

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :		
Product line	: Premium Efficiency Three-Phase	
Product code :	14786569	
Catalog # :	00158ET3E56CFL-S	
Frame	: 56C	
Insulation class	: F	
Duty cycle	: Cont.(S1)	
Ambient temperature	: -20°C to +40°C	
Altitude	: 1000 m.a.s.l.	
Protection degree	: IP55	
Design	: B	
Cooling method	: IC411 - TEFC	
Mounting	: F-1	
Rotation ¹	: Both (CW and CCW)	
Starting method	: Direct On Line	
Approx. weight ²	: 36.6 lb	
Moment of inertia (J)	: 0.1101 sq.ft.lb	
Output [HP]	1.5	
Poles	4	
Frequency [Hz]	60	
Rated voltage [V]	230/460	
Rated current [A]	4.04/2.02	
L. R. Amperes [A]	33.1/16.6	
LRC [A]	8.2x(Code K)	
No load current [A]	2.17/1.08	
Rated speed [RPM]	1750	
Slip [%]	2.78	
Rated torque [ft.lb]	4.50	
Locked rotor torque [%]	270	
Breakdown torque [%]	300	
Service factor	1.15	
Temperature rise	80 K	
Locked rotor time	37s (cold) 21s (hot)	
Noise level ²	52.0 dB(A)	
Efficiency (%)	25%	85.2
	50%	85.5
	75%	86.5
	100%	86.5
Power Factor	25%	0.35
	50%	0.59
	75%	0.72
	100%	0.79
Bearing type	: <u>Drive end</u> 6204 ZZ <u>Non drive end</u> 6202 ZZ	
Sealing	: V'Ring Without Bearing Seal	
Lubrication interval	: - -	
Lubricant amount	: - -	
Lubricant type	: Mobil Polyrex EM	
Foundation loads	Max. traction : 133 lb	
	Max. compression : 170 lb	
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.		
Rev.	Changes Summary	
Performed by	Performed	
Checked by	Checked	
Date	Date	
12/04/2022		
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TORQUE AND CURRENT VS SPEED CURVE

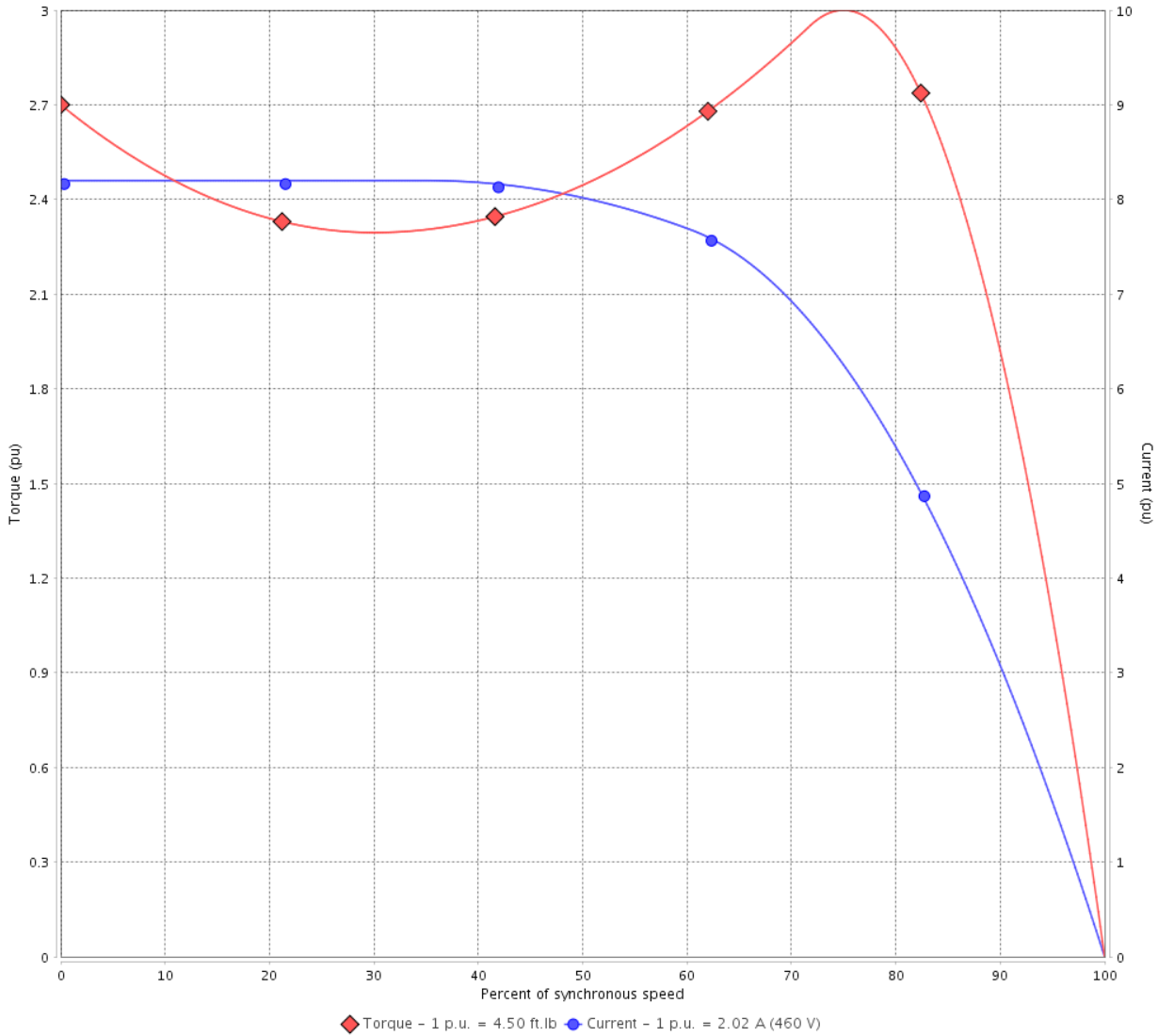
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Premium Efficiency Three-Phase Product code : 14786569
 Catalog # : 00158ET3E56CFL-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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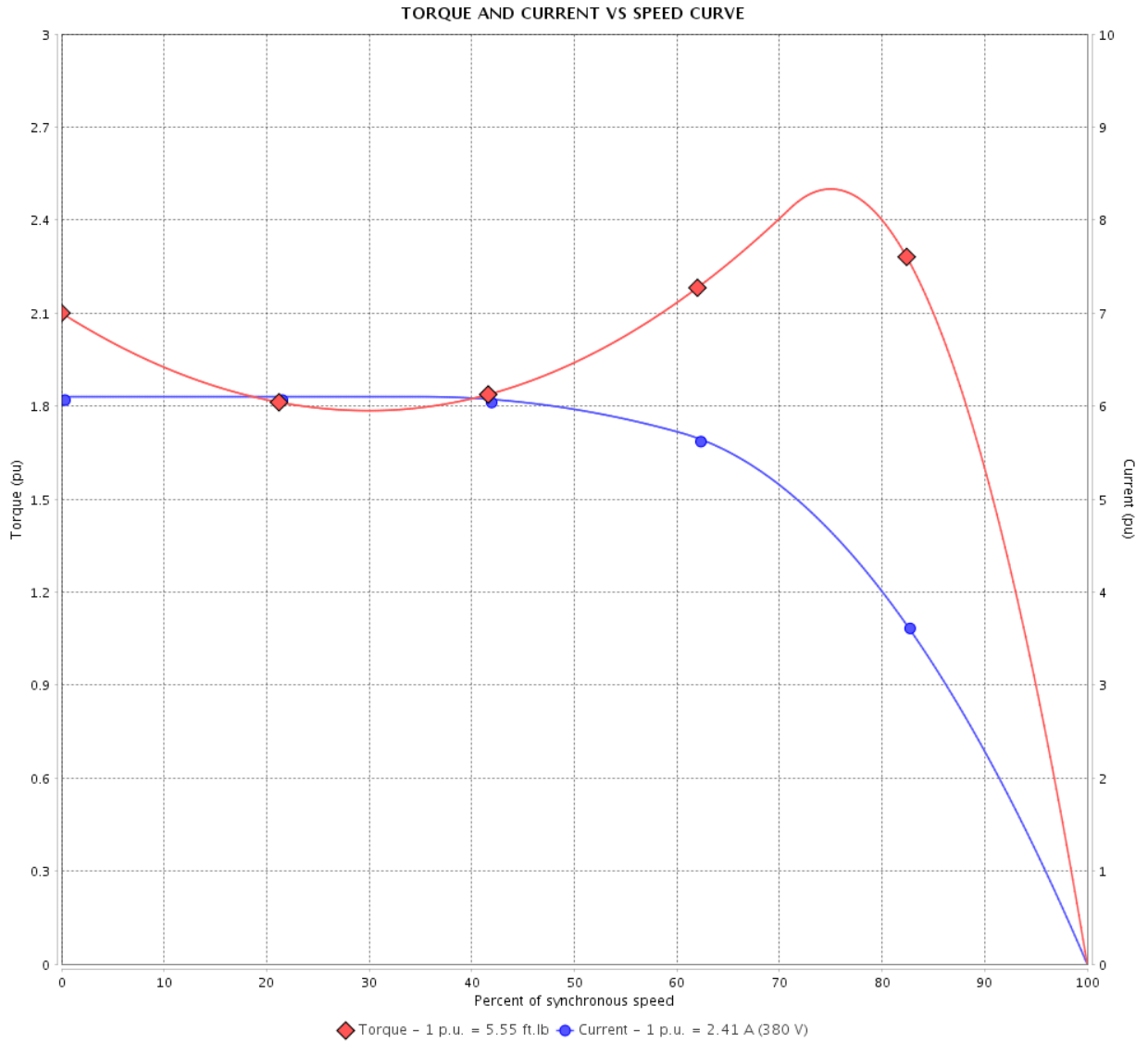
TORQUE AND CURRENT VS SPEED CURVE



