

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :	14325513	
			Catalog # :	01009ST3QIE284TC-W22	
Frame		: 284/6TC	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 : 373 lb		
Protection degree		: IP55	Moment of inertia (J) : 7.20 sq.ft.lb		
Design		: B			
Output [HP]	10	10	10	10	
Poles	8	8	8	8	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	13.4	16.1	15.3	15.1	
L. R. Amperes [A]	75.0	70.8	75.0	78.5	
LRC [A]	5.6x(Code G)	4.4x(Code E)	4.9x(Code F)	5.2x(Code G)	
No load current [A]	6.50	6.40	6.90	7.35	
Rated speed [RPM]	880	725	725	730	
Slip [%]	2.22	3.33	3.33	2.67	
Rated torque [ft.lb]	59.7	72.4	72.4	71.9	
Locked rotor torque [%]	200	150	170	190	
Breakdown torque [%]	240	190	210	229	
Service factor	1.25	1.00	1.15	1.15	
Temperature rise	80 K	105 K	105 K	105 K	
Locked rotor time	57s (cold) 32s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	
Noise level ²	54.0 dB(A)	52.0 dB(A)	52.0 dB(A)	52.0 dB(A)	
Efficiency (%)	25%	89.3	89.3	88.3	89.1
	50%	89.5	89.5	88.5	88.5
	75%	90.2	88.5	88.5	89.5
	100%	90.2	87.5	88.5	88.5
Power Factor	25%	0.36	0.42	0.39	0.36
	50%	0.61	0.68	0.64	0.61
	75%	0.72	0.77	0.74	0.72
	100%	0.78	0.81	0.80	0.78
Bearing type		Drive end : 6311 C3	Non drive end : 6211 C3	Foundation loads	
Sealing		: Inpro/Seal	: Inpro/Seal	Max. traction : 535 lb	
Lubrication interval		: 20000 h	: 20000 h	Max. compression : 908 lb	
Lubricant amount		: 18 g	: 11 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



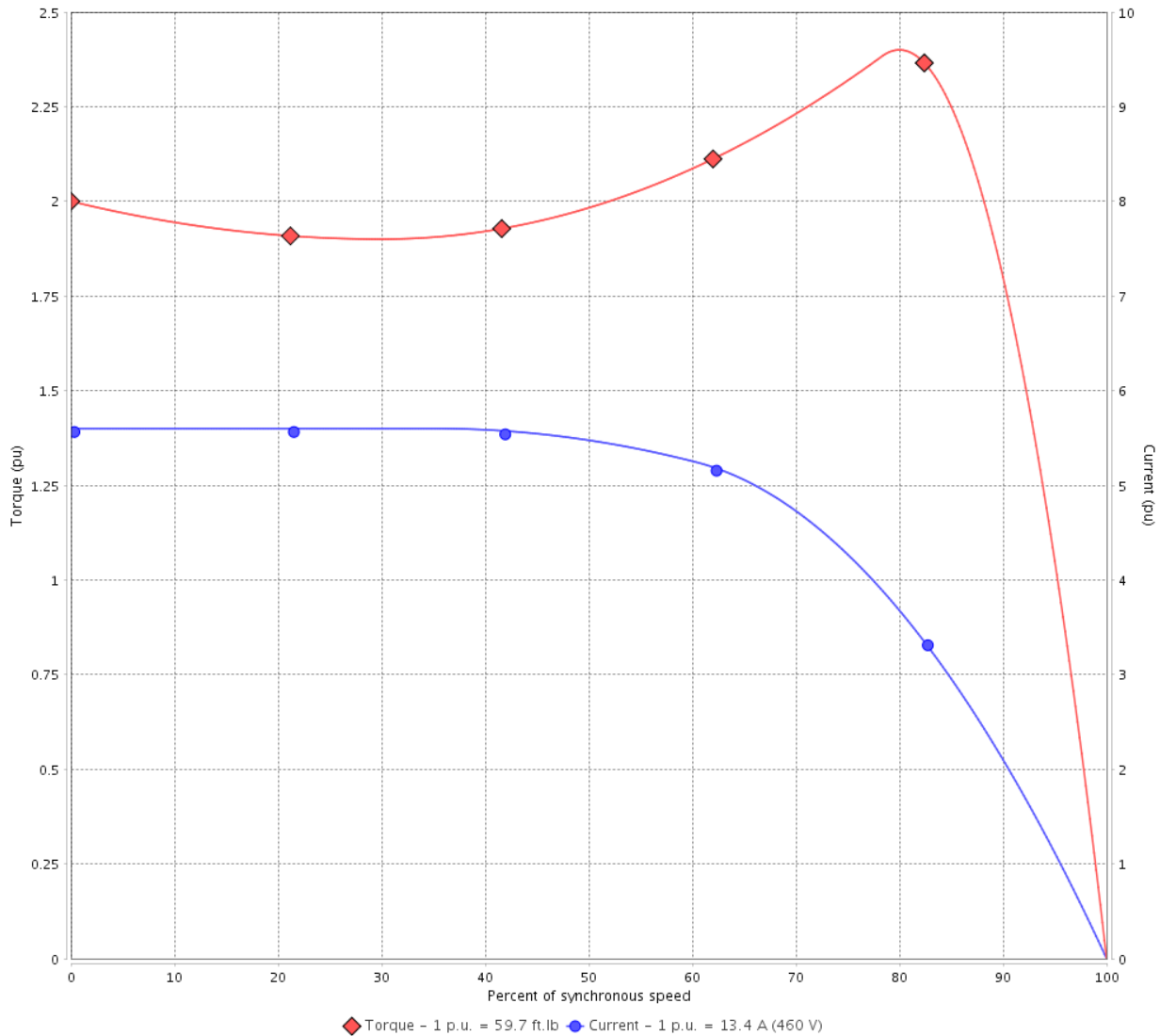
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14325513

Catalog # : 01009ST3QIE284TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 8P

Rated current	: 13.4 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 59.7 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 880 rpm	Design	: B

Locked rotor time : 57s (cold) 32s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



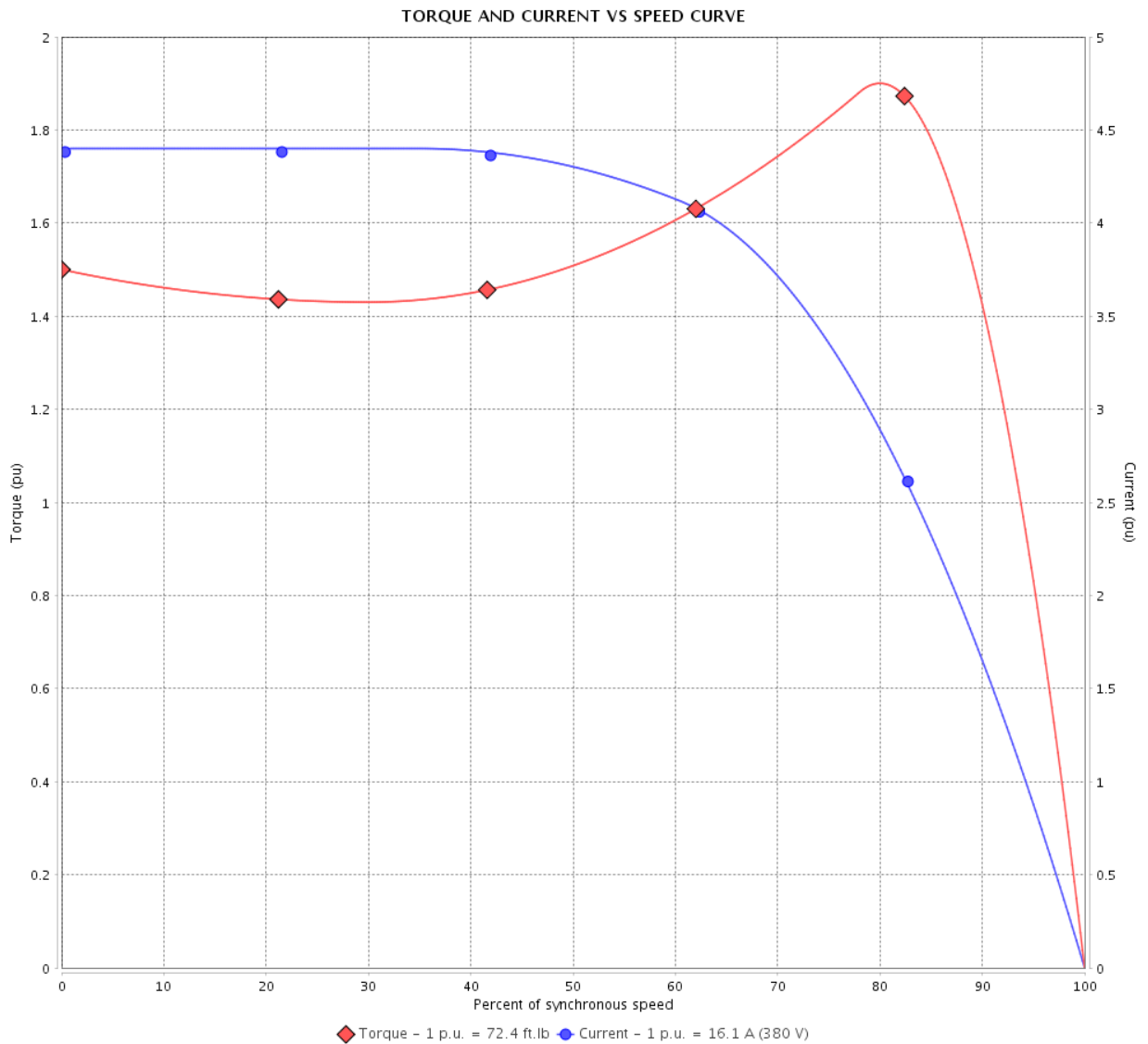
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14325513

