

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :			
Product line	: JM Pump NEMA Premium Efficiency Three-Phase	Product code :	13440285
		Catalog # :	00512ET3E215JM-S
Frame	: 213/5JM	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>	: 155 lb
Protection degree	: IP55	Moment of inertia (J)	: 1.26 sq.ft.lb
Design	: B		
Output [HP]	5	5	5
Poles	6	6	6
Frequency [Hz]	60	50	50
Rated voltage [V]	230/460	190/380	220/415
Rated current [A]	13.5/6.74	16.3/8.13	14.6/7.74
L. R. Amperes [A]	80.9/40.4	74.8/37.4	75.9/40.2
LRC [A]	6.0x(Code H)	4.6x(Code E)	5.2x(Code F)
No load current [A]	6.84/3.42	6.75/3.38	6.86/3.64
Rated speed [RPM]	1175	960	965
Slip [%]	2.08	4.00	3.50
Rated torque [ft.lb]	22.3	27.4	27.2
Locked rotor torque [%]	220	160	190
Breakdown torque [%]	250	190	210
Service factor	1.15	1.00	1.00
Temperature rise	80 K	105 K	105 K
Locked rotor time	54s (cold) 30s (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%	86.4	88.7
	50%	87.5	87.6
	75%	88.5	87.8
	100%	89.5	86.3
Power Factor	25%	0.35	0.37
	50%	0.59	0.62
	75%	0.71	0.74
	100%	0.77	0.80
Bearing type	: <u>Drive end</u> 6209 ZZ <u>Non drive end</u> 6206 ZZ	Foundation loads	
Sealing	: V'Ring Without Bearing Seal	Max. traction	: 245 lb
		Max. compression	: 399 lb
Lubrication interval	: -		
Lubricant amount	: -		
Lubricant type	: Mobil Polyrex EM		
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	Checked
			Date
Performed by			
Checked by			Page
Date	12/04/2022		Revision
			1 / 16

# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



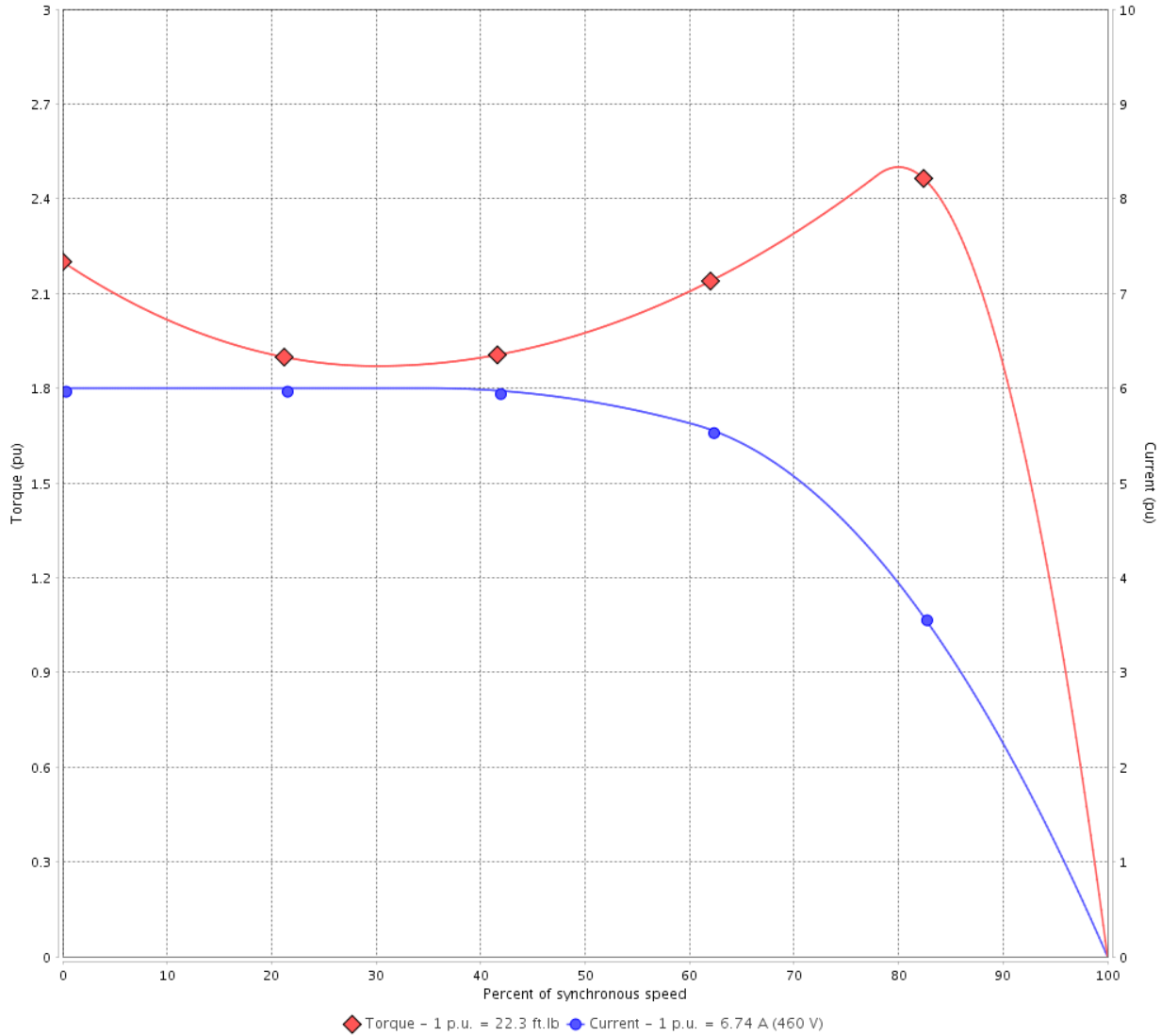
Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 13440285

