

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer	:		
Product line	: Premium Efficiency Three-Phase	Product code :	14799000
		Catalog # :	00158ET3E56C-S
Frame	: 56HC	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>3</sup>	: 38.0 lb
Protection degree	: IP55	Moment of inertia (J)	: 0.1101 sq.ft.lb
Design	: B		
Output [HP]	1.5	1.5	1.5
Poles	4	4	4
Frequency [Hz]	60	50	50
Rated voltage [V]	230/460	190/380	220/415
Rated current [A]	4.04/2.02	4.82/2.41	4.38/2.32
L. R. Amperes [A]	33.1/16.6	29.4/14.7	29.3/15.5
LRC [A]	8.2x(Code K)	6.1x(Code H)	6.7x(Code J)
No load current [A]	2.17/1.08	2.13/1.07	2.20/1.17
Rated speed [RPM]	1750	1420	1430
Slip [%]	2.78	5.33	4.67
Rated torque [ft.lb]	4.50	5.55	5.51
Locked rotor torque [%]	270	210	240
Breakdown torque [%]	300	250	280
Service factor		1.15	1.15
Temperature rise	80 K	80 K	80 K
Locked rotor time	37s (cold) 21s (hot)	36s (cold) 20s (hot)	34s (cold) 19s (hot)
Noise level <sup>2</sup>	52.0 dB(A)	49.0 dB(A)	49.0 dB(A)
Efficiency (%)	25%	85.2	85.0
	50%	85.5	84.2
	75%	86.5	84.9
	100%	86.5	83.6
Power Factor	25%	0.35	0.37
	50%	0.59	0.62
	75%	0.72	0.75
	100%	0.79	0.82
Bearing type	: <u>Drive end</u> 6204 ZZ	<u>Non drive end</u> 6202 ZZ	Foundation loads
Sealing	: V'Ring	Without Bearing Seal	Max. traction : 132 lb
Lubrication interval	: -	-	Max. compression : 170 lb
Lubricant amount	: -	-	
Lubricant type	: Mobil Polyrex EM		
Notes USABLE @208V 4.47A SF 1.00 SFA 4.47A			
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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			Date
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# TORQUE AND CURRENT VS SPEED CURVE

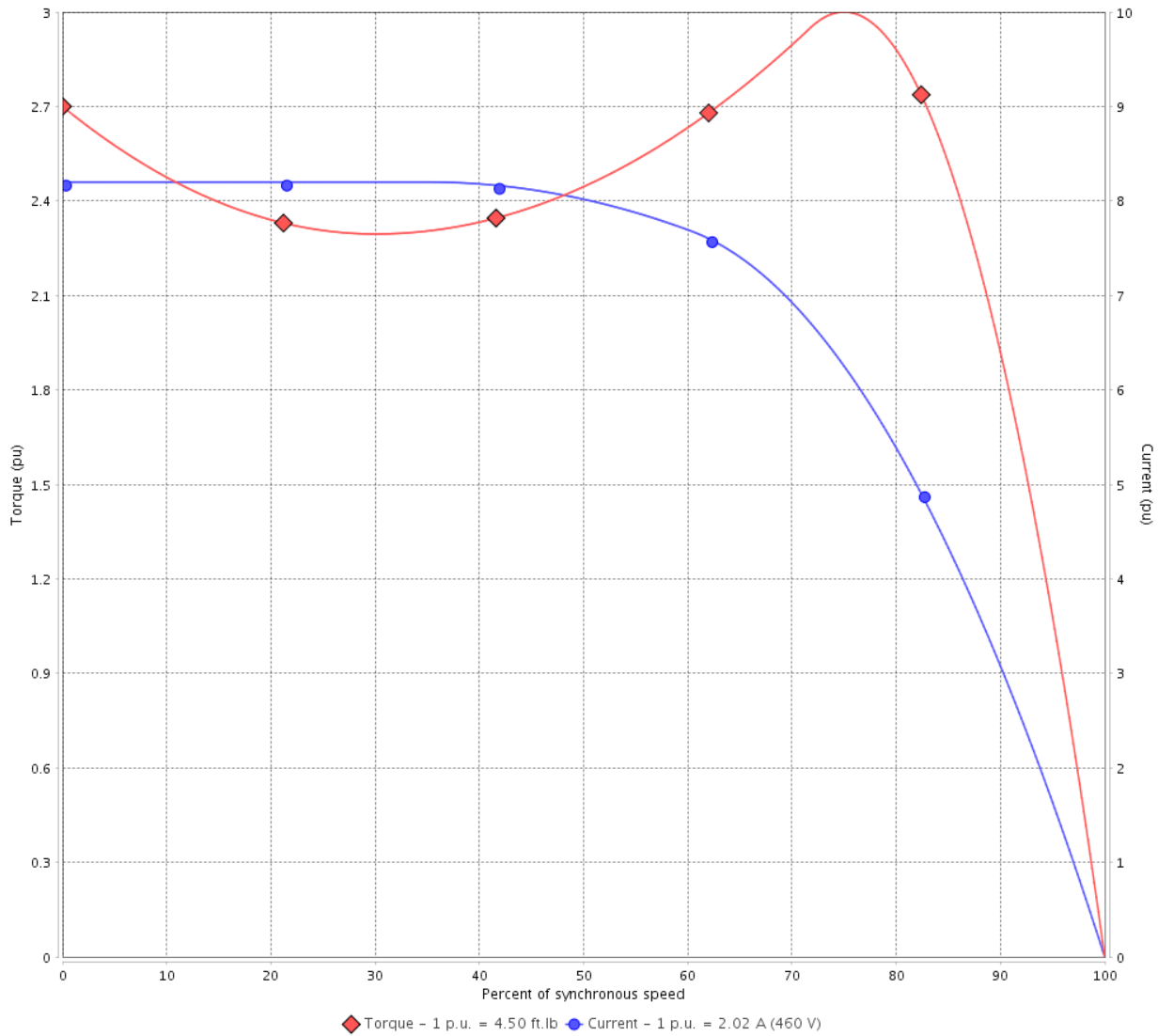
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Premium Efficiency Three-Phase      Product code : 14799000  
 Catalog # : 00158ET3E56C-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current	: 4.04/2.02 A	Moment of inertia (J)	: 0.1101 sq.ft.lb
LRC	: 8.2	Duty cycle	: Cont.(S1)
Rated torque	: 4.50 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	:
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1750 rpm	Design	: B

Locked rotor time : 37s (cold) 21s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



