

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :		
Product line	: NEMA Premium Efficiency Three-Phase	
Product code :	12675416	
Catalog # :	00512ET3E215T-S	
Frame	: 213/5T	
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 <sup>1</sup>	: Both (CW and CCW)	
Starting method	: Direct On Line	
Approx. weight <sup>2</sup>	: 145 lb	
Moment of inertia (J)	: 1.26 sq.ft.lb	
Output [HP]	5	
Poles	6	
Frequency [Hz]	60	
Rated voltage [V]	230/460	
Rated current [A]	13.5/6.74	
L. R. Amperes [A]	80.9/40.4	
LRC [A]	6.0x(Code H)	
No load current [A]	6.84/3.42	
Rated speed [RPM]	1175	
Slip [%]	2.08	
Rated torque [ft.lb]	22.3	
Locked rotor torque [%]	220	
Breakdown torque [%]	250	
Service factor	1.15	
Temperature rise	80 K	
Locked rotor time	54s (cold) 30s (hot)	
Noise level <sup>2</sup>	55.0 dB(A)	
Efficiency (%)	25%	86.4
	50%	87.5
	75%	88.5
	100%	89.5
Power Factor	25%	0.35
	50%	0.59
	75%	0.71
	100%	0.77
Bearing type	: <u>Drive end</u> 6208 ZZ <u>Non drive end</u> 6206 ZZ	
Sealing	: V'Ring Without Bearing Seal	
Lubrication interval	: -	
Lubricant amount	: -	
Lubricant type	: Mobil Polyrex EM	
Foundation loads	Max. traction : 250 lb	
	Max. compression : 394 lb	
Notes USABLE @208V 14.9A SF 1.00 SFA 14.9A		
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	12/04/2022	
Page	1 / 16	
Revision		

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



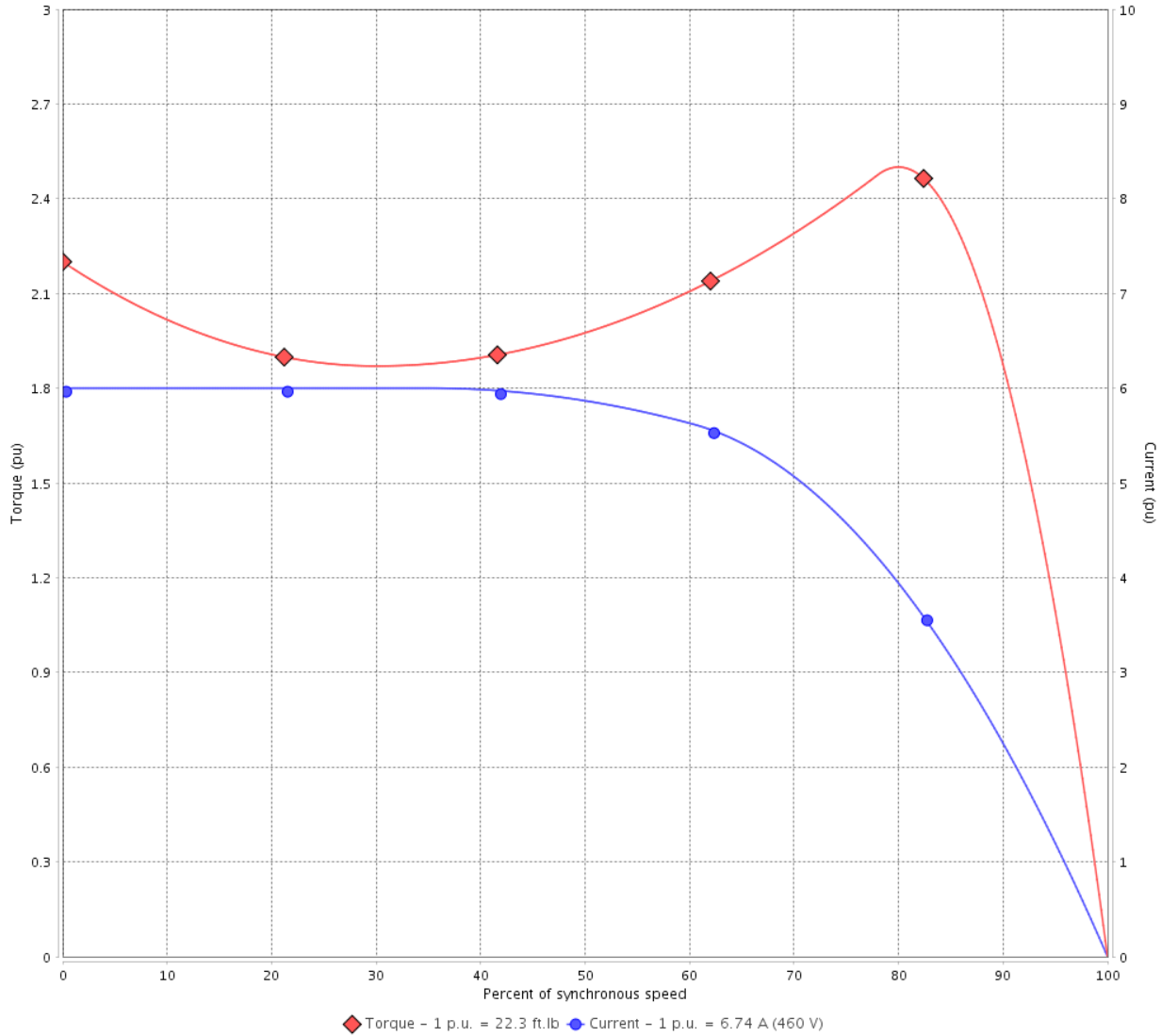
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12675416

Catalog # : 00512ET3E215T-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current	: 13.5/6.74 A	Moment of inertia (J)	: 1.26 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 22.3 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1175 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 16	Revision
Checked by				
Date	12/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE



