

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: Standard Efficiency Three-Phase	Product code :	12805240	
		Catalog # :	.3336ES3E56C-S	
Frame	: 56C	Cooling method	: IC411 - TEFC	
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>	: 17.9 lb	
Protection degree	: IP55	Moment of inertia (J)	: 0.0389 sq.ft.lb	
Output [HP]	0.33	0.33	0.33	
Poles	2	2	2	
Frequency [Hz]	60	50	50	
Rated voltage [V]	208-230/460	190/380	220/415	
Rated current [A]	1.33-1.20/0.602	1.27/0.635	1.16/0.613	
L. R. Amperes [A]	8.52-7.71/3.85	6.73/3.37	6.71/3.56	
LRC [A]	6.4x(Code L)	5.3x(Code H)	5.8x(Code J)	
No load current [A]	0.621-0.720/0.360	0.586/0.293	0.611/0.324	
Rated speed [RPM]	3485	2850	2870	
Slip [%]	3.19	5.00	4.33	
Rated torque [ft.lb]	0.497	0.608	0.604	
Locked rotor torque [%]	250	180	210	
Breakdown torque [%]	300	240	270	
Service factor		1.15	1.15	
Temperature rise	80 K	80 K	80 K	
Locked rotor time	72s (cold) 40s (hot)	90s (cold) 50s (hot)	81s (cold) 45s (hot)	
Noise level <sup>2</sup>	68.0 dB(A)	65.0 dB(A)	65.0 dB(A)	
Efficiency (%)	25%	44.9	57.8	56.4
	50%	48.0	59.6	58.7
	75%	57.5	65.4	65.2
	100%	62.0	67.2	67.7
Power Factor	25%	0.44	0.48	0.44
	50%	0.72	0.77	0.72
	75%	0.79	0.85	0.82
	100%	0.84	0.89	0.87
Bearing type	: Drive end 6203 ZZ Non drive end 6202 ZZ	Foundation loads		
Sealing	: V'Ring Without Bearing Seal	Max. traction	: 7 lb	
		Max. compression	: 24 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.		
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# TORQUE AND CURRENT VS SPEED CURVE

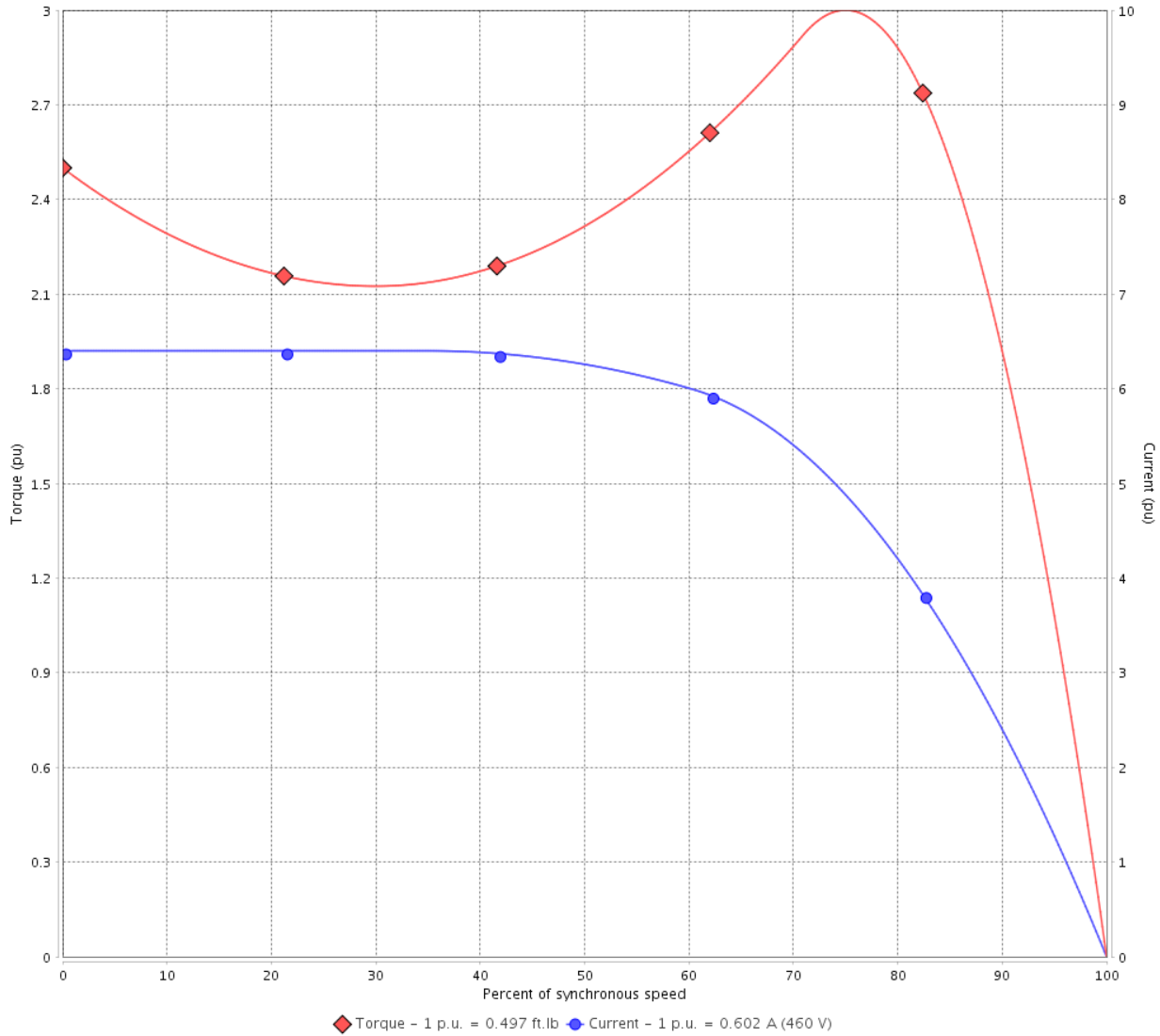
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Standard Efficiency Three-Phase      Product code : 12805240  
 Catalog # : .3336ES3E56C-S

TORQUE AND CURRENT VS SPEED CURVE



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

Rated current	: 1.33-1.20/0.602 A	Moment of inertia (J)	: 0.0389 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 0.497 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	:
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 3485 rpm		

Locked rotor time : 72s (cold) 40s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



