

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :			
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	12674875
		Catalog # :	003120T3E213T-S
Frame	: 213/5T	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>	: 106 lb
Design	: B	Moment of inertia (J)	: 0.8104 sq.ft.lb
Output [HP]	3	3	3
Poles	6	6	6
Frequency [Hz]	60	50	50
Rated voltage [V]	230/460	190/380	220/415
Rated current [A]	8.32/4.16	9.88/4.94	9.00/4.77
L. R. Amperes [A]	49.1/24.5	45.4/22.7	45.9/24.3
LRC [A]	5.9x(Code H)	4.6x(Code E)	5.1x(Code G)
No load current [A]	4.58/2.29	4.52/2.26	4.60/2.44
Rated speed [RPM]	1175	965	970
Slip [%]	2.08	3.50	3.00
Rated torque [ft.lb]	13.4	16.3	16.2
Locked rotor torque [%]	210	160	180
Breakdown torque [%]	260	190	220
Service factor	1.15	1.15	1.15
Temperature rise	80 K	80 K	80 K
Locked rotor time	70s (cold) 39s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)
Noise level <sup>2</sup>	55.0 dB(A)	53.0 dB(A)	53.0 dB(A)
Efficiency (%)	25%	85.4	85.9
	50%	86.5	85.8
	75%	87.5	86.1
	100%	88.5	84.6
Power Factor	25%	0.33	0.35
	50%	0.56	0.59
	75%	0.68	0.72
	100%	0.75	0.80
Bearing type	: <u>Drive end</u> 6208 ZZ <u>Non drive end</u> 6206 ZZ	Foundation loads	
Sealing	: Without Without Bearing Seal Bearing Seal	Max. traction	: 148 lb
		Max. compression	: 254 lb
Lubrication interval	: - -		
Lubricant amount	: - -		
Lubricant type	: Mobil Polyrex EM		
Notes USABLE @208V 9.20A SF 1.00 SFA 9.20A			
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



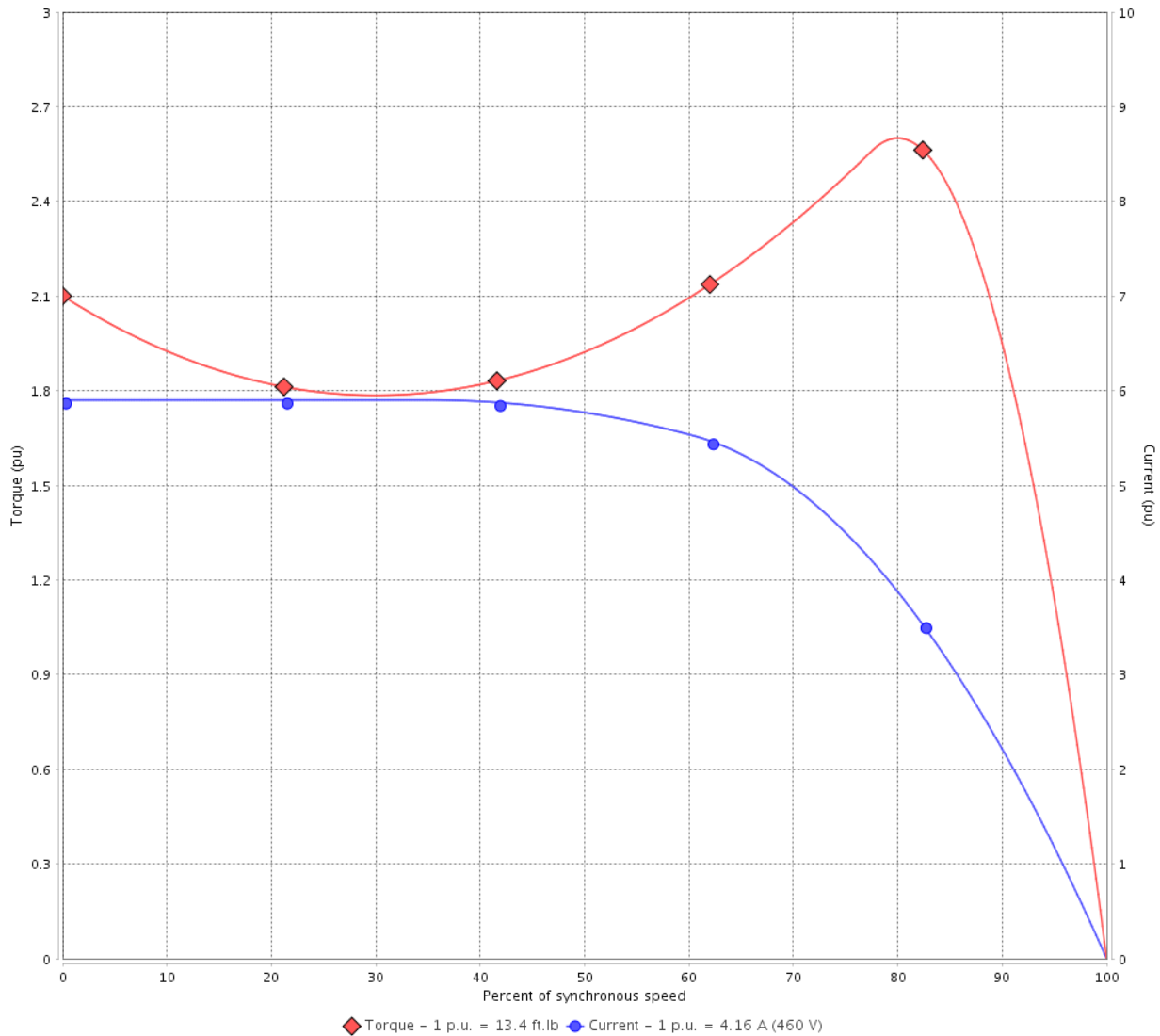
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12674875

Catalog # : 003120T3E213T-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 8.32/4.16 A  
 LRC : 5.9  
 Rated torque : 13.4 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 260 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 0.8104 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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

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# TORQUE AND CURRENT VS SPEED CURVE



