

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :		
Product line	: JM Pump NEMA Premium Efficiency Three-Phase	
Product code :	12676963	
Catalog # :	00218OT3E145JM-S	
Frame	: 143/5JM	
Insulation class	: F	
Duty cycle	: Cont.(S1)	
Ambient temperature	: -20°C to +40°C	
Altitude	: 1000 m.a.s.l.	
Design	: B	
Cooling method	: IC01 - ODP	
Mounting	: F-1	
Rotation <sup>1</sup>	: Both (CW and CCW)	
Starting method	: Direct On Line	
Approx. weight <sup>2</sup>	: 41.4 lb	
Moment of inertia (J)	: 0.1168 sq.ft.lb	
Output [HP]	2	
Poles	4	
Frequency [Hz]	60	
Rated voltage [V]	230/460	
Rated current [A]	5.38/2.69	
L. R. Amperes [A]	41.4/20.7	
LRC [A]	7.7x(Code K)	
No load current [A]	2.75/1.38	
Rated speed [RPM]	1740	
Slip [%]	3.33	
Rated torque [ft.lb]	6.04	
Locked rotor torque [%]	260	
Breakdown torque [%]	320	
Service factor	1.00	
Temperature rise	80 K	
Locked rotor time	30s (cold) 17s (hot)	
Noise level <sup>2</sup>	52.0 dB(A)	
Efficiency (%)	25%	85.2
	50%	85.5
	75%	86.5
	100%	86.5
Power Factor	25%	0.36
	50%	0.61
	75%	0.74
	100%	0.81
Bearing type	: <u>Drive end</u> 6206 ZZ <u>Non drive end</u> 6203 ZZ	
Sealing	: Without Without	
	: Bearing Seal Bearing Seal	
Lubrication interval	: - -	
Lubricant amount	: - -	
Lubricant type	: Mobil Polyrex EM	
Foundation loads	Max. traction : 147 lb	
	Max. compression : 188 lb	
Notes USABLE @208V 5.95A SF 1.00 SFA 5.95A		
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

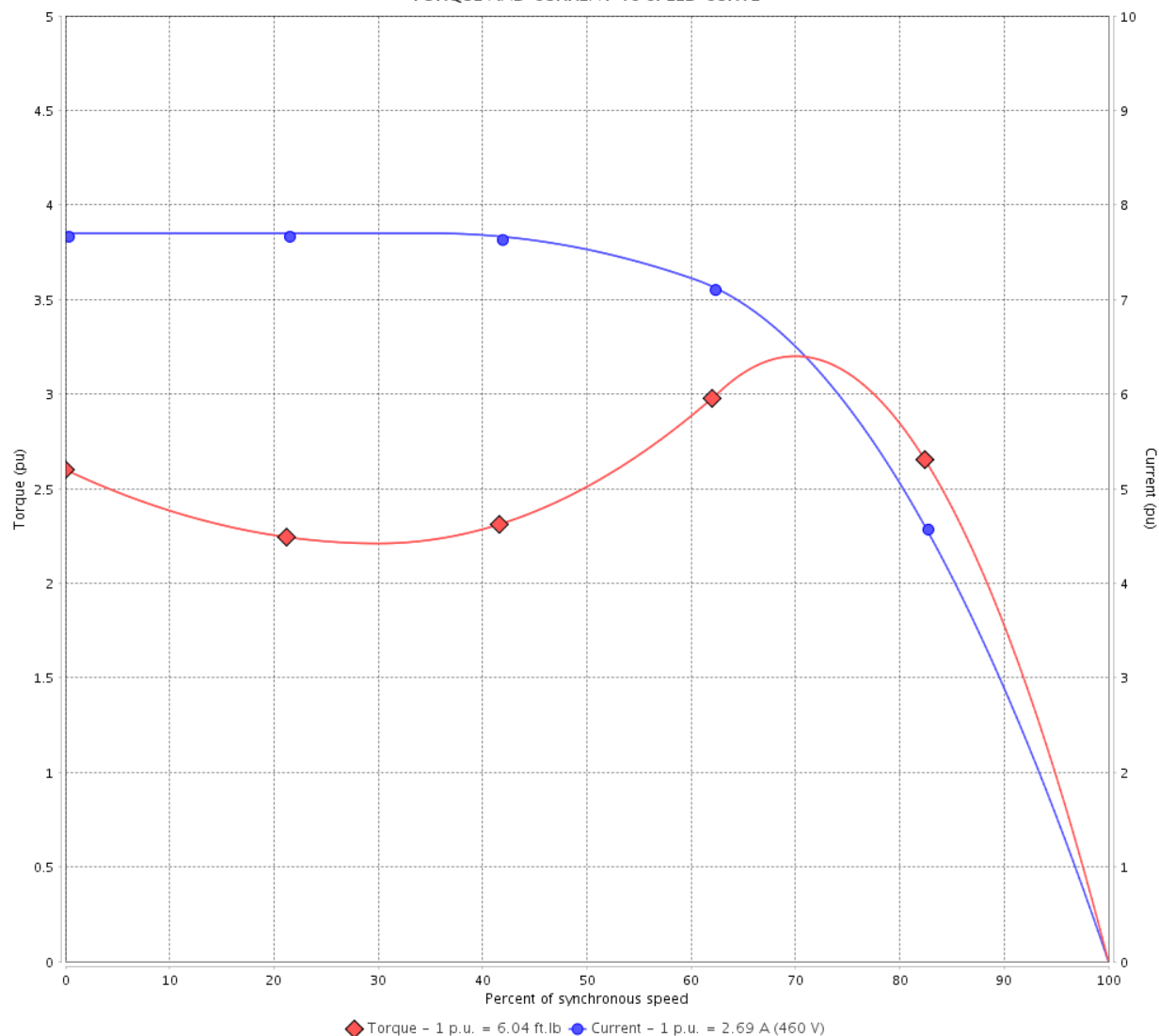
Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 12676963

Catalog # : 00218OT3E145JM-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 5.38/2.69 A  
 LRC : 7.7  
 Rated torque : 6.04 ft.lb  
 Locked rotor torque : 260 %  
 Breakdown torque : 320 %  
 Rated speed : 1740 rpm

Moment of inertia (J) : 0.1168 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

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

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# TORQUE AND CURRENT VS SPEED CURVE