## Three Phase Induction Motor - Squirrel Cage

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

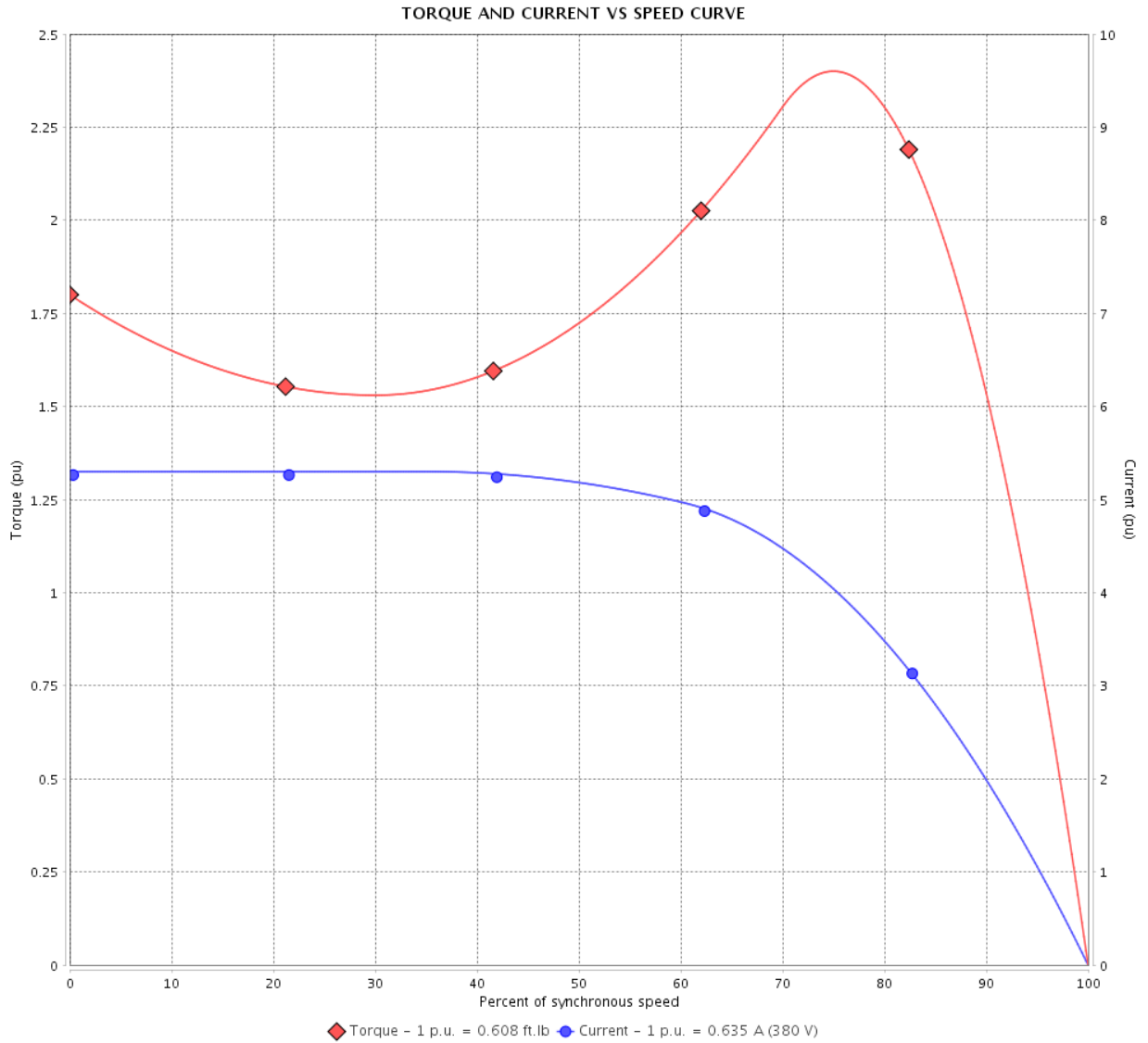
Product line : Standard Efficiency Three-Phase

Product code :

12805240

Catalog # :

.3336ES3E56C-S



Performance : 190/380 V 50 Hz 2P

Rated current : 1.27/0.635 A  
 LRC : 5.3  
 Rated torque : 0.608 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 240 %  
 Rated speed : 2850 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K

Locked rotor time : 90s (cold) 50s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

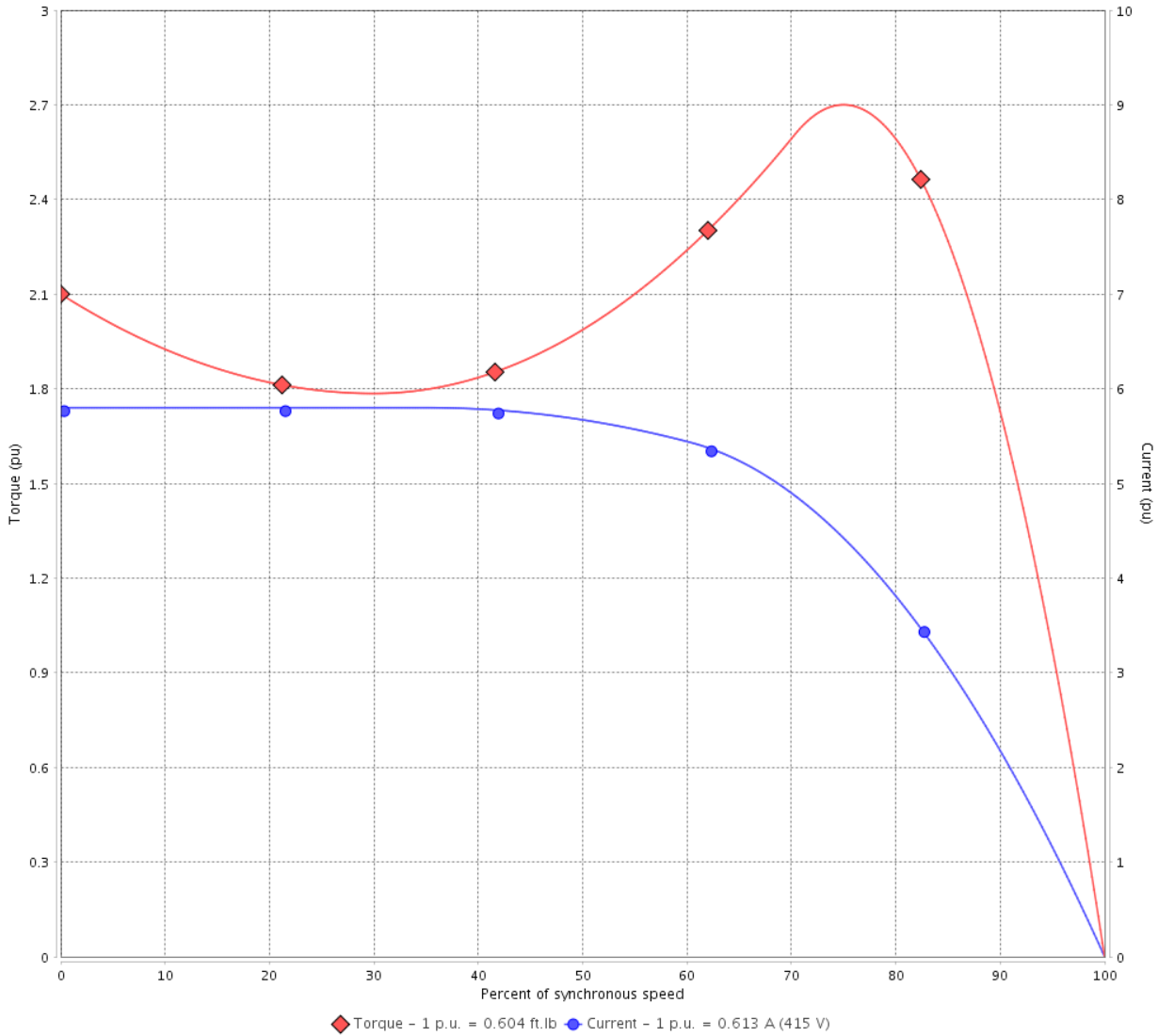
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Standard Efficiency Three-Phase      Product code : 12805240  
 Catalog # : .3336ES3E56C-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 2P

