

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer		:			
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	14802525		
		Catalog # :	00218ET3E145T-S		
Frame	: 143/5T	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>	: 43.5 lb		
Protection degree	: IP55	Moment of inertia (J)	: 0.1296 sq.ft.lb		
Design	: B				
Output [HP]	2	2	2		
Poles	4	4	4		
Frequency [Hz]	60	50	50		
Rated voltage [V]	230/460	190/380	220/415		
Rated current [A]	5.44/2.72	6.50/3.25	5.89/3.12		
L. R. Amperes [A]	44.6/22.3	39.0/19.5	39.4/20.9		
LRC [A]	8.2x(Code K)	6.0x(Code H)	6.7x(Code J)		
No load current [A]	2.80/1.40	2.75/1.37	2.87/1.52		
Rated speed [RPM]	1745	1415	1425		
Slip [%]	3.06	5.67	5.00		
Rated torque [ft.lb]	6.02	7.42	7.37		
Locked rotor torque [%]	270	210	240		
Breakdown torque [%]	300	240	270		
Service factor		1.00	1.00		
Temperature rise	80 K	105 K	105 K		
Locked rotor time	27s (cold) 15s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)		
Noise level <sup>2</sup>	52.0 dB(A)	49.0 dB(A)	49.0 dB(A)		
Efficiency (%)	25%	86.0	87.1	86.0	
	50%	85.5	85.4	84.9	
	75%	87.5	84.9	85.2	
	100%	86.5	82.6	83.6	
Power Factor	25%	0.35	0.42	0.38	
	50%	0.60	0.68	0.64	
	75%	0.73	0.80	0.76	
	100%	0.80	0.85	0.83	
Bearing type	: <u>Drive end</u> 6205 ZZ	<u>Non drive end</u> 6203 ZZ	Foundation loads		
Sealing	: V'Ring	Without Bearing Seal	Max. traction	: 151 lb	
			Max. compression	: 195 lb	
Lubrication interval	: -	-			
Lubricant amount	: -	-			
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 6.02A SF 1.00 SFA 6.02A					
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

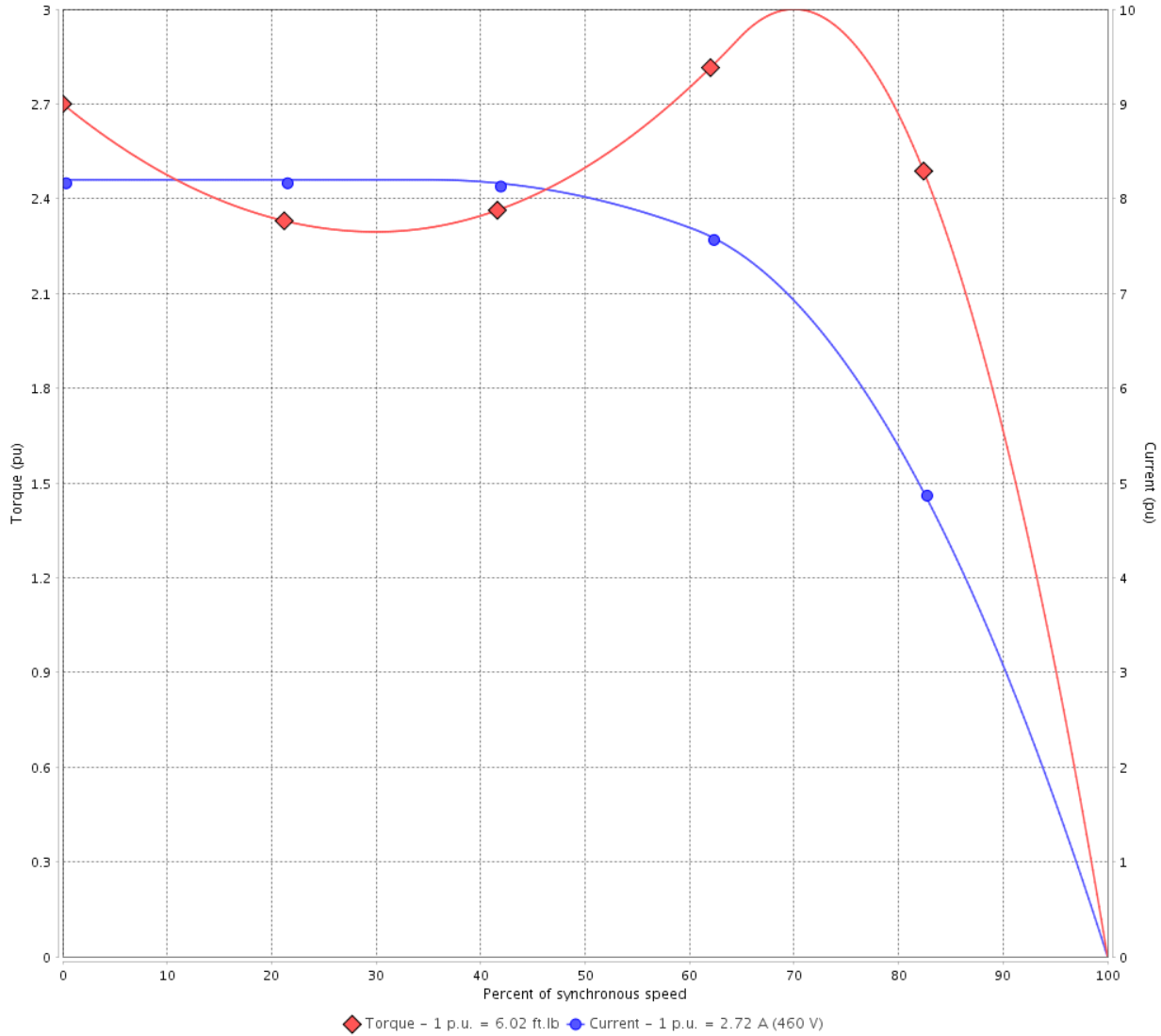
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14802525

Catalog # : 00218ET3E145T-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 5.44/2.72 A  
 LRC : 8.2  
 Rated torque : 6.02 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 300 %  
 Rated speed : 1745 rpm

Moment of inertia (J) : 0.1296 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 27s (cold) 15s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