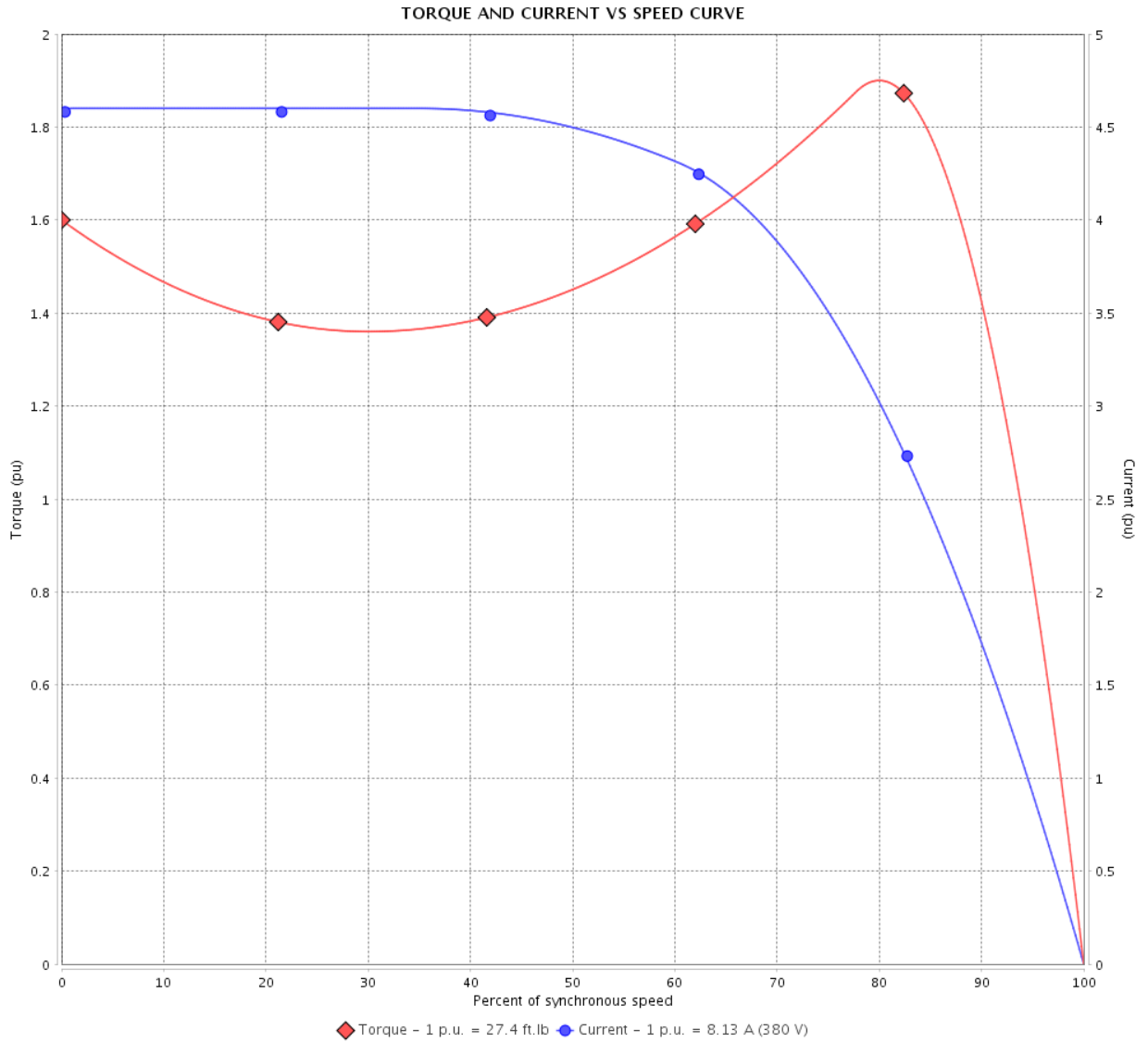
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12675416

Catalog # : 00512ET3E215T-S



Performance : 190/380 V 50 Hz 6P

Rated current : 16.3/8.13 A  
 LRC : 4.6  
 Rated torque : 27.4 ft.lb  
 Locked rotor torque : 160 %  
 Breakdown torque : 190 %  
 Rated speed : 960 rpm

Moment of inertia (J) : 1.26 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)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 16	Revision
Checked by				
Date	12/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



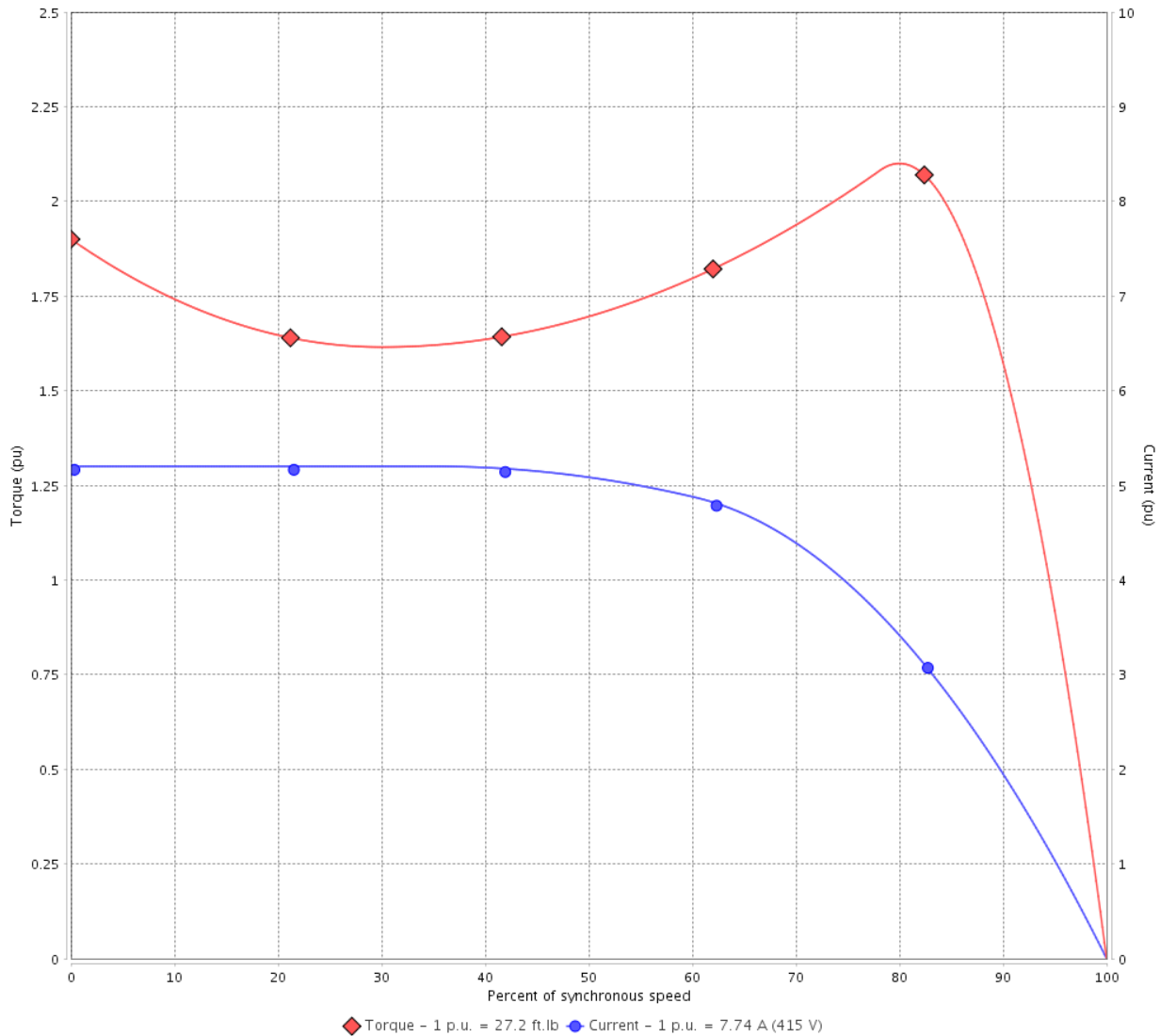
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12675416

Catalog # : 00512ET3E215T-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 6P

Rated current	: 14.6/7.74 A	Moment of inertia (J)	: 1.26 sq.ft.lb
LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 27.2 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 965 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 16	Revision
Checked by				
Date	12/04/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

