

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :	11768123	
			Catalog # :	00512ST3QIE215TC-W22	
Frame	: 213/5TC	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	: 187 lb		
Protection degree	: IP55	Moment of inertia (J)	: 1.47 sq.ft.lb		
Design	: B				
Output [HP]	5	5	5	5	
Poles	6	6	6	6	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	6.83	8.10	7.82	7.55	
L. R. Amperes [A]	46.4	44.5	47.7	49.1	
LRC [A]	6.8x(Code J)	5.5x(Code G)	6.1x(Code H)	6.5x(Code H)	
No load current [A]	3.45	3.41	3.68	3.90	
Rated speed [RPM]	1170	960	965	970	
Slip [%]	2.50	4.00	3.50	3.00	
Rated torque [ft.lb]	22.4	27.4	27.2	27.1	
Locked rotor torque [%]	170	140	160	190	
Breakdown torque [%]	260	200	229	250	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	102s (cold) 57s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	
Noise level ²	55.0 dB(A)	53.0 dB(A)	53.0 dB(A)	53.0 dB(A)	
Efficiency (%)	25%	88.2	89.8	89.1	87.2
	50%	88.5	88.5	88.5	87.5
	75%	89.5	88.5	88.5	88.5
	100%	89.5	86.8	87.5	88.5
Power Factor	25%	0.34	0.40	0.37	0.34
	50%	0.58	0.65	0.61	0.58
	75%	0.70	0.76	0.73	0.71
	100%	0.76	0.80	0.78	0.77
Bearing type	: <u>Drive end</u> 6308 C3 <u>Non drive end</u> 6207 C3	Foundation loads			
Sealing	: Inpro/Seal Inpro/Seal	Max. traction	: 288 lb		
Lubrication interval	: 20000 h 20000 h	Max. compression	: 475 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



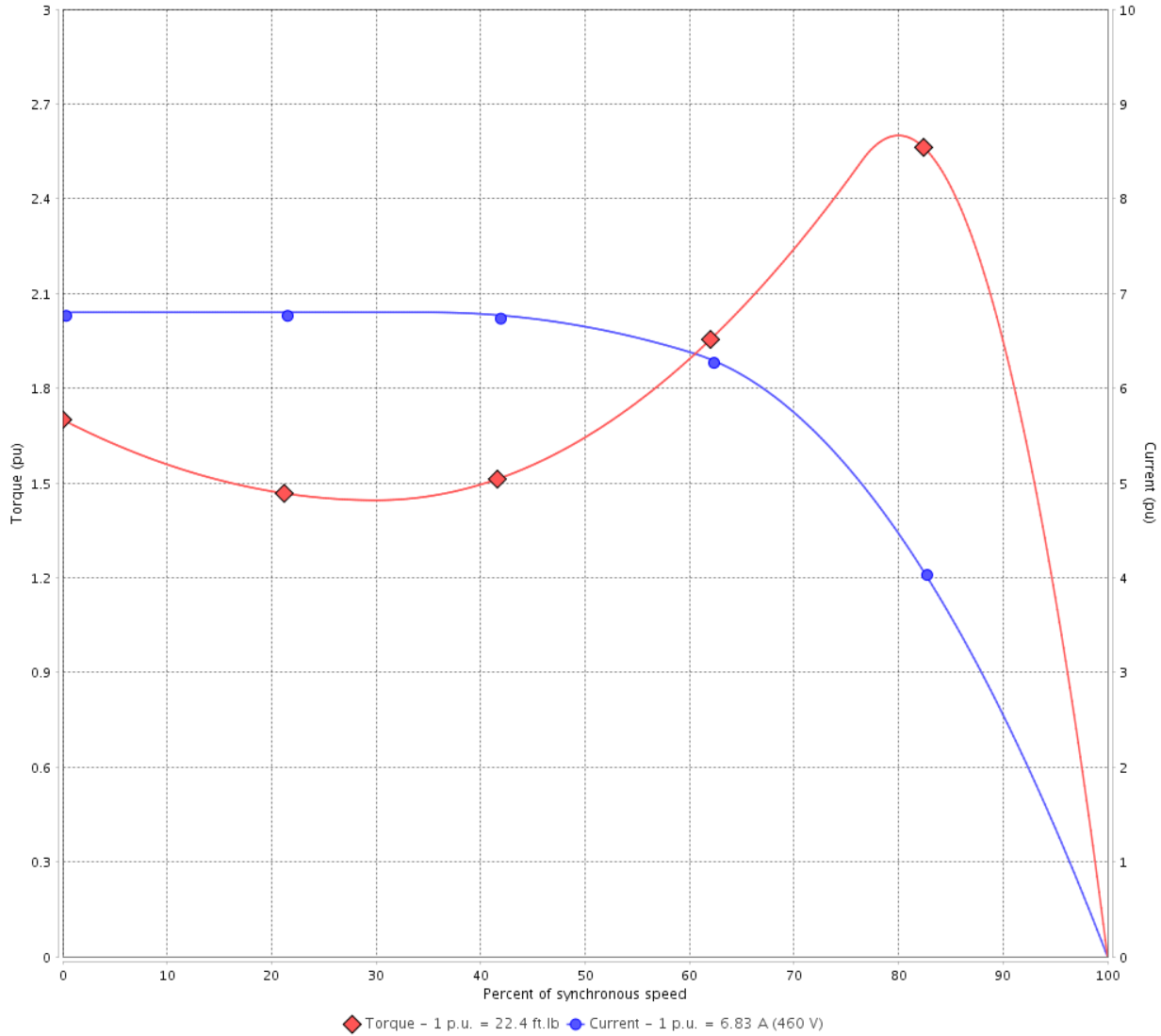
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11768123

Catalog # : 00512ST3QIE215TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 6P

Rated current	: 6.83 A	Moment of inertia (J)	: 1.47 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 22.4 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1170 rpm	Design	: B

Locked rotor time : 102s (cold) 57s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



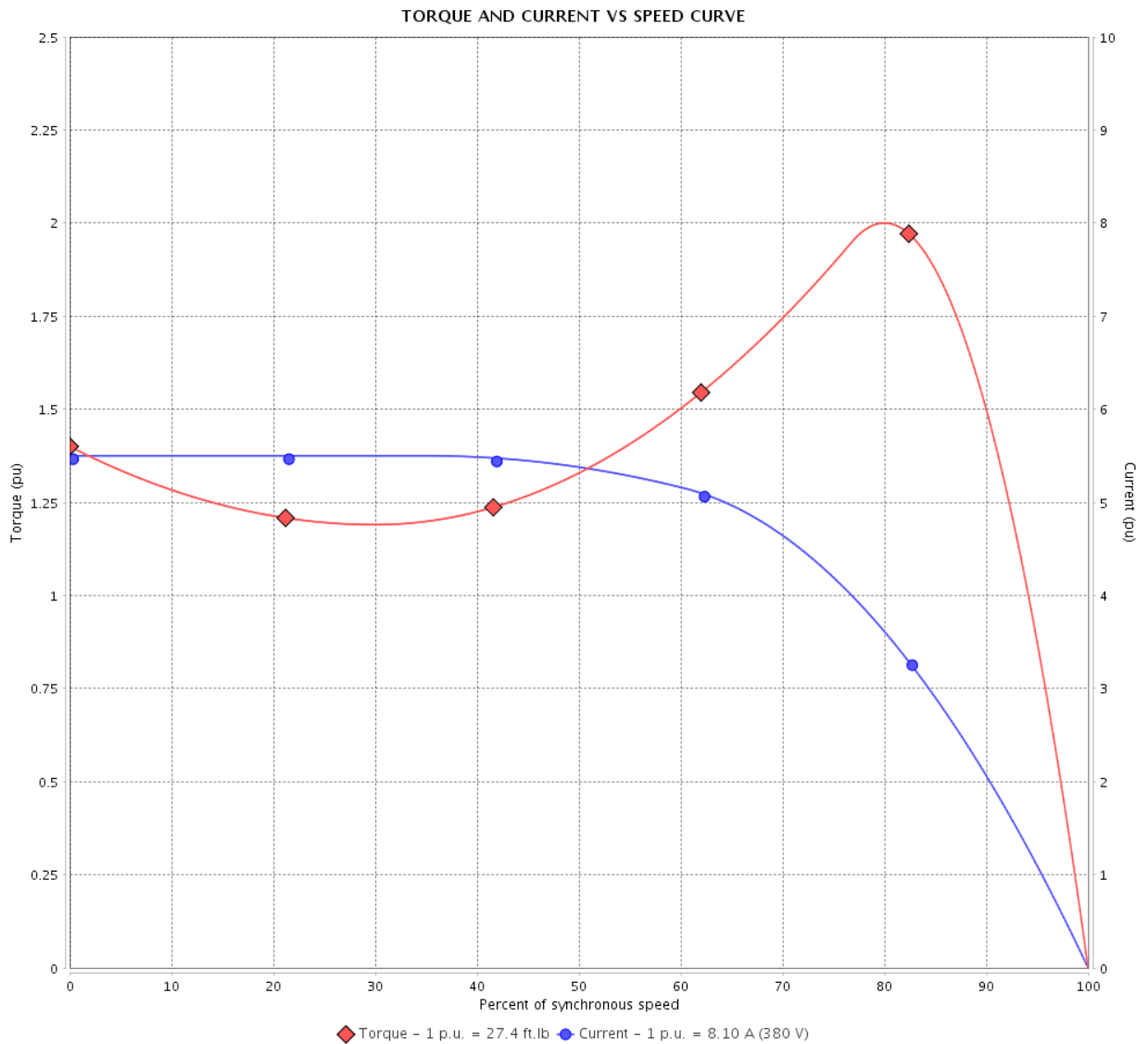
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11768123