## Three Phase Induction Motor - Squirrel Cage

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

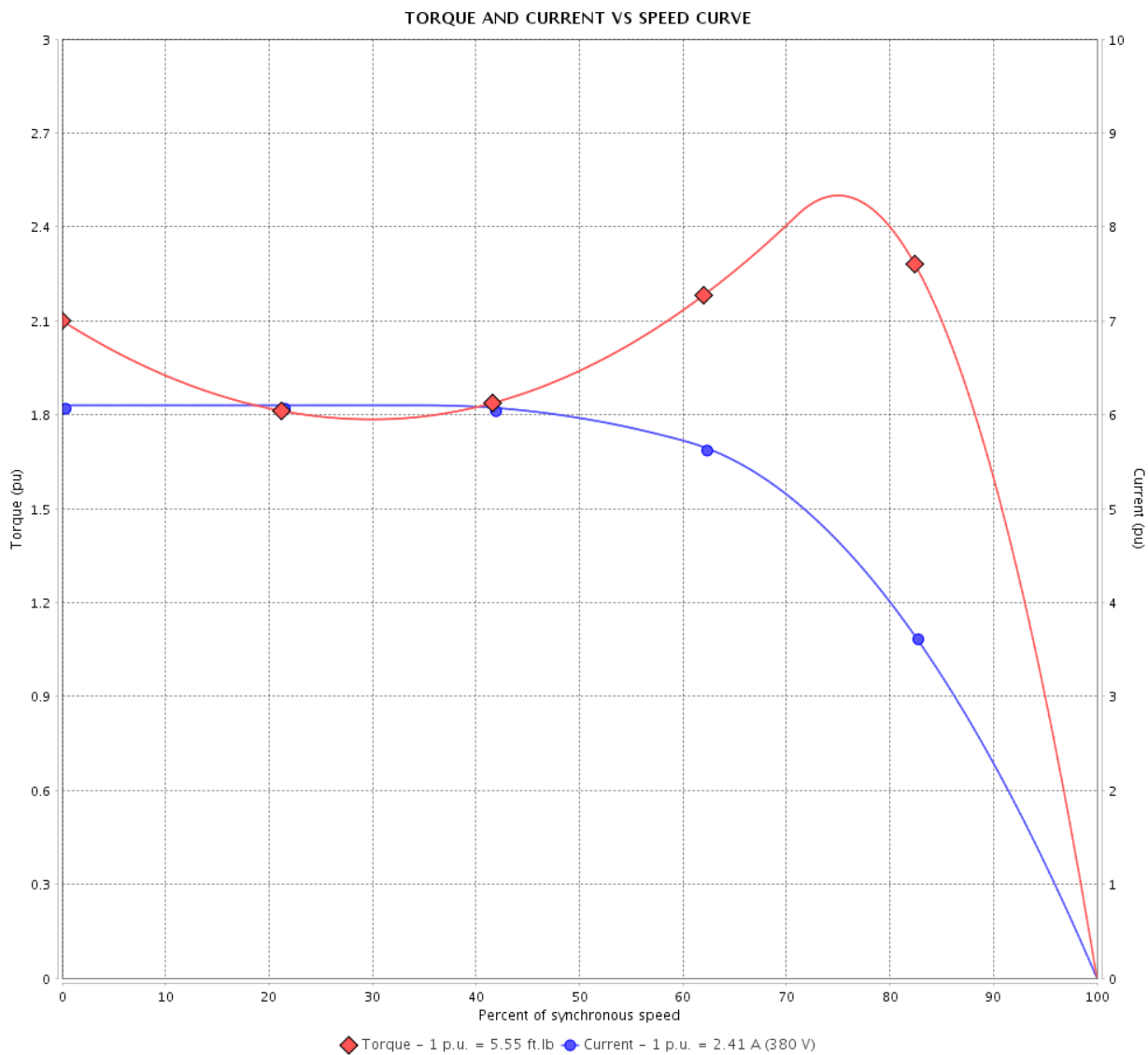
Product line : Premium Efficiency Three-Phase

Product code :

14799000

Catalog # :

00158ET3E56C-S



Performance : 190/380 V 50 Hz 4P

Rated current : 4.82/2.41 A  
 LRC : 6.1  
 Rated torque : 5.55 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 250 %  
 Rated speed : 1420 rpm

Moment of inertia (J) : 0.1101 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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

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Date	12/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

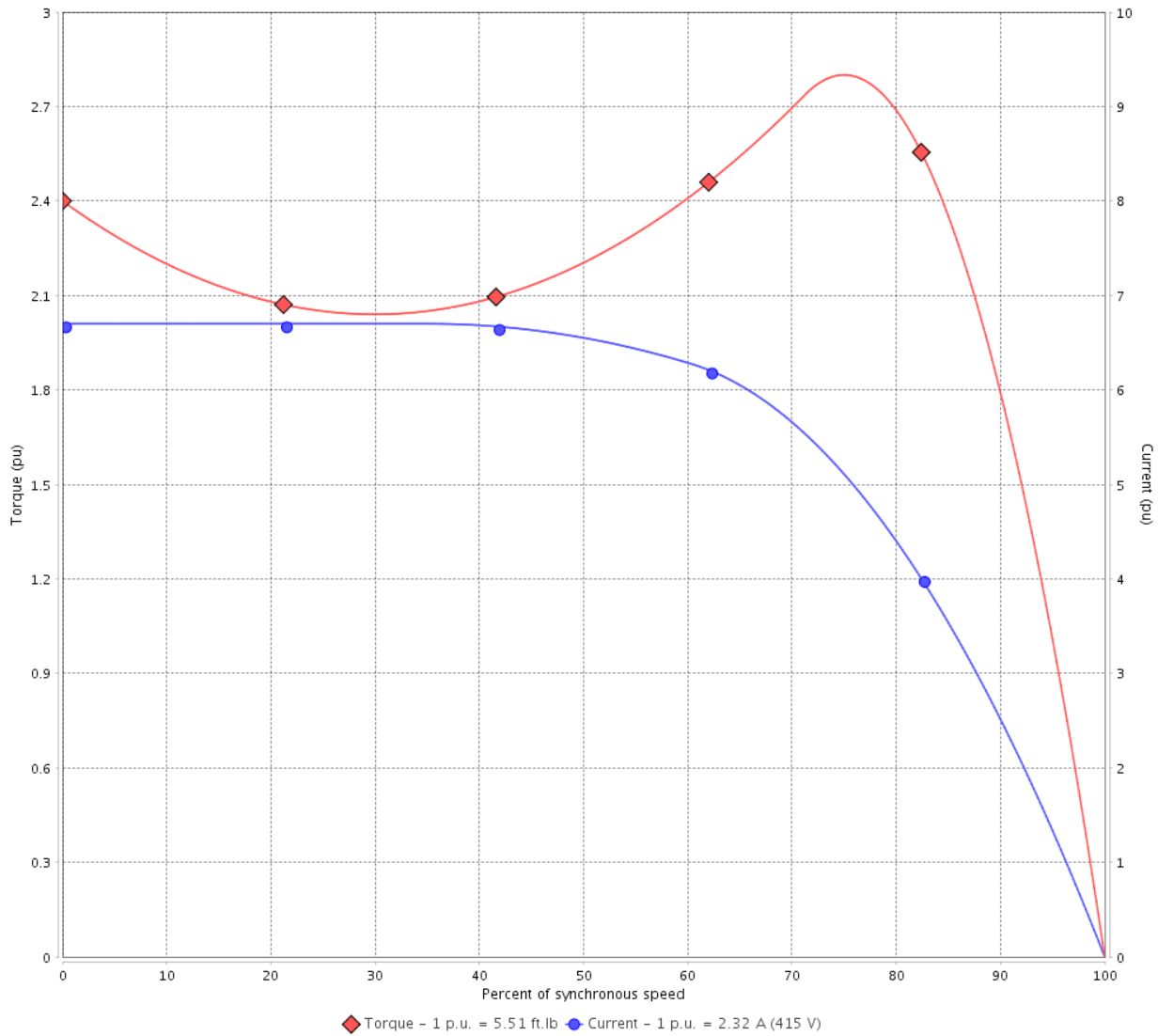
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Premium Efficiency Three-Phase      Product code : 14799000  
 Catalog # : 00158ET3E56C-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 4P

Rated current	: 4.38/2.32 A	Moment of inertia (J)	: 0.1101 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 5.51 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.15
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1430 rpm	Design	: B

Locked rotor time : 34s (cold) 19s (hot)