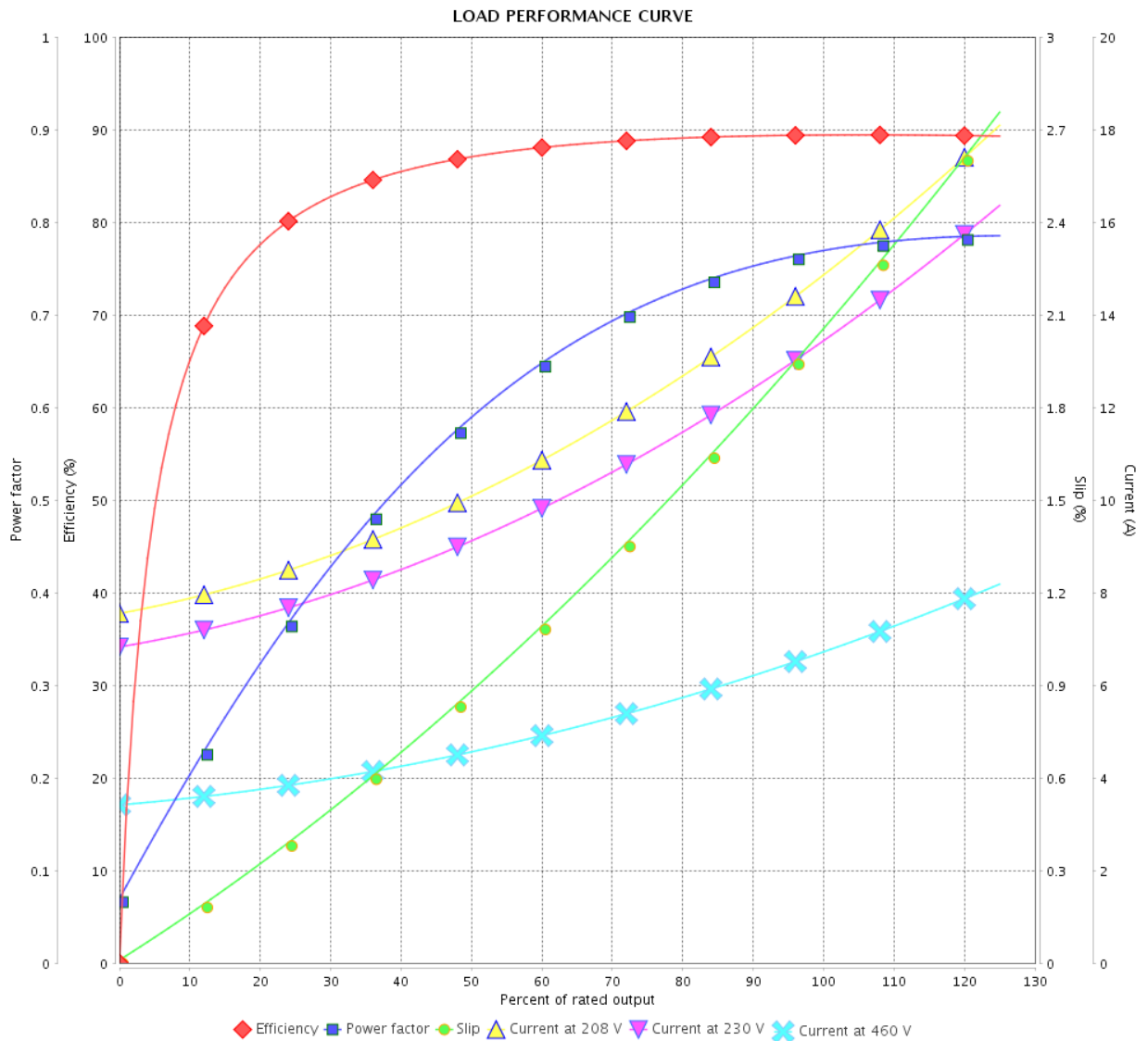


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12675416

Catalog # : 00512ET3E215T-S



Performance : 230/460 V 60 Hz 6P

Rated current : 13.5/6.74 A  
 LRC : 6.0  
 Rated torque : 22.3 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 250 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 1.26 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		5 / 16		
Date		12/04/2022		

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



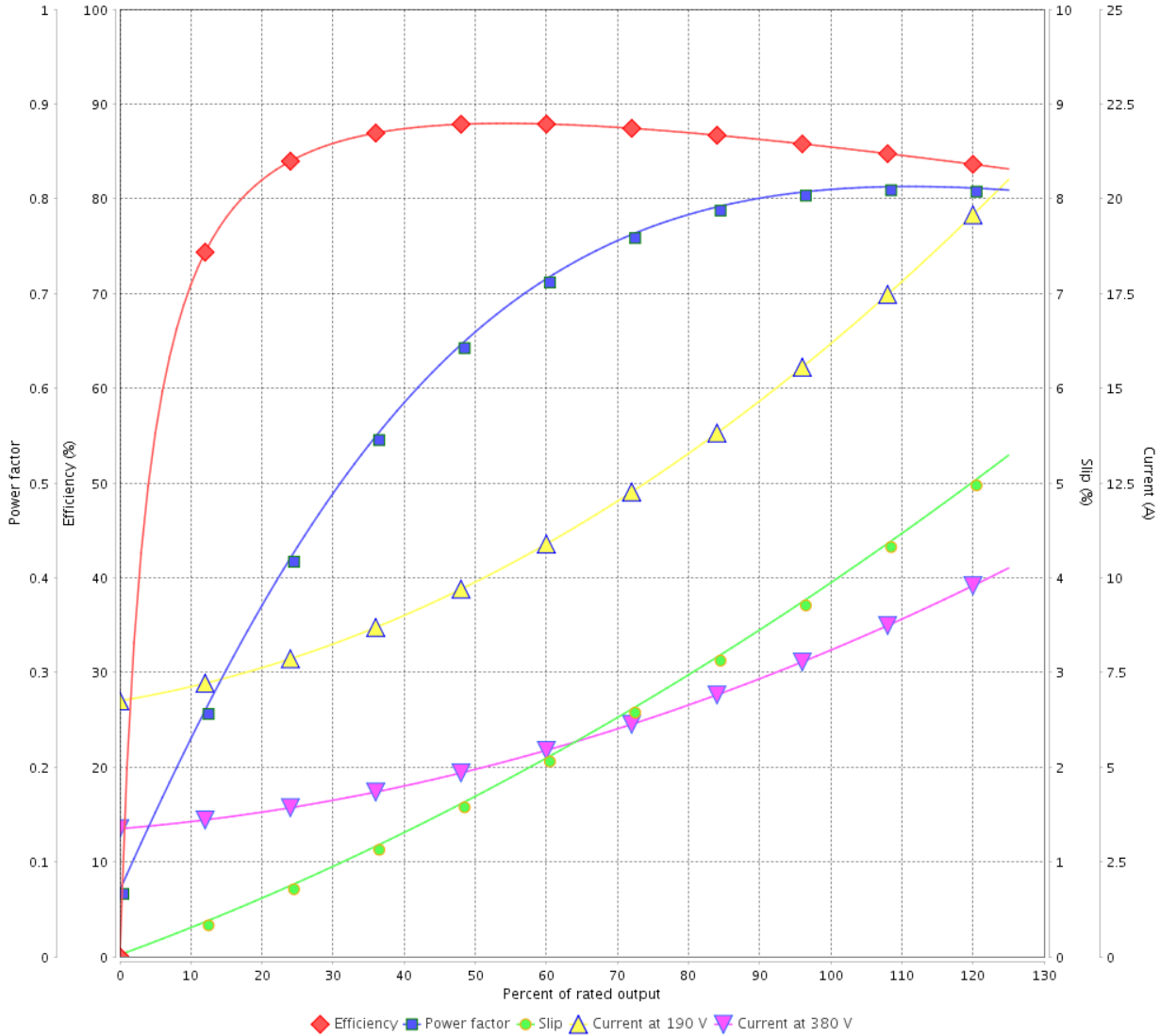
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12675416

Catalog # : 00512ET3E215T-S

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 6P

Rated current : 16.3/8.13 A  
 LRC : 4.6  
 Rated torque : 27.4 ft.lb  
 Locked rotor torque : 160 %  
 Breakdown torque : 190 %  
 Rated speed : 960 rpm

