

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer	:		
Product line	: Premium Efficiency Three-Phase	Product code :	12809606
		Catalog # :	001120T3E56C-S
Frame	: 56HC	Cooling method	: IC01 - ODP
Insulation class	: F	Mounting	: F-1
Duty cycle	: Cont.(S1)	Rotation <sup>1</sup>	: Both (CW and CCW)
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line
Altitude	: 1000 m.a.s.l.	Approx. weight <sup>2</sup>	: 40.3 lb
Design	: A	Moment of inertia (J)	: 0.1951 sq.ft.lb
Output [HP]	1	1	1
Poles	6	6	6
Frequency [Hz]	60	50	50
Rated voltage [V]	230/460	190/380	220/415
Rated current [A]	3.36/1.68	3.82/1.91	3.55/1.88
L. R. Amperes [A]	20.8/10.4	18.3/9.17	18.8/9.96
LRC [A]	6.2x(Code K)	4.8x(Code G)	5.3x(Code H)
No load current [A]	2.40/1.20	2.34/1.17	2.36/1.25
Rated speed [RPM]	1160	940	945
Slip [%]	3.33	6.00	5.50
Rated torque [ft.lb]	4.53	5.59	5.56
Locked rotor torque [%]	240	190	210
Breakdown torque [%]	300	229	260
Service factor		1.15	1.15
Temperature rise	80 K	80 K	80 K
Locked rotor time	46s (cold) 26s (hot)	46s (cold) 26s (hot)	41s (cold) 23s (hot)
Noise level <sup>2</sup>	50.0 dB(A)	48.0 dB(A)	48.0 dB(A)
Efficiency (%)	25%	75.7	77.0
	50%	77.0	77.1
	75%	81.5	79.5
	100%	82.5	79.0
Power Factor	25%	0.25	0.28
	50%	0.45	0.50
	75%	0.58	0.63
	100%	0.68	0.73
Bearing type	: Drive end 6204 ZZ Non drive end 6202 ZZ	Foundation loads	
Sealing	: Without Without Bearing Seal Bearing Seal	Max. traction	: 122 lb
		Max. compression	: 162 lb
Lubrication interval	: - -		
Lubricant amount	: - -		
Lubricant type	: Mobil Polyrex EM		
Notes			
USABLE @208V 3.71A SF 1.00 SFA 3.71A			
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

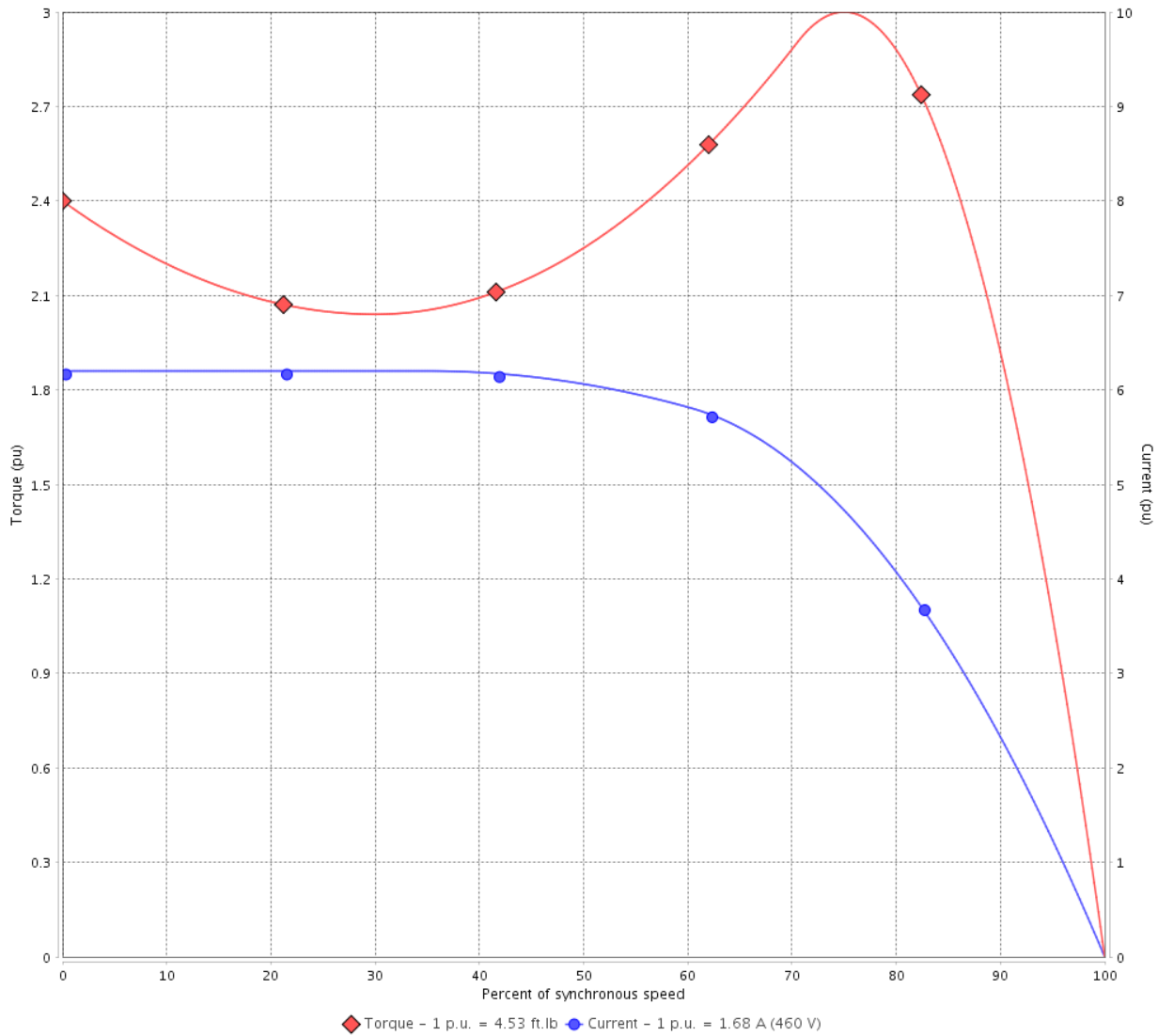
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Premium Efficiency Three-Phase      Product code : 12809606  
 Catalog # : 001120T3E56C-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current	: 3.36/1.68 A	Moment of inertia (J)	: 0.1951 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 4.53 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	:
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1160 rpm	Design	: A