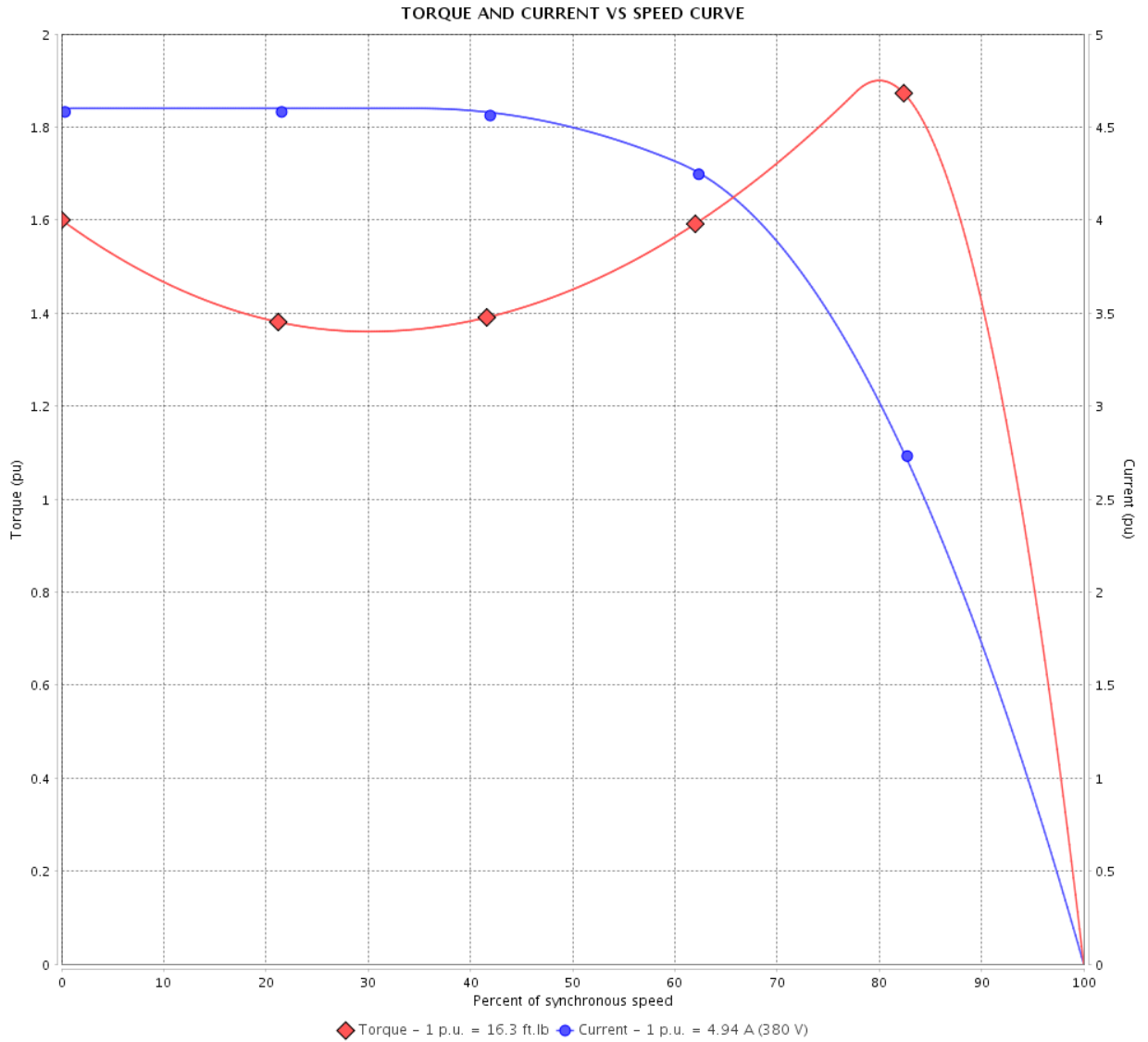
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12674875

Catalog # : 00312OT3E213T-S



Performance : 190/380 V 50 Hz 6P

Rated current : 9.88/4.94 A  
 LRC : 4.6  
 Rated torque : 16.3 ft.lb  
 Locked rotor torque : 160 %  
 Breakdown torque : 190 %  
 Rated speed : 965 rpm

Moment of inertia (J) : 0.8104 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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

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Three Phase Induction Motor - Squirrel Cage



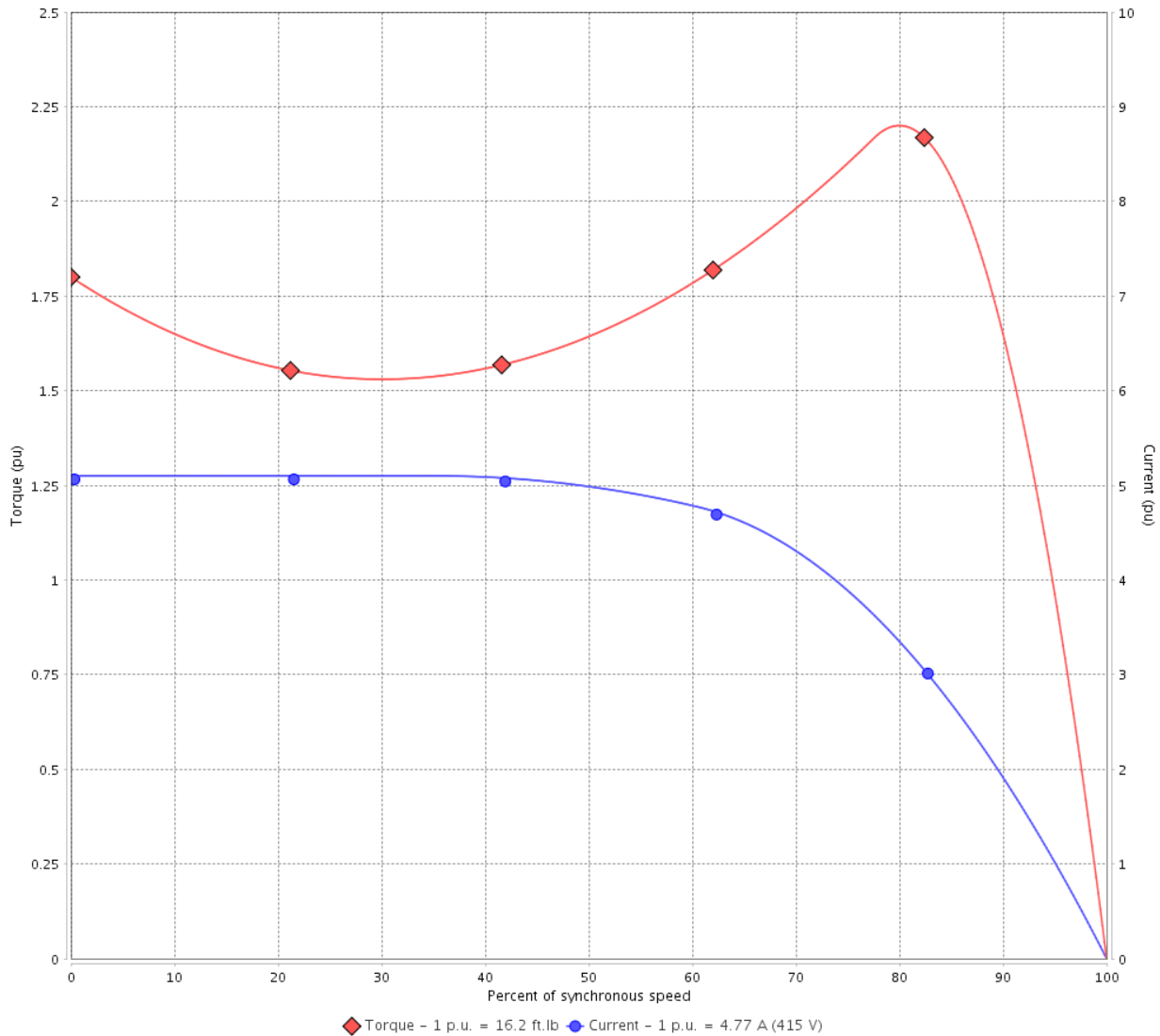
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12674875

Catalog # : 003120T3E213T-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 6P

Rated current	: 9.00/4.77 A	Moment of inertia (J)	: 0.8104 sq.ft.lb
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 16.2 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.15
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

