

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer	:		
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	12677338
		Catalog # :	00736ET3ER213TC-S
Frame	: 213/5TC	Cooling method	: IC411 - TEFC
Insulation class	: F	Mounting	: W-6
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>	: 144 lb
Protection degree	: IP55	Moment of inertia (J)	: 0.5496 sq.ft.lb
Design	: B		
Output [HP]	7.5	7.5	7.5
Poles	2	2	2
Frequency [Hz]	60	50	50
Rated voltage [V]	230/460	190/380	220/415
Rated current [A]	17.3/8.67	21.2/10.6	19.1/10.1
L. R. Amperes [A]	132/65.9	134/66.8	133/70.7
LRC [A]	7.6x(Code H)	6.3x(Code G)	7.0x(Code H)
No load current [A]	6.63/3.32	6.54/3.27	6.64/3.52
Rated speed [RPM]	3530	2905	2915
Slip [%]	1.94	3.17	2.83
Rated torque [ft.lb]	11.2	13.6	13.5
Locked rotor torque [%]	260	190	220
Breakdown torque [%]	300	240	270
Service factor	1.15	1.00	1.00
Temperature rise	80 K	105 K	80 K
Locked rotor time	27s (cold) 15s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)
Noise level <sup>2</sup>	70.0 dB(A)	67.0 dB(A)	67.0 dB(A)
Efficiency (%)	25%	86.4	89.4
	50%	87.5	88.6
	75%	88.5	88.8
	100%	89.5	87.7
Power Factor	25%	0.49	0.51
	50%	0.76	0.78
	75%	0.85	0.87
	100%	0.89	0.90
Bearing type	: <u>Drive end</u> 6208 ZZ <u>Non drive end</u> 6206 ZZ	Foundation loads	
Sealing	: V'Ring Without Bearing Seal	Max. traction	: 134 lb
		Max. compression	: 277 lb
Lubrication interval	: -		
Lubricant amount	: -		
Lubricant type	: Mobil Polyrex EM		
Notes USABLE @208V 19.2A SF 1.00 SFA 19.2A			
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



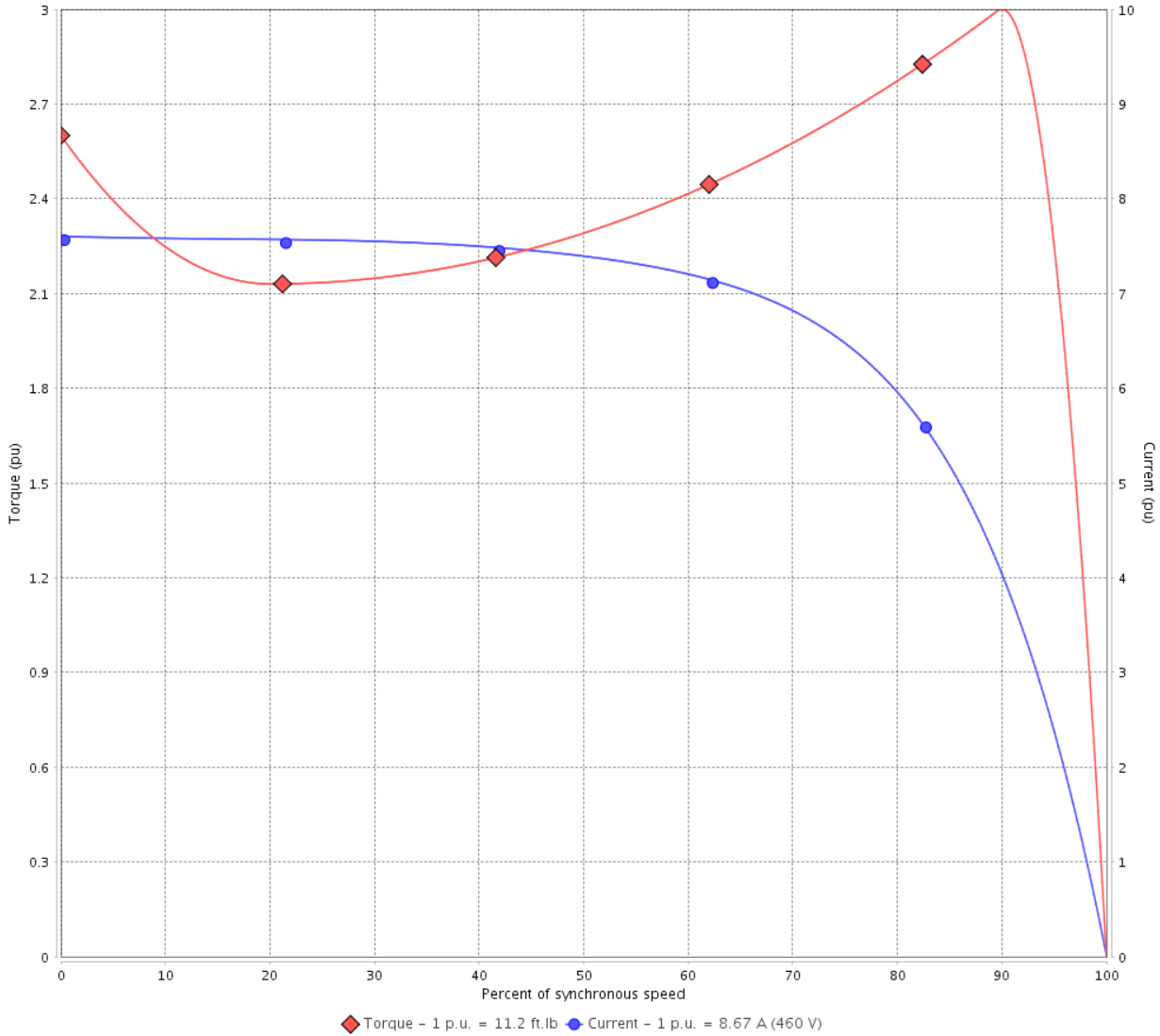
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12677338

Catalog # : 00736ET3ER213TC-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 2P

Rated current	: 17.3/8.67 A	Moment of inertia (J)	: 0.5496 sq.ft.lb
LRC	: 7.6	Duty cycle	: Cont.(S1)
Rated torque	: 11.2 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.15
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 3530 rpm	Design	: B

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

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# TORQUE AND CURRENT VS SPEED CURVE