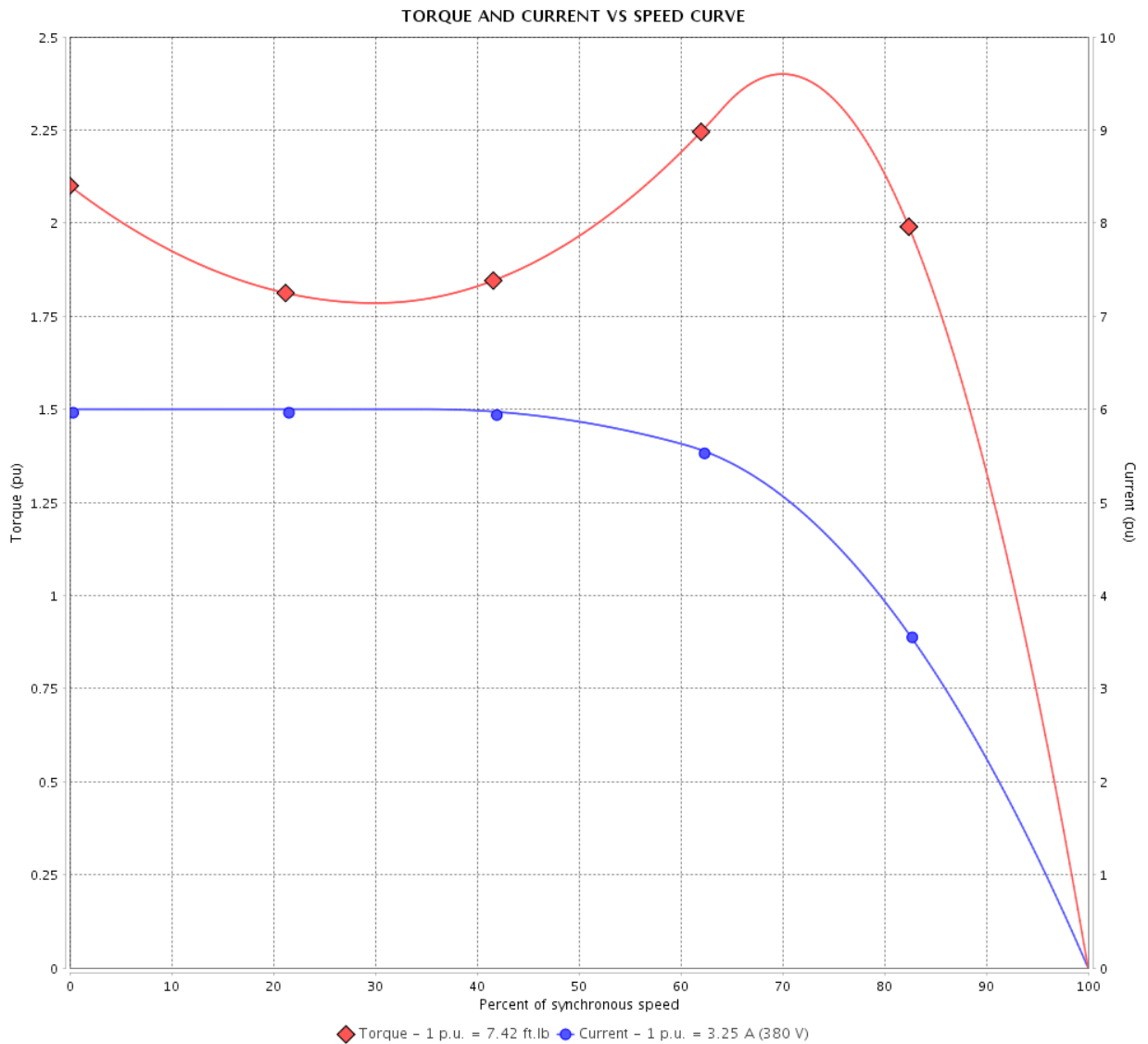
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14802525

Catalog # : 00218ET3E145T-S



Performance : 190/380 V 50 Hz 4P

Rated current : 6.50/3.25 A  
 LRC : 6.0  
 Rated torque : 7.42 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 240 %  
 Rated speed : 1415 rpm

Moment of inertia (J) : 0.1296 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

Locked rotor time : 0s (cold) 0s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



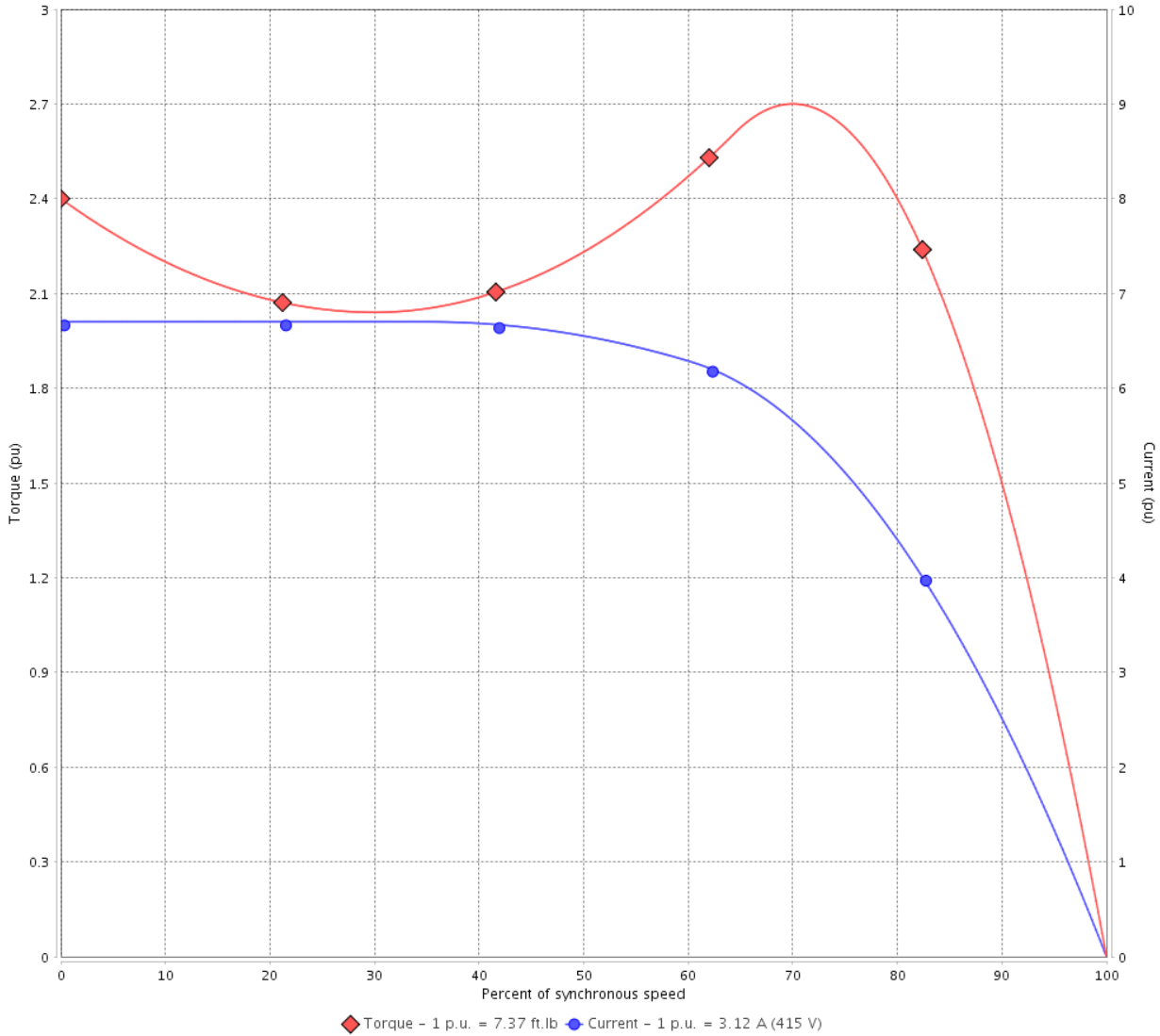
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14802525

Catalog # : 00218ET3E145T-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 4P

Rated current : 5.89/3.12 A  
 LRC : 6.7  
 Rated torque : 7.37 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 270 %  
 Rated speed : 1425 rpm

