

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	12822417	
		Catalog # :	00718ST3QIER213TC-W2	
Frame	: 213TC	Cooling method	: IC411 - TEFC	
Insulation class	: F	Mounting	: W-6	
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	: 172 lb	
Protection degree	: IP55	Moment of inertia (J)	: 1.34 sq.ft.lb	
Design	: B			
Output [HP]	7.5	7.5	7.5	7.5
Poles	4	4	4	4
Frequency [Hz]	60	50	50	50
Rated voltage [V]	460	380	400	415
Rated current [A]	9.18	11.0	10.5	10.3
L. R. Amperes [A]	65.2	61.6	65.1	69.0
LRC [A]	7.1x(Code H)	5.6x(Code F)	6.2x(Code G)	6.7x(Code H)
No load current [A]	4.40	4.00	4.30	4.55
Rated speed [RPM]	1765	1455	1460	1460
Slip [%]	1.94	3.00	2.67	2.67
Rated torque [ft.lb]	22.3	27.1	27.0	27.0
Locked rotor torque [%]	220	170	190	210
Breakdown torque [%]	310	240	270	290
Service factor	1.25	1.25	1.25	1.25
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	36s (cold) 20s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)
Noise level ²	58.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)
Efficiency (%)	25%	88.6	89.2	89.2
	50%	89.5	89.5	89.5
	75%	91.0	89.5	90.2
	100%	91.7	89.6	90.2
Power Factor	25%	0.40	0.47	0.43
	50%	0.66	0.72	0.69
	75%	0.76	0.81	0.78
	100%	0.82	0.85	0.84
Bearing type	: <u>Drive end</u> 6308 C3 <u>Non drive end</u> 6207 C3	Foundation loads		
Sealing	: Inpro/Seal Inpro/Seal	Max. traction	: 355 lb	
Lubrication interval	: 19000 h 20000 h	Max. compression	: 527 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



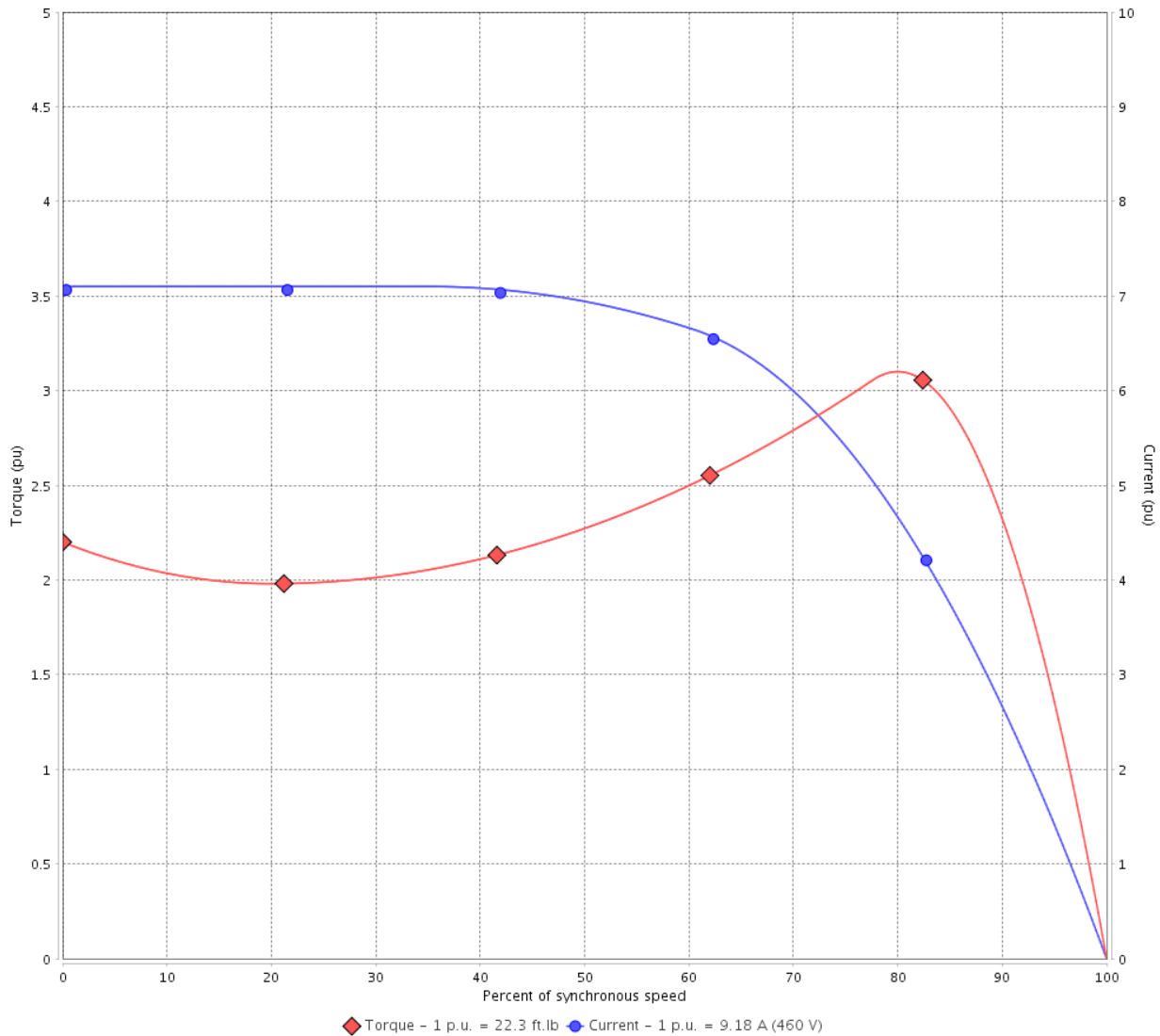
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822417

Catalog # : 00718ST3QIER213TC-W2

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 9.18 A	Moment of inertia (J)	: 1.34 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 22.3 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.25
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 1765 rpm	Design	: B

Locked rotor time : 36s (cold) 20s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



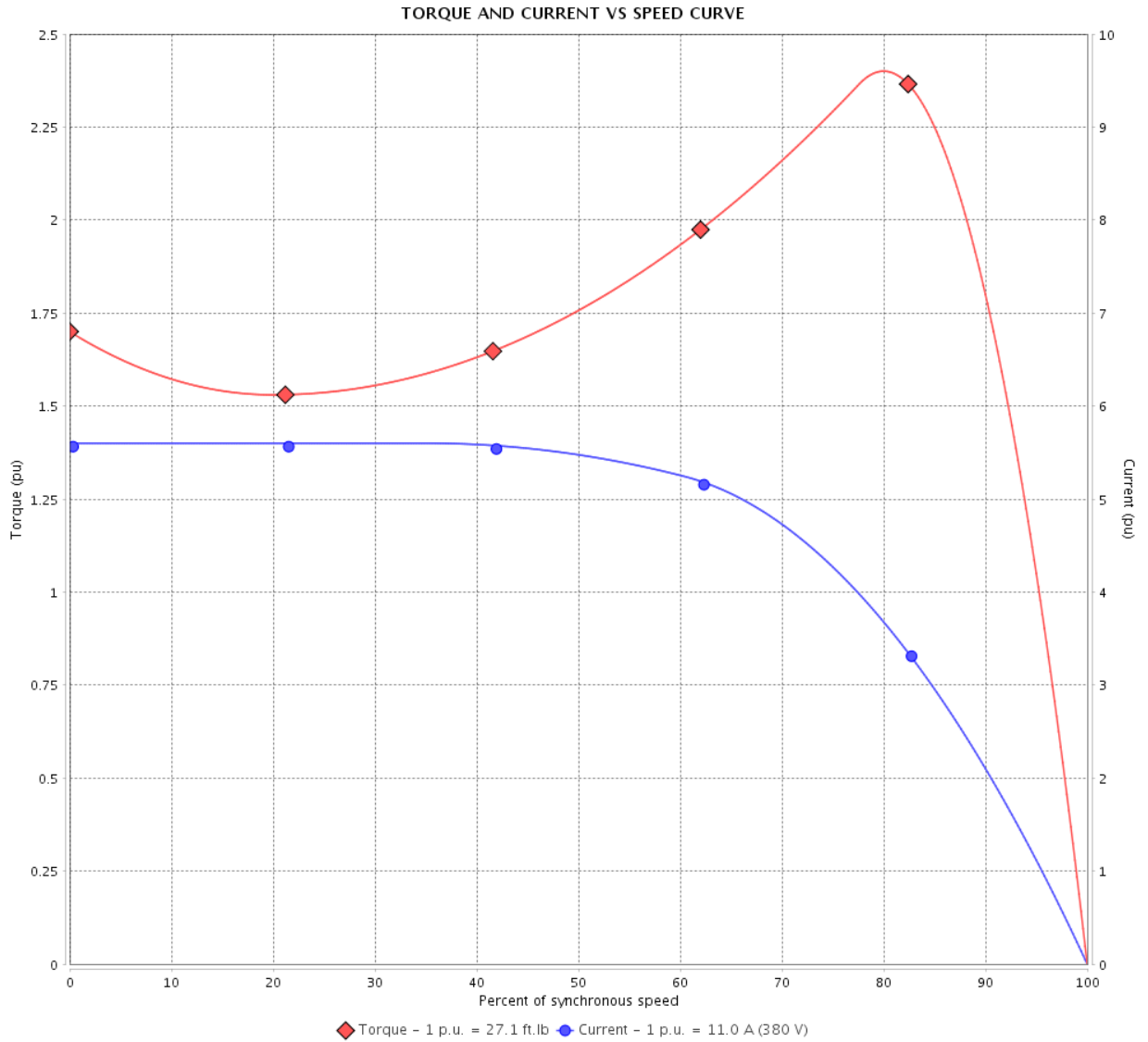
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822417

