

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: JM Pump NEMA Premium Efficiency Three-Phase	Product code :	12687790	
		Catalog # :	00518OT3E184JM-SG	
Frame	: 182/4JM	Cooling method	: IC01 - ODP	
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>	: 89.0 lb	
Design	: B	Moment of inertia (J)	: 0.4003 sq.ft.lb	
Output [HP]	5	5	5	
Poles	4	4	4	
Frequency [Hz]	60	50	50	
Rated voltage [V]	230/460	190/380	220/415	
Rated current [A]	12.7/6.33	15.4/7.71	13.8/7.32	
L. R. Amperes [A]	91.2/45.6	89.4/44.7	89.8/47.6	
LRC [A]	7.2x(Code J)	5.8x(Code G)	6.5x(Code H)	
No load current [A]	6.29/3.15	6.19/3.10	6.38/3.38	
Rated speed [RPM]	1760	1445	1450	
Slip [%]	2.22	3.67	3.33	
Rated torque [ft.lb]	14.9	18.2	18.1	
Locked rotor torque [%]	200	140	160	
Breakdown torque [%]	310	220	250	
Service factor	1.15	1.15	1.15	
Temperature rise	80 K	80 K	80 K	
Locked rotor time	21s (cold) 12s (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%	87.5	89.3	
	50%	88.5	87.9	
	75%	88.5	87.6	
	100%	89.5	85.8	
Power Factor	25%	0.38	0.40	
	50%	0.63	0.67	
	75%	0.76	0.79	
	100%	0.82	0.85	
Bearing type	: <u>Drive end</u> 6207 ZZ <u>Non drive end</u> 6205 ZZ	Foundation loads		
Sealing	: Without Without Bearing Seal Bearing Seal	Max. traction	: 245 lb	
		Max. compression	: 334 lb	
Lubrication interval	: - -			
Lubricant amount	: - -			
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V 14.0A SF 1.00 SFA 14.0A				
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



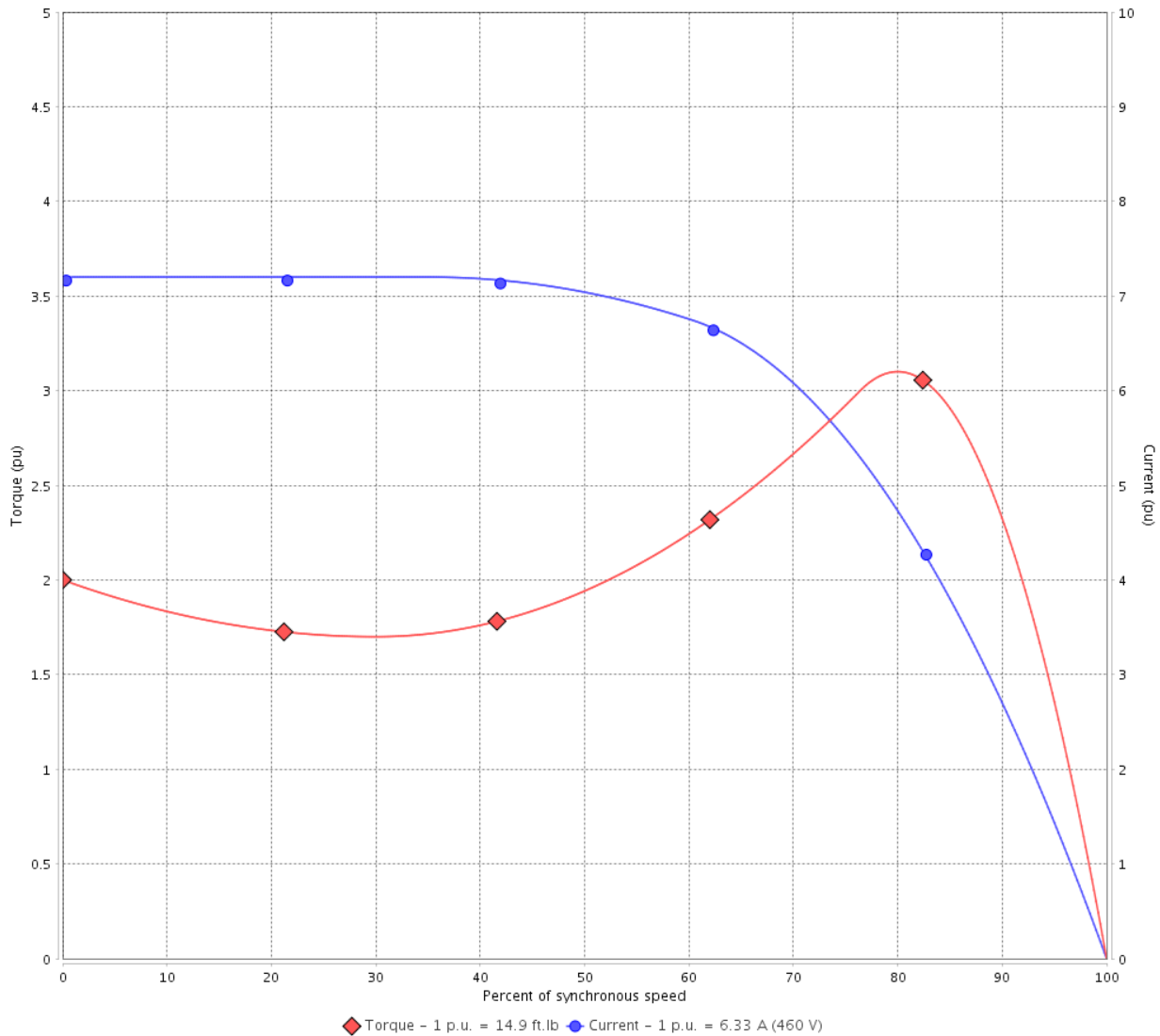
Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 12687790

Catalog # : 00518OT3E184JM-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 12.7/6.33 A  
LRC : 7.2  
Rated torque : 14.9 ft.lb  
Locked rotor torque : 200 %  
Breakdown torque : 310 %  
Rated speed : 1760 rpm

Moment of inertia (J) : 0.4003 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

Locked rotor time : 21s (cold) 12s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