Three Phase Induction Motor - Squirrel Cage

Customer : _____

Product line : Premium Efficiency Three-Phase Product code : 14786569
 Catalog # : 00158ET3E56CFL-S



Performance : 190/380 V 50 Hz 4P

Rated current	: 4.82/2.41 A	Moment of inertia (J)	: 0.1101 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 5.55 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1420 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE

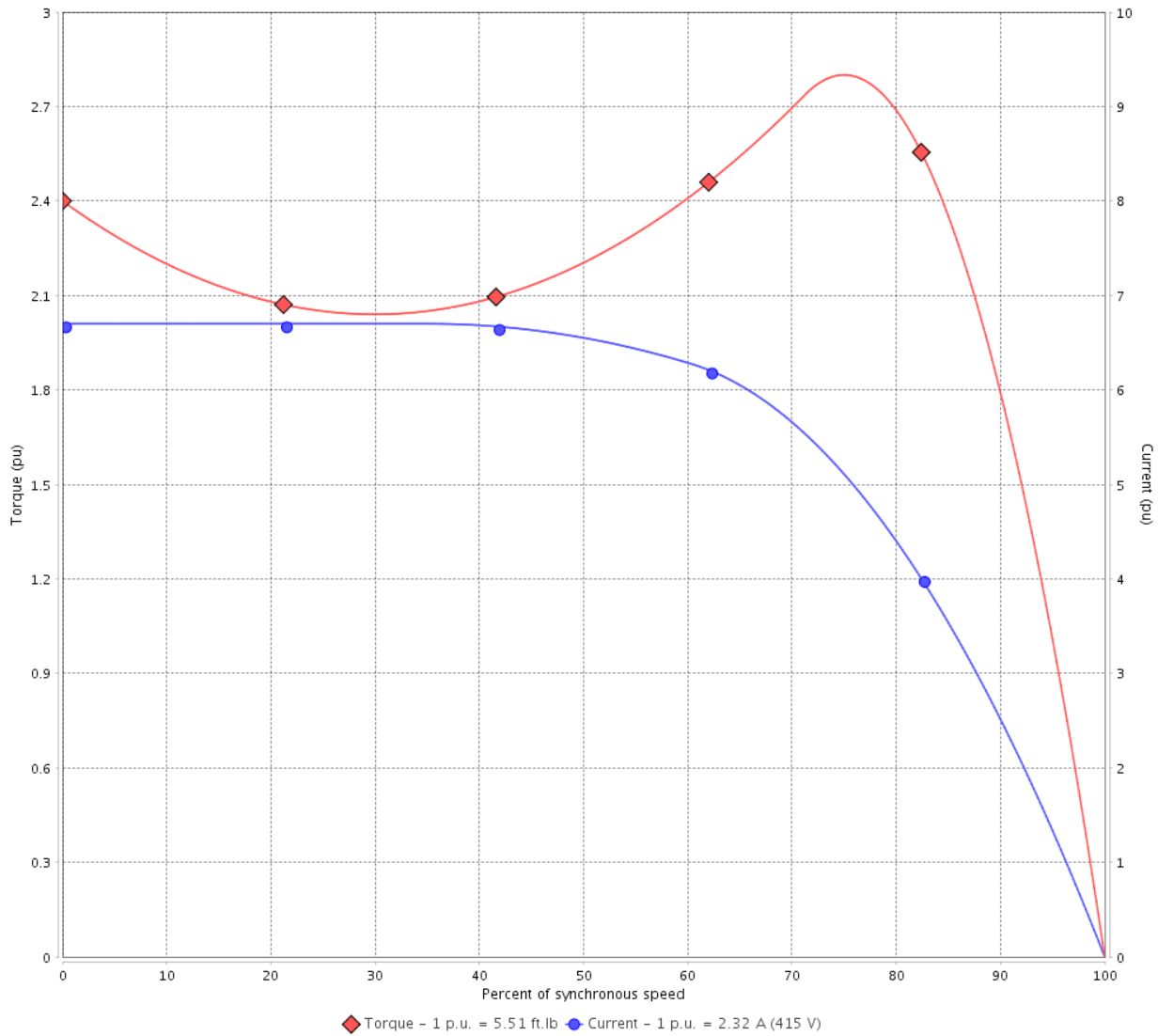
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Premium Efficiency Three-Phase Product code : 14786569
 Catalog # : 00158ET3E56CFL-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 : _____