Catalog # : 01009ST3QIE284TC-W22



Performance : 380 V 50 Hz 8P IE3

Rated current	: 16.1 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 4.4	Duty cycle	: Cont.(S1)
Rated torque	: 72.4 ft.lb	Insulation class	: F
Locked rotor torque	: 150 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 725 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

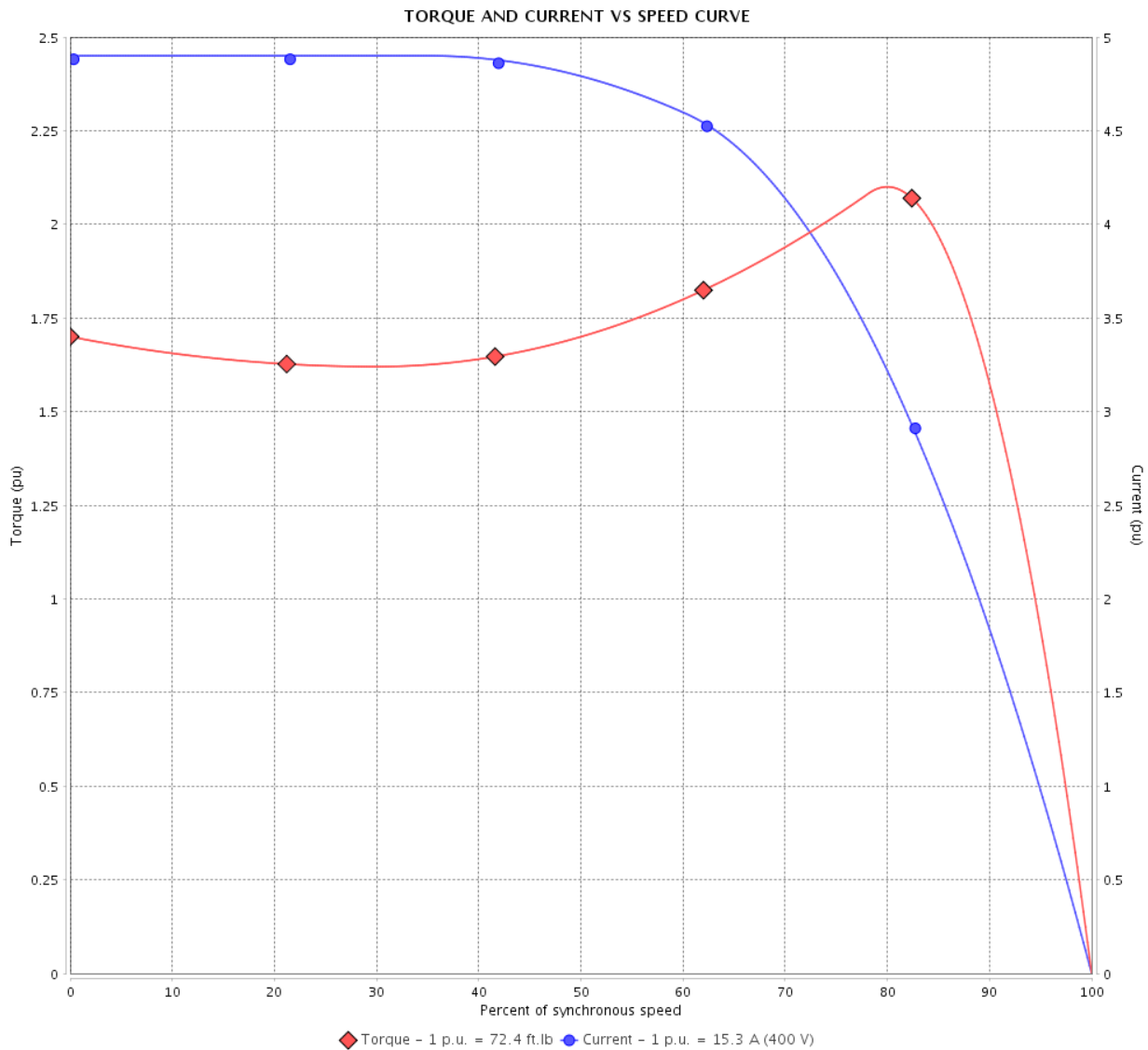


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14325513

Catalog # : 01009ST3QIE284TC-W22



Performance : 400 V 50 Hz 8P IE3

Rated current	: 15.3 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 4.9	Duty cycle	: Cont.(S1)
Rated torque	: 72.4 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.15
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 725 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



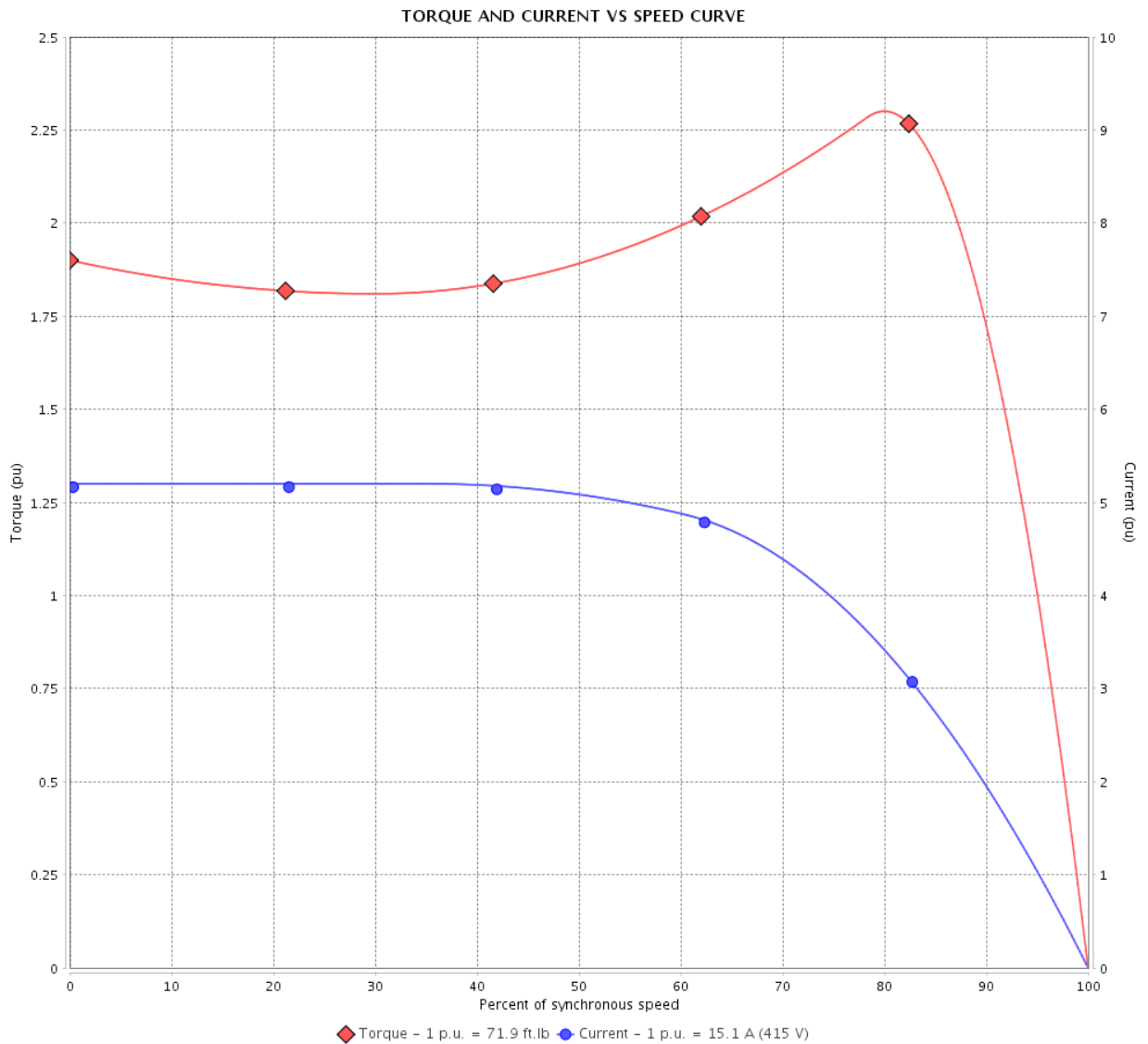
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Catalog # : 01009ST3QIE284TC-W22