Moment of inertia (J) : 1.26 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				
			6 / 16	

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

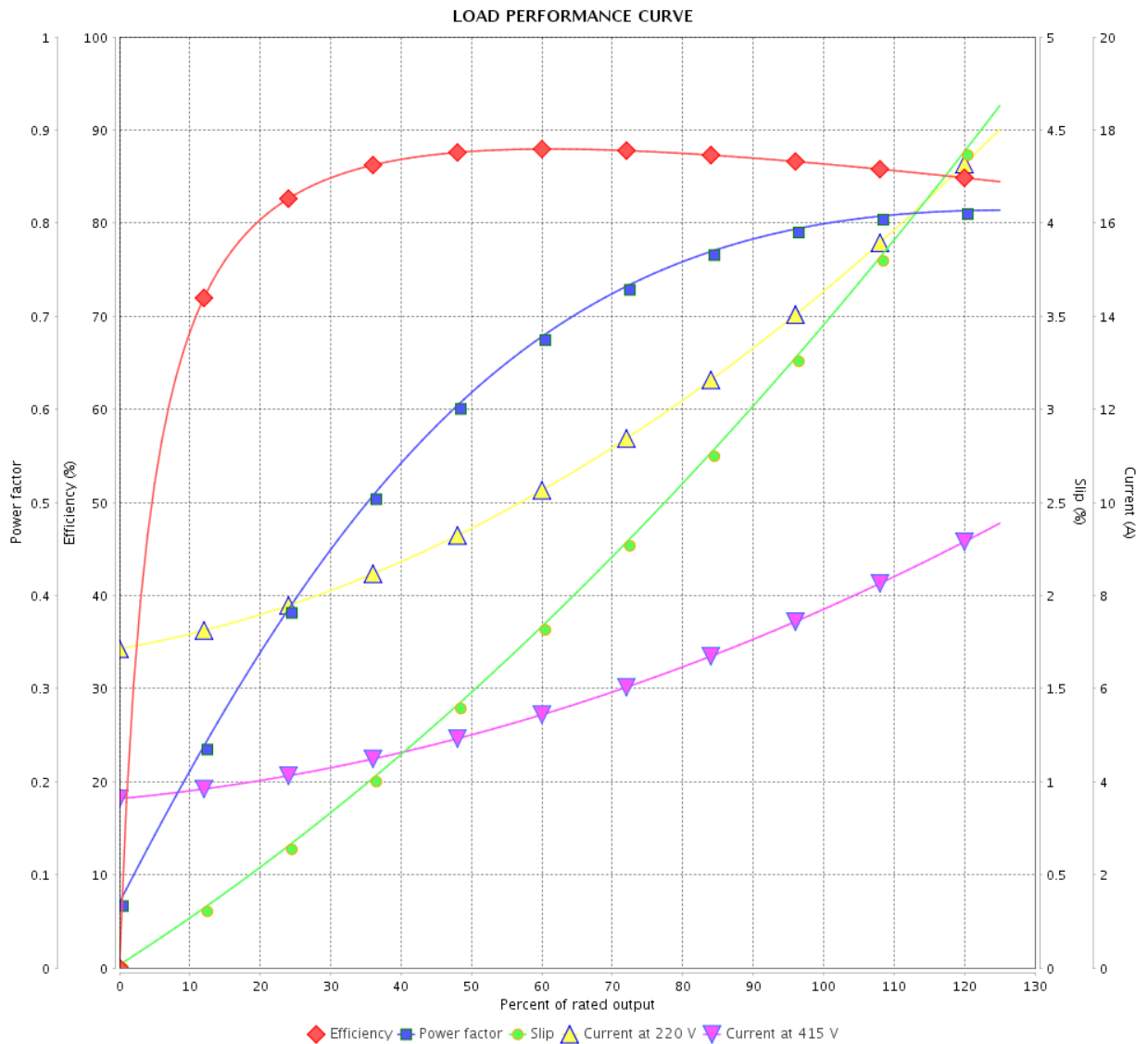


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12675416

Catalog # : 00512ET3E215T-S



Performance : 220/415 V 50 Hz 6P

Rated current : 14.6/7.74 A  
 LRC : 5.2  
 Rated torque : 27.2 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 210 %  
 Rated speed : 965 rpm

Moment of inertia (J) : 1.26 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		7 / 16		
Date		12/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 12675416  
 Catalog # : 00512ET3E215T-S

Performance : 230/460 V 60 Hz 6P

Rated current : 13.5/6.74 A	Moment of inertia (J) : 1.26 sq.ft.lb
LRC : 6.0	Duty cycle : Cont.(S1)
Rated torque : 22.3 ft.lb	Insulation class : F
Locked rotor torque : 220 %	Service factor : 1.15
Breakdown torque : 250 %	Temperature rise : 80 K
Rated speed : 1175 rpm	Design : B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date	12/04/2022			

