

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line		: Premium Efficiency Three-Phase		Product code : 12809249
				Catalog # : .5036OT3E56C-S
Frame	: 56C	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>	: 16.8 lb	
		Moment of inertia (J)	: 0.0389 sq.ft.lb	
Output [HP]	0.5	0.5	0.5	
Poles	2	2	2	
Frequency [Hz]	60	50	50	
Rated voltage [V]	208-230/460	190/380	220/415	
Rated current [A]	1.79-1.62/0.811	1.85/0.925	1.72/0.911	
L. R. Amperes [A]	11.1-10.1/5.03	8.88/4.44	8.76/4.65	
LRC [A]	6.2x(Code K)	4.8x(Code G)	5.1x(Code H)	
No load current [A]	0.776-0.900/0.450	0.880/0.440	1.19/0.630	
Rated speed [RPM]	3490	2855	2870	
Slip [%]	3.06	4.83	4.33	
Rated torque [ft.lb]	0.752	0.920	0.915	
Locked rotor torque [%]	229	160	180	
Breakdown torque [%]	280	210	240	
Service factor		1.25	1.25	
Temperature rise	80 K	80 K	80 K	
Locked rotor time	70s (cold) 39s (hot)	81s (cold) 45s (hot)	73s (cold) 41s (hot)	
Noise level <sup>2</sup>	62.0 dB(A)	60.0 dB(A)	60.0 dB(A)	
Efficiency (%)	25%	61.1	66.3	62.7
	50%	64.0	67.0	64.4
	75%	70.0	71.3	70.0
	100%	73.4	71.5	71.5
Power Factor	25%	0.35	0.41	0.33
	50%	0.57	0.65	0.59
	75%	0.69	0.78	0.72
	100%	0.78	0.85	0.82
Bearing type	: Drive end 6203 ZZ Non drive end 6202 ZZ	Foundation loads		
Sealing	: Without Without Bearing Seal Bearing Seal	Max. traction	: 13 lb	
		Max. compression	: 30 lb	
Lubrication interval	: - -			
Lubricant amount	: - -			
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V SF 1.00				
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.		
Rev.	Changes Summary		Performed	Checked
Performed by			Page 1 / 13	Revision
Checked by				
Date	14/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

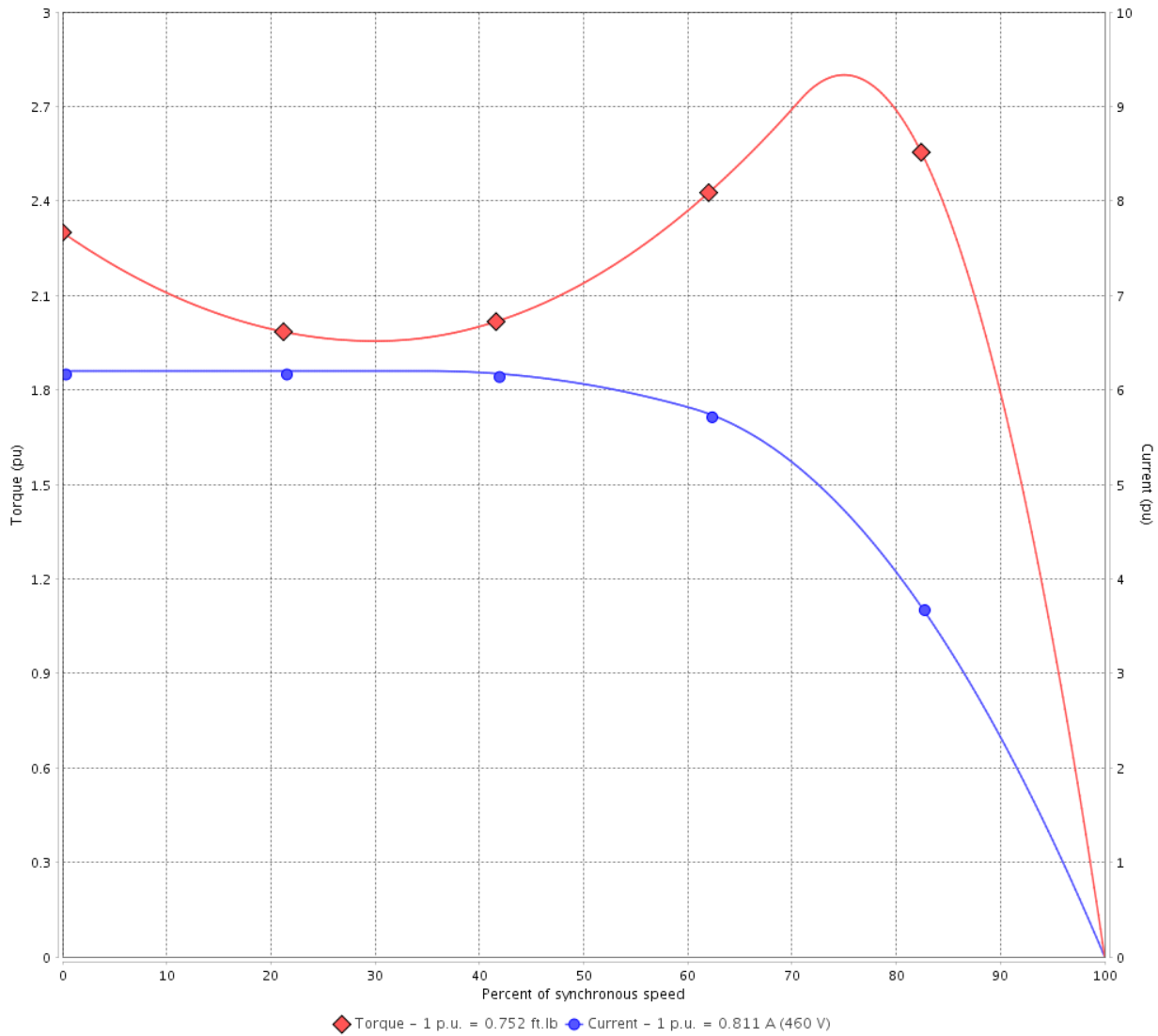
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Premium Efficiency Three-Phase      Product code : 12809249  
 Catalog # : .5036OT3E56C-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 208-230/460 V 60 Hz 2P

Rated current	: 1.79-1.62/0.811 A	Moment of inertia (J)	: 0.0389 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 0.752 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	:
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 3490 rpm		

Locked rotor time : 70s (cold) 39s (hot)

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Checked by				
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# TORQUE AND CURRENT VS SPEED CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