Catalog # : 00512ST3QIE215TC-W22



Performance : 380 V 50 Hz 6P IE3

Rated current : 8.10 A
 LRC : 5.5
 Rated torque : 27.4 ft.lb
 Locked rotor torque : 140 %
 Breakdown torque : 200 %
 Rated speed : 960 rpm

Moment of inertia (J) : 1.47 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Locked rotor time : 54s (cold) 30s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



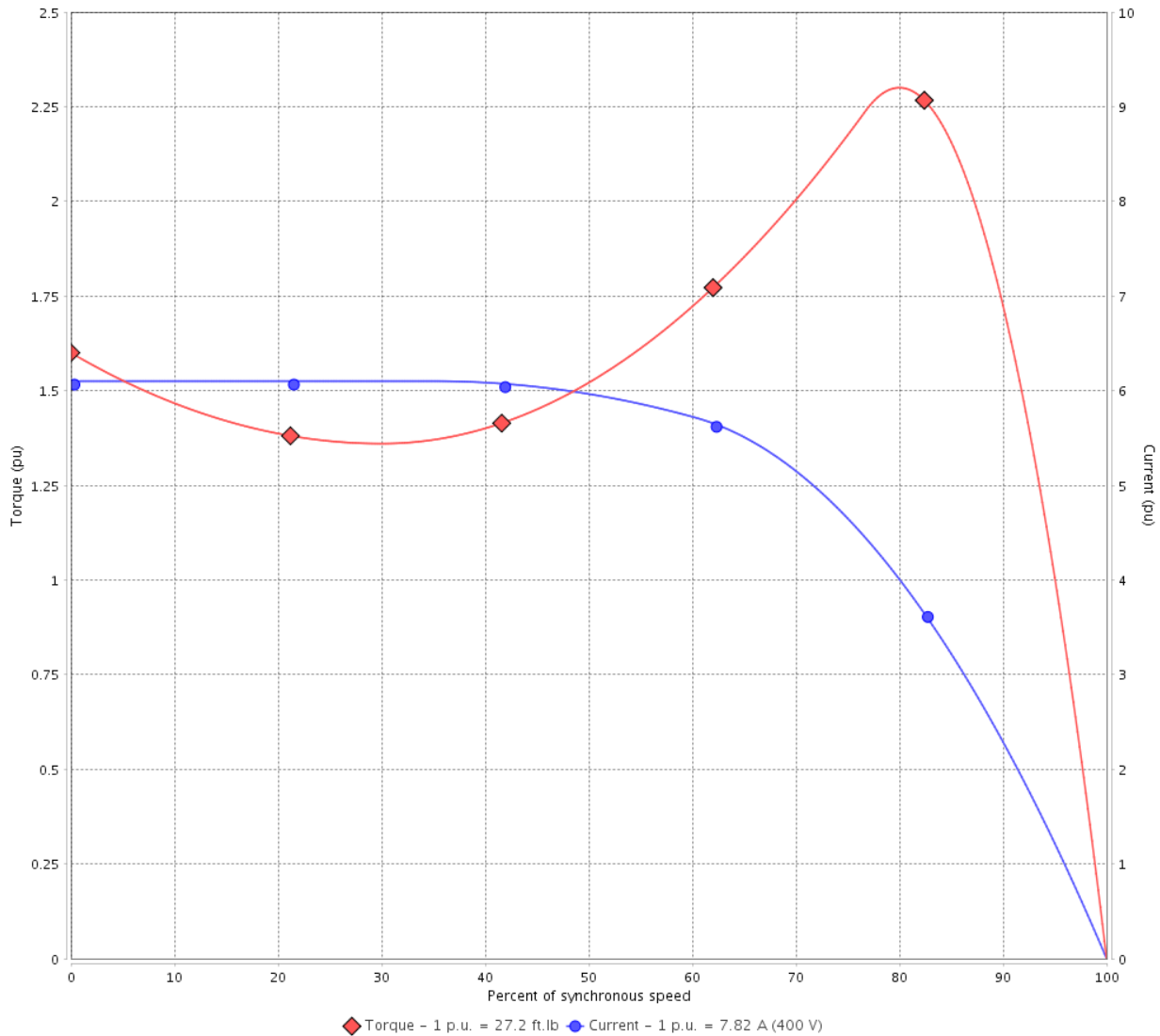
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11768123

Catalog # : 00512ST3QIE215TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 7.82 A	Moment of inertia (J)	: 1.47 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 27.2 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



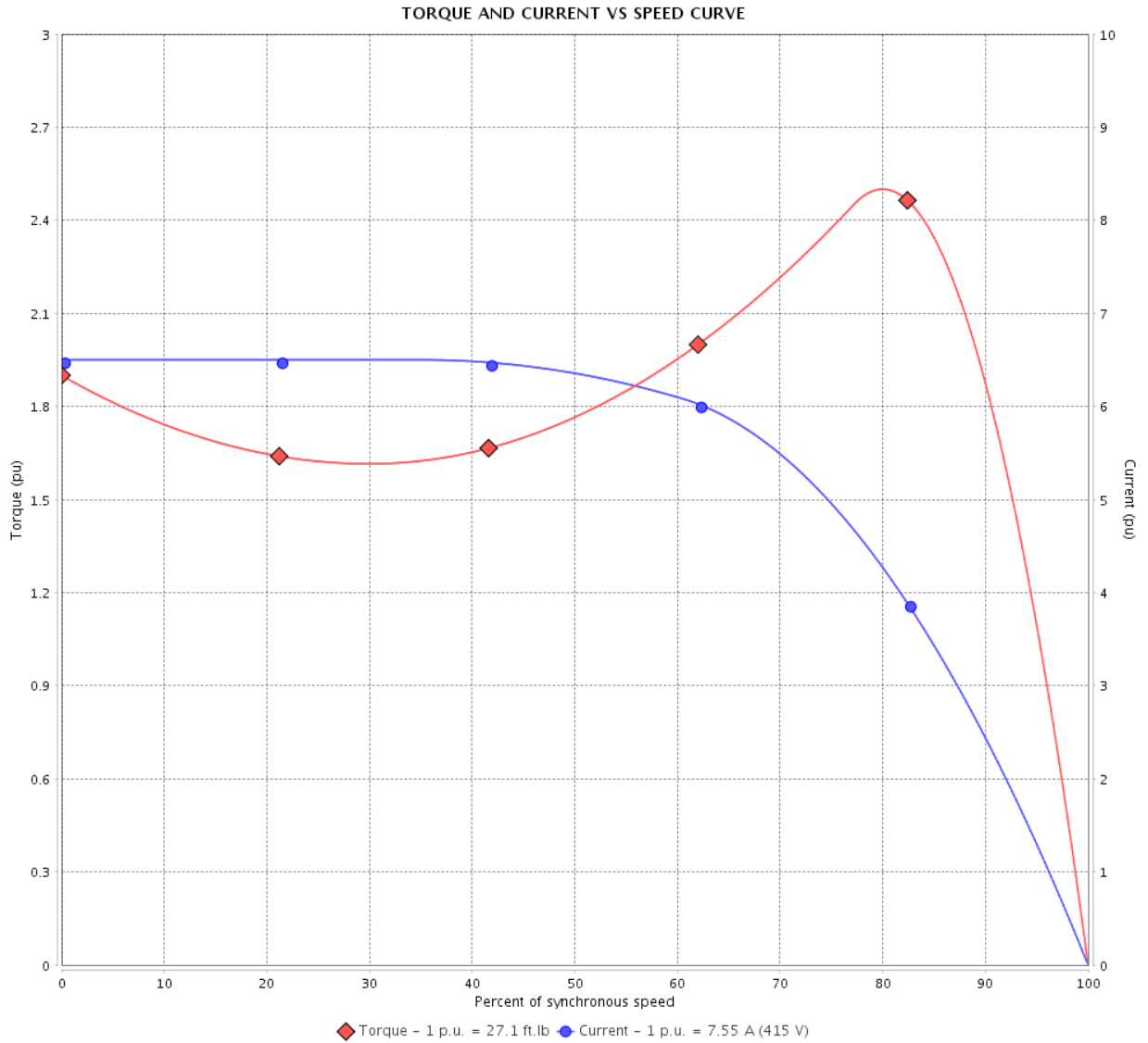
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Catalog # : 00512ST3QIE215TC-W22



Performance : 415 V 50 Hz 6P IE3

Rated current	: 7.55 A	Moment of inertia (J)	: 1.47 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 27.1 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