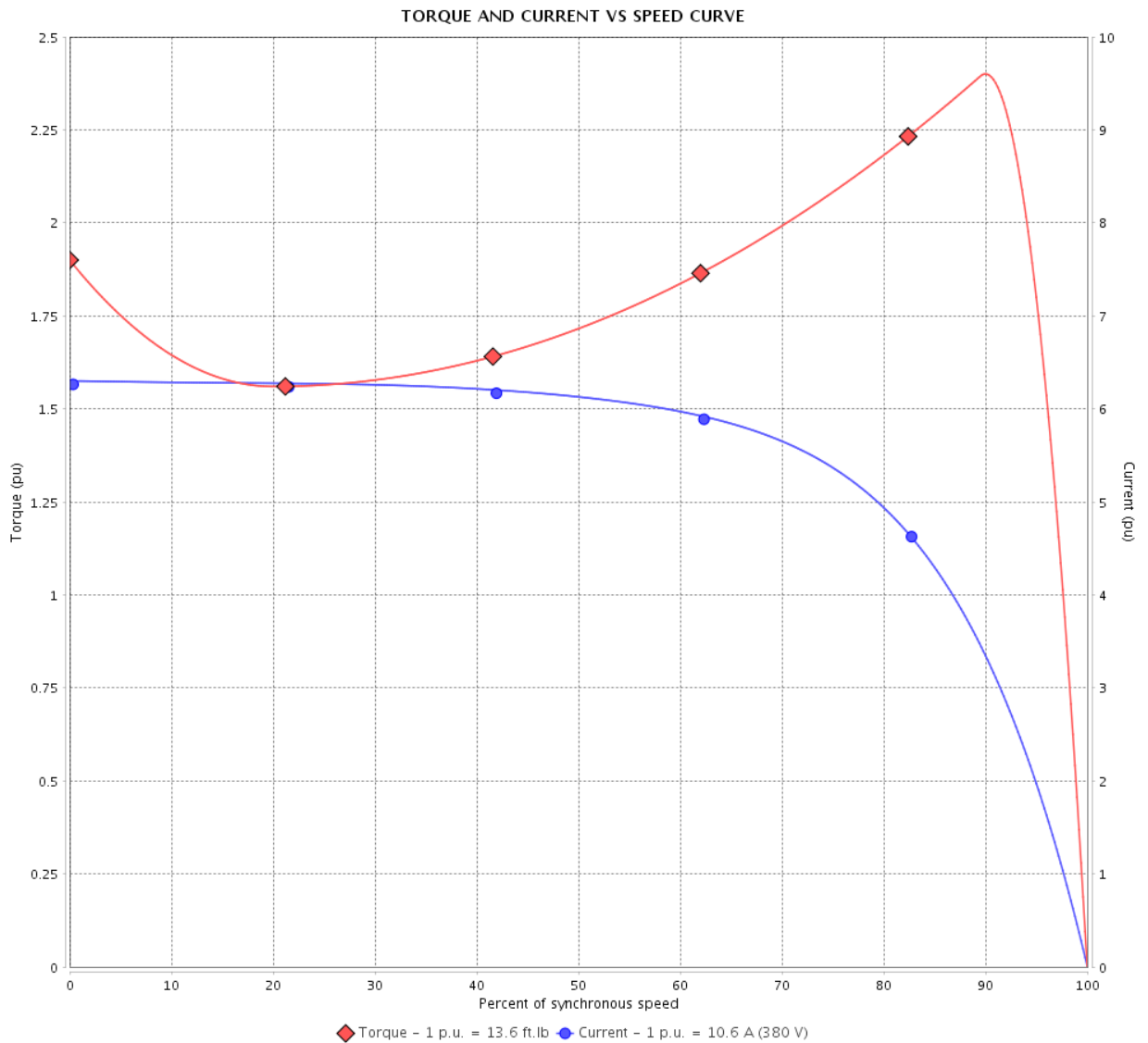
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12677338

Catalog # : 00736ET3ER213TC-S



Performance : 190/380 V 50 Hz 2P

Rated current : 21.2/10.6 A  
 LRC : 6.3  
 Rated torque : 13.6 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 240 %  
 Rated speed : 2905 rpm

Moment of inertia (J) : 0.5496 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



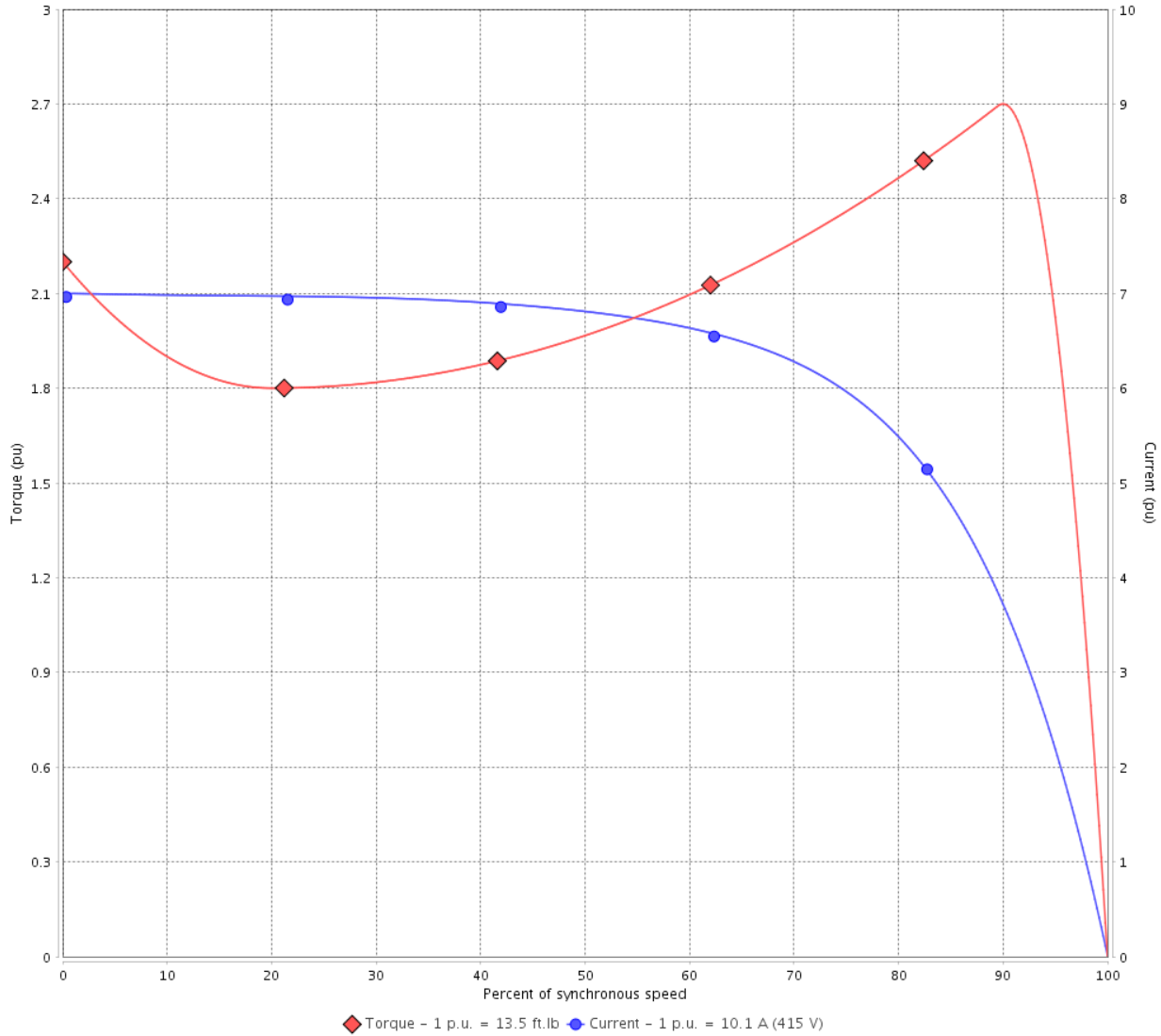
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12677338

Catalog # : 00736ET3ER213TC-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 2P

Rated current	: 19.1/10.1 A	Moment of inertia (J)	: 0.5496 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 13.5 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 2915 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