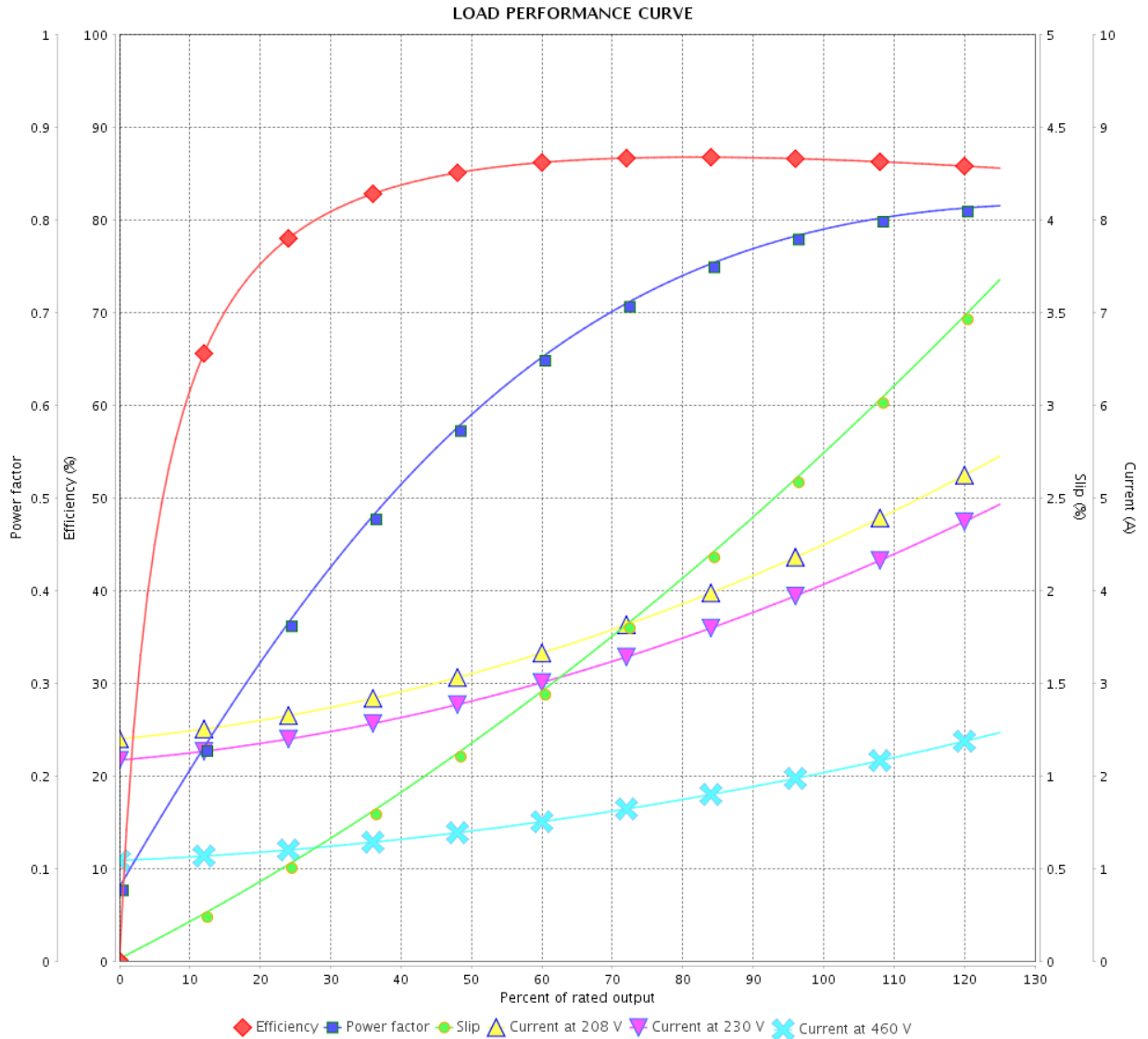
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Product code :

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Catalog # :

00158ET3E56CFL-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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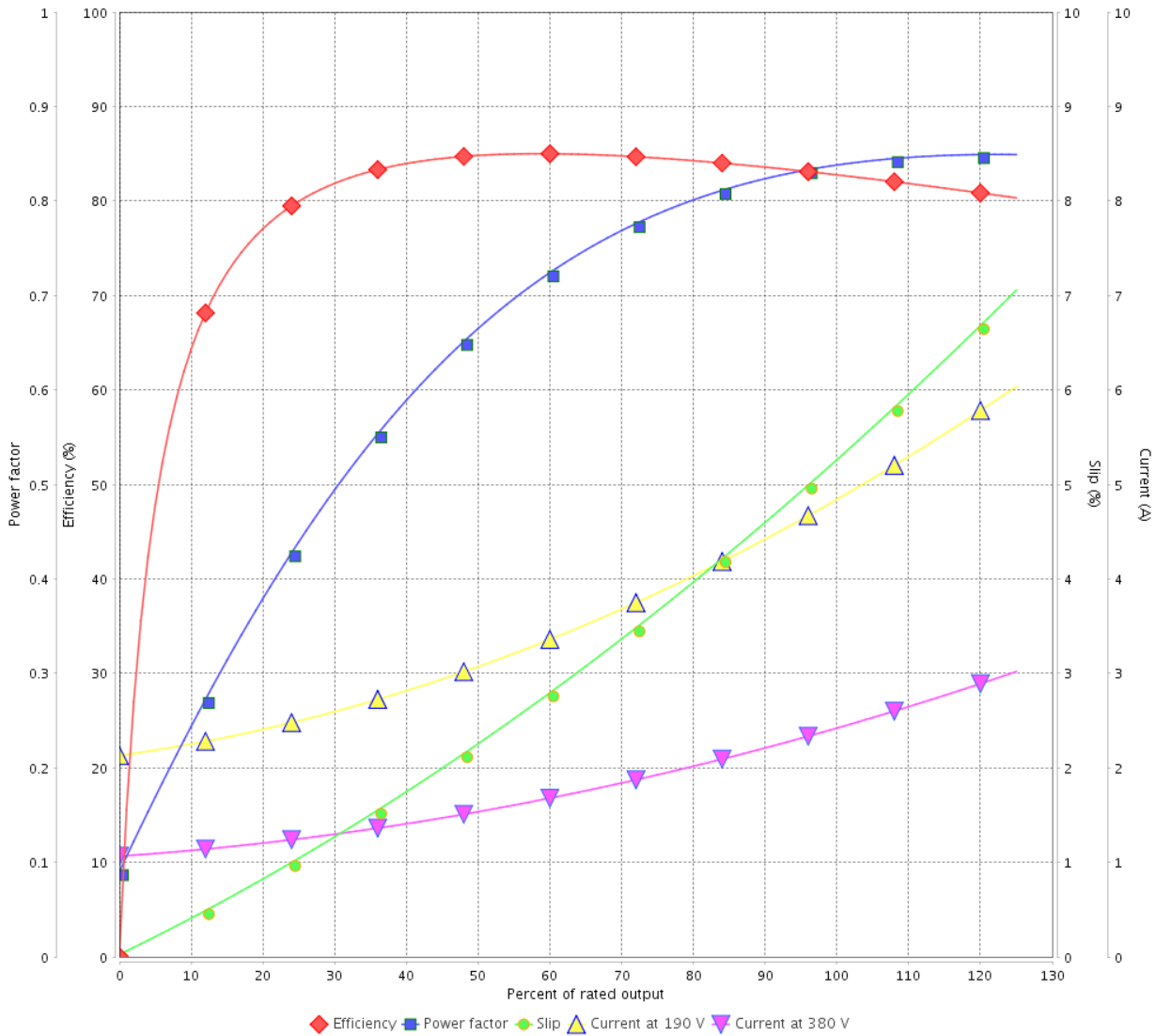
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Performance : 190/380 V 50 Hz 4P