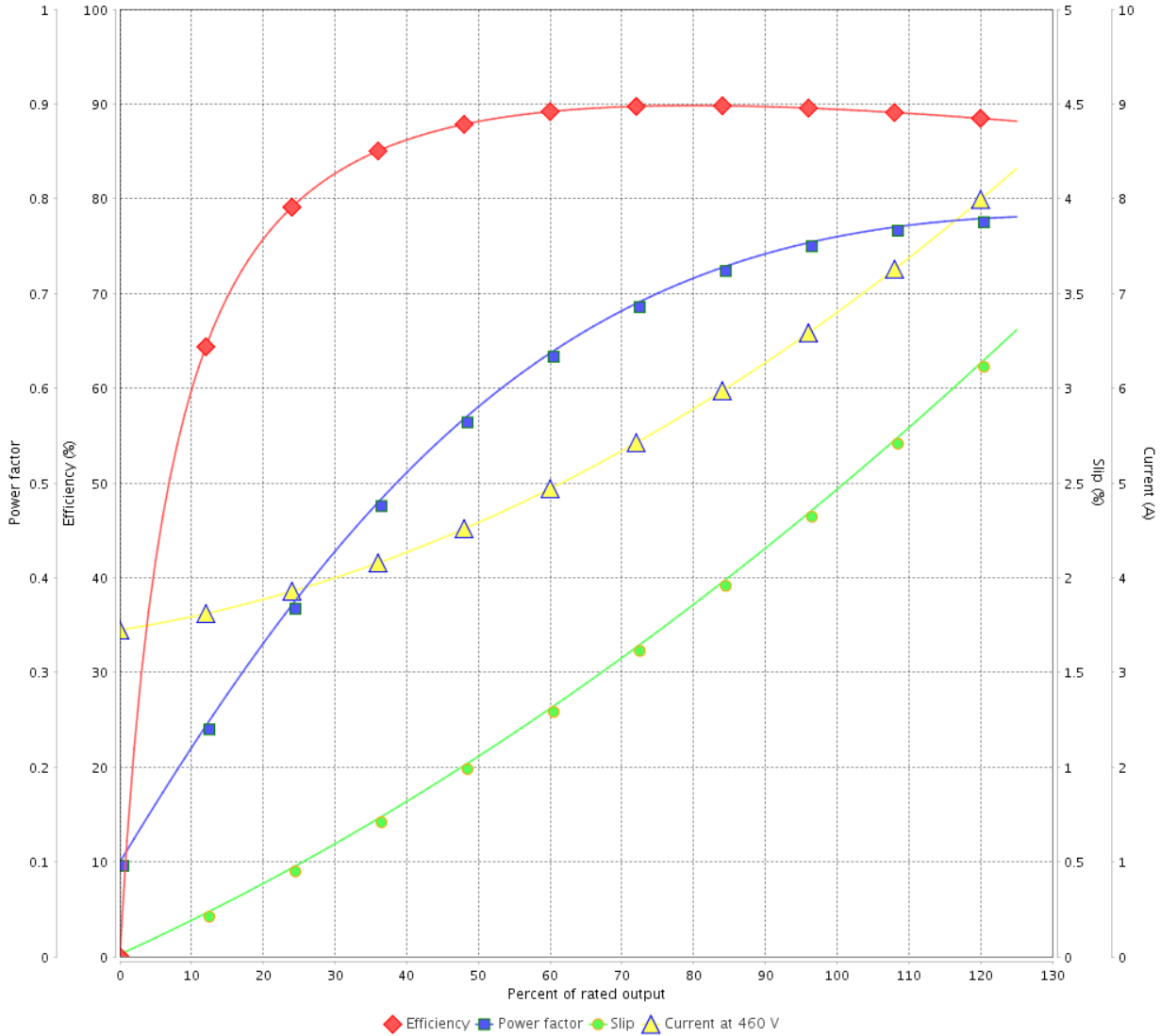
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Catalog # : 00512ST3QIE215TC-W22

LOAD PERFORMANCE CURVE



Performance : 460 V 60 Hz 6P

Rated current : 6.83 A
 LRC : 6.8
 Rated torque : 22.4 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 260 %
 Rated speed : 1170 rpm

Moment of inertia (J) : 1.47 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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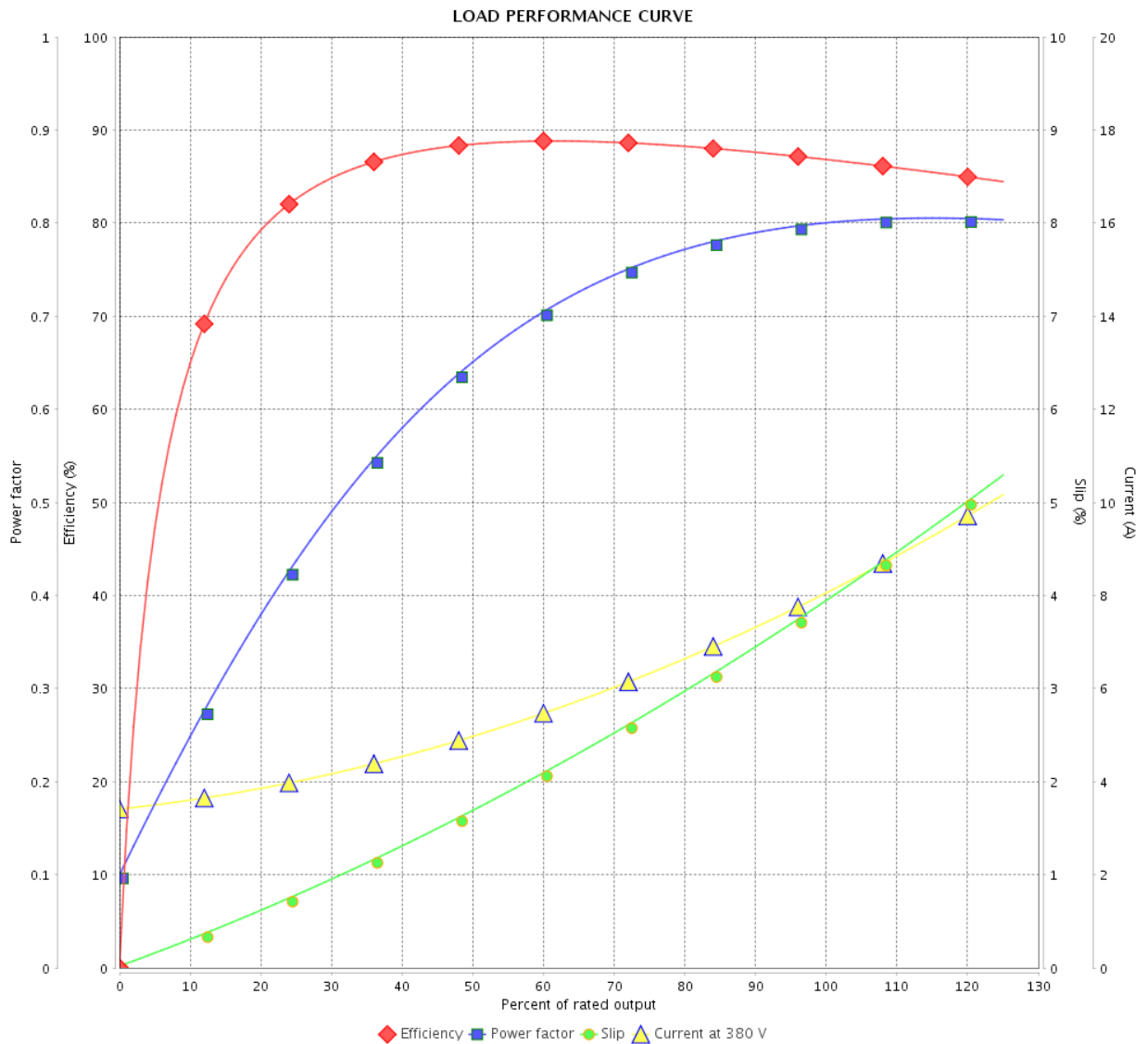


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Performance : 380 V 50 Hz 6P IE3

Rated current : 8.10 A
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 Breakdown torque : 200 %
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Three Phase Induction Motor - Squirrel Cage