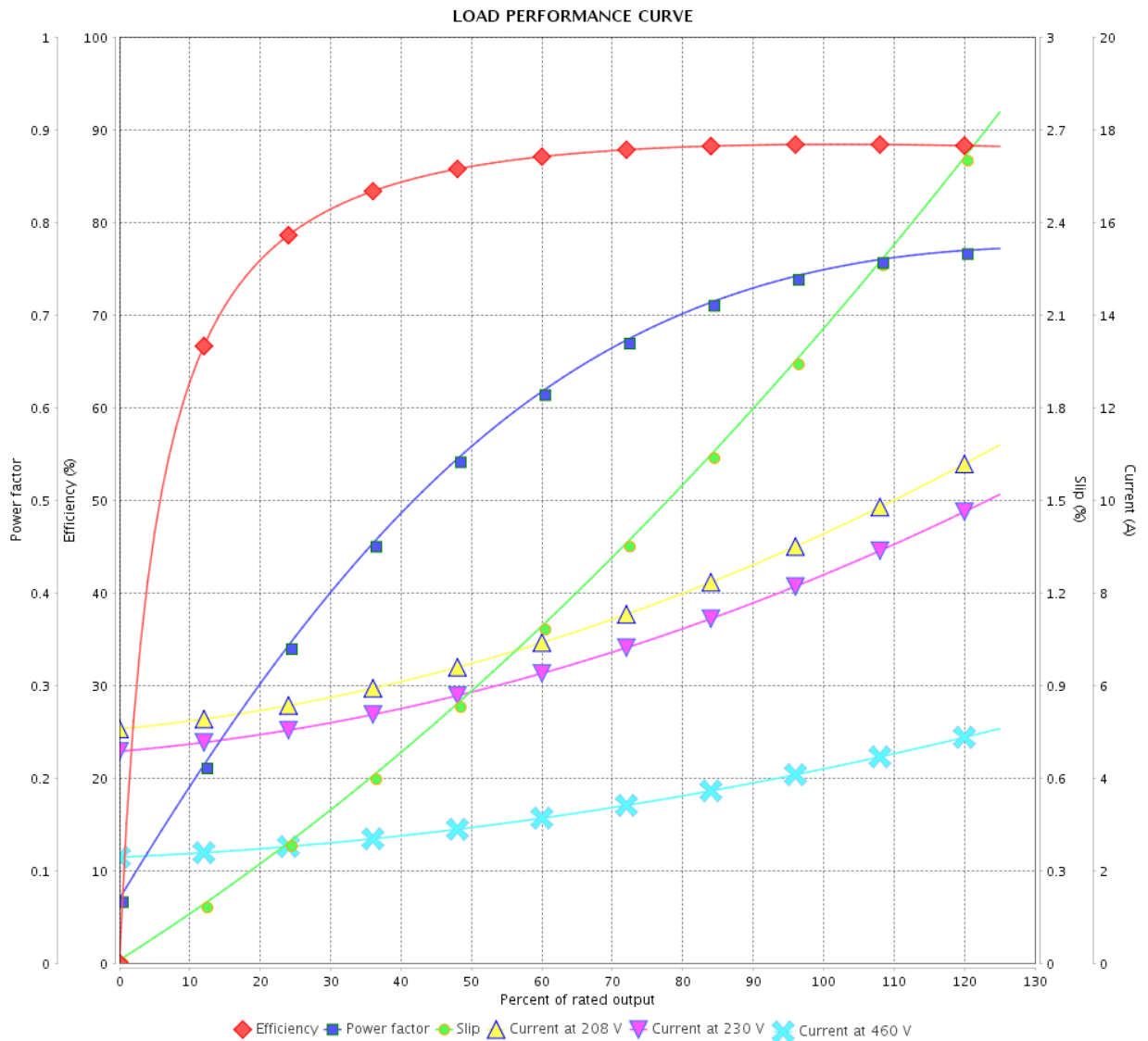


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12674875

Catalog # : 003120T3E213T-S



Performance : 230/460 V 60 Hz 6P

Rated current : 8.32/4.16 A  
 LRC : 5.9  
 Rated torque : 13.4 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 260 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 0.8104 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



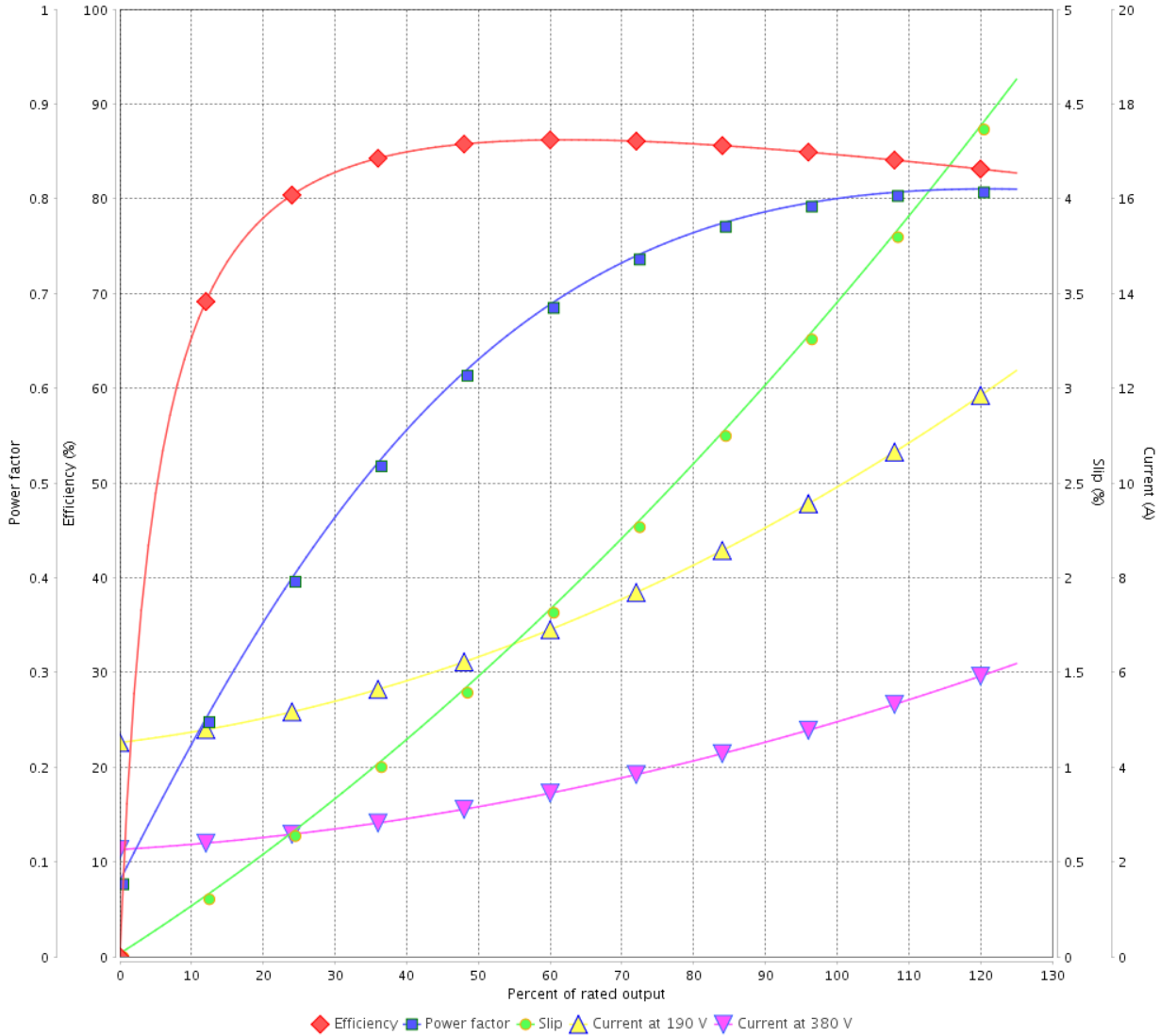
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Product code : 12674875