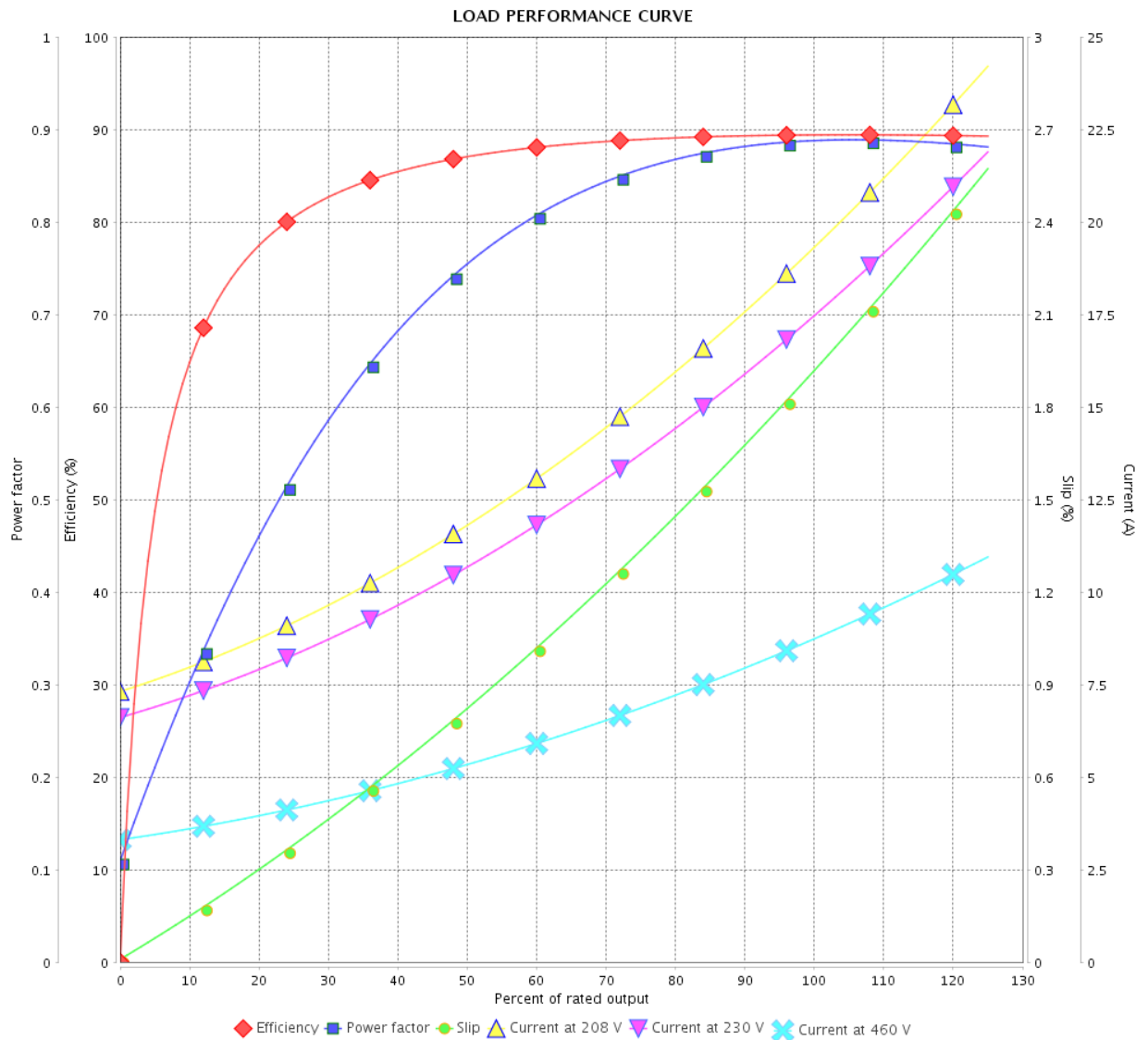


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12677338

Catalog # : 00736ET3ER213TC-S



Performance : 230/460 V 60 Hz 2P

Rated current : 17.3/8.67 A  
 LRC : 7.6  
 Rated torque : 11.2 ft.lb  
 Locked rotor torque : 260 %  
 Breakdown torque : 300 %  
 Rated speed : 3530 rpm

Moment of inertia (J) : 0.5496 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



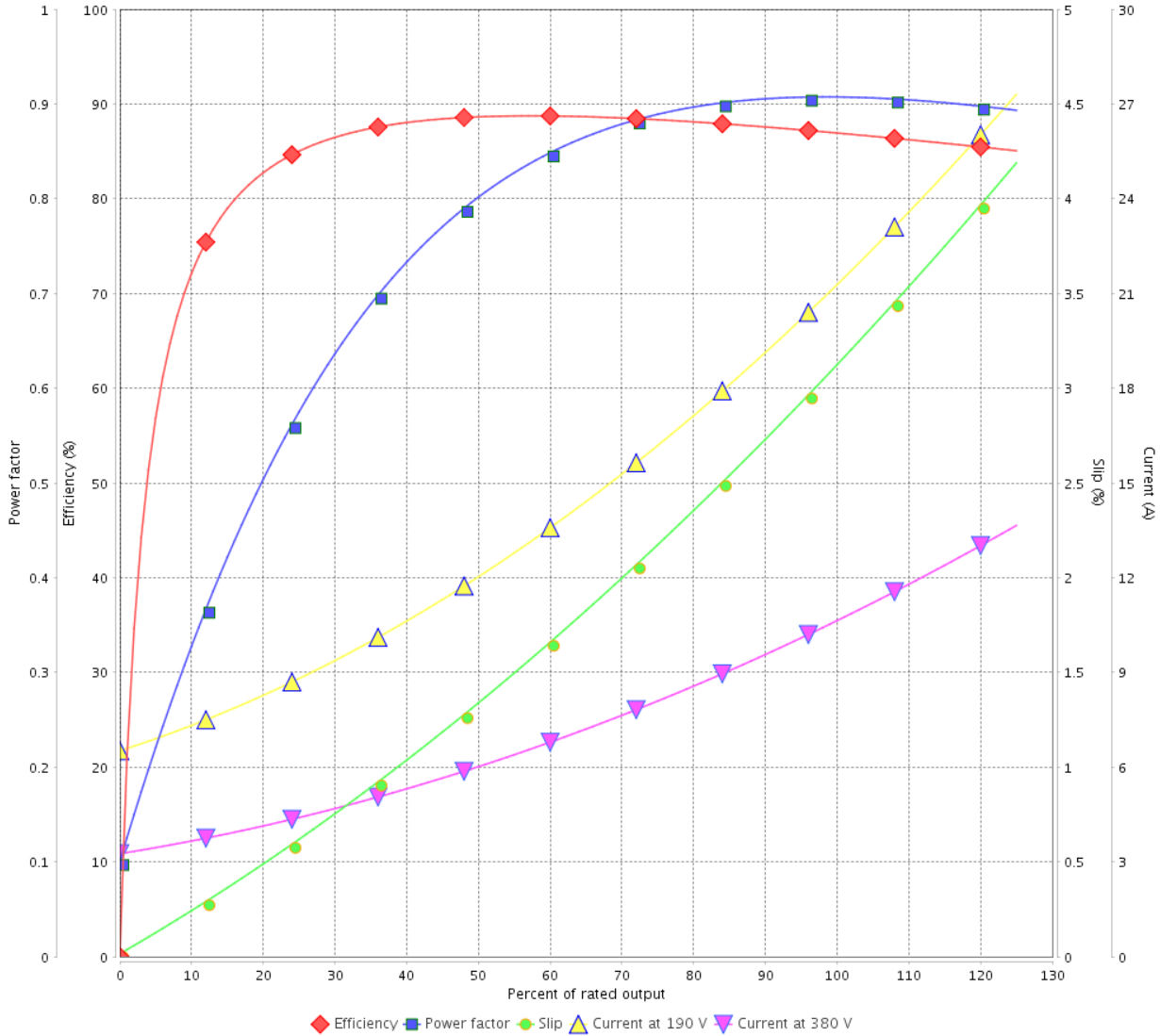
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12677338