Rated current	: 1.16/0.613 A	Moment of inertia (J)	: 0.0389 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 0.604 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 2870 rpm		

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

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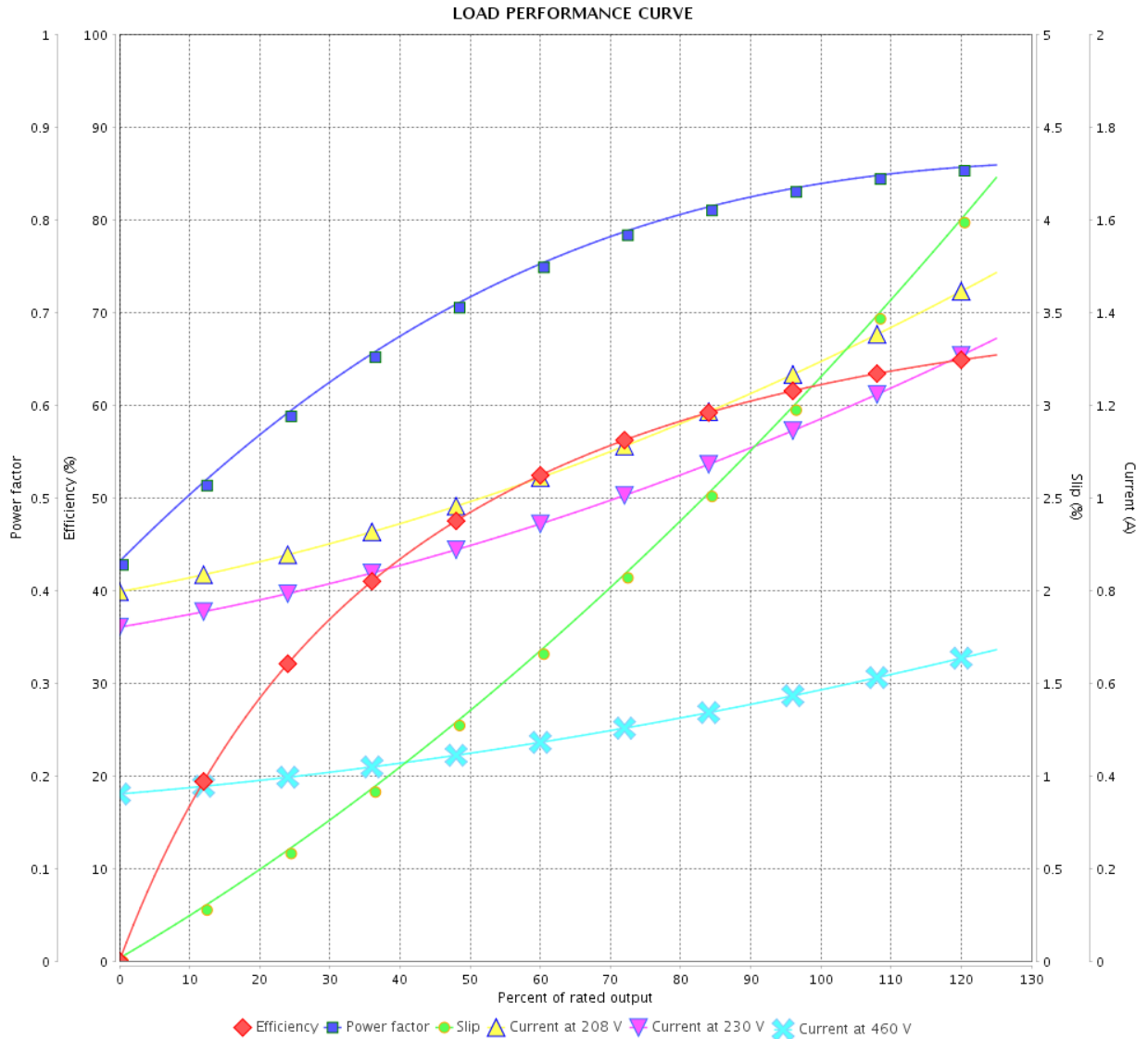
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Standard Efficiency Three-Phase      Product code : 12805240  
 Catalog # : .3336ES3E56C-S



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

Rated current : 1.33-1.20/0.602 A  
 LRC : 6.4  
 Rated torque : 0.497 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 300 %  
 Rated speed : 3485 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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Date				

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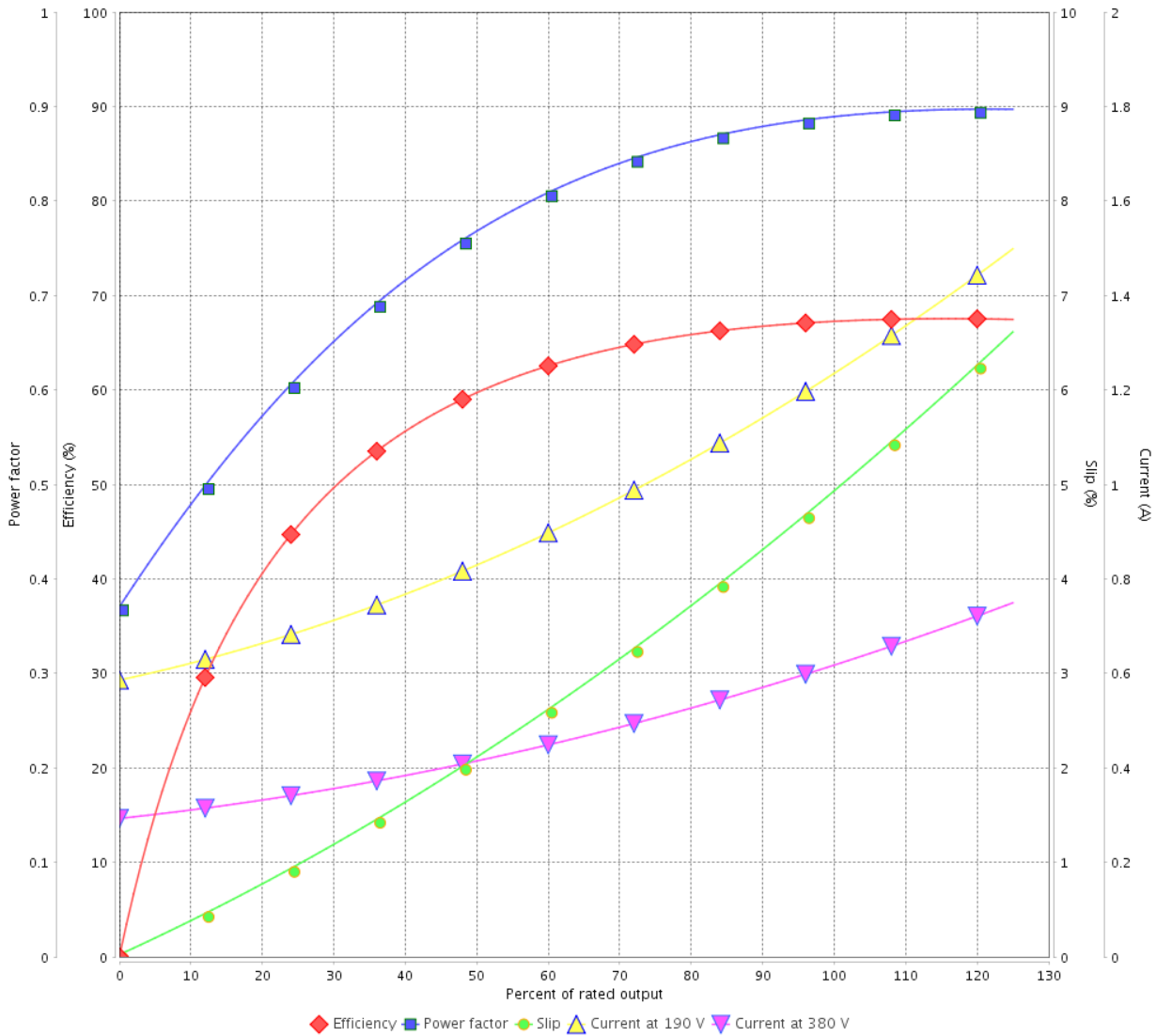
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Standard Efficiency Three-Phase      Product code : 12805240  
 Catalog # : .3336ES3E56C-S

