

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :		
Product line	: JM Pump NEMA Premium Efficiency Three-Phase	
Product code :	13221486	
Catalog # :	00536ET3E184JM-SG	
Frame	: 182/4JM	
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>	: 88.9 lb	
Moment of inertia (J)	: 0.2079 sq.ft.lb	
Output [HP]	5	
Poles	2	
Frequency [Hz]	60	
Rated voltage [V]	230/460	
Rated current [A]	11.8/5.90	
L. R. Amperes [A]	92.0/46.0	
LRC [A]	7.8x(Code J)	
No load current [A]	4.40/2.20	
Rated speed [RPM]	3500	
Slip [%]	2.78	
Rated torque [ft.lb]	7.50	
Locked rotor torque [%]	220	
Breakdown torque [%]	300	
Service factor	1.15	
Temperature rise	80 K	
Locked rotor time	30s (cold) 17s (hot)	
Noise level <sup>2</sup>	68.0 dB(A)	
Efficiency (%)	25%	0.000
	50%	87.5
	75%	88.5
	100%	88.5
Power Factor	25%	0.00
	50%	0.76
	75%	0.85
	100%	0.89
Bearing type	: <u>Drive end</u> 6207 ZZ <u>Non drive end</u> 6205 ZZ	
Sealing	: V'Ring Without Bearing Seal	
Lubrication interval	: -	
Lubricant amount	: -	
Lubricant type	: Mobil Polyrex EM	
Foundation loads	Max. traction : 130 lb	
	Max. compression : 219 lb	
Notes USABLE @208V 13.1A SF 1.00 SFA 13.1A		
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



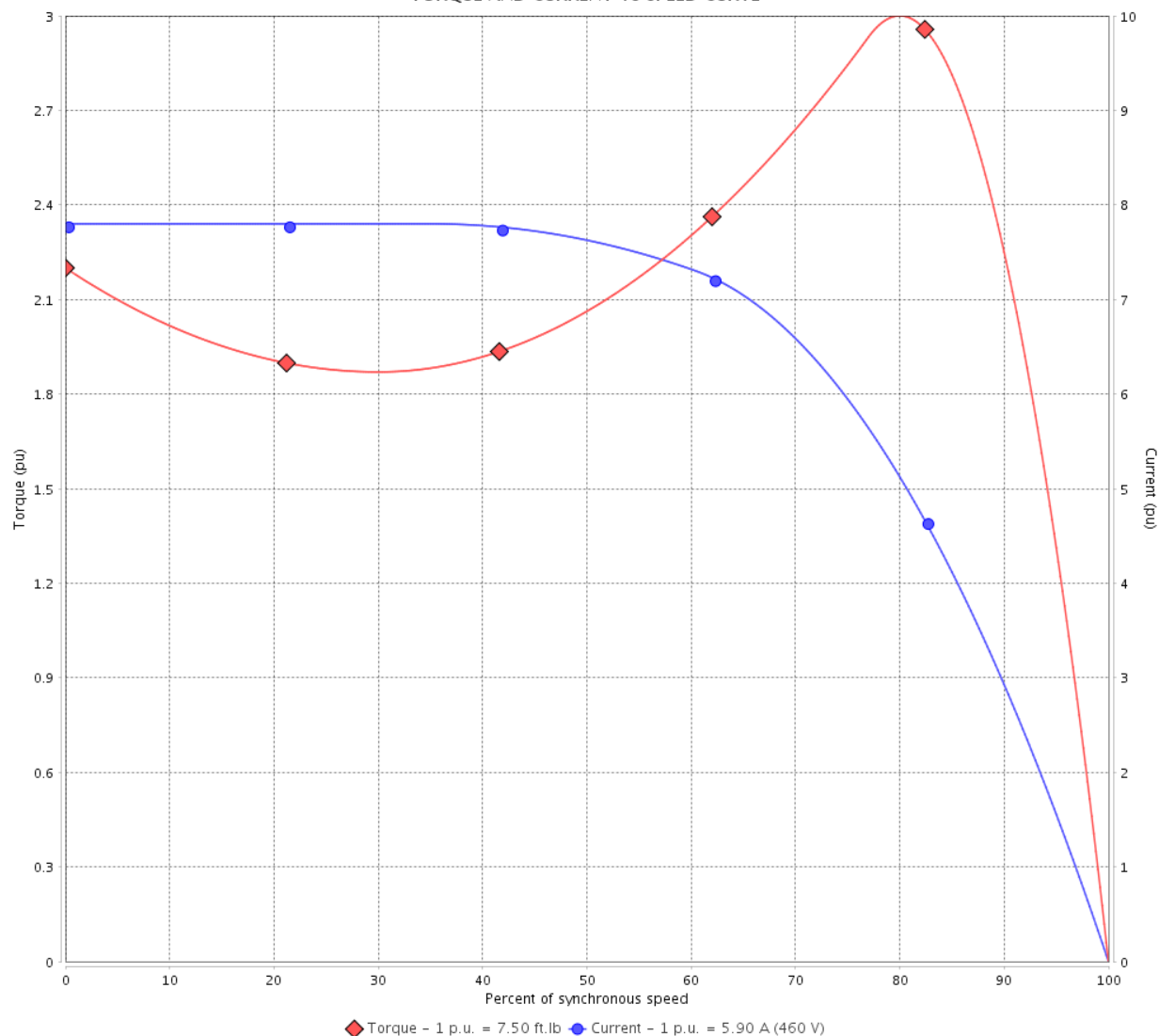
Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13221486

Catalog # : 00536ET3E184JM-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 2P

Rated current : 11.8/5.90 A  
 LRC : 7.8  
 Rated torque : 7.50 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 300 %  
 Rated speed : 3500 rpm

Moment of inertia (J) : 0.2079 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 30s (cold) 17s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