Catalog # : 00736ET3ER213TC-S

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 2P

Rated current : 21.2/10.6 A  
 LRC : 6.3  
 Rated torque : 13.6 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 240 %  
 Rated speed : 2905 rpm

Moment of inertia (J) : 0.5496 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

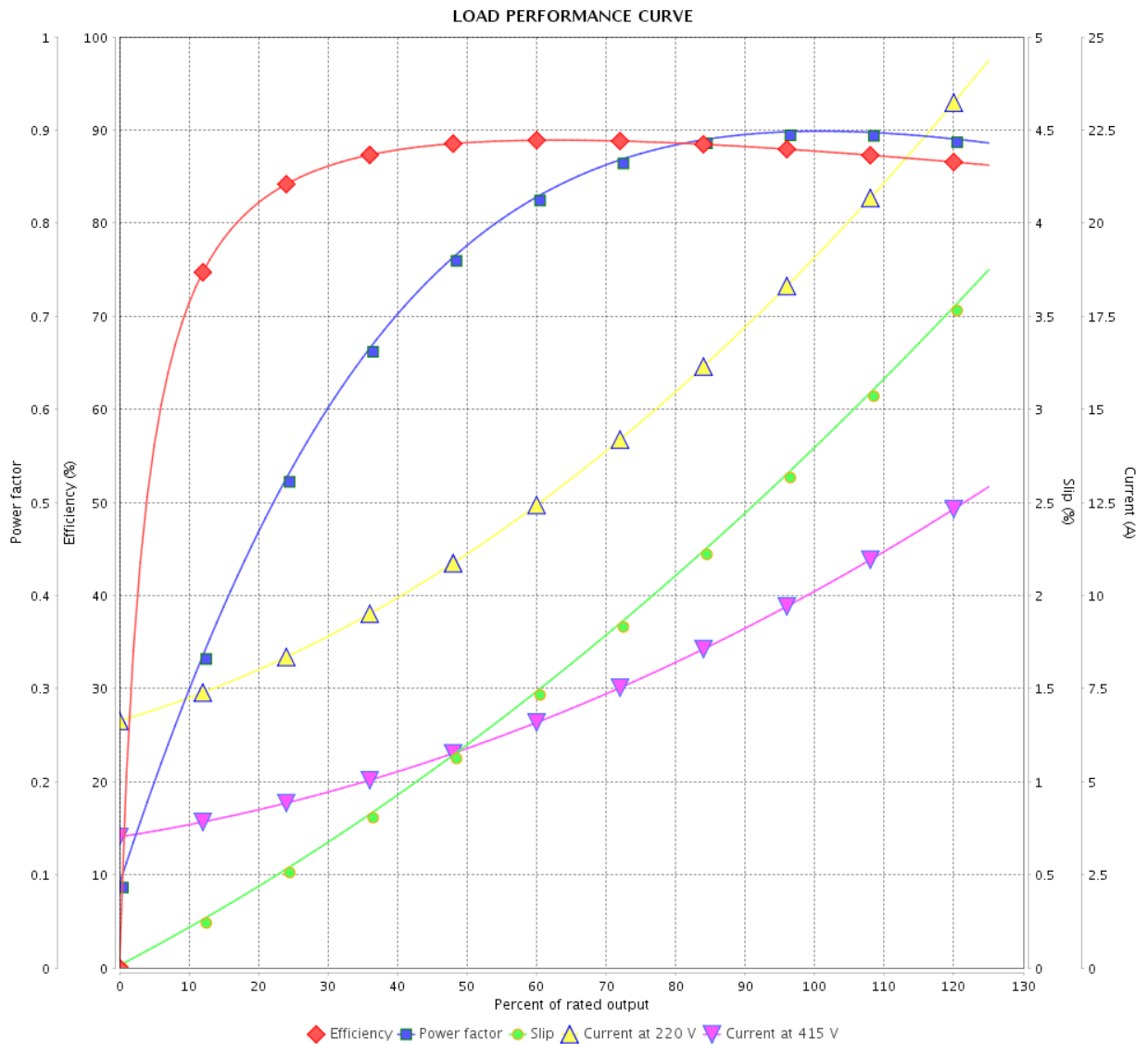


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Catalog # : 00736ET3ER213TC-S



Performance : 220/415 V 50 Hz 2P

Rated current : 19.1/10.1 A  
 LRC : 7.0  
 Rated torque : 13.5 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 270 %  
 Rated speed : 2915 rpm

Moment of inertia (J) : 0.5496 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 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 : 12677338  
 Catalog # : 00736ET3ER213TC-S

Performance : 230/460 V 60 Hz 2P

Rated current : 17.3/8.67 A	Moment of inertia (J) : 0.5496 sq.ft.lb
LRC : 7.6	Duty cycle : Cont.(S1)
Rated torque : 11.2 ft.lb	Insulation class : F
Locked rotor torque : 260 %	Service factor : 1.15
Breakdown torque : 300 %	Temperature rise : 80 K
Rated speed : 3530 rpm	Design : B

Heating constant

Cooling constant

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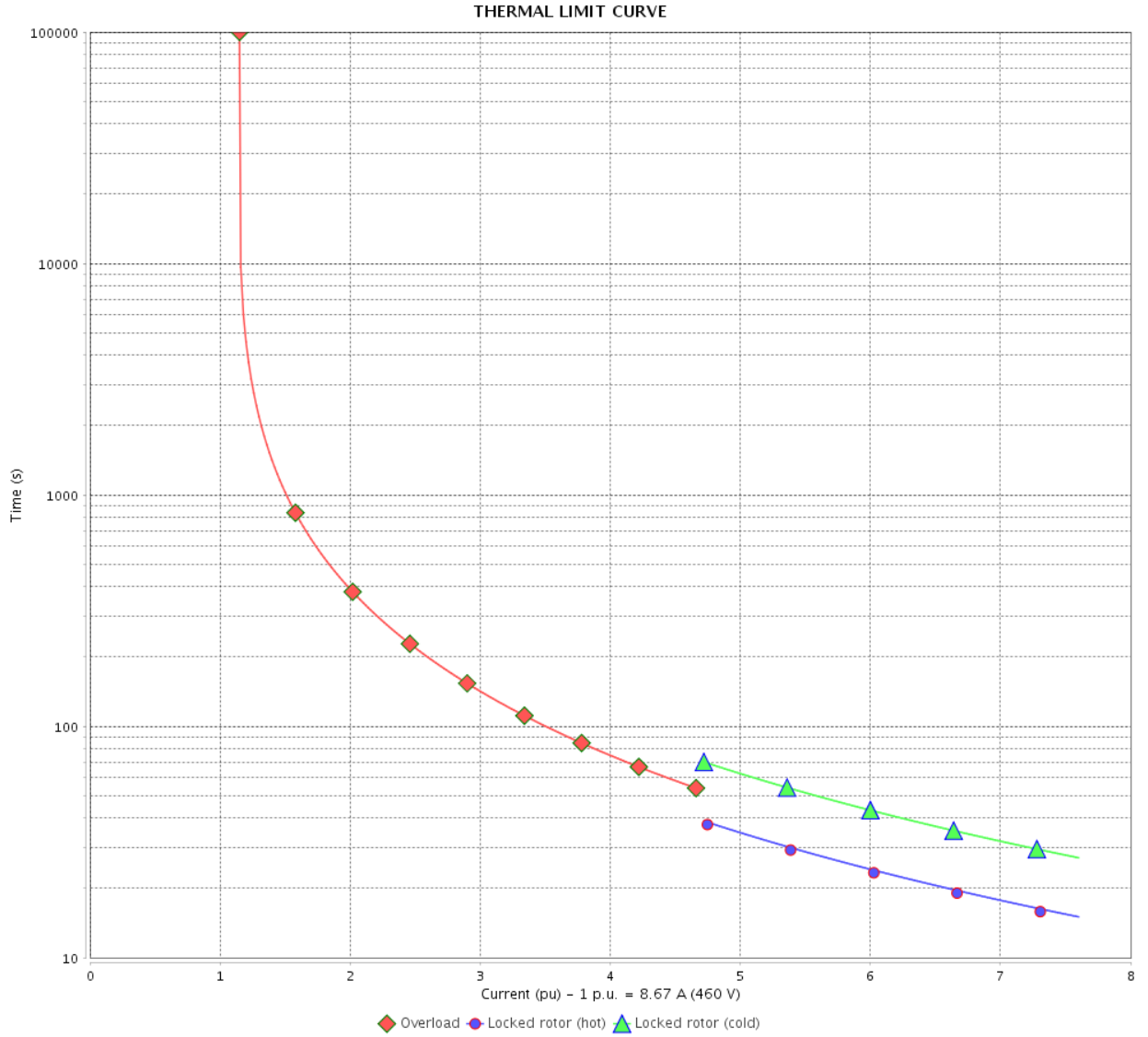