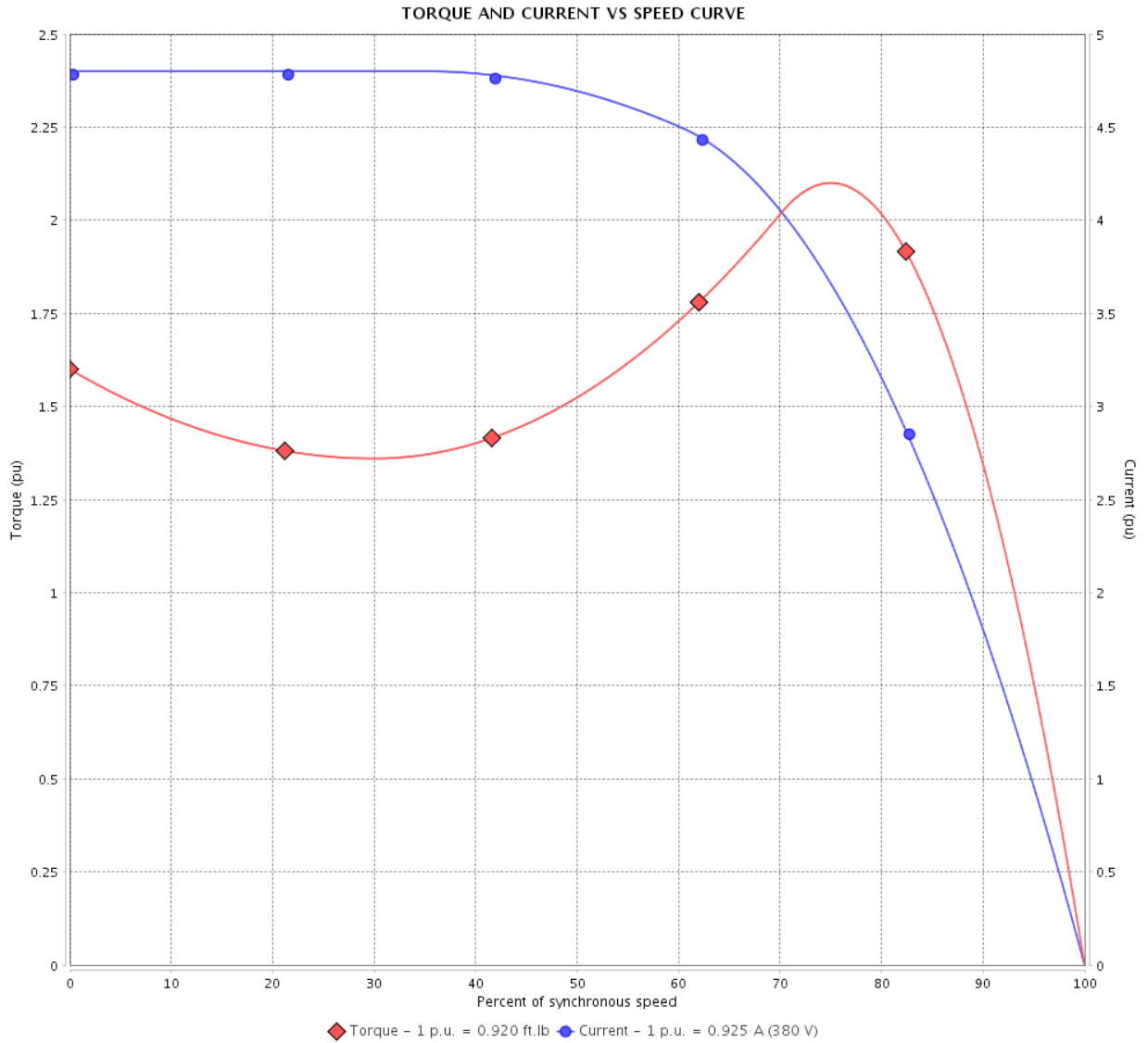
Product line : Premium Efficiency Three-Phase

Product code :

12809249

Catalog # :

.5036OT3E56C-S



Performance : 190/380 V 50 Hz 2P

Rated current : 1.85/0.925 A  
 LRC : 4.8  
 Rated torque : 0.920 ft.lb  
 Locked rotor torque : 160 %  
 Breakdown torque : 210 %  
 Rated speed : 2855 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K

Locked rotor time : 81s (cold) 45s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

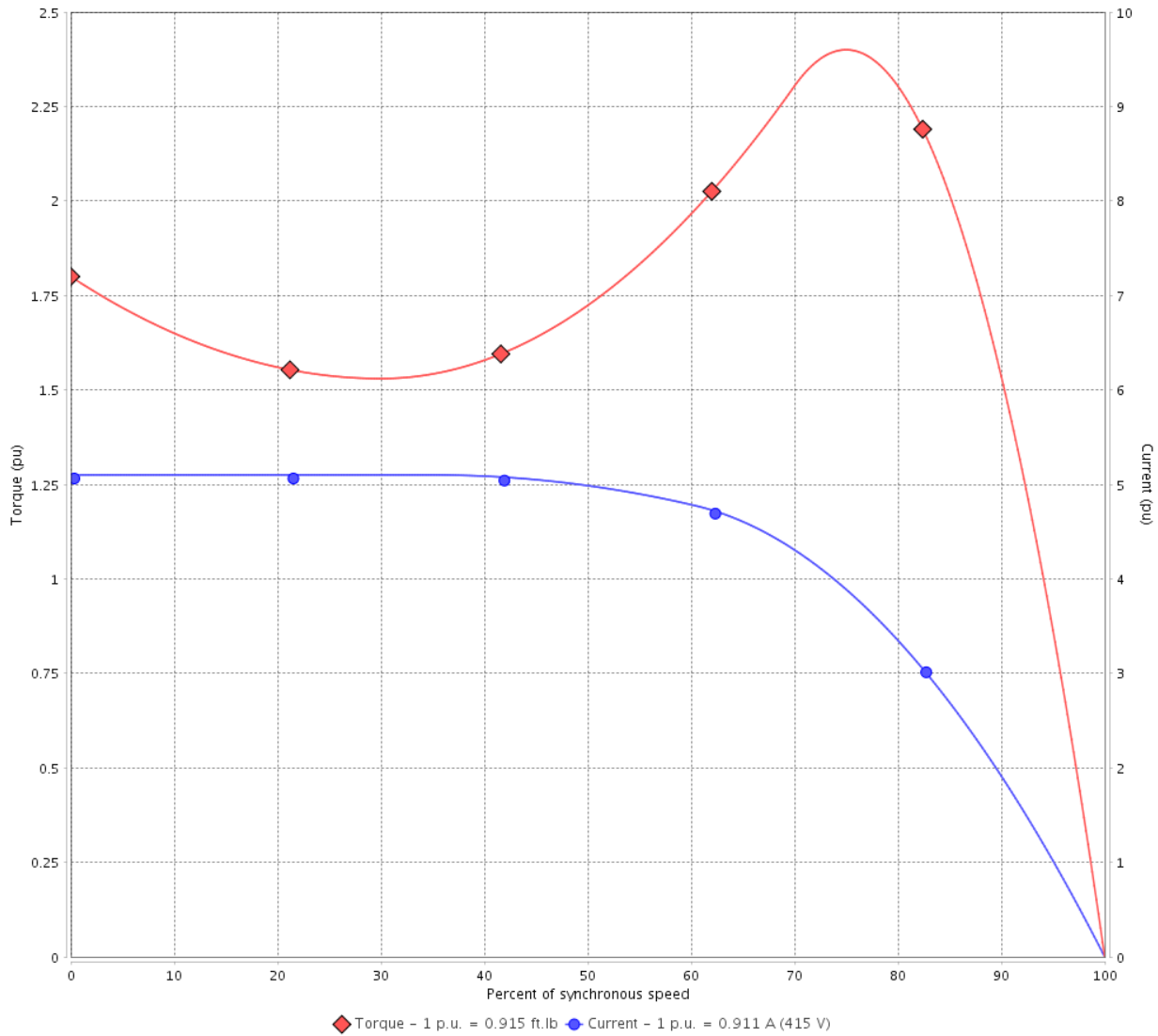
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Premium Efficiency Three-Phase      Product code : 12809249  
 Catalog # : .5036OT3E56C-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 2P

Rated current	: 1.72/0.911 A	Moment of inertia (J)	: 0.0389 sq.ft.lb
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 0.915 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 2870 rpm		

Locked rotor time : 73s (cold) 41s (hot)