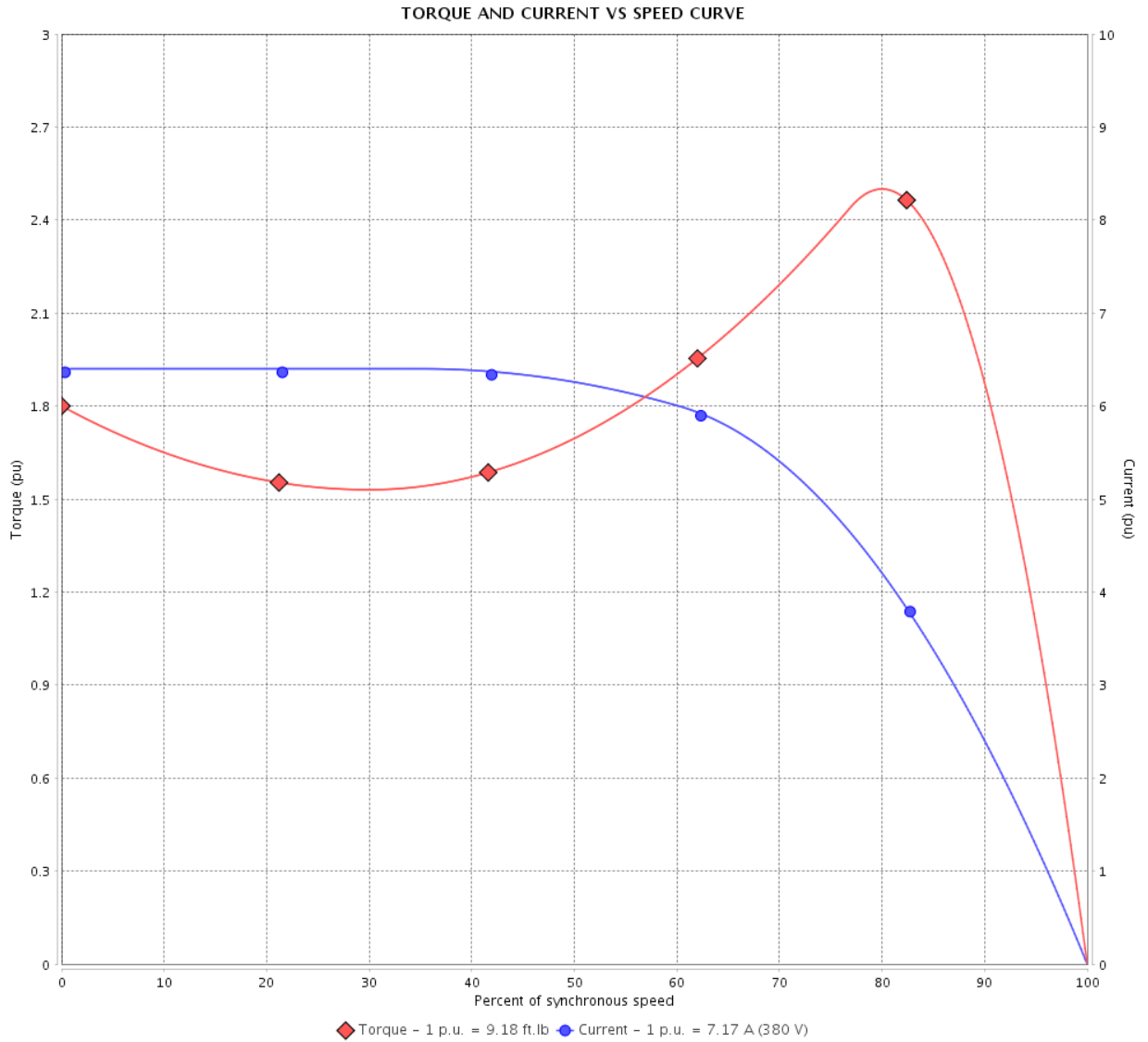
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13221486

Catalog # : 00536ET3E184JM-SG



Performance : 190-220/380 V 50 Hz 2P

Rated current	: 14.3-12.4/7.17 A	Moment of inertia (J)	: 0.2079 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 9.18 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 105 K
Rated speed	: 2860 rpm	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

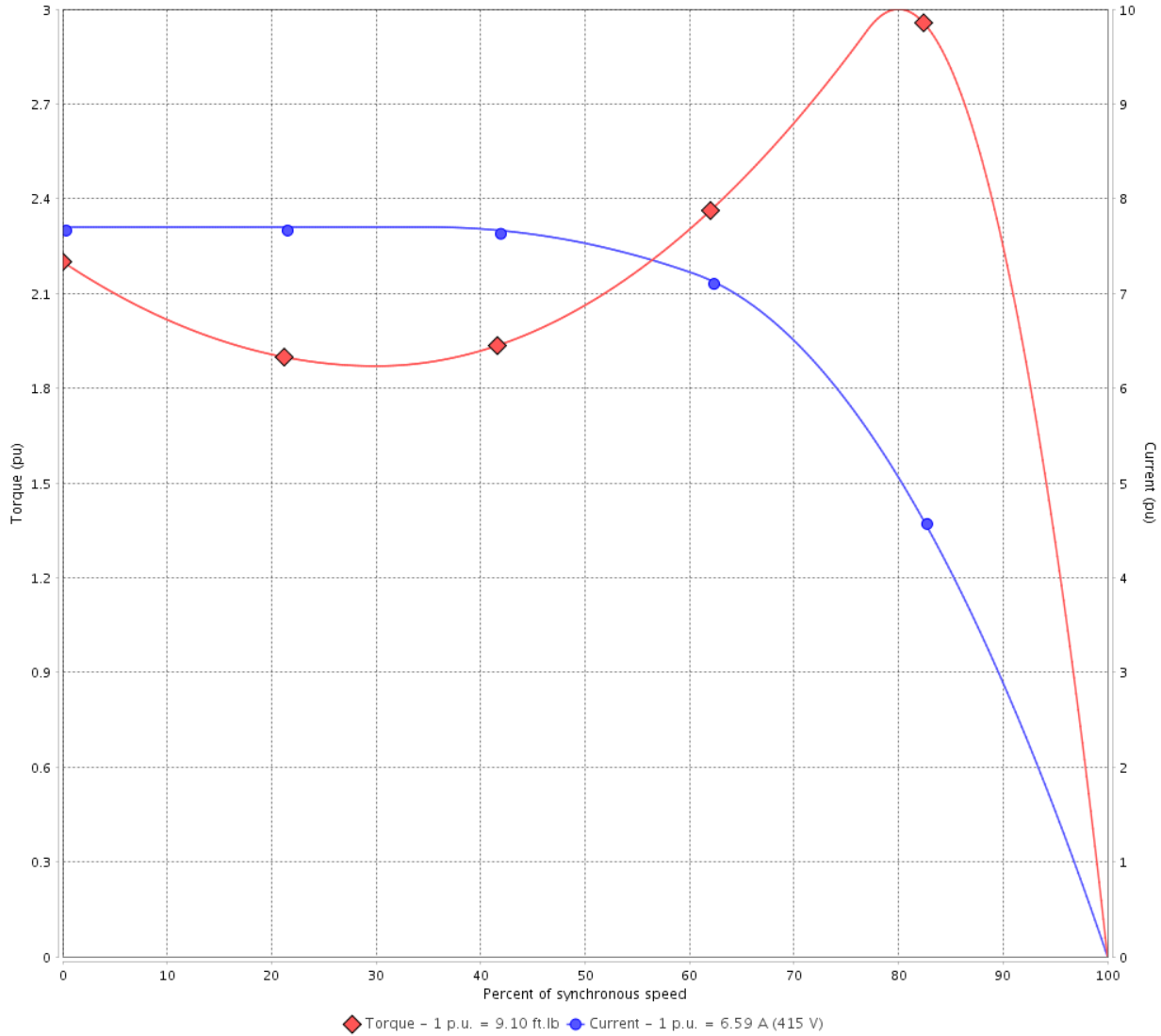
Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 13221486

Catalog # : 00536ET3E184JM-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 2P

Rated current	: 6.59 A	Moment of inertia (J)	: 0.2079 sq.ft.lb
LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 9.10 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 105 K
Rated speed	: 2885 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