Moment of inertia (J) : 0.1296 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

Locked rotor time : 0s (cold) 0s (hot)

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

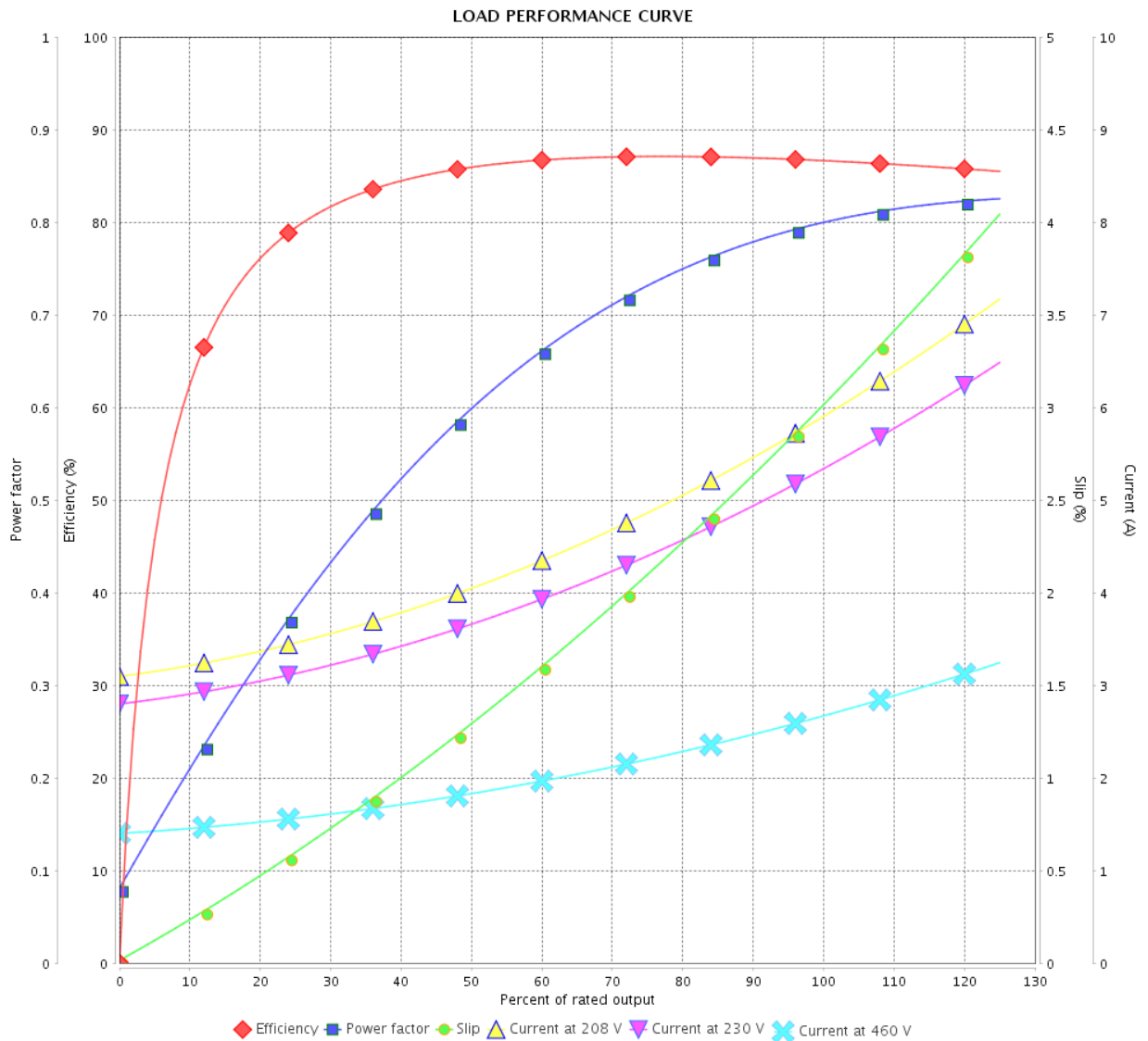


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14802525

Catalog # : 00218ET3E145T-S



Performance : 230/460 V 60 Hz 4P

Rated current : 5.44/2.72 A  
 LRC : 8.2  
 Rated torque : 6.02 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 300 %  
 Rated speed : 1745 rpm

Moment of inertia (J) : 0.1296 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



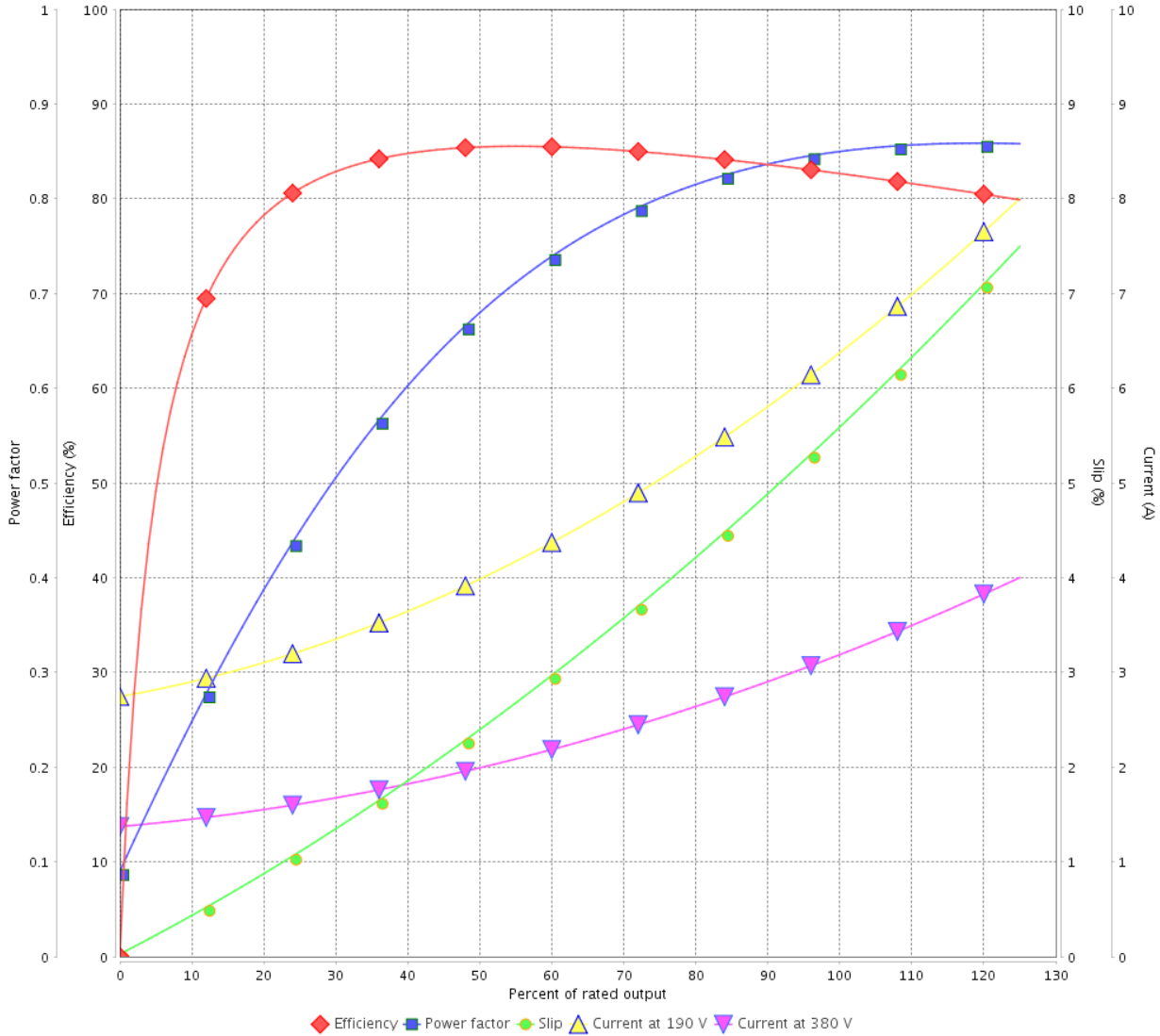
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14802525