Rated current	: 4.82/2.41 A	Moment of inertia (J)	: 0.1101 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 5.55 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1420 rpm	Design	: B

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Date	12/04/2022			

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Three Phase Induction Motor - Squirrel Cage



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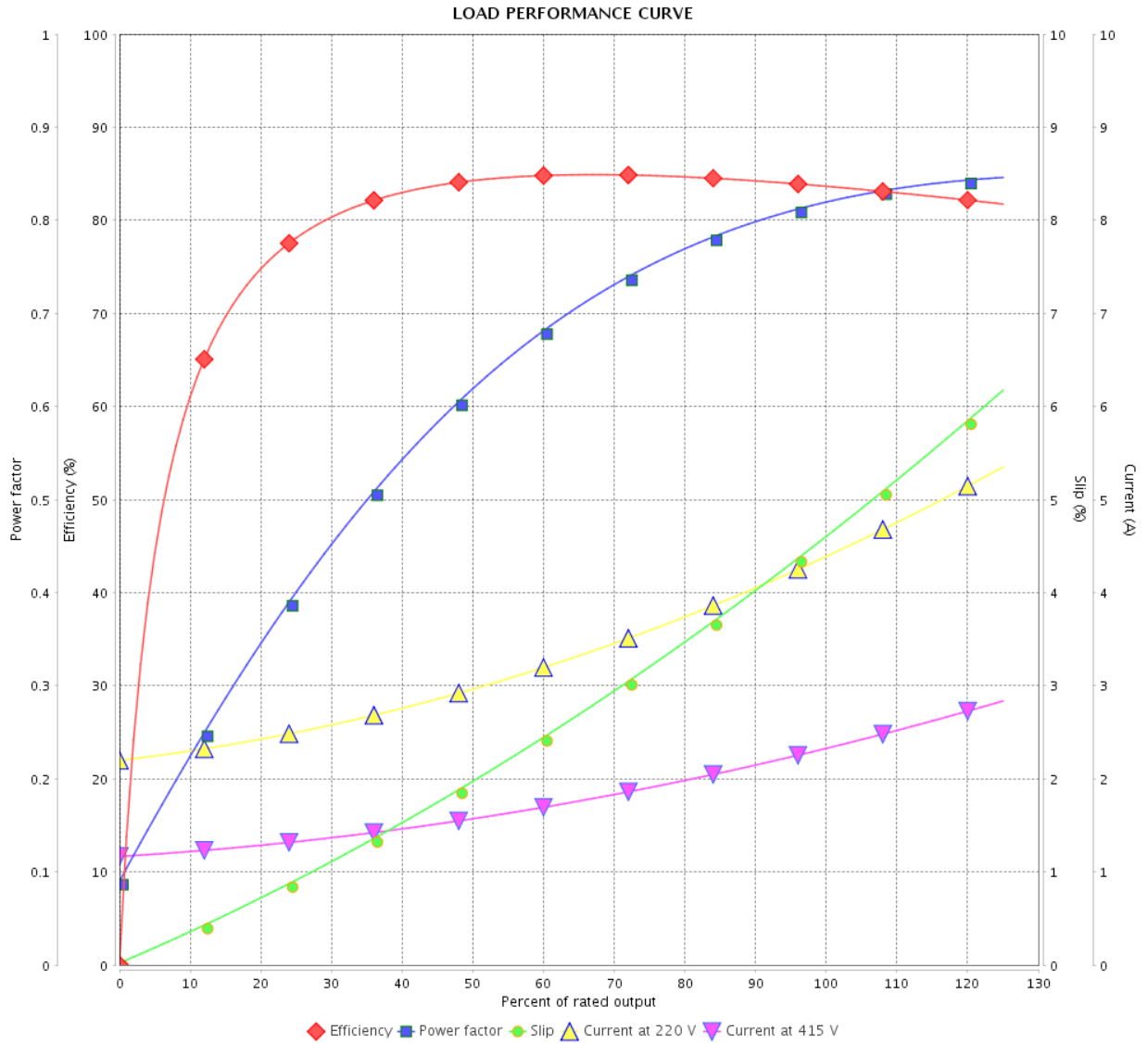
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Performance : 220/415 V 50 Hz 4P

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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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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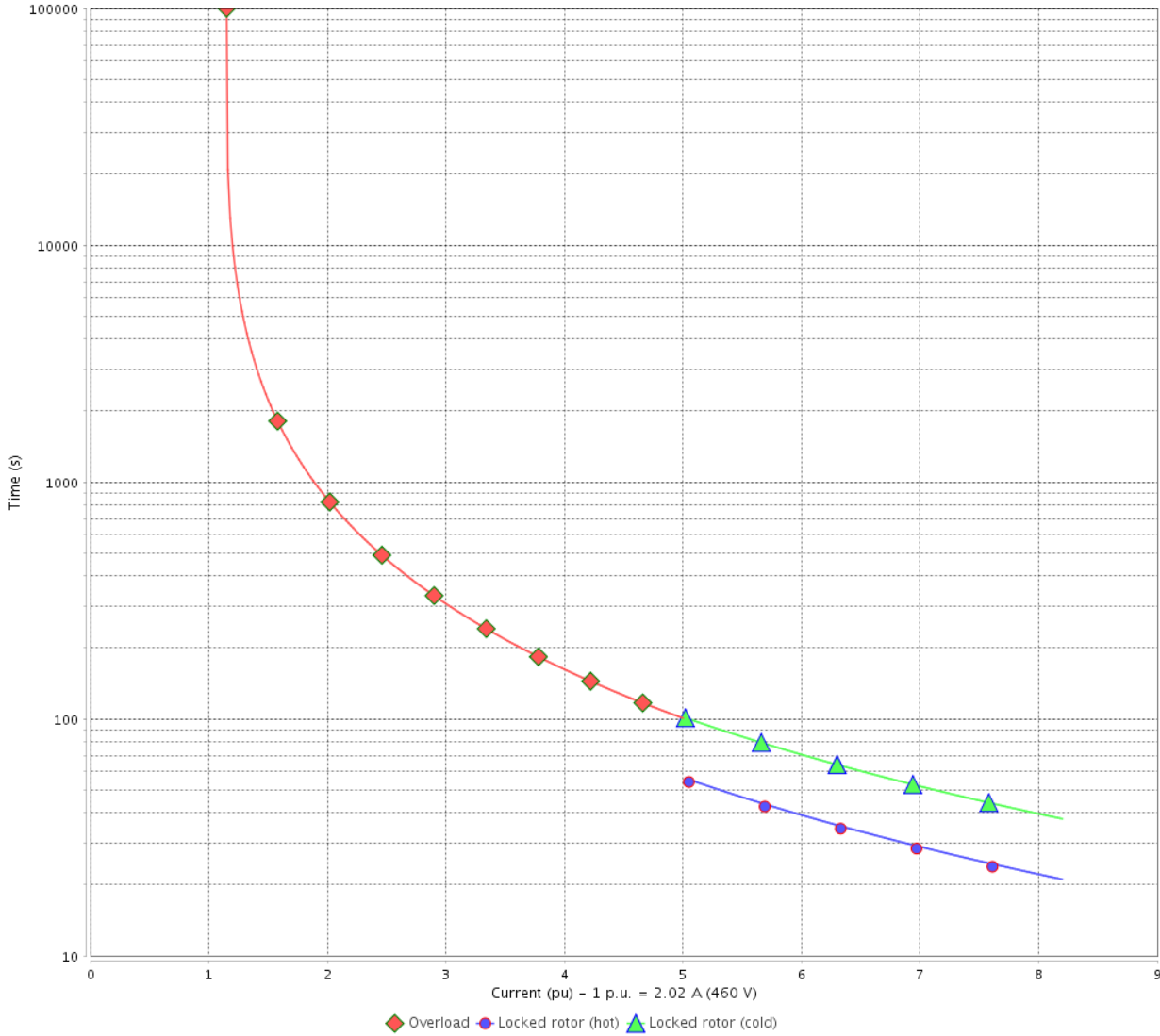
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THERMAL LIMIT CURVE