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

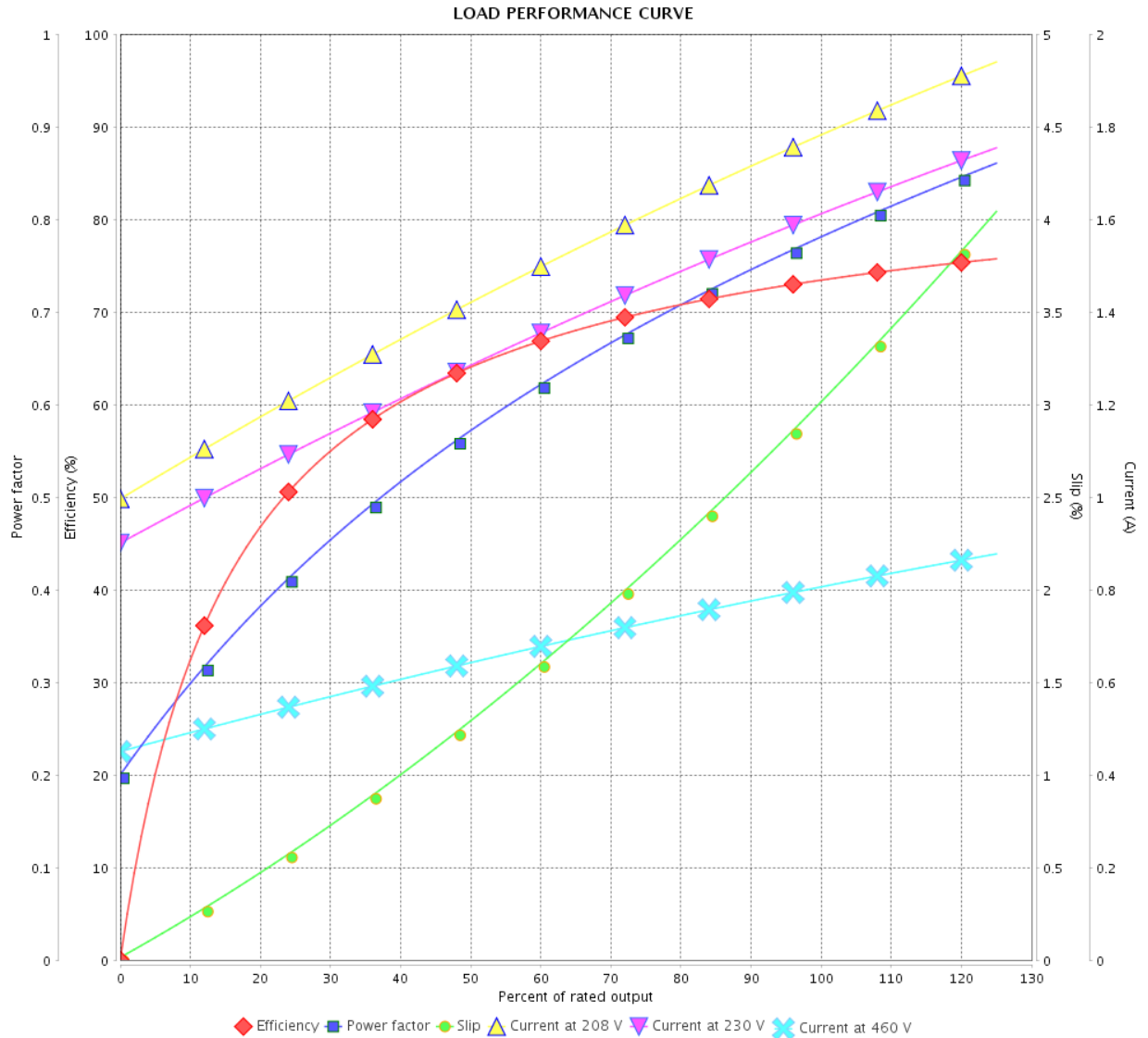
Product line : Premium Efficiency Three-Phase

Product code :

12809249

Catalog # :

.5036OT3E56C-S



Performance : 208-230/460 V 60 Hz 2P

Rated current : 1.79-1.62/0.811 A  
 LRC : 6.2  
 Rated torque : 0.752 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 280 %  
 Rated speed : 3490 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				

# LOAD PERFORMANCE CURVE

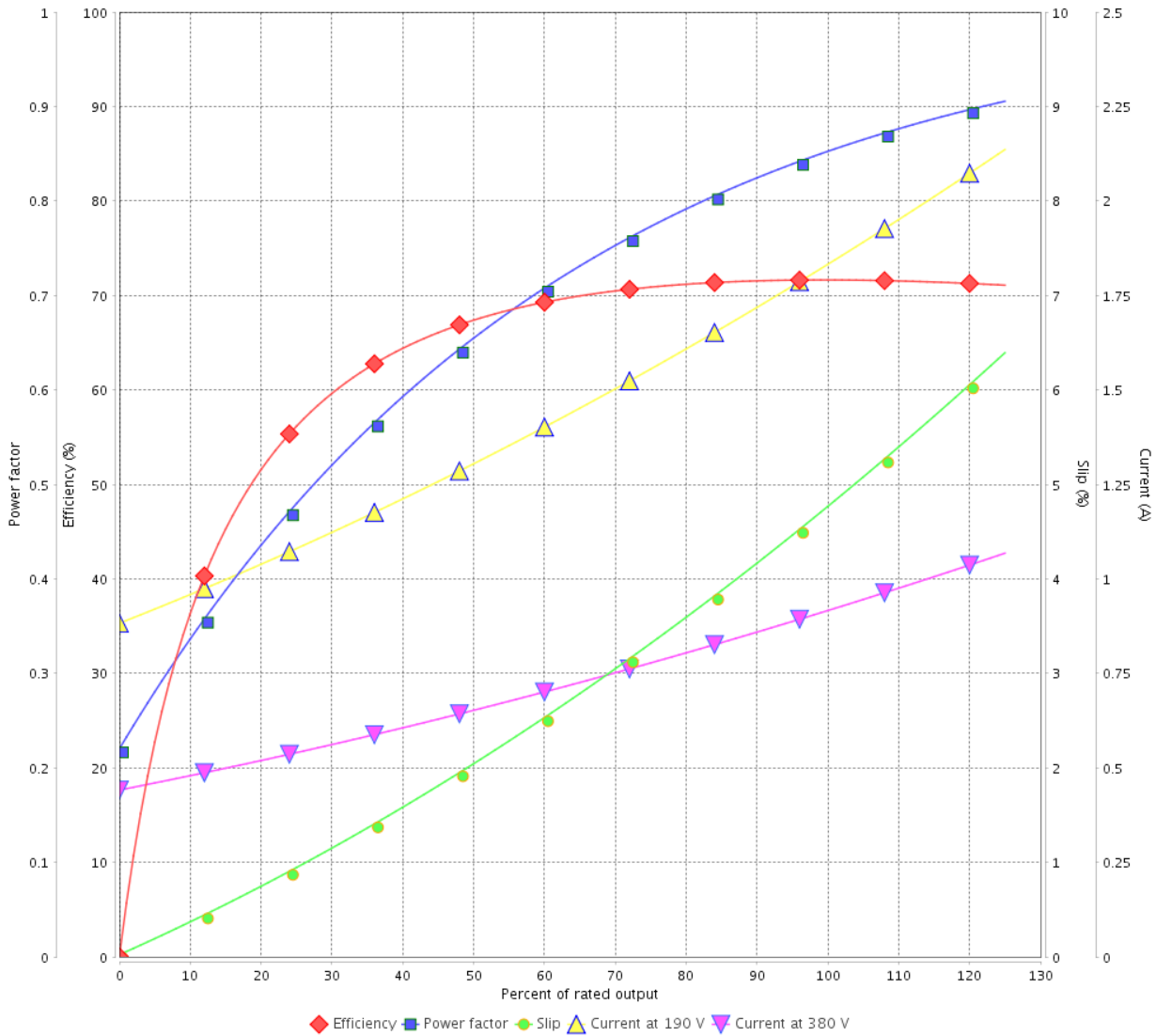
Three Phase Induction Motor - Squirrel Cage