# THERMAL LIMIT CURVE

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 : 12677338  
 Catalog # : 00736ET3ER213TC-S

Performance : 190/380 V 50 Hz 2P

Rated current : 21.2/10.6 A	Moment of inertia (J) : 0.5496 sq.ft.lb
LRC : 6.3	Duty cycle : Cont.(S1)
Rated torque : 13.6 ft.lb	Insulation class : F
Locked rotor torque : 190 %	Service factor : 1.00
Breakdown torque : 240 %	Temperature rise : 105 K
Rated speed : 2905 rpm	Design : B

Heating constant

Cooling constant

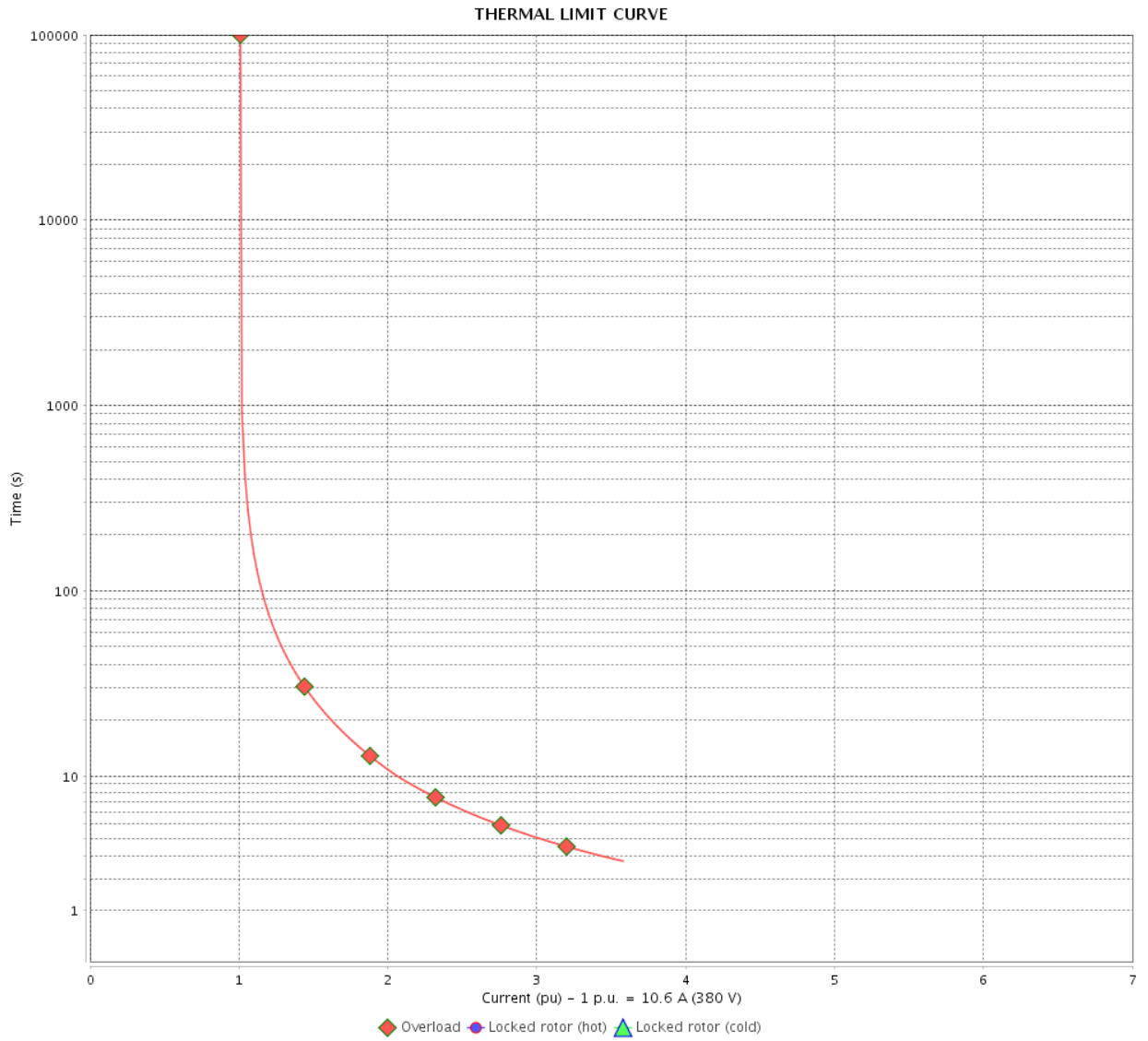
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# THERMAL LIMIT CURVE

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 : 12677338  
 Catalog # : 00736ET3ER213TC-S

Performance : 220/415 V 50 Hz 2P

Rated current : 19.1/10.1 A	Moment of inertia (J) : 0.5496 sq.ft.lb
LRC : 7.0	Duty cycle : Cont.(S1)
Rated torque : 13.5 ft.lb	Insulation class : F
Locked rotor torque : 220 %	Service factor : 1.00
Breakdown torque : 270 %	Temperature rise : 80 K
Rated speed : 2915 rpm	Design : B