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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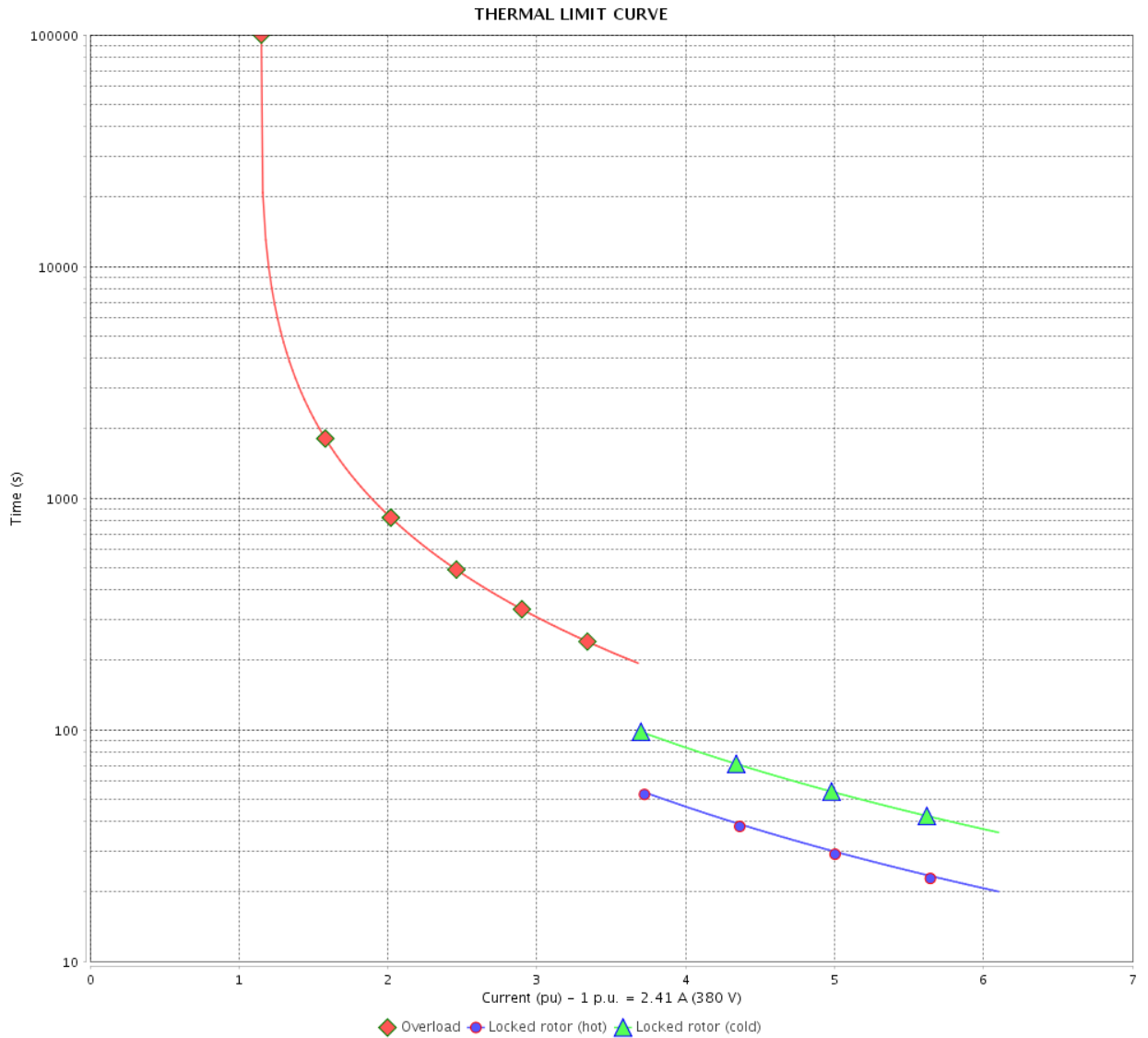
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Rated torque	: 5.55 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1420 rpm	Design	: B