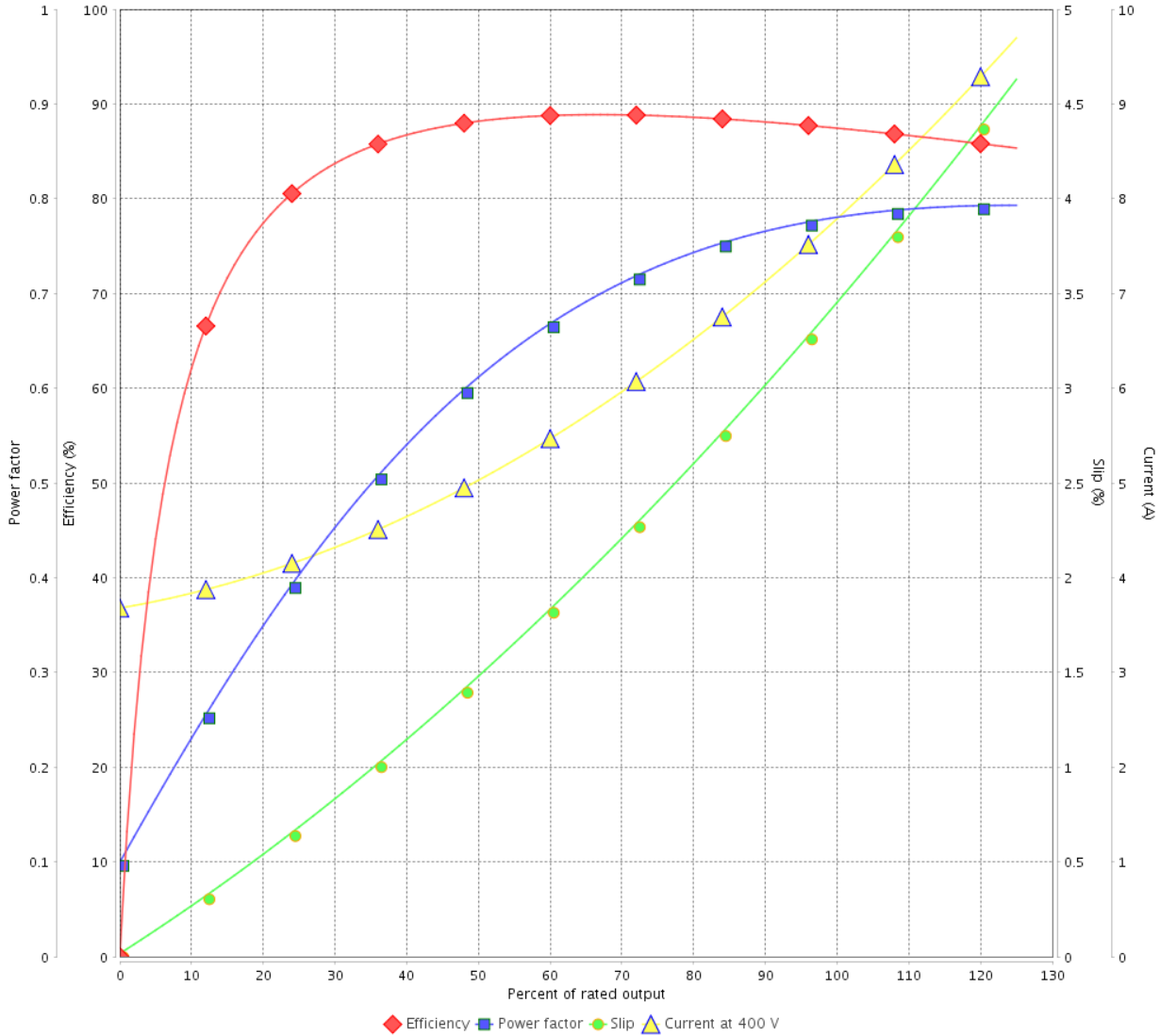
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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current : 7.82 A
 LRC : 6.1
 Rated torque : 27.2 ft.lb
 Locked rotor torque : 160 %
 Breakdown torque : 229 %
 Rated speed : 965 rpm

Moment of inertia (J) : 1.47 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

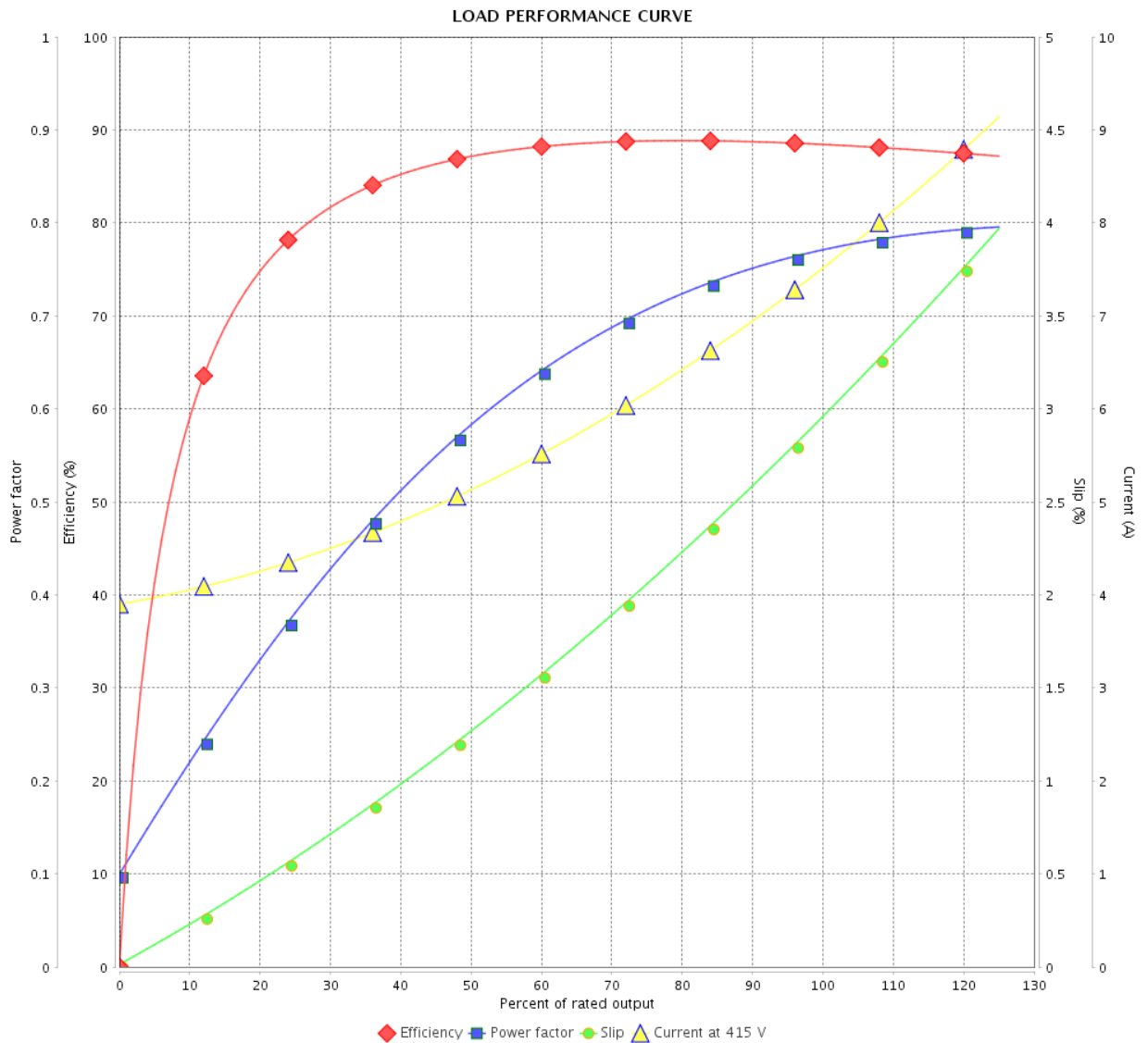


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 Breakdown torque : 250 %
 Rated speed : 970 rpm

Moment of inertia (J) : 1.47 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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Locked rotor torque : 170 %	Service factor : 1.25
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 1170 rpm	Design : B