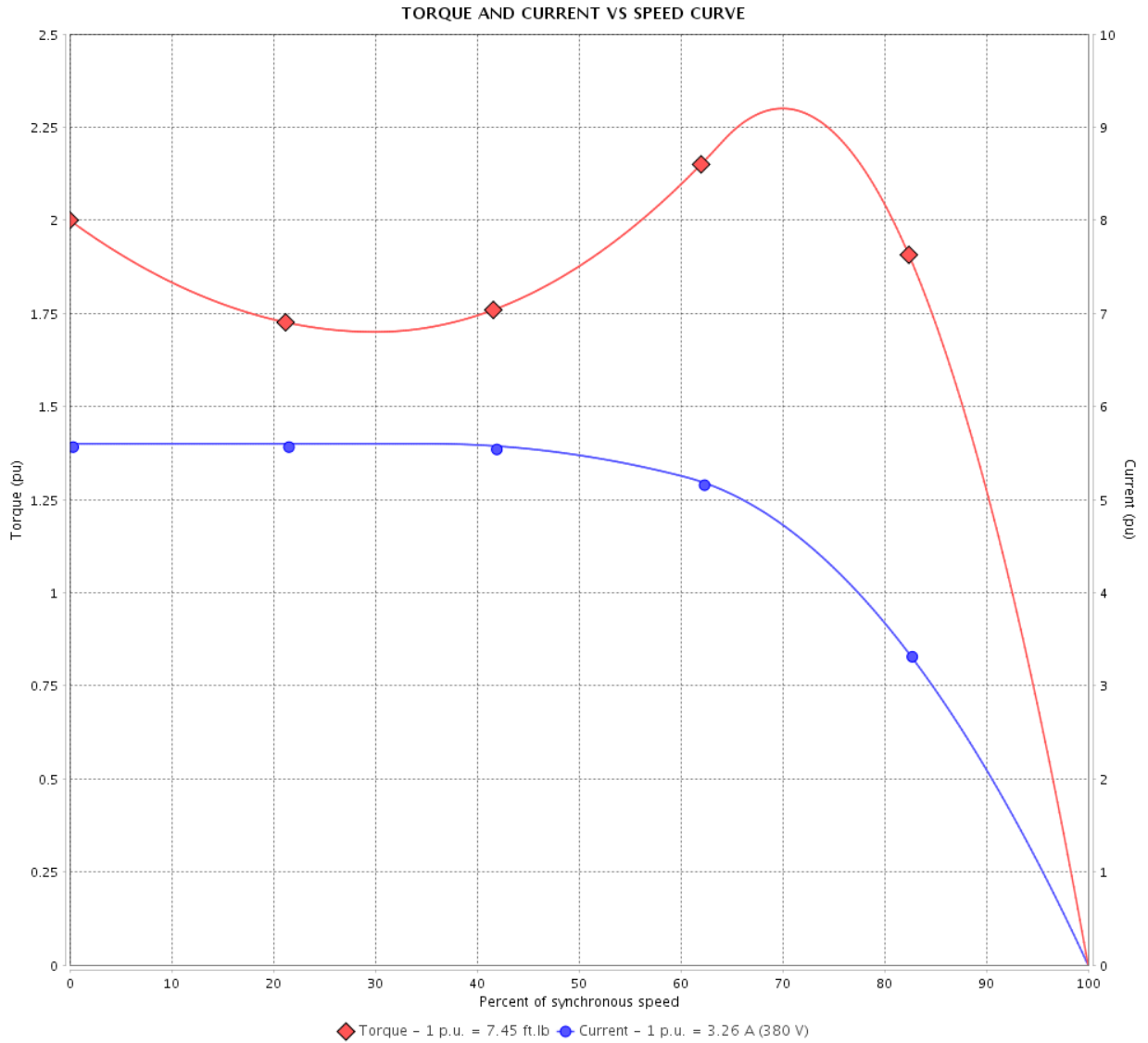
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 12676963

Catalog # : 00218OT3E145JM-S



Performance : 190/380 V 50 Hz 4P

Rated current : 6.52/3.26 A  
 LRC : 5.6  
 Rated torque : 7.45 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 229 %  
 Rated speed : 1410 rpm

Moment of inertia (J) : 0.1168 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



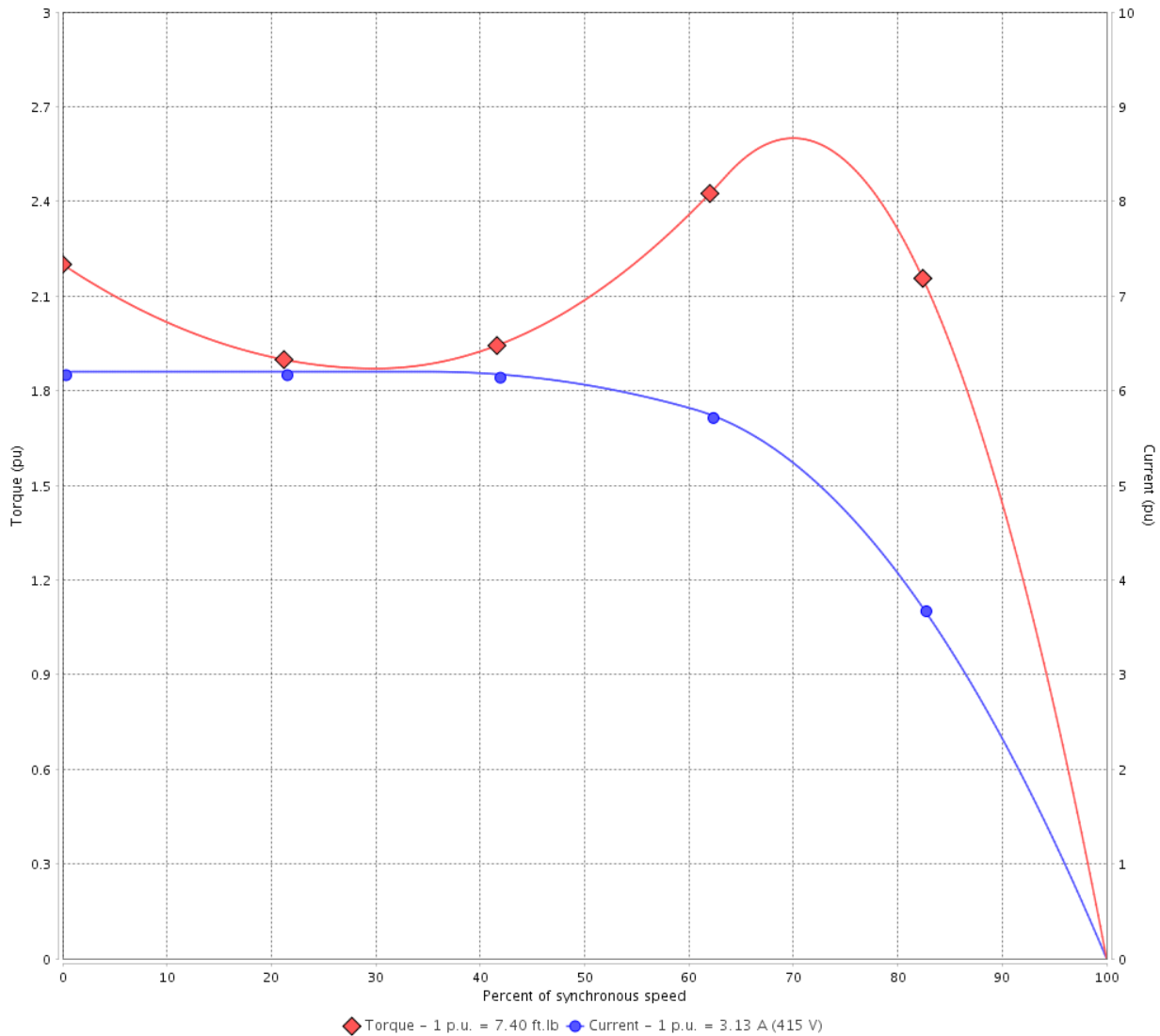
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Efficiency Three-Phase

Product code : 12676963

Catalog # : 00218OT3E145JM-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 4P

Rated current	: 5.90/3.13 A	Moment of inertia (J)	: 0.1168 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 7.40 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1420 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