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

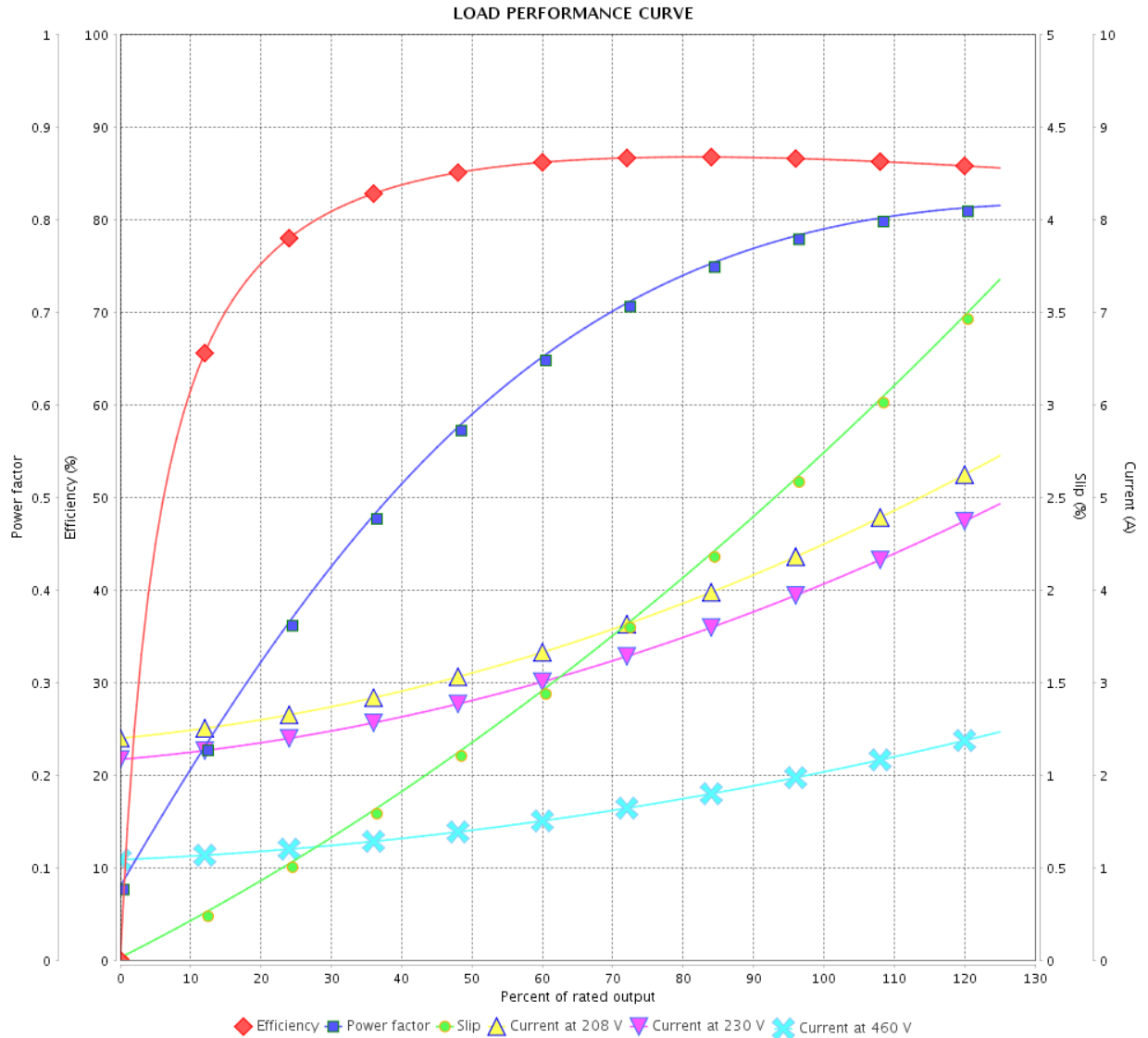
Product line : Premium Efficiency Three-Phase

Product code :

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Catalog # :

00158ET3E56C-S



Performance : 230/460 V 60 Hz 4P

Rated current : 4.04/2.02 A  
 LRC : 8.2  
 Rated torque : 4.50 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 300 %  
 Rated speed : 1750 rpm

Moment of inertia (J) : 0.1101 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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Date				

# LOAD PERFORMANCE CURVE

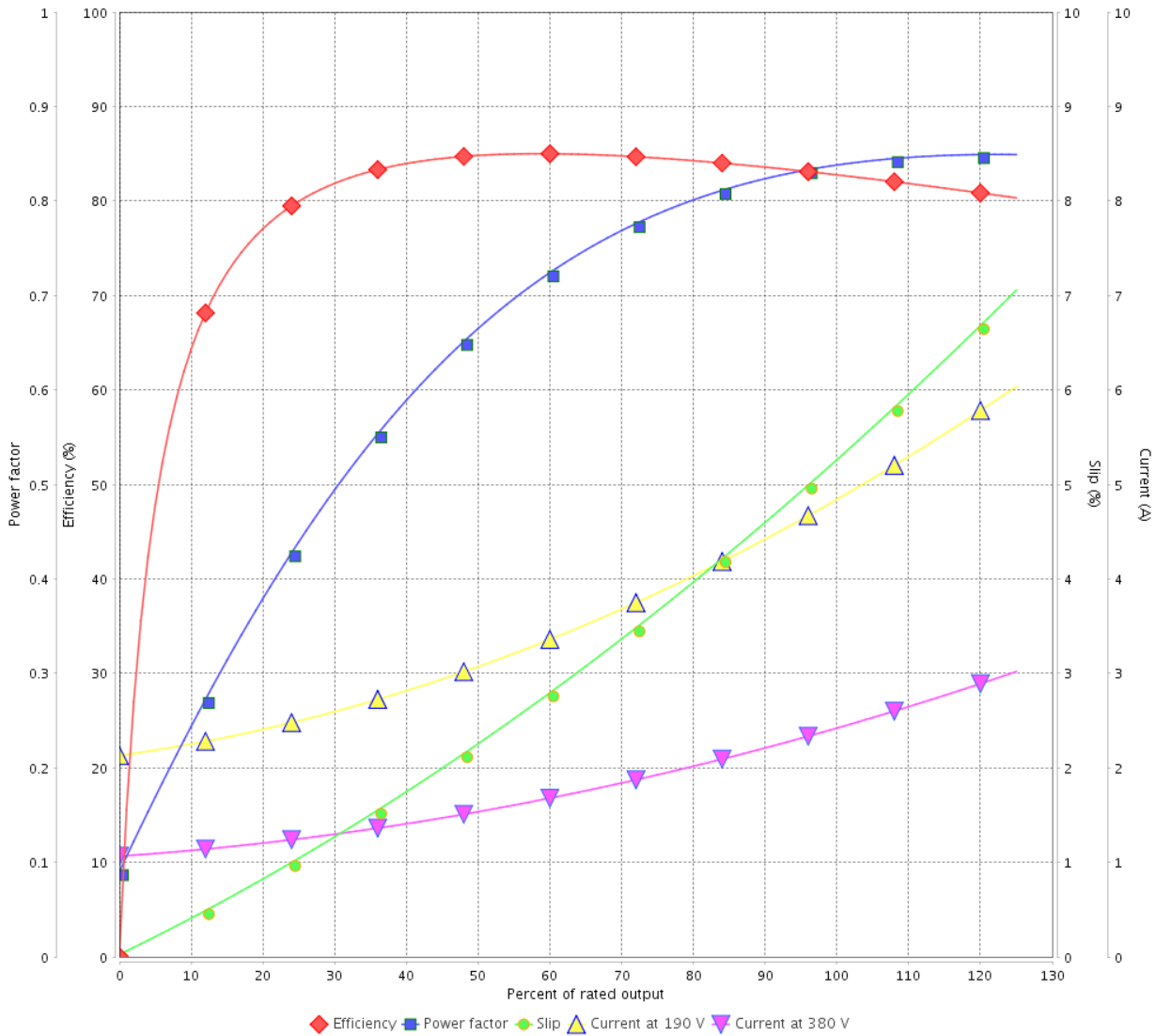
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Customer : \_\_\_\_\_

Product line : Premium Efficiency Three-Phase      Product code : 14799000  
 Catalog # : 00158ET3E56C-S

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 4P

Rated current : 4.82/2.41 A  
 LRC : 6.1  
 Rated torque : 5.55 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 250 %  
 Rated speed : 1420 rpm

Moment of inertia (J) : 0.1101 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