Locked rotor time : 46s (cold) 26s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer : \_\_\_\_\_

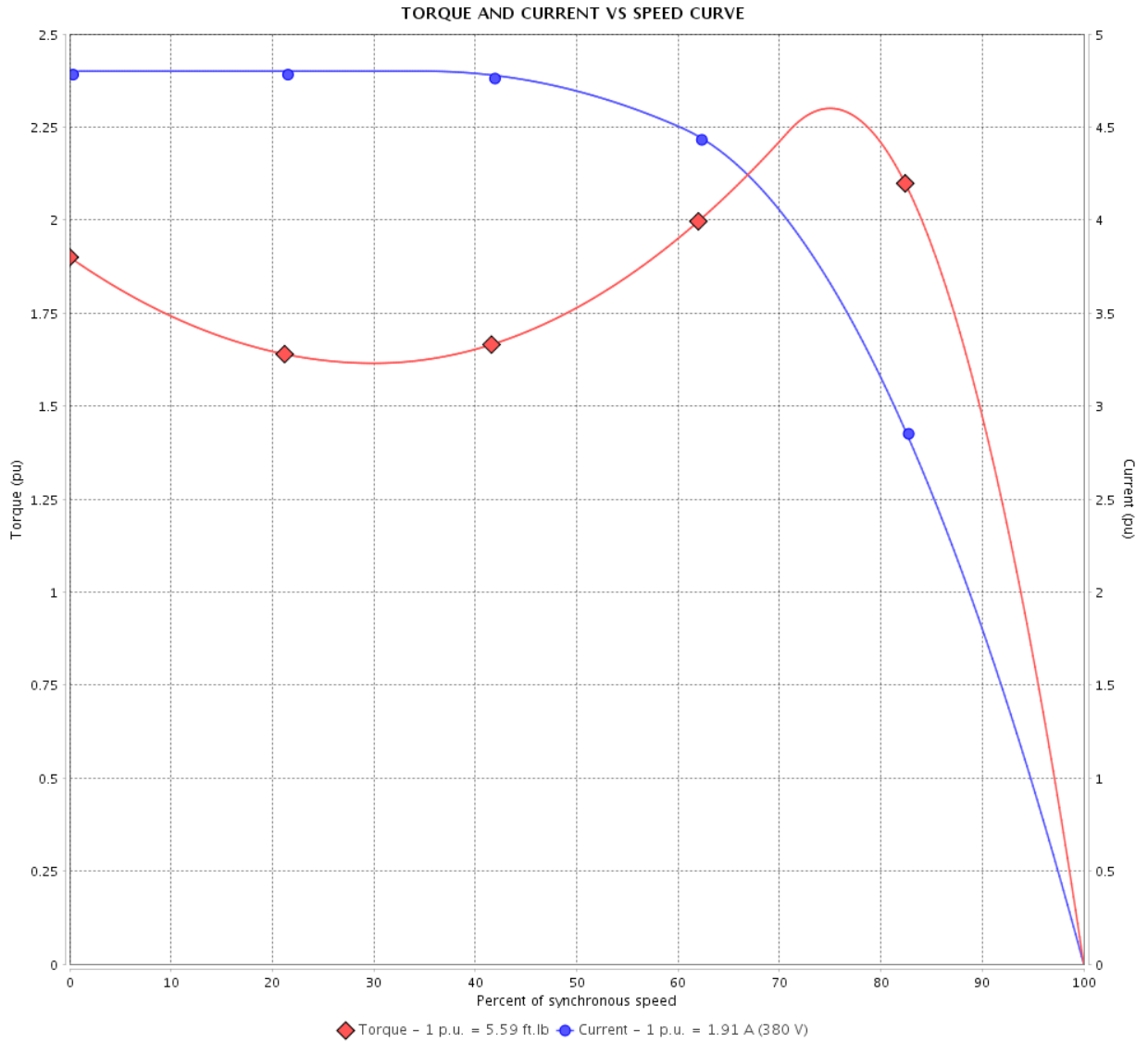
Product line : Premium Efficiency Three-Phase

Product code :

12809606

Catalog # :

00112OT3E56C-S



Performance : 190/380 V 50 Hz 6P

Rated current : 3.82/1.91 A  
 LRC : 4.8  
 Rated torque : 5.59 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 229 %  
 Rated speed : 940 rpm

Moment of inertia (J) : 0.1951 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : A

Locked rotor time : 46s (cold) 26s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