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

Product line : Premium Efficiency Three-Phase      Product code : 12809249  
 Catalog # : .5036OT3E56C-S

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 2P

Rated current : 1.85/0.925 A  
 LRC : 4.8  
 Rated torque : 0.920 ft.lb  
 Locked rotor torque : 160 %  
 Breakdown torque : 210 %  
 Rated speed : 2855 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K

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Date	14/04/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

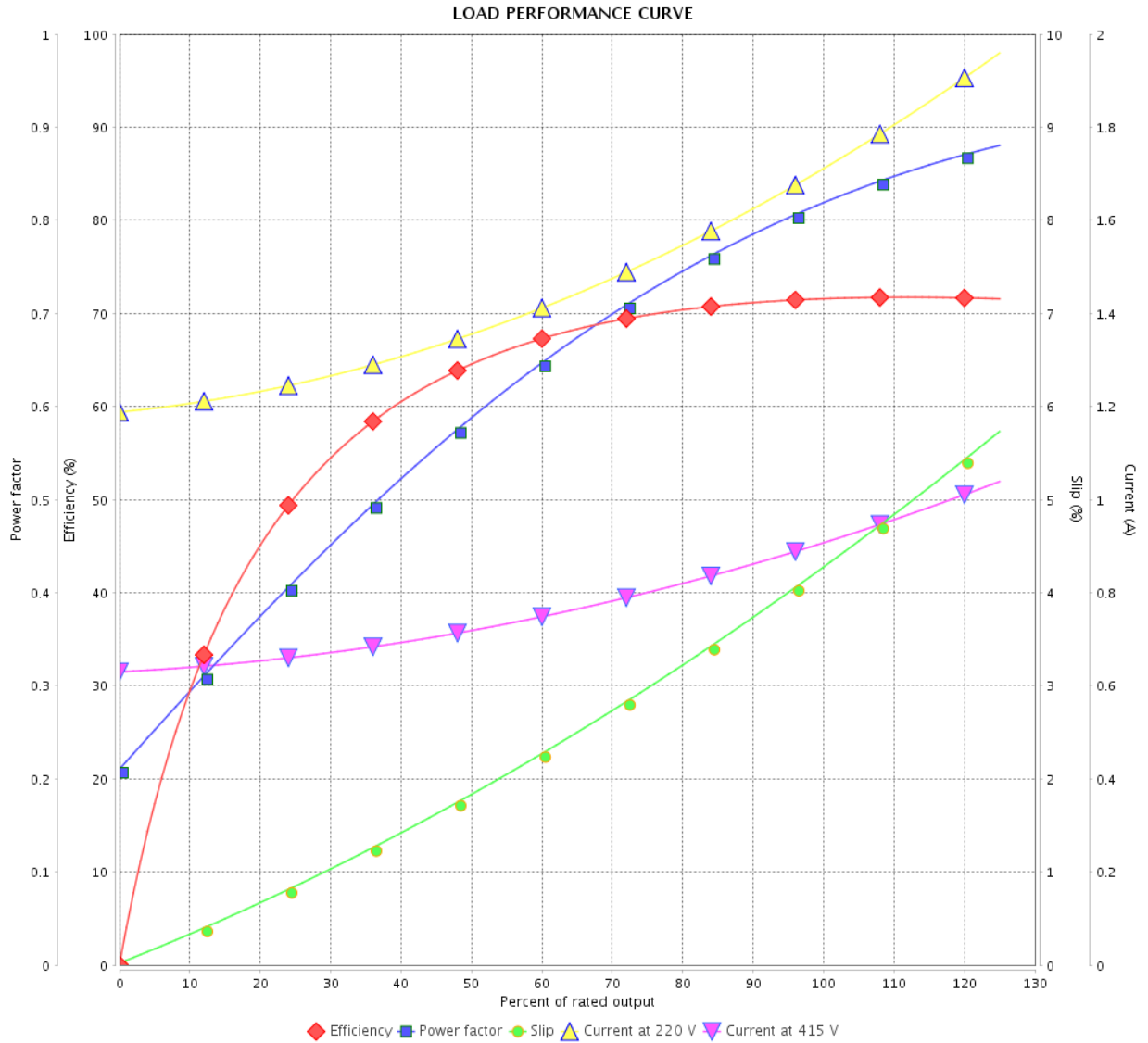
Product line : Premium Efficiency Three-Phase

Product code :

12809249

Catalog # :

.5036OT3E56C-S



Performance : 220/415 V 50 Hz 2P

Rated current : 1.72/0.911 A  
 LRC : 5.1  
 Rated torque : 0.915 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 240 %  
 Rated speed : 2870 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K

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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



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

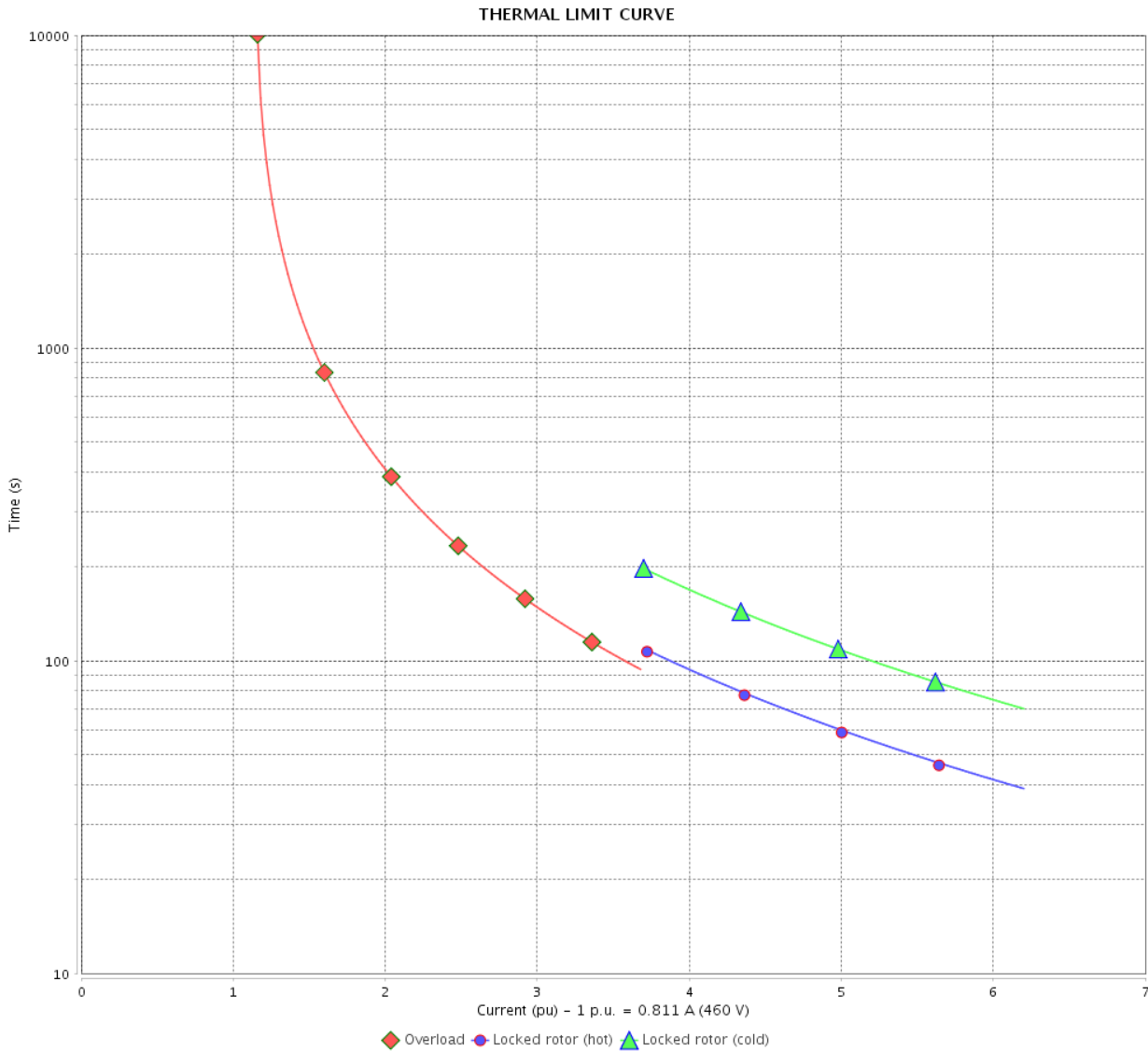
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Product code :