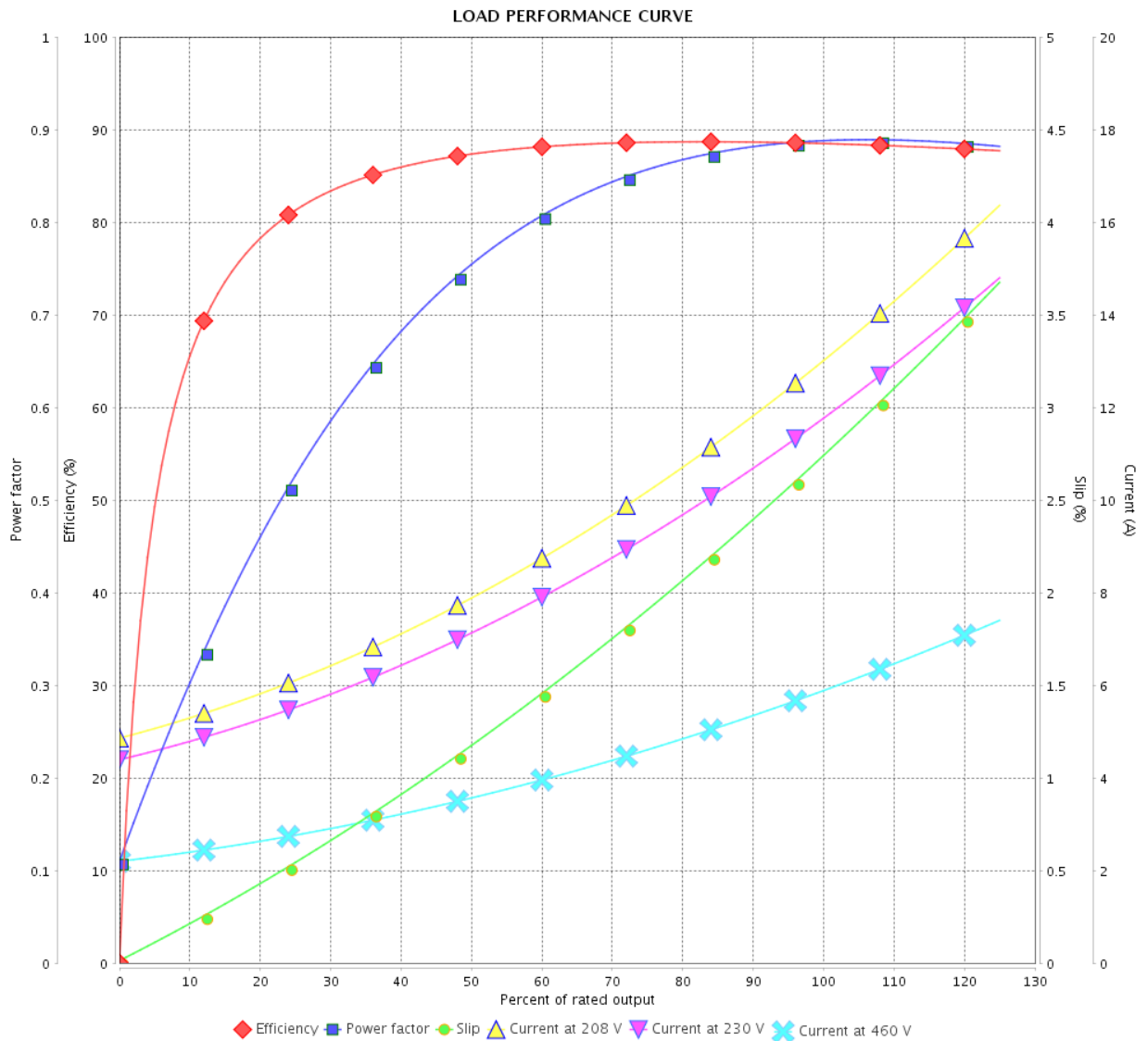


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Product code : 13221486

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 Design : B

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



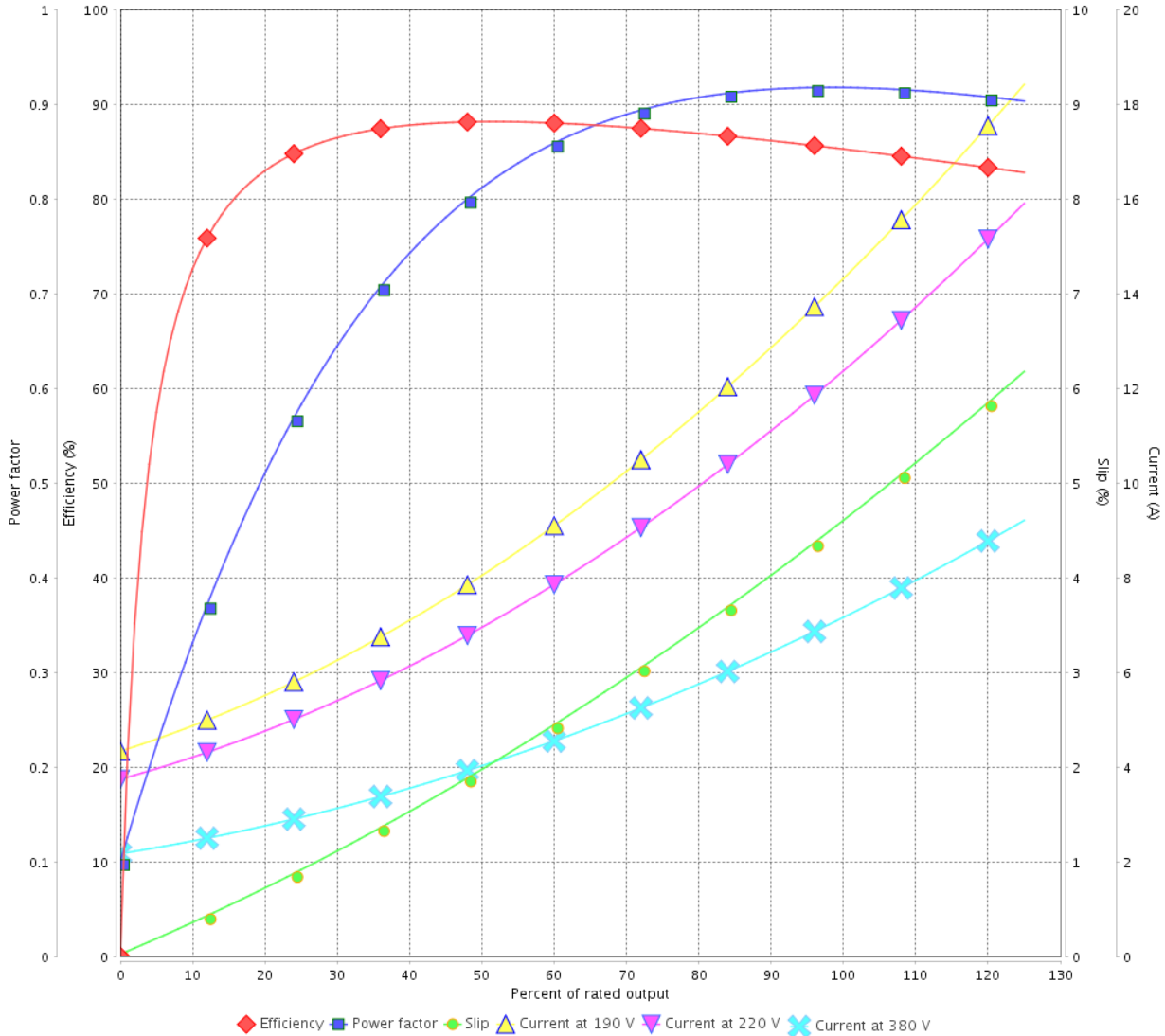
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Product code : 13221486

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LOAD PERFORMANCE CURVE



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Rated current : 14.3-12.4/7.17 A  
 LRC : 6.4  
 Rated torque : 9.18 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 250 %  
 Rated speed : 2860 rpm

Moment of inertia (J) : 0.2079 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