Heating constant

Cooling constant

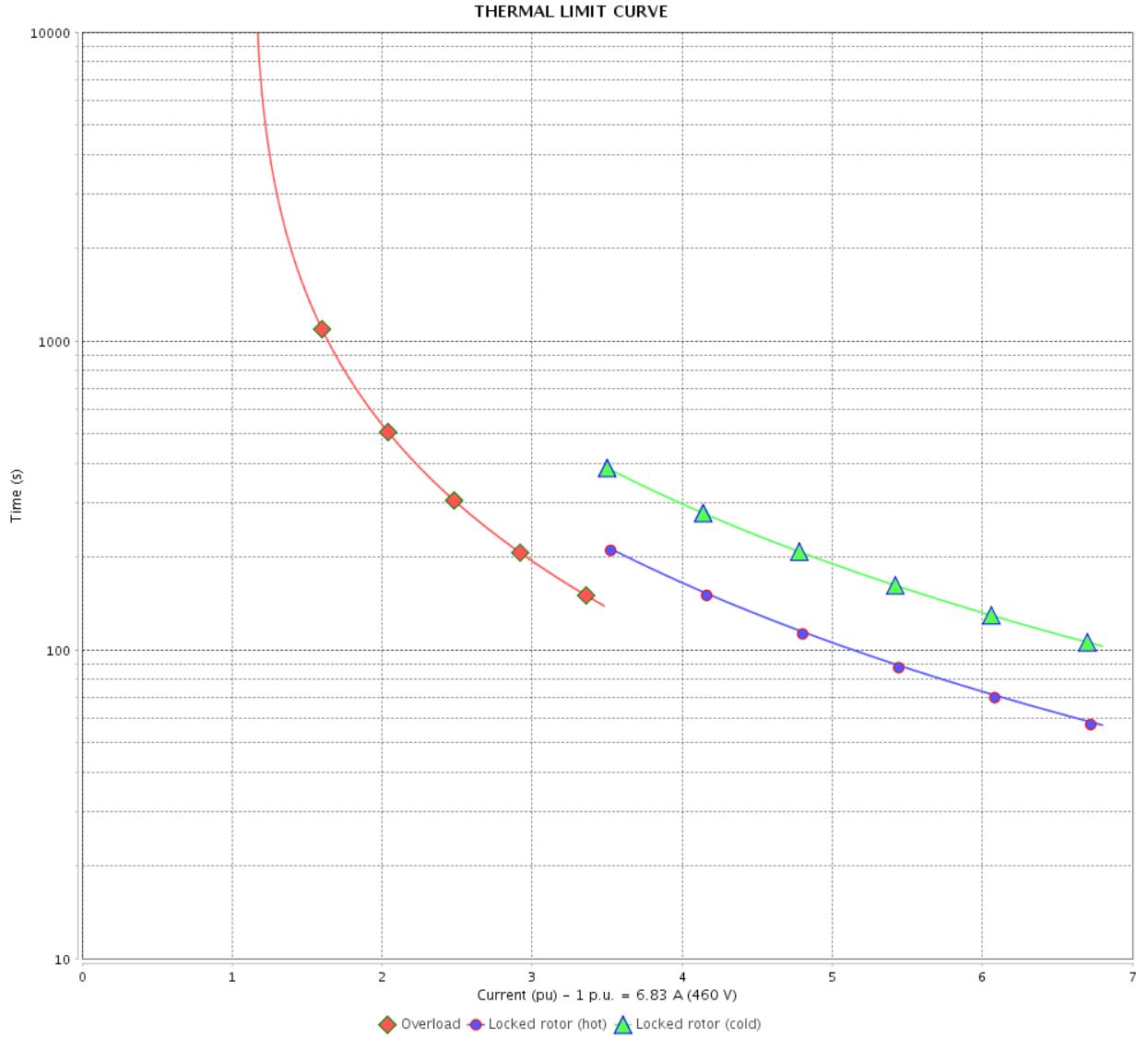
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THERMAL LIMIT CURVE

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Locked rotor torque : 140 %	Service factor : 1.00
Breakdown torque : 200 %	Temperature rise : 80 K
Rated speed : 960 rpm	Design : B

Heating constant

Cooling constant

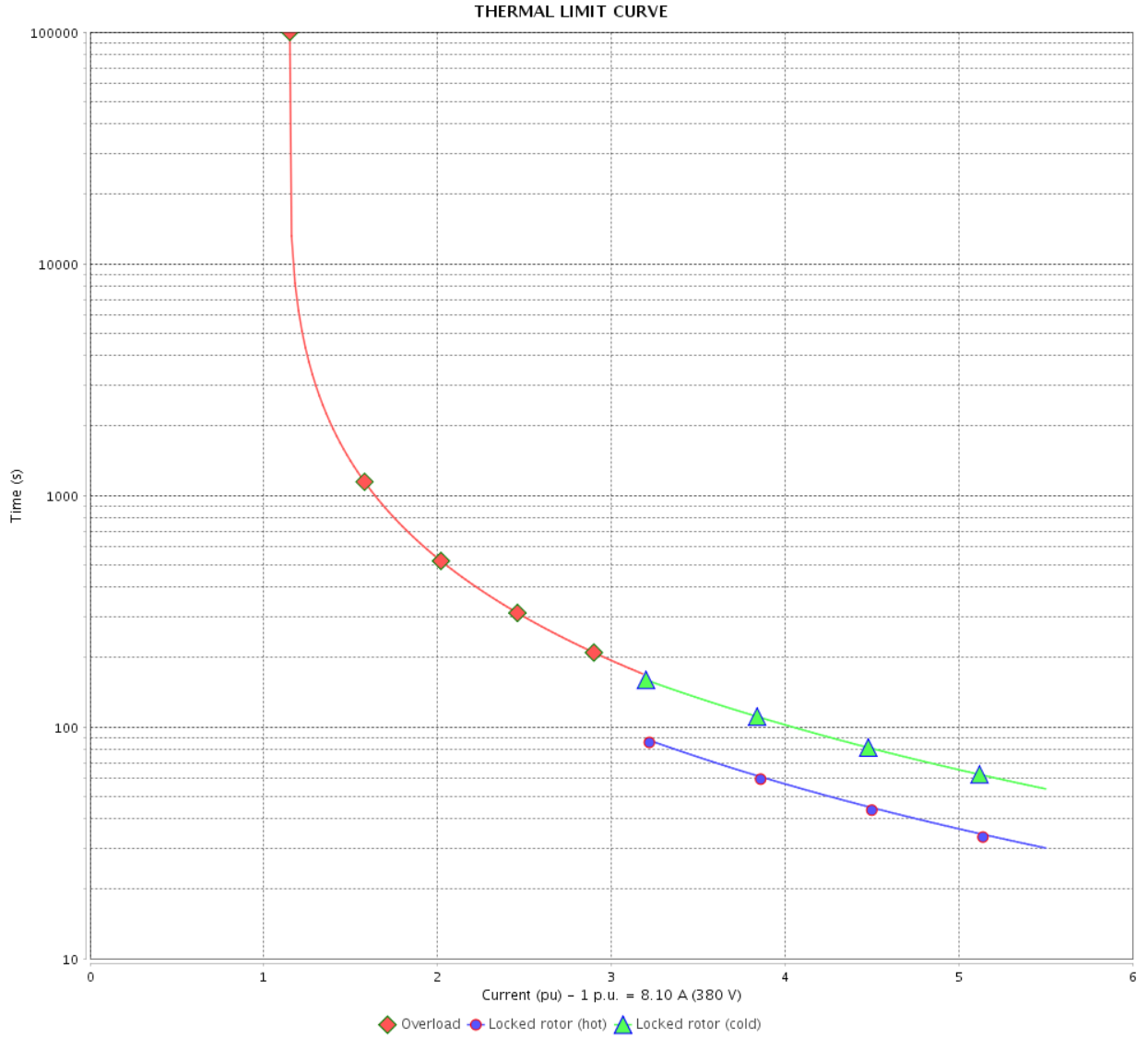
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 Catalog # : 00512ST3QIE215TC-W22

Performance : 400 V 50 Hz 6P IE3

Rated current : 7.82 A	Moment of inertia (J) : 1.47 sq.ft.lb
LRC : 6.1	Duty cycle : Cont.(S1)
Rated torque : 27.2 ft.lb	Insulation class : F
Locked rotor torque : 160 %	Service factor : 1.00
Breakdown torque : 229 %	Temperature rise : 80 K
Rated speed : 965 rpm	Design : B

Heating constant

Cooling constant

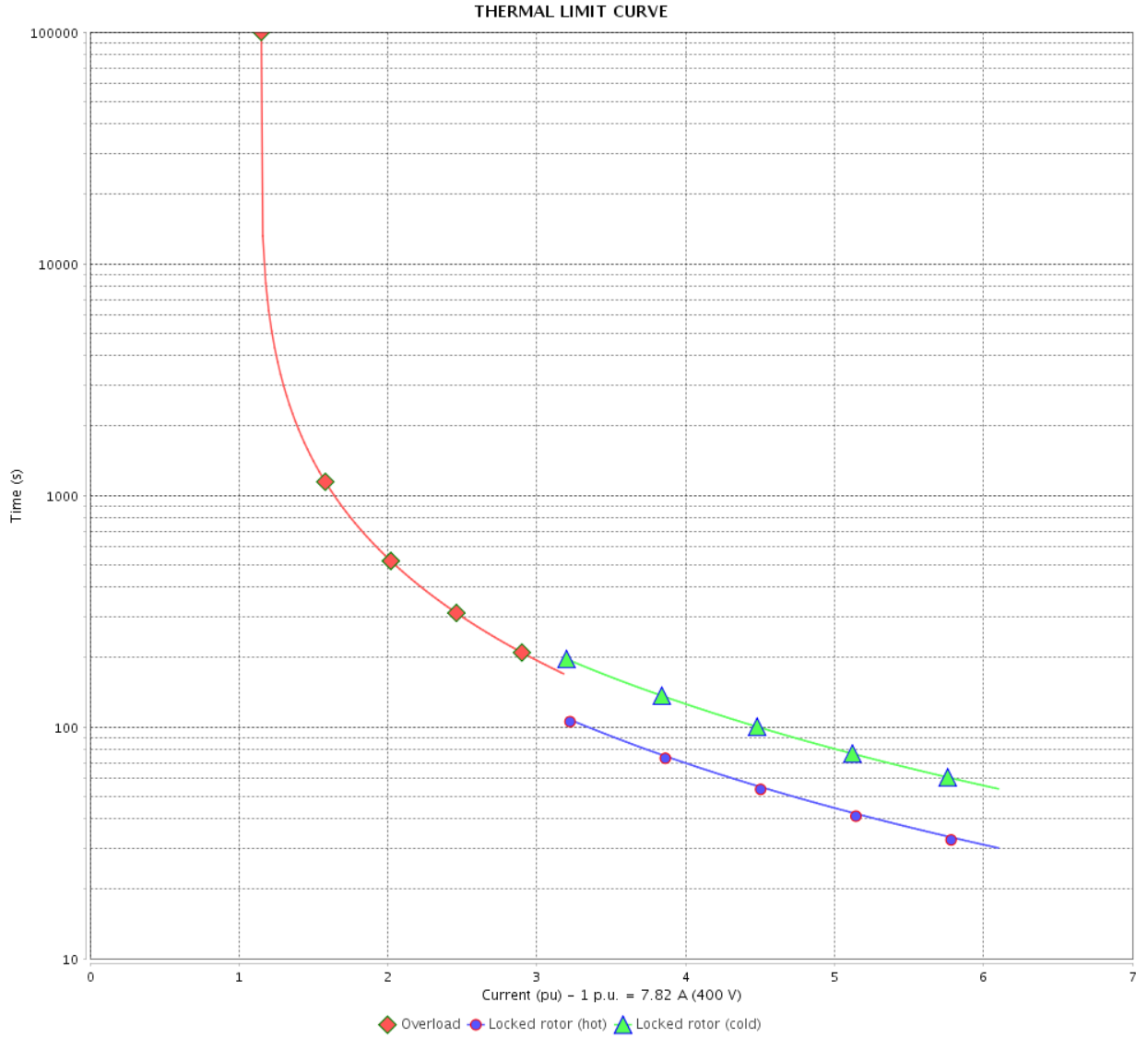
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Checked by				
Date				