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Catalog # :

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Performance : 208-230/460 V 60 Hz 2P

Rated current : 1.79-1.62/0.811 A  
 LRC : 6.2  
 Rated torque : 0.752 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 280 %  
 Rated speed : 3490 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K

Heating constant

Cooling constant

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Checked by				
Date				
	14/04/2022			



# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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

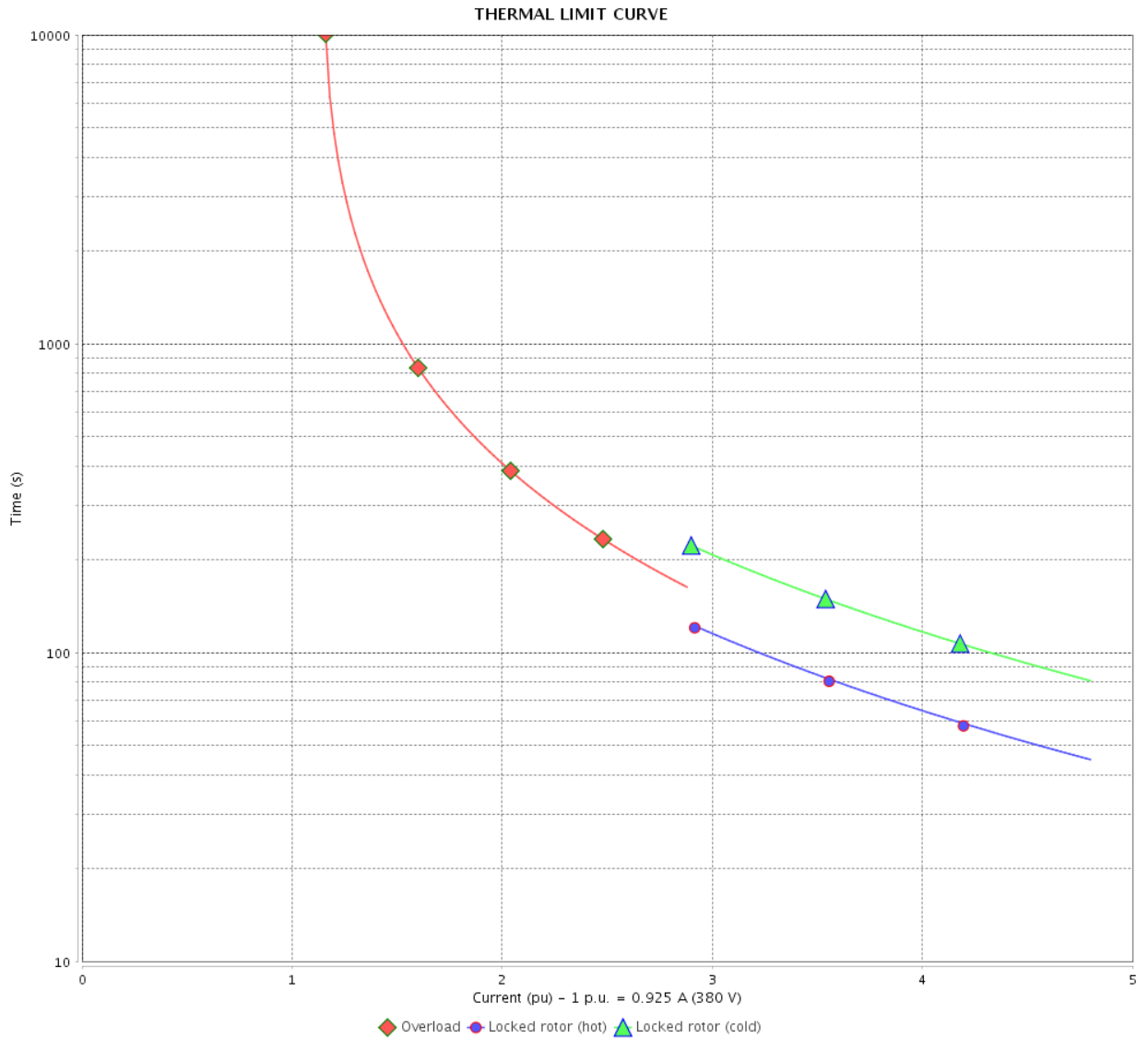
Product line : Premium Efficiency Three-Phase

Product code :

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Catalog # :

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Performance : 190/380 V 50 Hz 2P

Rated current : 1.85/0.925 A  
 LRC : 4.8  
 Rated torque : 0.920 ft.lb  
 Locked rotor torque : 160 %  
 Breakdown torque : 210 %  
 Rated speed : 2855 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K

Heating constant

Cooling constant

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Date				
		Page	Revision	
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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