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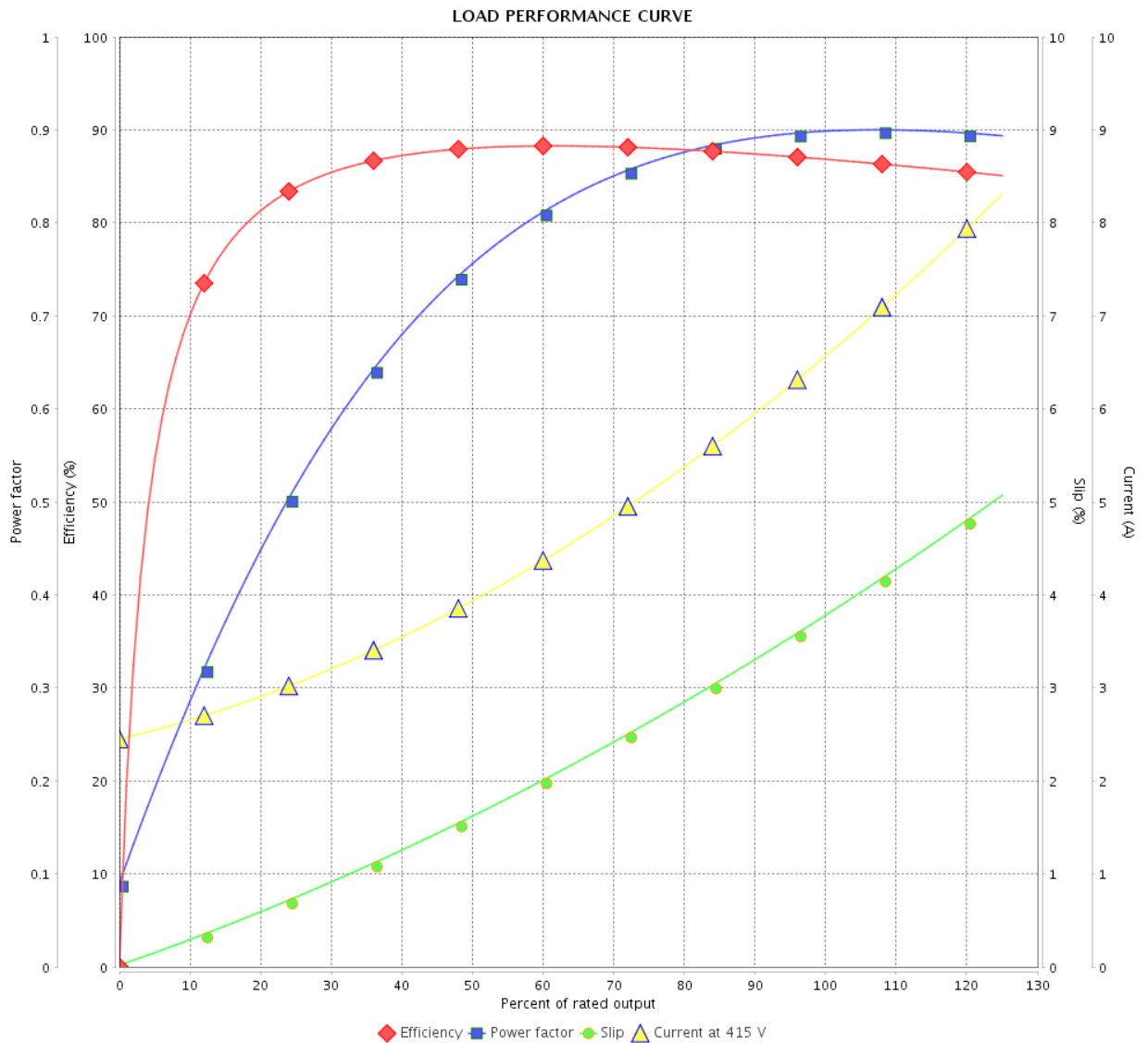


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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

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LRC : 7.8  
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Locked rotor torque : 220 %  
Breakdown torque : 300 %  
Rated speed : 3500 rpm

Moment of inertia (J) : 0.2079 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

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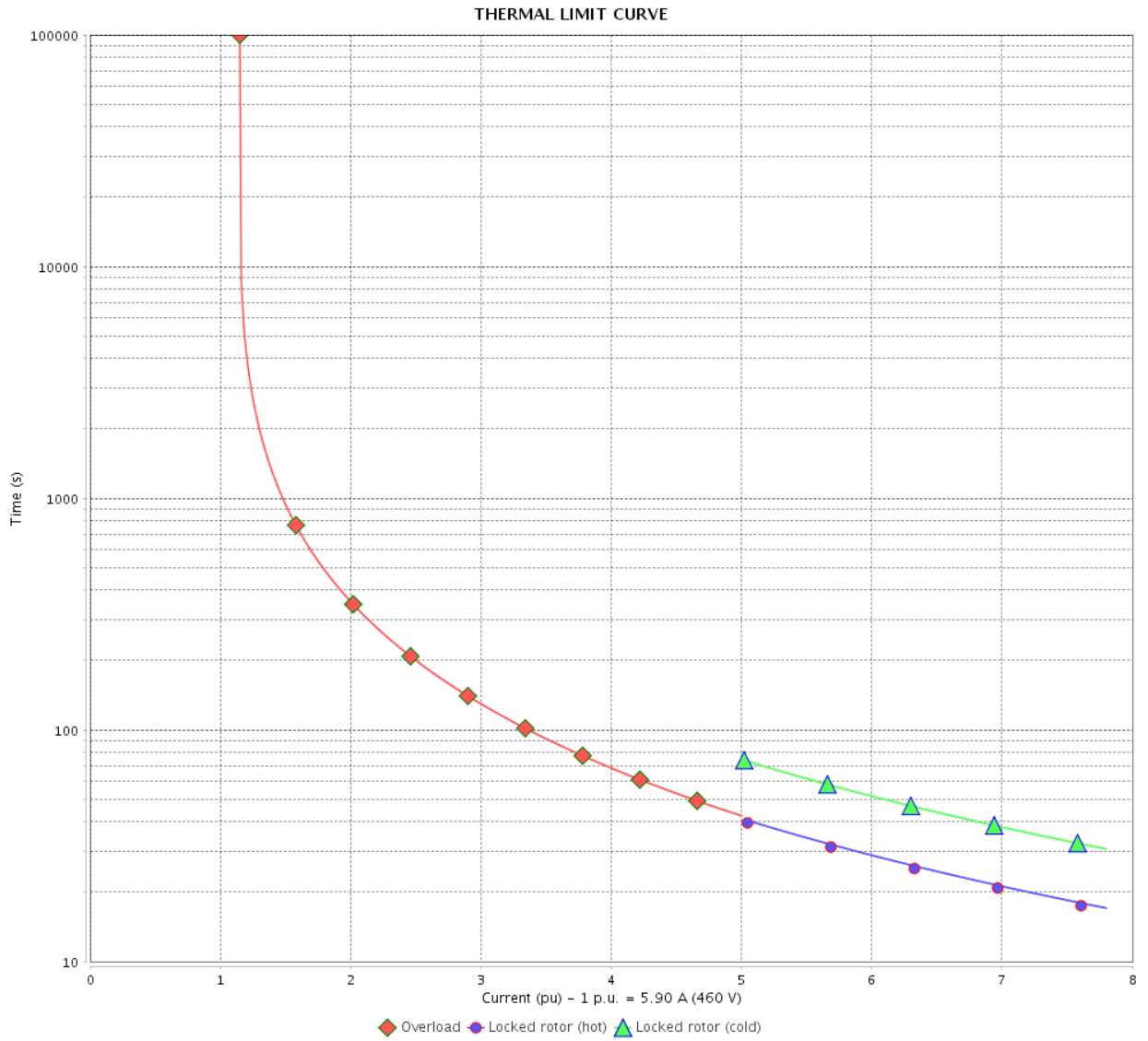