Catalog # : 003120T3E213T-S

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 6P

Rated current : 9.88/4.94 A  
 LRC : 4.6  
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 Locked rotor torque : 160 %  
 Breakdown torque : 190 %  
 Rated speed : 965 rpm

Moment of inertia (J) : 0.8104 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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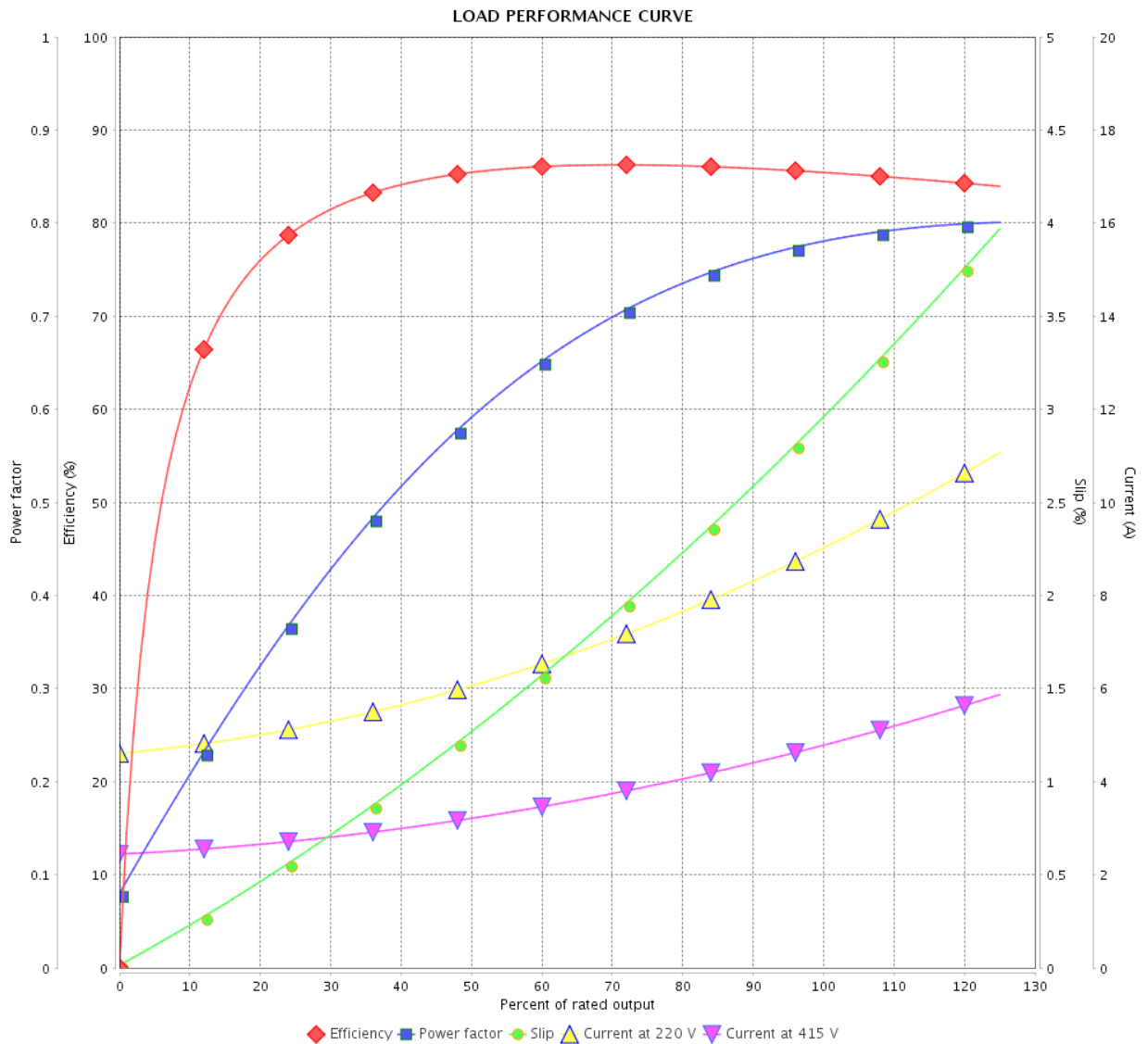


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Product code : 12674875

Catalog # : 003120T3E213T-S



Performance : 220/415 V 50 Hz 6P

Rated current : 9.00/4.77 A  
 LRC : 5.1  
 Rated torque : 16.2 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 220 %  
 Rated speed : 970 rpm

Moment of inertia (J) : 0.8104 sq.ft.lb  
 Duty cycle : Cont.(S1)  
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 Service factor : 1.15  
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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12674875  
Catalog # : 00312OT3E213T-S

Performance : 230/460 V 60 Hz 6P

Rated current	: 8.32/4.16 A	Moment of inertia (J)	: 0.8104 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 13.4 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1175 rpm	Design	: B

Heating constant

Cooling constant

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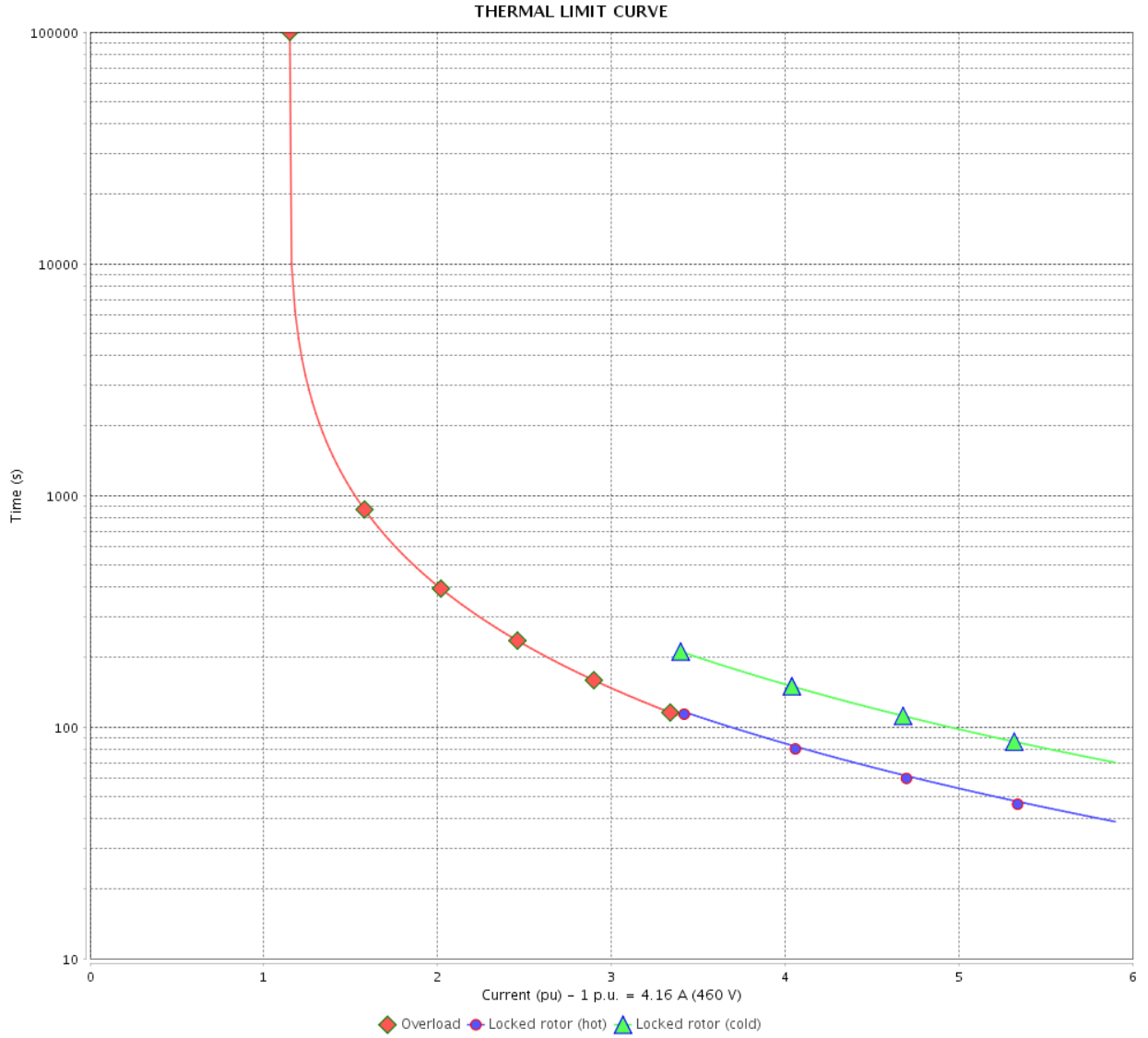