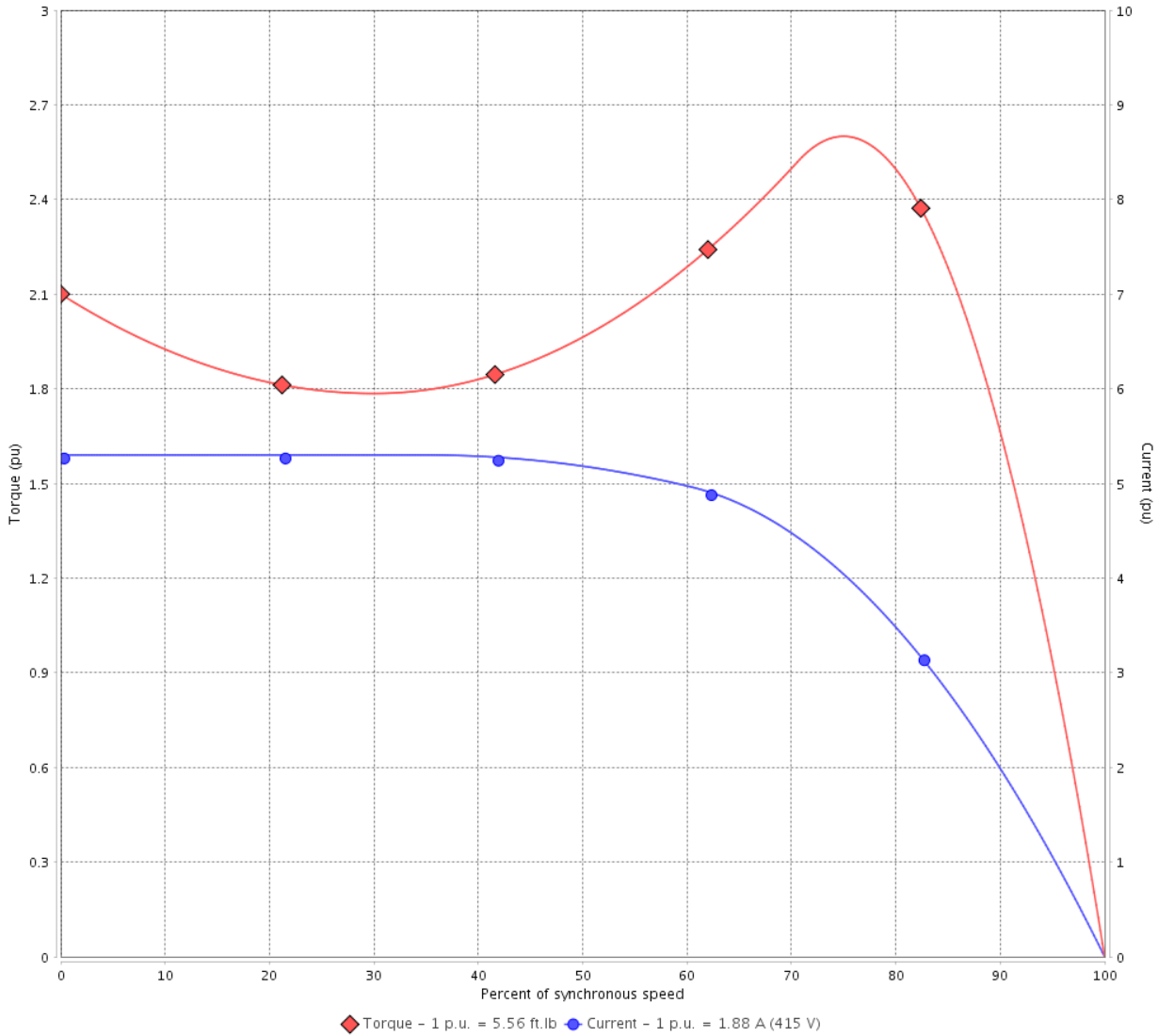
Three Phase Induction Motor - Squirrel Cage



Customer :

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 Catalog # : 001120T3E56C-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 6P

Rated current	: 3.55/1.88 A	Moment of inertia (J)	: 0.1951 sq.ft.lb
LRC	: 5.3	Duty cycle	: Cont.(S1)
Rated torque	: 5.56 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 945 rpm	Design	: A

Locked rotor time : 41s (cold) 23s (hot)

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

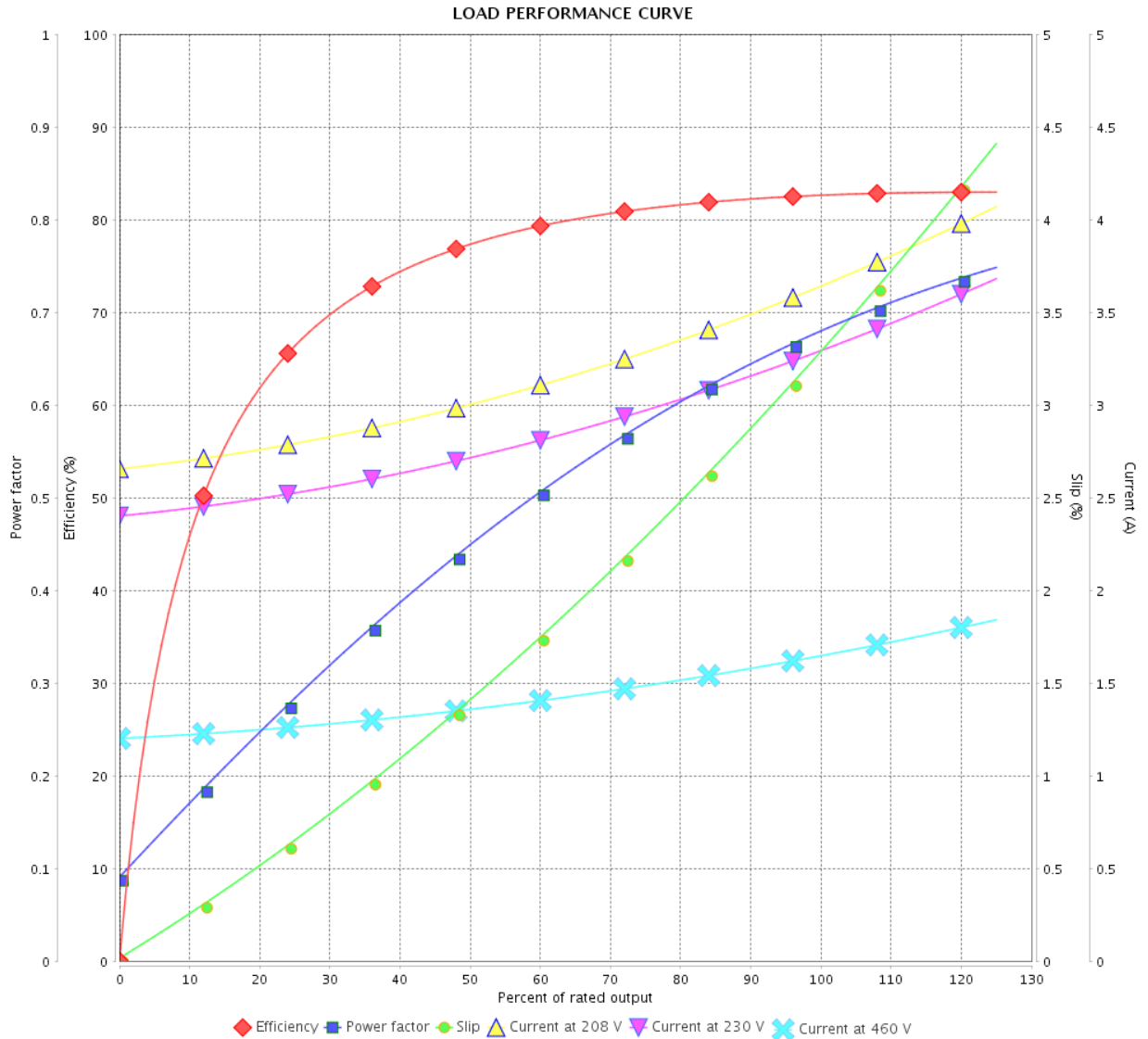
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Catalog # :