Performance : 415 V 50 Hz 8P IE3

Rated current	: 15.1 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 71.9 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 730 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

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Three Phase Induction Motor - Squirrel Cage



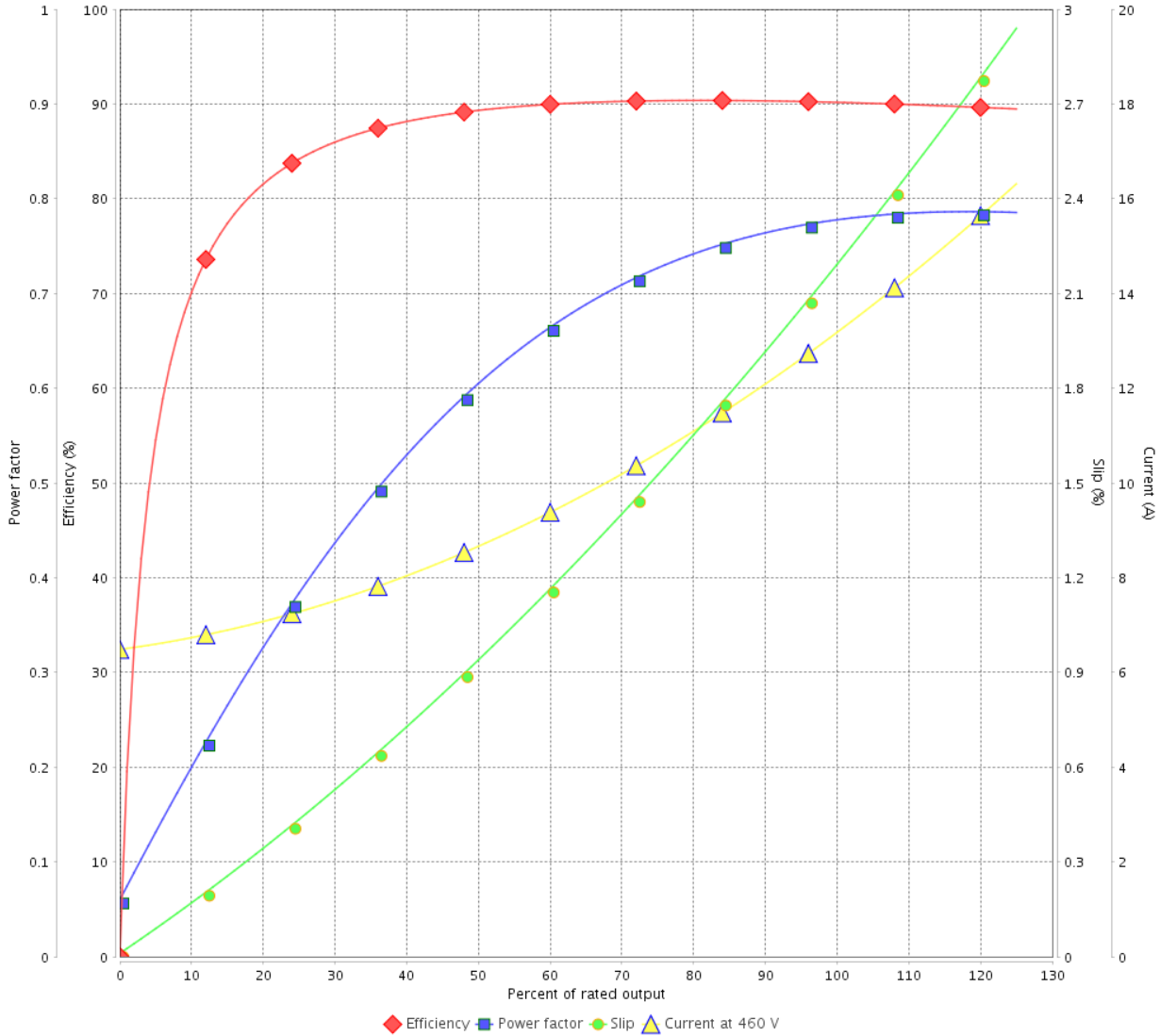
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LOAD PERFORMANCE CURVE



Performance : 460 V 60 Hz 8P

Rated current : 13.4 A
 LRC : 5.6
 Rated torque : 59.7 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 880 rpm

Moment of inertia (J) : 7.20 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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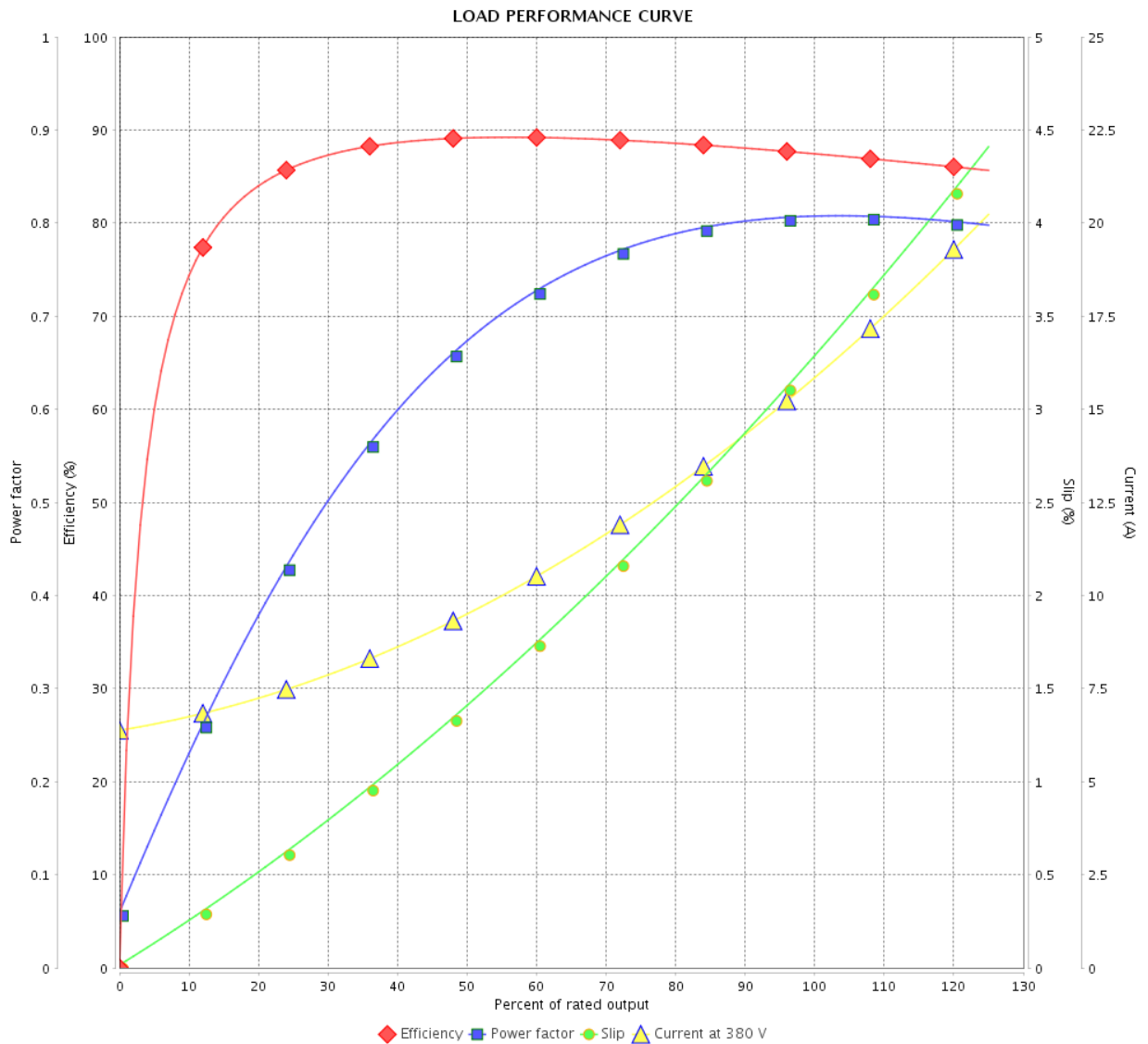


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Performance : 380 V 50 Hz 8P IE3