Catalog # : 00512ET3E215JM-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



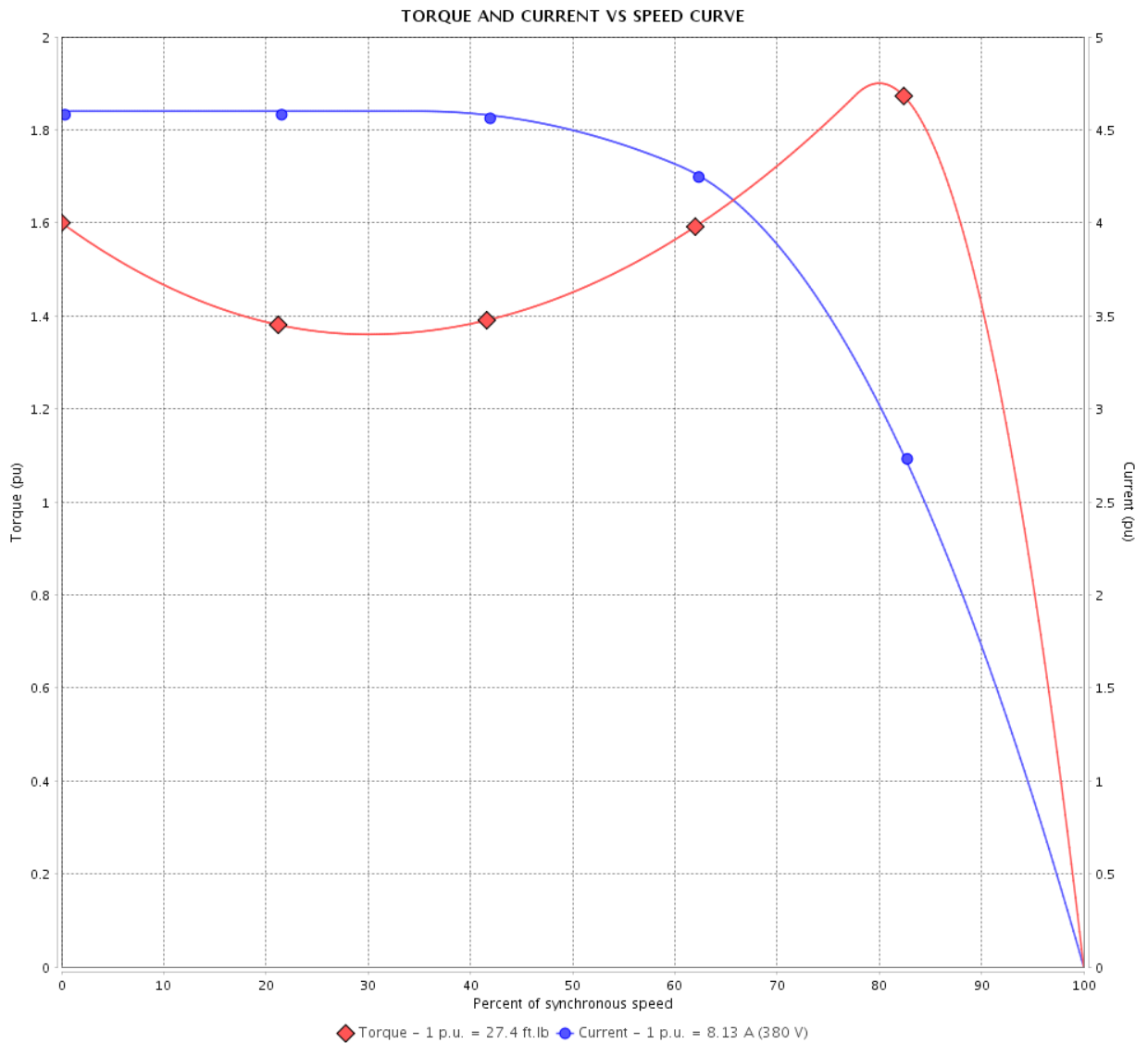
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13440285

Catalog # : 00512ET3E215JM-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

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

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

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



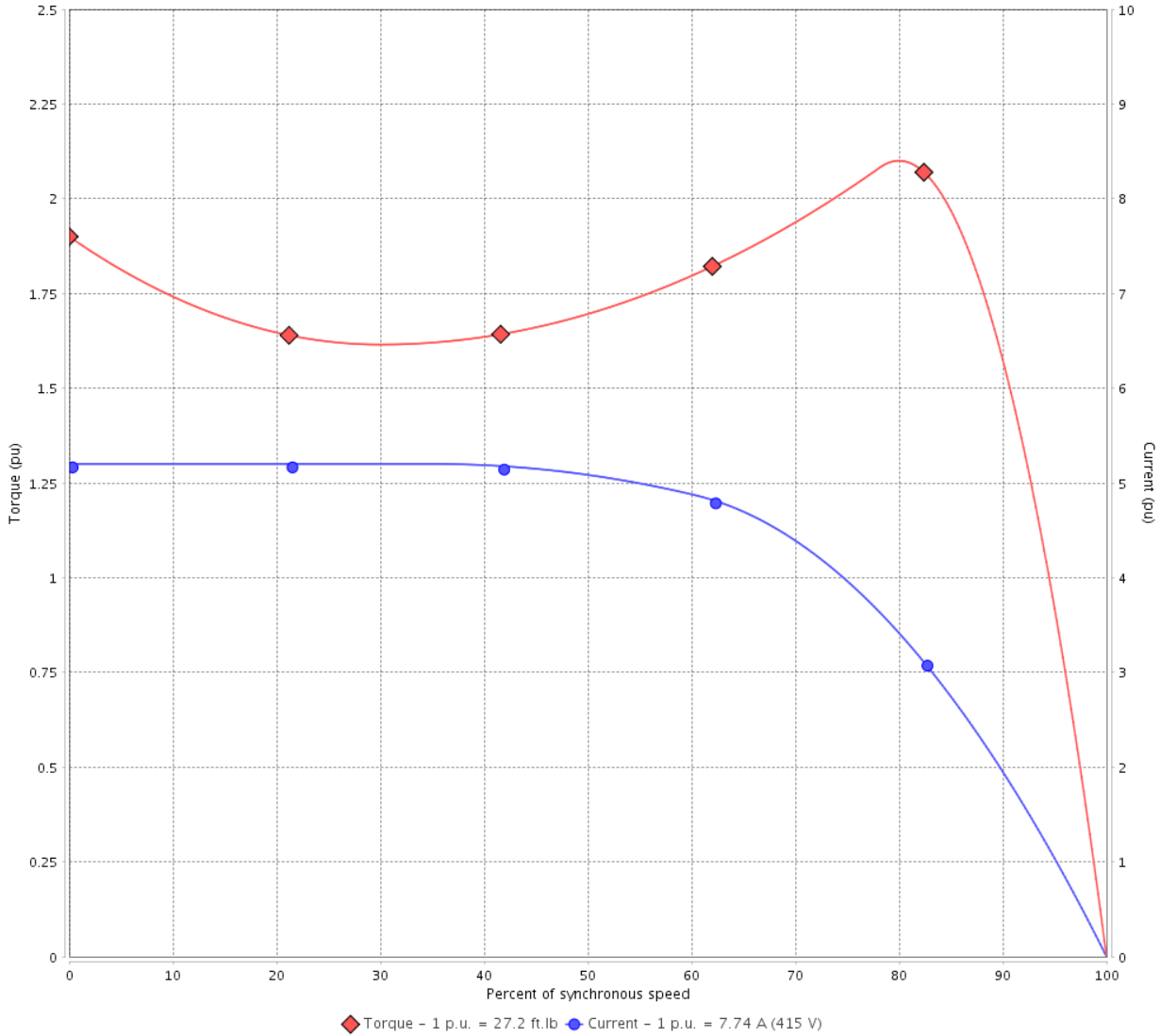
Customer :