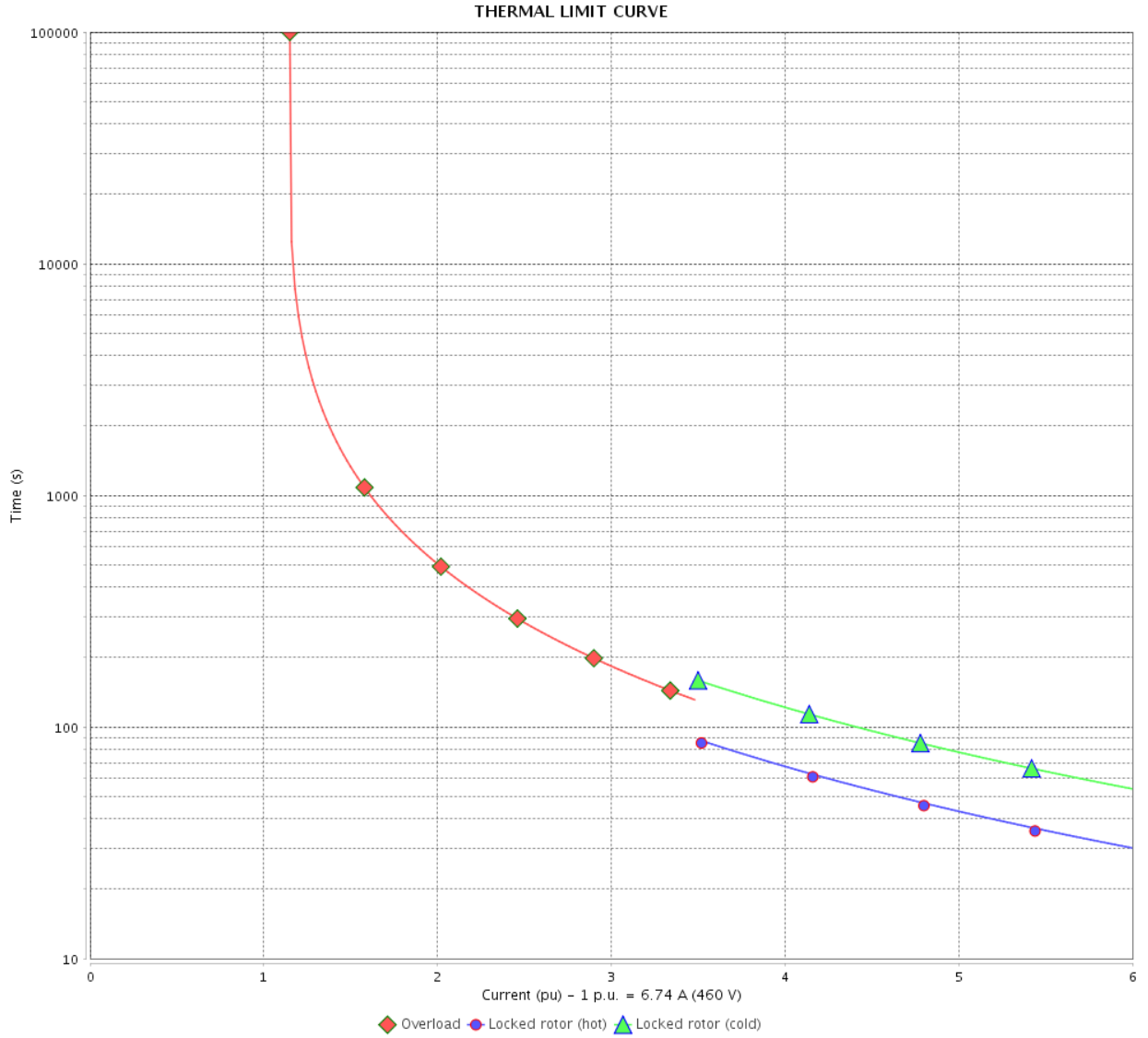


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
			Page	Revision
			9 / 16	

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 12675416  
 Catalog # : 00512ET3E215T-S

Performance : 190/380 V 50 Hz 6P

Rated current : 16.3/8.13 A	Moment of inertia (J) : 1.26 sq.ft.lb
LRC : 4.6	Duty cycle : Cont.(S1)
Rated torque : 27.4 ft.lb	Insulation class : F
Locked rotor torque : 160 %	Service factor : 1.00
Breakdown torque : 190 %	Temperature rise : 105 K
Rated speed : 960 rpm	Design : B

Heating constant

Cooling constant

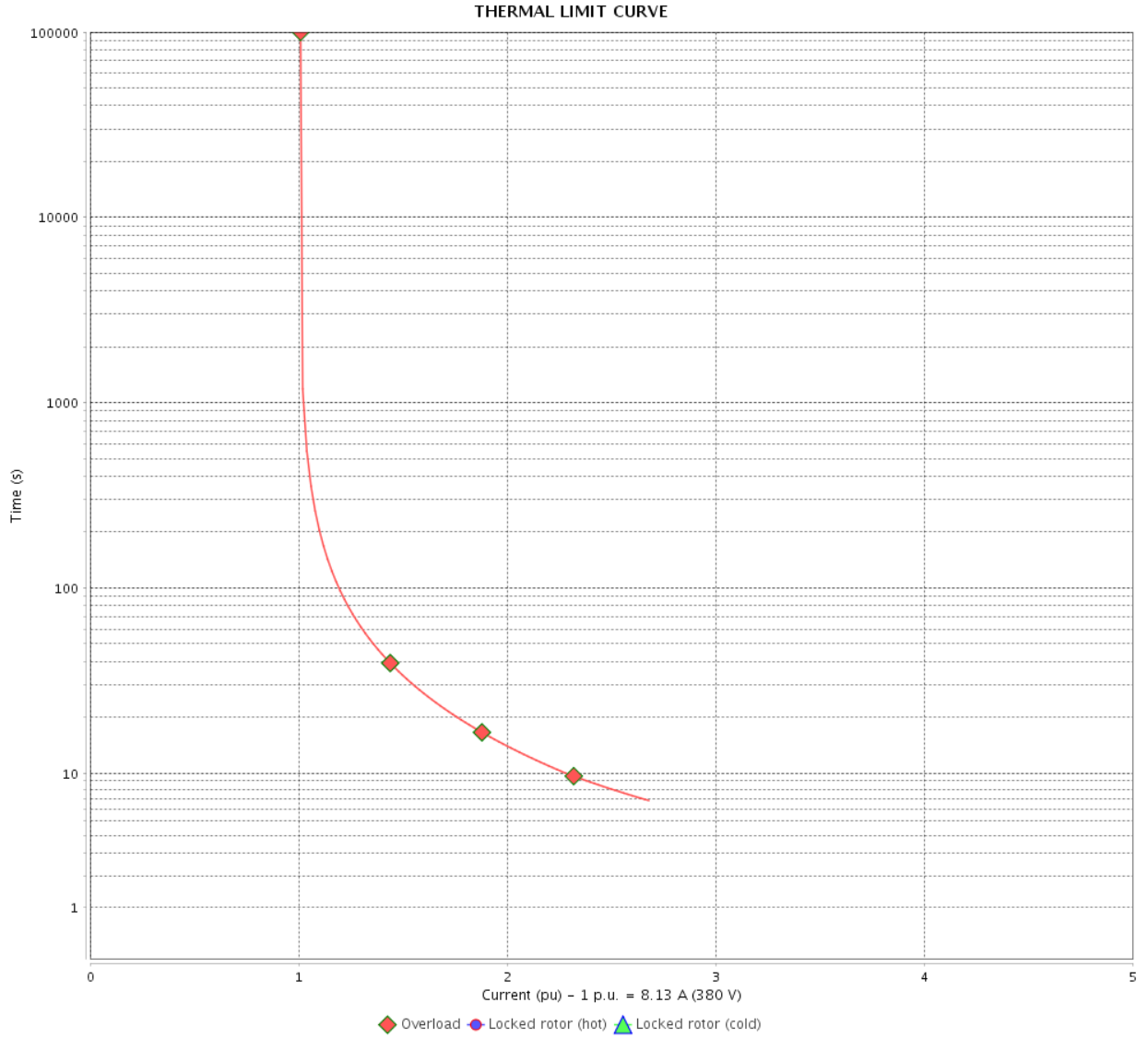
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 10 / 16	Revision
Checked by				
Date	12/04/2022			

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		11 / 16		
Date		12/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12675416  
Catalog # : 00512ET3E215T-S

Performance : 220/415 V 50 Hz 6P

Rated current	: 14.6/7.74 A	Moment of inertia (J)	: 1.26 sq.ft.lb
LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 27.2 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 965 rpm	Design	: B