Heating constant

Cooling constant

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THERMAL LIMIT CURVE

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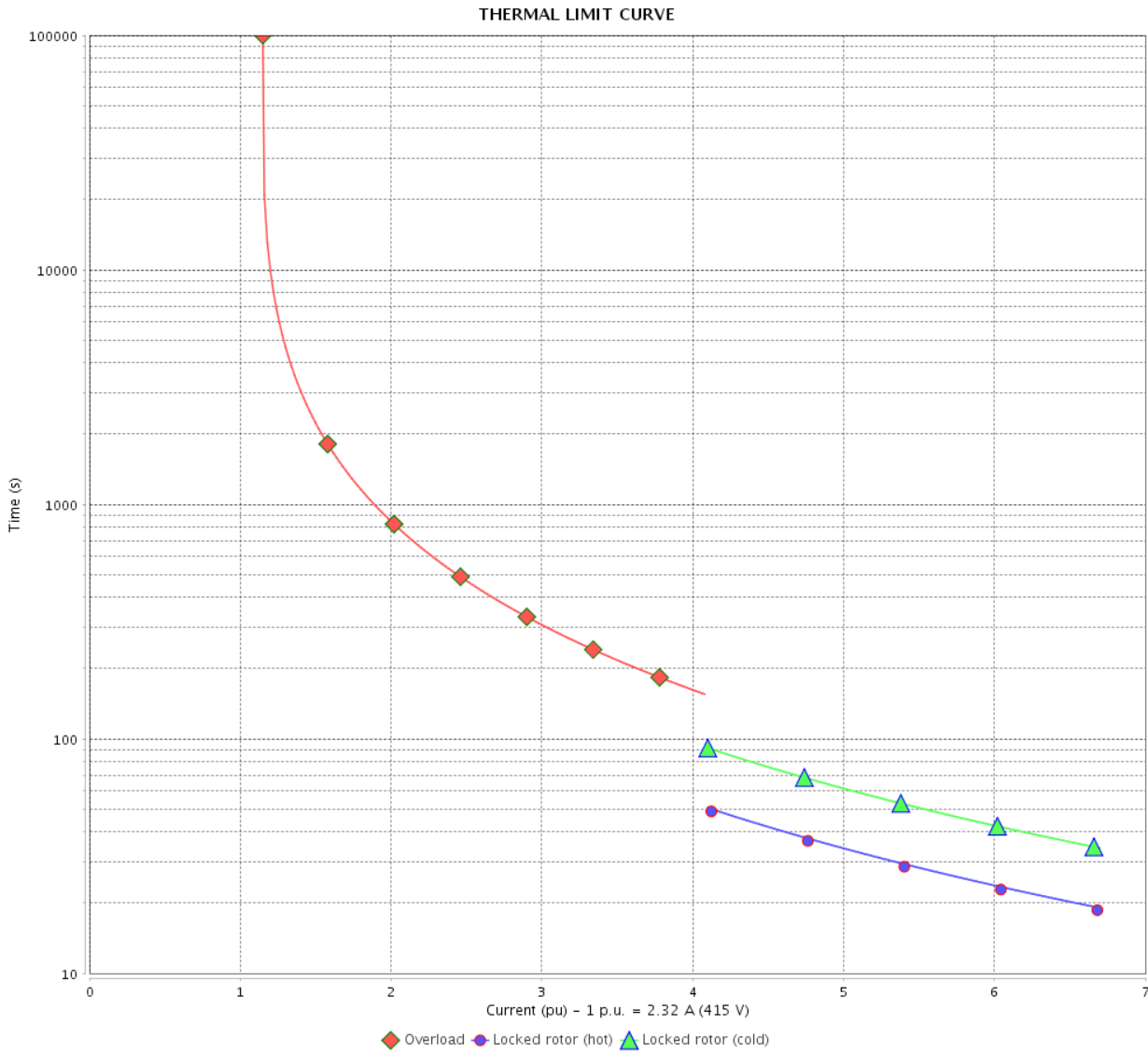
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Rated current : 4.38/2.32 A
 LRC : 6.7
 Rated torque : 5.51 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 280 %
 Rated speed : 1430 rpm

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

Rev.	Changes Summary	Performed	Checked	Date
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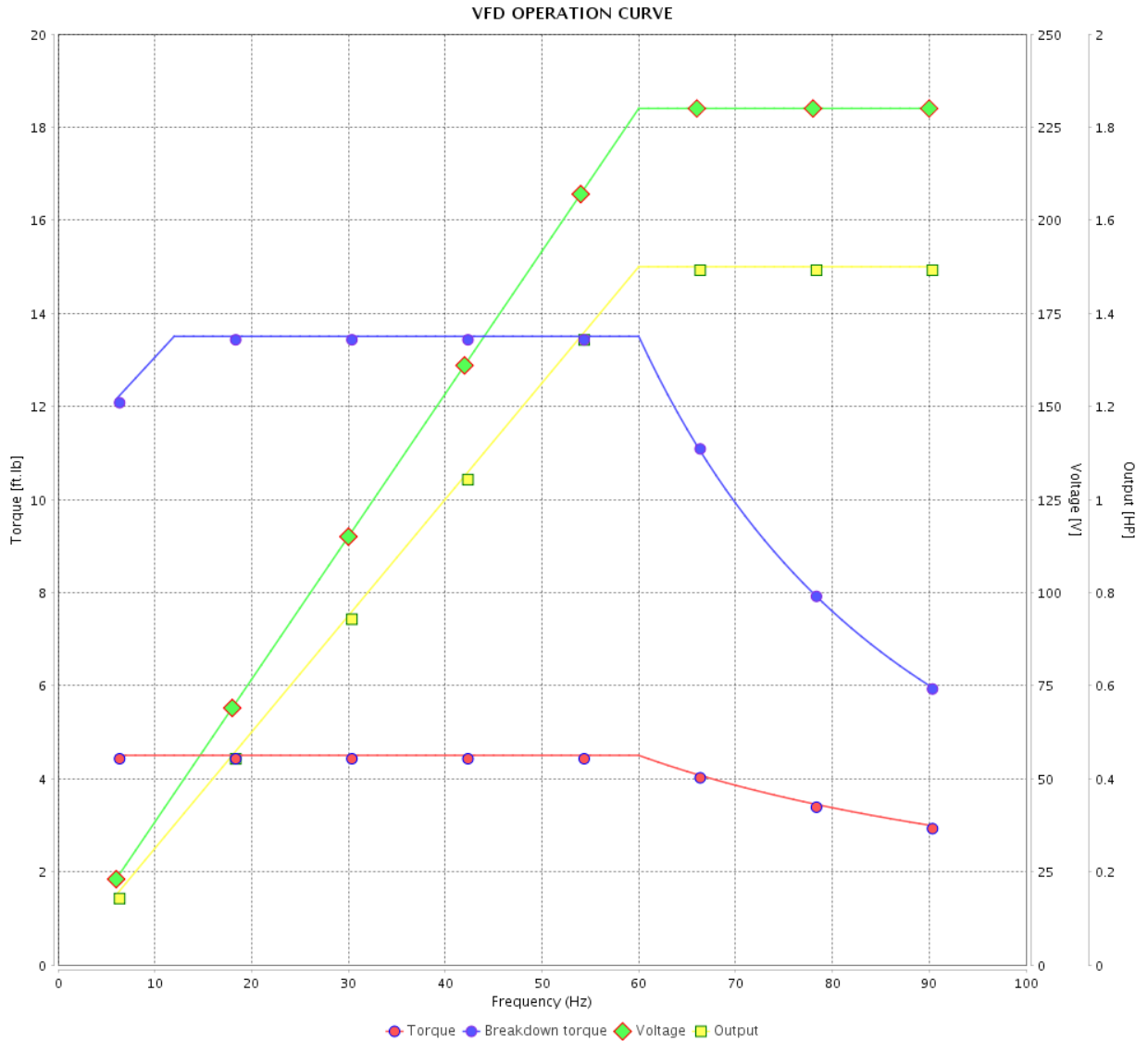
VFD OPERATION CURVE

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Performance : 230/460 V 60 Hz 4P