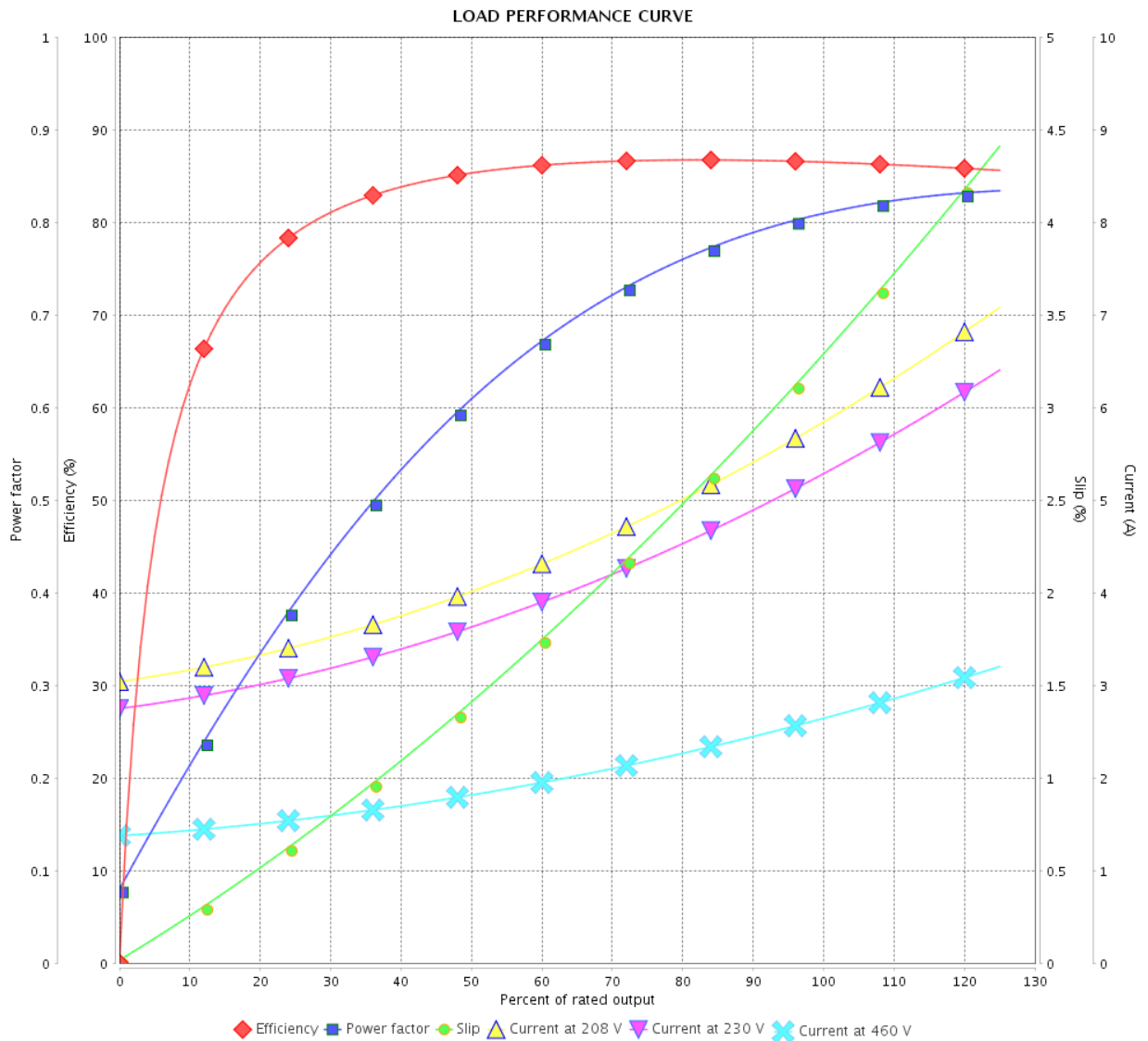


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 Locked rotor torque : 260 %  
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 Rated speed : 1740 rpm

Moment of inertia (J) : 0.1168 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
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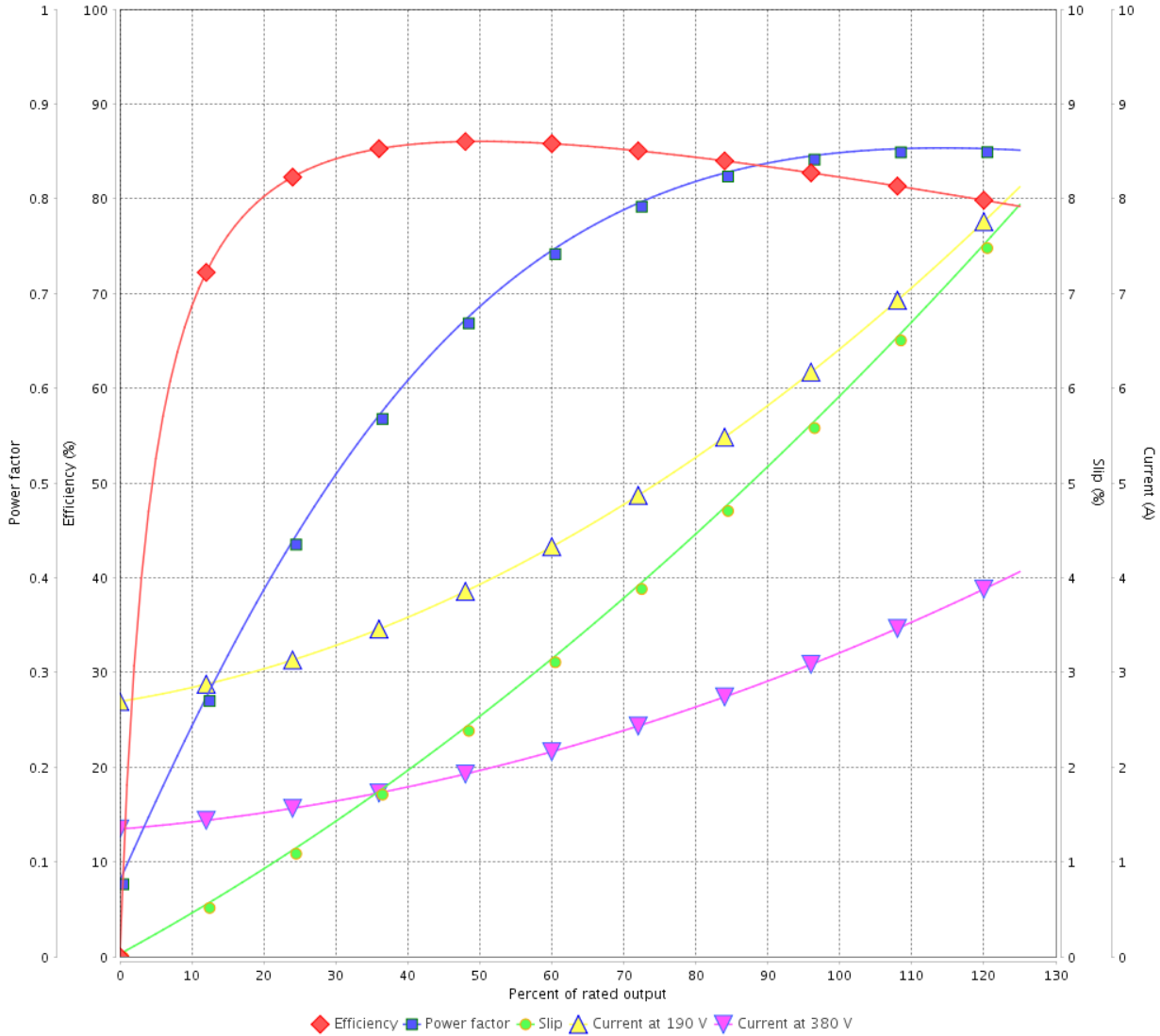
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LOAD PERFORMANCE CURVE