Heating constant

Cooling constant

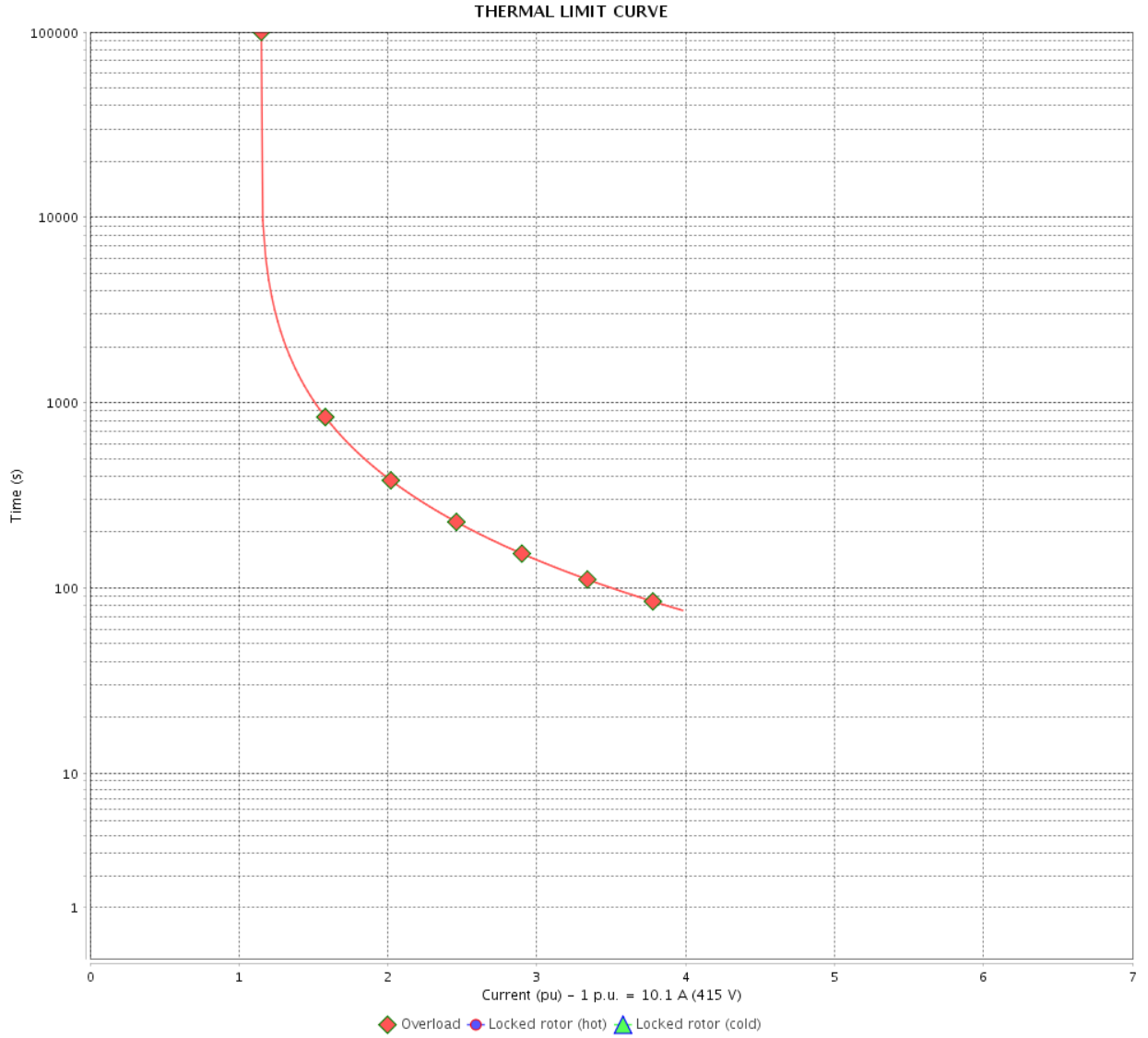
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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



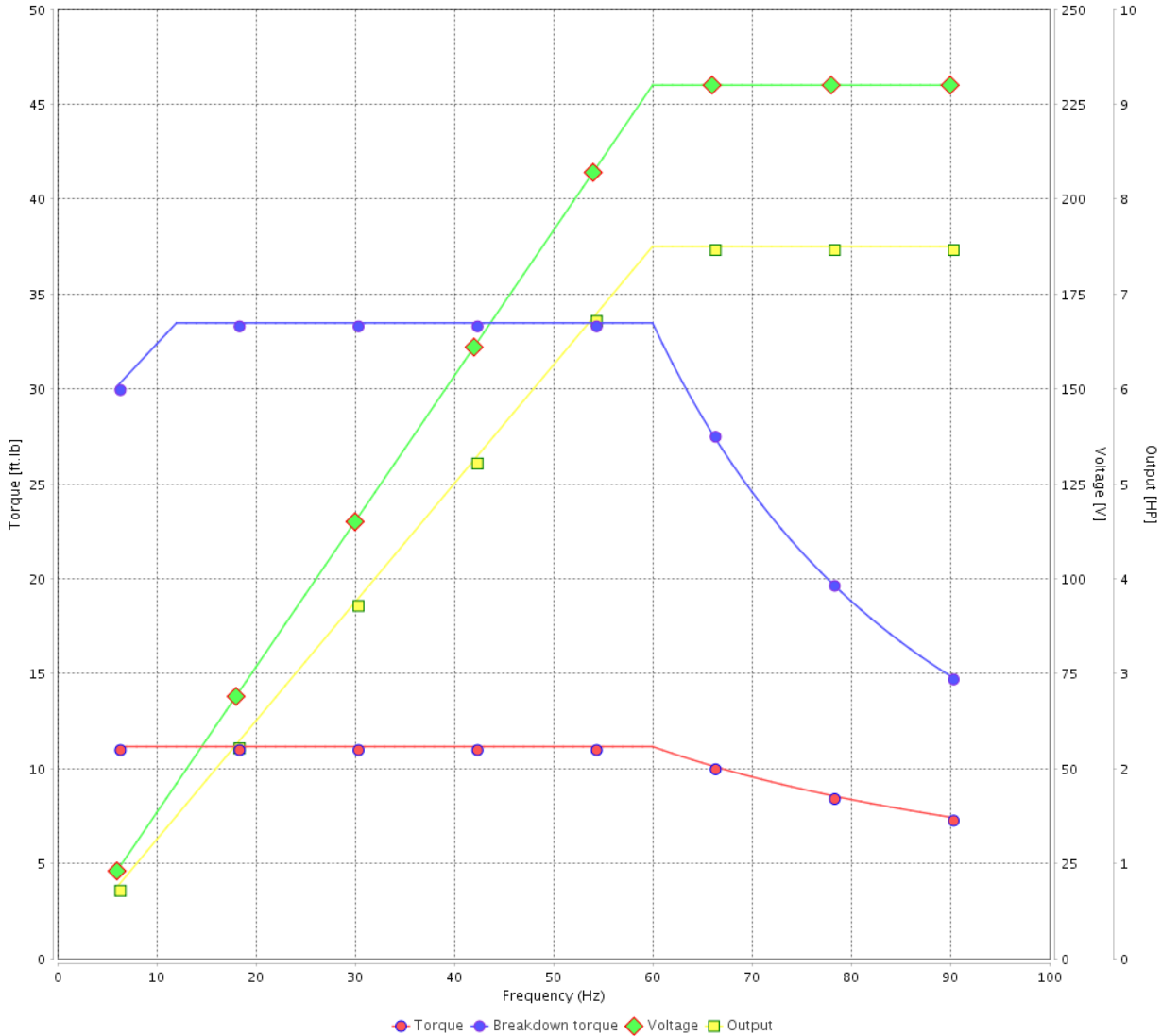
Customer :

Product line : NEMA Premium Efficiency Three-Phase

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VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 2P

Rated current : 17.3/8.67 A  
 LRC : 7.6  
 Rated torque : 11.2 ft.lb  
 Locked rotor torque : 260 %  
 Breakdown torque : 300 %  
 Rated speed : 3530 rpm