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 2P

Rated current : 1.27/0.635 A  
 LRC : 5.3  
 Rated torque : 0.608 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 240 %  
 Rated speed : 2850 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



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

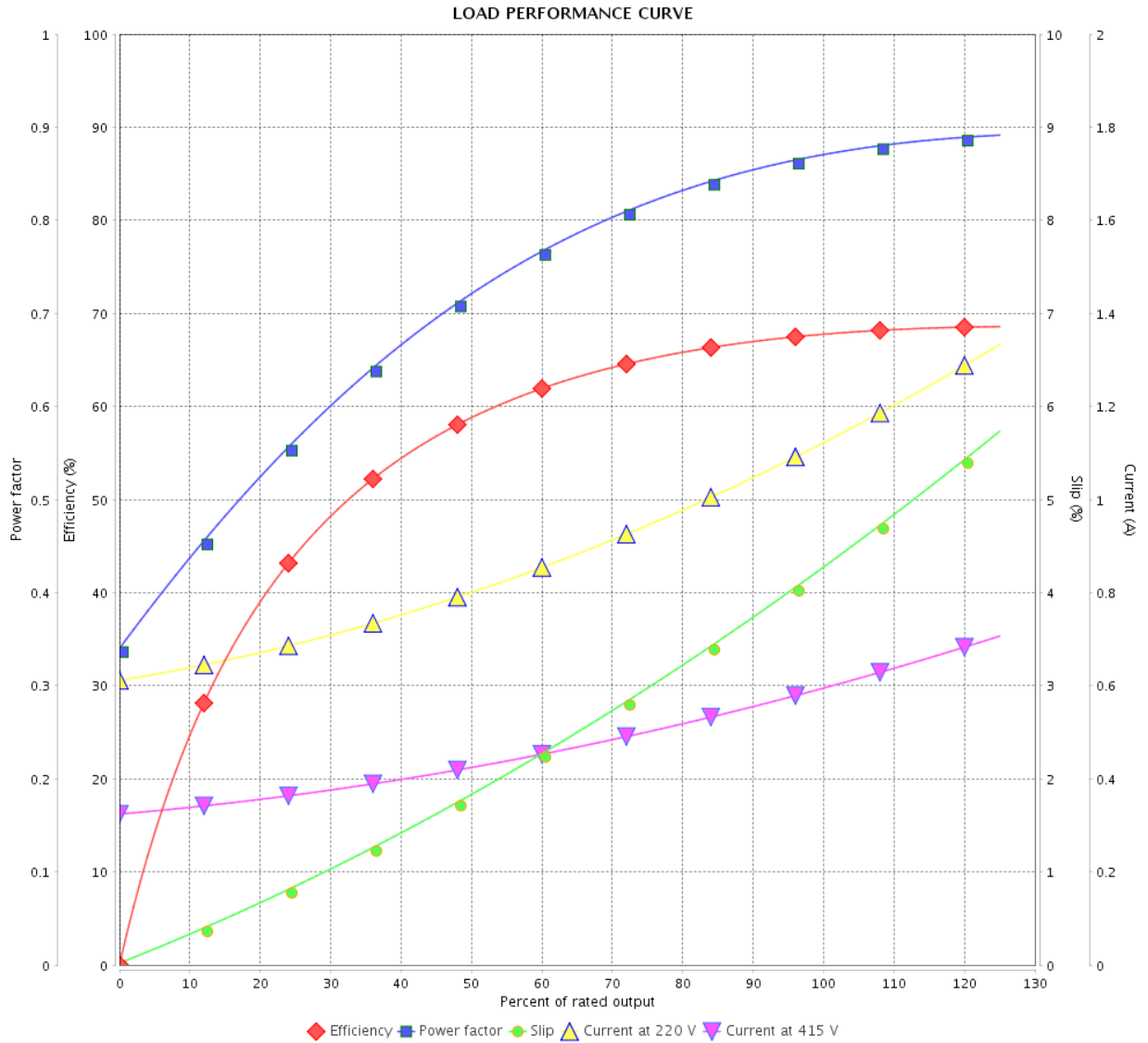
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Product code :

12805240

Catalog # :

.3336ES3E56C-S



Performance : 220/415 V 50 Hz 2P

Rated current : 1.16/0.613 A  
 LRC : 5.8  
 Rated torque : 0.604 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 270 %  
 Rated speed : 2870 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K

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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