Catalog # : 00718ST3QIER213TC-W2



Performance : 380 V 50 Hz 4P IE3

Rated current	: 11.0 A	Moment of inertia (J)	: 1.34 sq.ft.lb
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 27.1 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1455 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



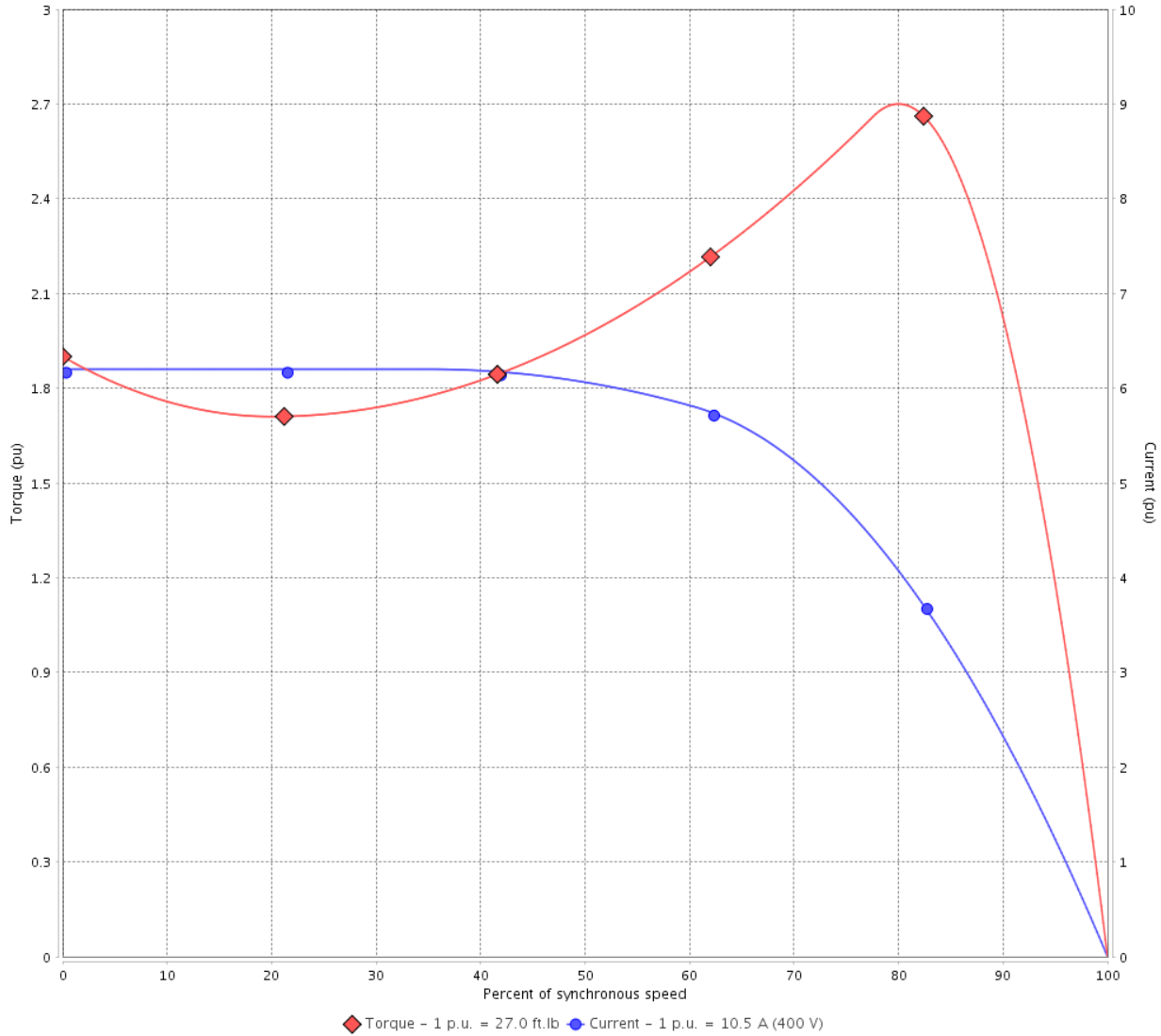
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822417

Catalog # : 00718ST3QIER213TC-W2

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 10.5 A	Moment of inertia (J)	: 1.34 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 27.0 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.25
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



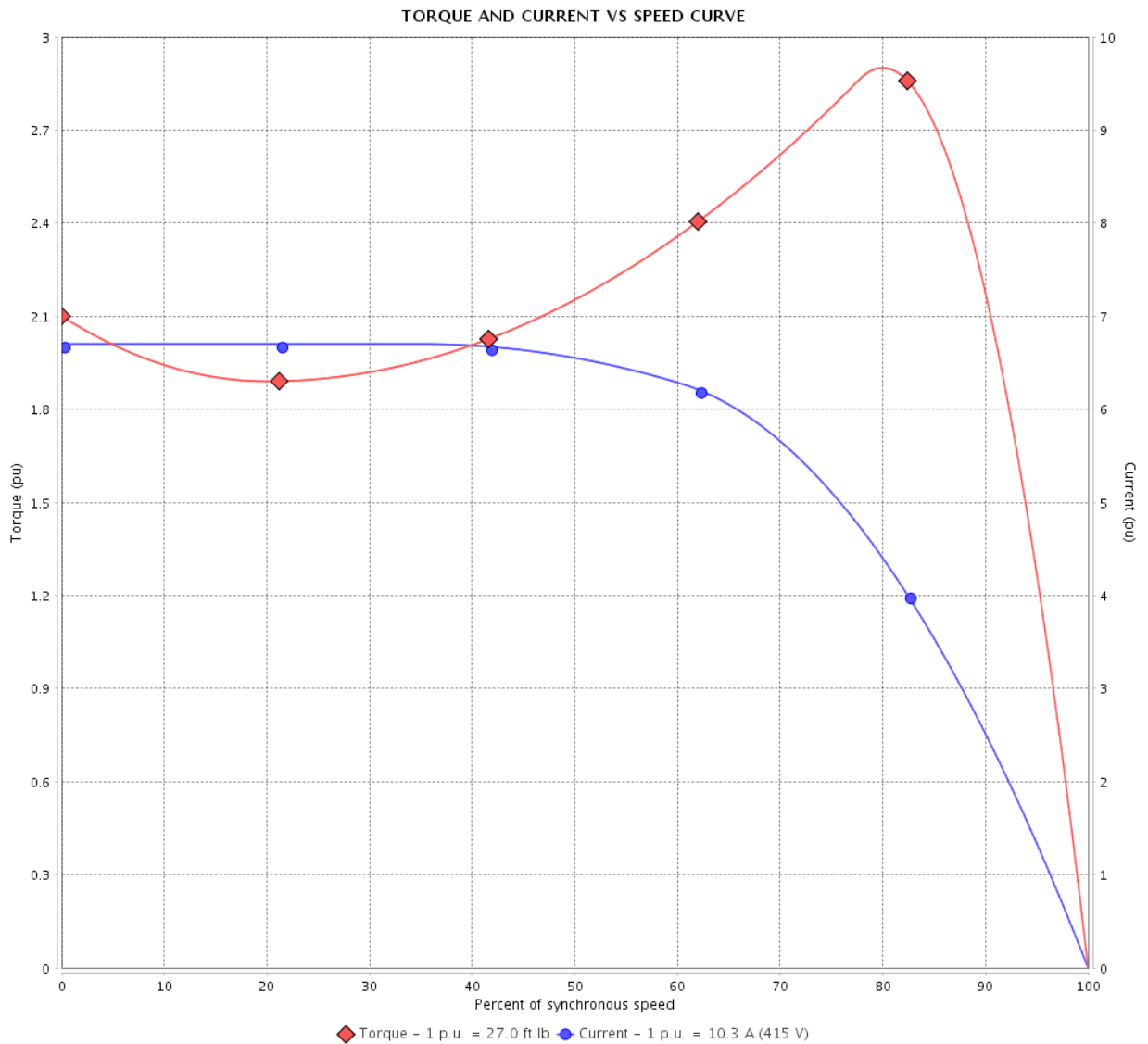
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822417

Catalog # : 00718ST3QIER213TC-W2



Performance : 415 V 50 Hz 4P IE3

Rated current	: 10.3 A	Moment of inertia (J)	: 1.34 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 27.0 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.25
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