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Efficiency Three-Phase

Product code : 13440285

Catalog # : 00512ET3E215JM-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

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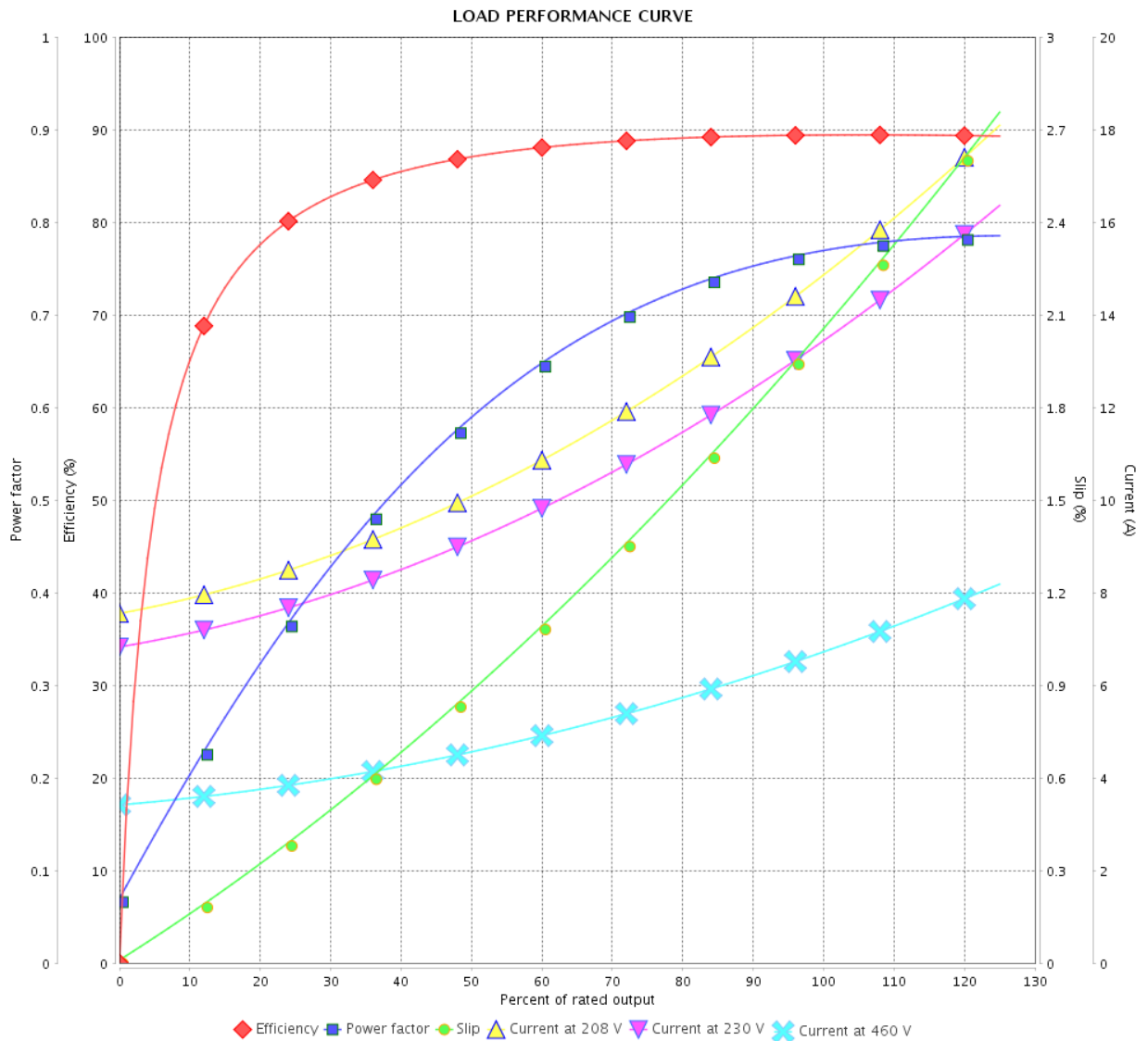


Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 13440285

Catalog # : 00512ET3E215JM-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



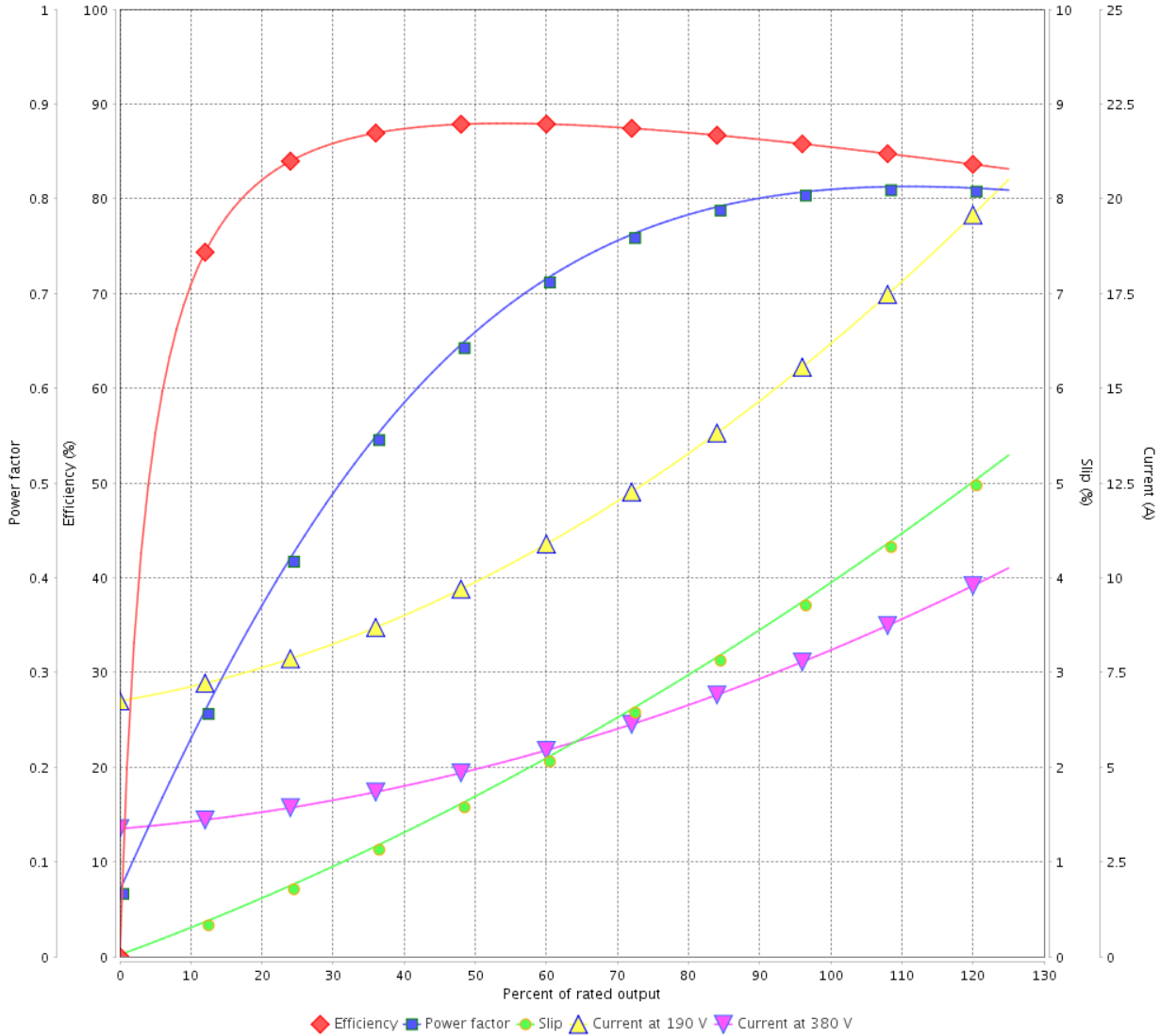
Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 13440285

Catalog # : 00512ET3E215JM-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			6 / 16	
Date	12/04/2022			