Catalog # : 00218ET3E145T-S

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 4P

Rated current : 6.50/3.25 A  
 LRC : 6.0  
 Rated torque : 7.42 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 240 %  
 Rated speed : 1415 rpm

Moment of inertia (J) : 0.1296 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

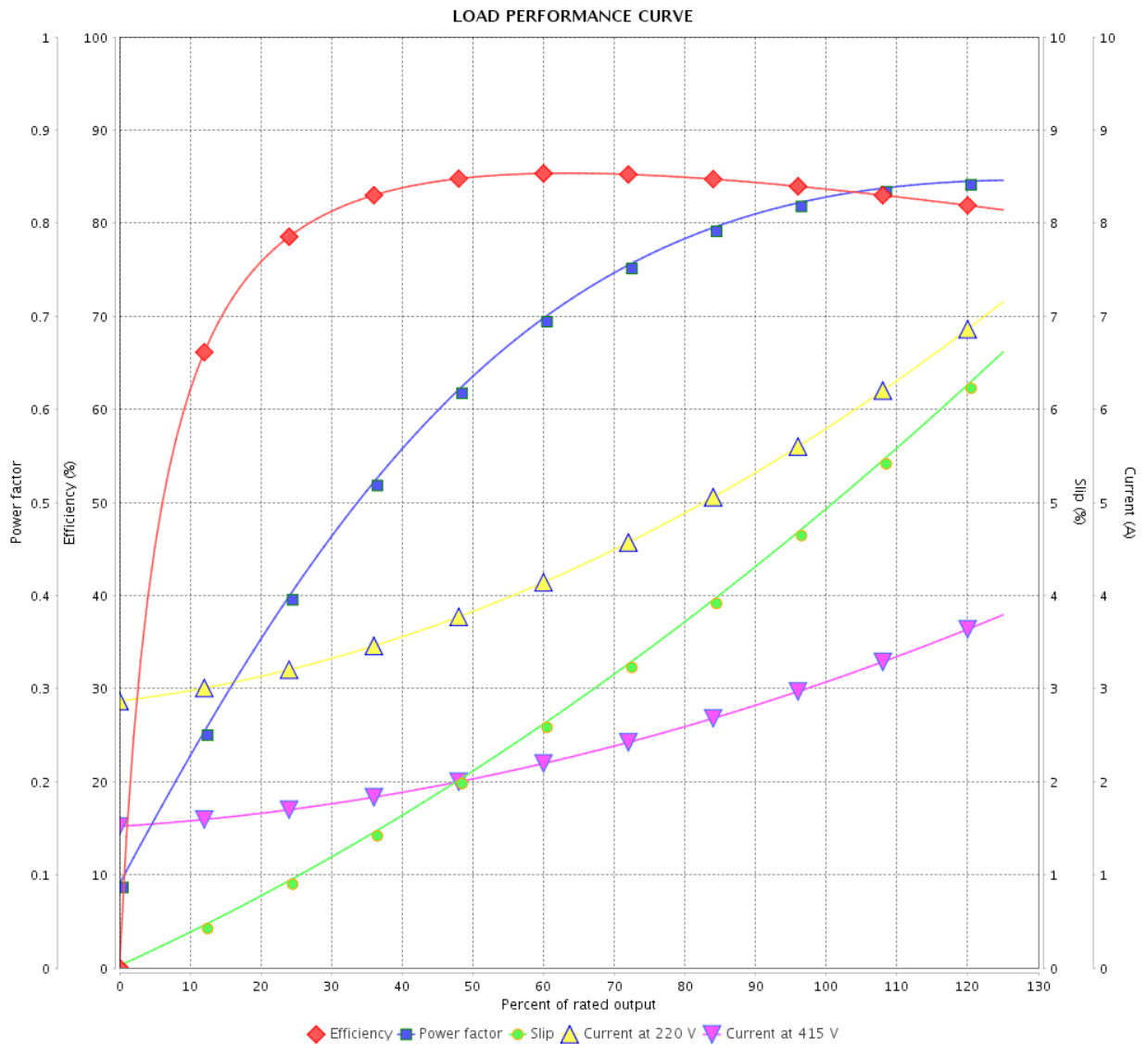


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14802525

Catalog # : 00218ET3E145T-S



Performance : 220/415 V 50 Hz 4P

Rated current : 5.89/3.12 A  
 LRC : 6.7  
 Rated torque : 7.37 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 270 %  
 Rated speed : 1425 rpm

Moment of inertia (J) : 0.1296 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 14802525  
Catalog # : 00218ET3E145T-S

Performance : 230/460 V 60 Hz 4P

Rated current	: 5.44/2.72 A	Moment of inertia (J)	: 0.1296 sq.ft.lb
LRC	: 8.2	Duty cycle	: Cont.(S1)
Rated torque	: 6.02 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	:
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1745 rpm	Design	: B