Heating constant

Cooling constant

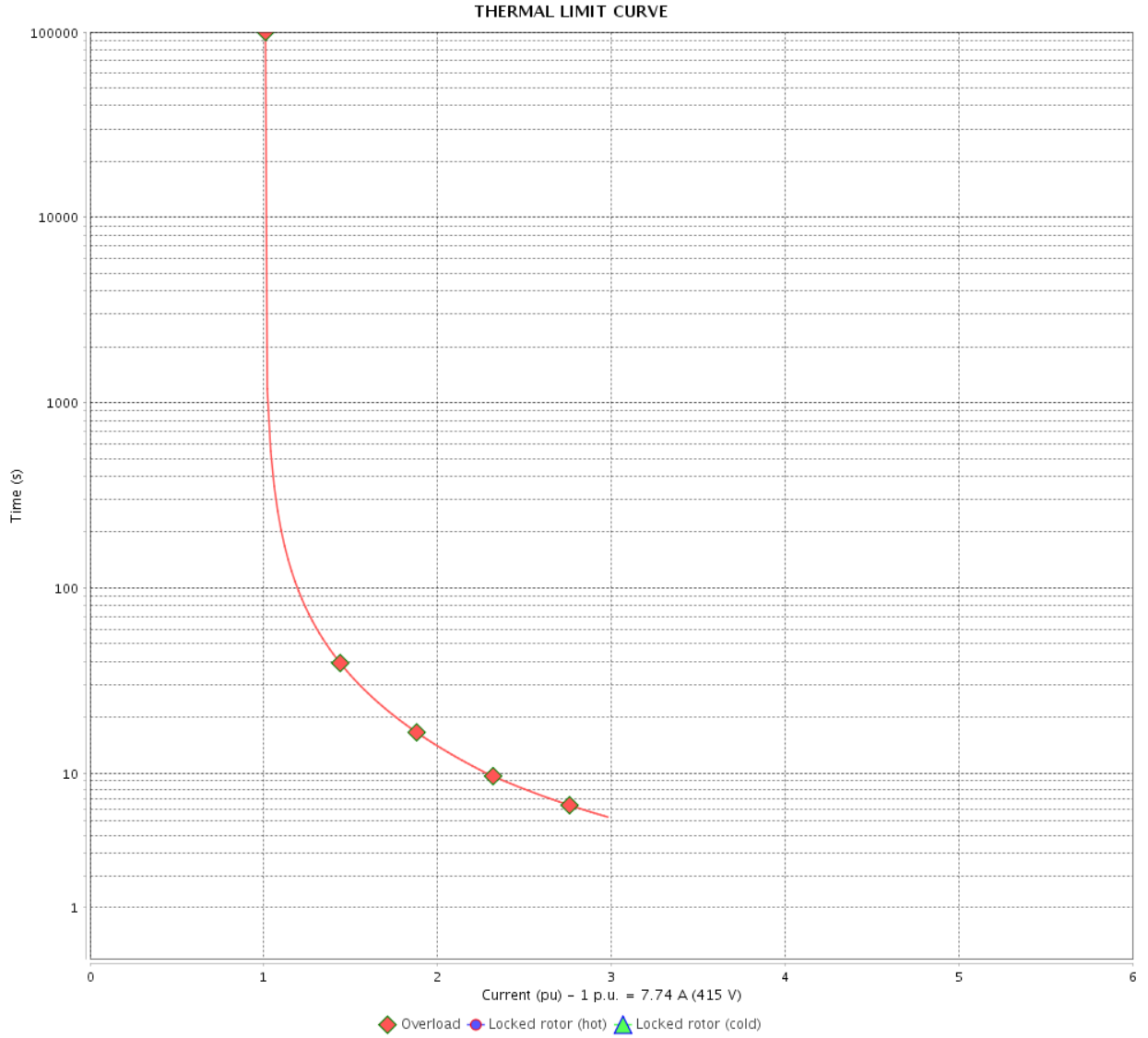
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	12/04/2022		12 / 16	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page      Revision 13 / 16		
Checked by				
Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



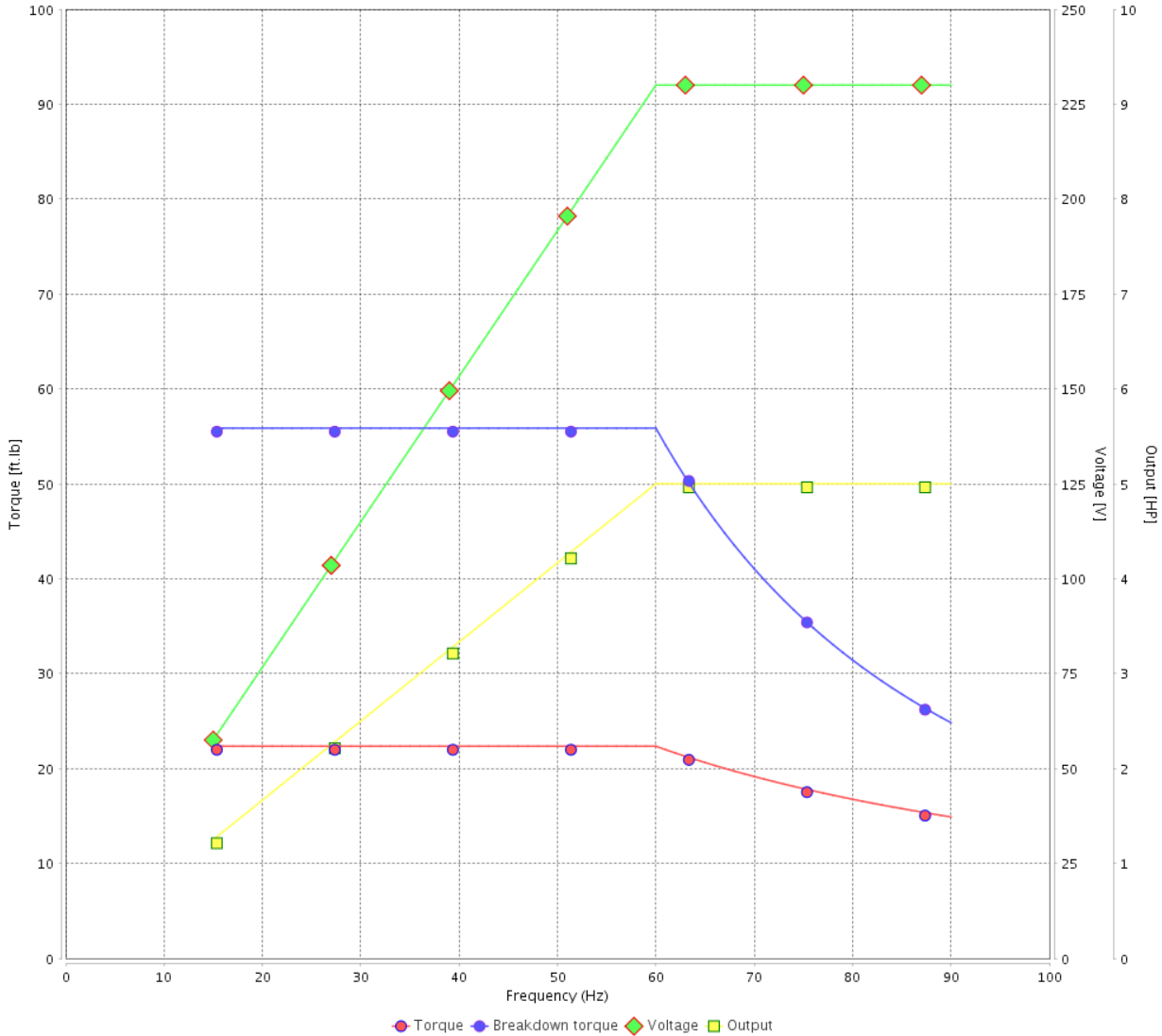
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12675416

Catalog # : 00512ET3E215T-S

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 13.5/6.74 A  
 LRC : 6.0  
 Rated torque : 22.3 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 250 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 1.26 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 14 / 16	Revision
Checked by				
Date	12/04/2022			