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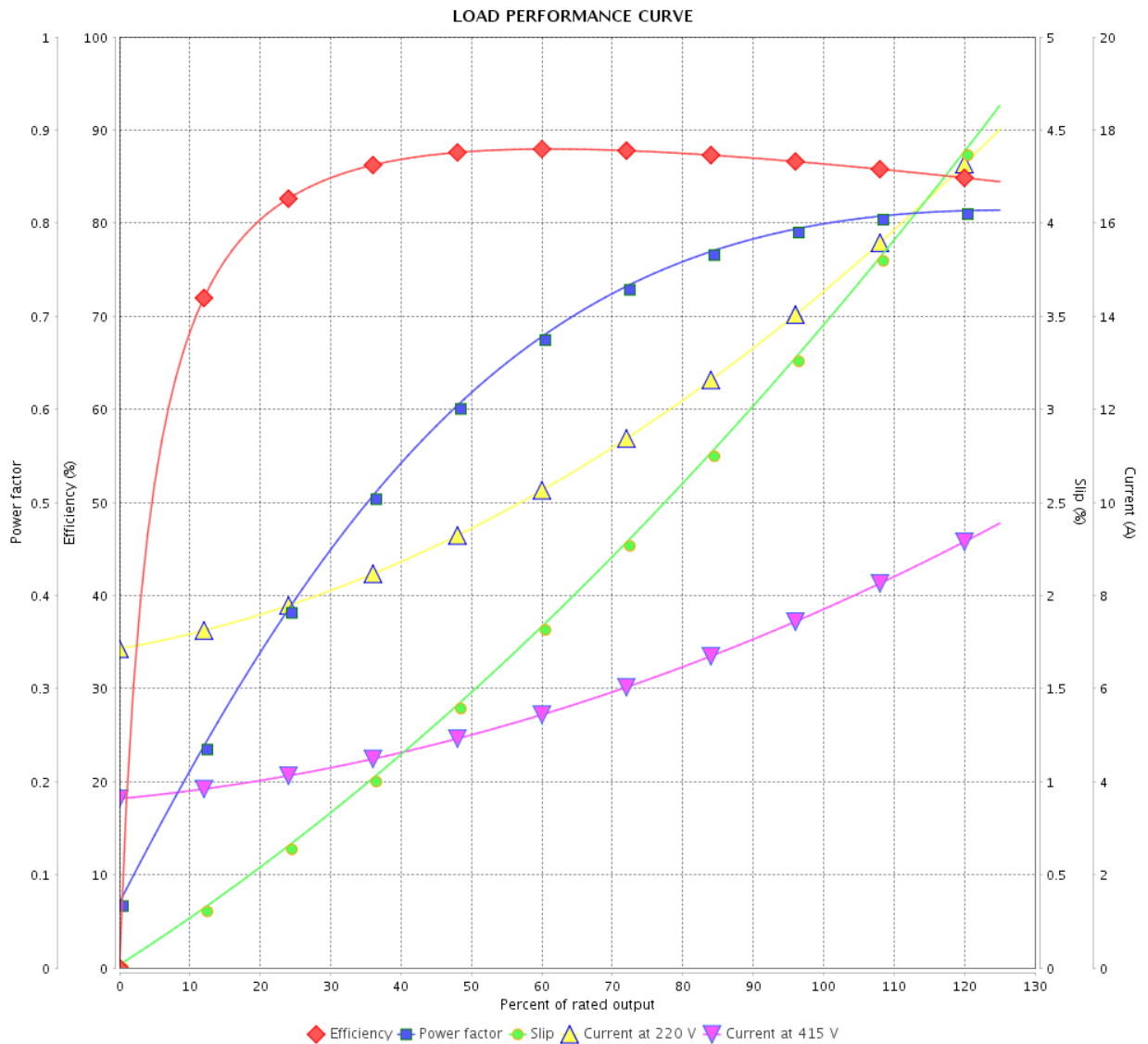


Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13440285

Catalog # : 00512ET3E215JM-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 : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 13440285

Catalog # : 00512ET3E215JM-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

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	12/04/2022		8 / 16	

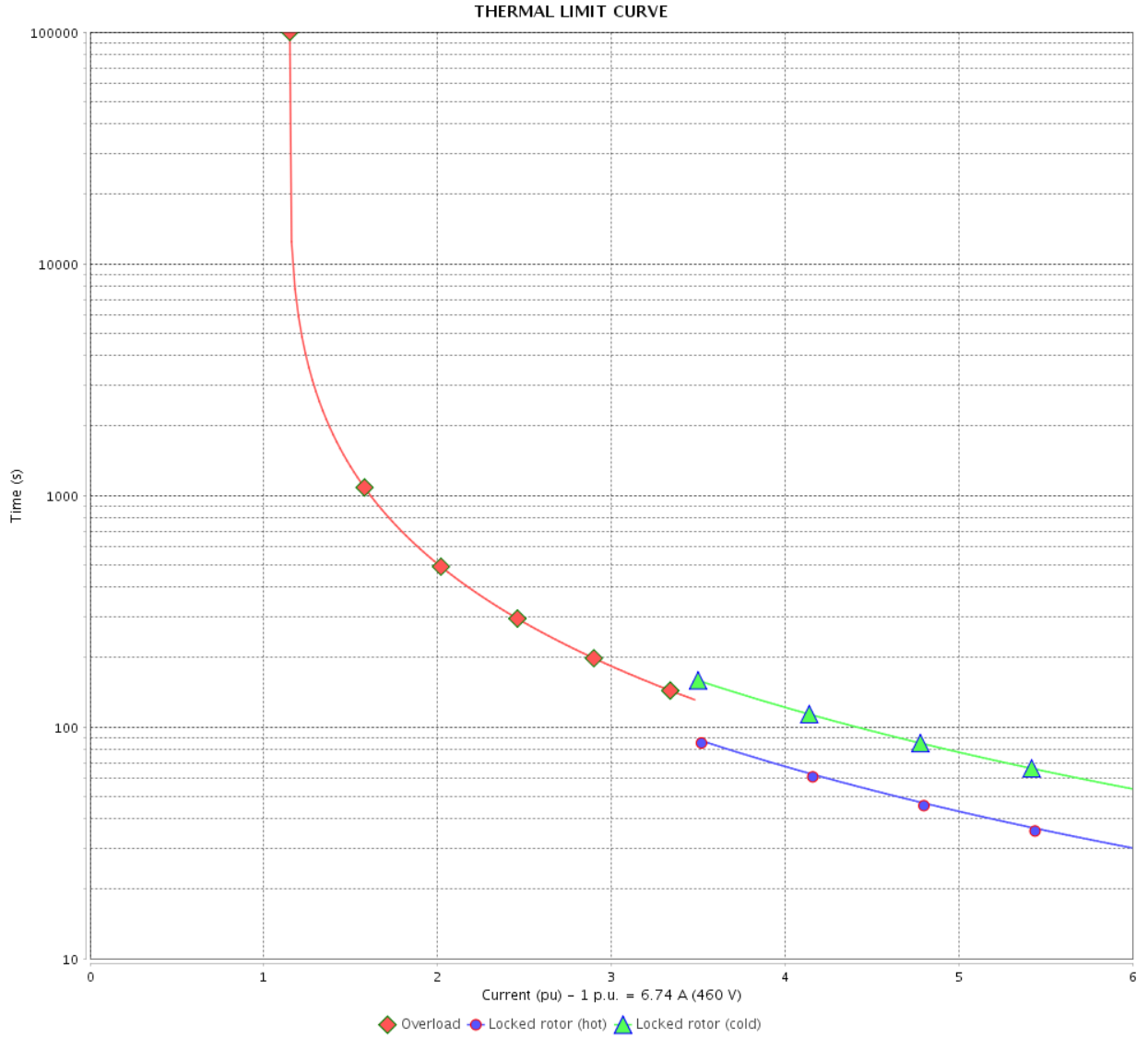


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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