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

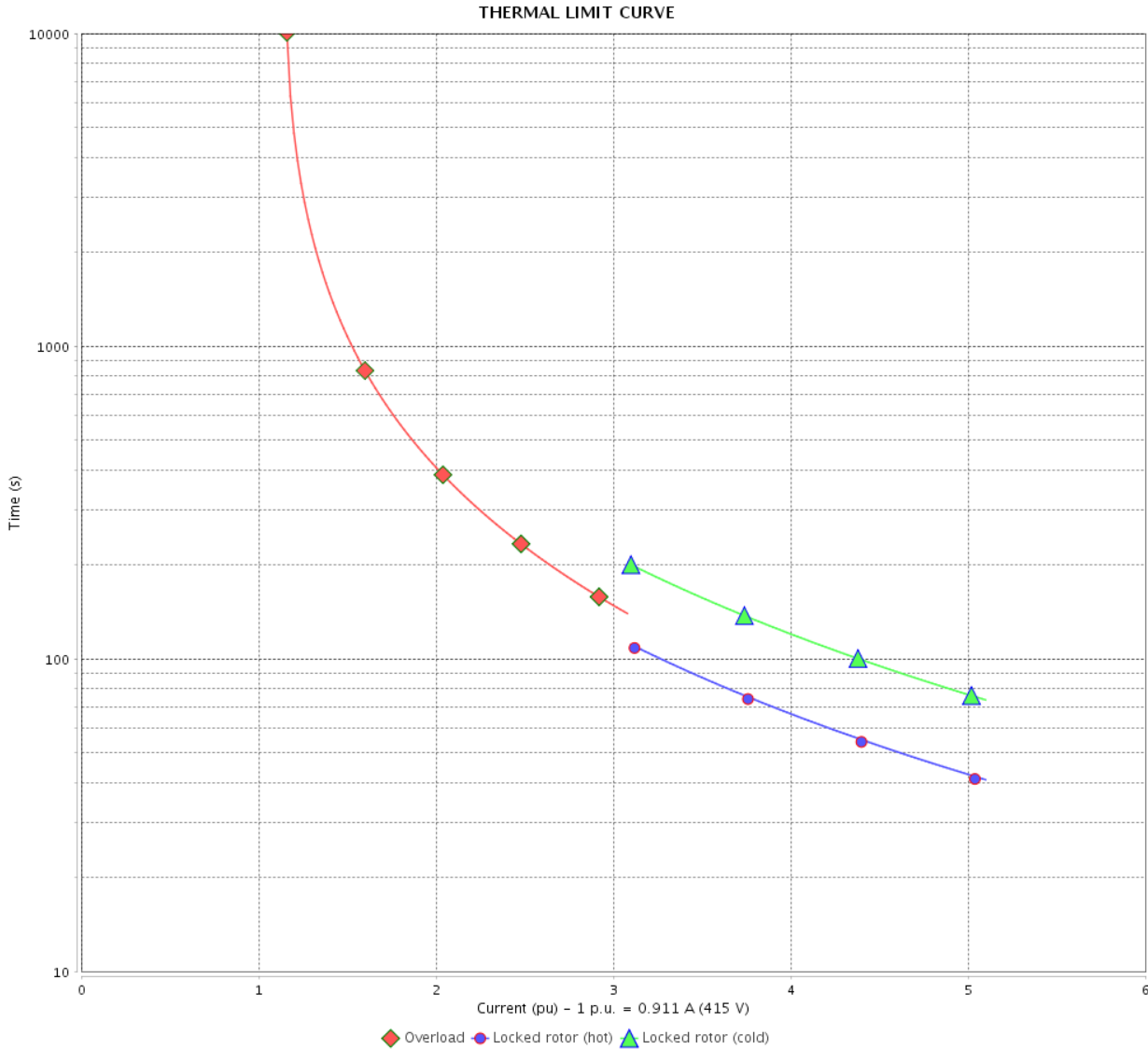
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Product code :

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Catalog # :

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Performance : 220/415 V 50 Hz 2P

Rated current : 1.72/0.911 A  
 LRC : 5.1  
 Rated torque : 0.915 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 240 %  
 Rated speed : 2870 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K

Heating constant

Cooling constant

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Performed by	14/04/2022	Page		Revision
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Date				

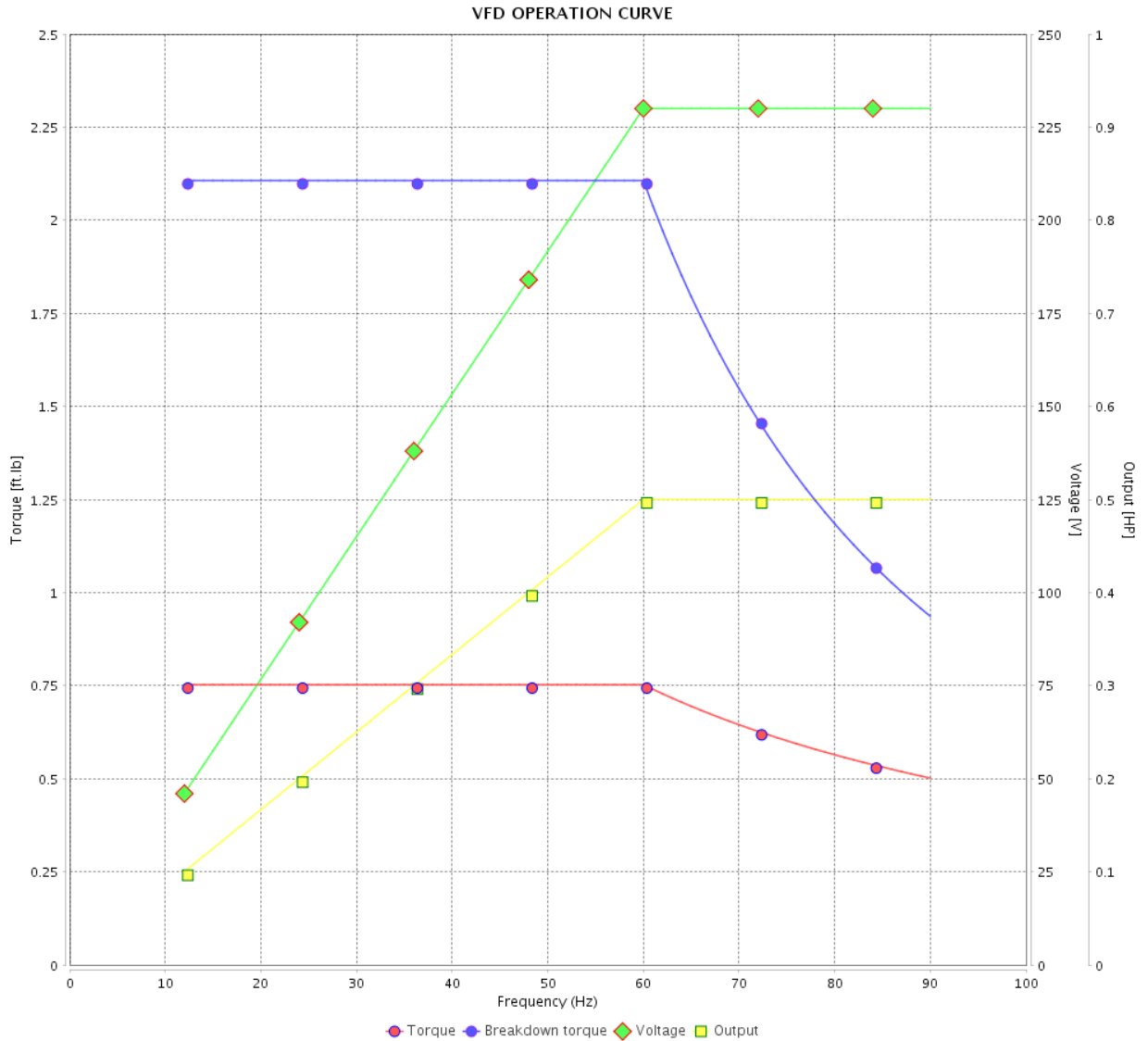
# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage



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

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 Catalog # : .5036OT3E56C-S



Performance : 208-230/460 V 60 Hz 2P

Rated current : 1.79-1.62/0.811 A  
 LRC : 6.2  
 Rated torque : 0.752 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 280 %  
 Rated speed : 3490 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K