Heating constant

Cooling constant

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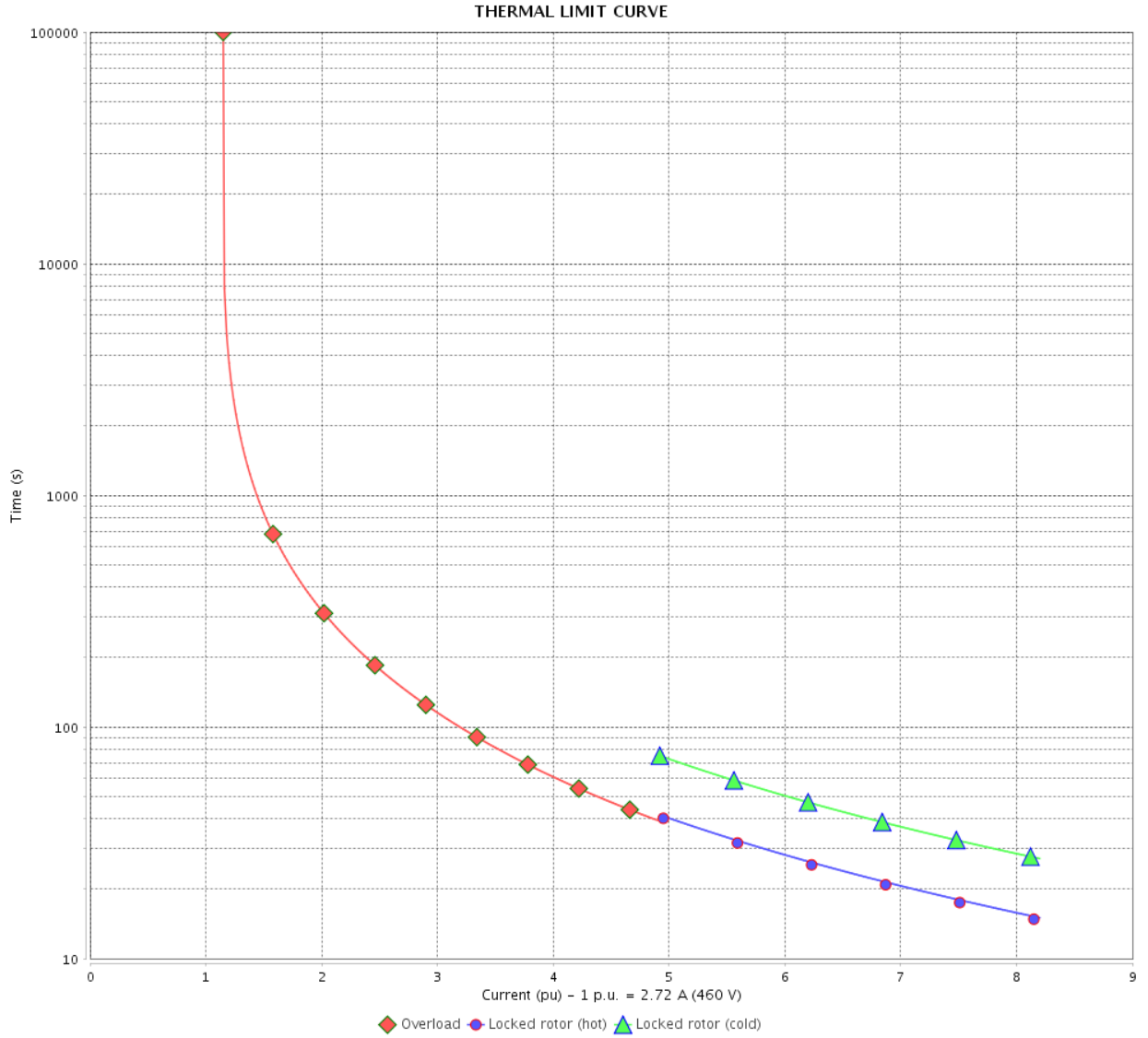


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 14802525  
Catalog # : 00218ET3E145T-S

Performance : 190/380 V 50 Hz 4P

Rated current	: 6.50/3.25 A	Moment of inertia (J)	: 0.1296 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 7.42 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 1415 rpm	Design	: B

Heating constant

Cooling constant

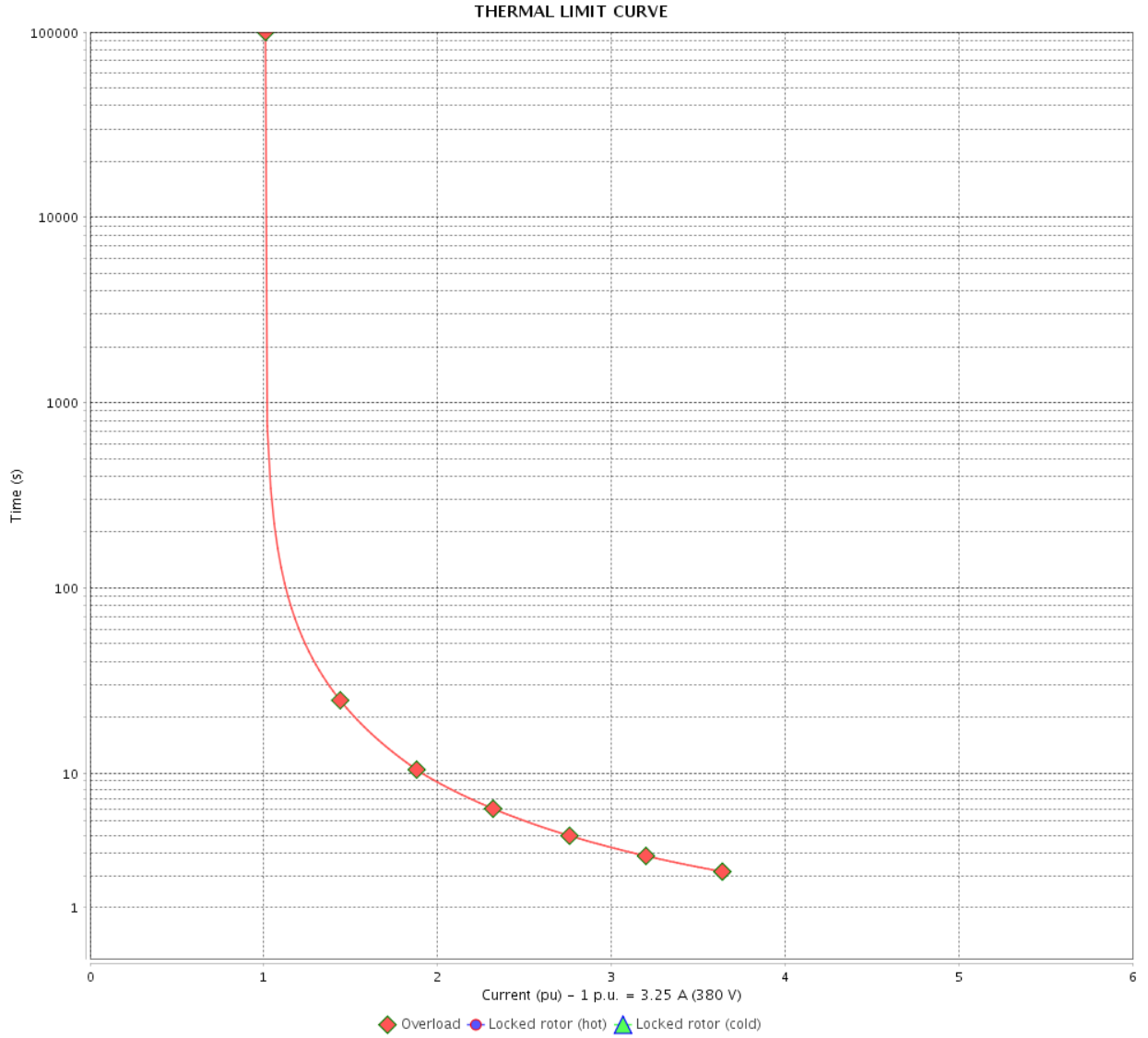
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Customer : \_\_\_\_\_



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# THERMAL LIMIT CURVE



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Performance : 220/415 V 50 Hz 4P

Rated current	: 5.89/3.12 A	Moment of inertia (J)	: 0.1296 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 7.37 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 105 K
Rated speed	: 1425 rpm	Design	: B