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LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 27.1 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

Heating constant

Cooling constant

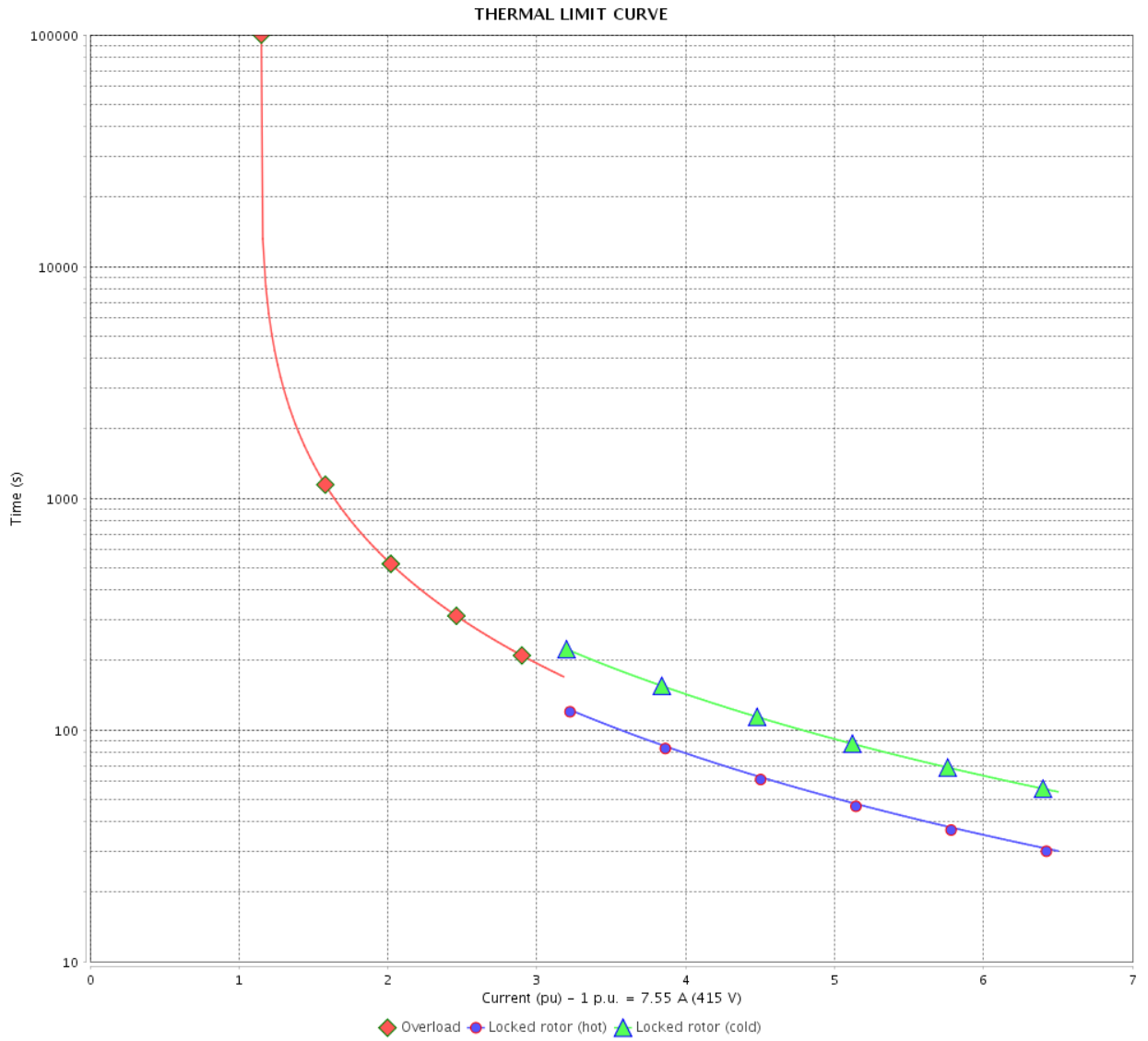
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



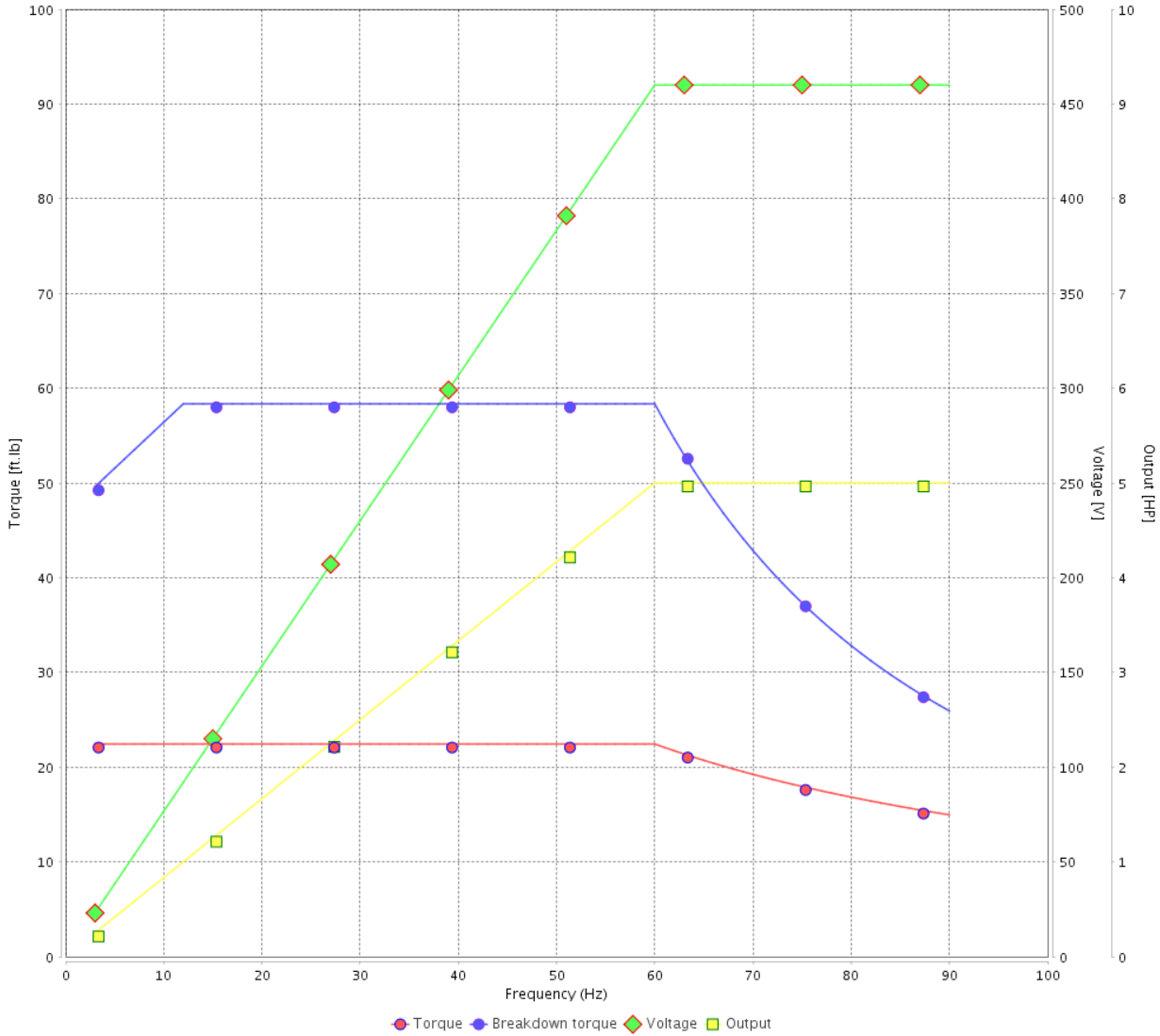
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Moment of inertia (J) : 1.47 sq.ft.lb
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 Insulation class : F
 Service factor : 1.25
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 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