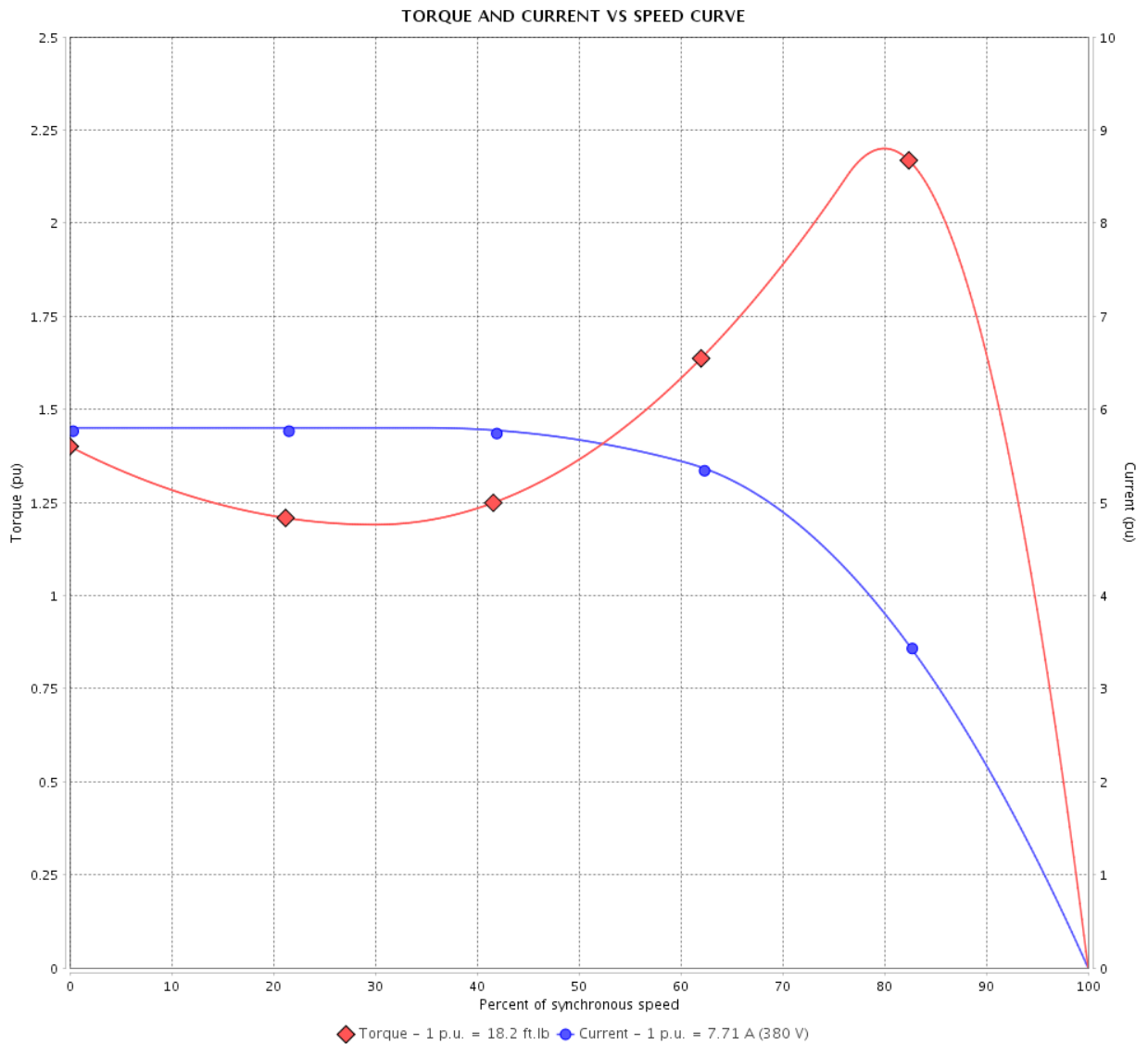
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 12687790

Catalog # : 00518OT3E184JM-SG



Performance : 190/380 V 50 Hz 4P

Rated current : 15.4/7.71 A  
 LRC : 5.8  
 Rated torque : 18.2 ft.lb  
 Locked rotor torque : 140 %  
 Breakdown torque : 220 %  
 Rated speed : 1445 rpm

Moment of inertia (J) : 0.4003 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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

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# TORQUE AND CURRENT VS SPEED CURVE

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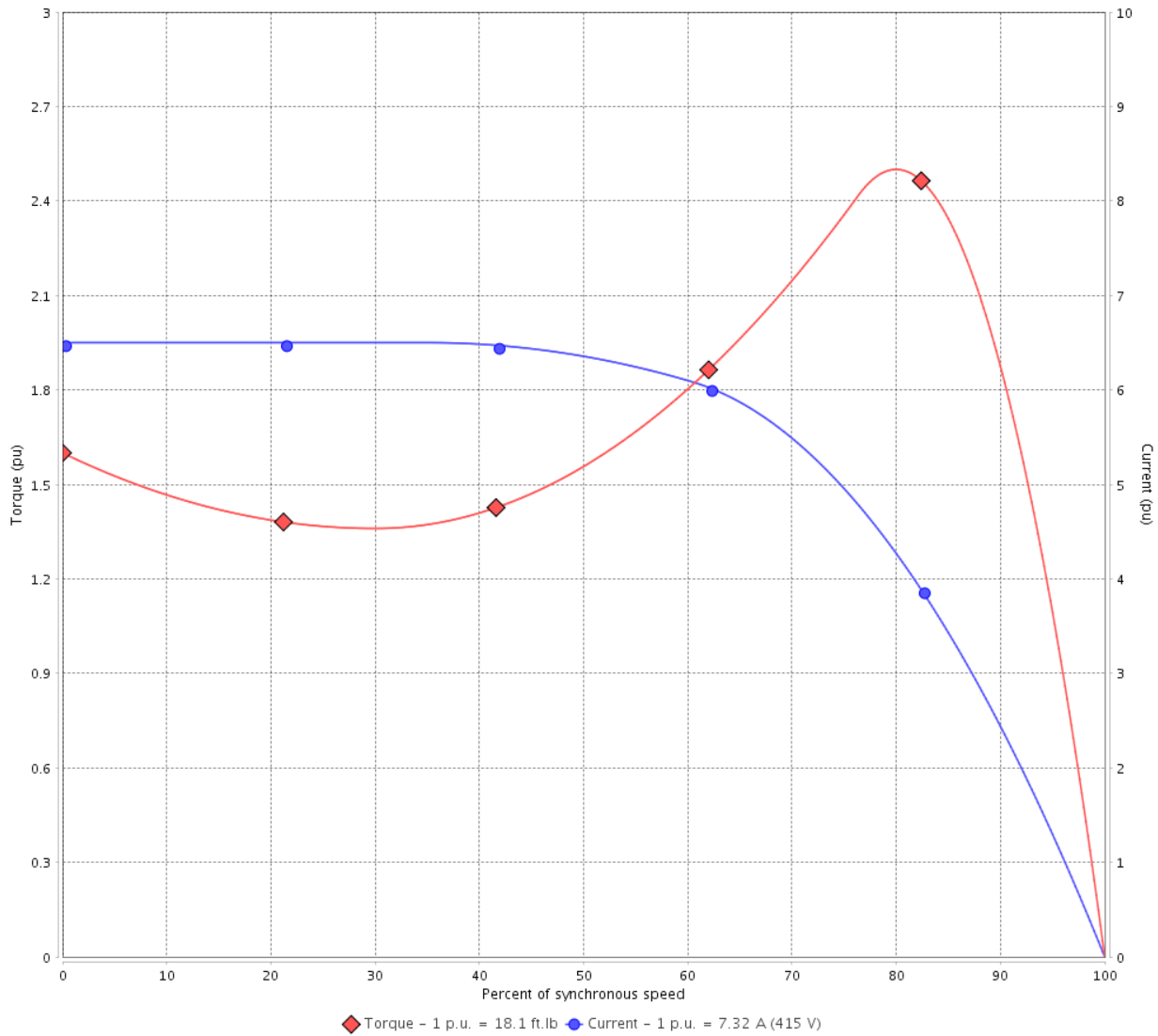
Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 12687790

Catalog # : 00518OT3E184JM-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 4P

Rated current : 13.8/7.32 A  
LRC : 6.5  
Rated torque : 18.1 ft.lb  
Locked rotor torque : 160 %  
Breakdown torque : 250 %  
Rated speed : 1450 rpm

Moment of inertia (J) : 0.4003 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