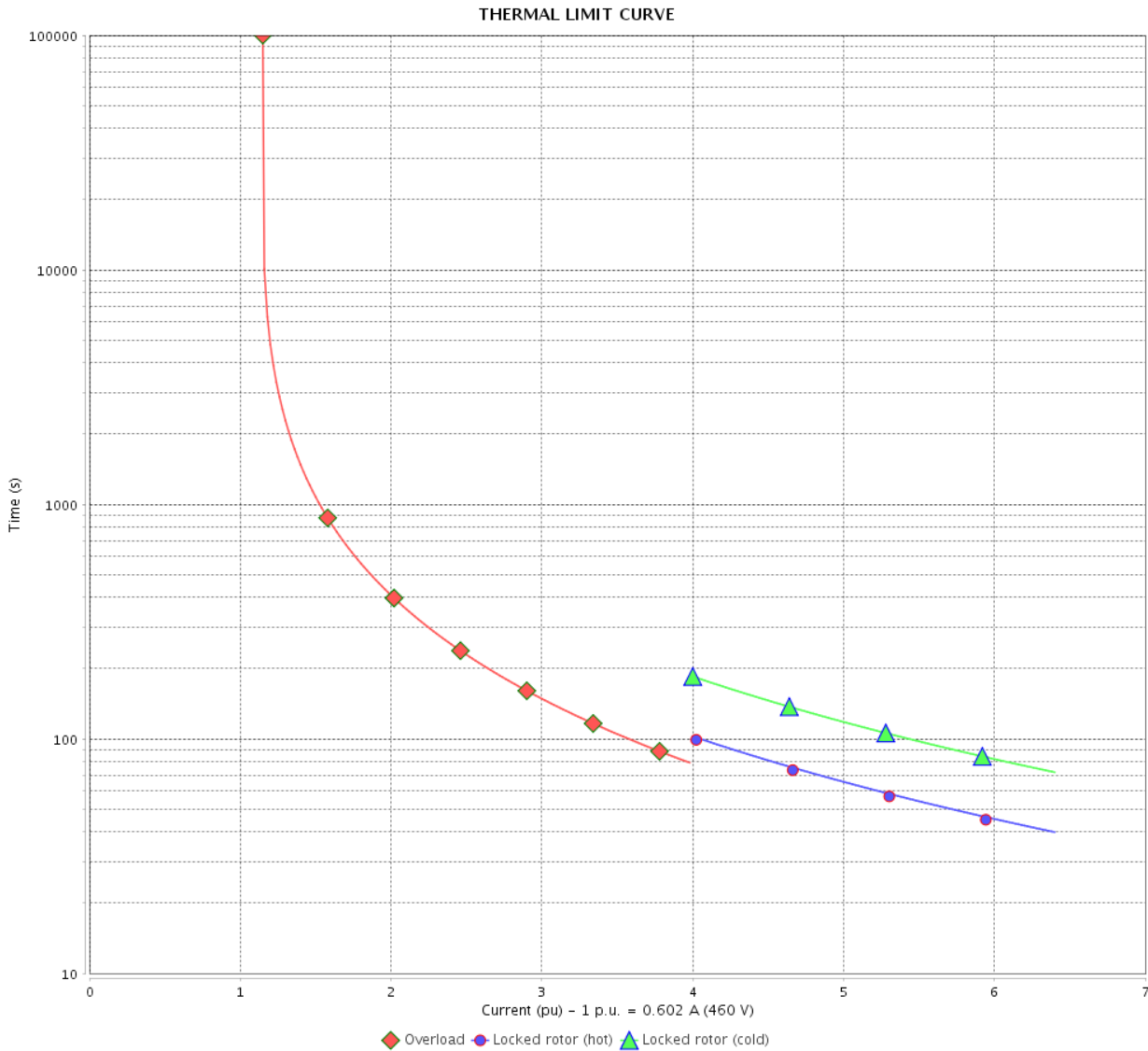
Product line : Standard Efficiency Three-Phase

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

Rated current : 1.33-1.20/0.602 A  
 LRC : 6.4  
 Rated torque : 0.497 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 300 %  
 Rated speed : 3485 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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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

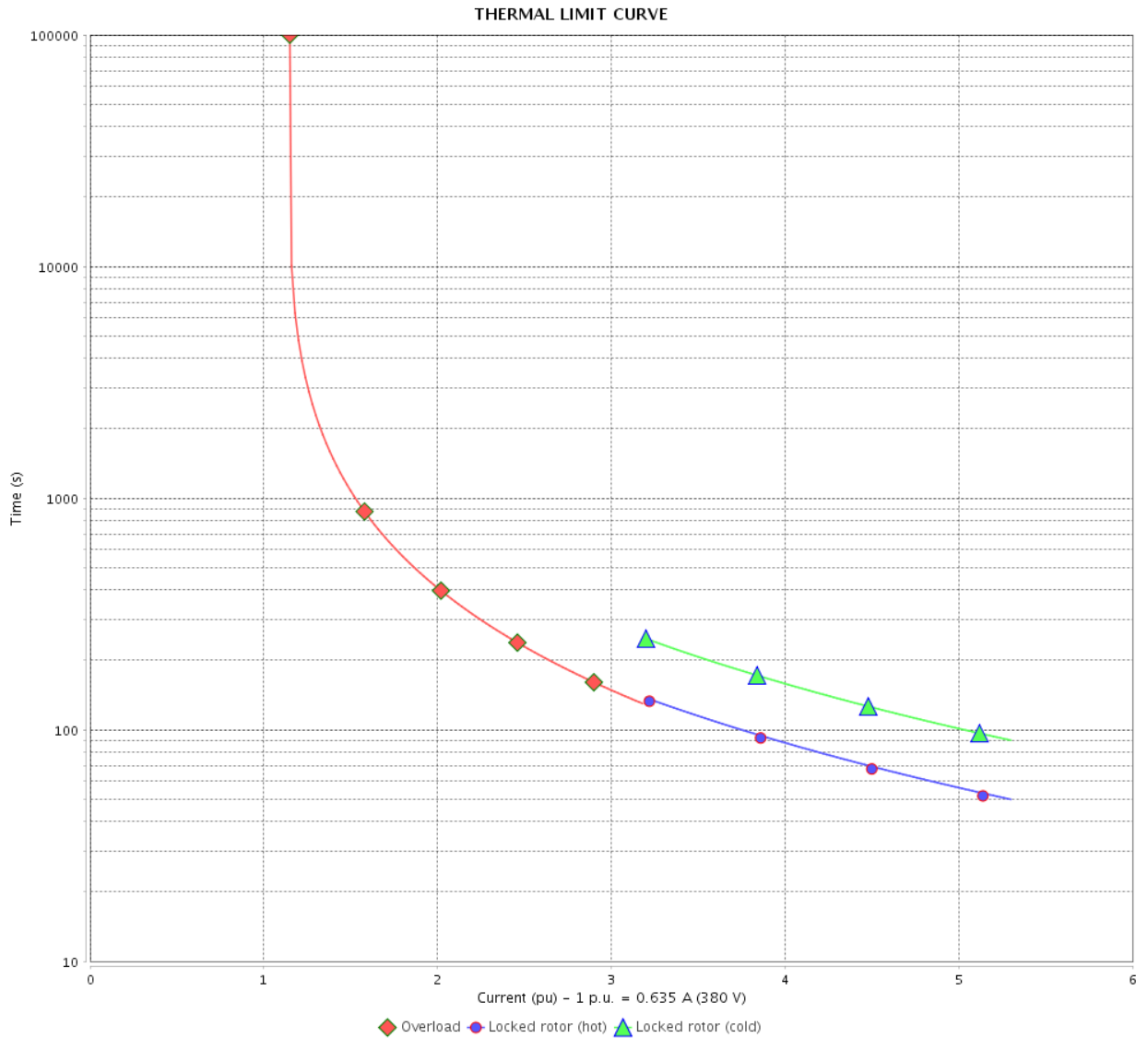
Product line : Standard Efficiency Three-Phase

Product code :

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Catalog # :

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Performance : 190/380 V 50 Hz 2P

Rated current : 1.27/0.635 A  
 LRC : 5.3  
 Rated torque : 0.608 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 240 %  
 Rated speed : 2850 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K