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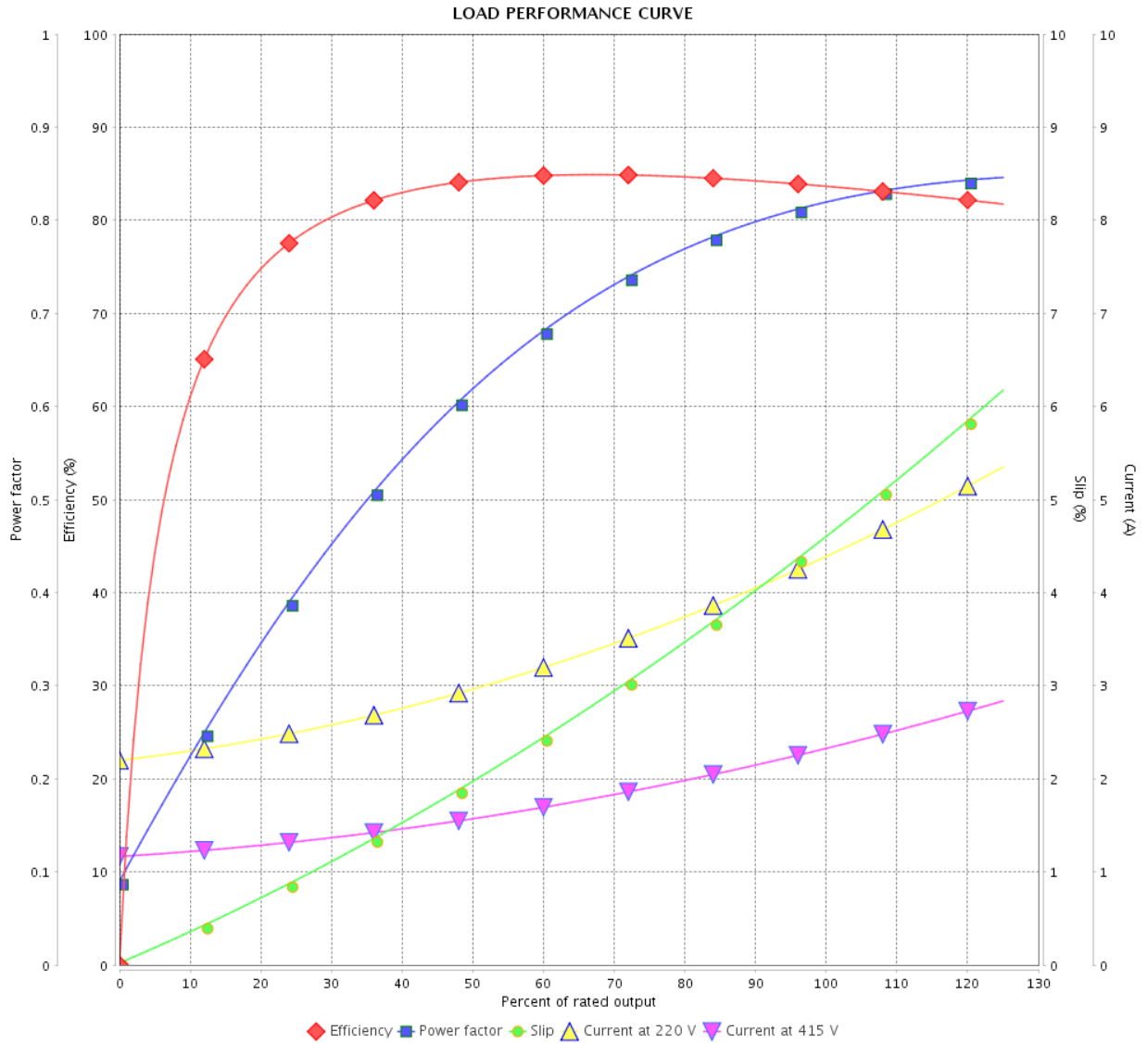
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Product code :

14799000

Catalog # :

00158ET3E56C-S



Performance : 220/415 V 50 Hz 4P

Rated current : 4.38/2.32 A  
 LRC : 6.7  
 Rated torque : 5.51 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 280 %  
 Rated speed : 1430 rpm

Moment of inertia (J) : 0.1101 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



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

Product line : Premium Efficiency Three-Phase

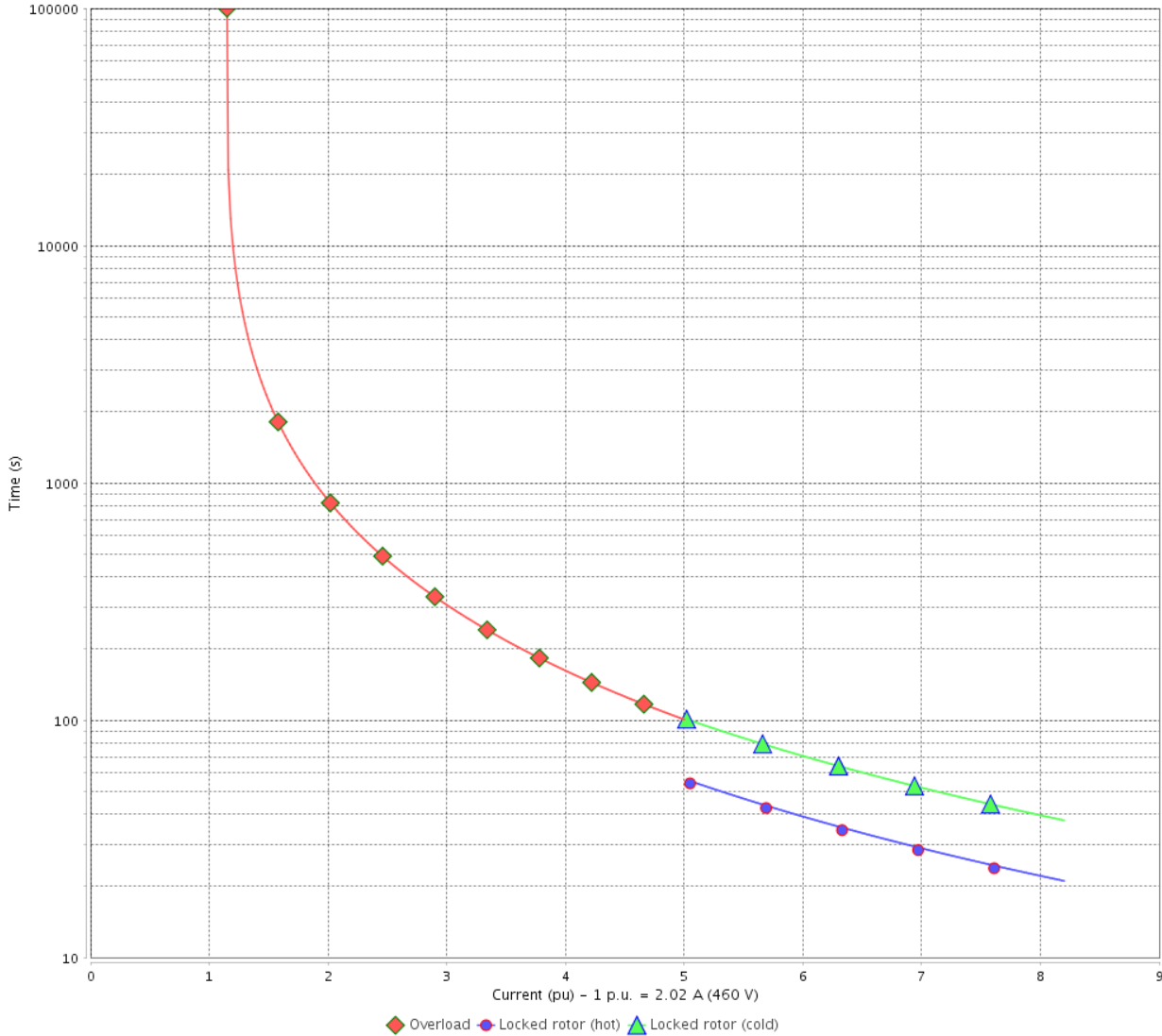
Product code :