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 Breakdown torque : 229 %  
 Rated speed : 1410 rpm

Moment of inertia (J) : 0.1168 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

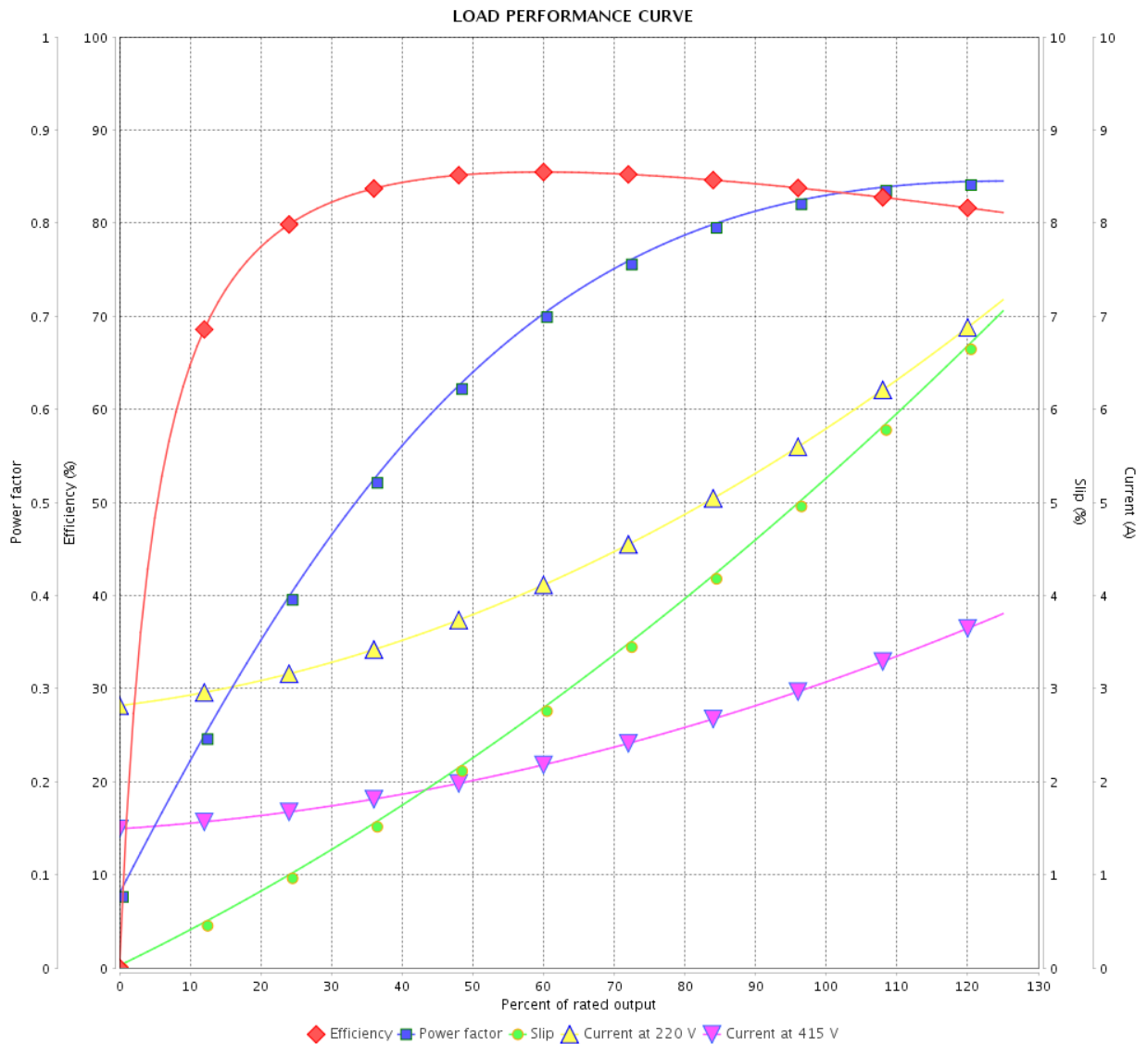


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Performance : 220/415 V 50 Hz 4P

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 Locked rotor torque : 220 %  
 Breakdown torque : 260 %  
 Rated speed : 1420 rpm

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# THERMAL LIMIT CURVE



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Rated speed : 1740 rpm

Moment of inertia (J) : 0.1168 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor :  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

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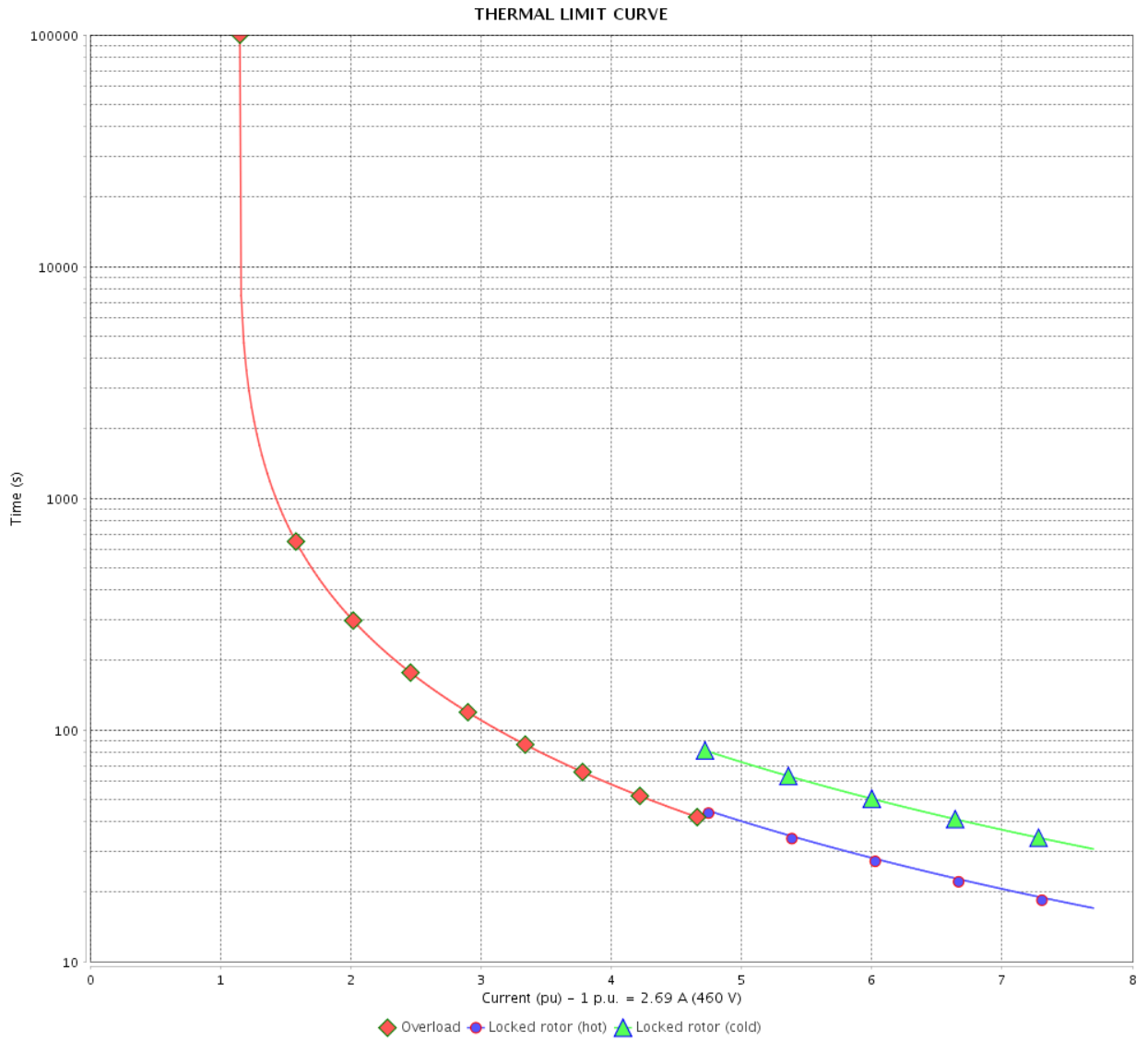