# THERMAL LIMIT CURVE

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  
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Catalog # : 00312OT3E213T-S

Performance : 190/380 V 50 Hz 6P

Rated current	: 9.88/4.94 A	Moment of inertia (J)	: 0.8104 sq.ft.lb
LRC	: 4.6	Duty cycle	: Cont.(S1)
Rated torque	: 16.3 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.15
Breakdown torque	: 190 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

Heating constant

Cooling constant

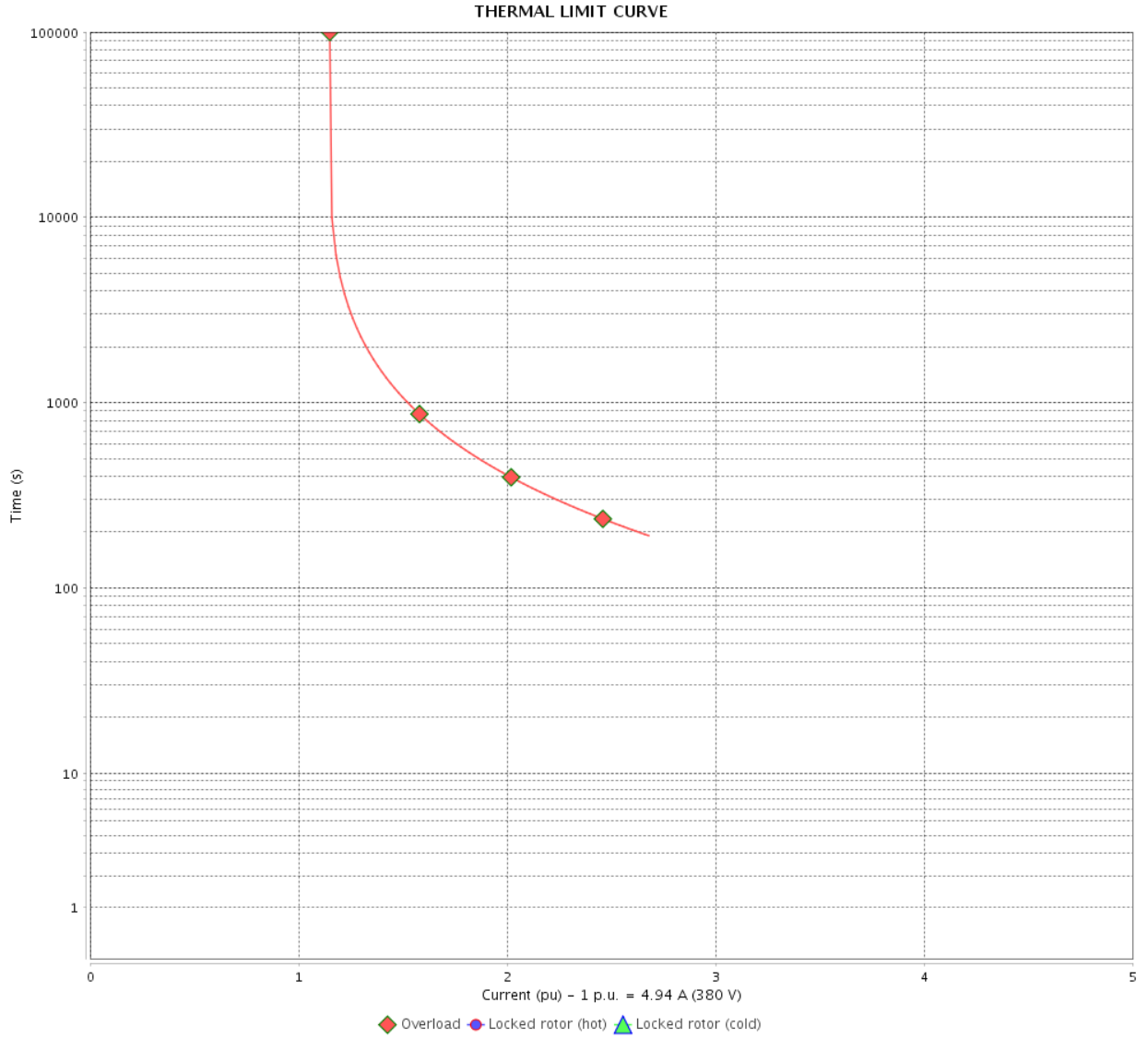
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Breakdown torque : 220 %	Temperature rise : 80 K
Rated speed : 970 rpm	Design : B