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## Three Phase Induction Motor - Squirrel Cage

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Efficiency Three-Phase

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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

Heating constant

Cooling constant

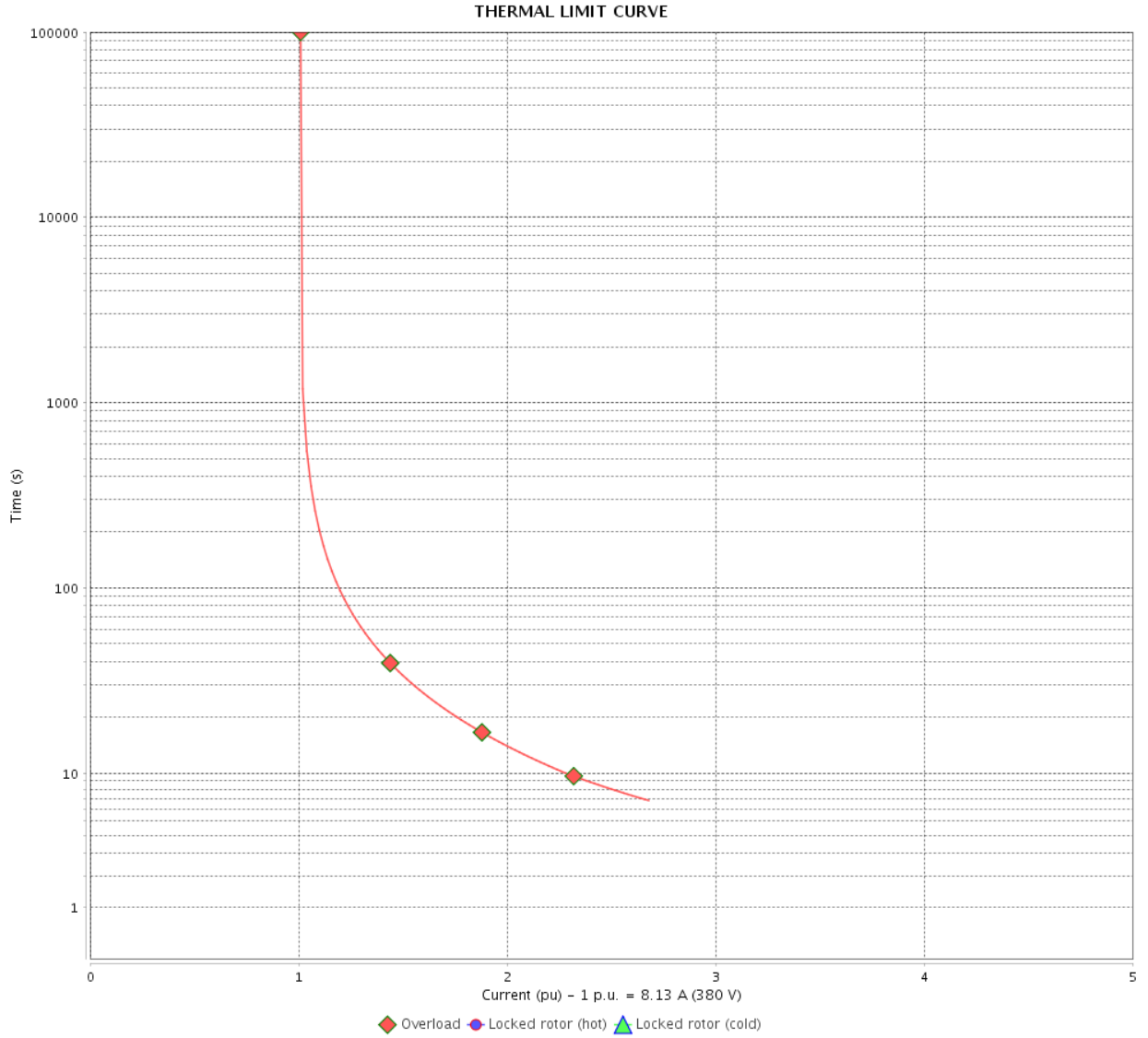
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	12/04/2022		10 / 16	

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

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Design : B

Heating constant

Cooling constant

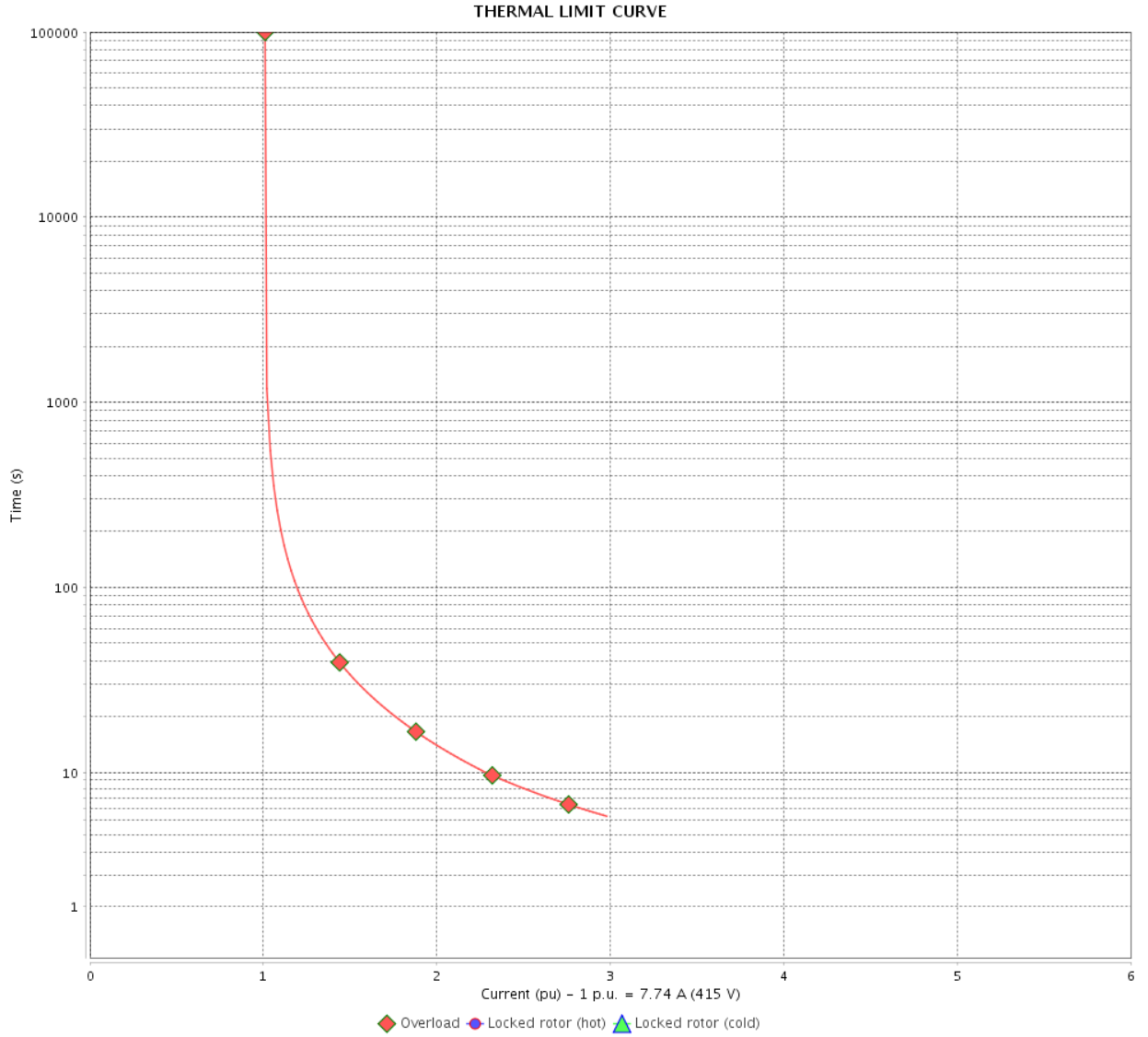
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	12/04/2022		12 / 16	