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Performance : 230/460 V 60 Hz 6P

Rated current : 3.36/1.68 A  
 LRC : 6.2  
 Rated torque : 4.53 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 300 %  
 Rated speed : 1160 rpm

Moment of inertia (J) : 0.1951 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : A

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Date				

# LOAD PERFORMANCE CURVE

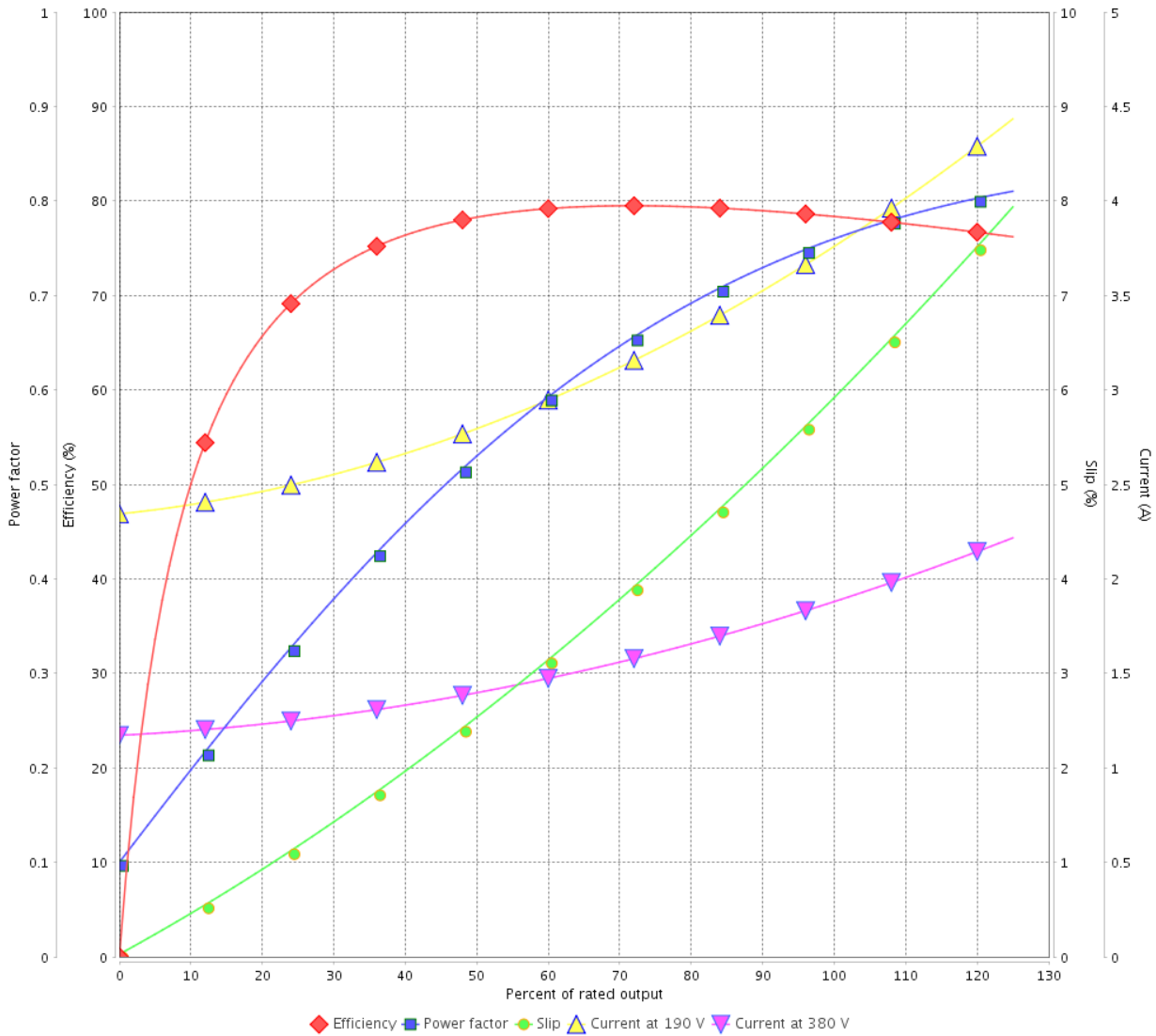
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Premium Efficiency Three-Phase      Product code : 12809606  
 Catalog # : 001120T3E56C-S