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

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

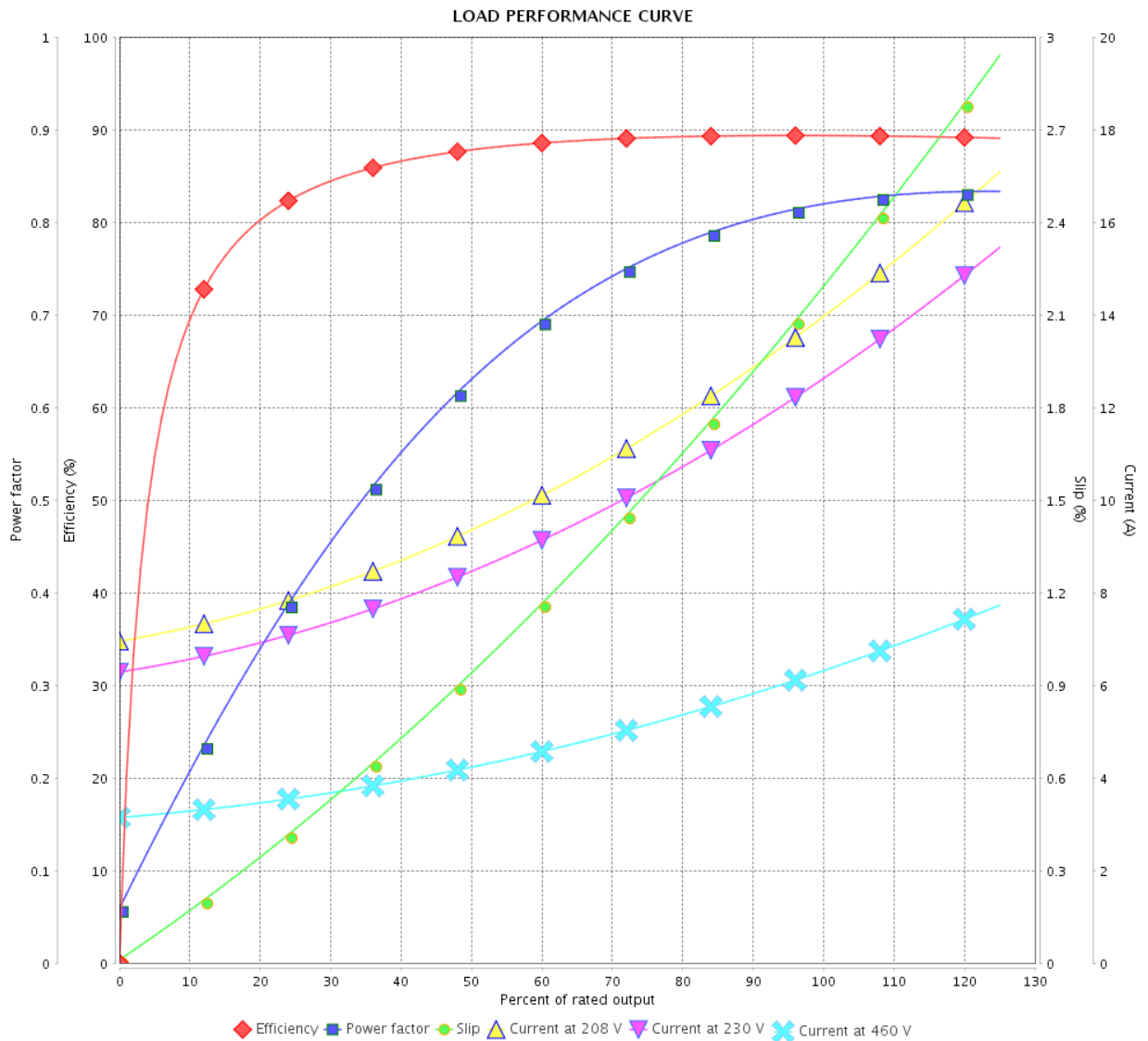


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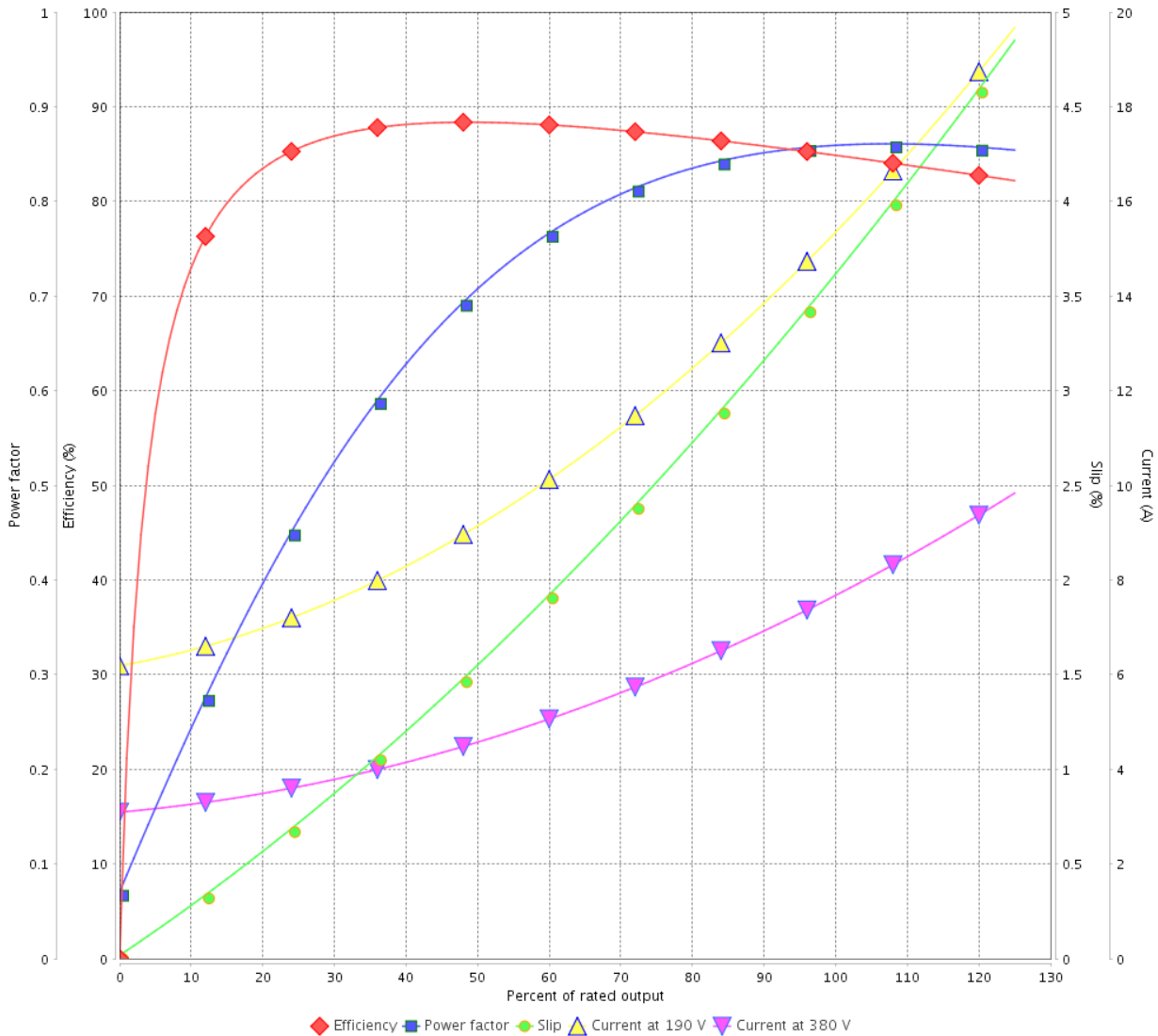
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LOAD PERFORMANCE CURVE