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

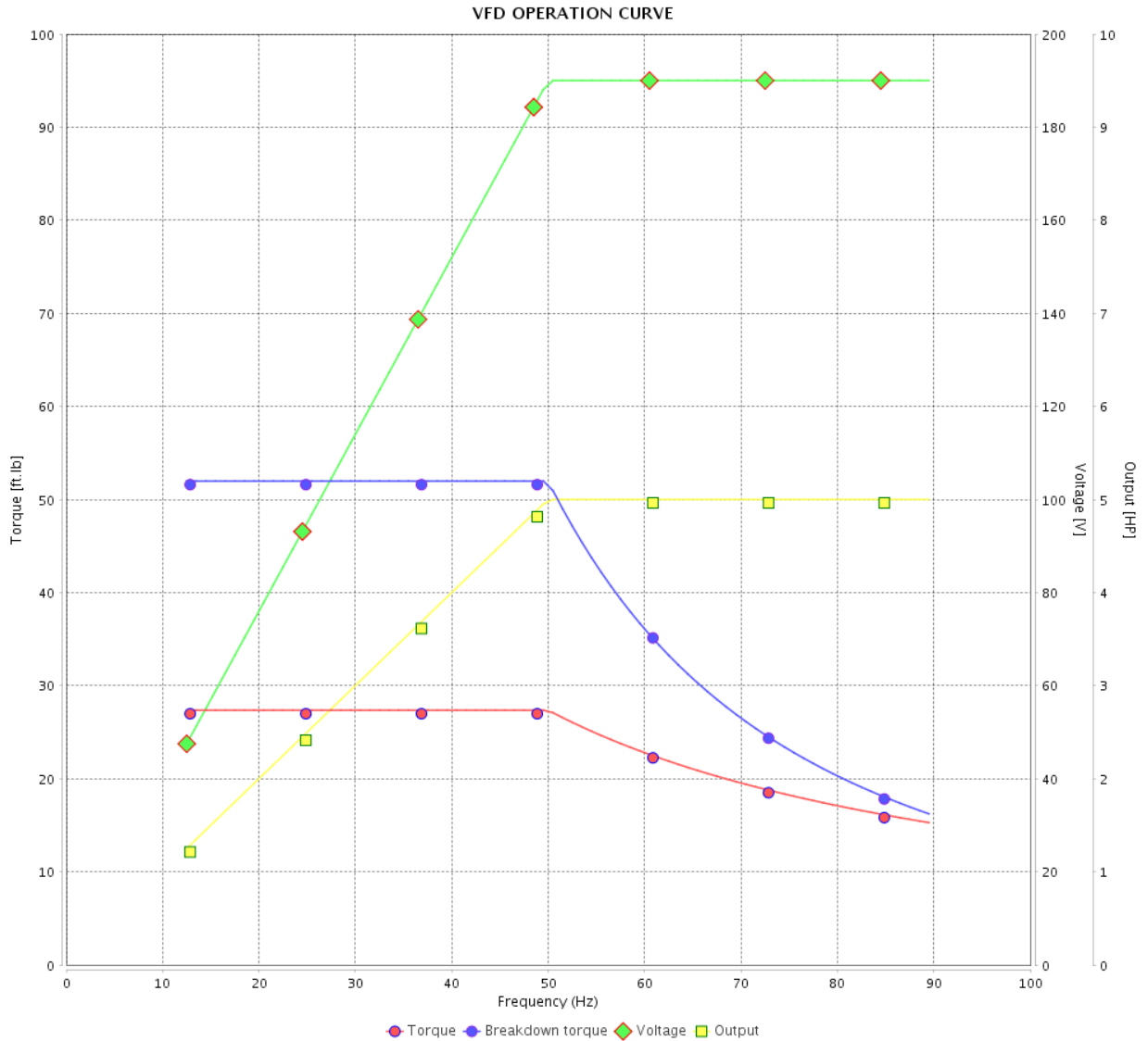


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12675416

Catalog # : 00512ET3E215T-S



Performance : 190/380 V 50 Hz 6P

Rated current : 16.3/8.13 A  
 LRC : 4.6  
 Rated torque : 27.4 ft.lb  
 Locked rotor torque : 160 %  
 Breakdown torque : 190 %  
 Rated speed : 960 rpm

Moment of inertia (J) : 1.26 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 15 / 16	Revision
Checked by				
Date	12/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



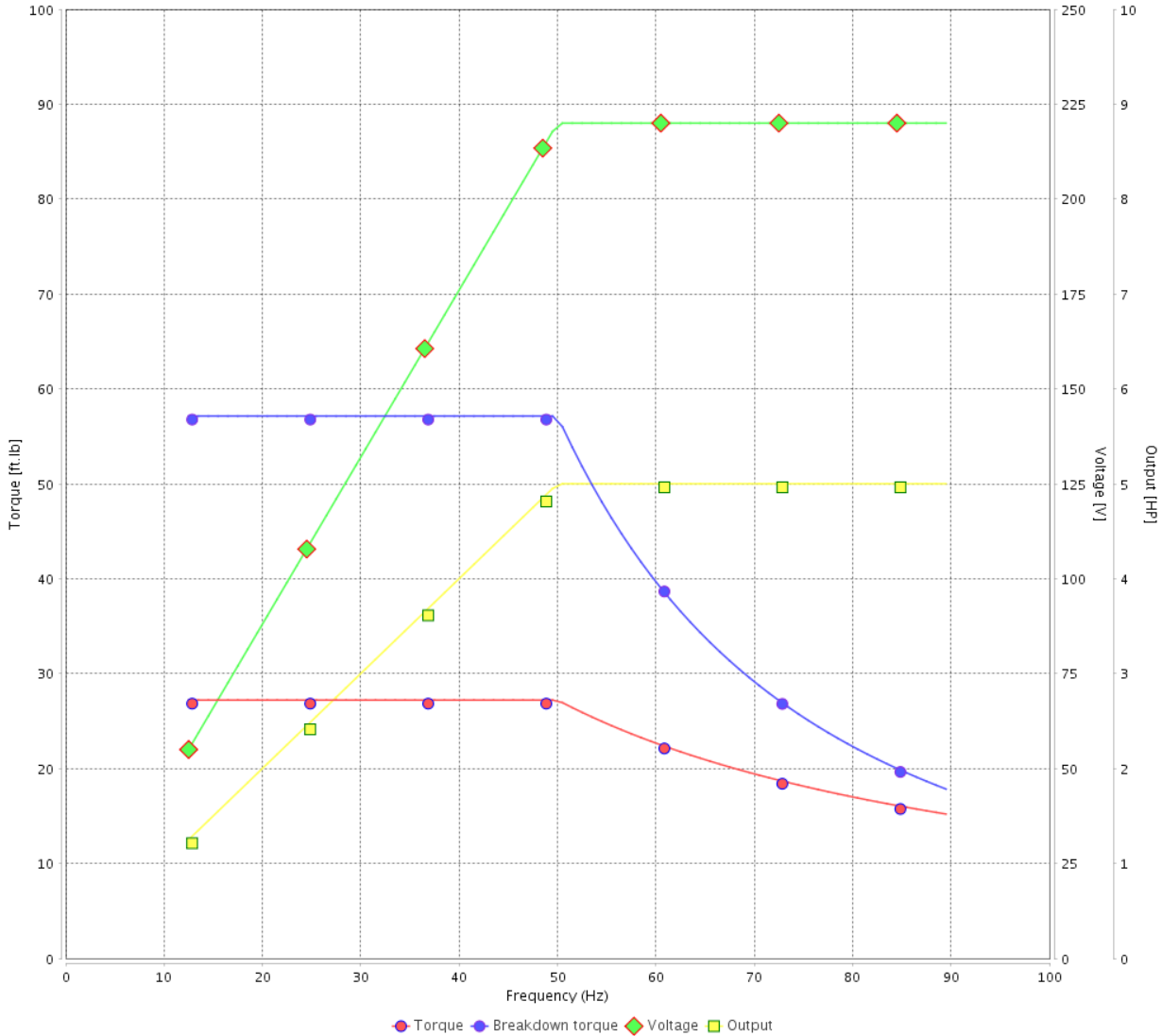
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12675416

Catalog # : 00512ET3E215T-S

VFD OPERATION CURVE



Performance : 220/415 V 50 Hz 6P

Rated current : 14.6/7.74 A  
 LRC : 5.2  
 Rated torque : 27.2 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 210 %  
 Rated speed : 965 rpm