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 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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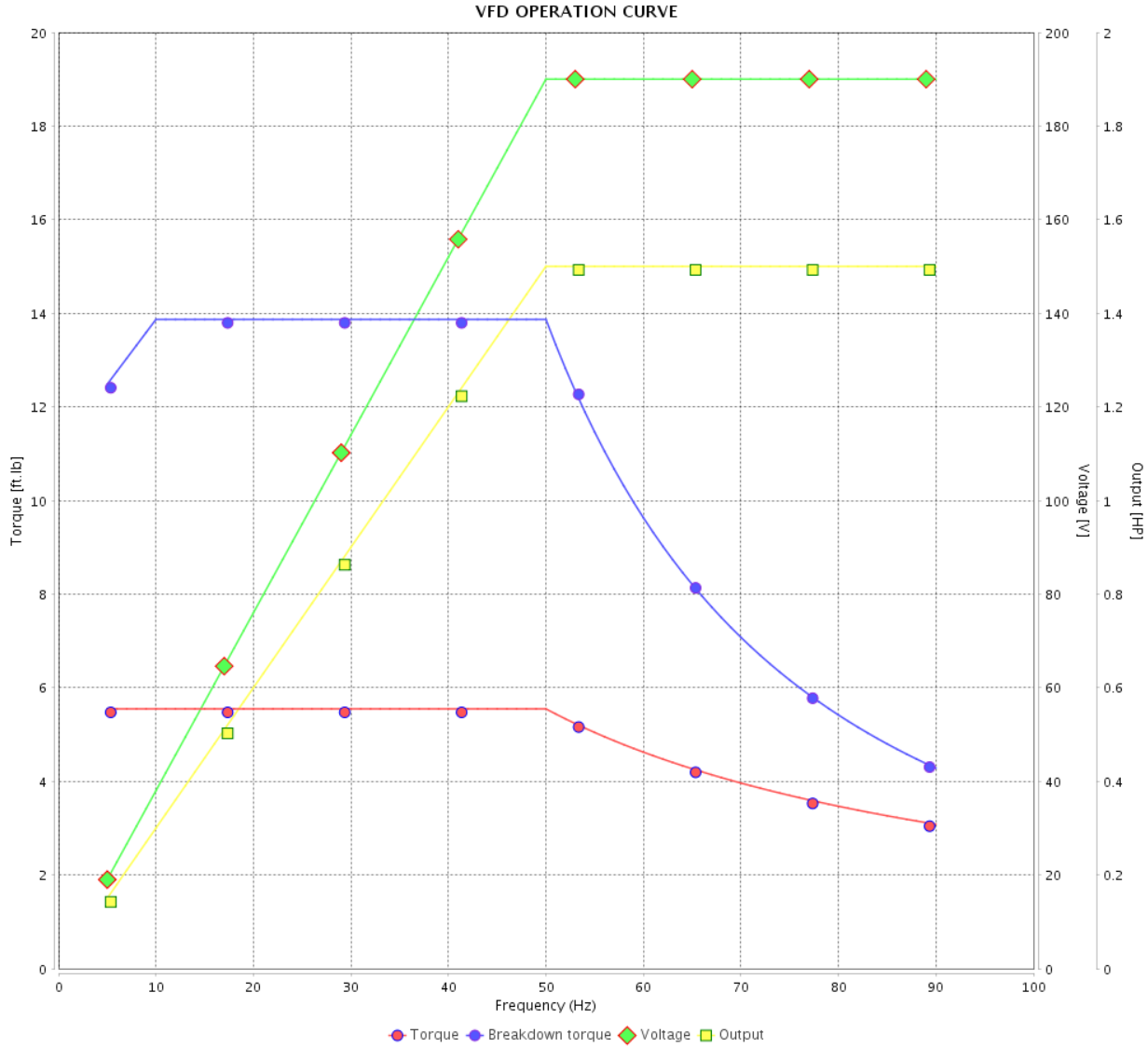
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Rated torque	: 5.55 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1420 rpm	Design	: B