Heating constant

Cooling constant

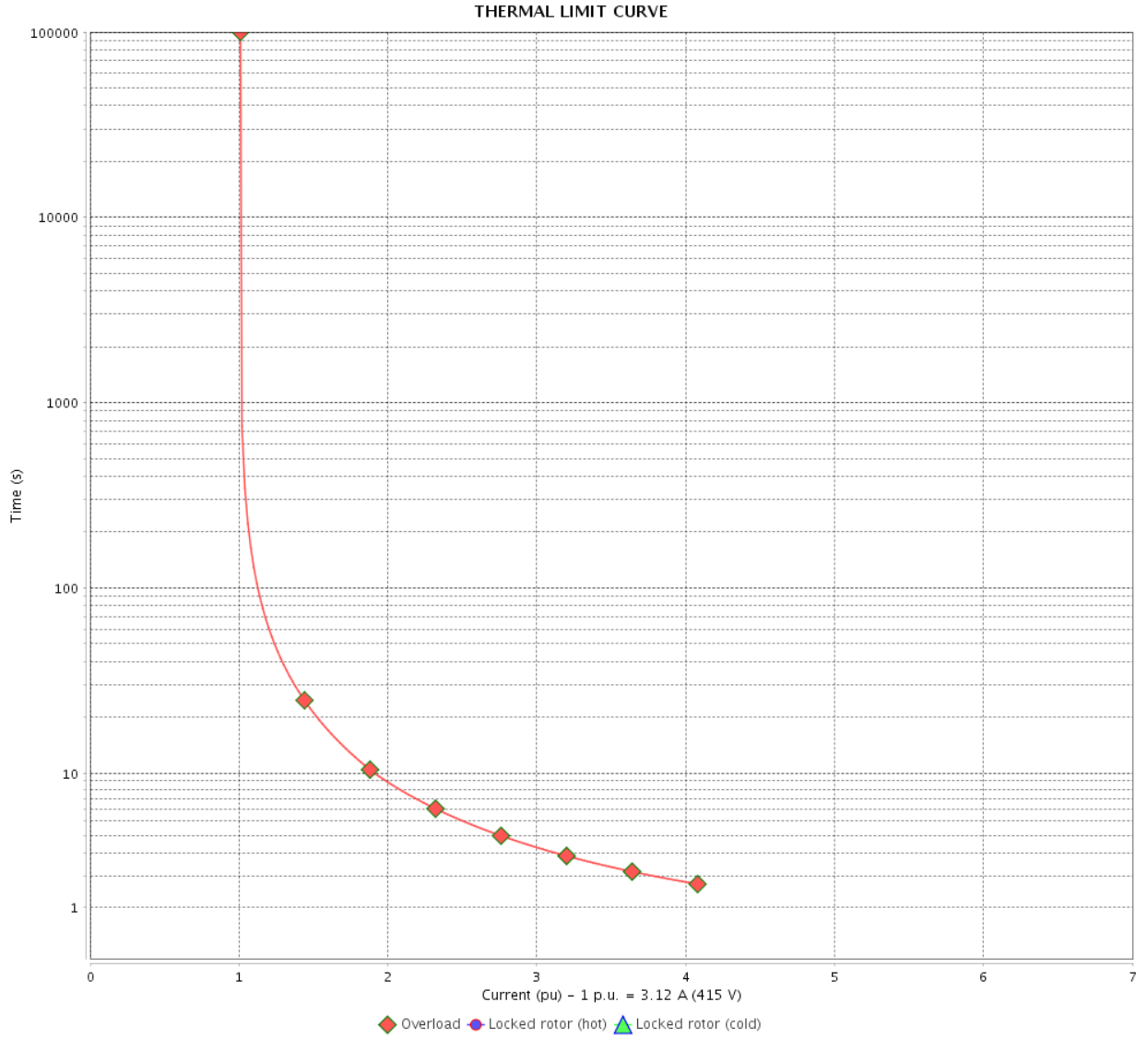
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Three Phase Induction Motor - Squirrel Cage



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

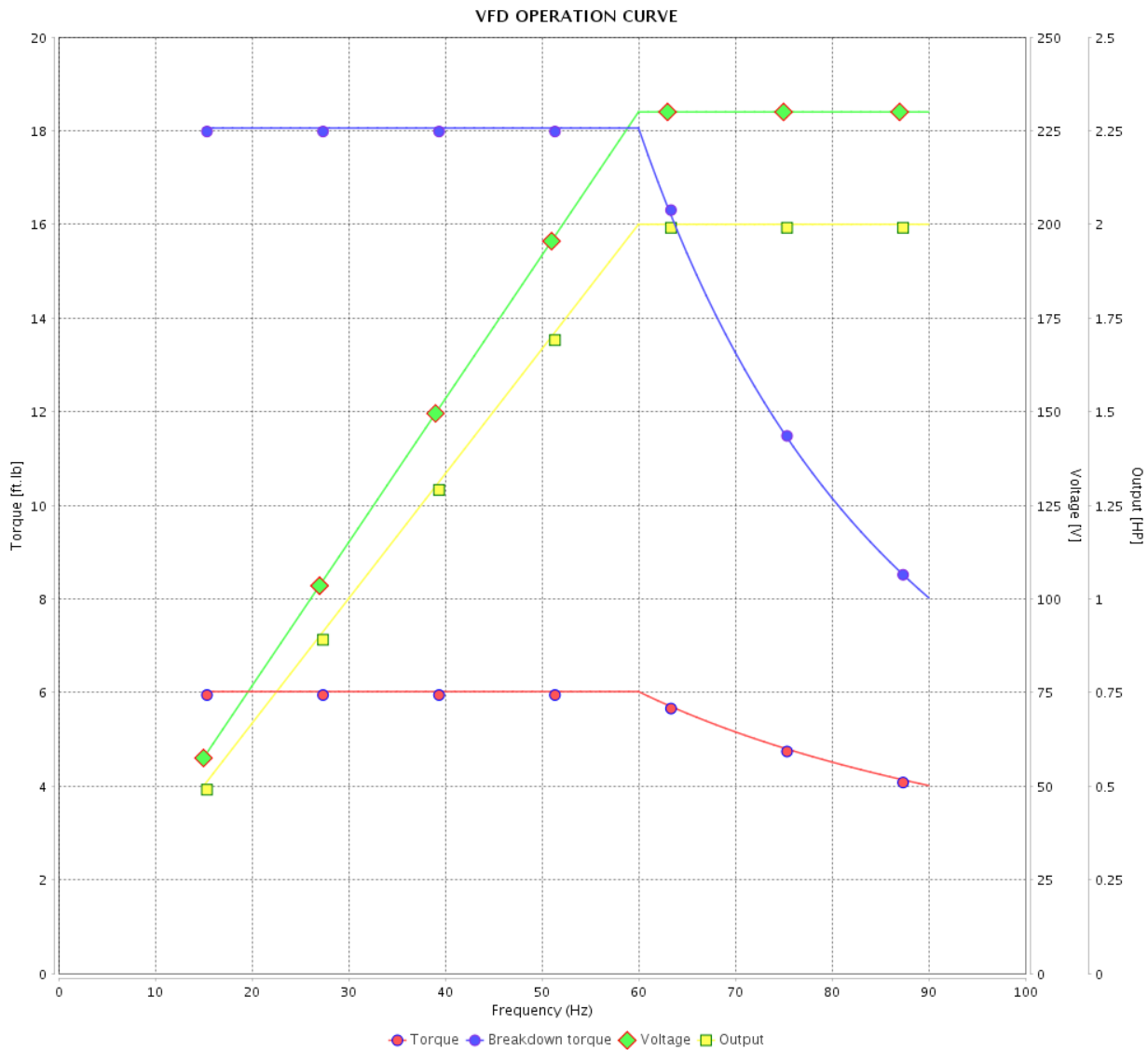


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14802525

Catalog # : 00218ET3E145T-S



Performance : 230/460 V 60 Hz 4P

Rated current : 5.44/2.72 A  
 LRC : 8.2  
 Rated torque : 6.02 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 300 %  
 Rated speed : 1745 rpm