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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		13 / 16		
Date		12/04/2022		

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



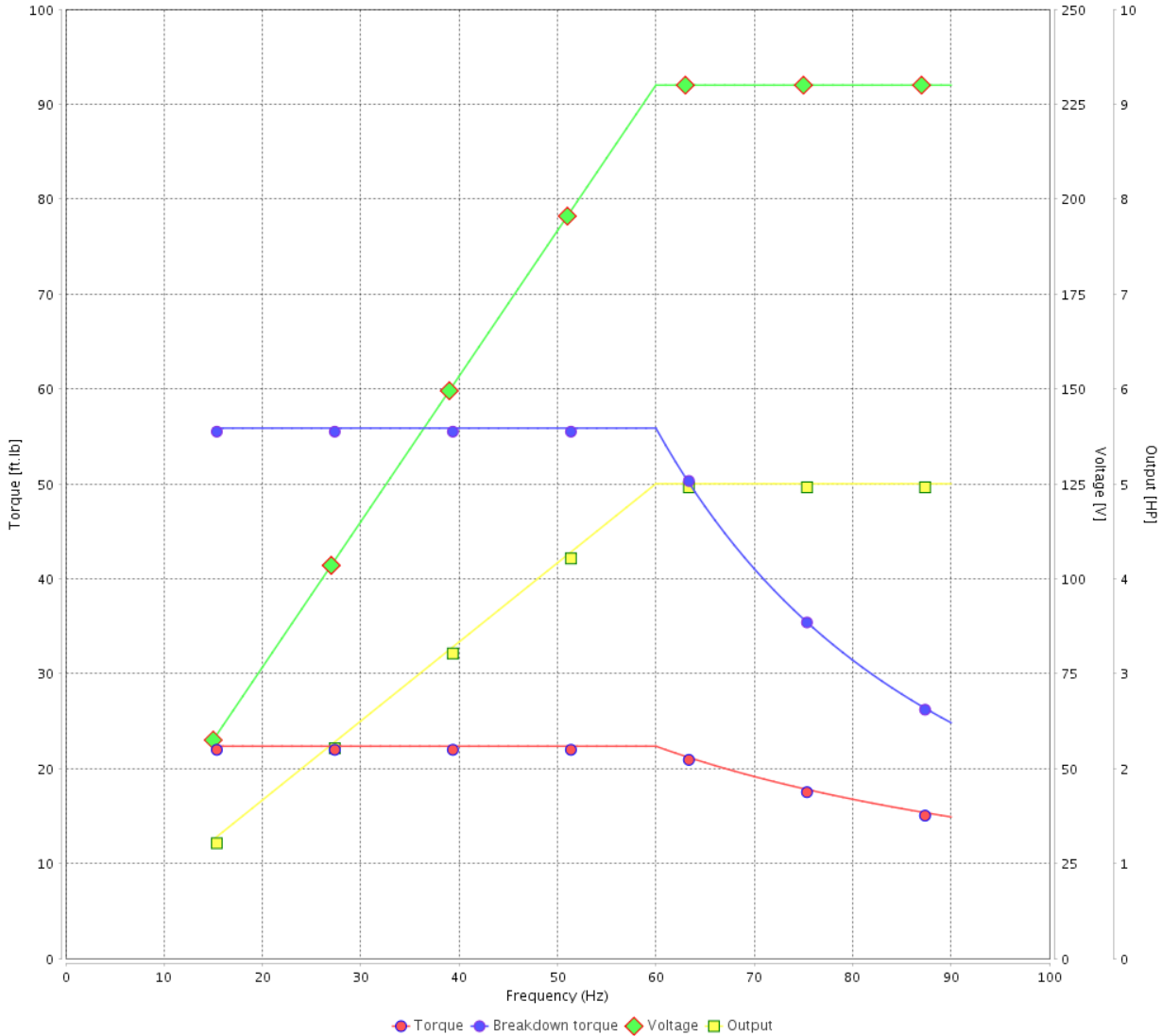
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Product code : 13440285

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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