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 6P

Rated current	: 3.82/1.91 A	Moment of inertia (J)	: 0.1951 sq.ft.lb
LRC	: 4.8	Duty cycle	: Cont.(S1)
Rated torque	: 5.59 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 940 rpm	Design	: A

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

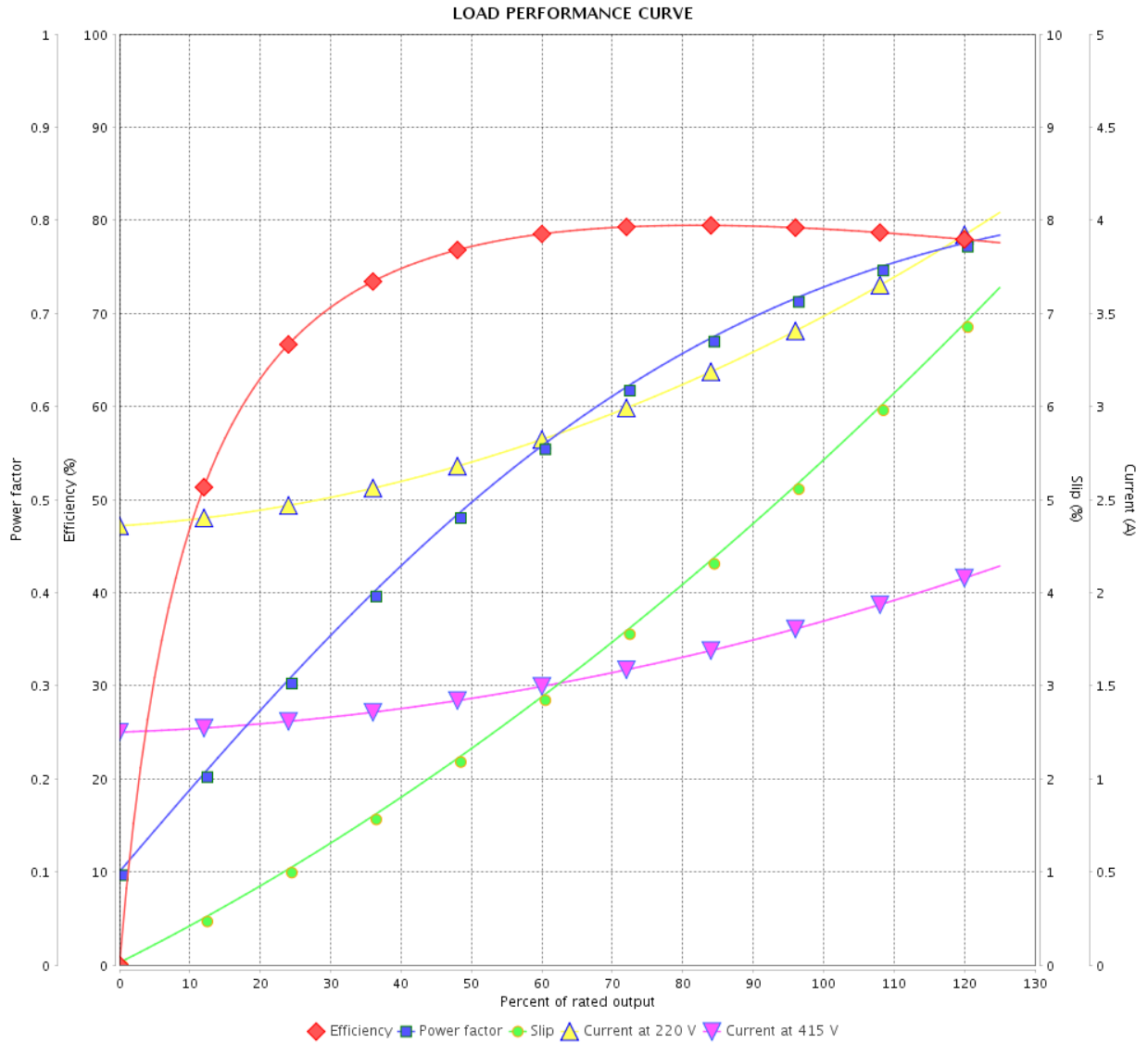
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 Rated torque : 5.56 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 260 %  
 Rated speed : 945 rpm

Moment of inertia (J) : 0.1951 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : A