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Three Phase Induction Motor - Squirrel Cage



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Design : B

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Cooling constant

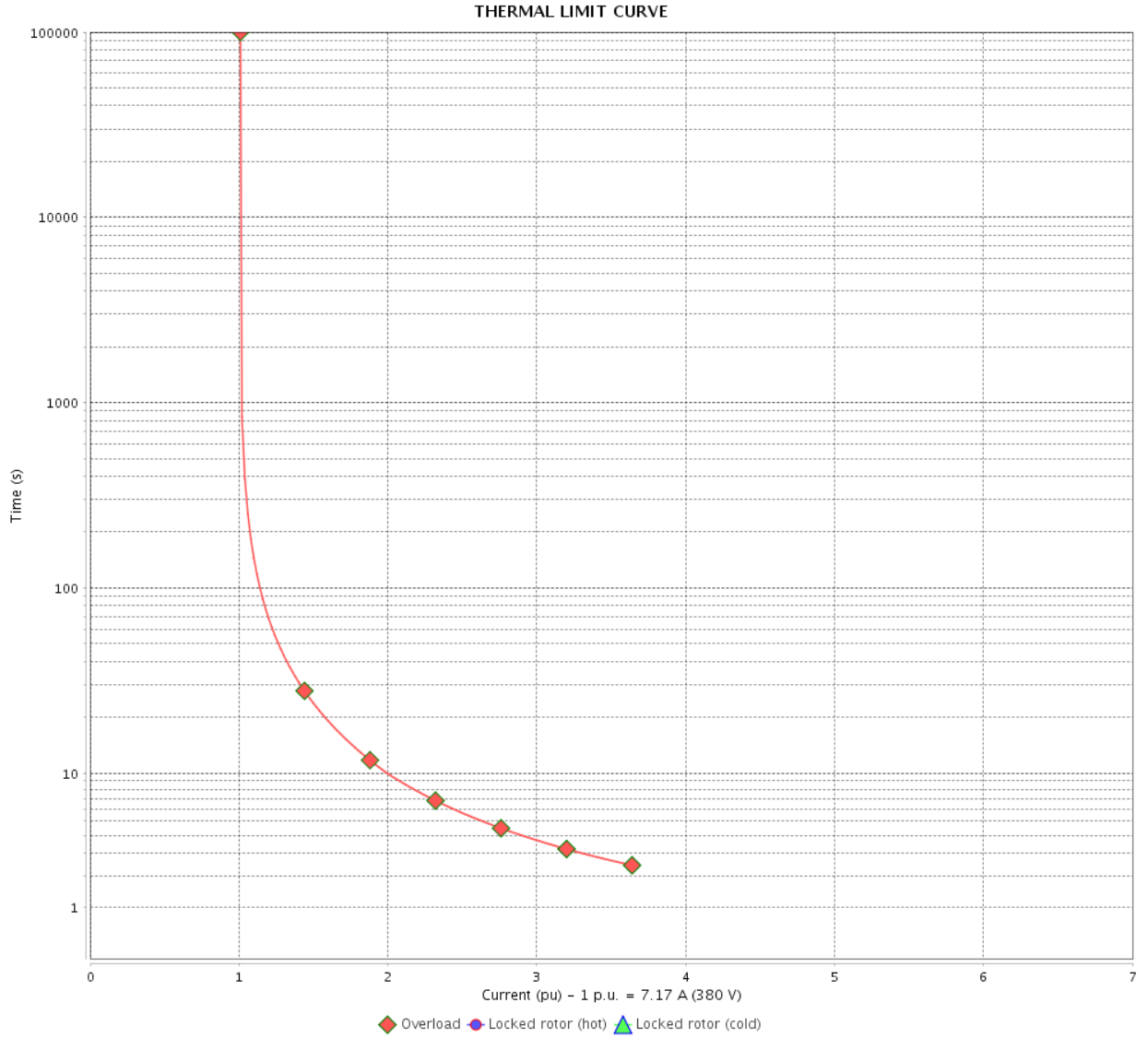
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Heating constant

Cooling constant

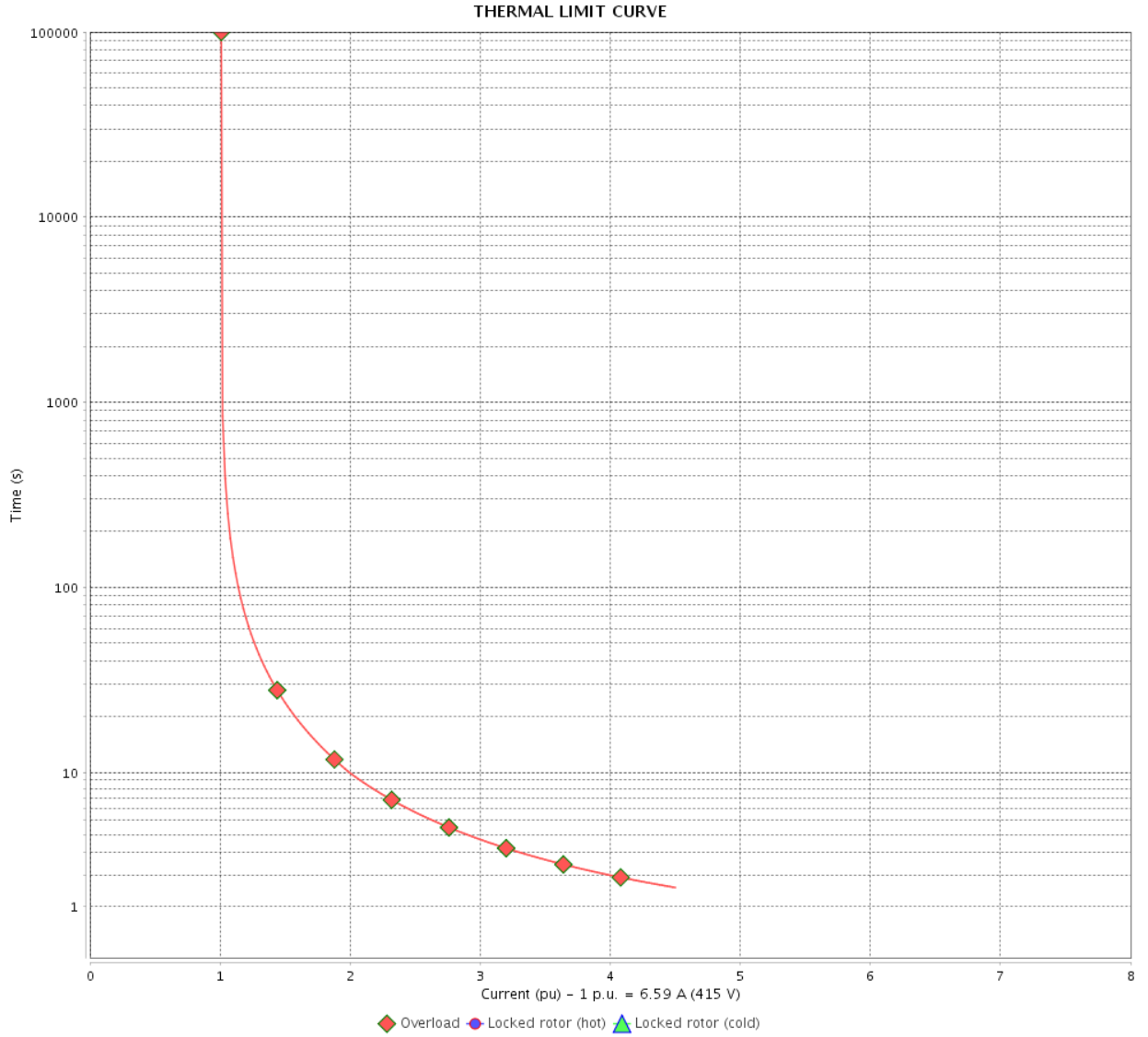
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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