Heating constant

Cooling constant

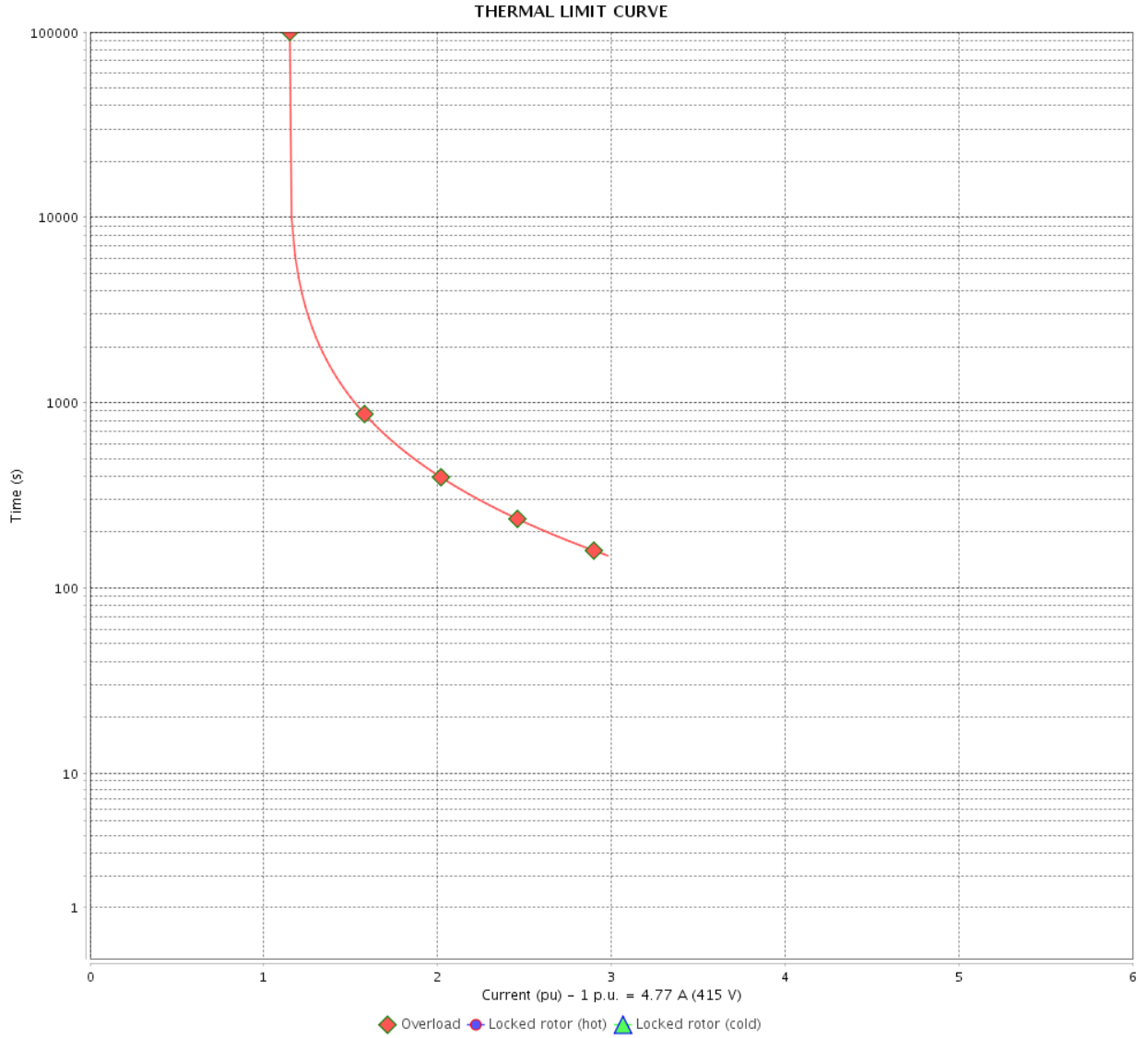
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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

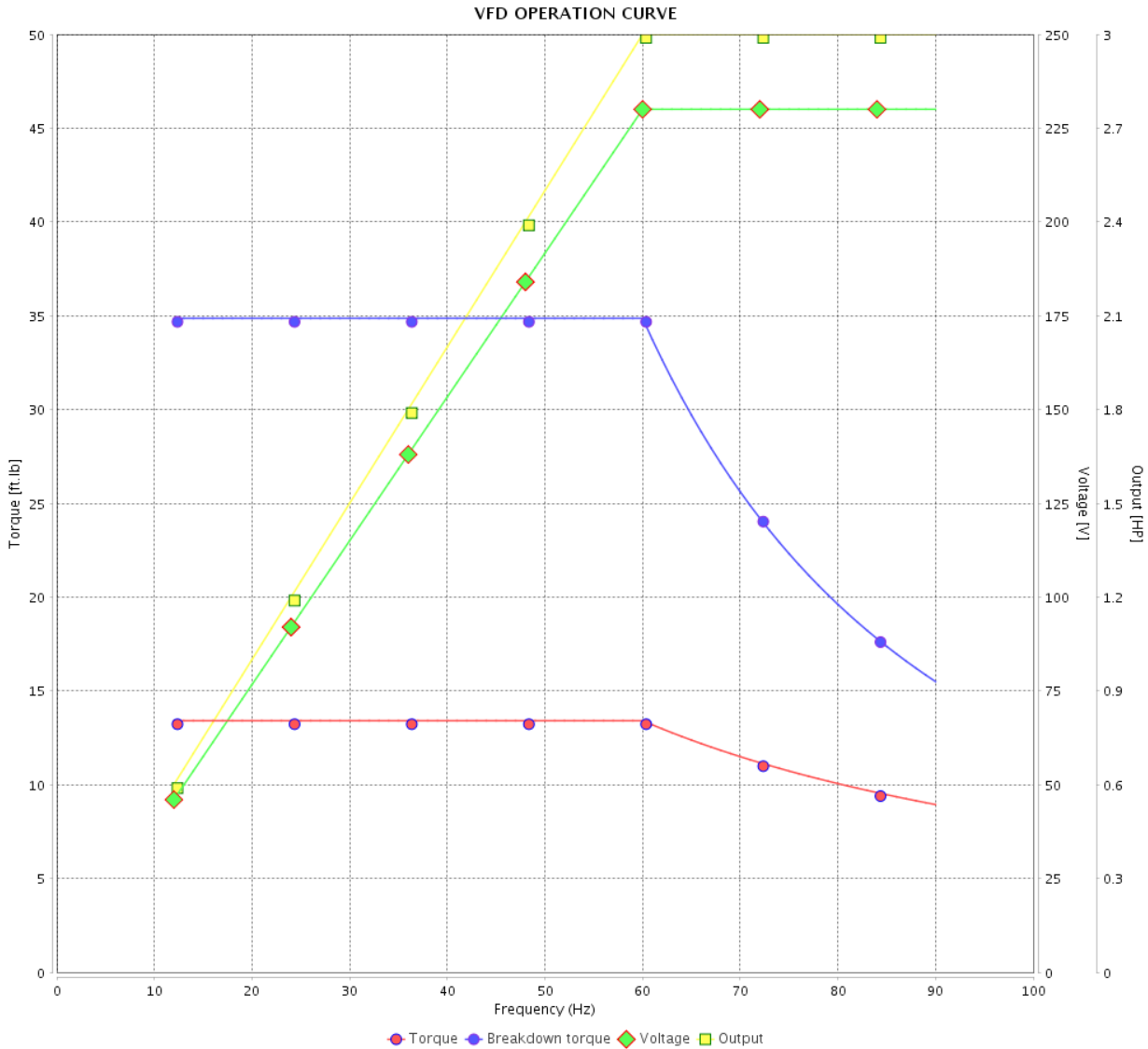


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Performance : 230/460 V 60 Hz 6P