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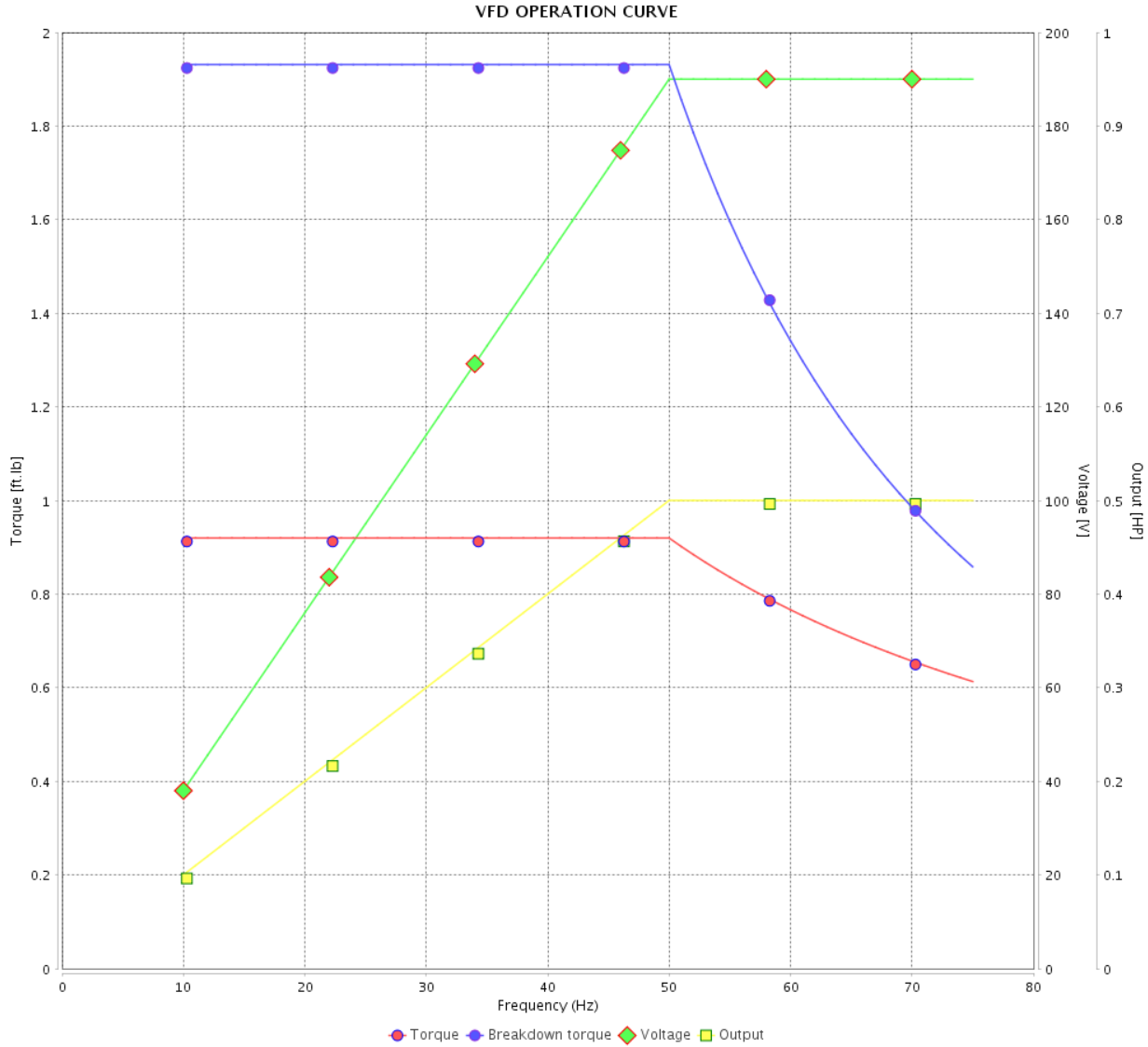
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Performance : 190/380 V 50 Hz 2P

Rated current	: 1.85/0.925 A	Moment of inertia (J)	: 0.0389 sq.ft.lb
LRC	: 4.8	Duty cycle	: Cont.(S1)
Rated torque	: 0.920 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.25
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 2855 rpm		

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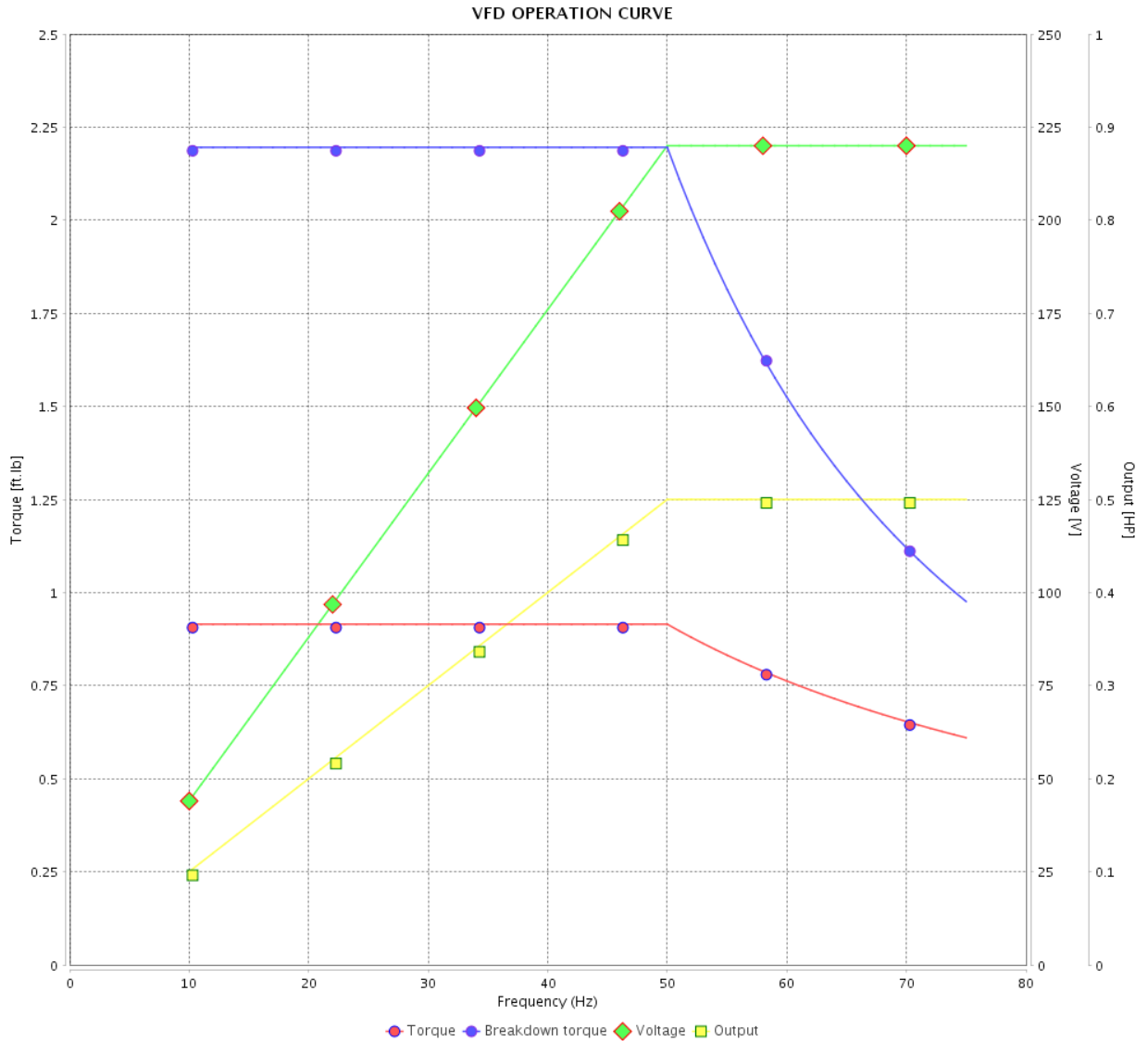
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## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Premium Efficiency Three-Phase      Product code : 12809249  
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 LRC : 5.1  
 Rated torque : 0.915 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 240 %  
 Rated speed : 2870 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K

Rev.	Changes Summary	Performed	Checked	Date
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Date		14/04/2022		