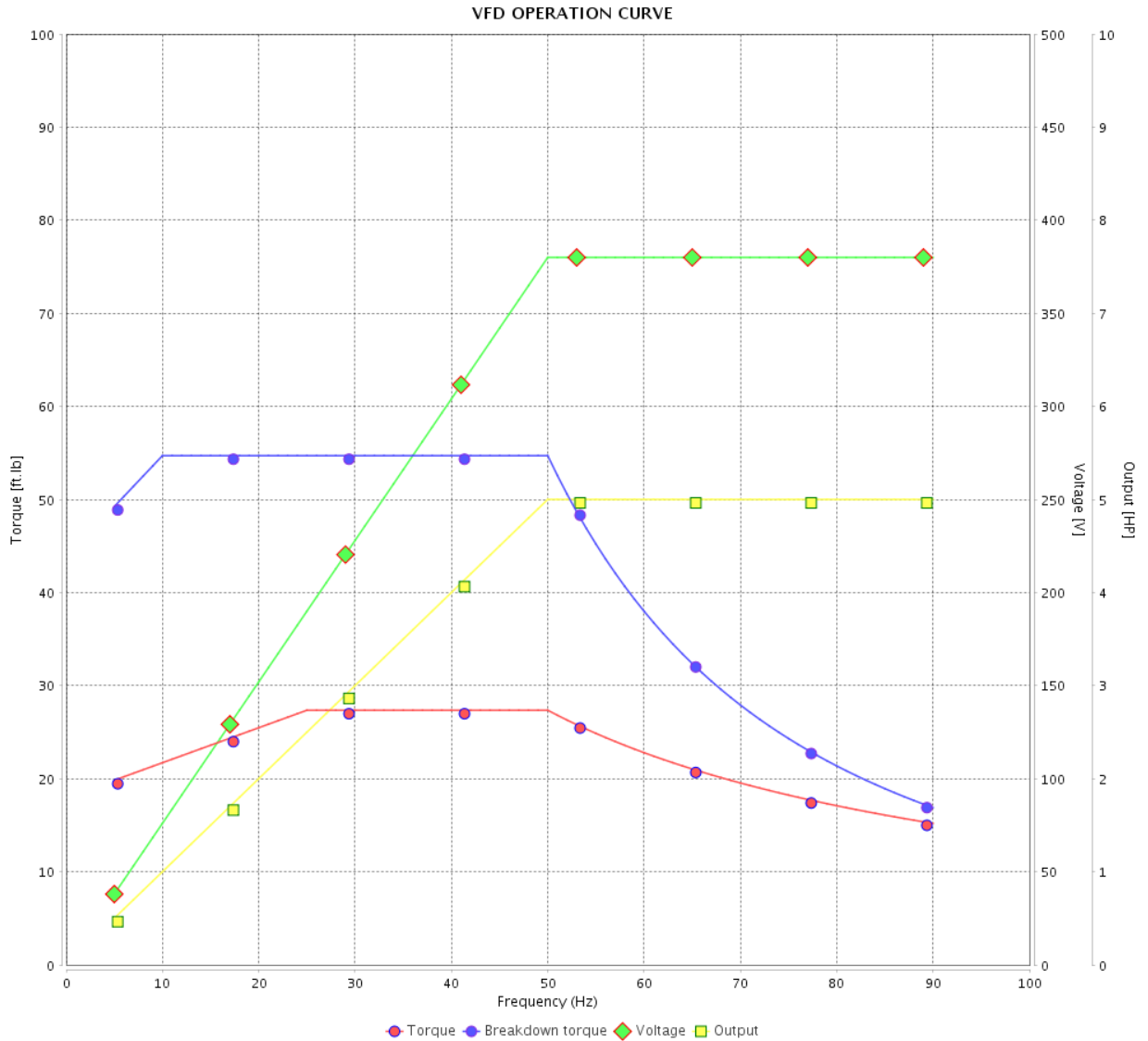


Customer :

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Performance : 380 V 50 Hz 6P IE3

Rated current : 8.10 A
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 Locked rotor torque : 140 %
 Breakdown torque : 200 %
 Rated speed : 960 rpm

Moment of inertia (J) : 1.47 sq.ft.lb
 Duty cycle : Cont.(S1)
 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



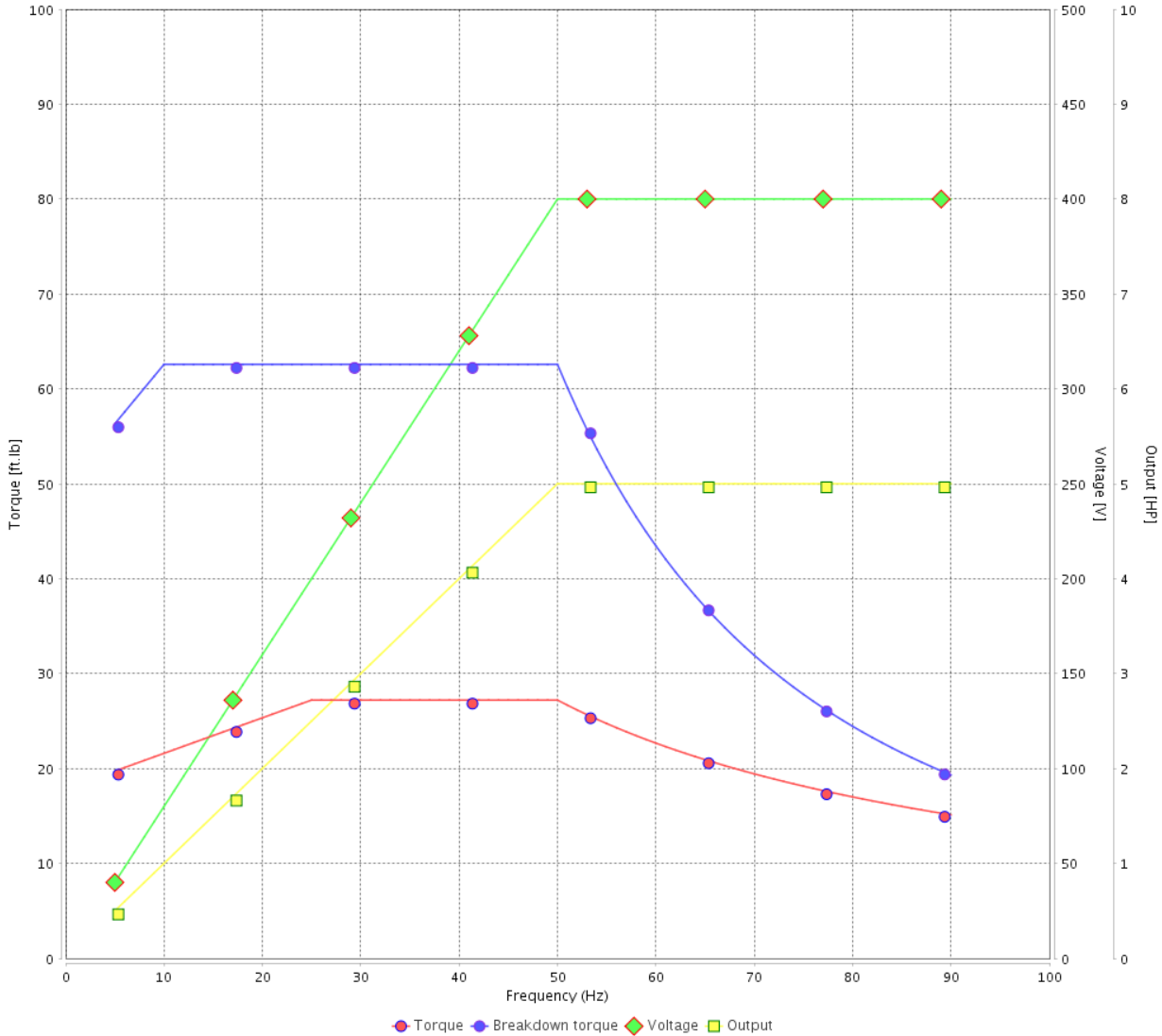
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 Insulation class : F
 Service factor : 1.00
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 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