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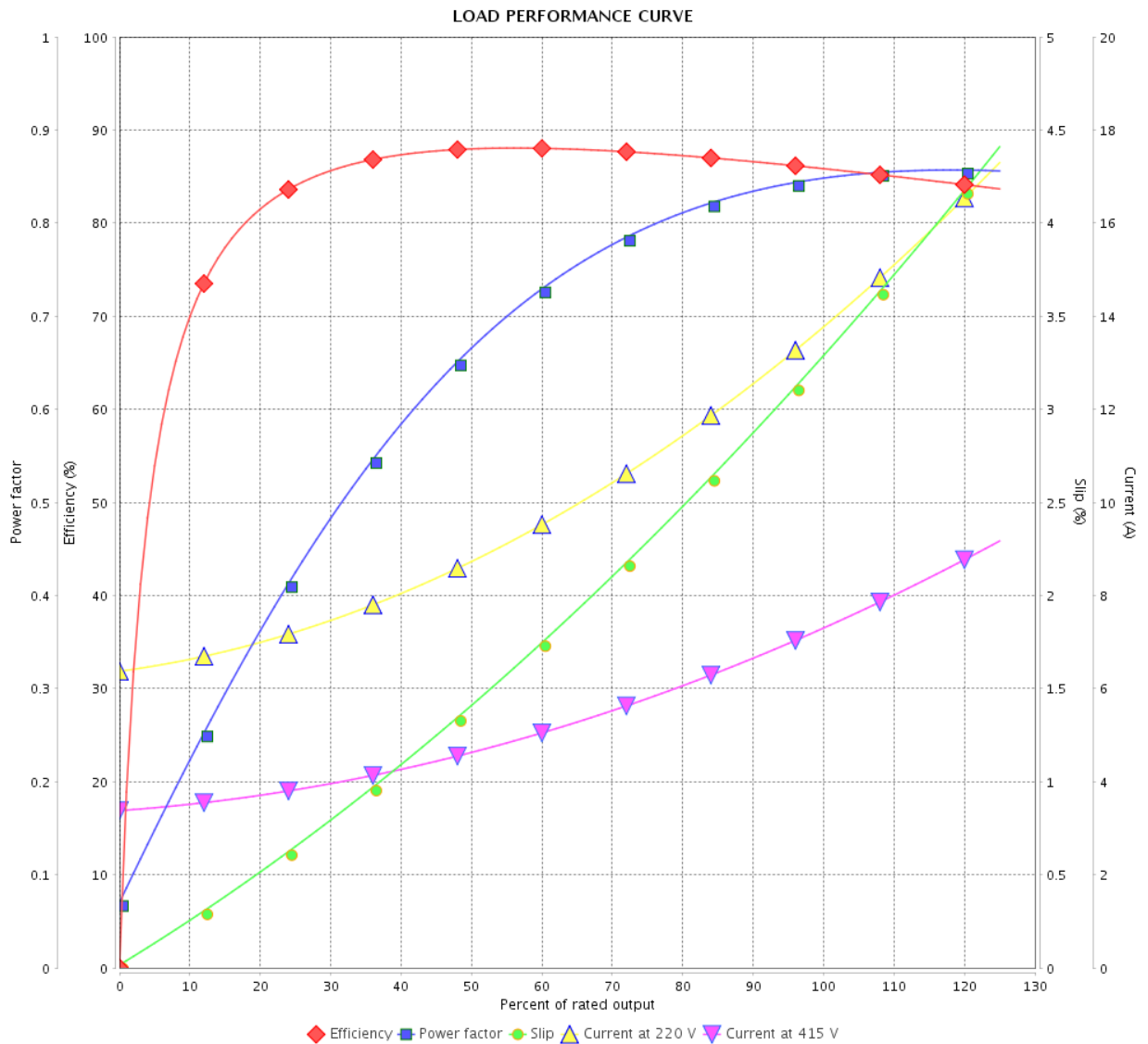


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# THERMAL LIMIT CURVE



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Design : B

Heating constant

Cooling constant

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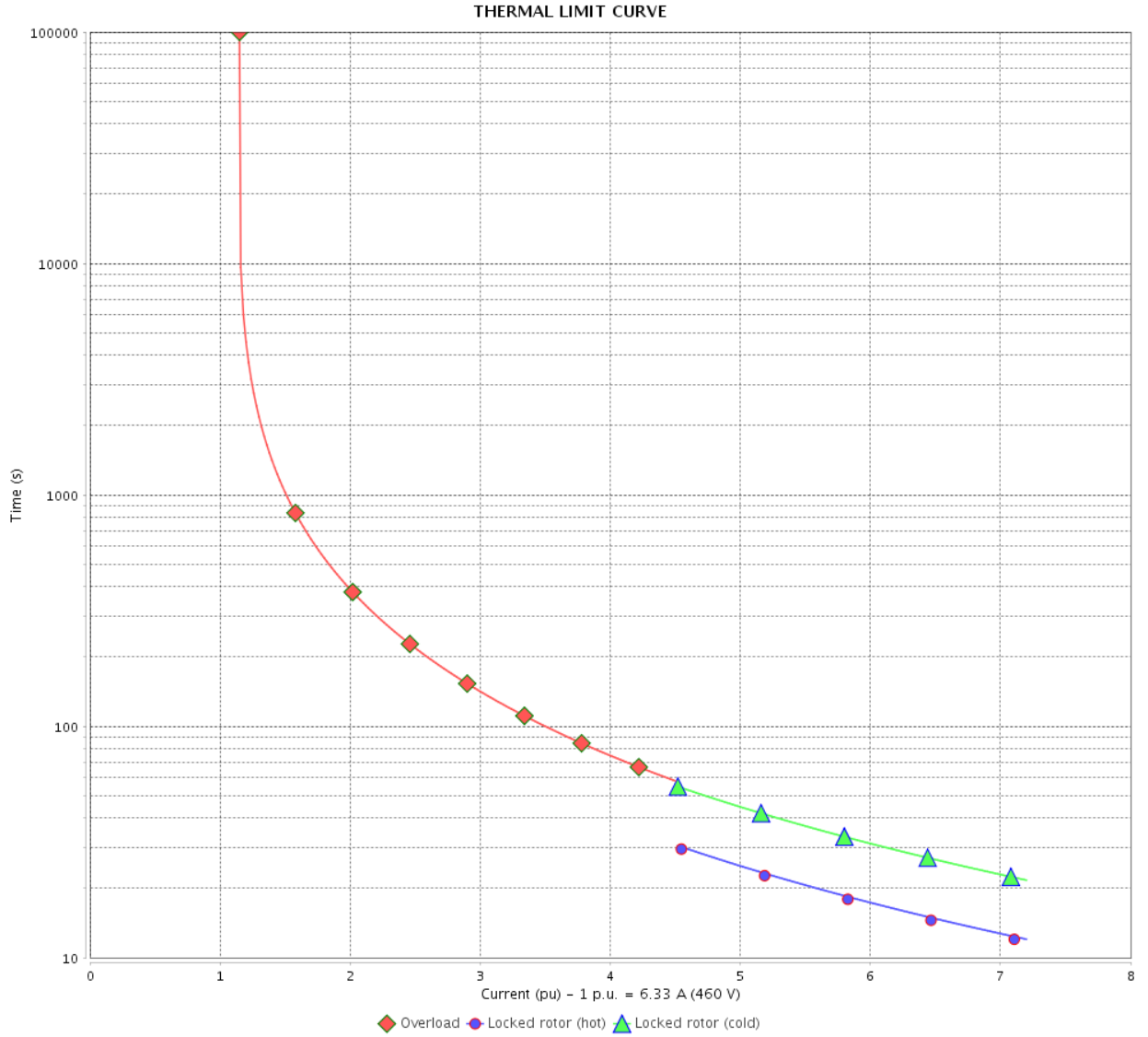