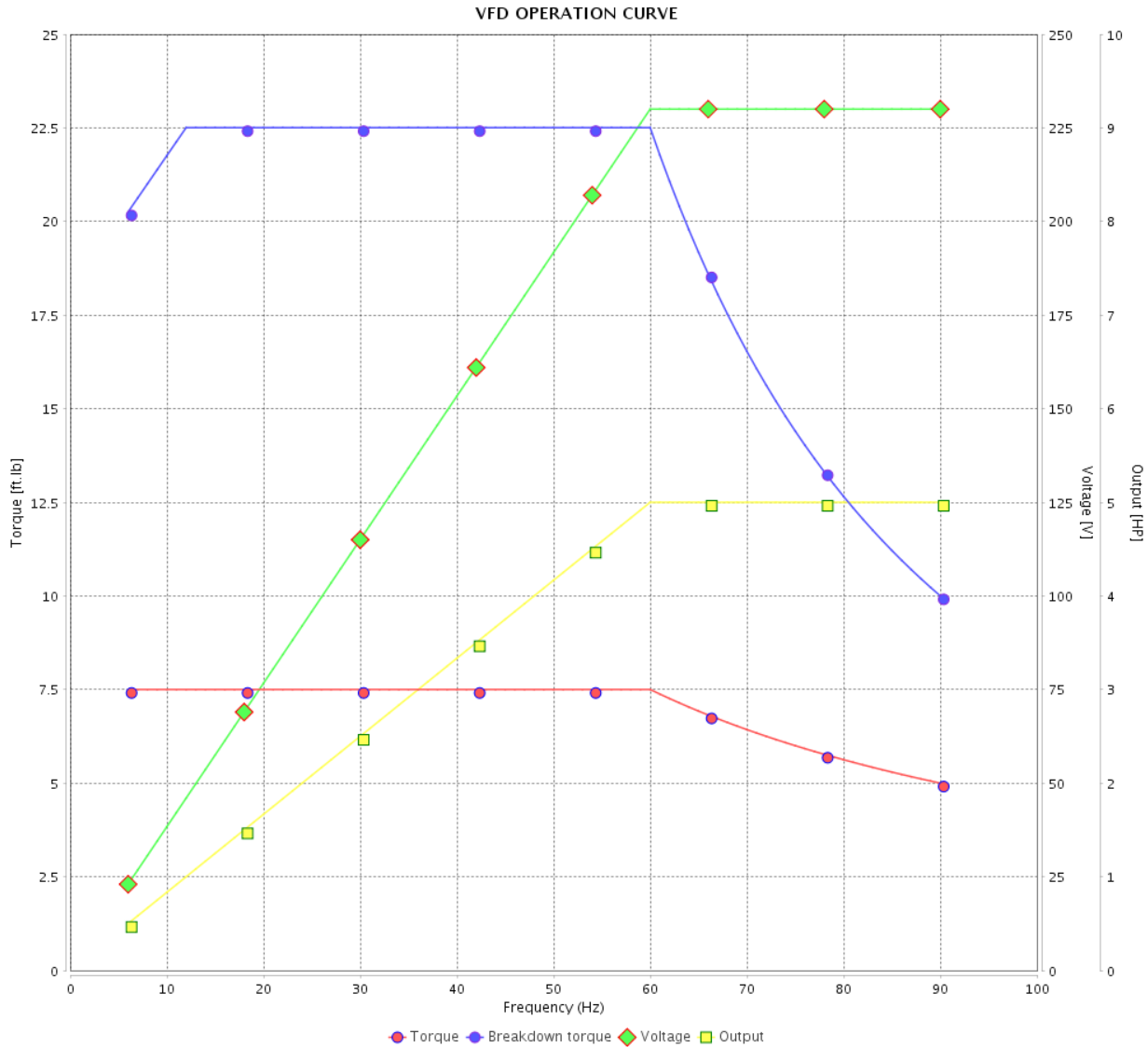


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 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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## Three Phase Induction Motor - Squirrel Cage

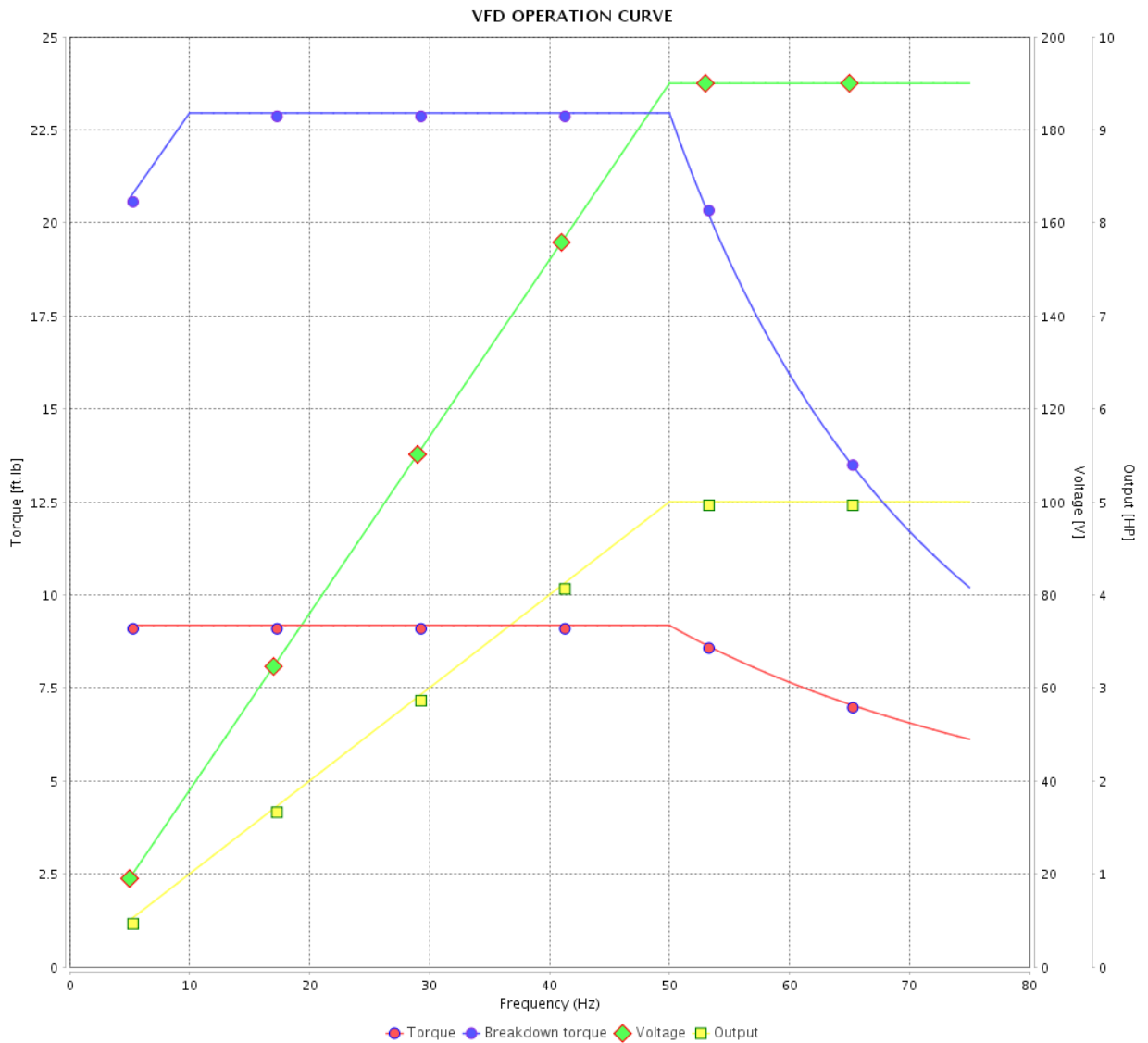


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 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