14799000

Catalog # :

00158ET3E56C-S

THERMAL LIMIT CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 4.04/2.02 A  
 LRC : 8.2  
 Rated torque : 4.50 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 300 %  
 Rated speed : 1750 rpm

Moment of inertia (J) : 0.1101 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

Heating constant

Cooling constant

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Date				



# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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

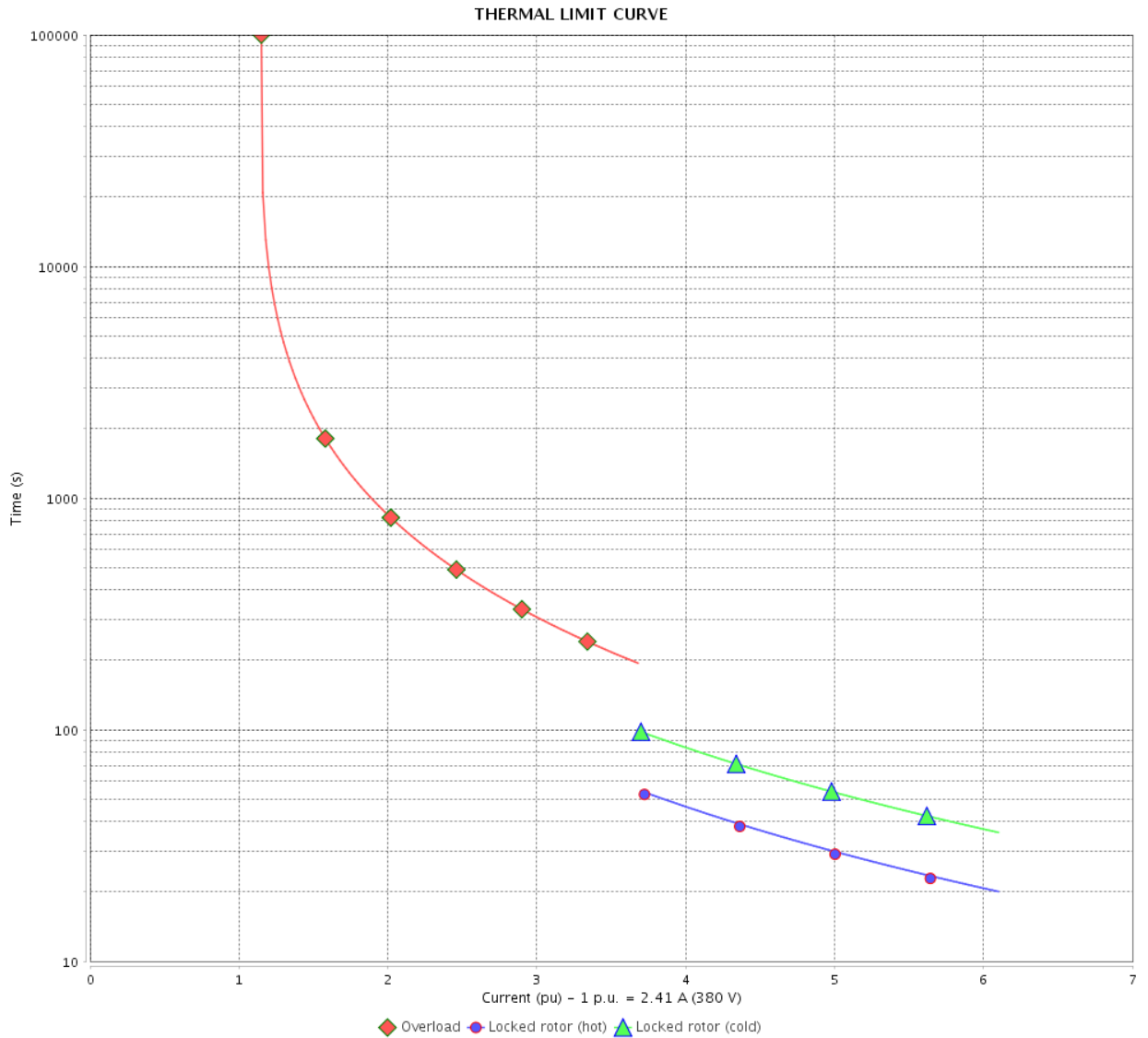
Product line : Premium Efficiency Three-Phase

Product code :

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Catalog # :

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Performance : 190/380 V 50 Hz 4P

Rated current : 4.82/2.41 A  
 LRC : 6.1  
 Rated torque : 5.55 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 250 %  
 Rated speed : 1420 rpm

Moment of inertia (J) : 0.1101 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Heating constant

Cooling constant

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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



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

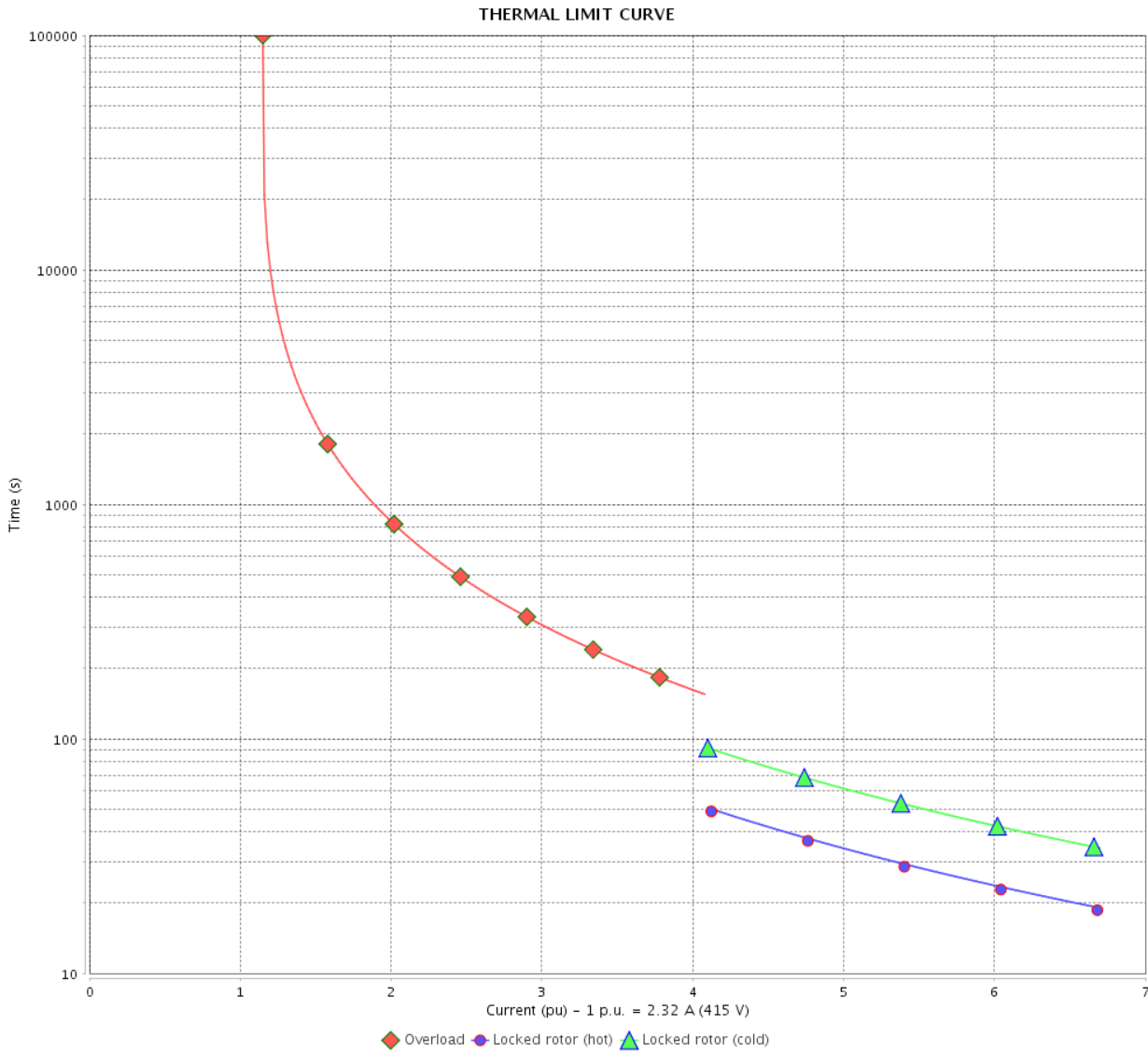
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Performance : 220/415 V 50 Hz 4P