Rated current : 8.32/4.16 A  
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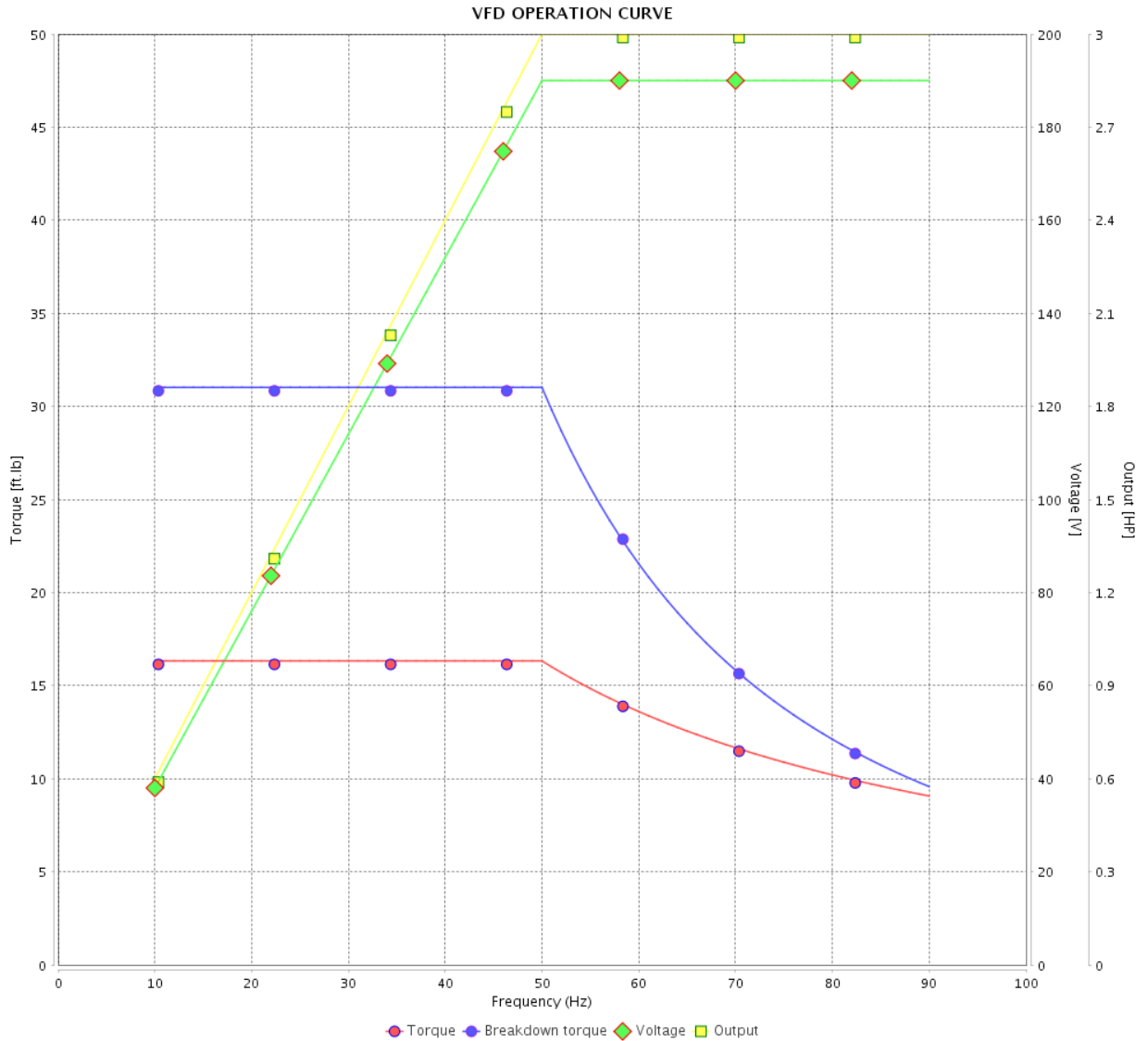


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 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
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 Design : B

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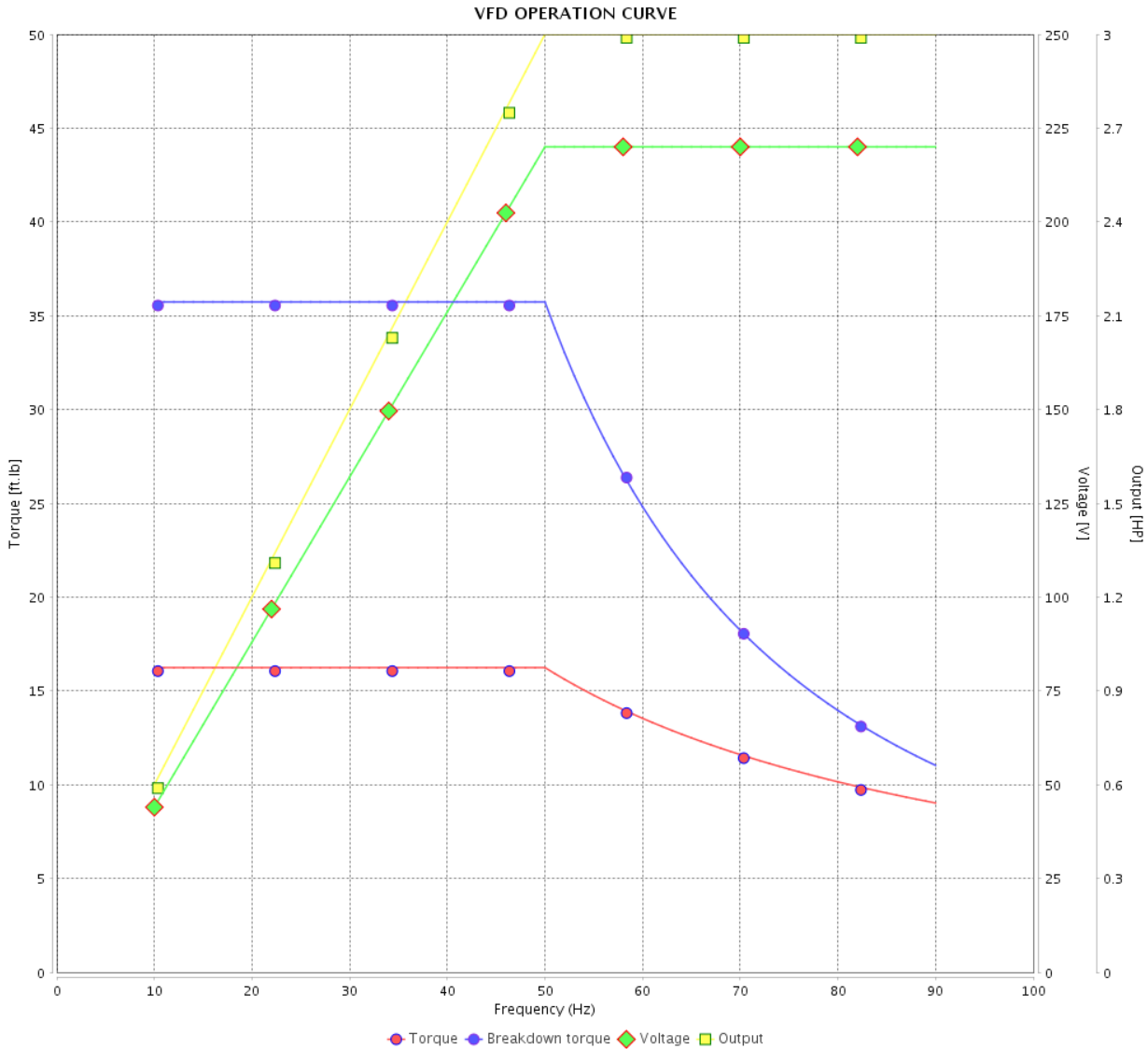