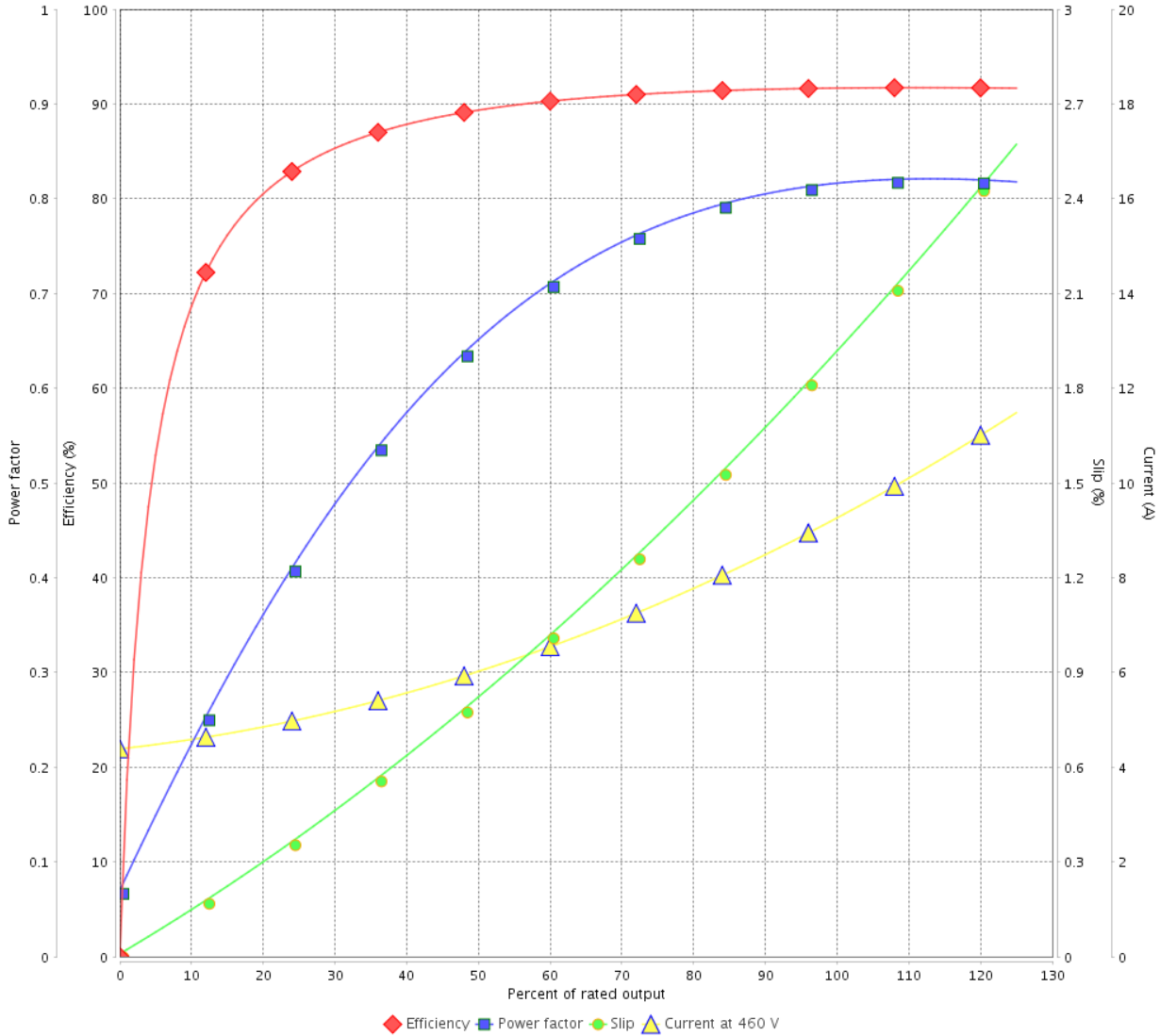
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Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822417

Catalog # : 00718ST3QIER213TC-W2

LOAD PERFORMANCE CURVE



Performance : 460 V 60 Hz 4P

Rated current : 9.18 A
 LRC : 7.1
 Rated torque : 22.3 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 310 %
 Rated speed : 1765 rpm

Moment of inertia (J) : 1.34 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

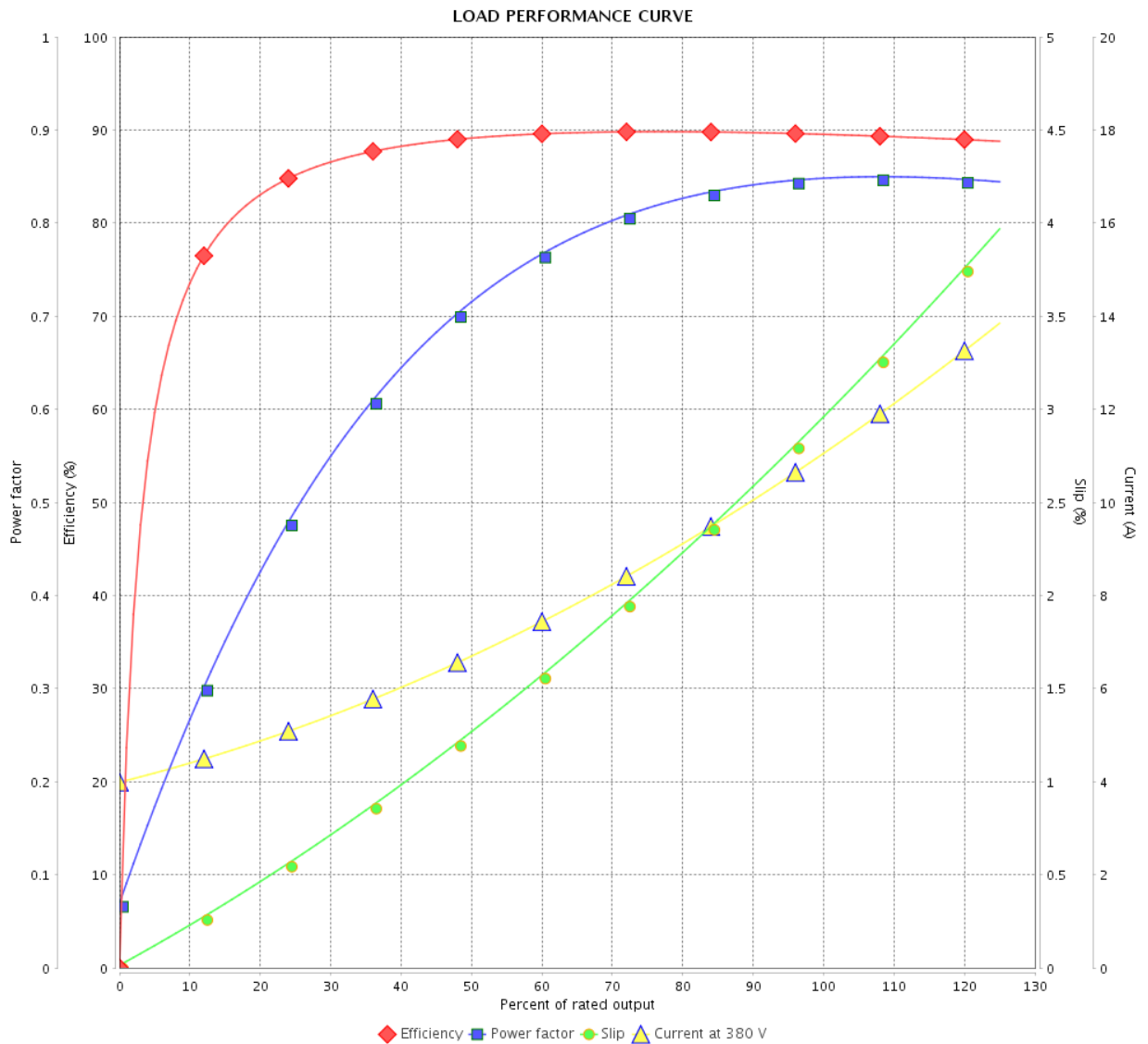


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Performance : 380 V 50 Hz 4P IE3

Rated current : 11.0 A
 LRC : 5.6
 Rated torque : 27.1 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 240 %
 Rated speed : 1455 rpm