Moment of inertia (J) : 0.1296 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

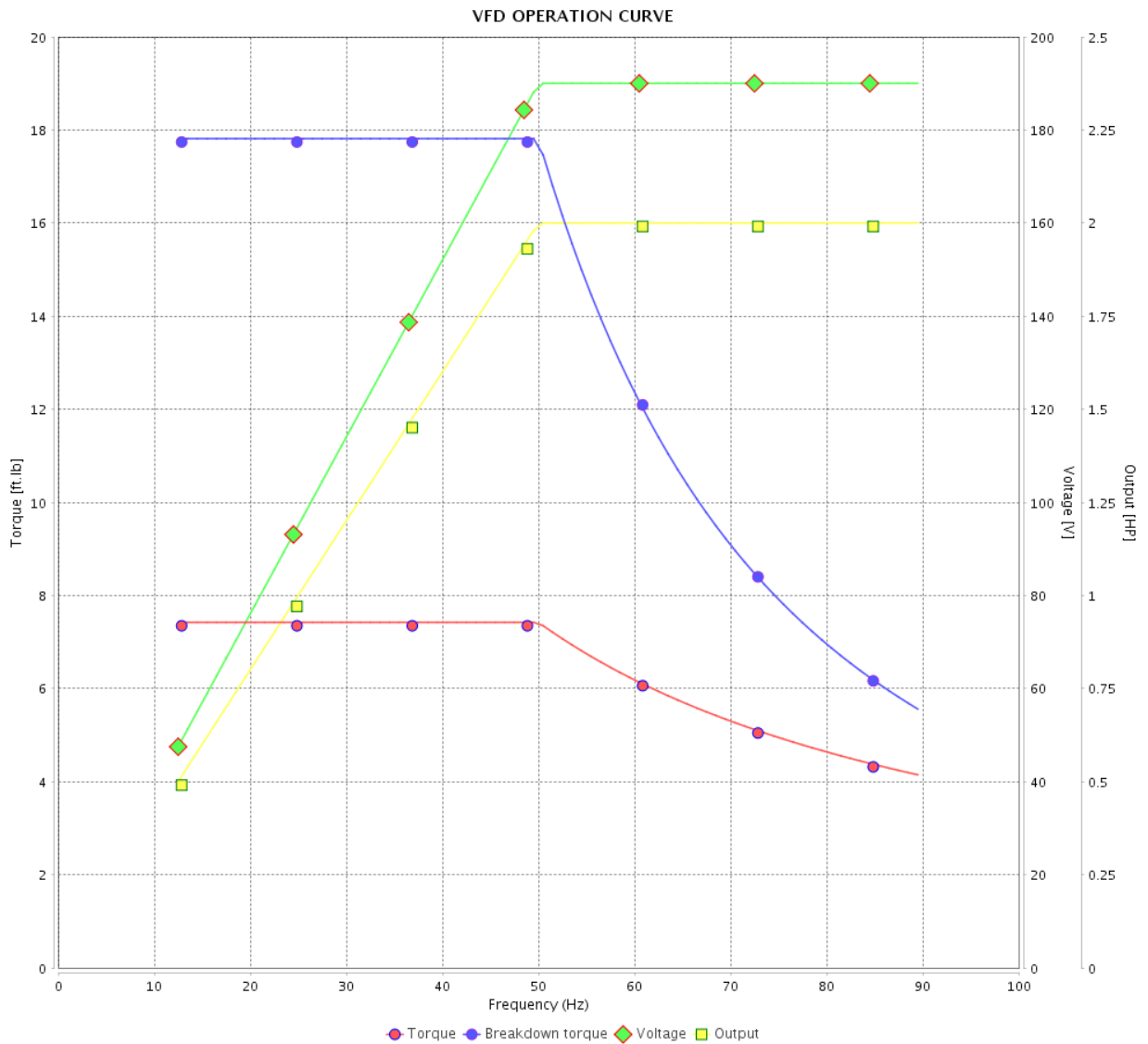


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Performance : 190/380 V 50 Hz 4P

Rated current : 6.50/3.25 A  
 LRC : 6.0  
 Rated torque : 7.42 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 240 %  
 Rated speed : 1415 rpm

Moment of inertia (J) : 0.1296 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