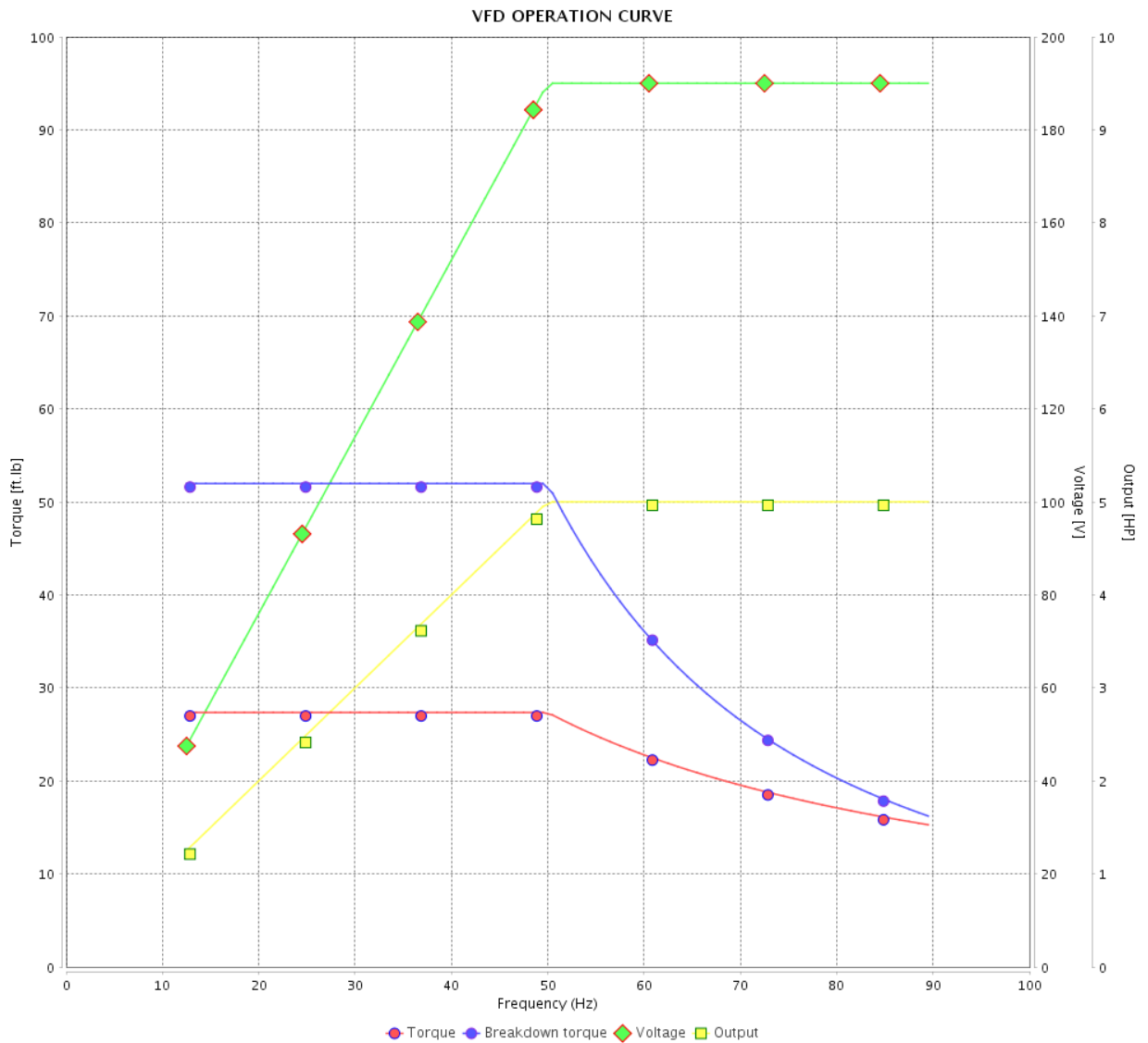


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 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

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

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



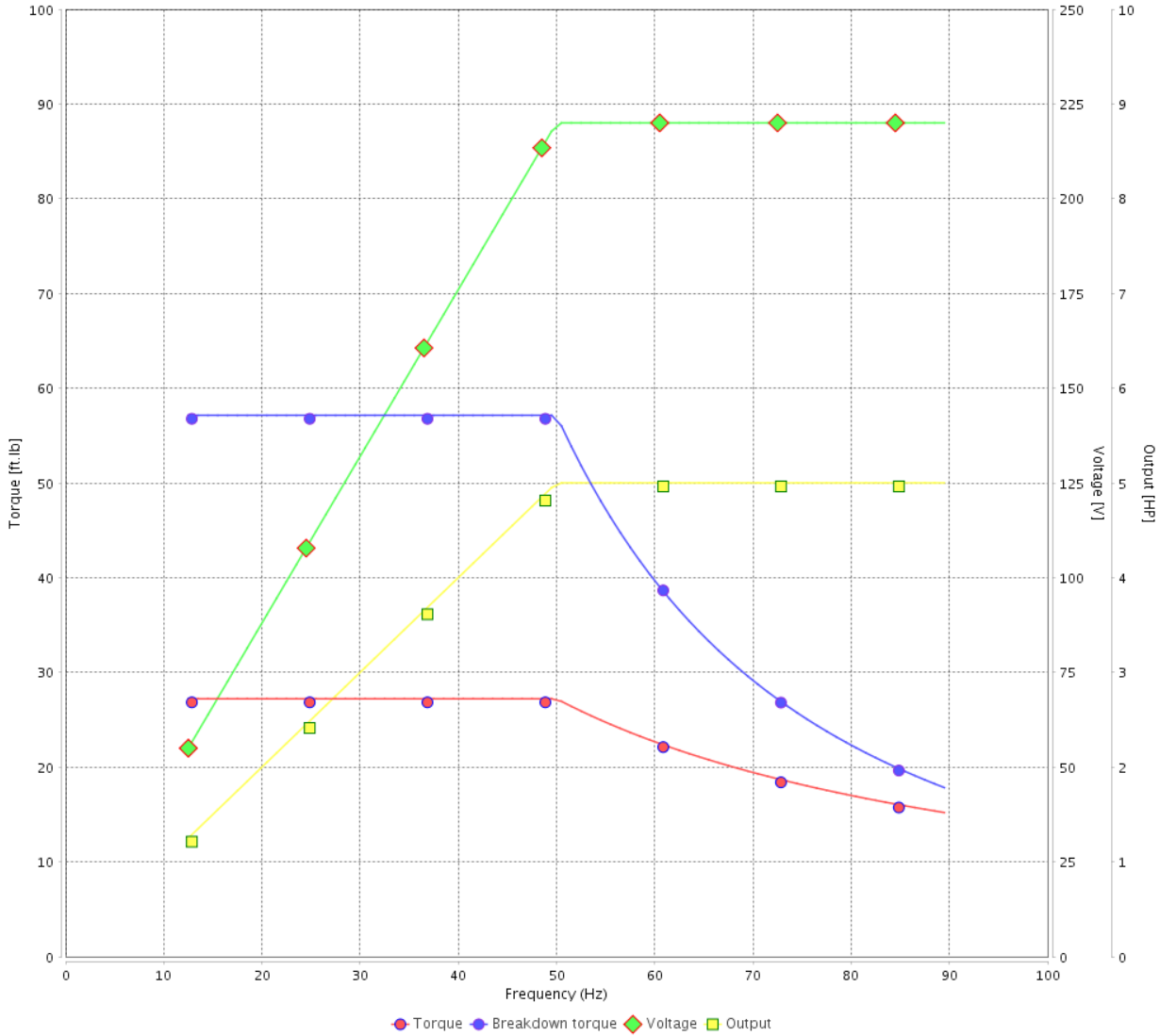
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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 16 / 16	Revision
Checked by				
Date	12/04/2022			