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Moment of inertia (J) : 0.1168 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 105 K  
Design : B

Heating constant

Cooling constant

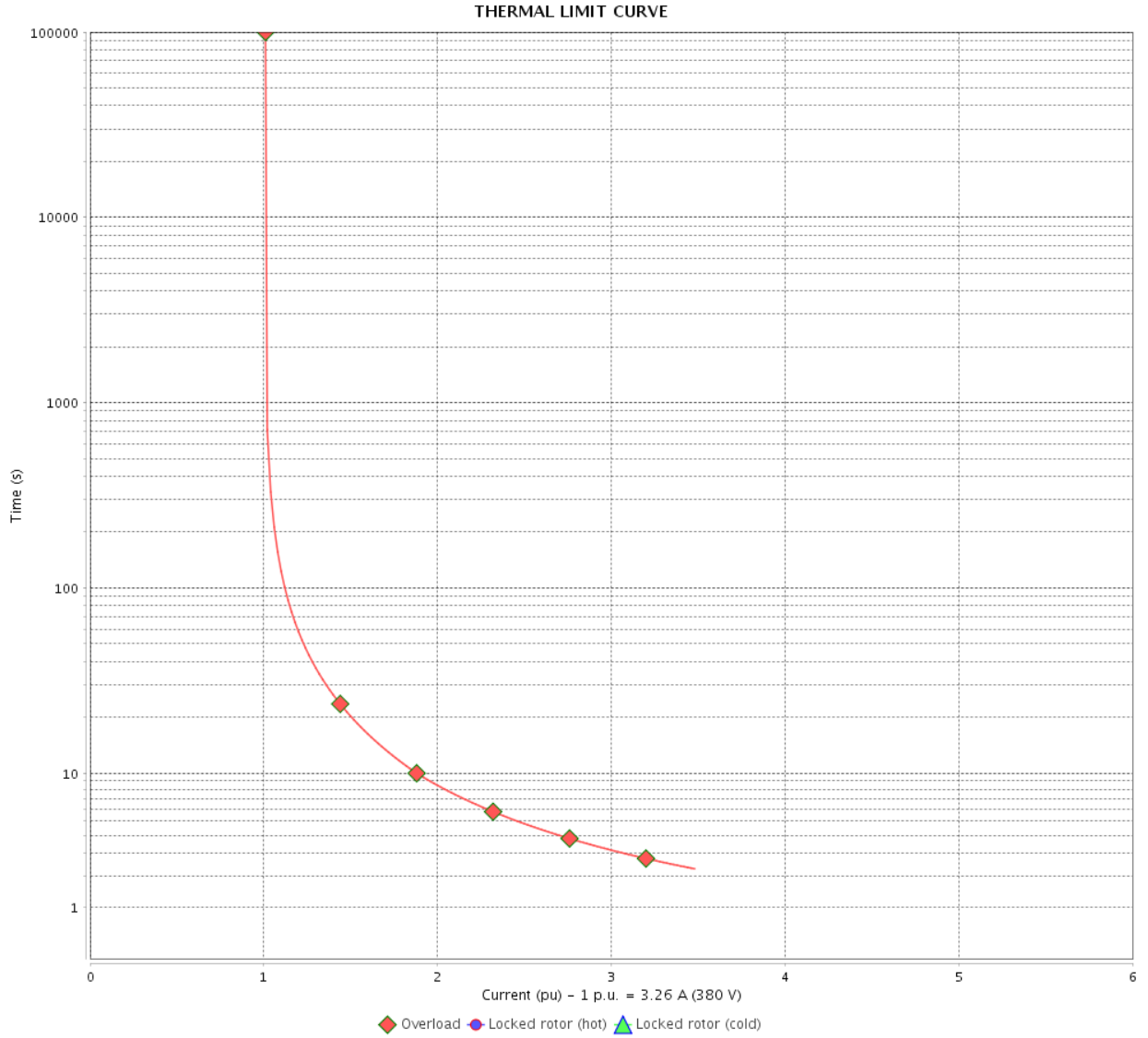
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Cooling constant

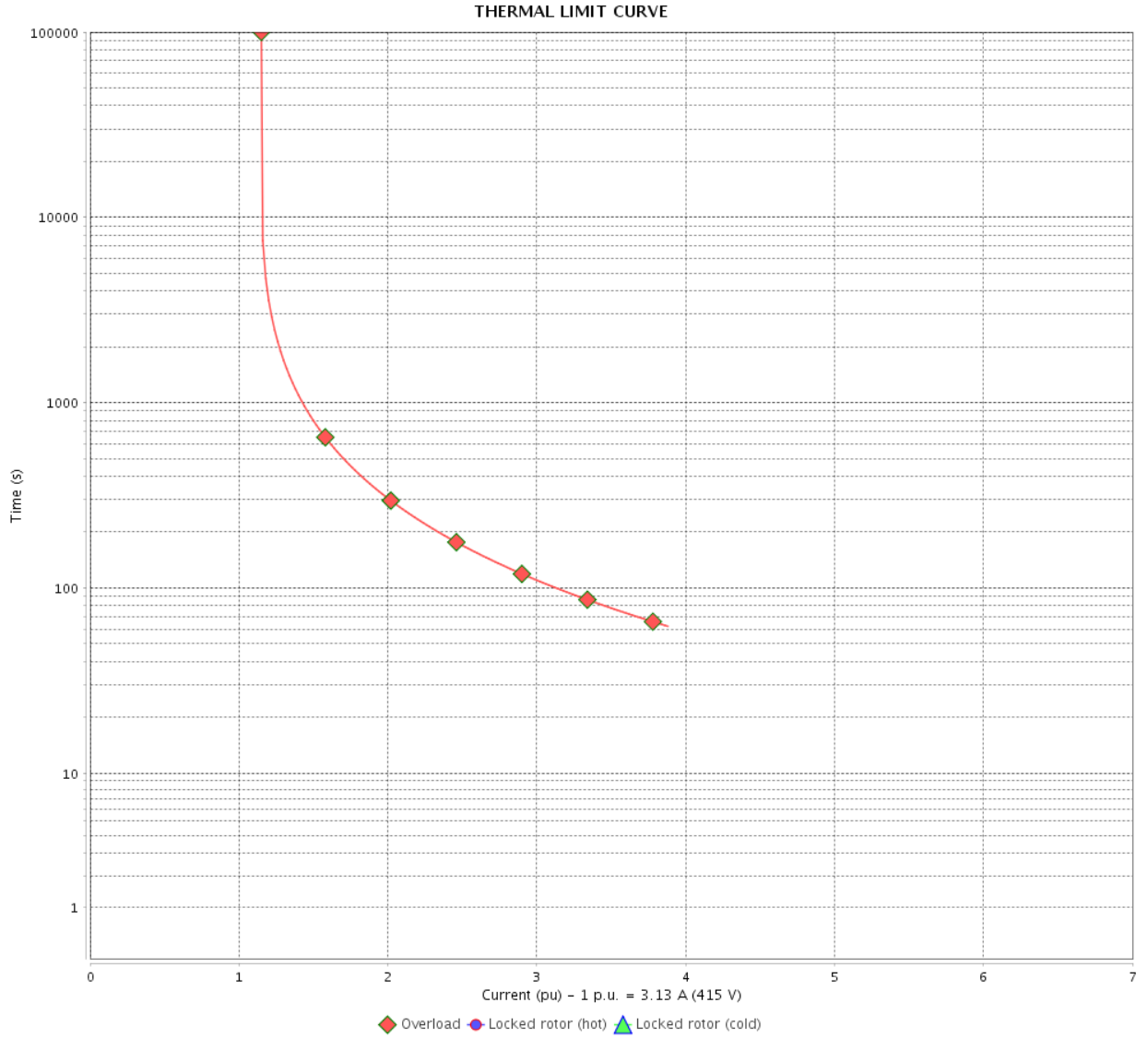
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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