Rated current : 16.1 A
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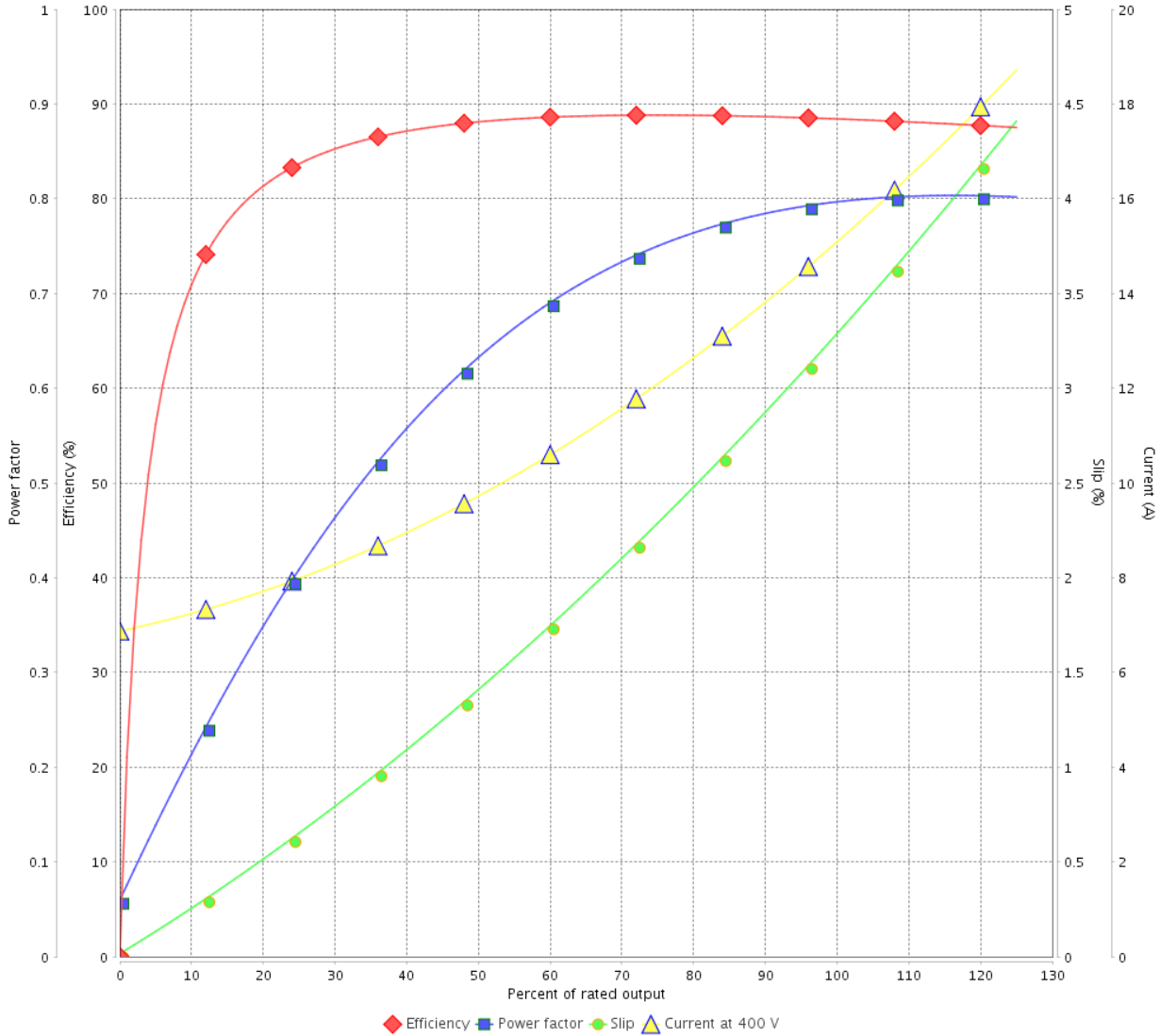
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Performance : 400 V 50 Hz 8P IE3

Rated current : 15.3 A
 LRC : 4.9
 Rated torque : 72.4 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 210 %
 Rated speed : 725 rpm

Moment of inertia (J) : 7.20 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 105 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

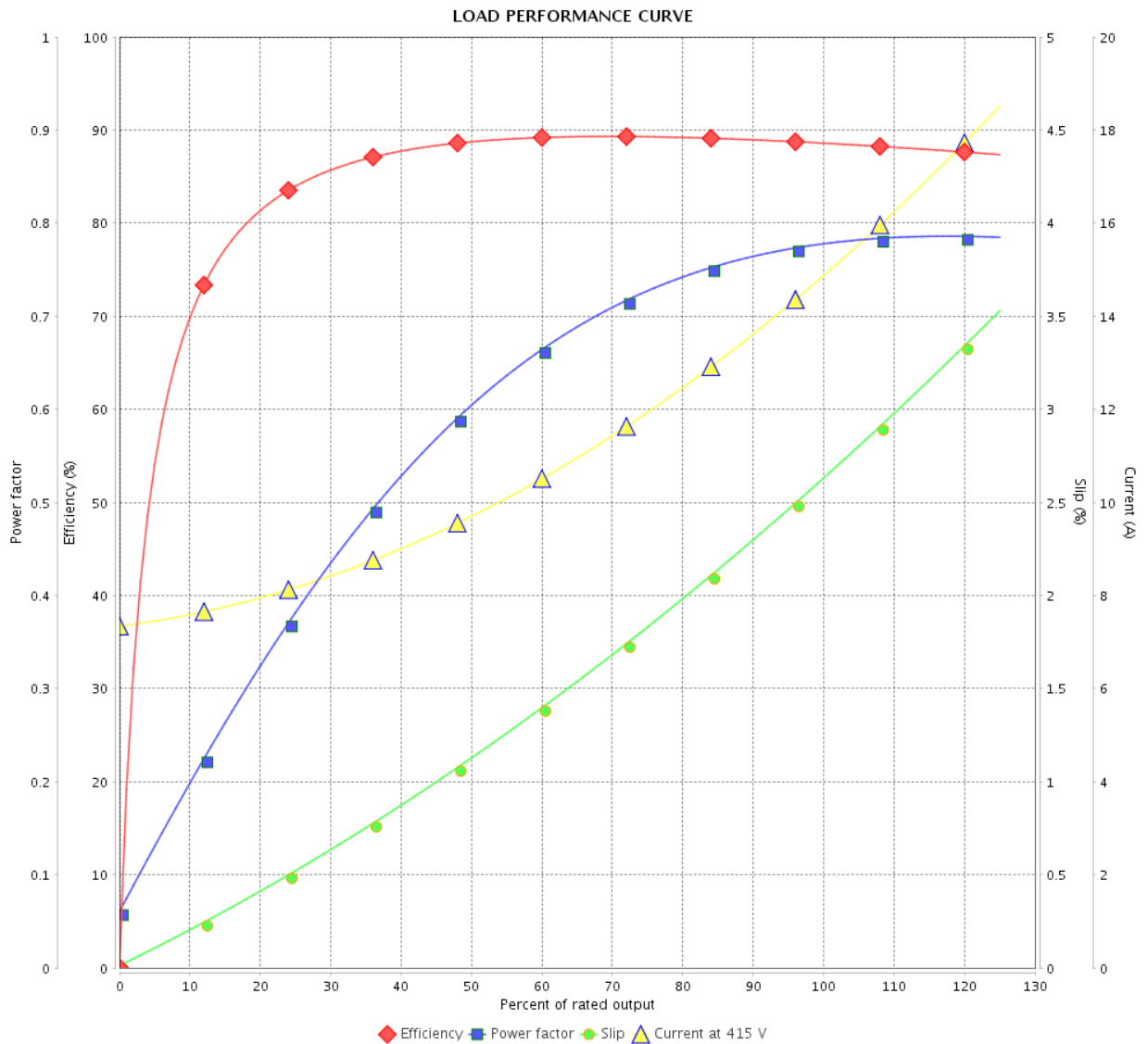


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 Breakdown torque : 229 %
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Moment of inertia (J) : 7.20 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 105 K
 Design : B

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THERMAL LIMIT CURVE



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Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 880 rpm	Design	: B