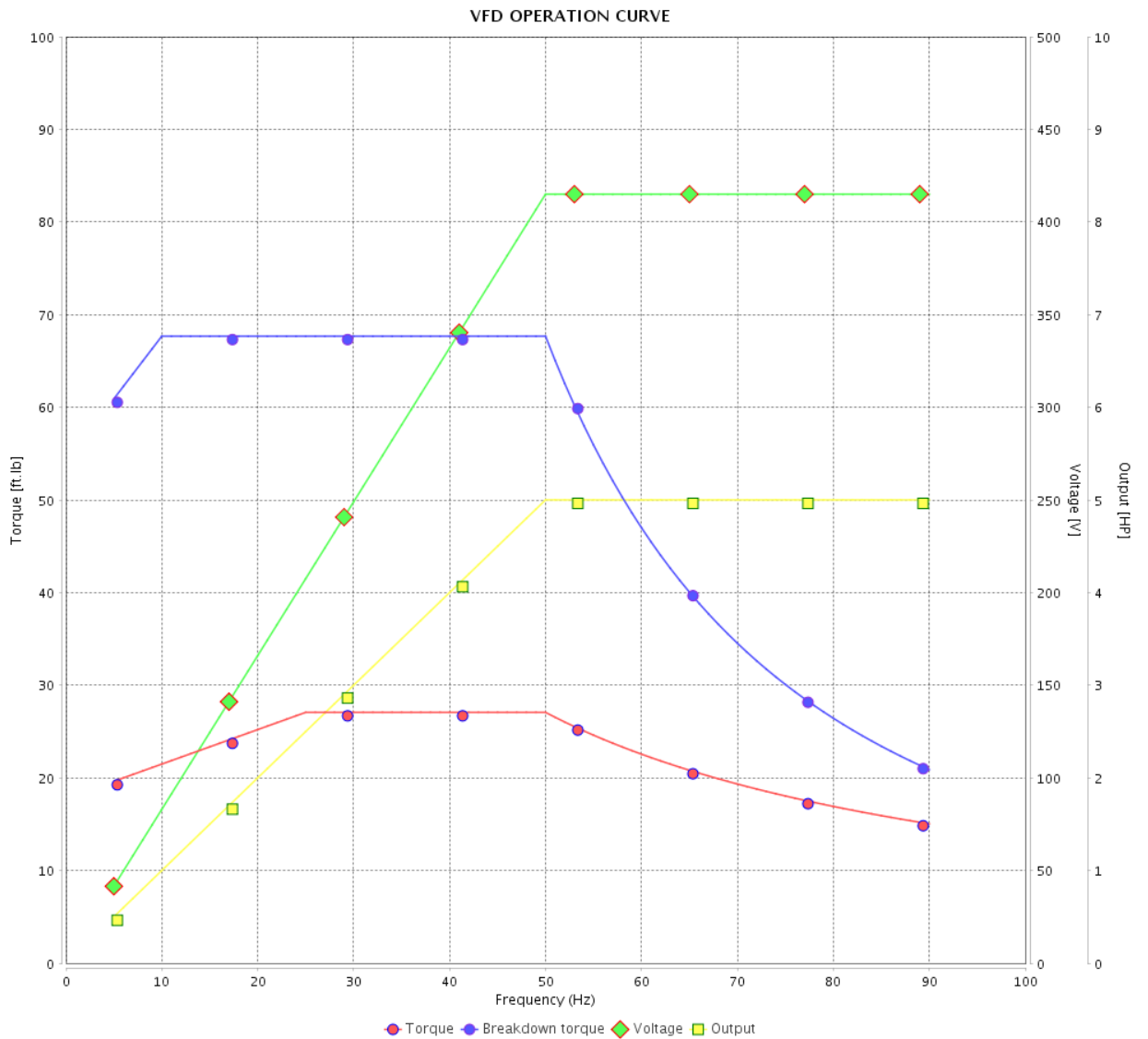


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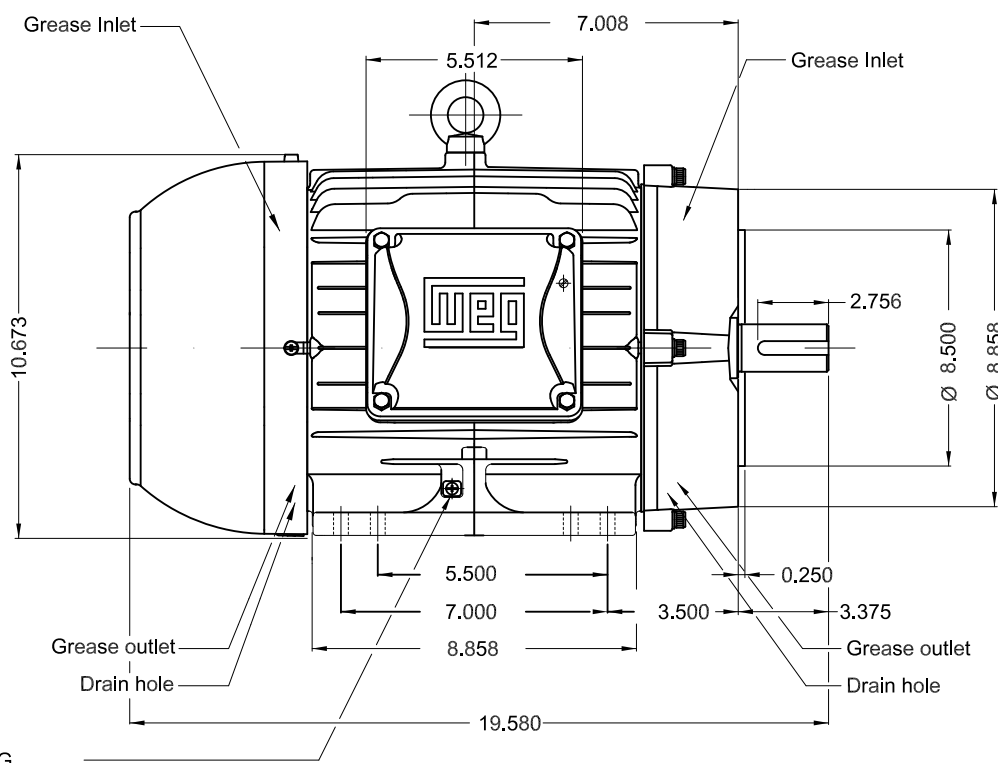
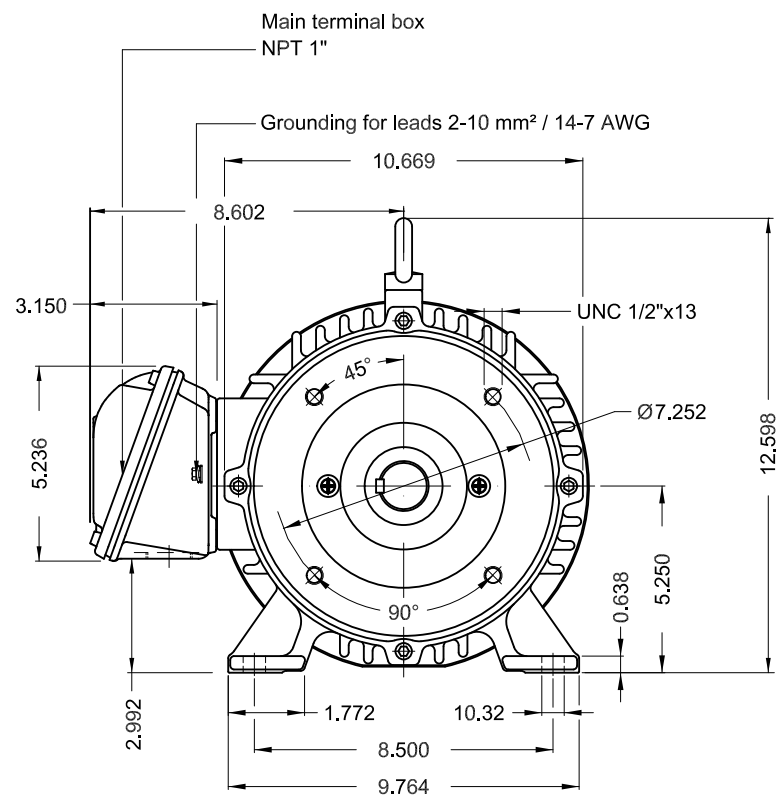
Rev.	Changes Summary	Performed	Checked	Date
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Date	12/04/2022			

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A

B

C

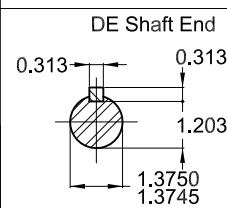


Grounding for leads 2-10 mm² / 14-7 AWG

D

E

Color RAL 5009
Painting plan 202E
Mounting B34R(D)



5 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.					
CHECKED		FRAME 213/5TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD



MADE IN BRAZIL
11768123



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 00512ST3QIE215TC-W22

Inverter Duty Motor
Severe Duty



FOR SAFE AREA
Mod. TE1BFOXON
CC029A

PH3 60Hz Fr. 213/5TC 1000m.a.s.l. IP55 TEFC 191lb

V 460

A 6.83

HP 5.0

kW 3.7

SF 1.25

SFA 8.54

RPM 1170

PF 0.76

AMB 40°C

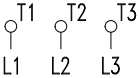
INS cl. F DT80K

NEMA NOM EFF 89.5%

DUTY CONT.

DES B Code J

GUARANT. EFF 87.5%



→ 6308-C3 (11g) 40BC03X30

→ 6207-C3 (7g) 35BC02X30



MOBIL POLYREX EM (20000h)