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Three Phase Induction Motor - Squirrel Cage



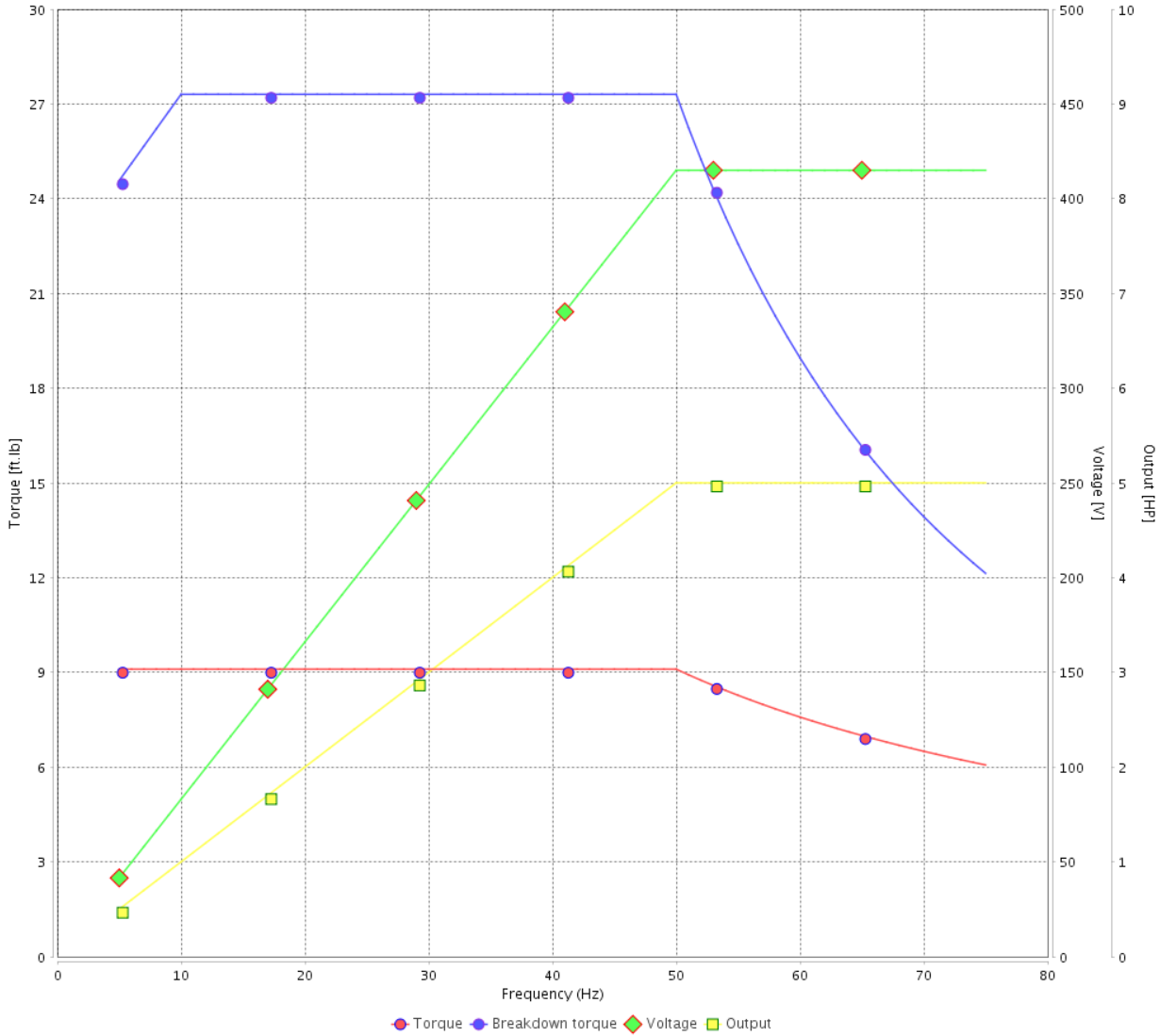
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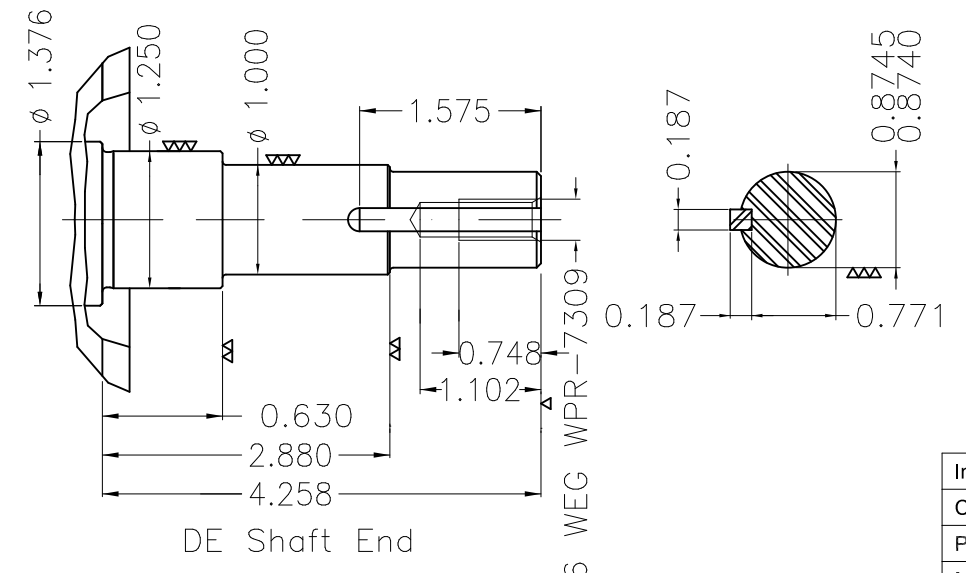
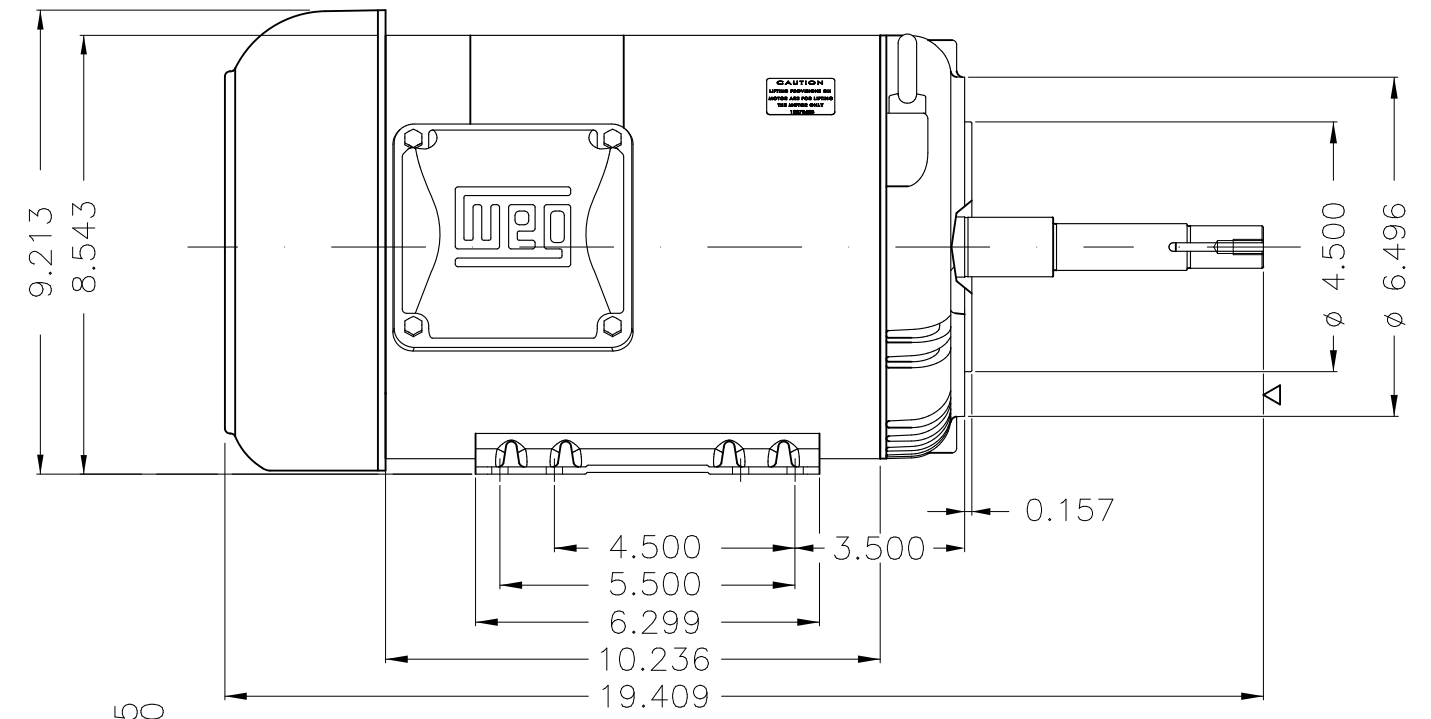
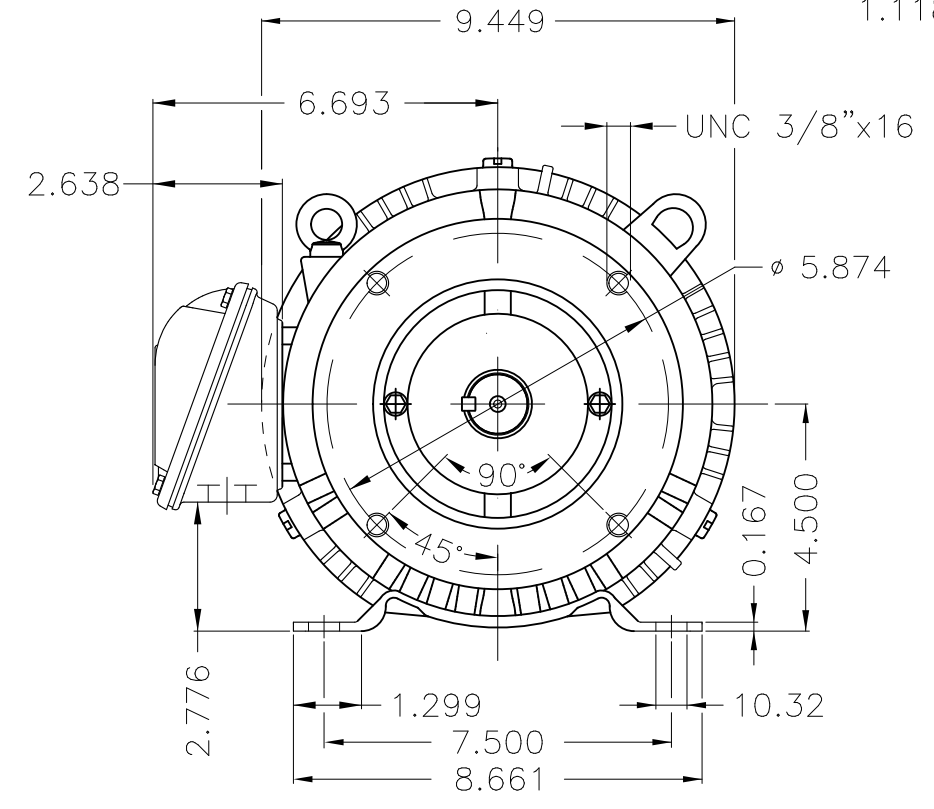
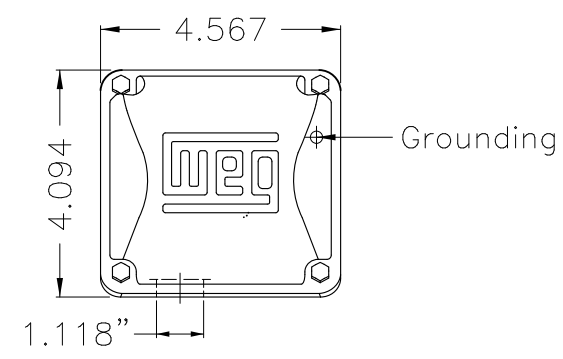
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1 2 3 4 5 6