Heating constant

Cooling constant

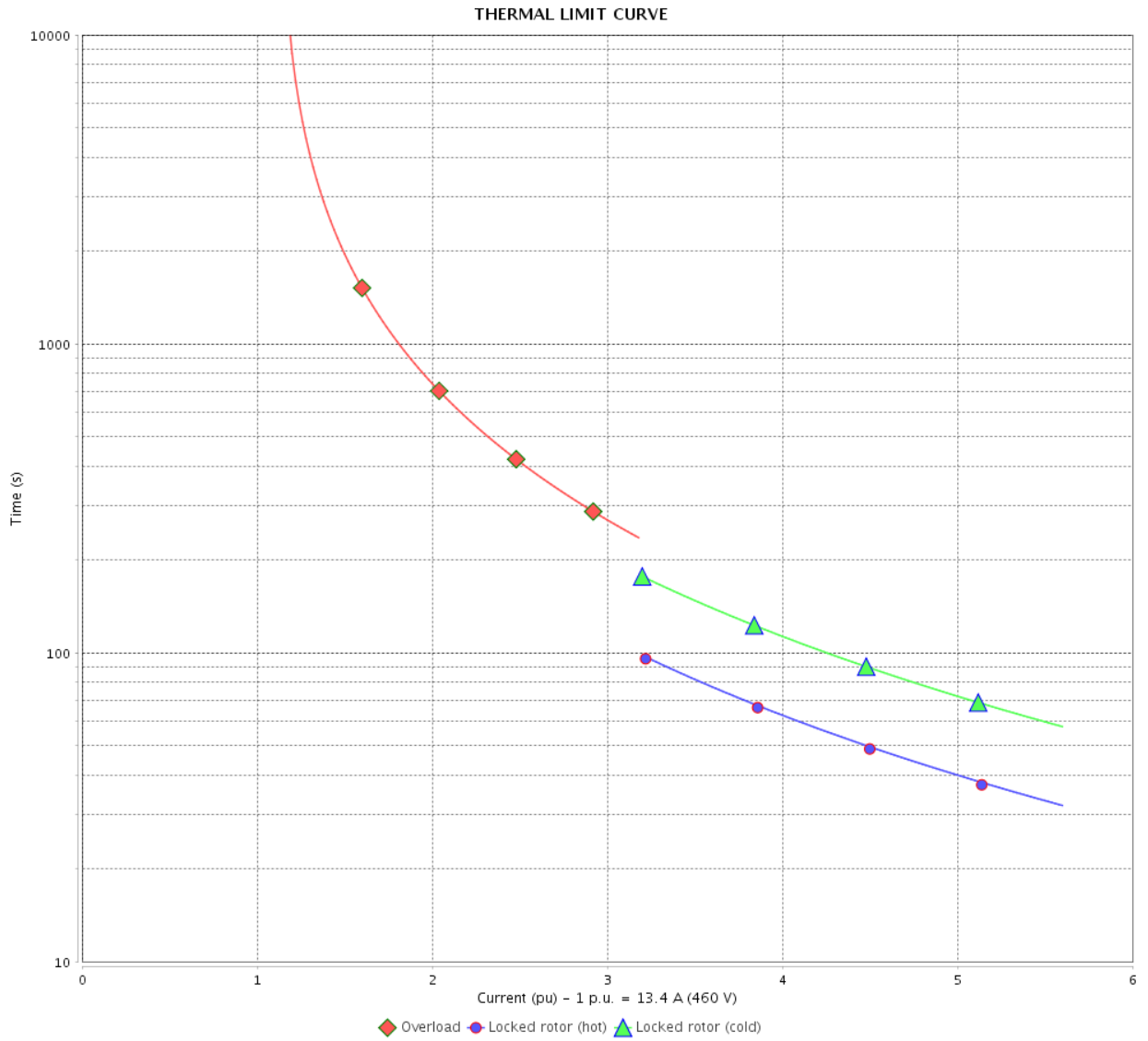
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LRC	: 4.4	Duty cycle	: Cont.(S1)
Rated torque	: 72.4 ft.lb	Insulation class	: F
Locked rotor torque	: 150 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 725 rpm	Design	: B

Heating constant

Cooling constant

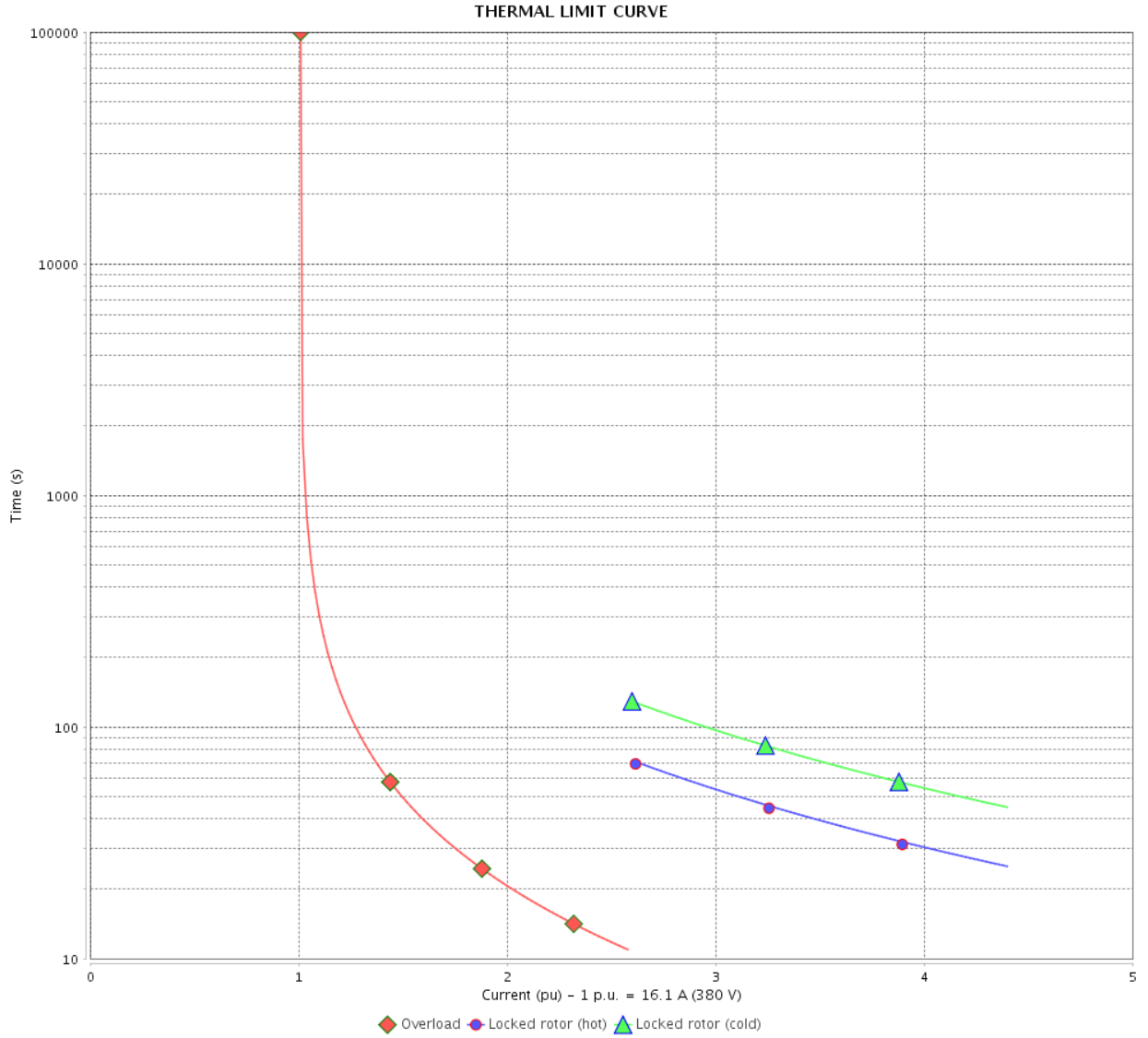
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Performance : 400 V 50 Hz 8P IE3

Rated current	: 15.3 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 4.9	Duty cycle	: Cont.(S1)
Rated torque	: 72.4 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.15
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 725 rpm	Design	: B

Heating constant

Cooling constant

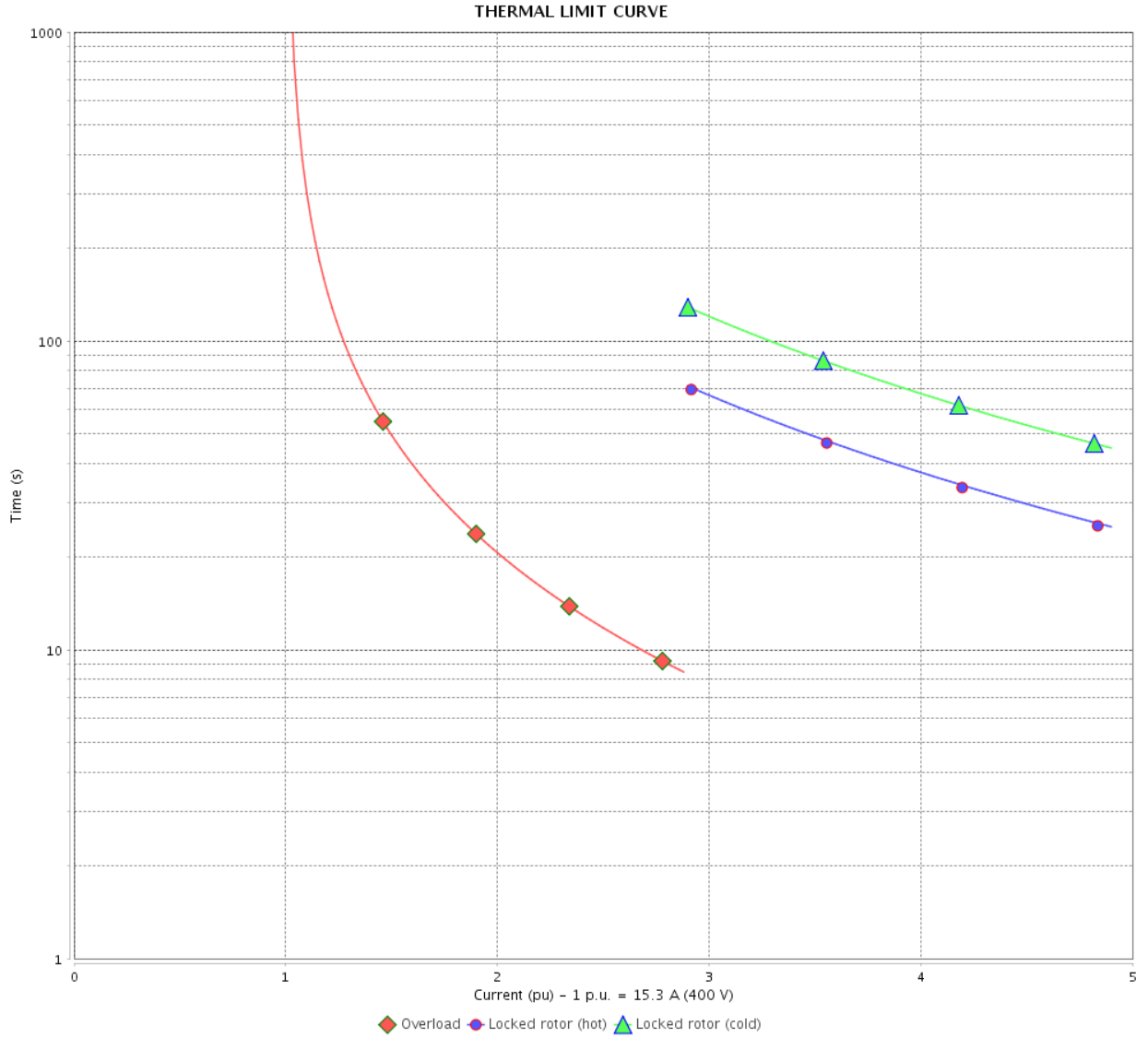
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Performance : 415 V 50 Hz 8P IE3