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Three Phase Induction Motor - Squirrel Cage



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



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Cooling constant

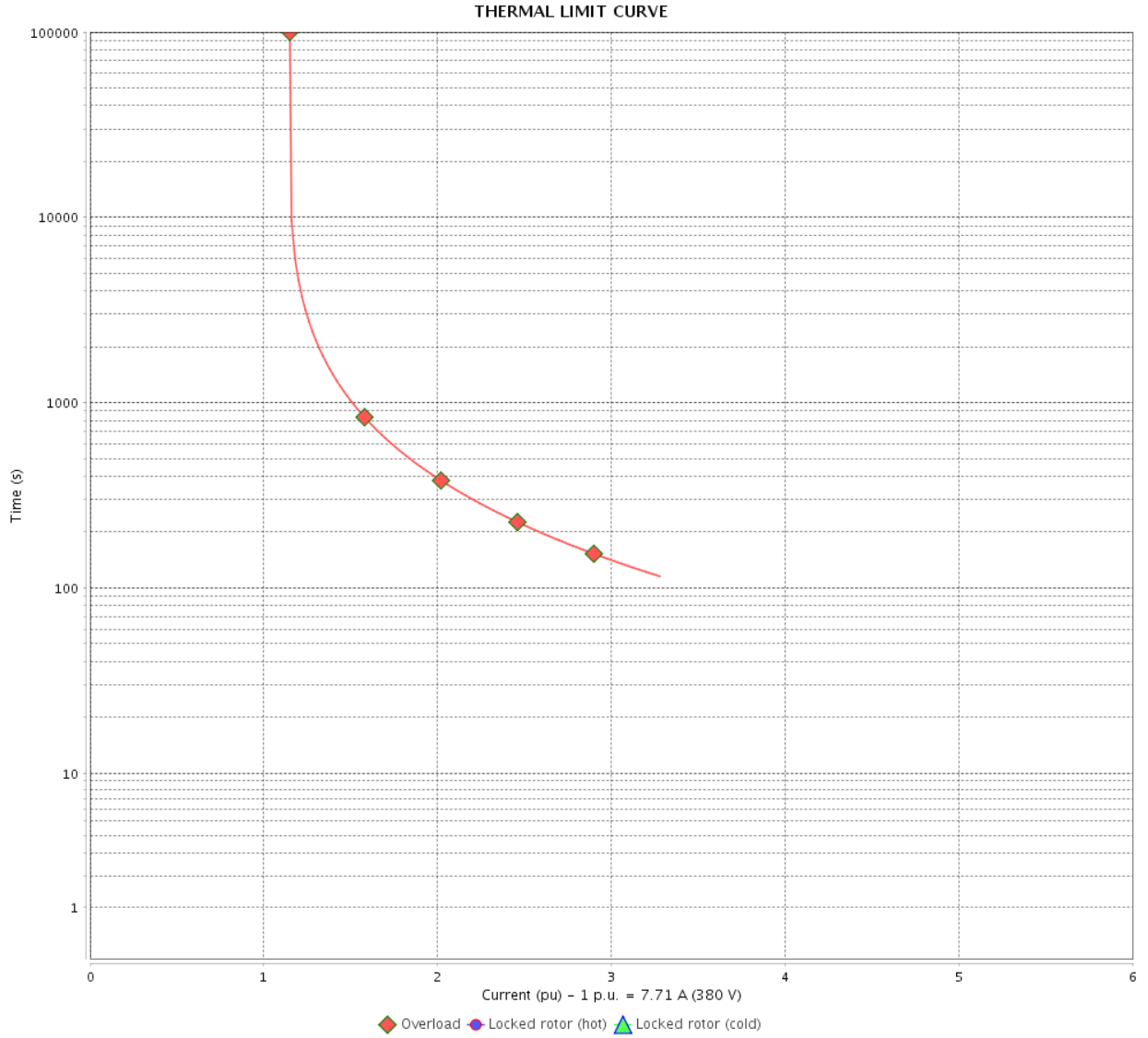
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Design : B

Heating constant

Cooling constant

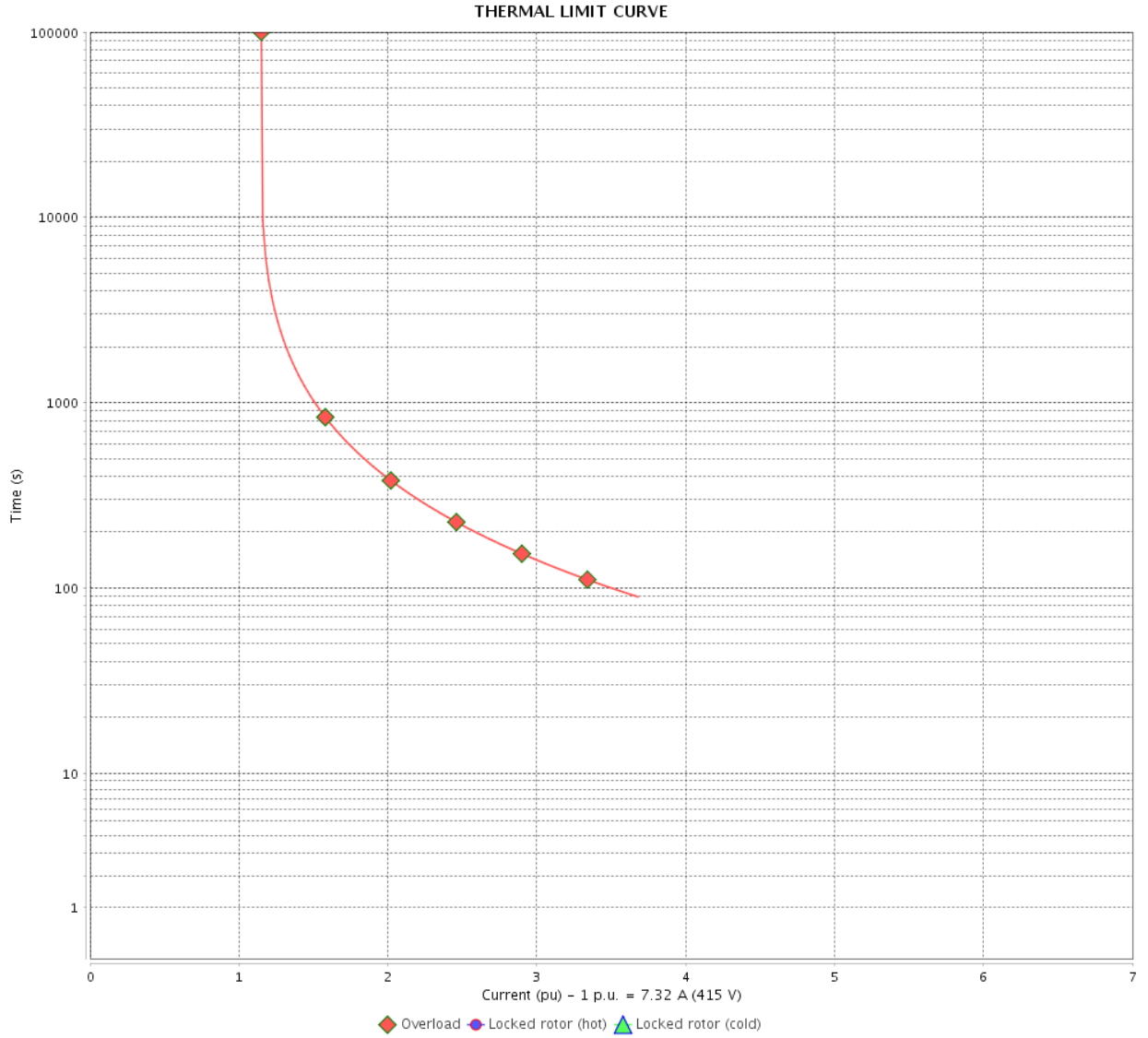
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# VFD OPERATION CURVE