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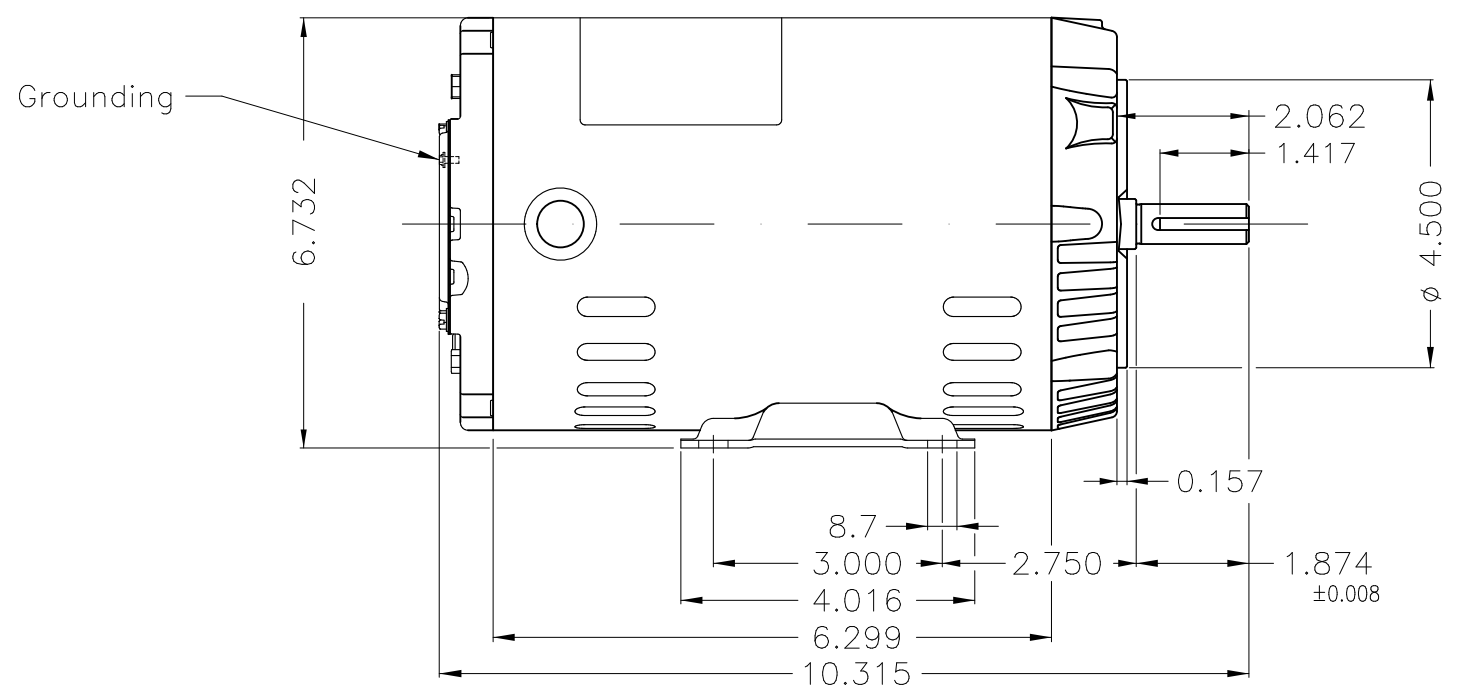
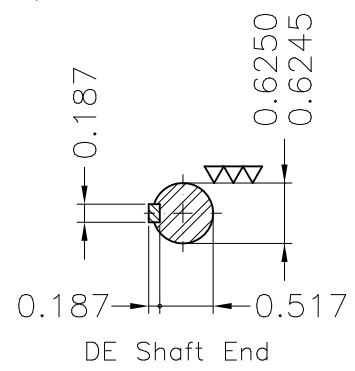
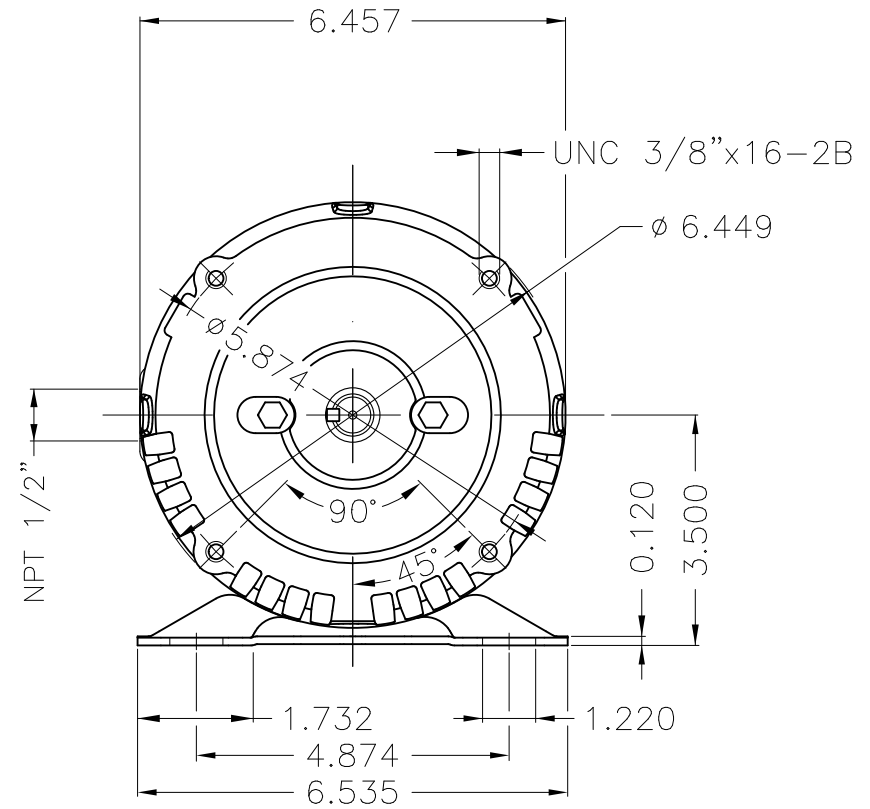
A

B

C

D

E



Dimensions in inches

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 56C IP21 ODP								
RELEASED										
REL DT.		WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1				

0.5 HP 02 Poles 60 Hz

A

XME A3

**WEG**  
**NEMA**  
**Premium**3PT9  
US LISTED

MADE IN MEXICO

MAT: 12809249

W01.T00IC0X0X

MODEL .5036OT3E56C-S

17JUN2019



PH 3 FR 56C HP(KW) 0.50(0.37) Hz 60

V 230/460 RPM 3490

A 1.62/0.811 DUTY CONT.

SFA 2.03/1.01 CODE K DES -

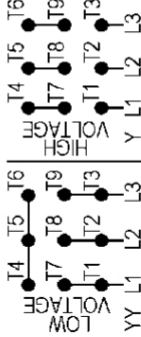
SF 1.25 INS CL F AT 80K AMB 40°C ENCL ODP

PF 0.78 AVG. F.L. EFF. 73.4%

ALT 1000 m.a.s.l. USABLE @ 208V 1.79A SF1.00

ALTERNATE RATING: 0.50HP 50Hz 190-220/380-415V SF1.25

1.85-1.76/0.925-0.932A 2855RPM EFF 70.8% (IE2) IEC 60034-1



Inverter duty motor For 60Hz use on VPWM 1000:1 VT, 5:1 CT

DE: 6203-ZZ ODE: 6202-ZZ MOBIL POLYREX EM

WARNING: Motor must be grounded in accordance with local and national electrical codes to prevent serious electrical shocks. Disconnect power source before servicing unit.

AVERTISSEMENT: Le moteur doit être mis à la terre conformément aux codes électriques locaux et nationaux afin d'éviter tout choc électrique grave. Déconnectez l'alimentation avant l'entretien de la machine.