Rated current	: 15.1 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 71.9 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 730 rpm	Design	: B

Heating constant

Cooling constant

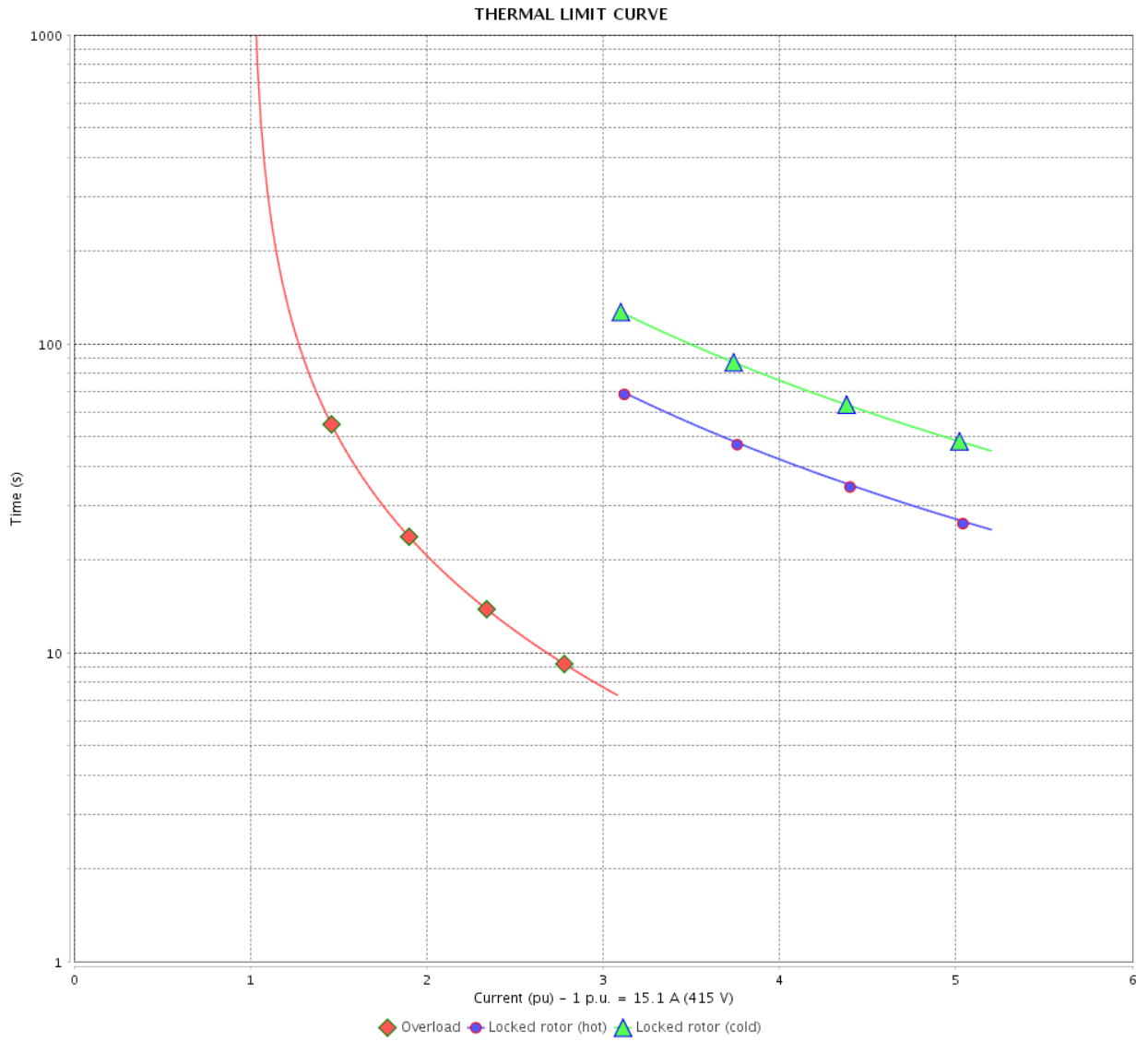
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Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



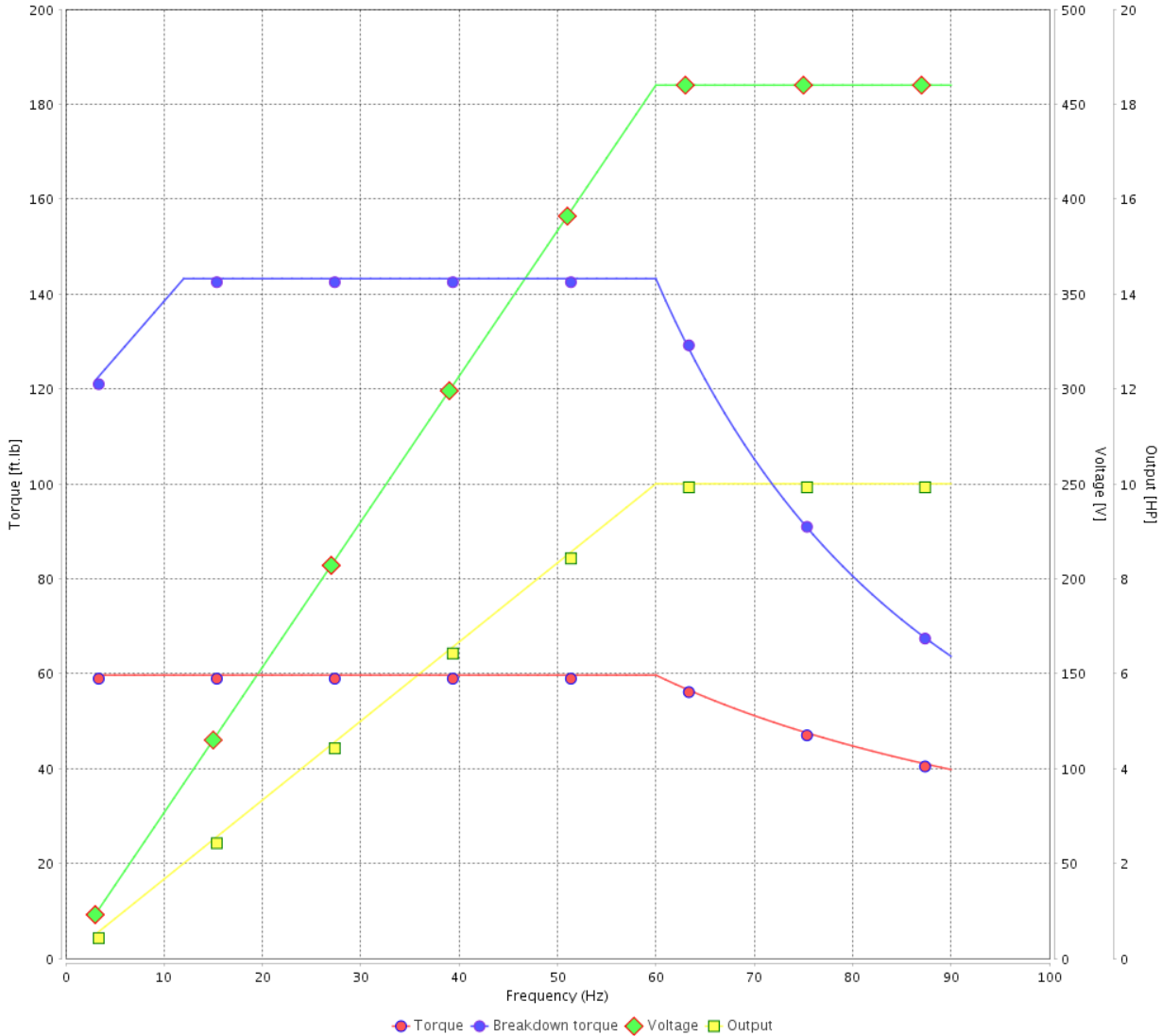
Customer : _____

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Catalog # : 01009ST3QIE284TC-W22