Moment of inertia (J) : 1.34 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
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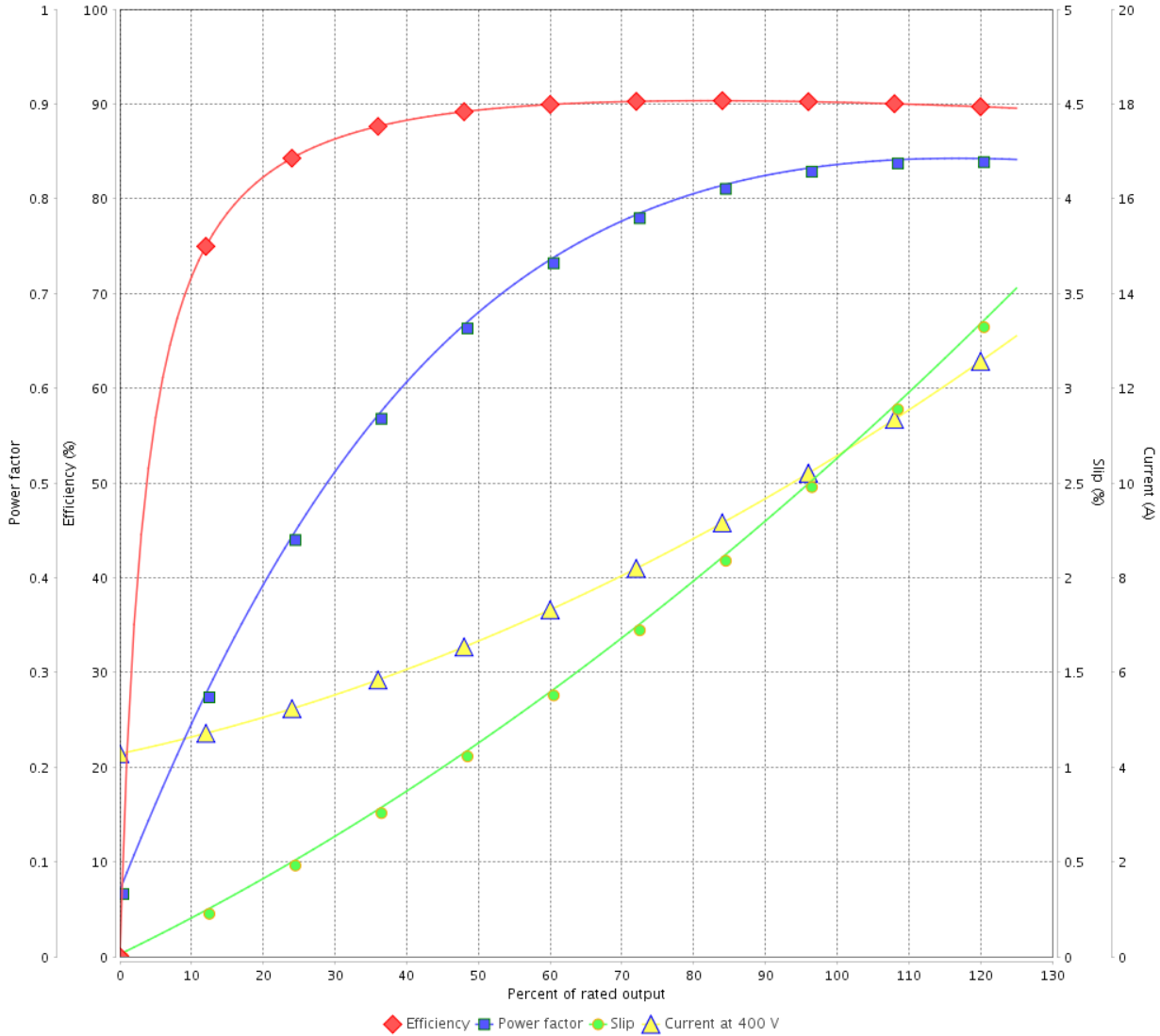
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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 10.5 A
 LRC : 6.2
 Rated torque : 27.0 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 270 %
 Rated speed : 1460 rpm

Moment of inertia (J) : 1.34 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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Three Phase Induction Motor - Squirrel Cage

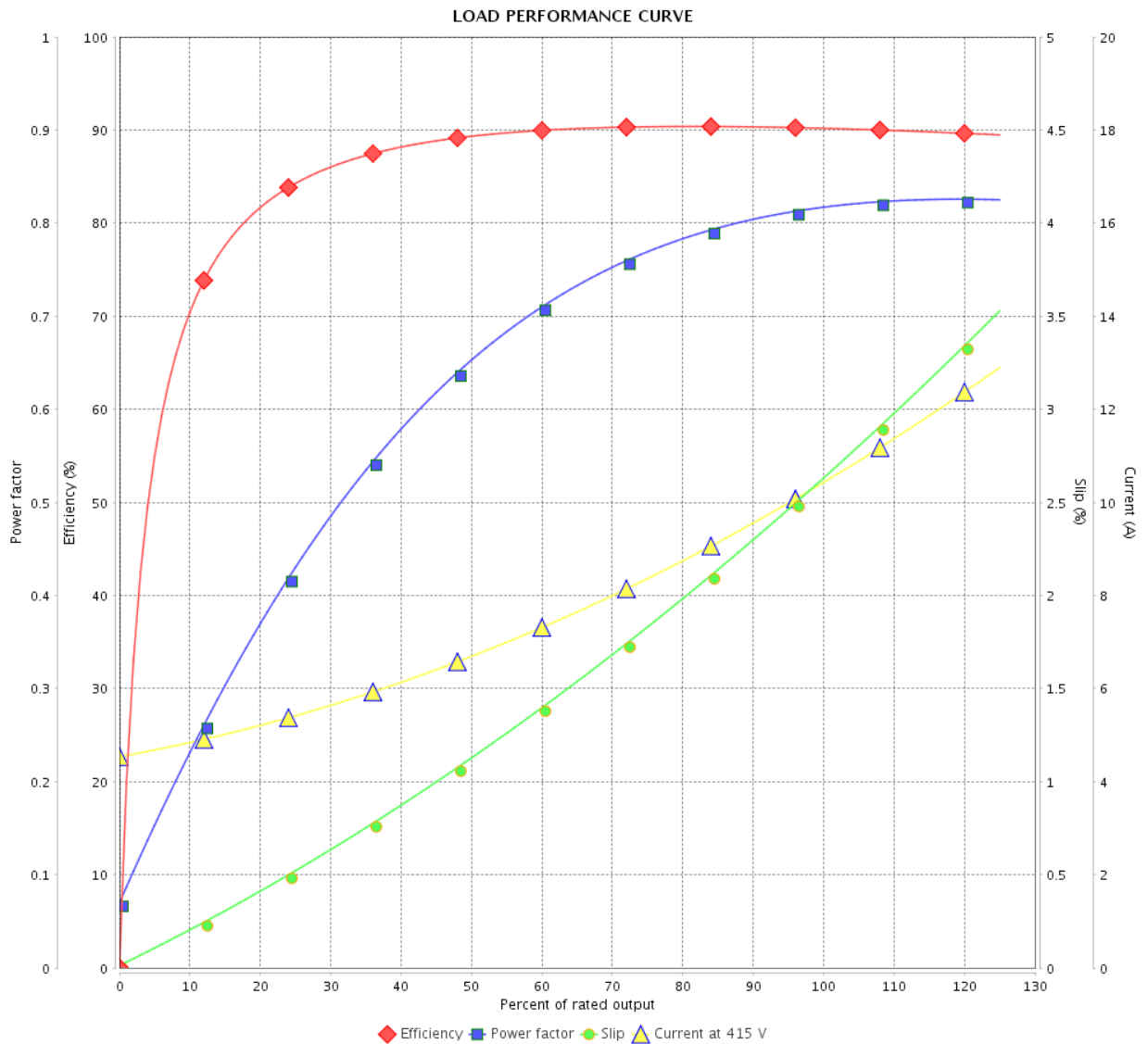


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 Insulation class : F
 Service factor : 1.25
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THERMAL LIMIT CURVE



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Rated speed	: 1765 rpm	Design	: B