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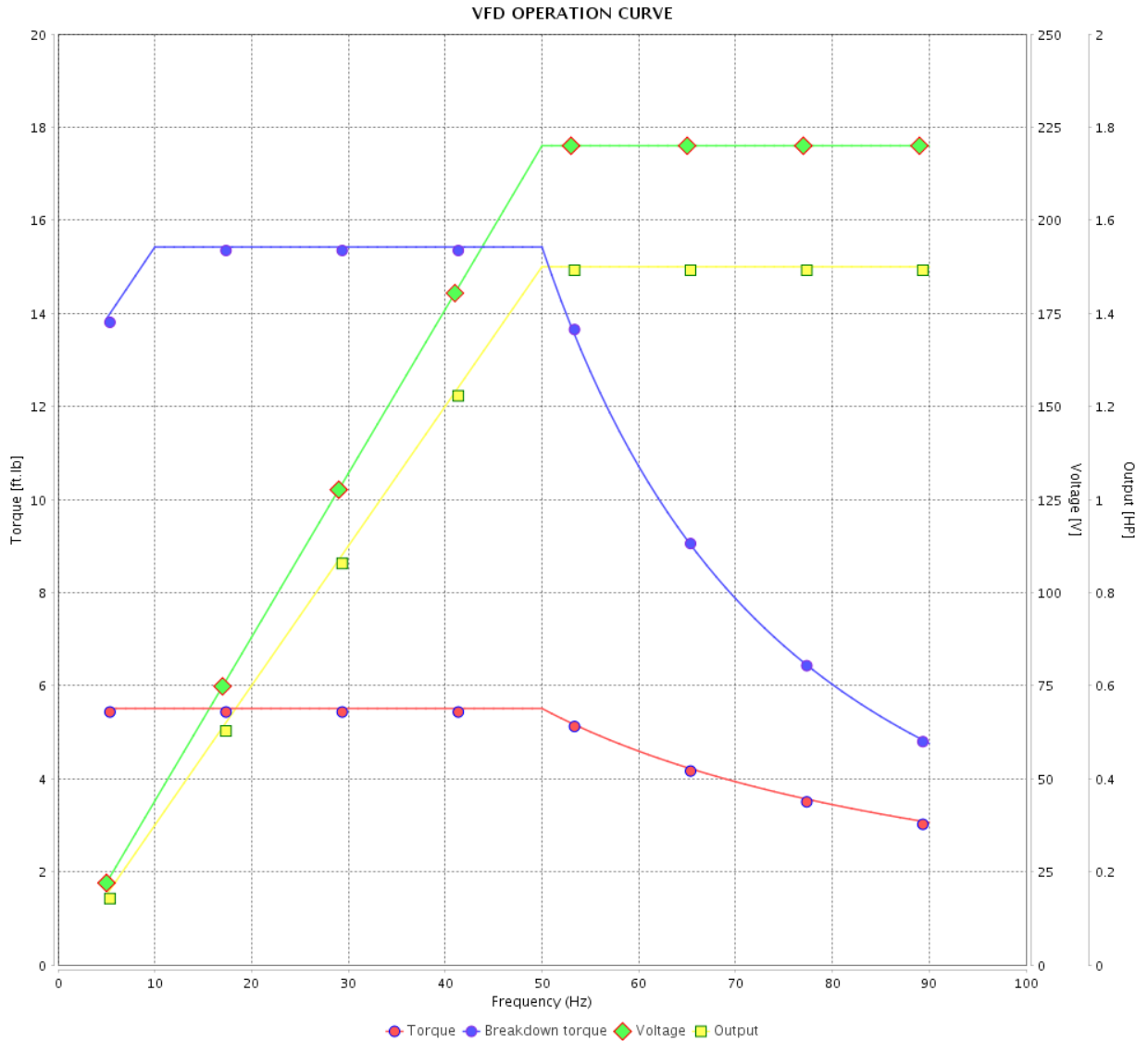
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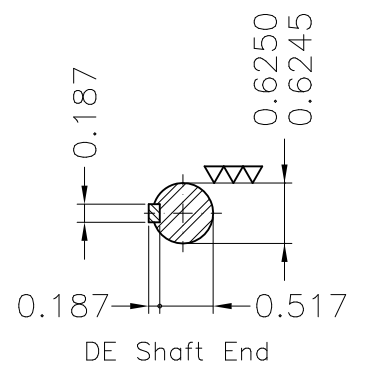
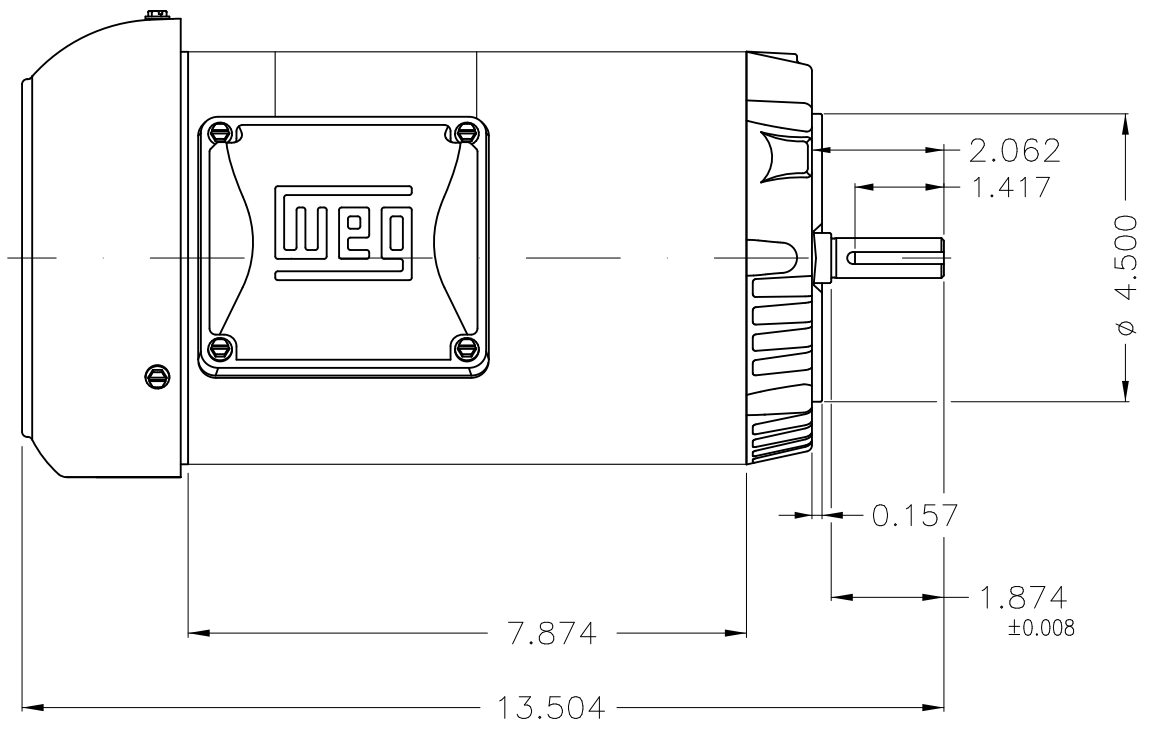
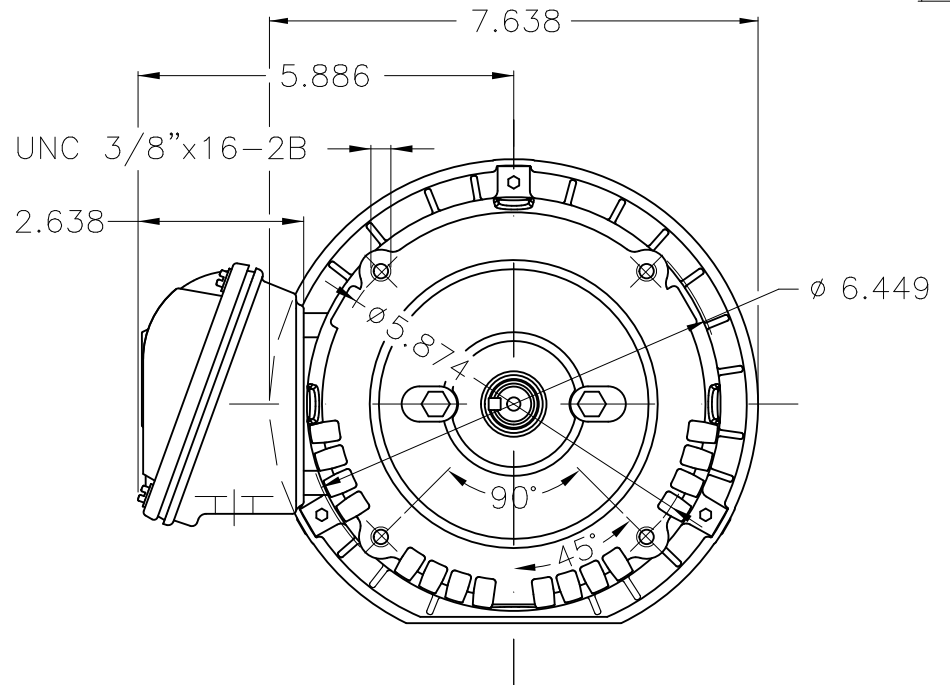
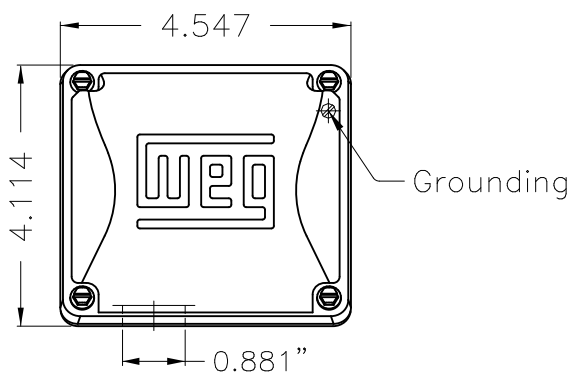
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A
B
C
D
E



Fan cover - steel plate
 Color Munsell N 1 matte black
 Painting plan 207N
 Mounting F-1/B14R(D)

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR ROLLED STEEL PREM. EFF.					
CHECKED		FRAME 56C IP55 TEFC					
RELEASED							

1.5 HP 04 Poles 60 Hz

REL DT. WMO Jaragua do Sul Product Engineering SHEET 1 / 1

PREVIEW
 WDD



NEMA
Premium



MADE IN BRAZIL

MAT: 14786569 CC029A

W01.TE0IC0X0X

MODEL 00158ET3E56CFL-S

12APR2022 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 56C		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.