Heating constant

Cooling constant

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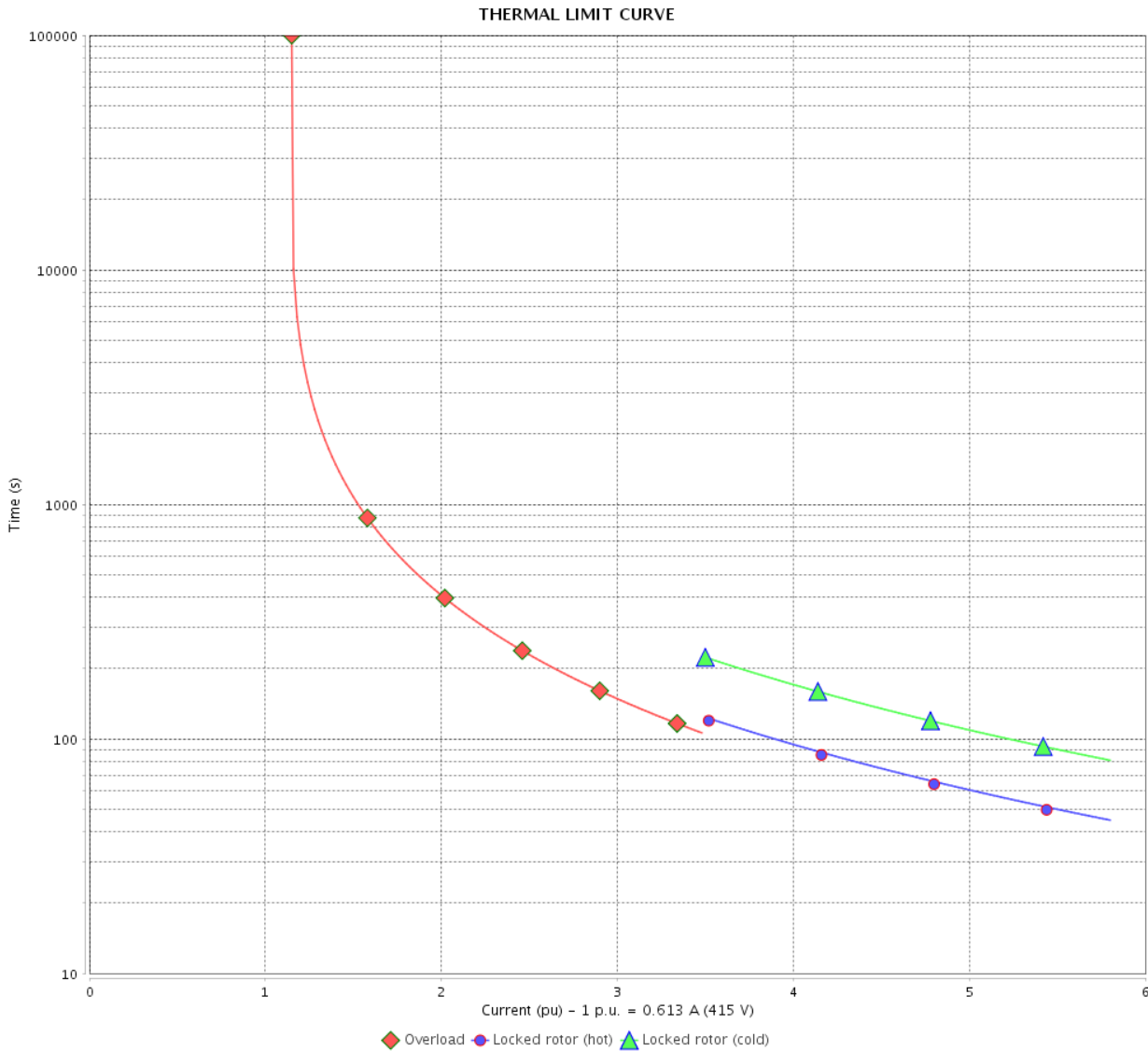
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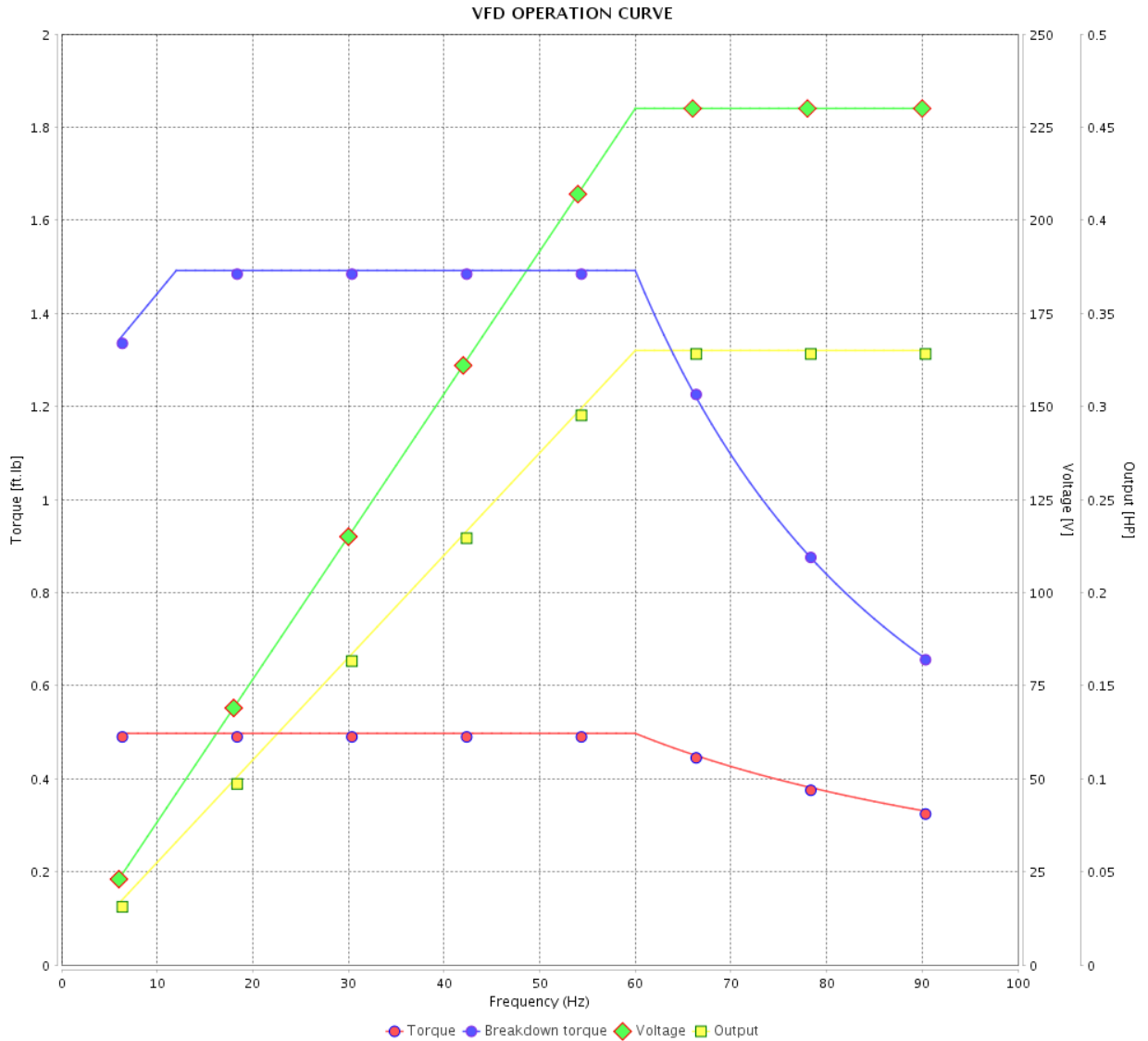
# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage