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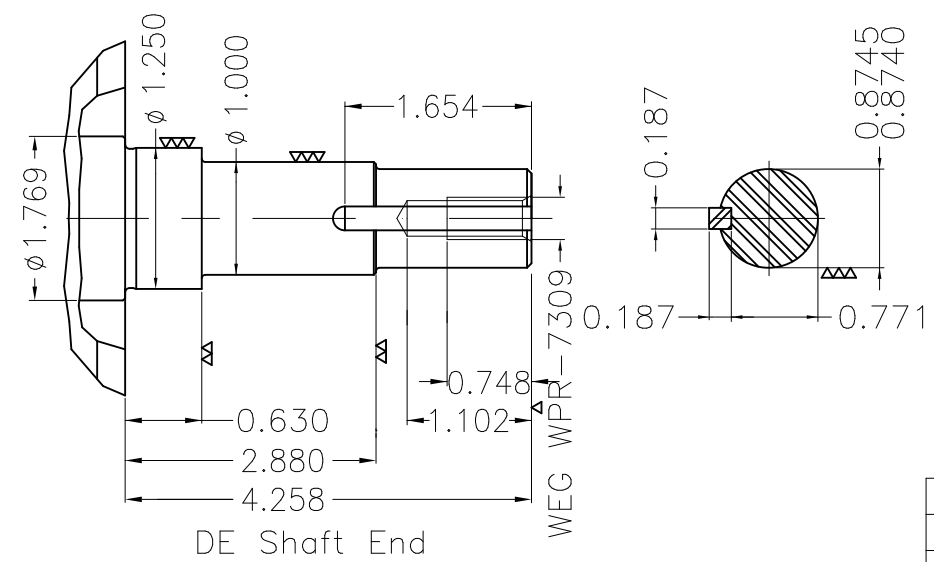
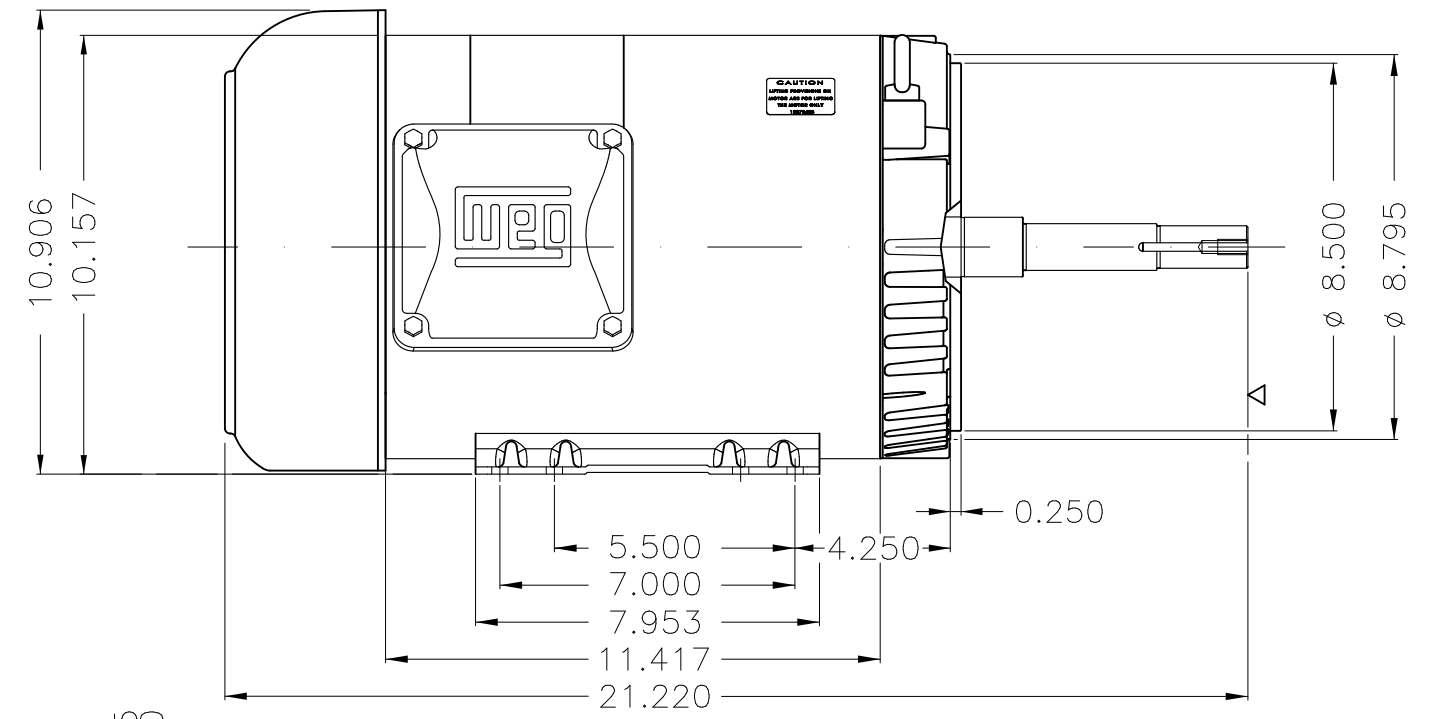
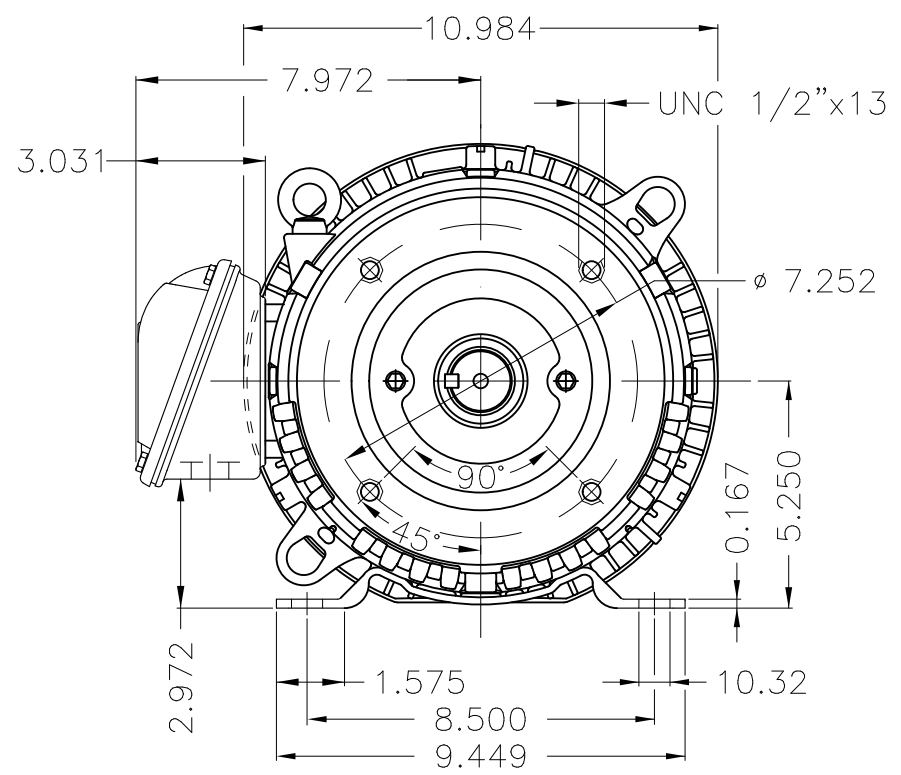
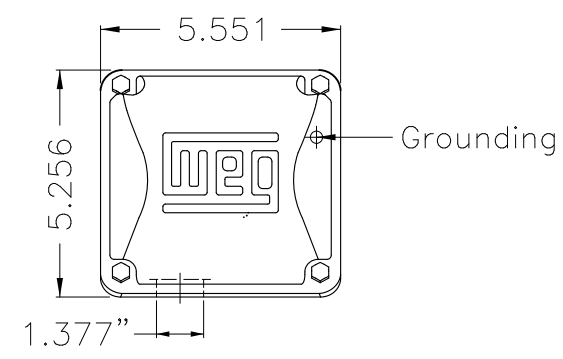
A

B

C

D

E



EUNC 3/8" - 16 WEG WPR-7309

DE Shaft End

Color Munsell N 1 matte black									
Painting plan 207N									
Mounting F-1/B34R(D)									
ECM	LOC	SUMMARY OF MODIFICATIONS			EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR ROLLED STEEL CLOSE COUPLED PUMP JN TYPE PSE 1/2"							
CHECKED		FRAME 213/5JM IP55 TEFC							
RELEASED									
REL DT.		WMO	Jaragua do Sul	Product Engineering					

PREVIEW

WDD



5 HP 06 Poles 60 Hz



**NEMA**  
**Premium**



MADE IN MEXICO

**MAT: 13440285 CC029A**

**W01.TE0IC0X0N**

**JM005406NPW01**

**13JAN2022 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 5.0</b>
<b>FR 213/5JM</b>		<b>KW 3.7</b>
<b>DUTY CONT.</b>		<b>V 230/460</b>
<b>ALT 1000 m.a.s.l.</b>		<b>A 13.5/6.74</b>
<b>INS CL F AT 80K</b>	<b>IP55</b>	<b>SFA 15.5/7.75</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 0.77</b>
<b>USABLE @ 208V 14.9A</b>		<b>RPM 1175</b>
<b>SF1.00</b>		<b>NEMA NOM. EFF 89.5%</b>

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

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

<b>DE 6209-ZZ</b>	<b>ODE 6206-ZZ</b>	<b>MOBIL POLYREX EM</b>
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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.