Heating constant

Cooling constant

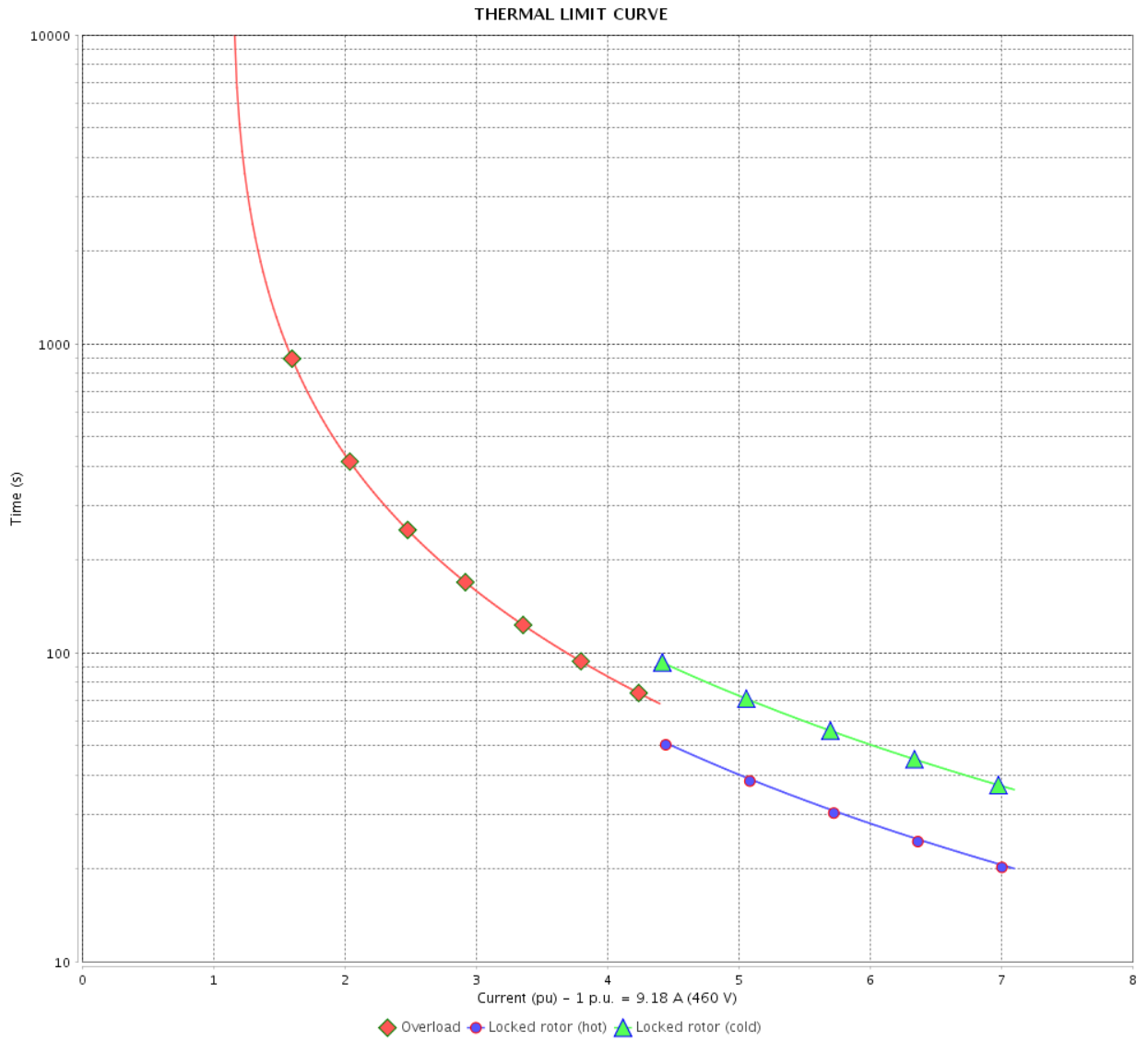
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LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 27.1 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1455 rpm	Design	: B

Heating constant

Cooling constant

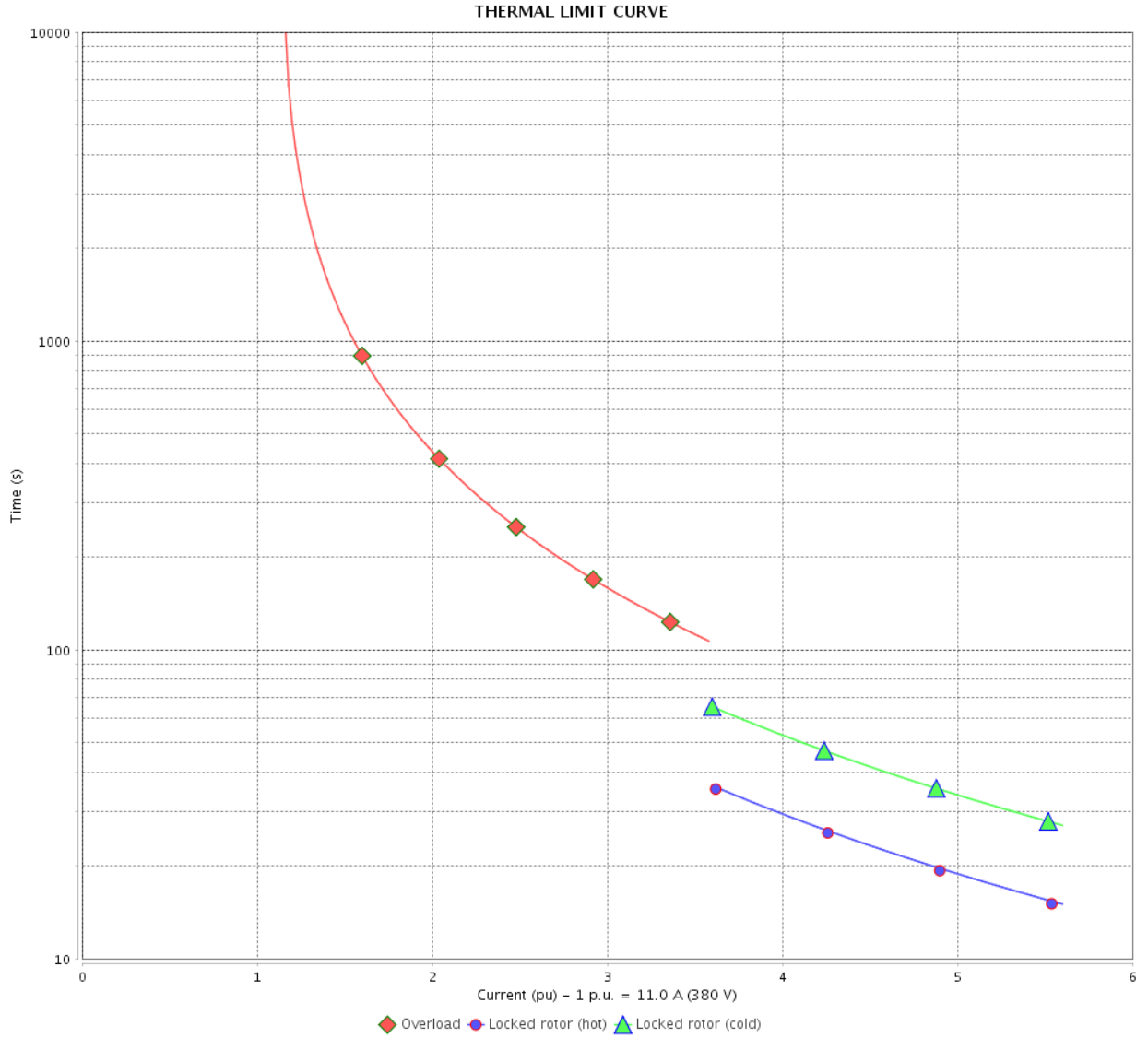
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Rated current	: 10.5 A	Moment of inertia (J)	: 1.34 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 27.0 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.25
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

Heating constant

Cooling constant

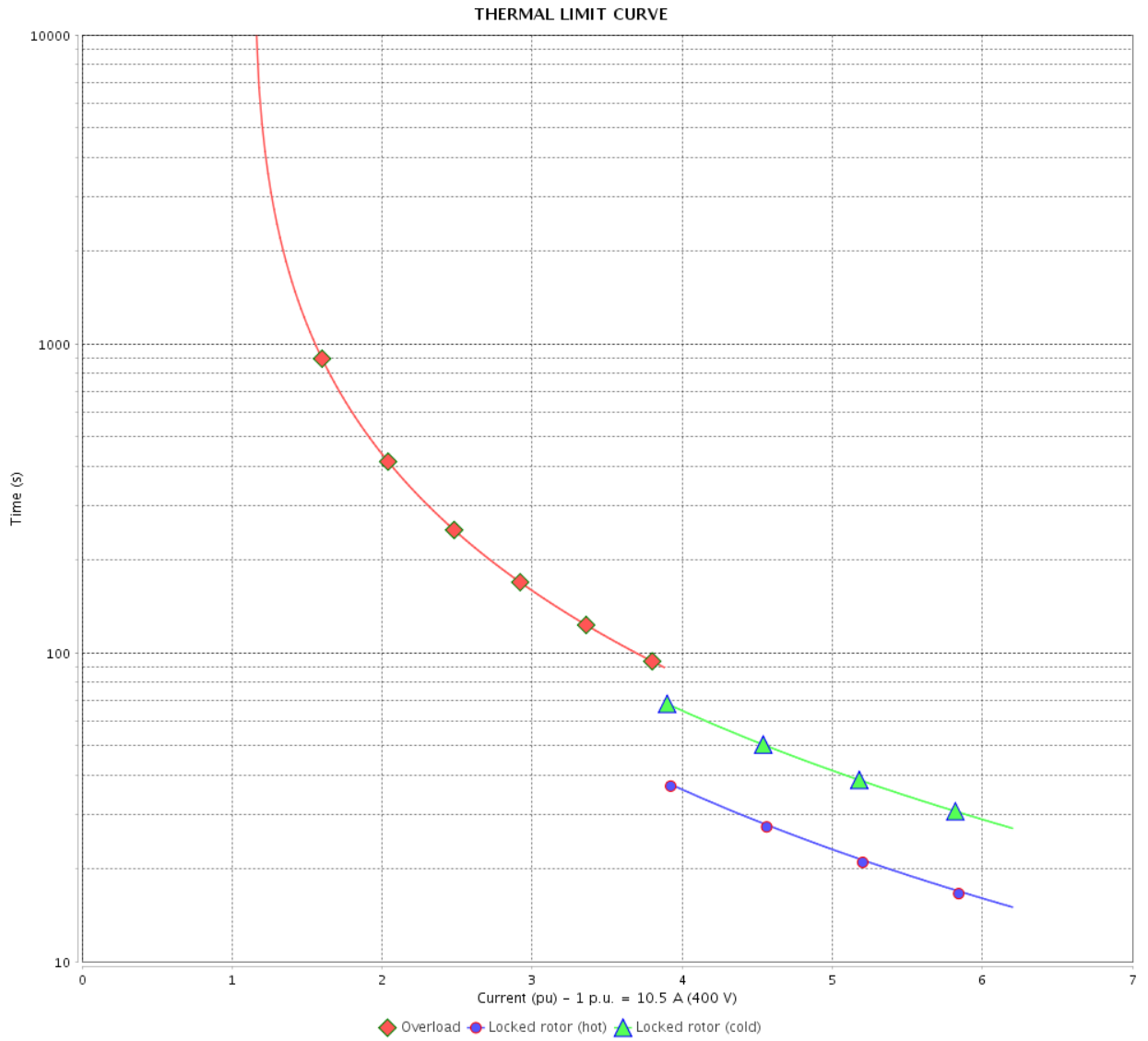
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Checked by			Page	Revision
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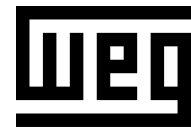