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 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K

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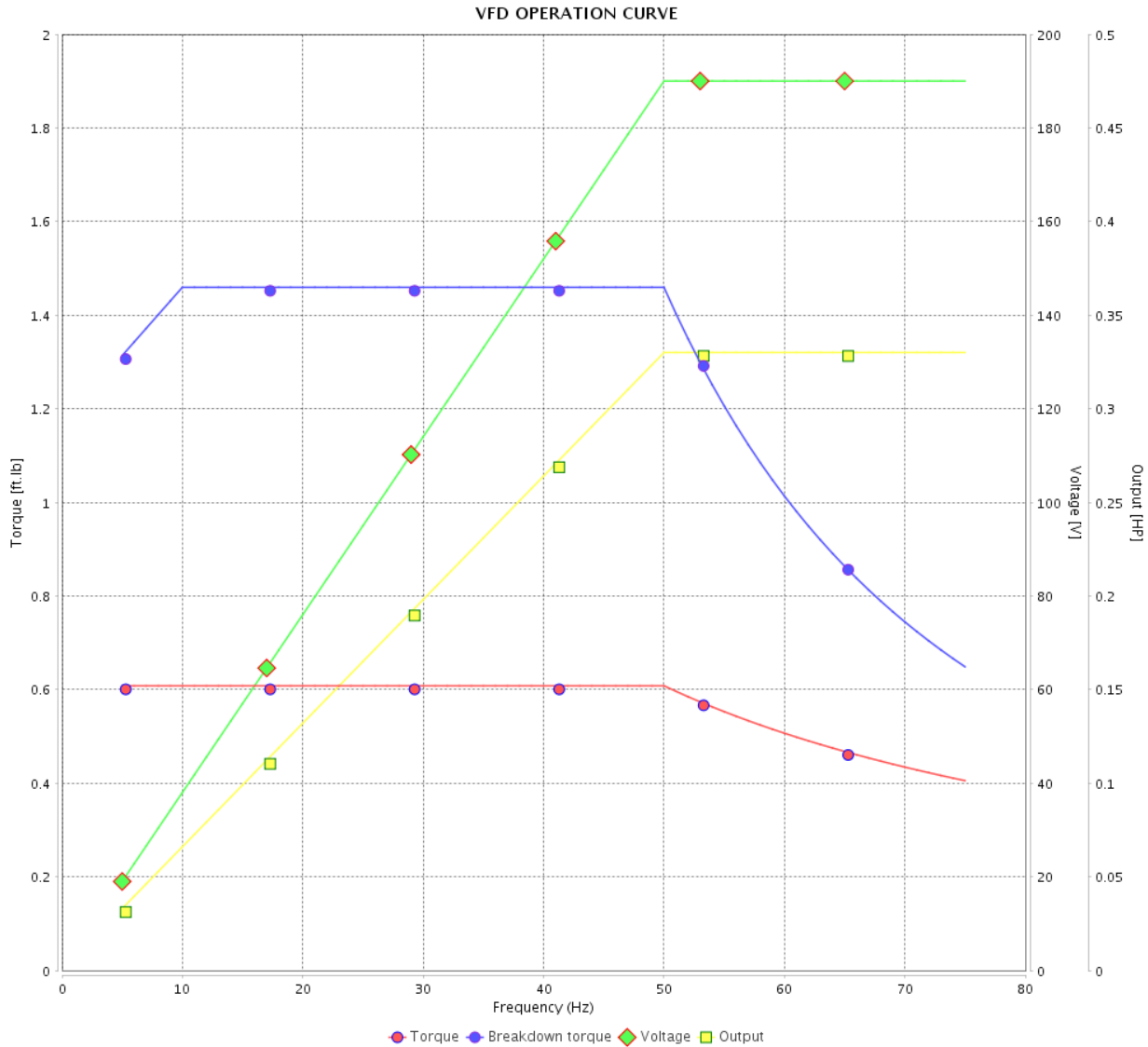
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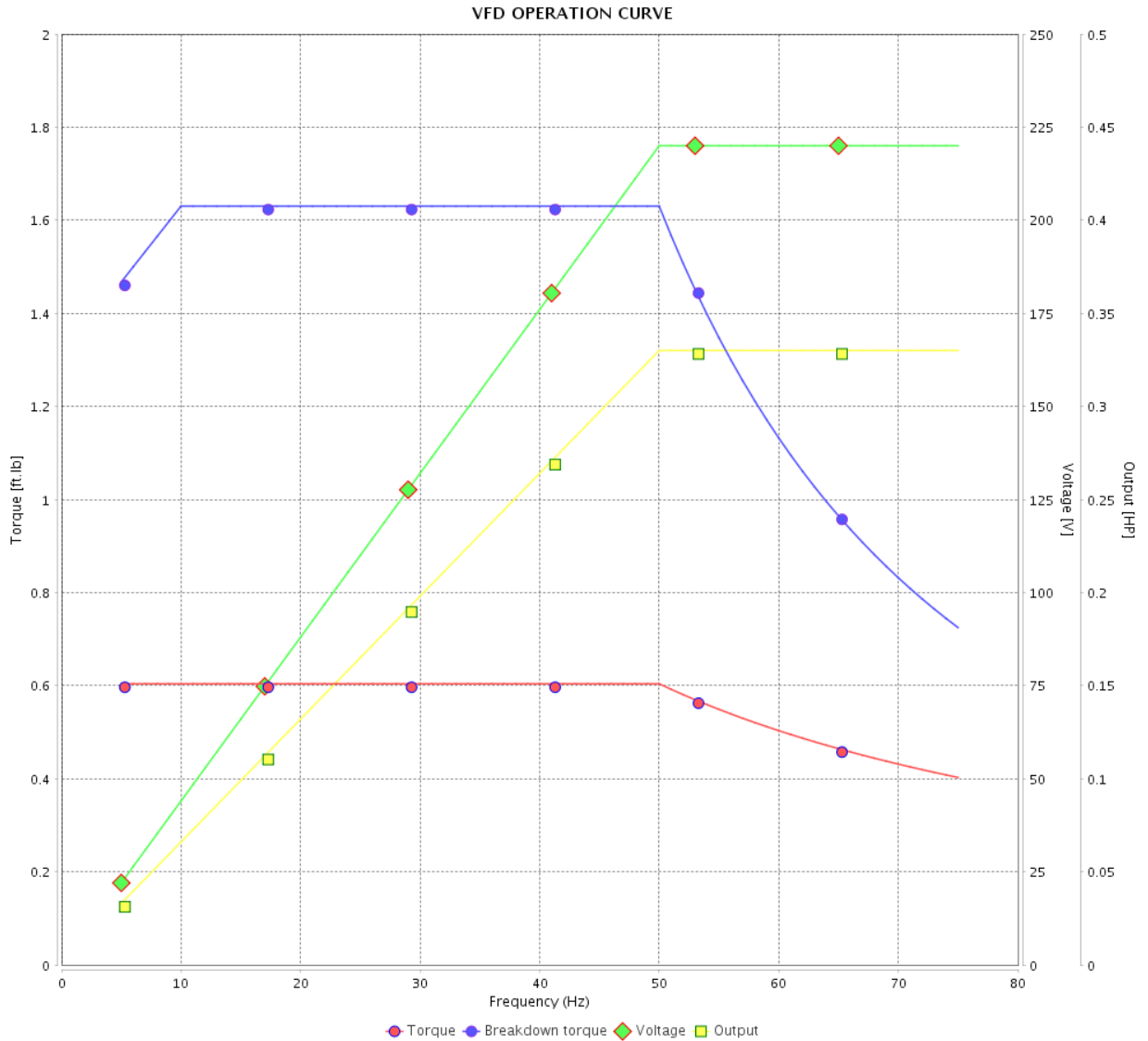
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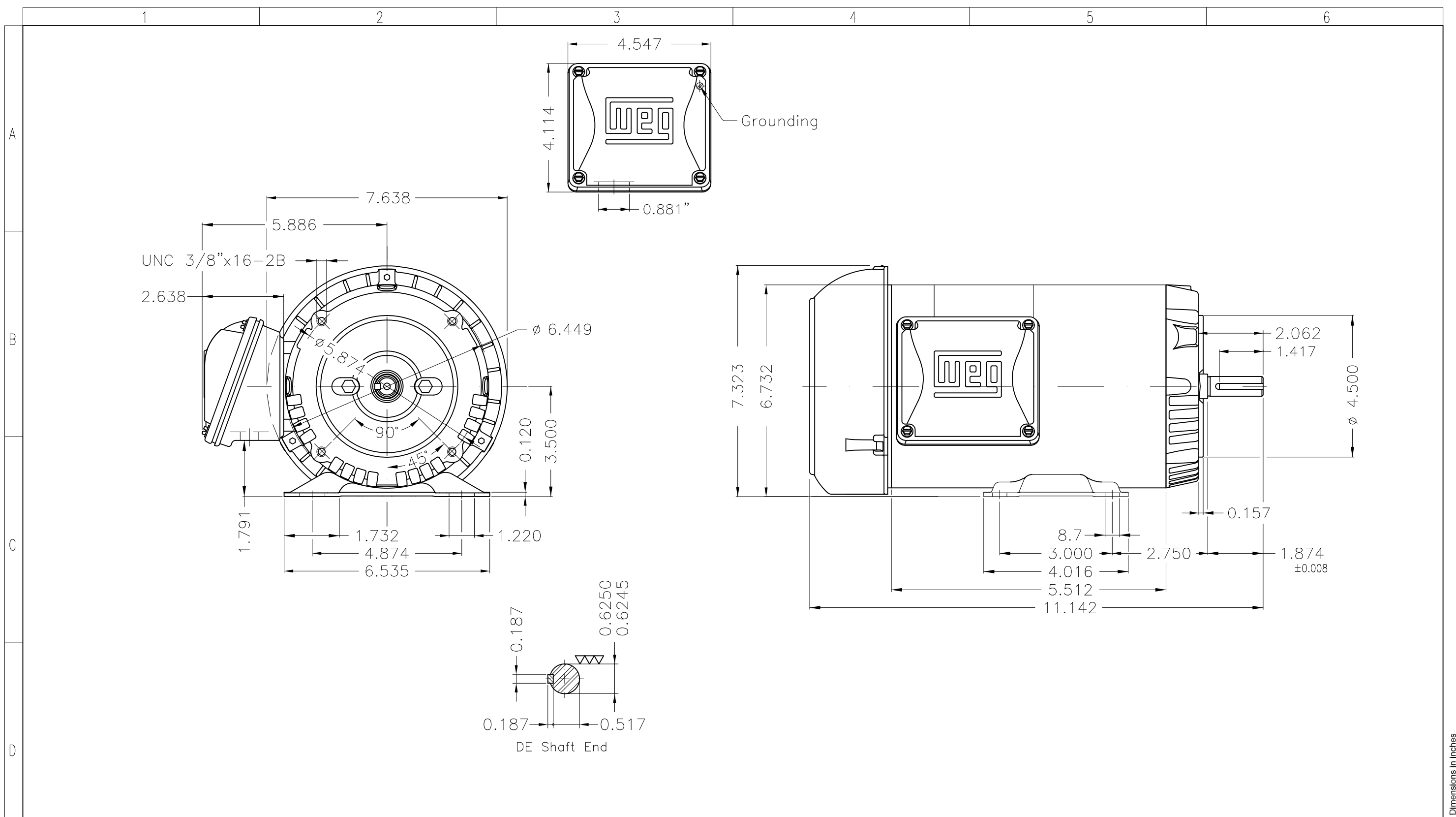