VFD OPERATION CURVE



Performance : 460 V 60 Hz 8P

Rated current : 13.4 A
 LRC : 5.6
 Rated torque : 59.7 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 880 rpm

Moment of inertia (J) : 7.20 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
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Rev.	Changes Summary	Performed	Checked	Date
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Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

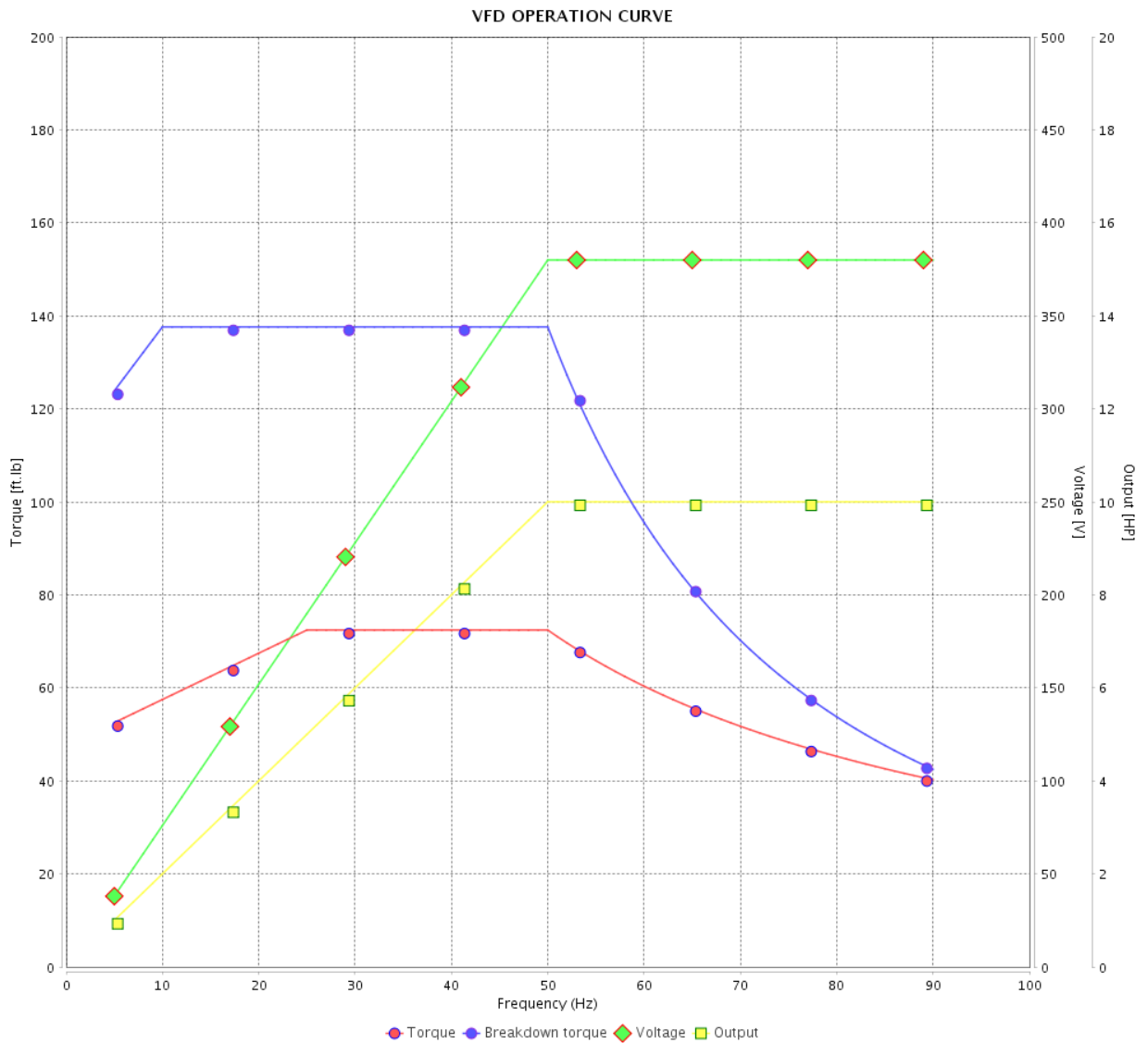


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Product code : 14325513

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Performance : 380 V 50 Hz 8P IE3

Rated current : 16.1 A
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 Rated torque : 72.4 ft.lb
 Locked rotor torque : 150 %
 Breakdown torque : 190 %
 Rated speed : 725 rpm

Moment of inertia (J) : 7.20 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

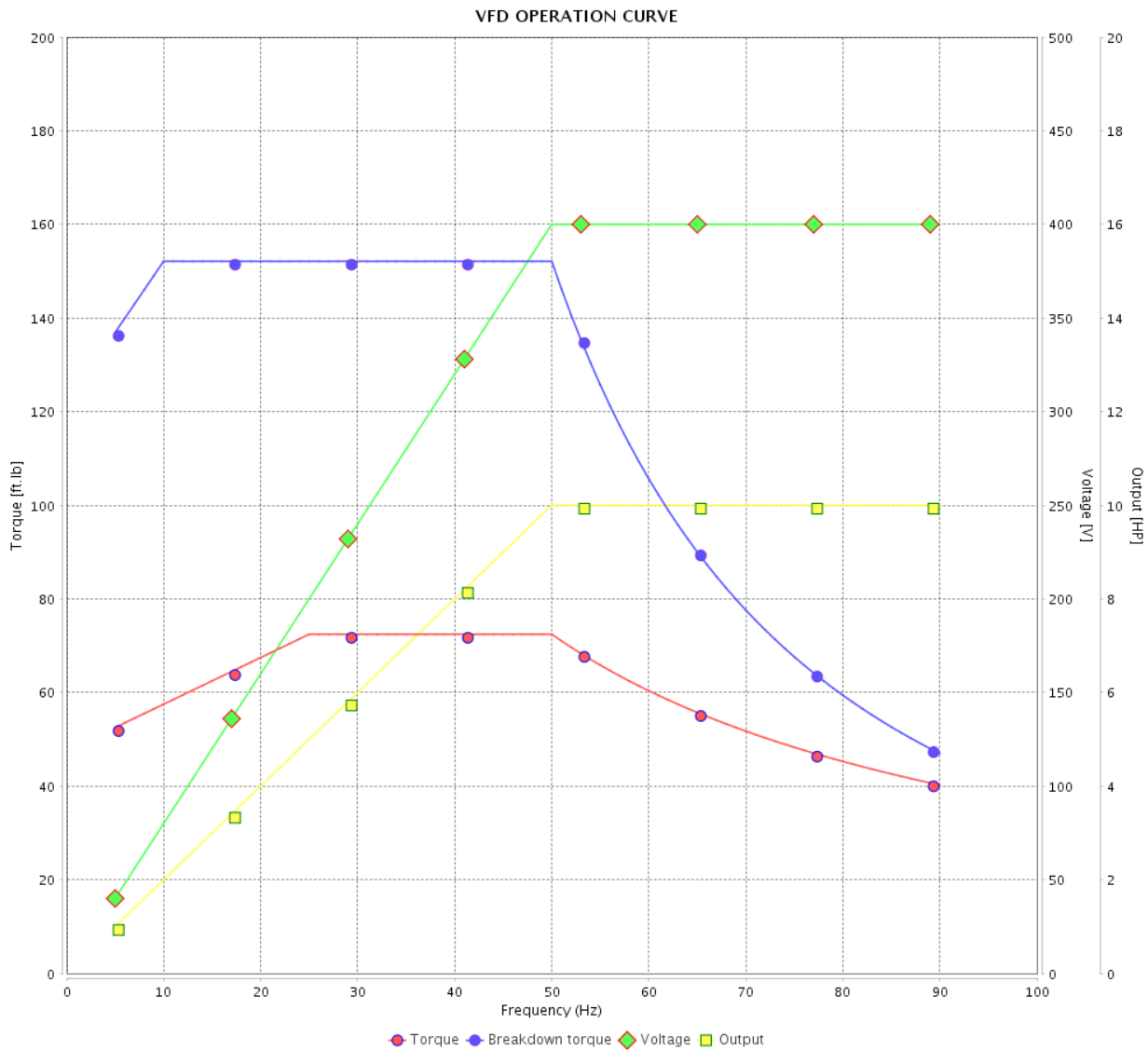


Customer :

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Product code : 14325513

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Performance : 400 V 50 Hz 8P IE3

Rated current	: 15.3 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 4.9	Duty cycle	: Cont.(S1)
Rated torque	: 72.4 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.15
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 725 rpm	Design	: B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