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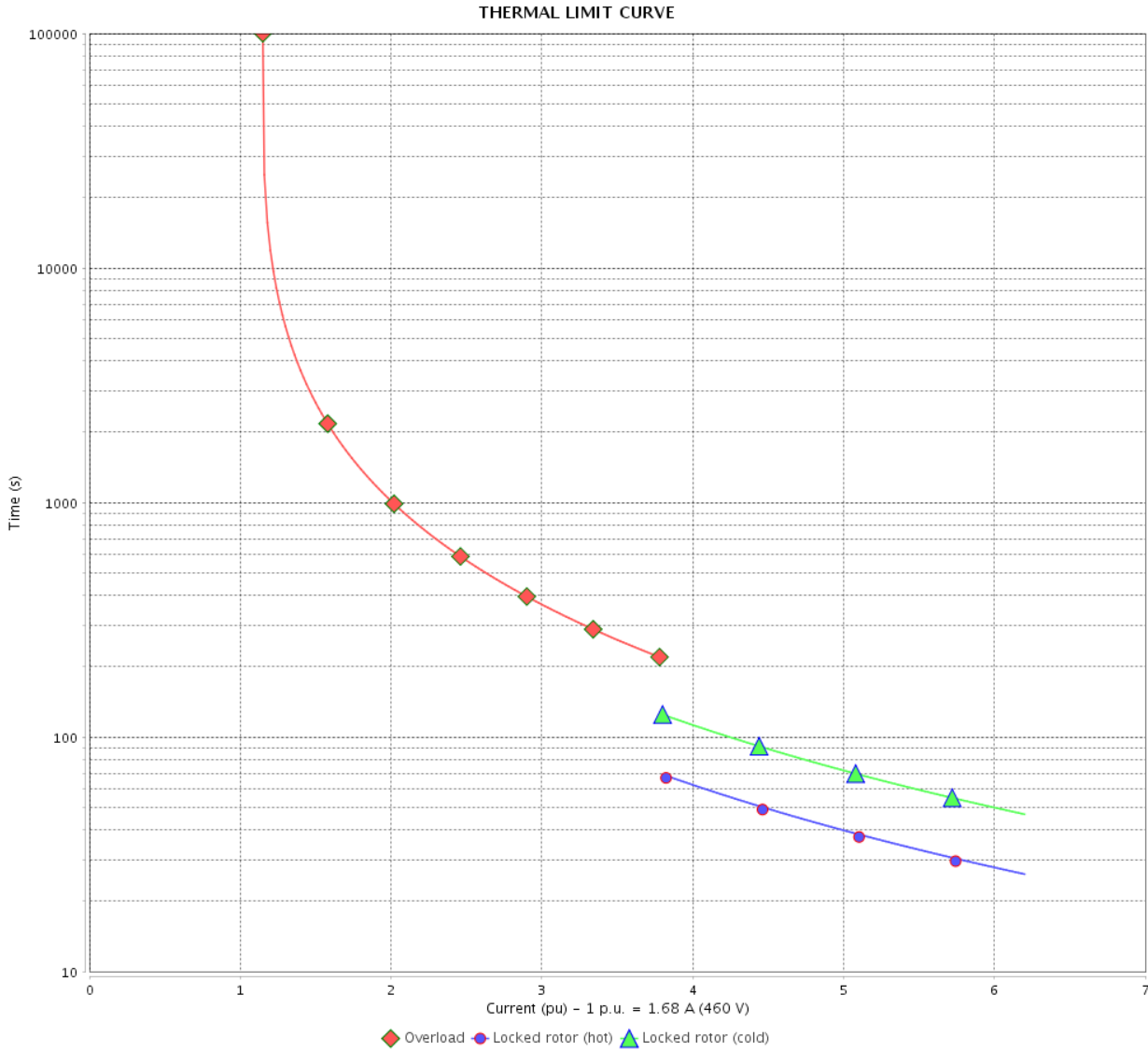
# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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Performance : 230/460 V 60 Hz 6P

Rated current	: 3.36/1.68 A	Moment of inertia (J)	: 0.1951 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 4.53 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	:
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1160 rpm	Design	: A

Heating constant

Cooling constant

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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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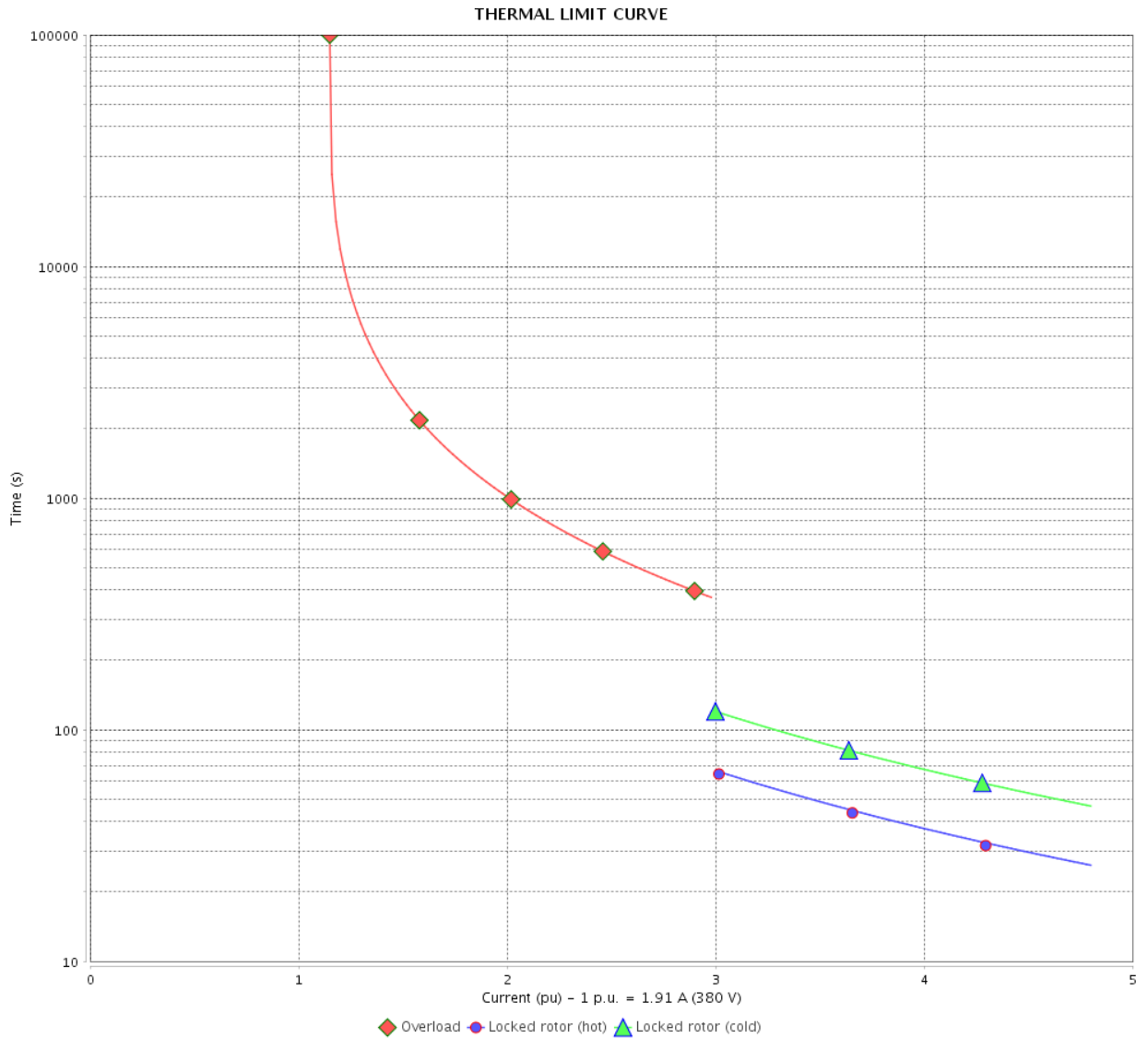
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 Rated torque : 5.59 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 229 %  
 Rated speed : 940 rpm