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THERMAL LIMIT CURVE



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Performance : 415 V 50 Hz 4P IE3

Rated current	: 10.3 A	Moment of inertia (J)	: 1.34 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 27.0 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.25
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

Heating constant

Cooling constant

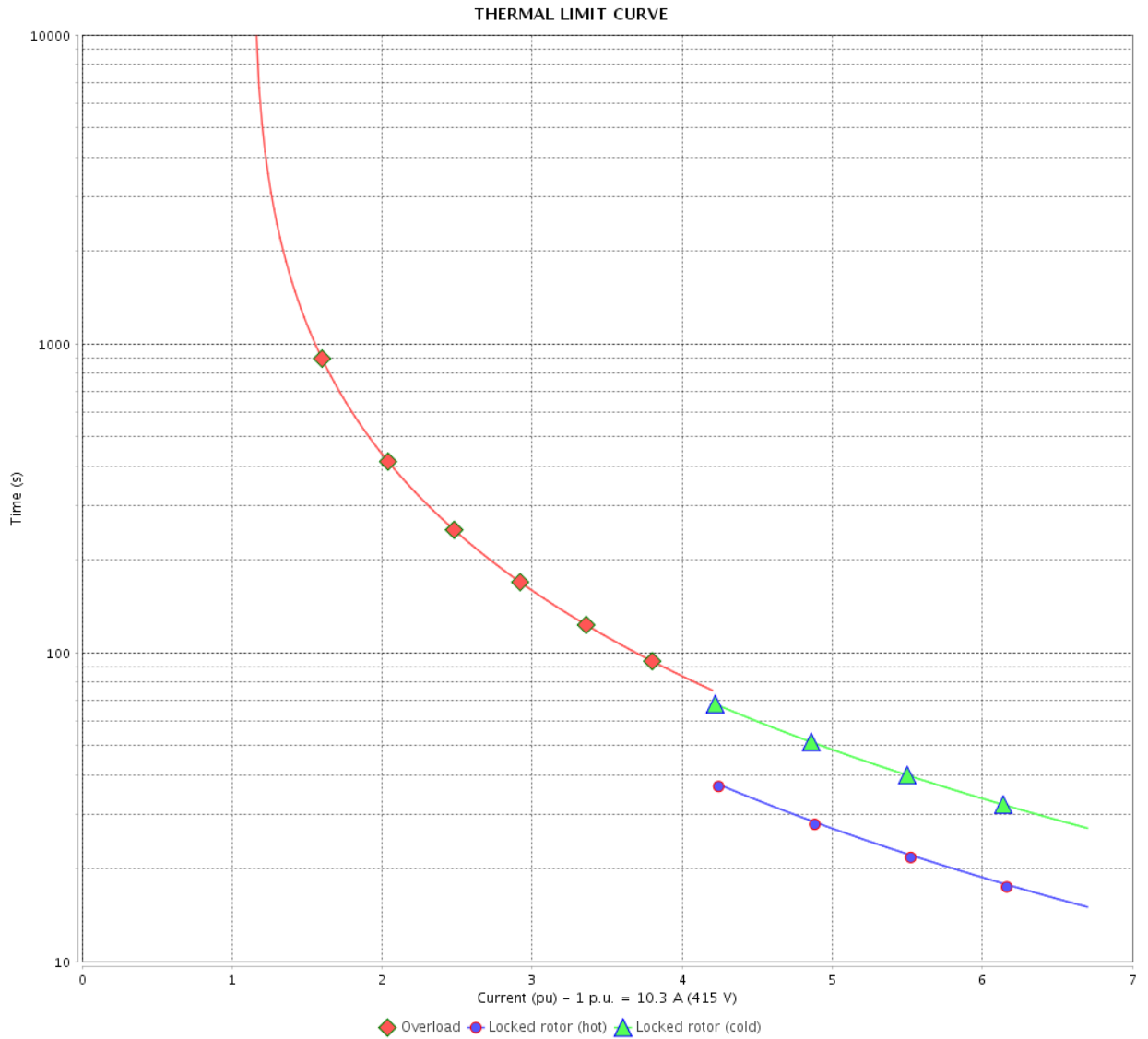
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Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



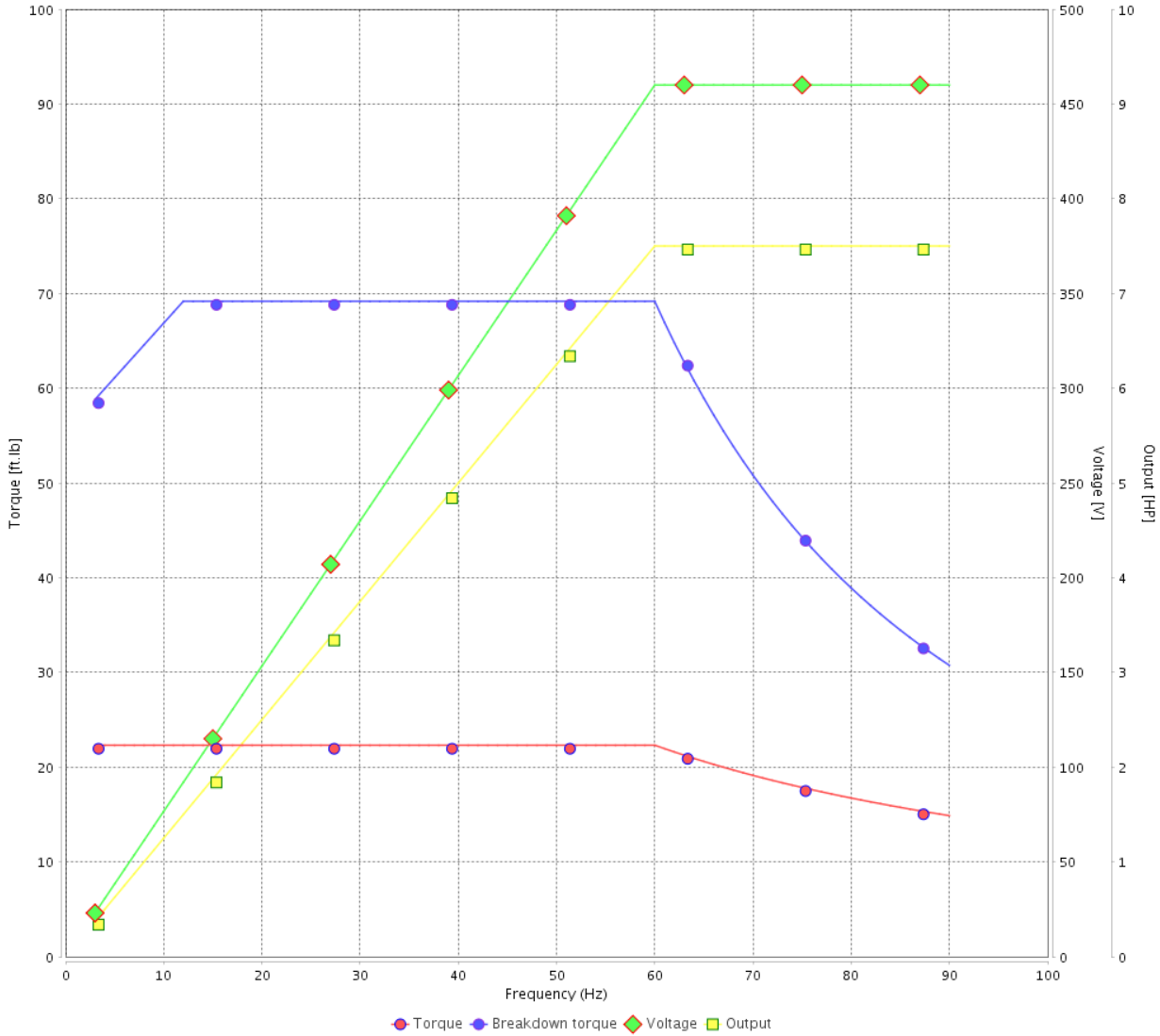
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VFD OPERATION CURVE