Rated current : 4.38/2.32 A  
 LRC : 6.7  
 Rated torque : 5.51 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 280 %  
 Rated speed : 1430 rpm

Moment of inertia (J) : 0.1101 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Heating constant

Cooling constant

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# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage



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

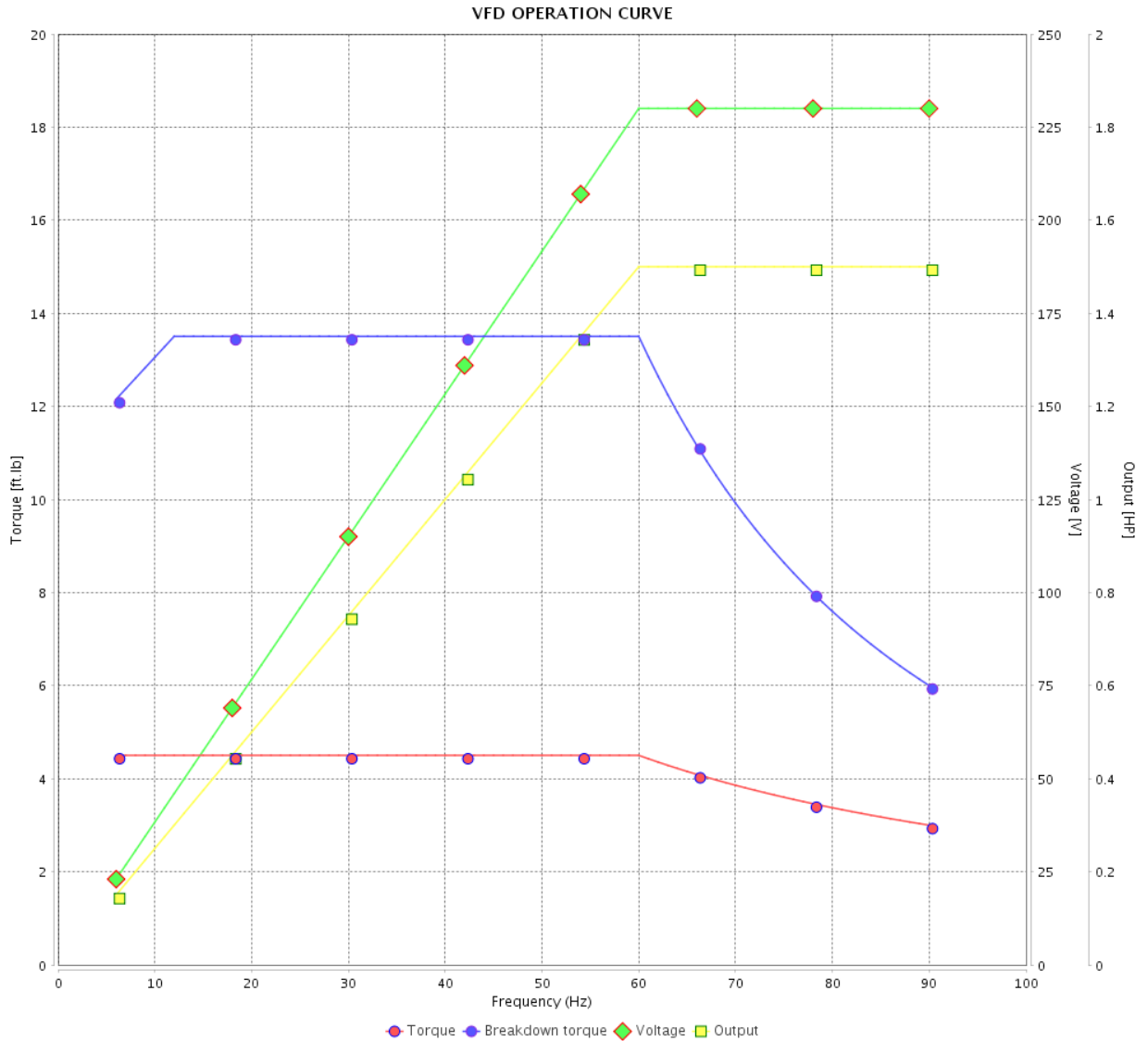
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Product code :

14799000

Catalog # :

00158ET3E56C-S



Performance : 230/460 V 60 Hz 4P

Rated current : 4.04/2.02 A  
 LRC : 8.2  
 Rated torque : 4.50 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 300 %  
 Rated speed : 1750 rpm

Moment of inertia (J) : 0.1101 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

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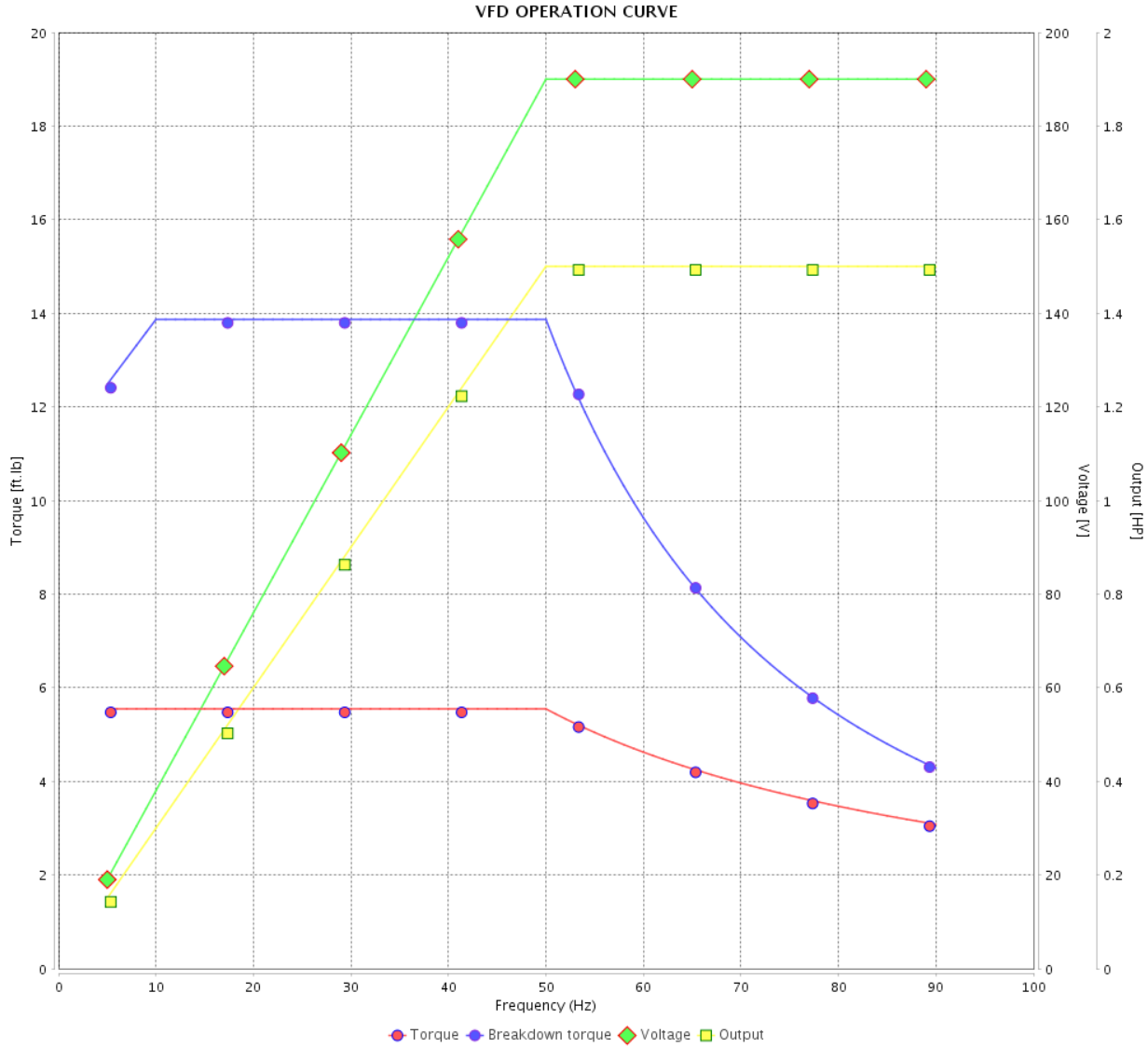
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Performance : 190/380 V 50 Hz 4P