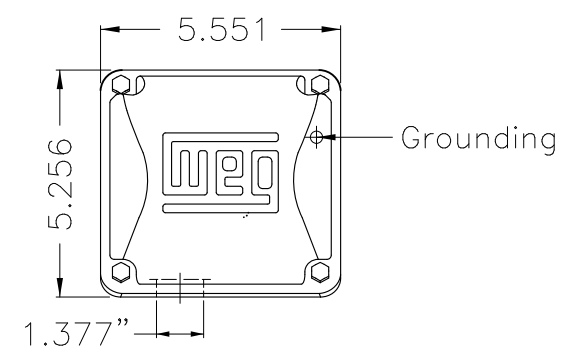
Moment of inertia (J) : 1.26 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 16 / 16	Revision
Checked by				
Date	12/04/2022			

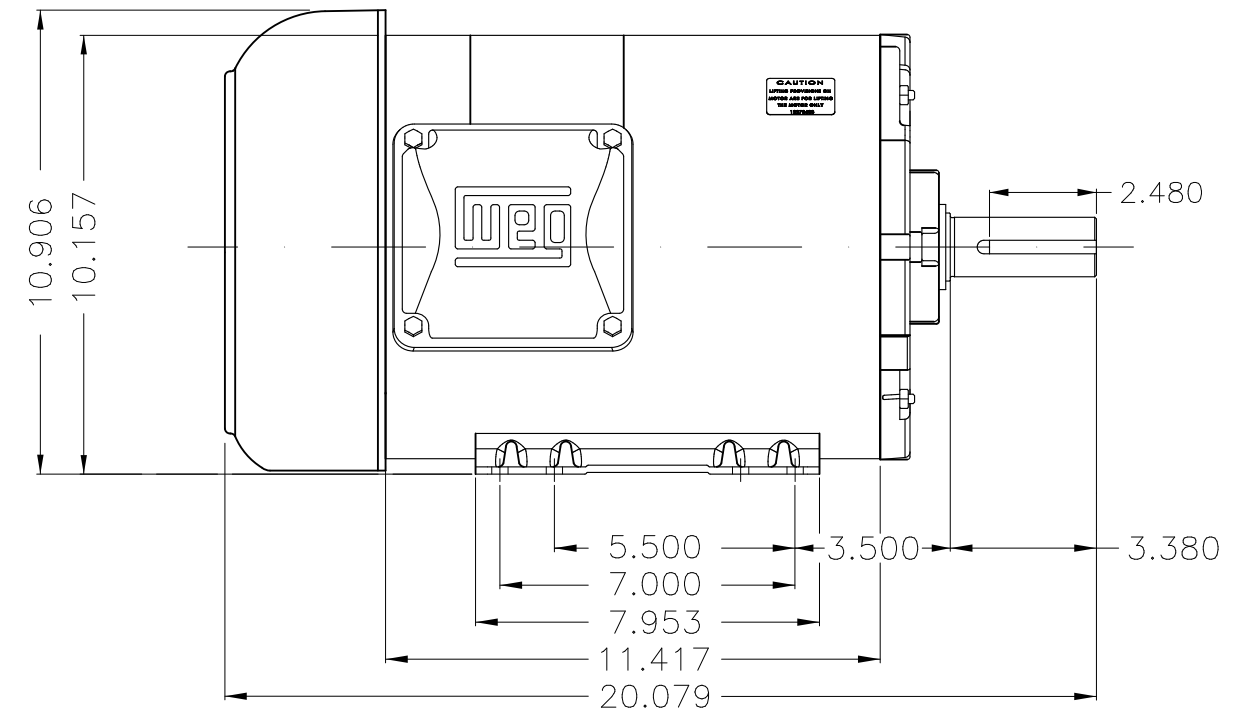
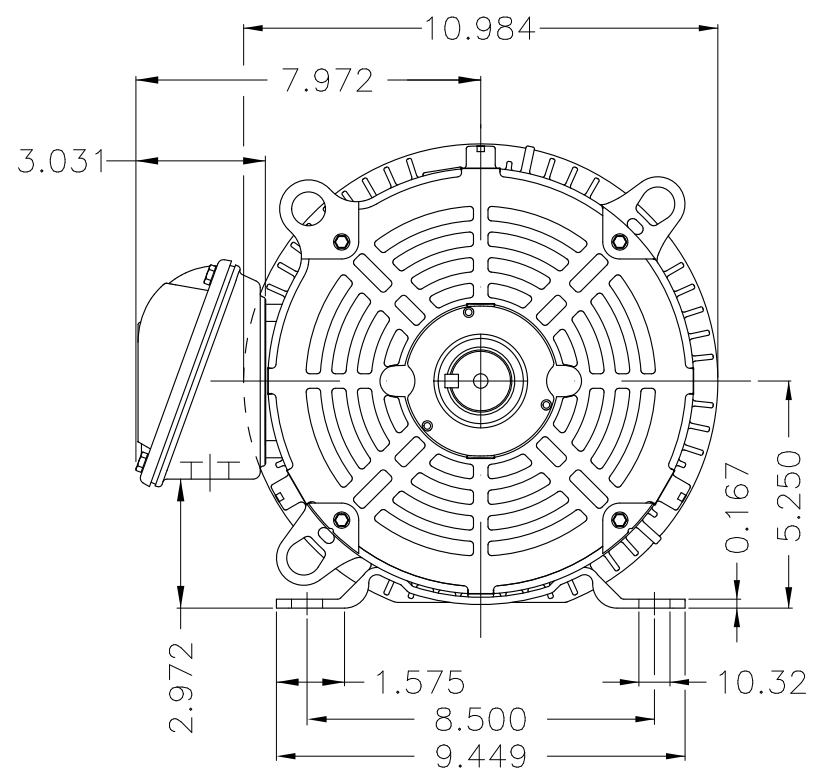


1 2 3 4 5 6

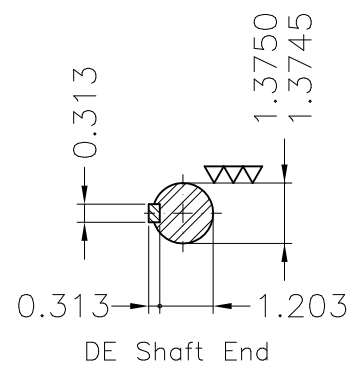
A



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	PIRWUSER	THREE PH. MOTOR ROLLED STEEL PREM. EFF. FRAME 213/5T IP55 TEFC					
CHECKED							
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

5 HP 06 Poles 60 Hz

A

PREVIEW  
WDD





**NEMA**  
**Premium**



3PT9



Energy Verified

MADE IN MEXICO

**MAT: 12675416 CC029A**  
**W01.TE0IC0X0N**  
**MODEL 00512ET3E215T-S**  
**19APR2022 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**

PH 3	Hz 60	HP 5.0
FR 213/5T		KW 3.7
DUTY CONT.		V 230/460
ALT 1000 m.a.s.l.		A 13.5/6.74
INS CL F AT 80K	IP55	SFA 15.5/7.75
AMB 40°C	DES B	SF 1.15
ENCL TEFC	CODE H	PF 0.77
USABLE @ 208V 14.9A		RPM 1175
SF1.00		NEMA NOM. EFF 89.5%

**ALTERNATE RATING: 5.0HP 50Hz 190-220/380-415V SF1.00**  
**18.3-14.3/8.13-7.60A 960RPM EFF 85.4% (IE2) IEC 60034-1**

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