Moment of inertia (J) : 0.5496 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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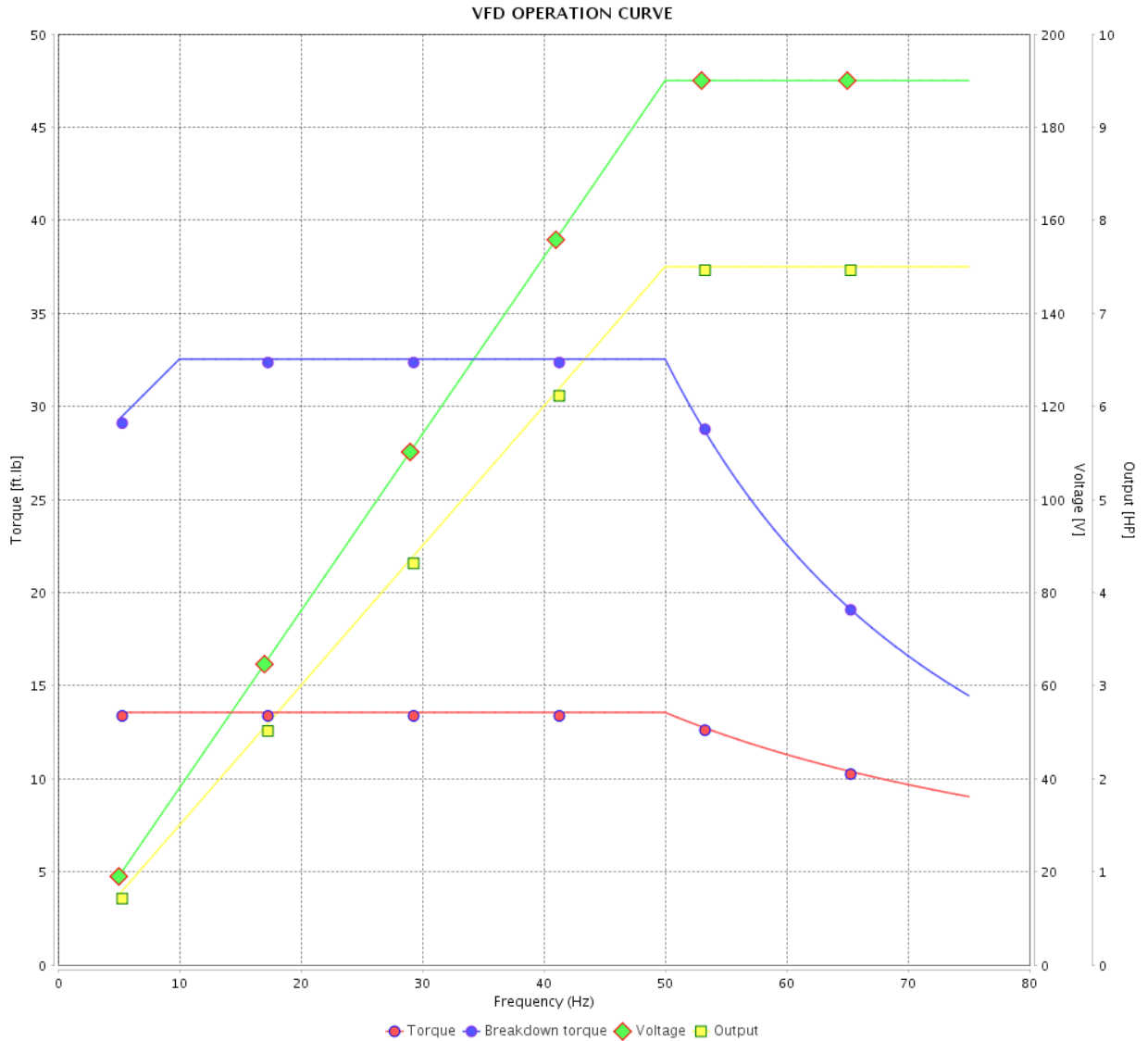
# VFD OPERATION CURVE

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 Breakdown torque : 240 %  
 Rated speed : 2905 rpm

Moment of inertia (J) : 0.5496 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