Rated current : 4.82/2.41 A  
 LRC : 6.1  
 Rated torque : 5.55 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 250 %  
 Rated speed : 1420 rpm

Moment of inertia (J) : 0.1101 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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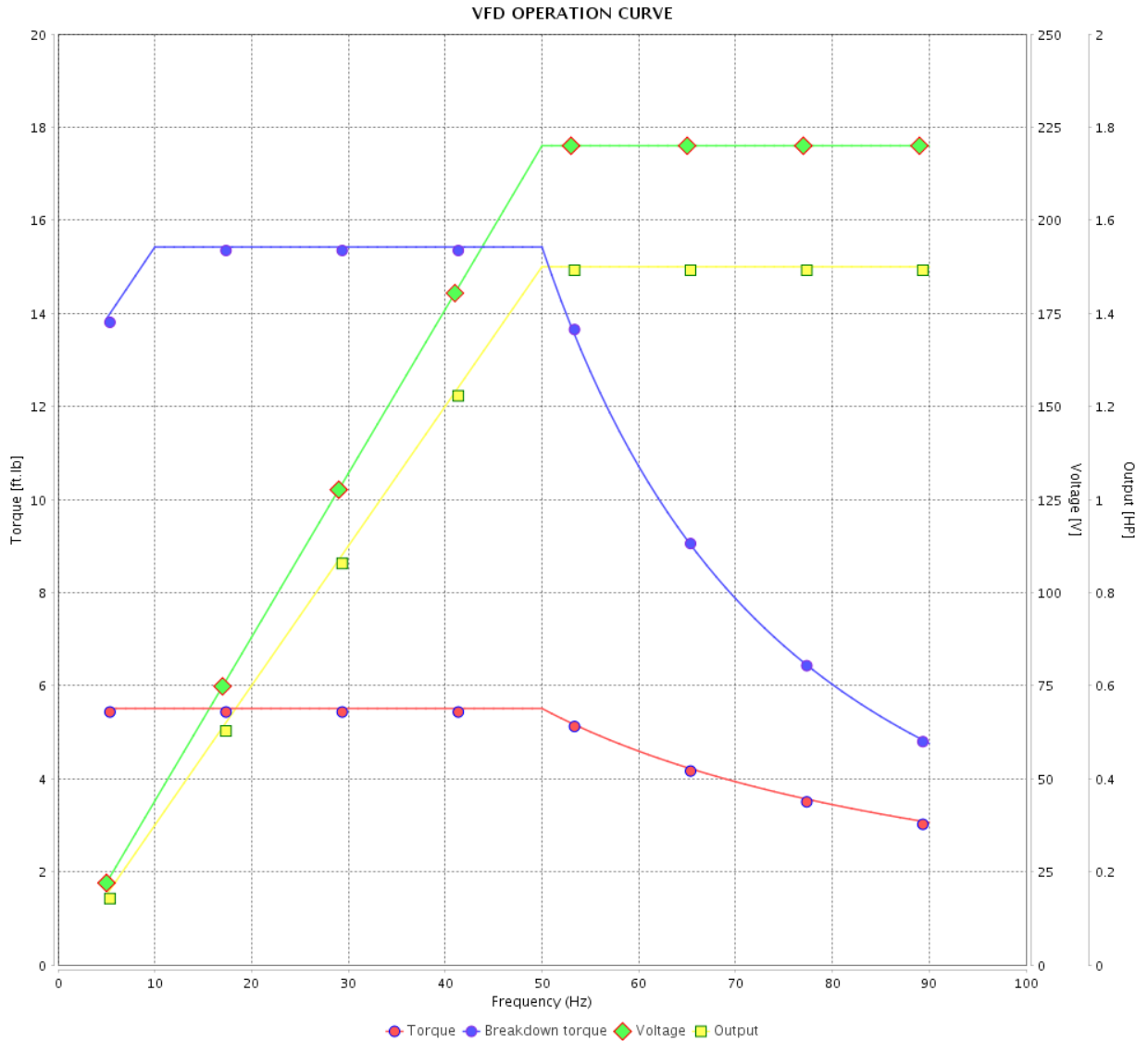
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## Three Phase Induction Motor - Squirrel Cage



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

Product line : Premium Efficiency Three-Phase      Product code : 14799000  
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Performance : 220/415 V 50 Hz 4P

Rated current : 4.38/2.32 A  
 LRC : 6.7  
 Rated torque : 5.51 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 280 %  
 Rated speed : 1430 rpm

Moment of inertia (J) : 0.1101 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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Date				