A  
B  
C  
D  
E



EUNC 3/8"-16 WEG WPR-7309

DE Shaft End

Internal AEGIS ground ring on the DE  
 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 PSEF 575					
CHECKED		FRAME 182/4JM IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	WDD	SHEET	1 / 1	

5 HP 02 Poles 60 Hz

Dimensions in inches XME A3



**NEMA**  
**Premium**

3PT9



Energy Verified

MADE IN MEXICO

**MAT: 13221486 CC029A****W01.TE0IC0X0N****JM005402NPW01GR****15FEB2022 S/N:**

<b>PH 3</b>	<b>Hz 60</b>	<b>HP 5.0</b>
<b>FR 182/4JM</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 11.8/5.90</b>
<b>INS CL F AT 80K</b>	<b>IP55</b>	<b>SFA 13.6/6.79</b>
<b>AMB 40°C</b>	<b>DES B</b>	<b>SF 1.15</b>
<b>ENCL TEFC</b>	<b>CODE J</b>	<b>PF 0.89</b>
<b>USABLE @ 208V 13.1A</b>		<b>RPM 3500</b>
<b>SF1.00</b>		<b>NEMA NOM. EFF 88.5%</b>

<b>ALTERNATE RATING: 5.0HP 50Hz 190-220/380-415V SF1.00</b>
<b>14.3-12.47.17-6.59A 2860RPM EFF 85.2% (IE1) IEC 60034-1</b>

**Inverter duty motor For 60Hz use on VPWM 1000:1 VT, 10:1 CT**

<b>DE 6207-ZZ</b>	<b>ODE 6205-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.