Performance : 460 V 60 Hz 4P

Rated current : 9.18 A
 LRC : 7.1
 Rated torque : 22.3 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 310 %
 Rated speed : 1765 rpm

Moment of inertia (J) : 1.34 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 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

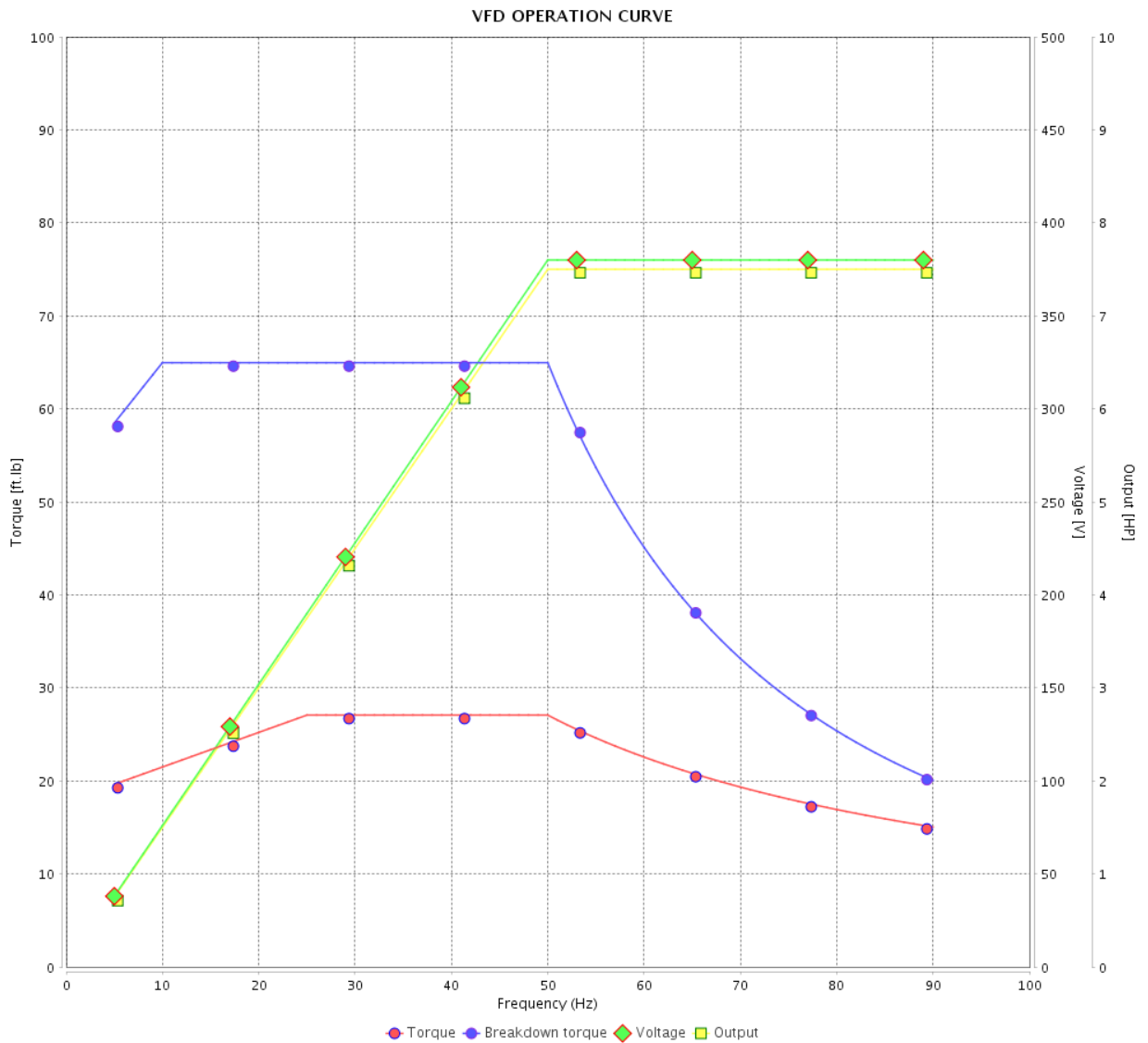


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Performance : 380 V 50 Hz 4P IE3

Rated current : 11.0 A
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 Rated speed : 1455 rpm

Moment of inertia (J) : 1.34 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
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 Design : B

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VFD OPERATION CURVE

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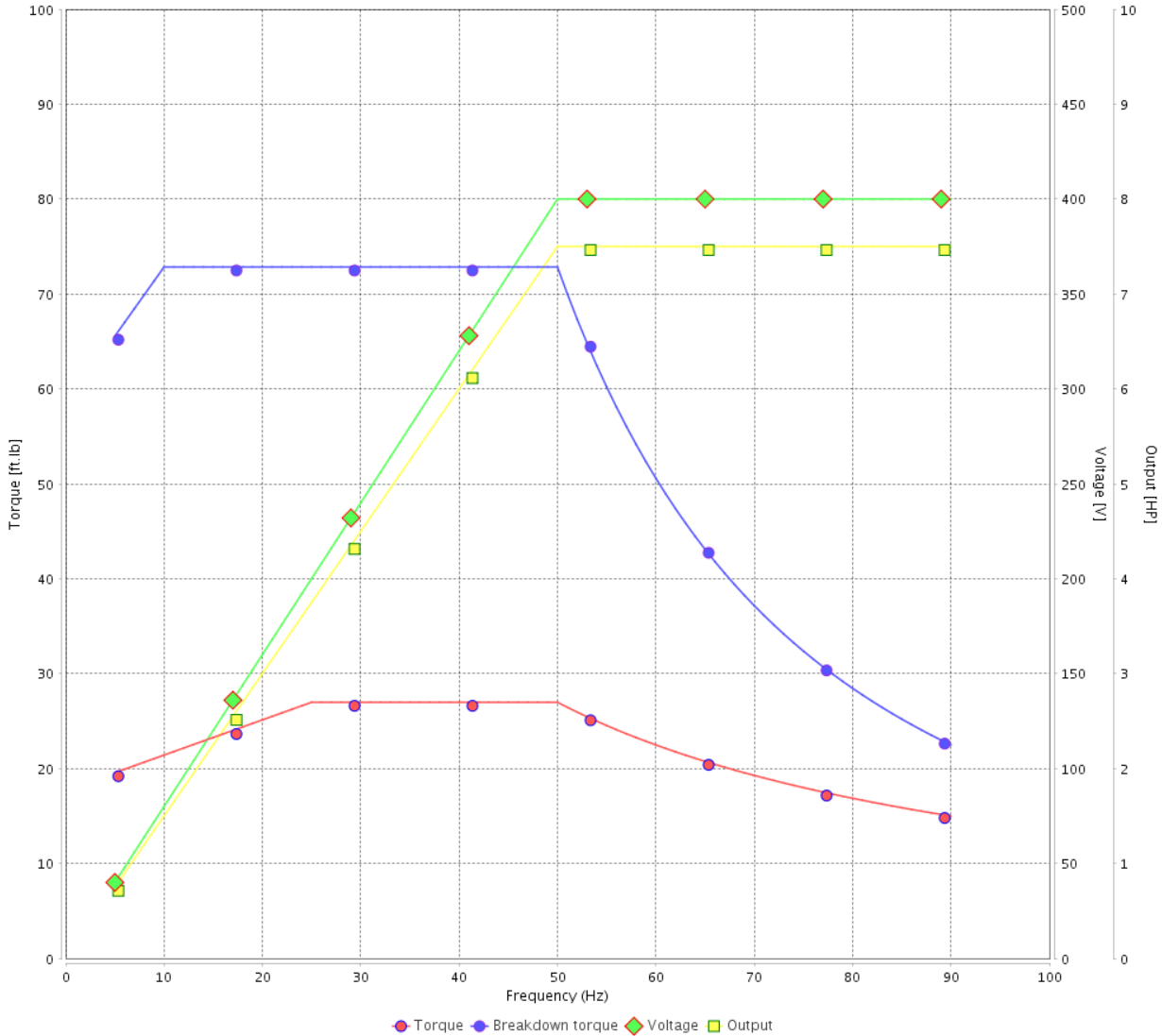
Customer :

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VFD OPERATION CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 10.5 A
 LRC : 6.2
 Rated torque : 27.0 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 270 %
 Rated speed : 1460 rpm

Moment of inertia (J) : 1.34 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 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