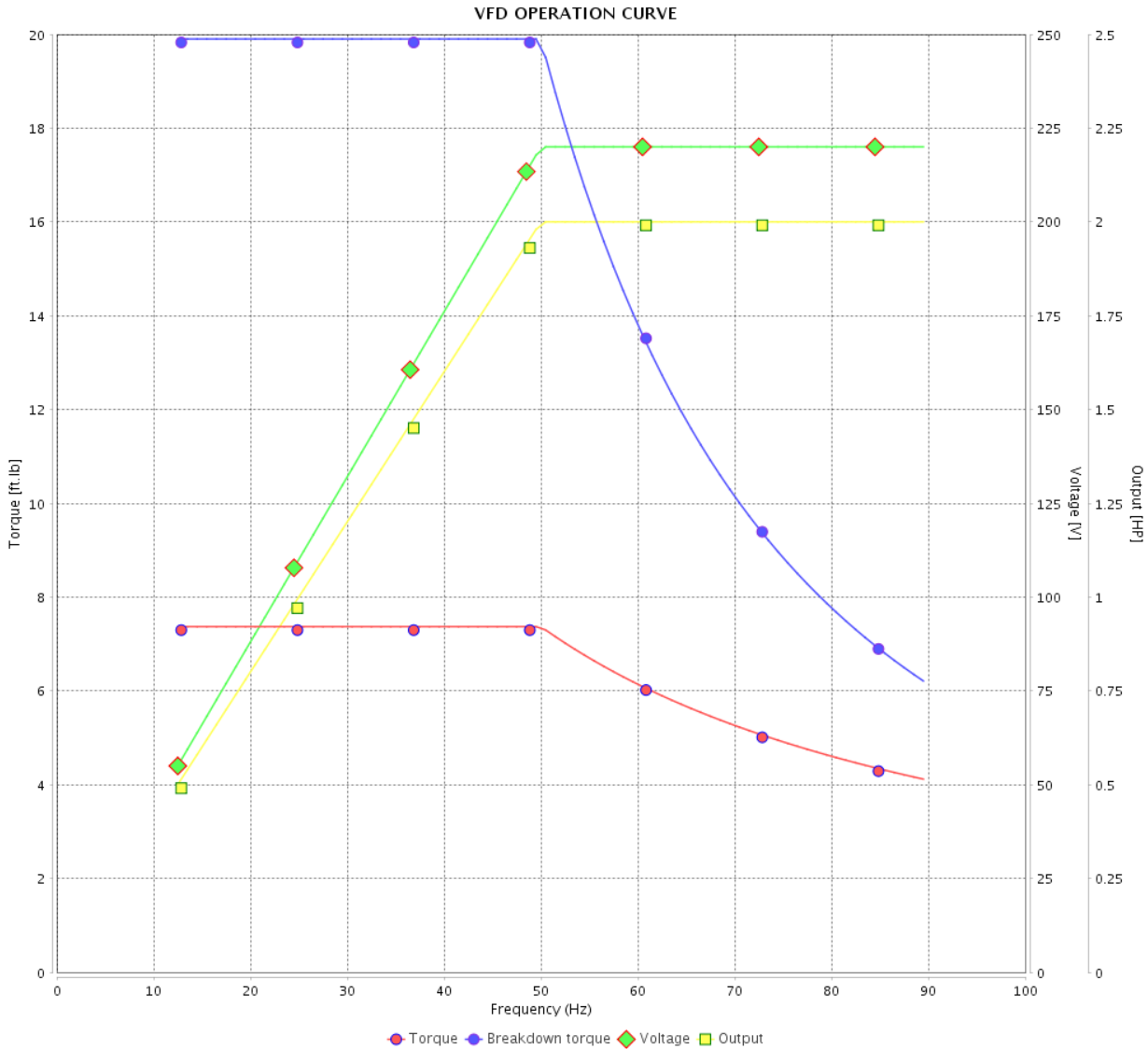


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Product code : 14802525

Catalog # : 00218ET3E145T-S



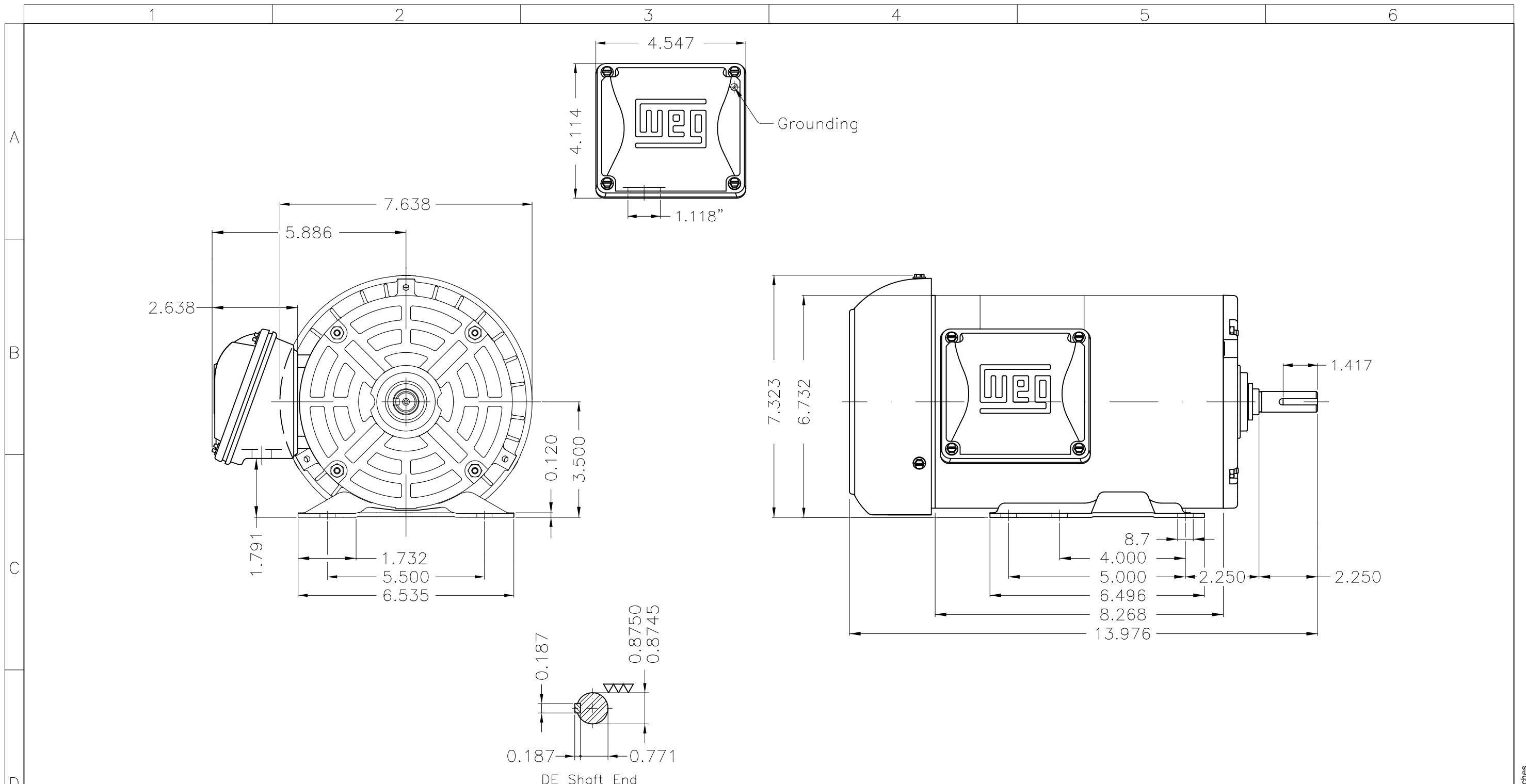
Performance : 220/415 V 50 Hz 4P

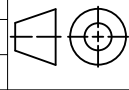

Rated current : 5.89/3.12 A  
 LRC : 6.7  
 Rated torque : 7.37 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 270 %  
 Rated speed : 1425 rpm

Moment of inertia (J) : 0.1296 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

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Fan cover - steel plate										
Color Munsell N 1 matte black										
Painting plan 207N										
Mounting F-1/B3R(D)										
ECM	LOC	SUMMARY OF MODIFICATIONS				EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR ROLLED STEEL PREM. EFF.					<b>PREVIEW</b> <b>WDD</b>			
CHECKED		FRAME 143/5T IP55 TEFC								
RELEASED										
REL DT.		WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1				

2 HP 04 Poles 60 Hz



**NEMA**  
**Premium**



3PT9



Energy Verified

MADE IN MEXICO

**MAT: 14802525 CC029A**  
**W01.TE0IC0X0N**  
**MODEL 00218ET3E145T-S**  
**04MAR2022 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 2.0
FR 143/5T		KW 1.5
DUTY CONT.		V 230/460
ALT 1000 m.a.s.l.		A 5.44/2.72
INS CL F AT 80K	IP55	SFA 6.26/3.13
AMB 40°C	DES B	SF 1.15
ENCL TEFC	CODE K	PF 0.80
USABLE @ 208V 6.02A		RPM 1745
SF1.00		NEMA NOM. EFF 86.5%

**ALTERNATE RATING: 2.0HP 50Hz 190-220/380-415V SF1.00**  
**6.50-5.79/3.25-3.07A 1415RPM EFF 82.6% (IE1) IEC 60034-1**

For safe area-inverter duty motor For 60Hz use on VPWM 1000:1 VT, 4:1 CT

**DE 6205-ZZ ODE 6203-ZZ MOBIL POLYREX EM**



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.