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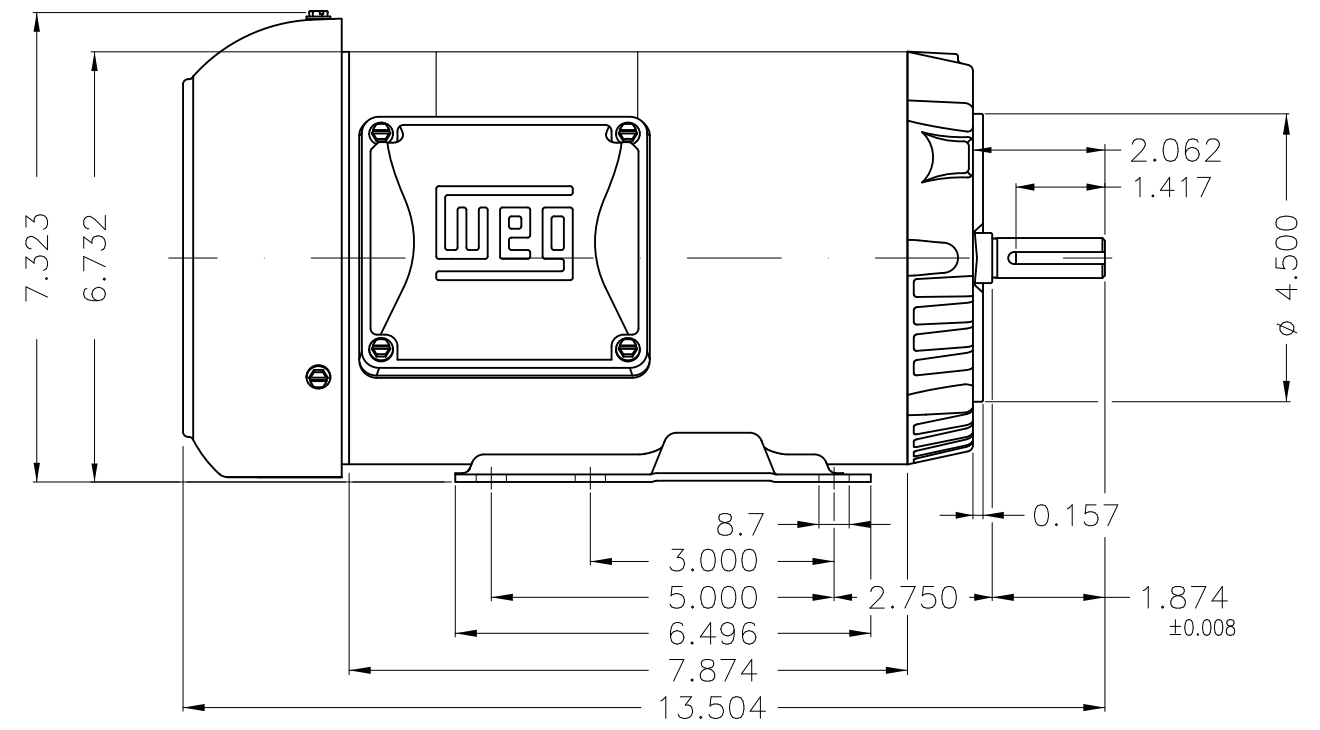
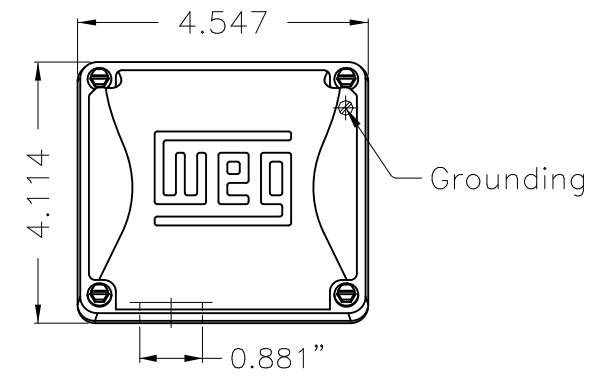
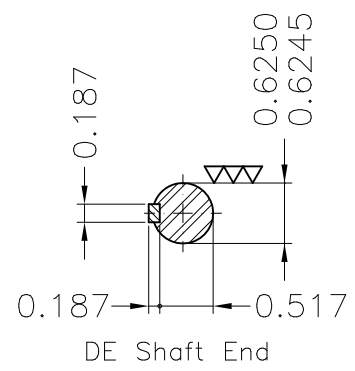
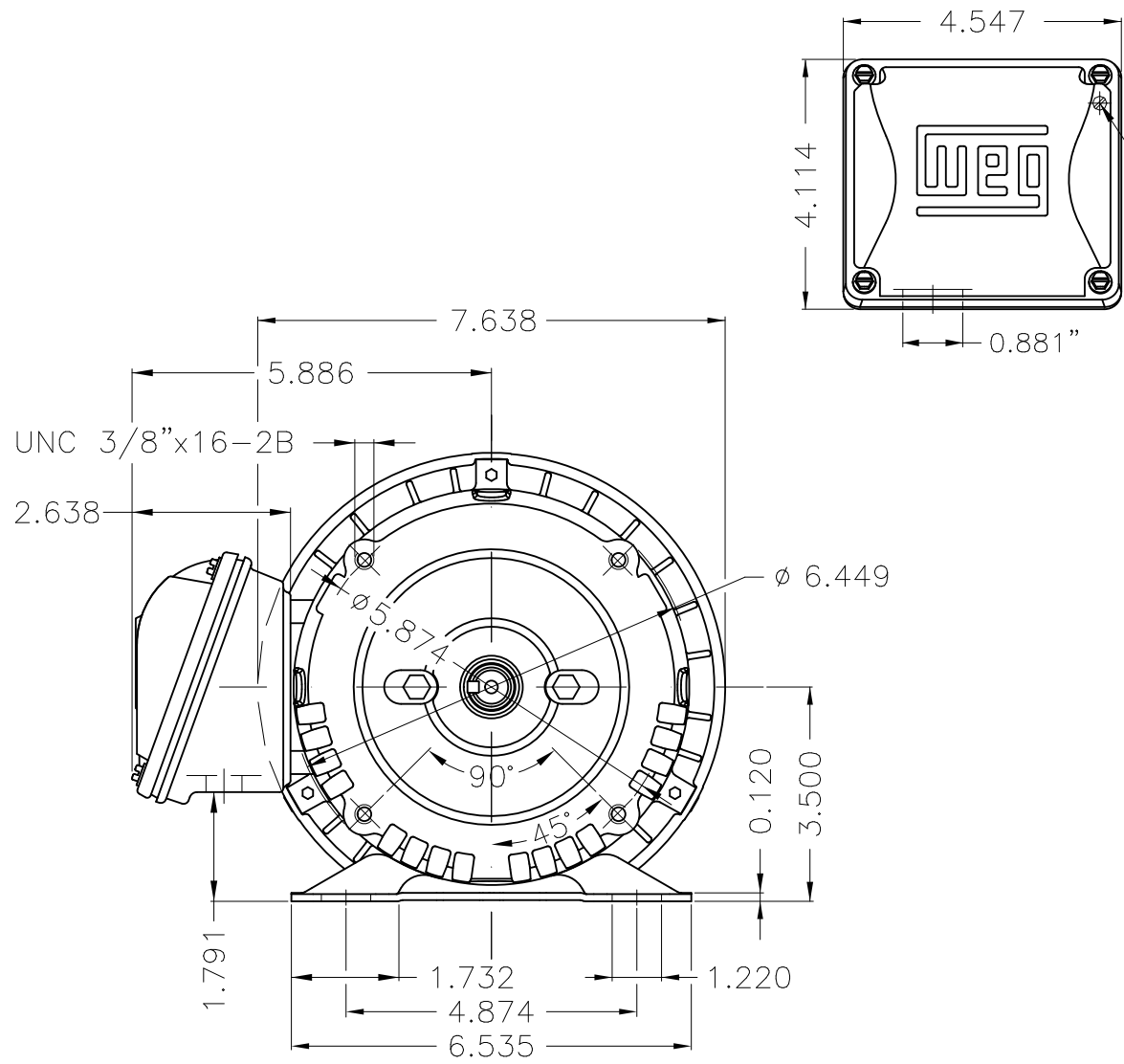
A

B

C

D

E



Fan cover - steel plate  
 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	PIRWBUSER	THREE PH. MOTOR ROLLED STEEL PREM. EFF.					
CHECKED		FRAME 56HC IP55 TEFC					
RELEASED							

1.5 HP 04 Poles 60 Hz

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PREVIEW  
 WDD



Dimensions in inches XME A3



**NEMA**  
**Premium**



MADE IN BRAZIL

**MAT: 14799000 CC029A**  
**W01.TE0IC0X0X**  
**MODEL 00158ET3E56C-S**  
**07APR2022 B/N:**

**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**

PH 3	Hz 60	HP 1.5
FR 56HC		KW 1.1
DUTY CONT.		V 230/460
ALT 1000 m.a.s.l.		A 4.04/2.02
INS CL F AT 80K	IP55	SFA 4.65/2.32
AMB 40°C	DES B	SF 1.15
ENCL TEFC	CODE K	PF 0.79
USABLE @ 208V 4.47A		RPM 1750
SF1.00		NEMA NOM. EFF 86.5%

ALTERNATE RATING: 1.5HP	50Hz	190-220/380-415V	SF1.15
4.82-4.28/2.41-2.27A	1420RPM	EFF 82.7% (IE2)	IEC 60034-1

For safe area-inverter duty motor For 60Hz use on VPWM 1000:1 VT, 5:1 CT

DE 6204-ZZ	ODE 6202-ZZ	MOBIL POLYREX EM
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T1-BLU T2-WHT  
T3-ORG T4-YEL  
T5-BLK T6-GRY  
T7-PNK T8-RED  
T9-BRK RED

INTERCHANGE ANY TWO LINE WIRES TO REVERSE THE ROTATION

**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.