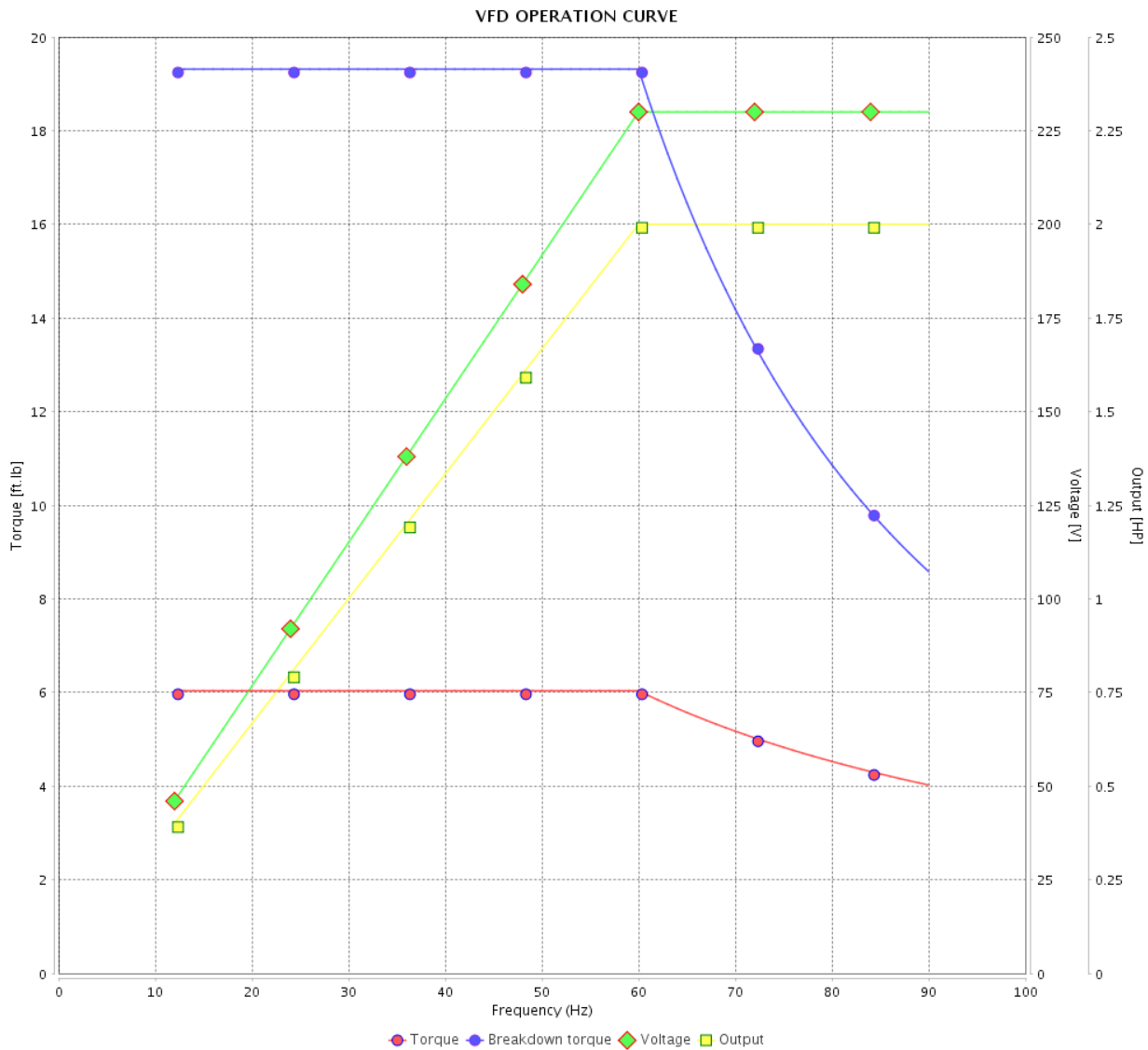


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Rated current : 5.38/2.69 A  
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 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

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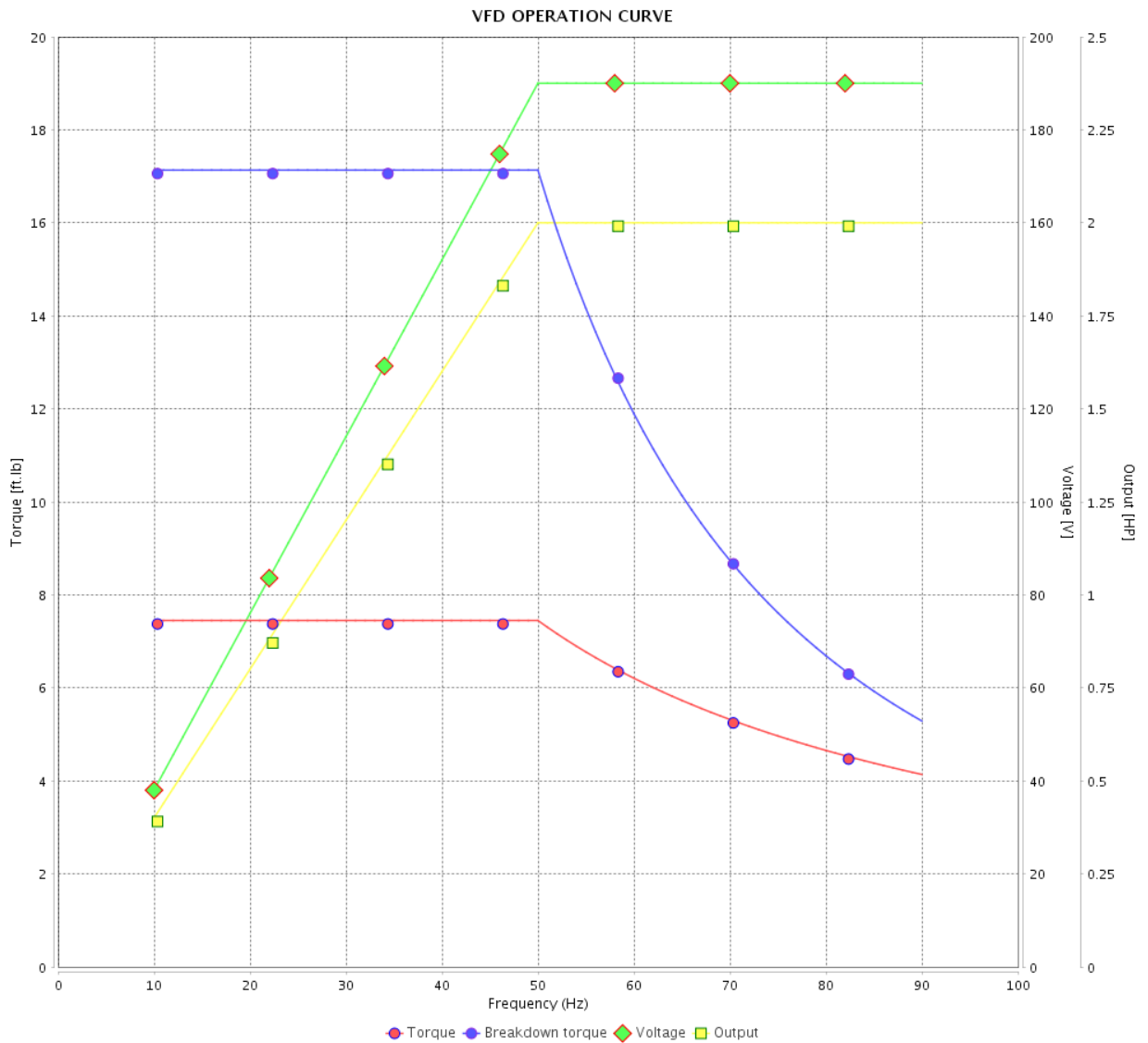