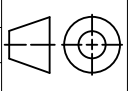

Performance : 220/415 V 50 Hz 2P

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Color Munsell N 1 matte black									
Painting plan 207N									
Mounting F-1/B34R(D)									
ECM	LOC	SUMMARY OF MODIFICATIONS			EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR ROLLED STEEL				<b>PREVIEW</b> <b>WDD</b>			SHEET 1 / 1
CHECKED		FRAME 56C IP55 TEFC							
RELEASED									
REL DT.		WMO	Jaragua do Sul	Product Engineering					

0.33 HP 02 Poles 60 Hz



MADE IN MEXICO

**MAT: 12805240**

**W01.TE0IC0X0X**

**MODEL .3336ES3E56C-S  
19SET2019**

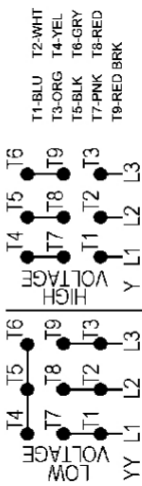
**For 60Hz: Class I, Zone 2, IIC  
Class I, Div.2, Gr. A,B,C,D - T3  
Div 2 Inverter Duty (SF1.00)  
CT 2:1/VT 1000:1**

<b>PH 3</b>	<b>FR</b>	<b>56C</b>	<b>HP(KW)</b>	<b>0.33(0.25)</b>	<b>Hz</b>	<b>60</b>
<b>V</b>	<b>230/460</b>		<b>RPM</b>	<b>3485</b>		
<b>A</b>	<b>1.20/0.602</b>		<b>DUTY CONT.</b>			

<b>SFA</b>	<b>1.38/0.692</b>	<b>INS CL F</b>	<b>AT</b>	<b>80K</b>	<b>AMB</b>	<b>40°C</b>	<b>ENCL</b>	<b>TEFC</b>
<b>PF</b>	<b>0.84</b>	<b>NEMA NOM.EFF.</b>		<b>62.0%</b>				

**ALT 1000 m.a.s.l. USABLE @ 208V 1.33A SF1.00**

**ALTERNATE RATING: 0.33HP 50Hz 190-220/380-415V SF1.15  
1.27-1.14/0.635-0.604A 2850RPM EFF 67.2% (IE2) IEC 60034-1**



**INTERCHANGE ANY TWO LINE WIRES TO REVERSE THE ROTATION**

**For safe area-Inverter duty motor For 60Hz use on VPWM 1000:1 VT, 10:1 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.**