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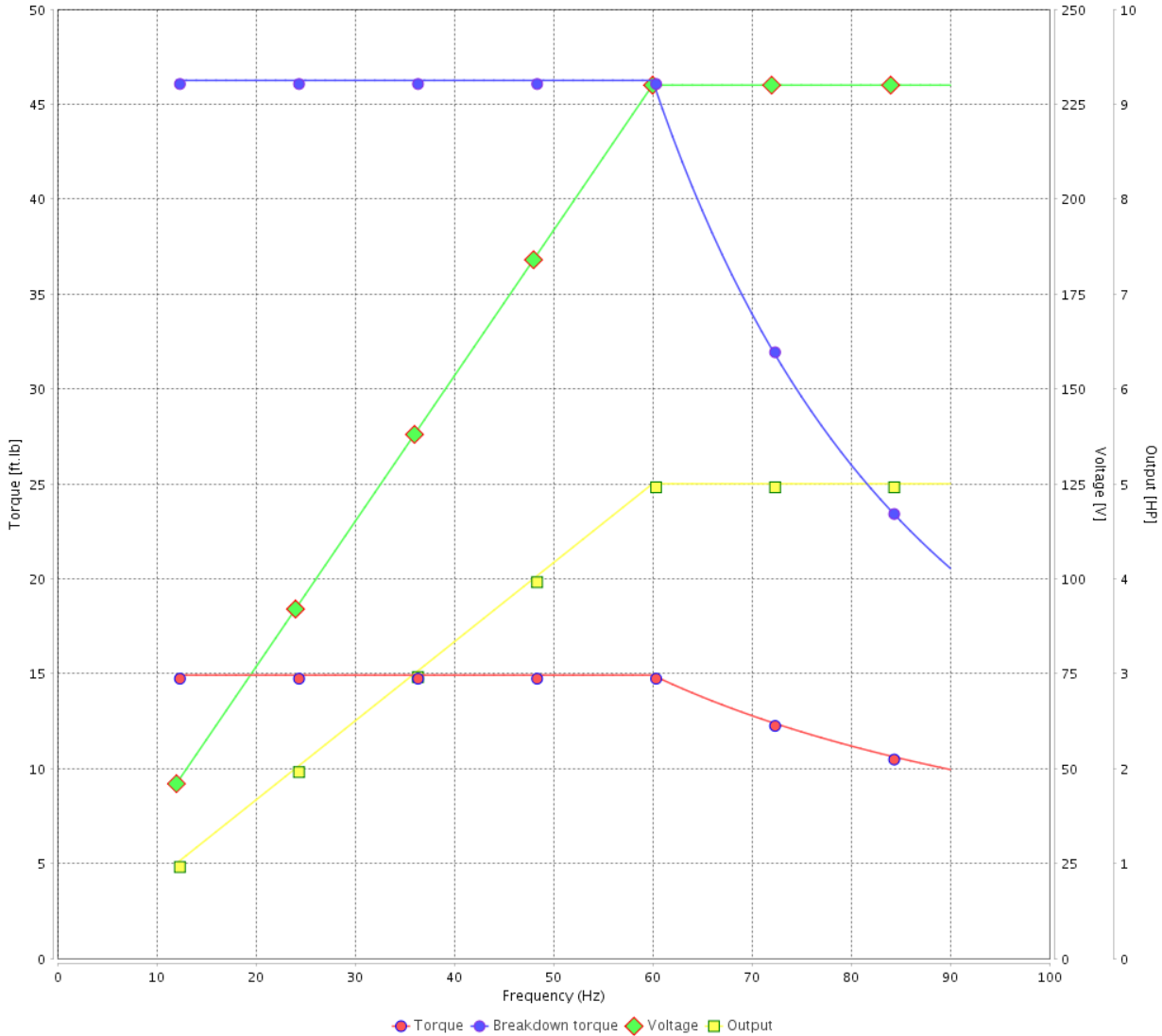
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VFD OPERATION CURVE



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 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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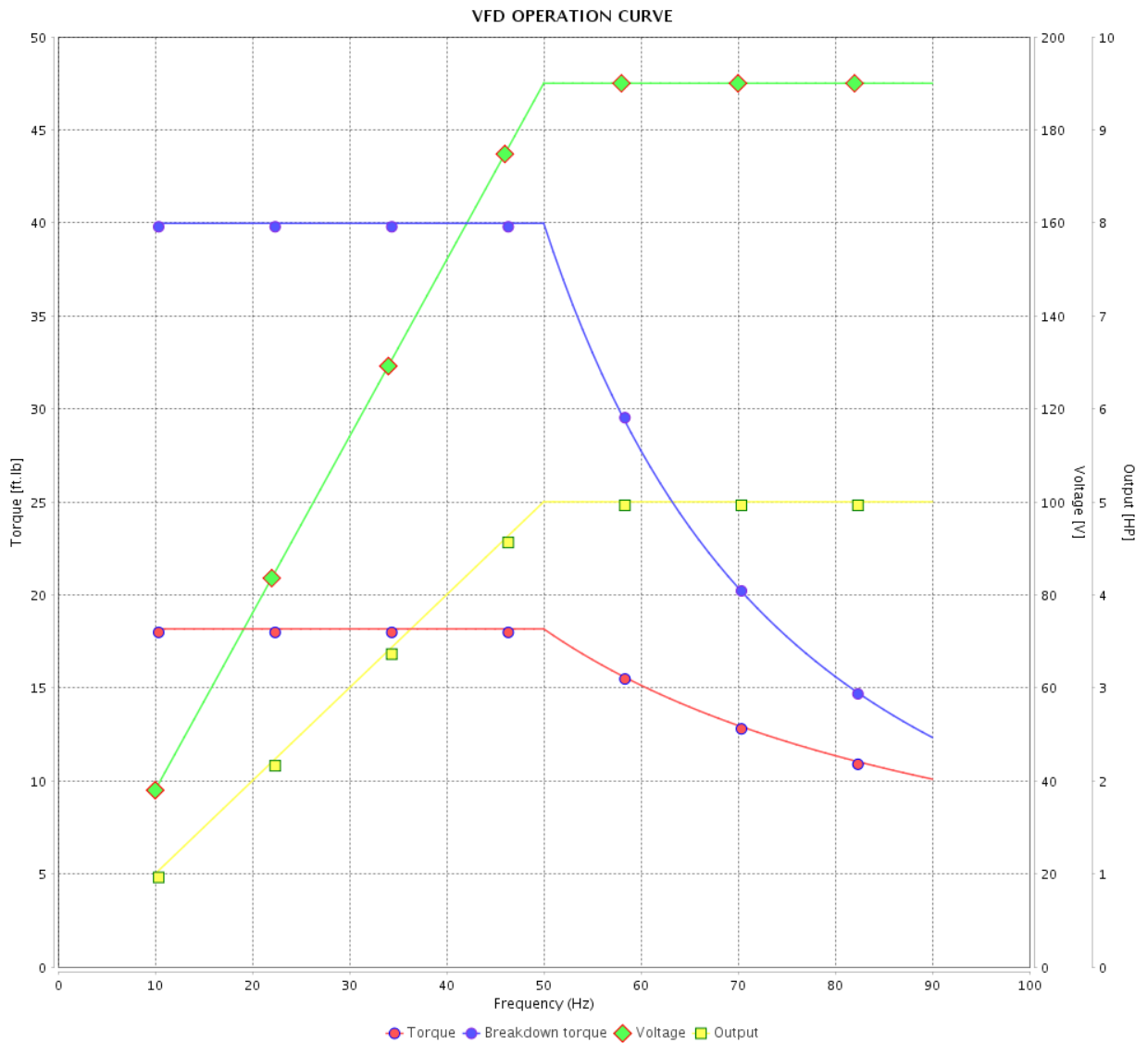