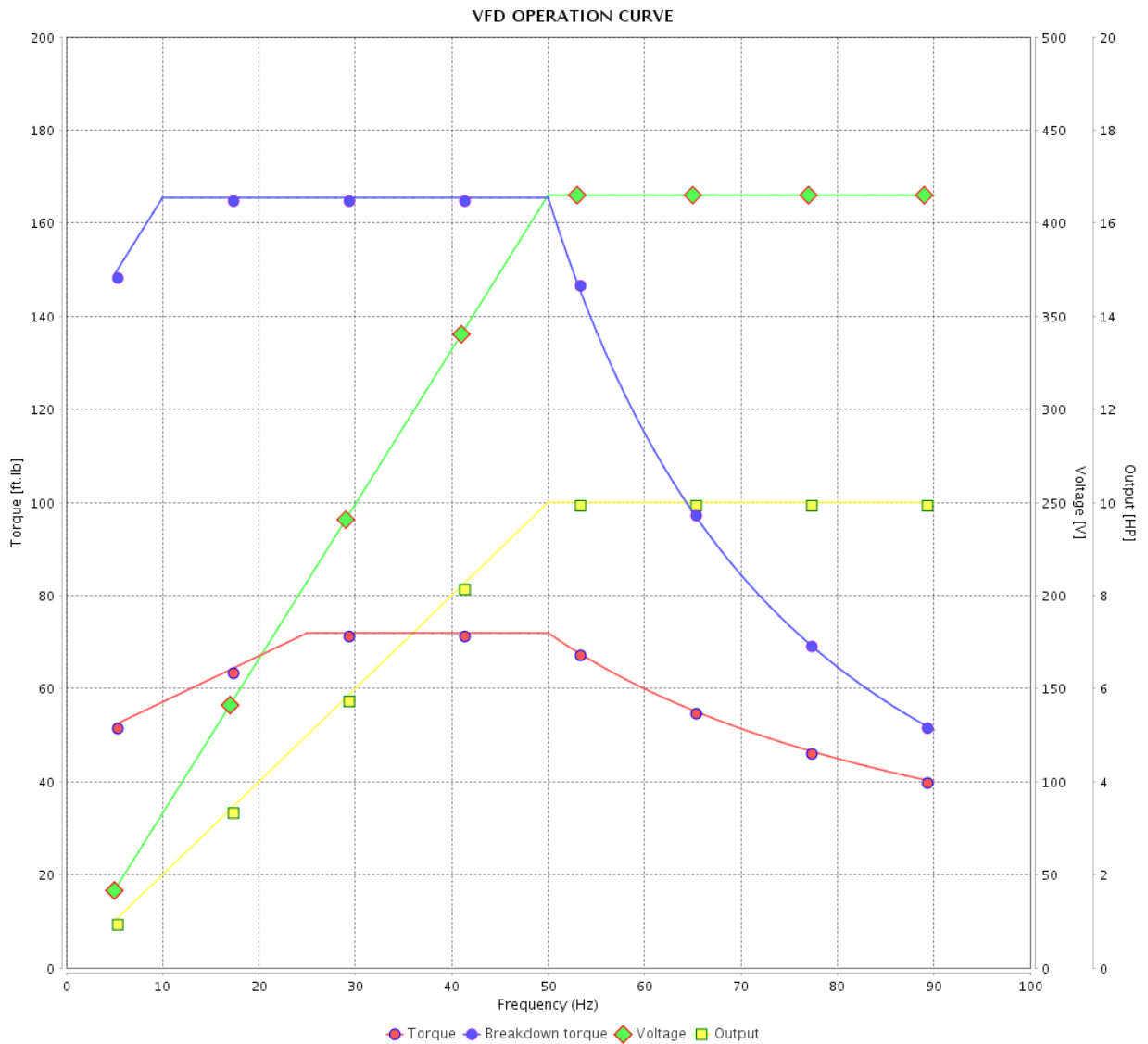


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Rated current : 15.1 A
 LRC : 5.2
 Rated torque : 71.9 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 229 %
 Rated speed : 730 rpm

Moment of inertia (J) : 7.20 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 105 K
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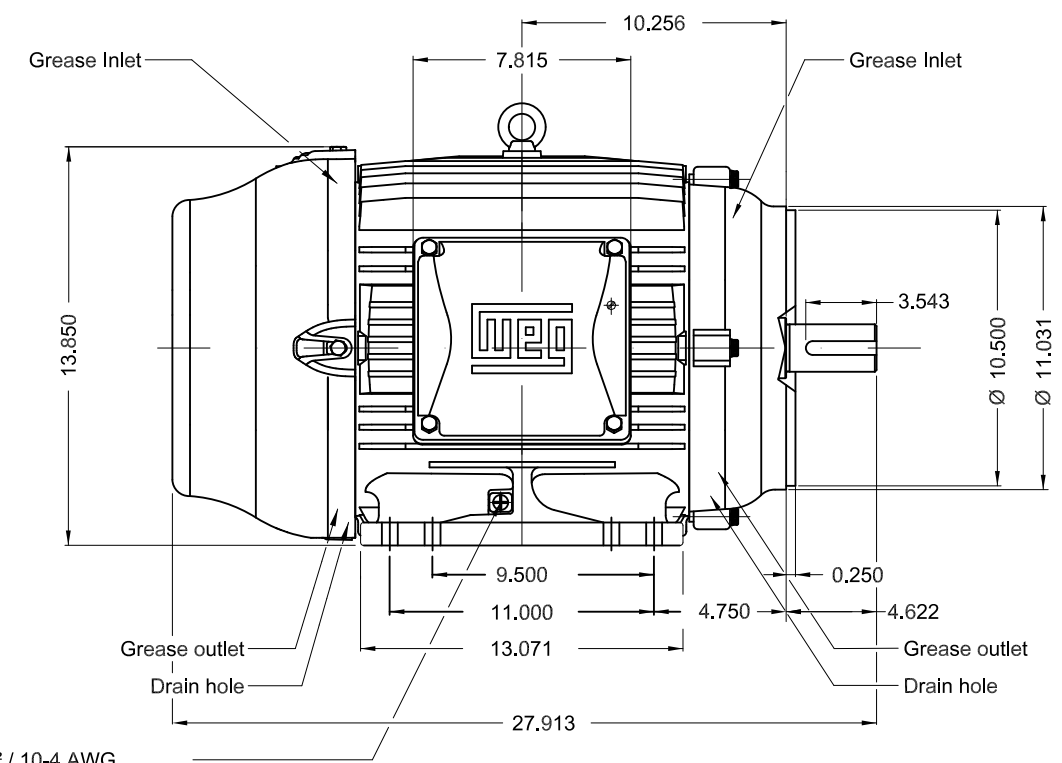
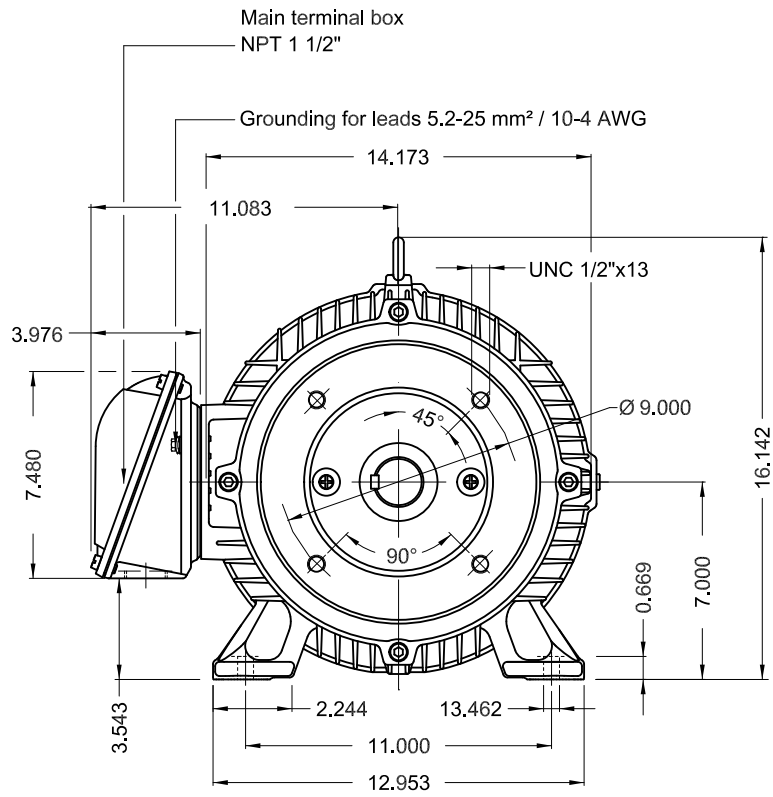
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1 2 3 4 5 6

A

B

C

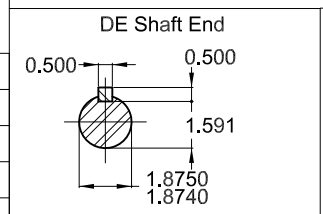


Grounding for leads 5.2-25 mm² / 10-4 AWG

D

E

Without vertical jackscrews
Color RAL 5009
Painting plan 202E
Mounting NEMA F-1
Mounting B34R(D)



10 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.					
CHECKED		FRAME 284/6TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD