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 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

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Three Phase Induction Motor - Squirrel Cage

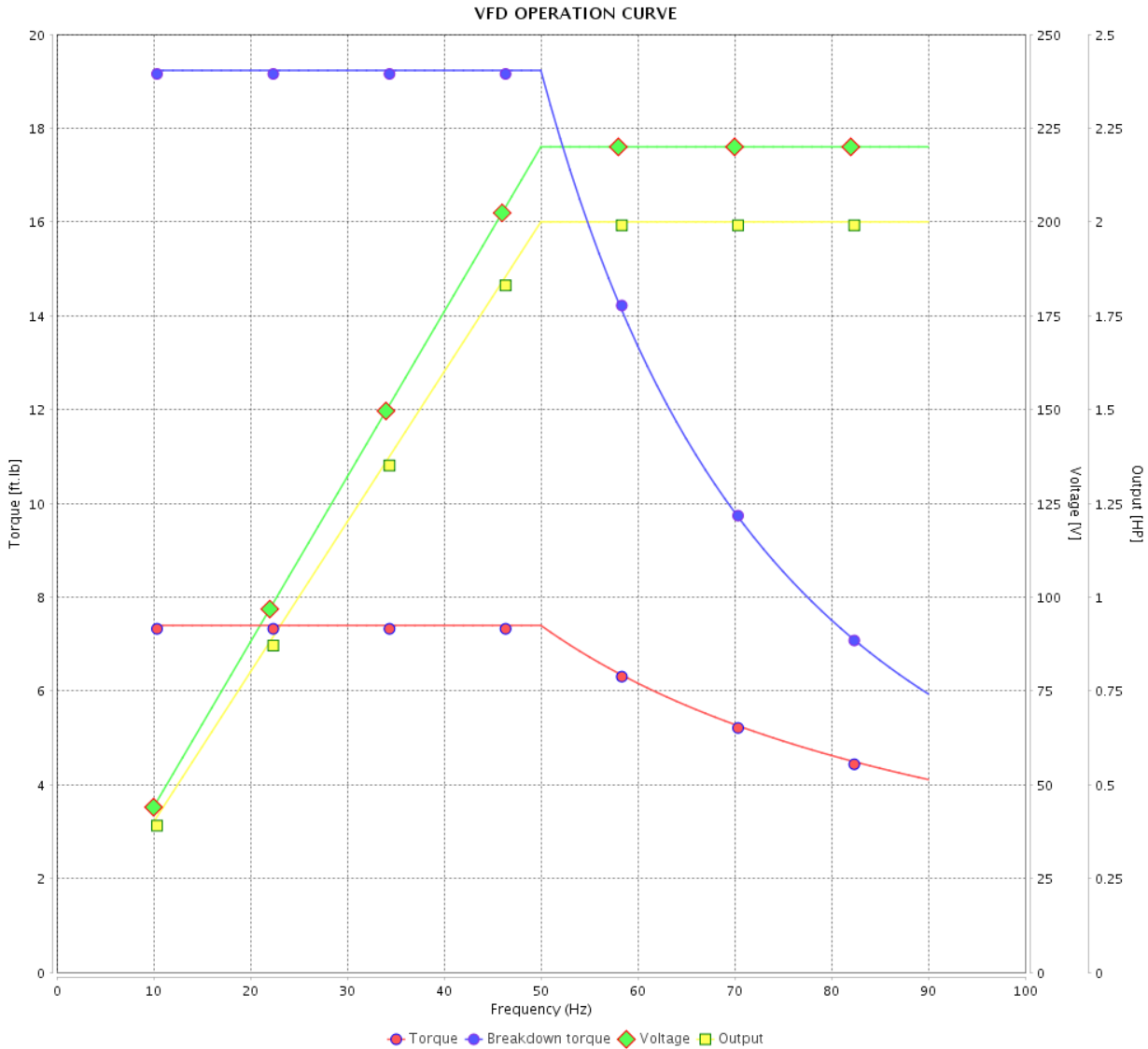


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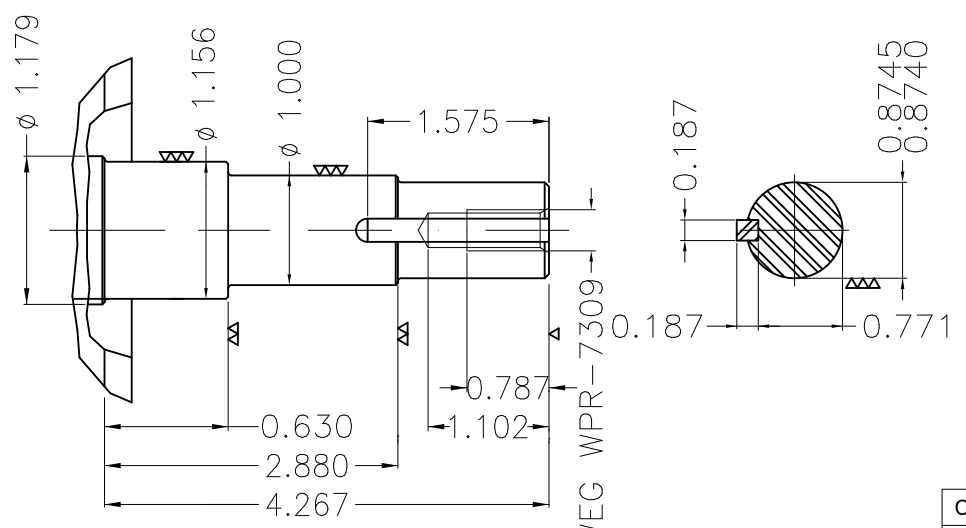
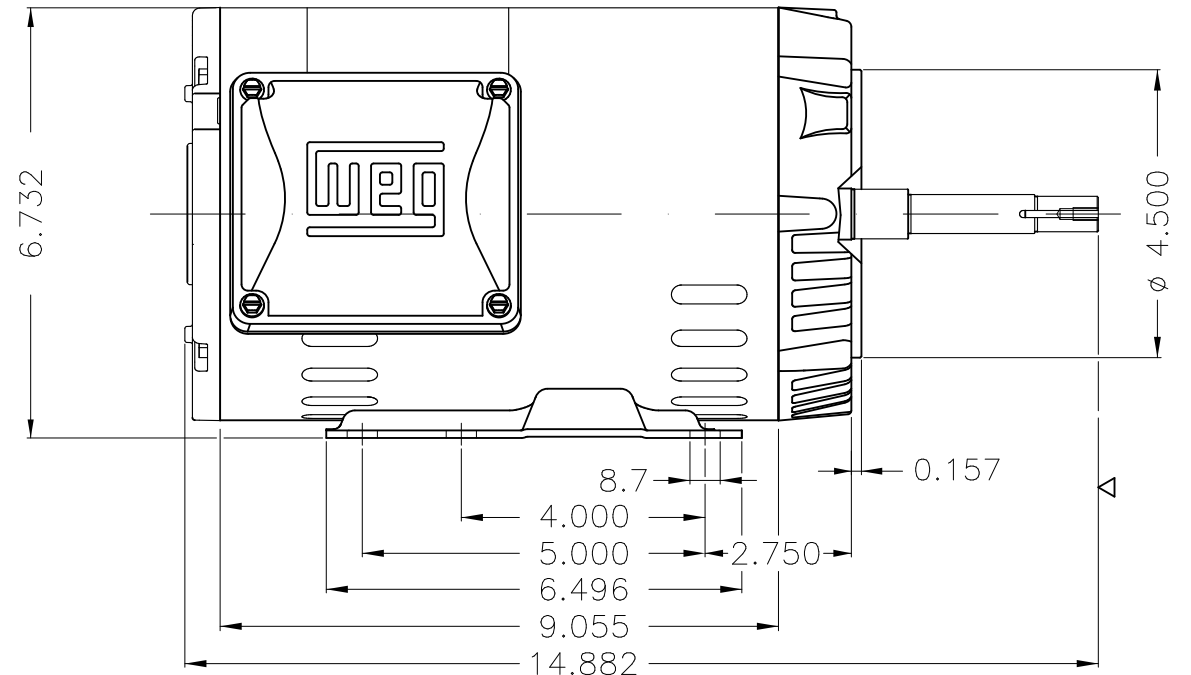
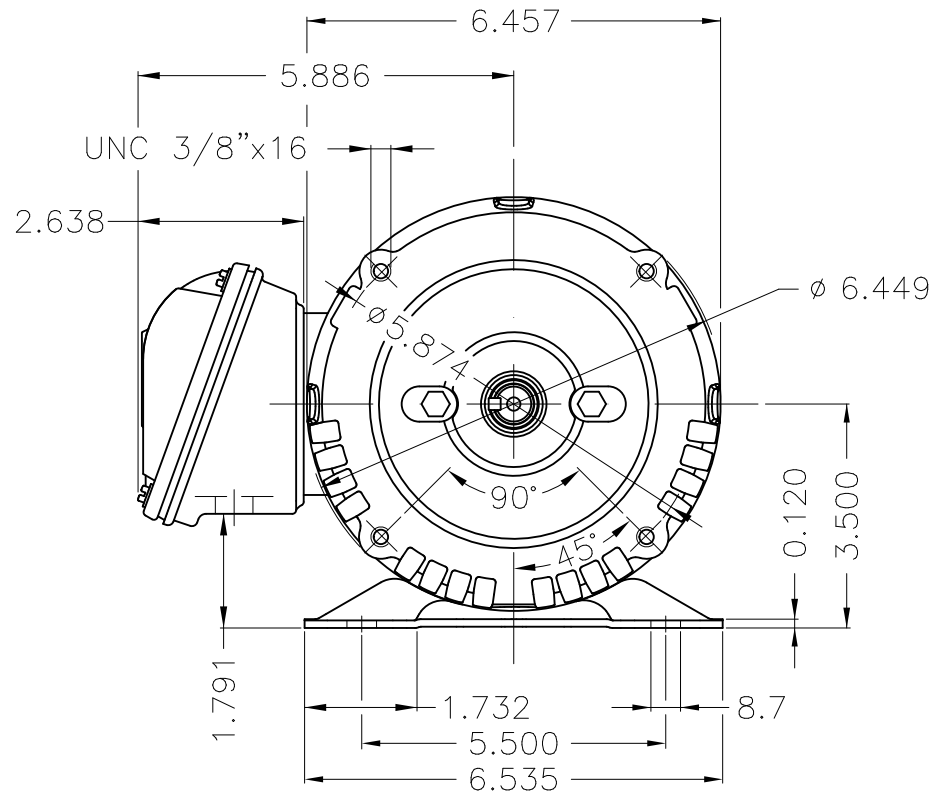
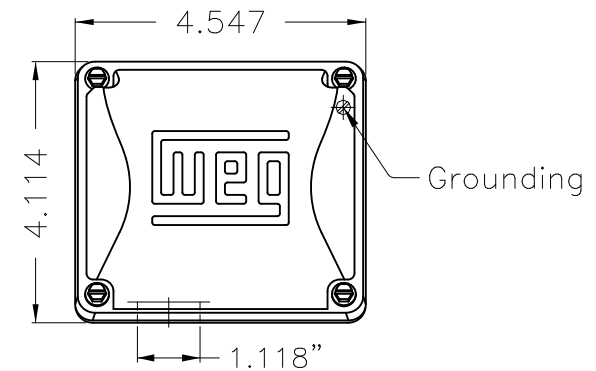
A

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	PIRWUSER	THREE PH. MOTOR ROLLED STEEL CLOSE COUPLED PUMP JN TYPE PSE 143							
CHECKED		FRAME 143/5JM IP21 ODP							
RELEASED									
REL DT.		WMO	Jaragua do Sul	Product Engineering					

2 HP 04 Poles 60 Hz

PREVIEW  
WDD  
SHEET 1 / 1



