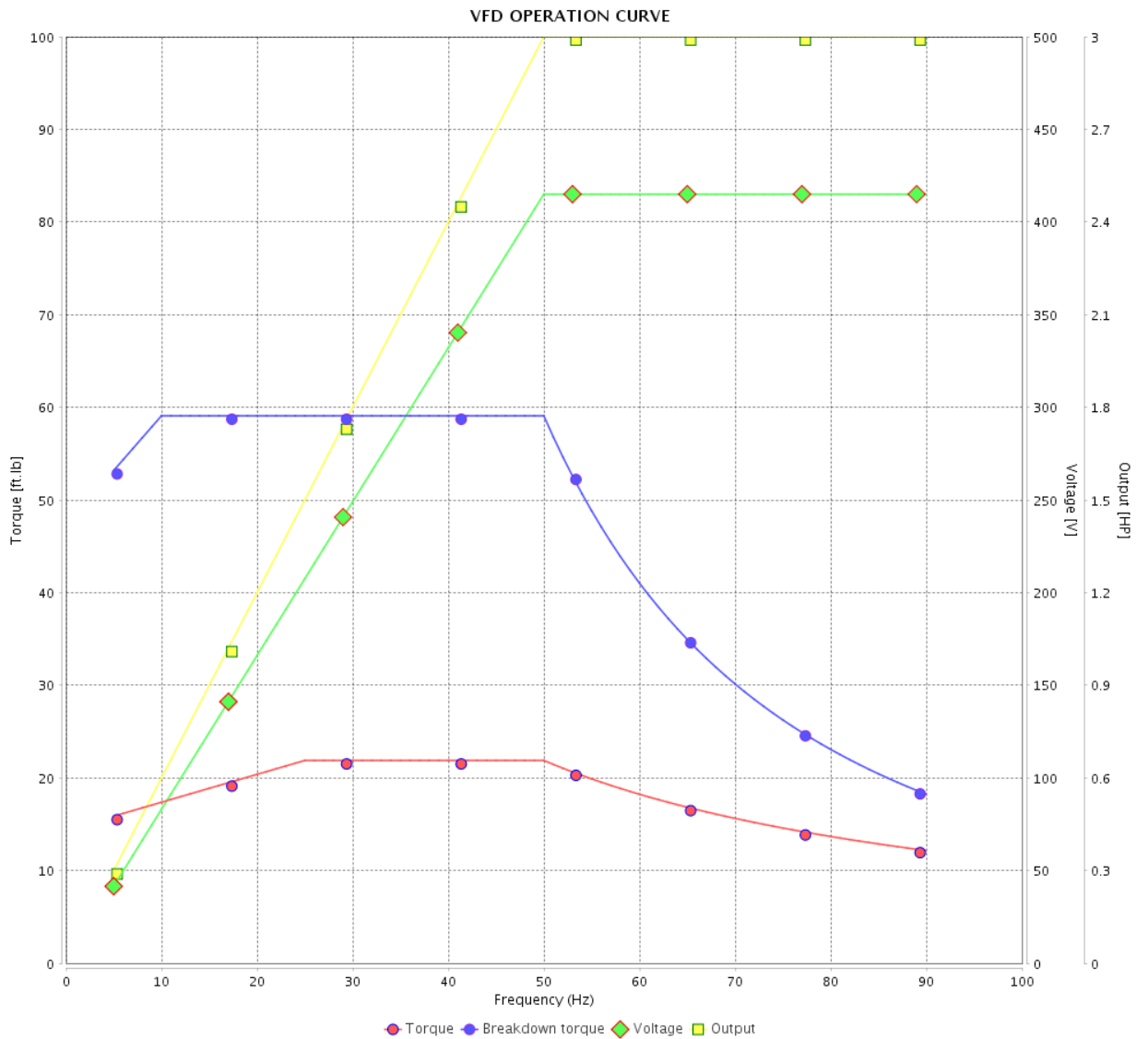


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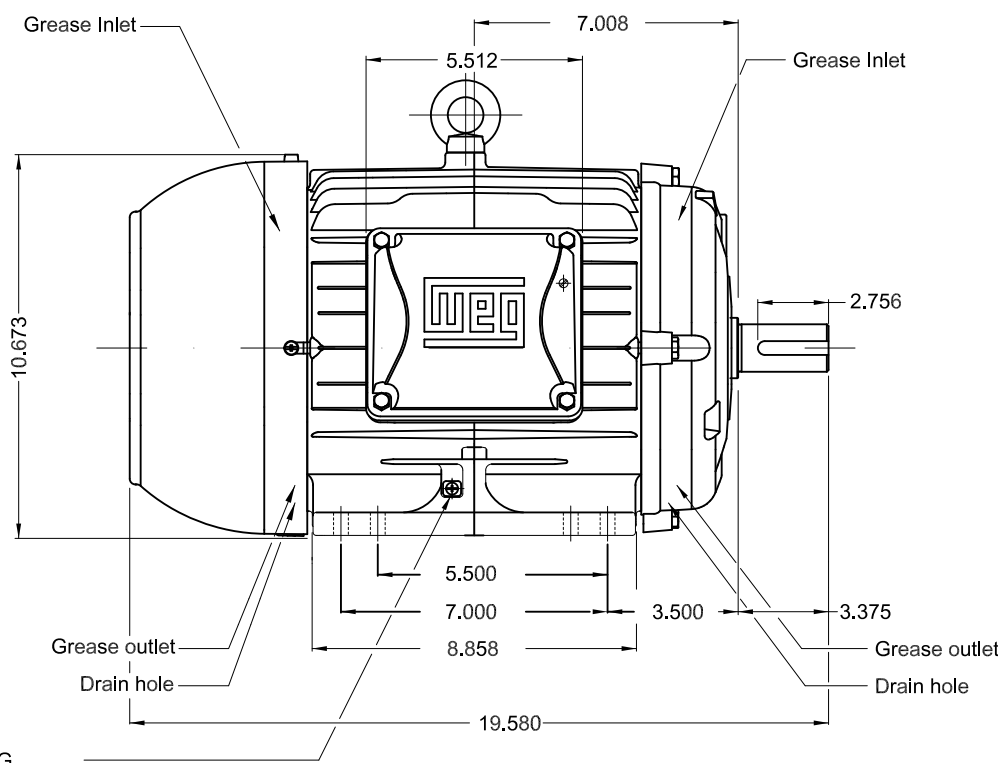
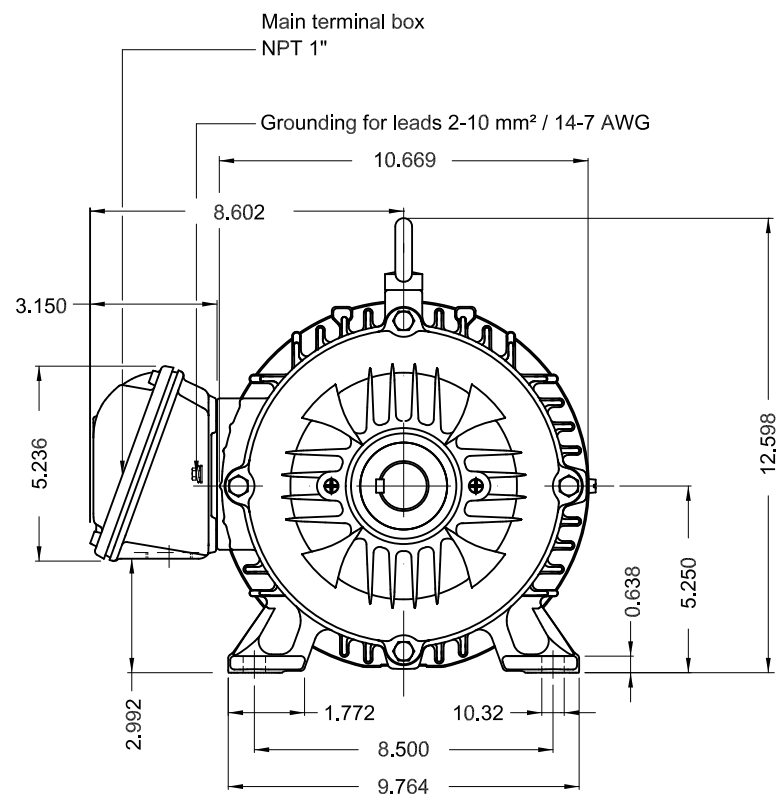
Rev.	Changes Summary	Performed	Checked	Date
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Date	13/04/2022			

1 2 3 4 5 6

A

B

C

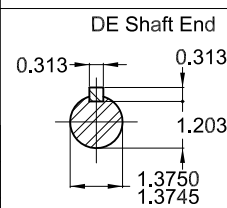


Grounding for leads 2-10 mm² / 14-7 AWG

D

E

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



3 HP 08 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
11684303



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 00309ST3QIE215T-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 197Ib

V 460

A 4.55

HP 3.0

kW 2.2

SF 1.25

SFA 5.69

RPM 870

PF 0.71

AMB 40°C

INS cl. F DT80K

NEMA NOM EFF 85.5%

DUTY CONT.

DES B Code K

GUARANT. EFF 82.5%