Moment of inertia (J) : 0.1951 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : A

Heating constant

Cooling constant

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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



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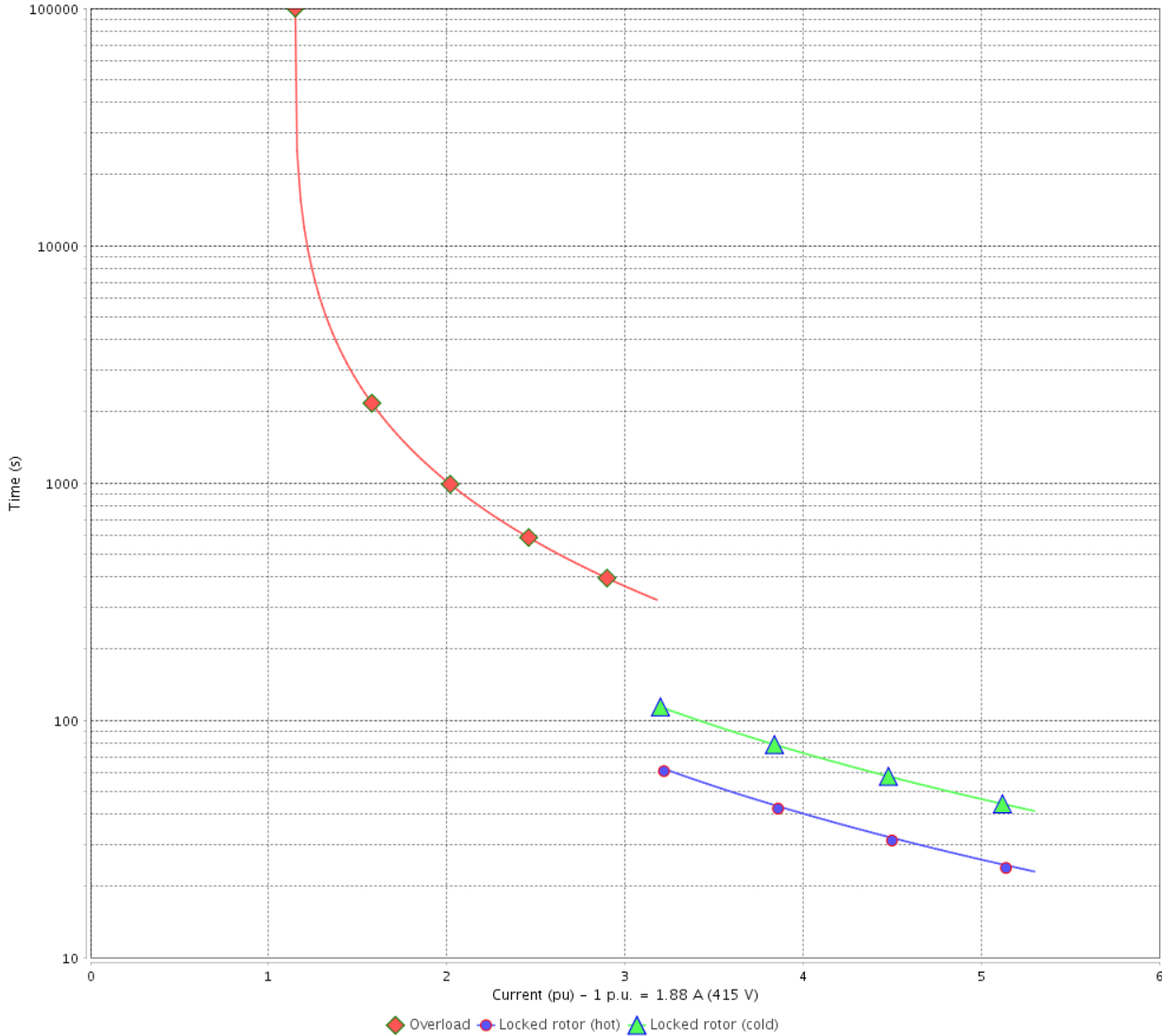
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Moment of inertia (J) : 0.1951 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : A