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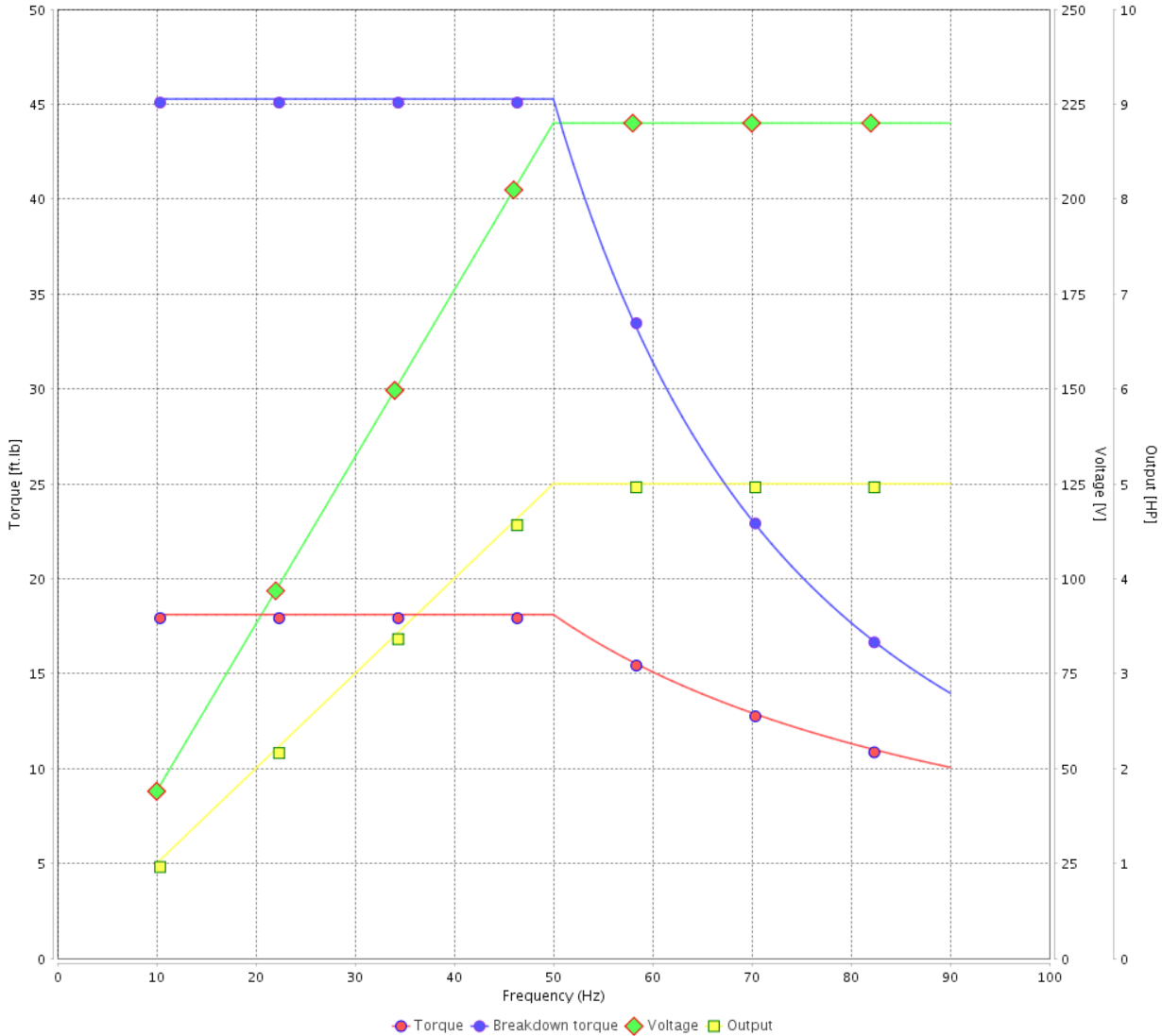
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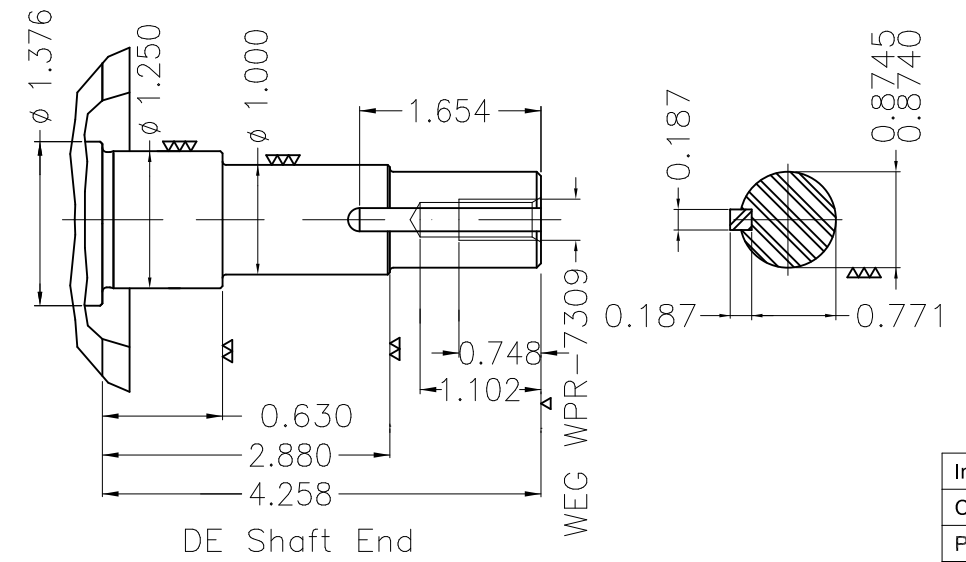
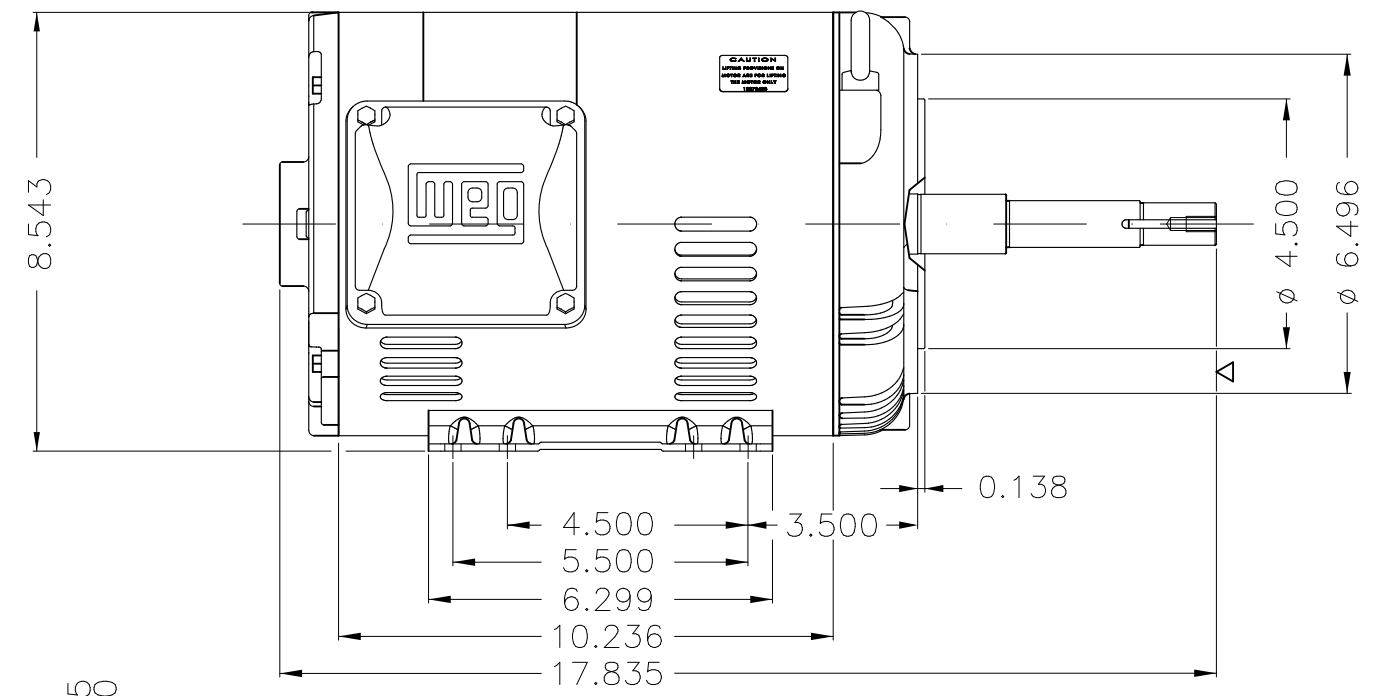
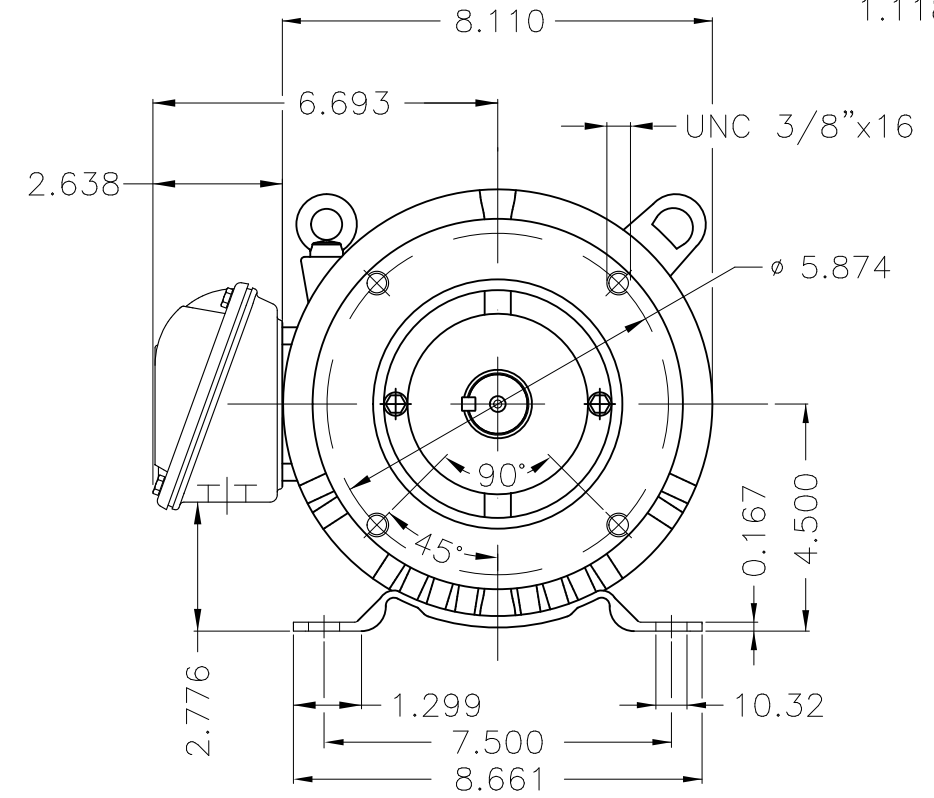
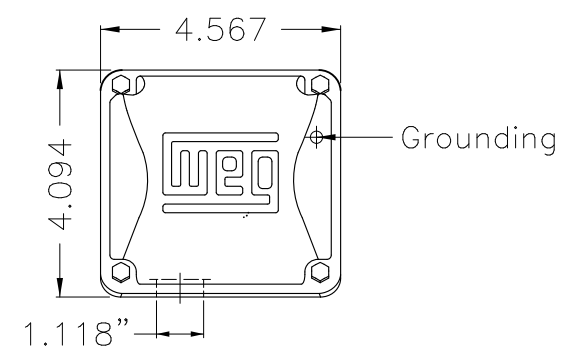
A

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	PIRWUSER	THREE PH. MOTOR ROLLED STEEL CLOSE COUPLED PUMP JN TYPE PSEF 117					
CHECKED		FRAME 182/4JM IP21 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	WDD	SHEET	1 / 1	

5 HP 04 Poles 60 Hz





**NEMA**  
**Premium**



MADE IN MEXICO

**MAT: 12687790 CC029A**

**W01.T00IC0X0N**

**MODEL 005180T3E184JM-SG**

**22APR2022 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 12.7/6.33</b>
<b>INS CL F AT 80K</b>		<b>SFA 14.6/7.28</b>
<b>AMB 40°C</b>	<b>DES B</b>	<b>SF 1.15</b>
<b>ENCL ODP</b>	<b>CODE J</b>	<b>PF 0.82</b>
<b>USABLE @ 208V 14.0A</b>		<b>RPM 1760</b>
<b>SF1.00</b>		<b>NEMA NOM. EFF 89.5%</b>

**ALTERNATE RATING: 5.0HP 50Hz 190-220/380-415V SF1.15**  
**15.4-13.57.71-7.18A 1445RPM EFF 84.8% (IE1) IEC 60034-1**

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