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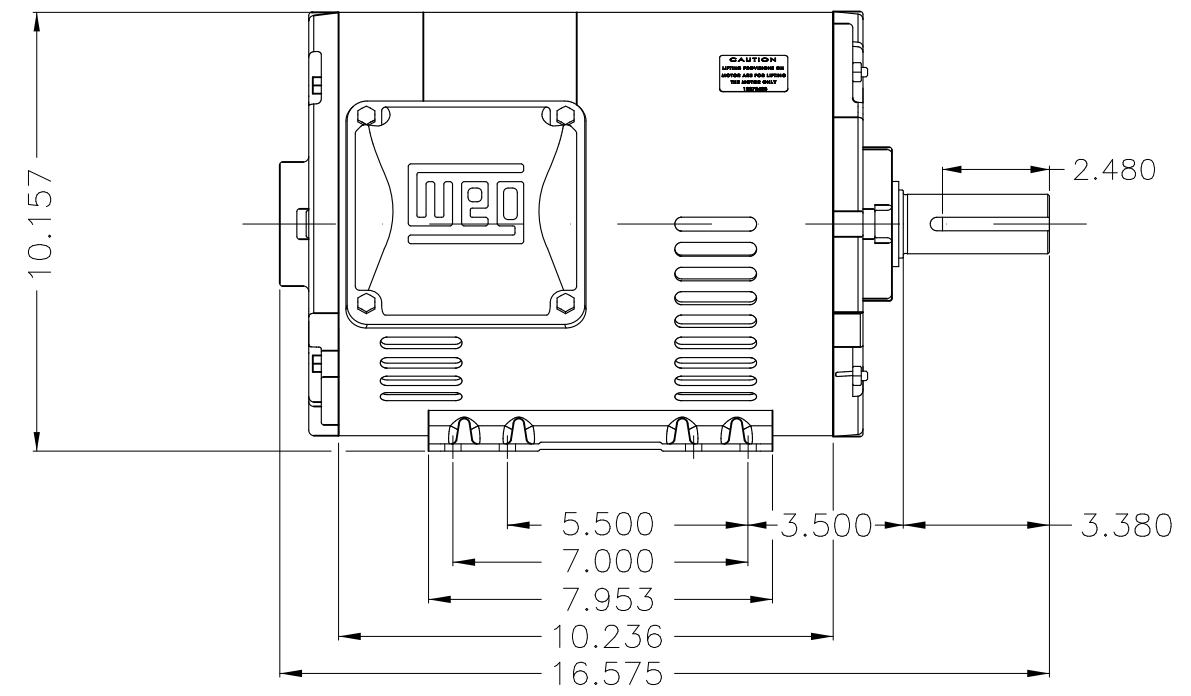
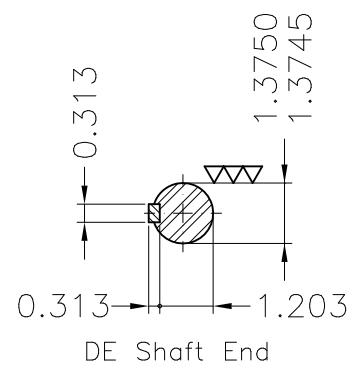
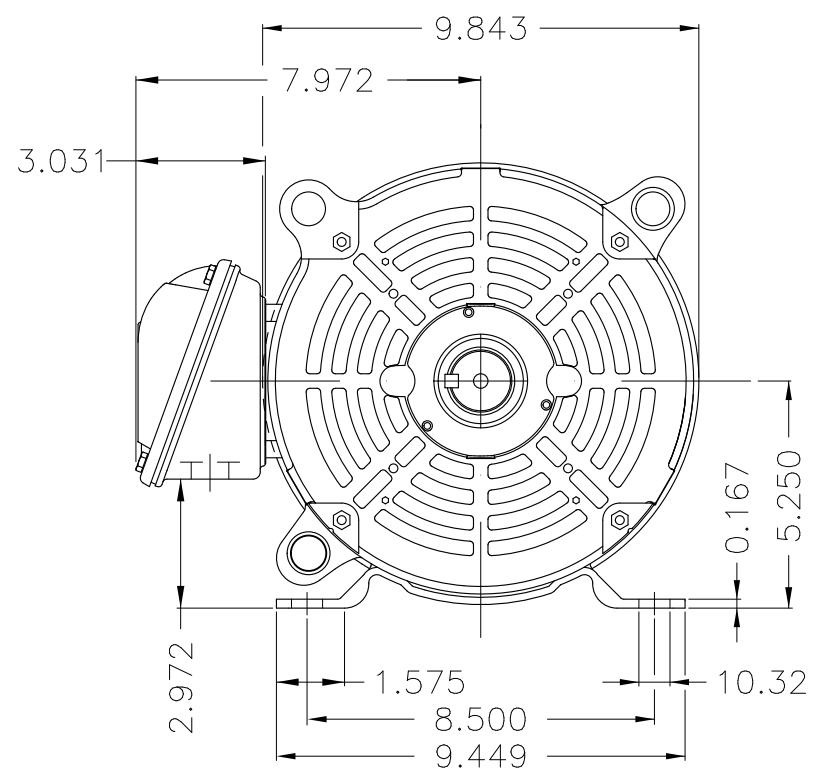
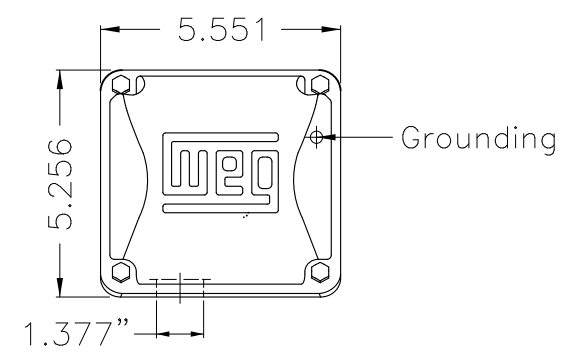
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1 2 3 4 5 6

A  
B  
C  
D  
E



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. FRAME 213/5T IP21 ODP					
CHECKED							
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET 1 / 1		PREVIEW WDD 	

3 HP 06 Poles 60 Hz

Dimensions in inches XME A3



**NEMA**  
**Premium**



MADE IN MEXICO

**MAT: 12674875 CC029A**  
**W01.T00IC0X0N**  
**MODEL 003120T3E213T-S**  
**12JAN2022 S/N:**

<b>PH 3</b>	<b>Hz 60</b>	<b>HP 3.0</b>
<b>FR 213/5T</b>		<b>KW 2.2</b>
<b>DUTY CONT.</b>		<b>V 230/460</b>
<b>ALT 1000 m.a.s.l.</b>		<b>A 8.32/4.16</b>
<b>INS CL F AT 80K</b>		<b>SFA 9.57/4.78</b>
<b>AMB 40°C</b>	<b>DES B</b>	<b>SF 1.15</b>
<b>ENCL ODP</b>	<b>CODE H</b>	<b>PF 0.75</b>
<b>USABLE @ 208V 9.20A</b>		<b>RPM 1175</b>
<b>SF1.00</b>		<b>NEMA NOM. EFF 88.5%</b>

**ALTERNATE RATING: 3.0HP 50Hz 190-220/380-415V SF1.15**  
**9.88-8.85/4.94-4.69A 965RPM EFF 84.6% (IE3) IEC 60034-1**

Inverter duty motor For 80Hz use on VPWM 1000:1 VT, 5:1 CT

**DE 6208-ZZ ODE 6206-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.