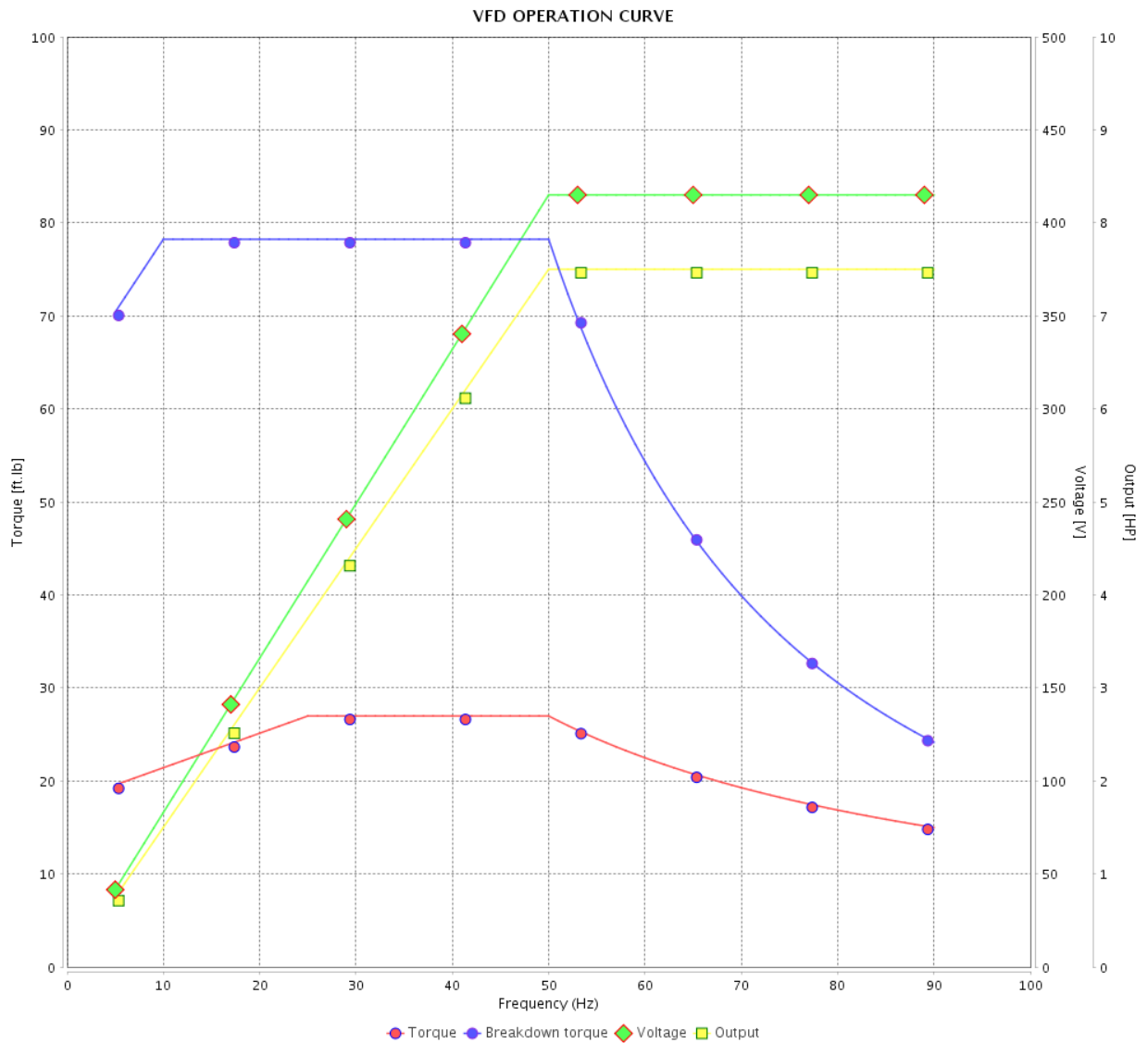


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Rated current : 10.3 A
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 Rated torque : 27.0 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 290 %
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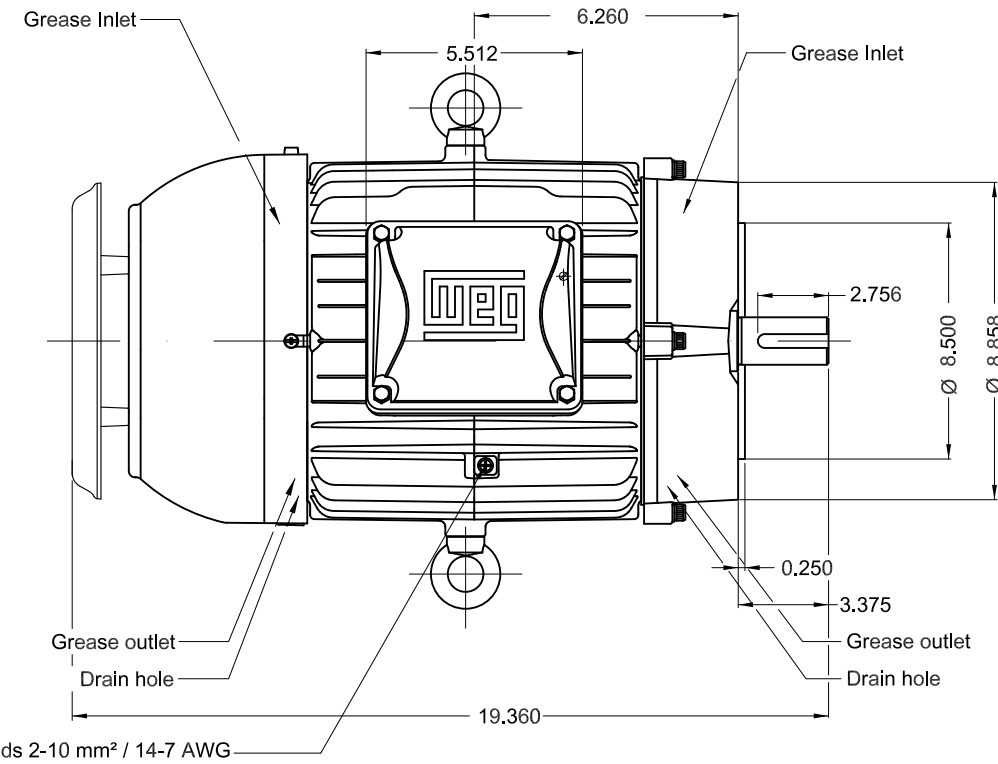
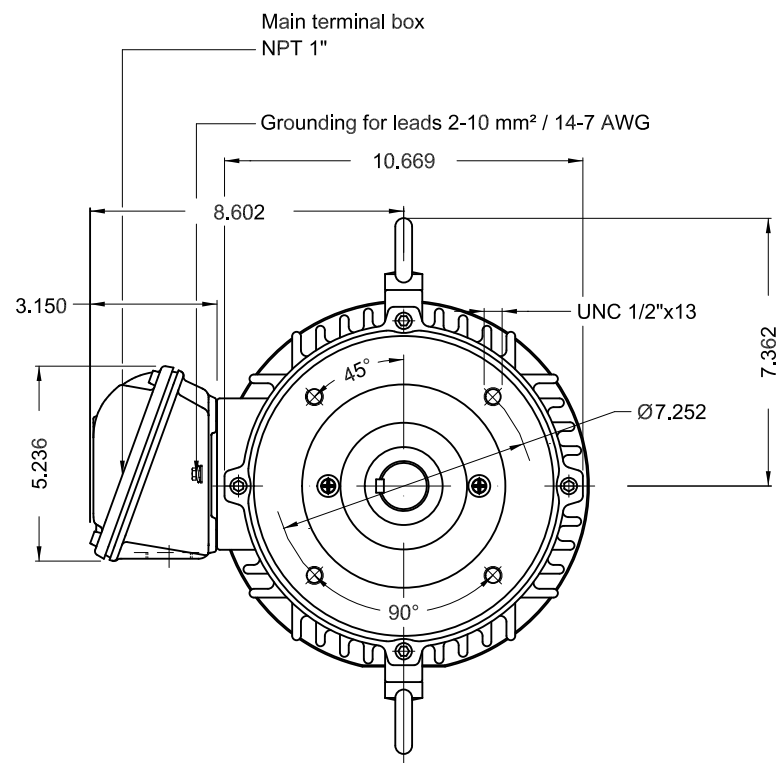
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 21 / 21	Revision
Checked by				
Date	13/04/2022			

1 2 3 4 5 6

A

B

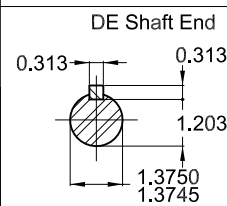
C



D

E

Color RAL 5009
 Painting plan 202E
 Mounting NEMA W-6
 Mounting V18



7.5 HP 04 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 213TC IP55 TEFC					
CHECKED							
RELEASED							
REL DT.							

WMO Jaragua do Sul

Product Engineering

PREVIEW

WDD

SHEET 1 / 1

MADE IN BRAZIL
12822417



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 00718ST3QIER213TC-W2

Inverter Duty Motor
Severe Duty

IEEE
841-2009



FOR SAFE AREA
Mod. TE1BFOXON
CC029A

PH3 60Hz Fr. 213TC 1000m.a.s.l. IP55 TEFC 172lb

V 460

A 9.18

HP 7.5

kW 5.5

SF 1.25

SFA 11.5

RPM 1765

PF 0.82

AMB 40°C

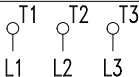
INS cl. F DT80K

NEMA NOM EFF 91.7%

DUTY CONT.

DES B Code H

GUARANT. EFF 90.2%



460V



→ 6308-C3 (11g) 40BC03X30

→ 6207-C3 (7g) 35BC02X30

MOBIL POLYREX EM (19000h)