**NEMA  
Premium**

MADE IN MEXICO

**MAT: 12676963 CC029A****W01.T00IC0X0N****MODEL 002180T3E145JM-S****24MAR2022 B/N:**

<b>PH 3</b>	<b>Hz 60</b>	<b>HP 2.0</b>
<b>FR 143/5JM</b>		<b>KW 1.5</b>
<b>DUTY CONT.</b>		<b>V 230/460</b>
<b>ALT 1000 m.a.s.l.</b>		<b>A 5.38/2.69</b>
<b>INS CL F AT 80K</b>		<b>SFA 6.19/3.09</b>
<b>AMB 40°C</b>	<b>DES B</b>	<b>SF 1.15</b>
<b>ENCL ODP</b>	<b>CODE K</b>	<b>PF 0.81</b>
<b>USABLE @ 208V 5.95A</b>		<b>RPM 1740</b>
<b>SF1.00</b>		<b>NEMA NOM. EFF 86.5%</b>

<b>ALTERNATE RATING: 2.0HP 50Hz 190-220/380-415V SF1.00</b>
<b>6.52-5.79/3.26-3.07A 1410RPM EFF 82.2% (IE1) IEC 60034-1</b>

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

<b>DE 6206-ZZ</b>	<b>ODE 6203-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.