Heating constant

Cooling constant

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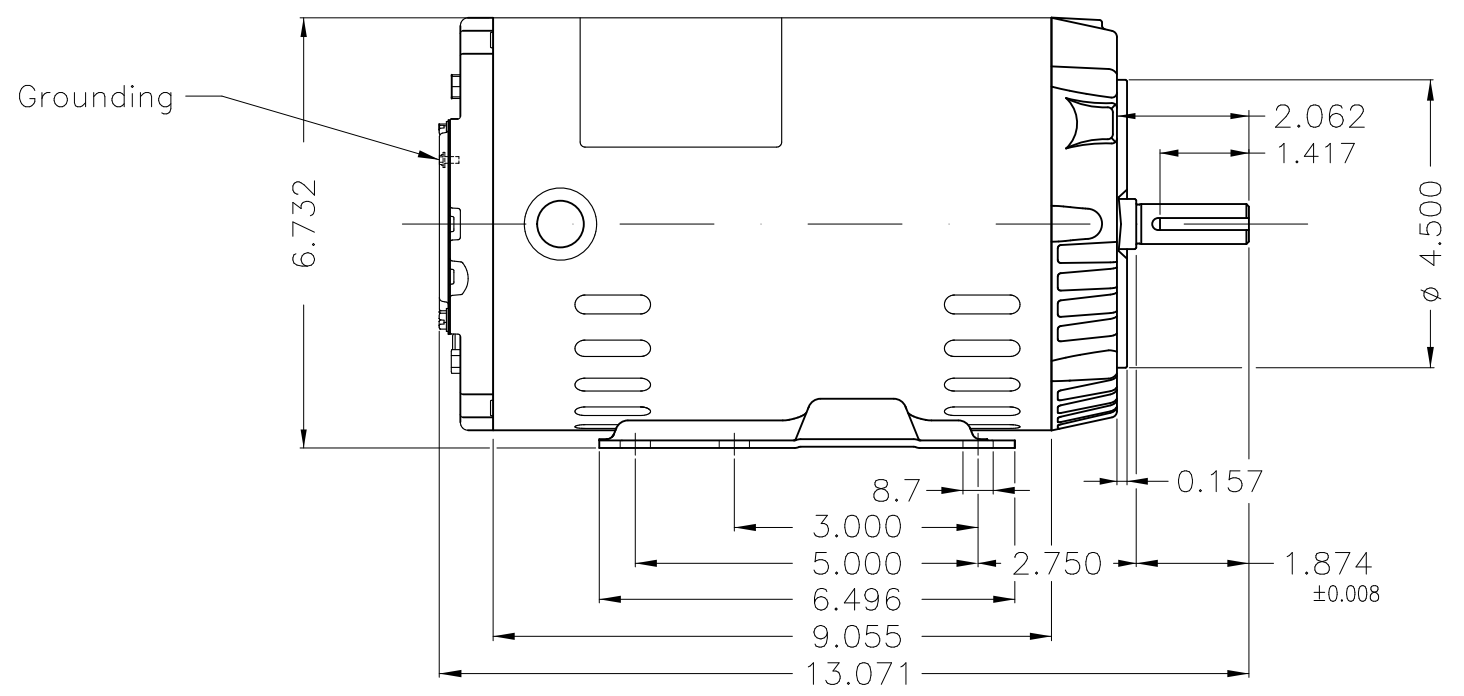
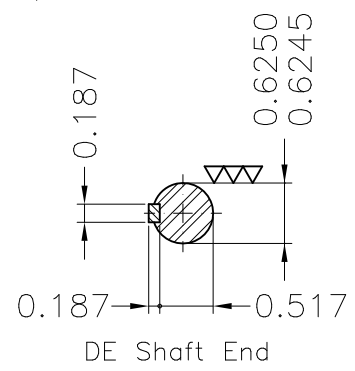
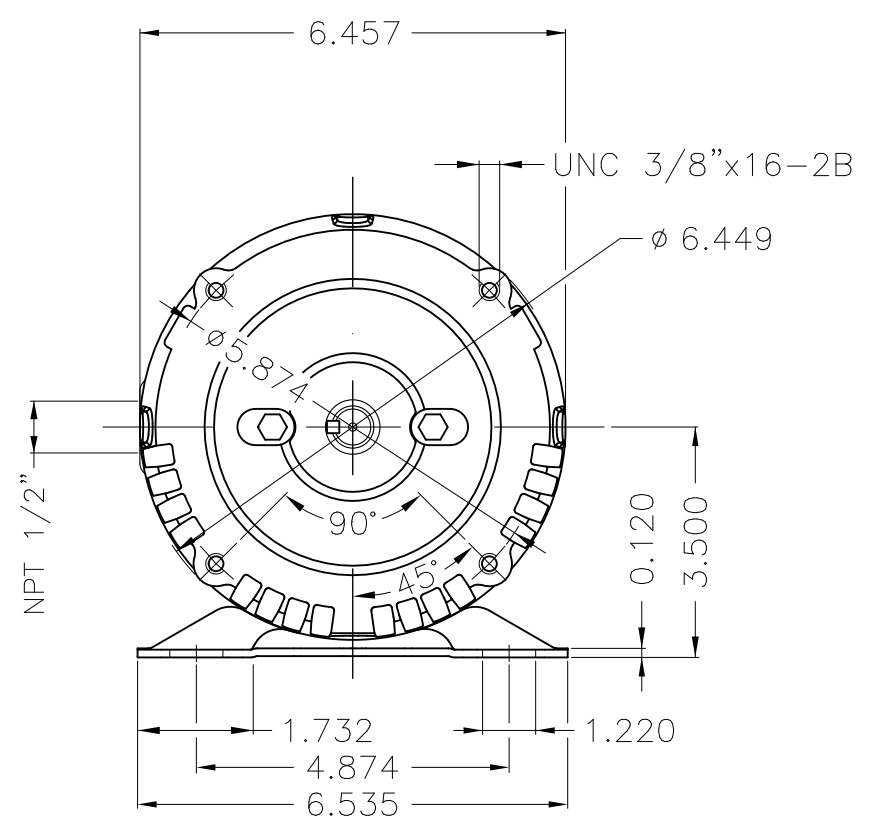
A

B

C

D

E



Without coating											
Mounting F-1/B34R(D)											
ECM	LOC	SUMMARY OF MODIFICATIONS					EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR ROLLED STEEL PREM. EFF.						<b>PREVIEW</b> WDD			
CHECKED		FRAME 56HC IP21 ODP									
RELEASED											
REL DT.		WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1					

1 HP 06 Poles 60 Hz

A