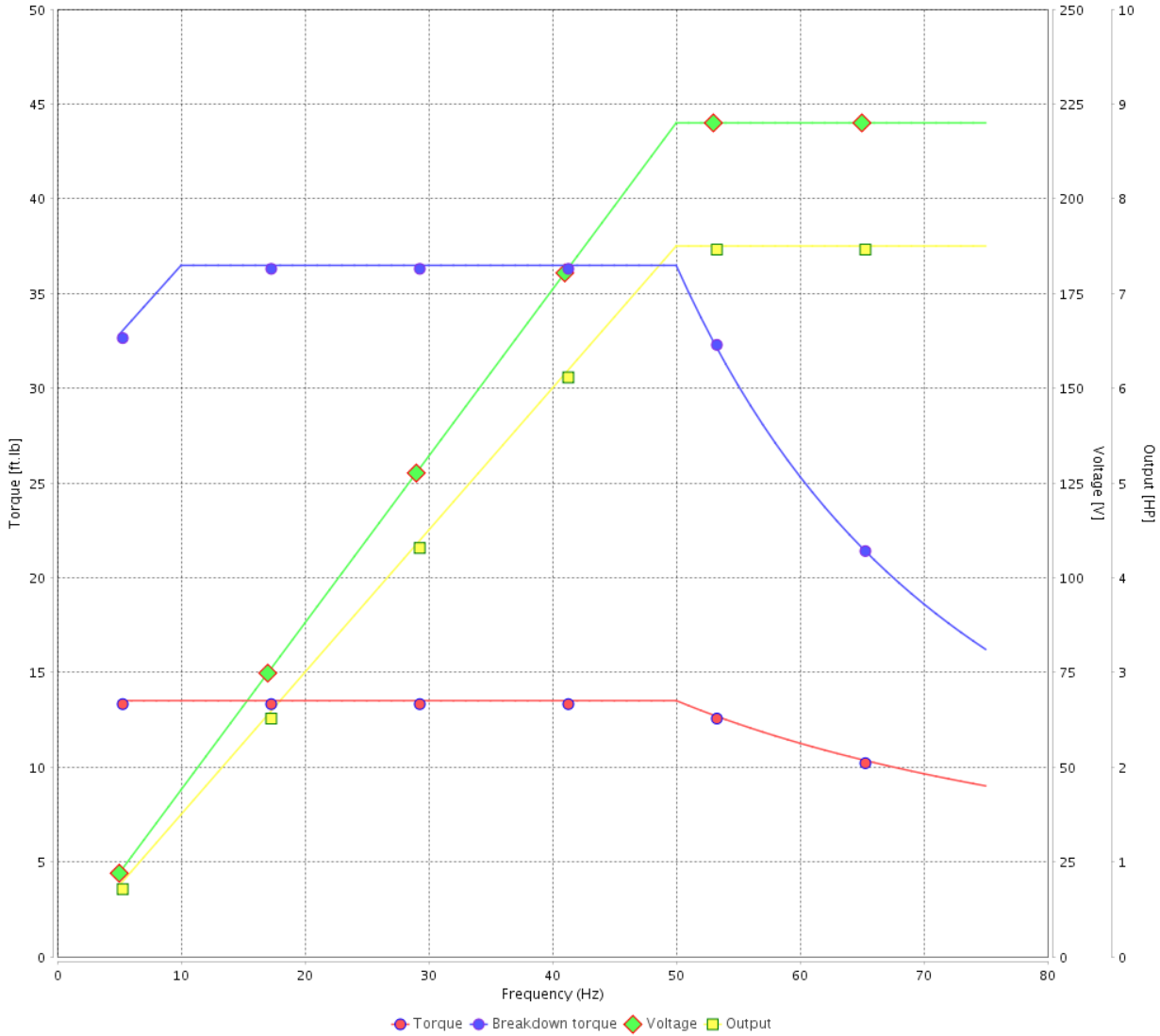
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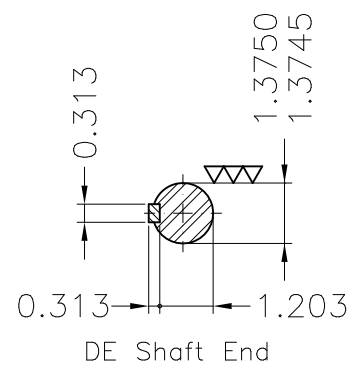
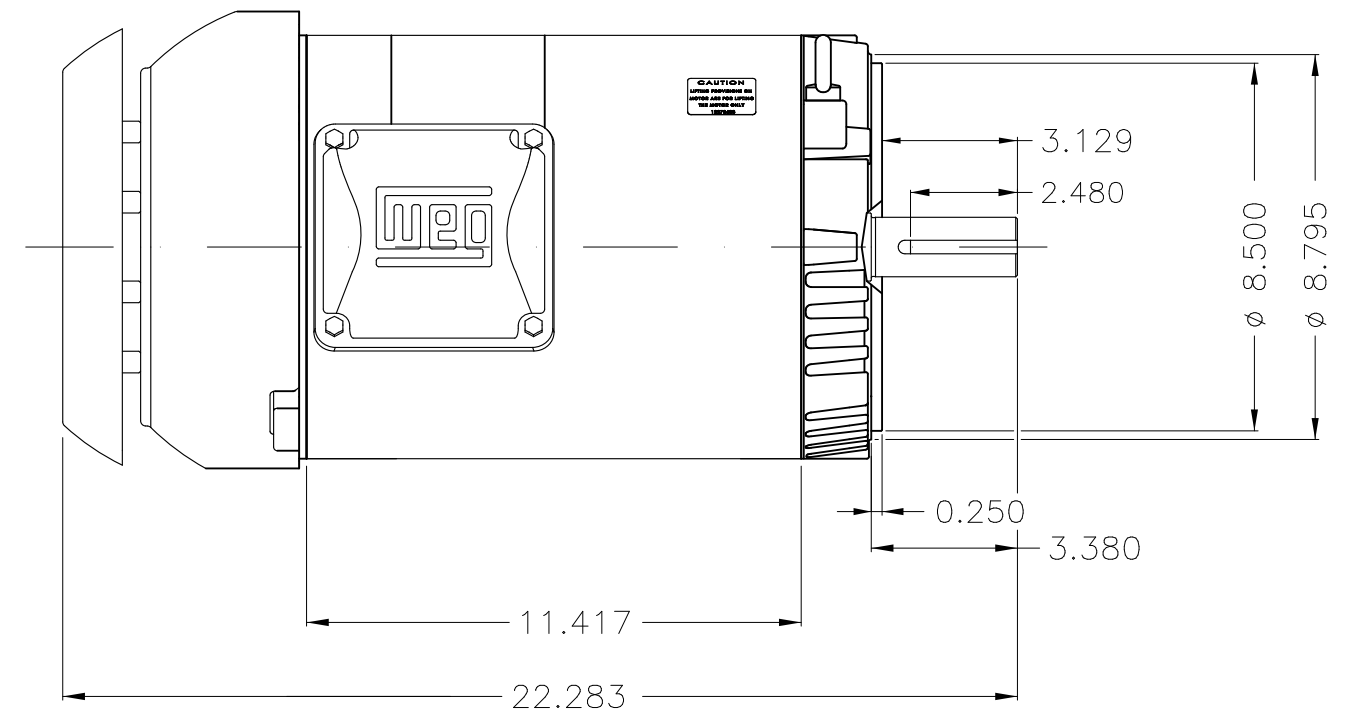
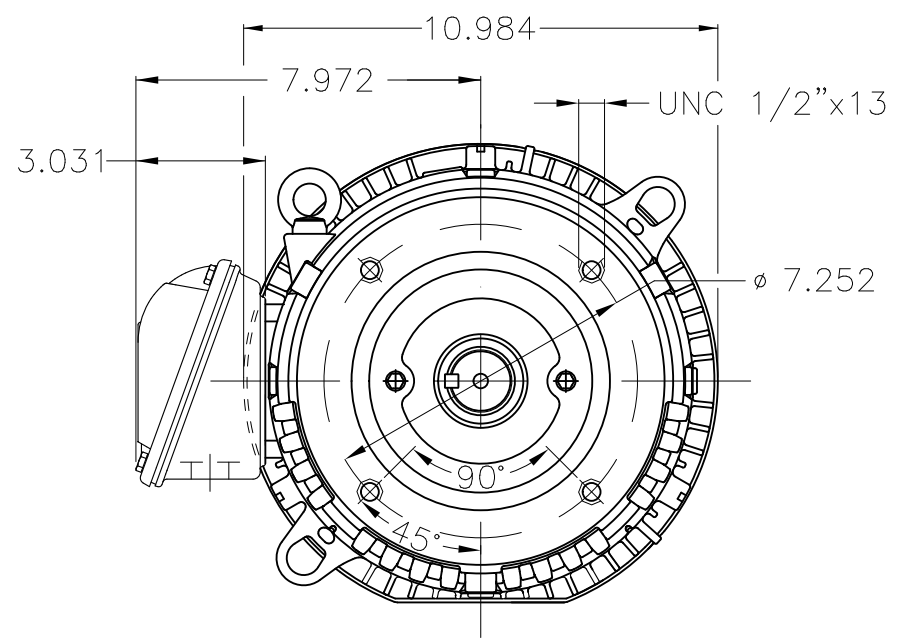
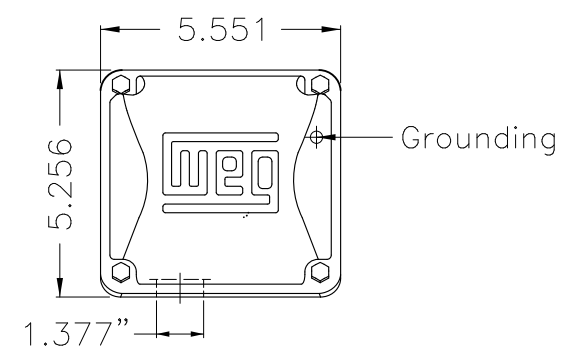
Moment of inertia (J) : 0.5496 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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1 2 3 4 5 6

A



B

C

D

E

Dimensions in inches

Color Munsell N 1 matte black  
 Painting plan 207N  
 Mounting W-6/V18R(D)

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR ROLLED STEEL PREM. EFF.					
CHECKED		FRAME 213/5TC IP55 TEFC					
RELEASED							

**PREVIEW**  
WDD



7.5 HP 02 Poles 60 Hz

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

XME A3



**NEMA**  
**Premium**



3PT9



Energy Verified

MADE IN MEXICO

**MAT: 12677338 CC029A**

**W01.TE0IC0X0N**

**MODEL 00736ET3ER213TC-S**

**20APR2022 S/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**

<b>PH 3</b>	<b>Hz 60</b>	<b>HP 7.5</b>
<b>FR 213/5TC</b>		<b>KW 5.5</b>
<b>DUTY CONT.</b>		<b>V 230/460</b>
<b>ALT 1000 m.a.s.l.</b>		<b>A 17.3/8.67</b>
<b>INS CL F AT 80K</b>	<b>IP55</b>	<b>SFA 19.9/9.97</b>
<b>AMB 40°C</b>	<b>DES B</b>	<b>SF 1.15</b>
<b>ENCL TEFC</b>	<b>CODE H</b>	<b>PF 0.89</b>
<b>USABLE @ 208V 19.2A</b>		<b>RPM 3530</b>
<b>SF1.00</b>		<b>NEMA</b>
		<b>NOM. EFF 89.5%</b>

<b>ALTERNATE RATING: 7.5HP 50Hz 190-220/380-415V SF1.00</b>
<b>21.2-18.4/10.8-8.75A 2905RPM EFF 86.9% (IE1) IEC 60034-1</b>

<b>DE 6208-ZZ</b>	<b>ODE 6206-ZZ</b>	<b>MOBIL POLYREX EM</b>
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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.

