

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: JM Pump NEMA Premium Efficiency Three-Phase	Product code :	12840736	
		Catalog # :	007120T3E254JM-S	
Frame	: 254/6JM	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>	: 202 lb	
Design	: B	Moment of inertia (J)	: 2.00 sq.ft.lb	
Output [HP]	7.5	7.5	7.5	
Poles	6	6	6	
Frequency [Hz]	60	50	50	
Rated voltage [V]	230/460	190/380	220/415	
Rated current [A]	20.4/10.2	24.4/12.2	22.1/11.7	
L. R. Amperes [A]	104/52.0	97.6/48.8	99.3/52.6	
LRC [A]	5.1x(Code F)	4.0x(Code D)	4.5x(Code E)	
No load current [A]	10.7/5.37	10.6/5.30	10.8/5.72	
Rated speed [RPM]	1175	970	970	
Slip [%]	2.08	3.00	3.00	
Rated torque [ft.lb]	33.5	40.6	40.6	
Locked rotor torque [%]	200	140	160	
Breakdown torque [%]	229	180	200	
Service factor	1.15	1.15	1.15	
Temperature rise	80 K	80 K	80 K	
Locked rotor time	66s (cold) 37s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)	
Noise level <sup>2</sup>	59.0 dB(A)	57.0 dB(A)	57.0 dB(A)	
Efficiency (%)	25%	88.2	89.8	
	50%	88.5	89.0	
	75%	90.2	89.3	
	100%	90.2	88.1	
Power Factor	25%	0.33	0.35	
	50%	0.56	0.59	
	75%	0.68	0.71	
	100%	0.75	0.77	
Bearing type	: <u>Drive end</u> 6309 Z C3 <u>Non drive end</u> 6208 Z C3	Foundation loads		
Sealing	: Without Without Bearing Seal Bearing Seal	Max. traction	: 288 lb	
		Max. compression	: 490 lb	
Lubrication interval	: 20000 h 20000 h			
Lubricant amount	: 13 g 8 g			
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V 22.6A SF 1.00 SFA 22.6A				
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



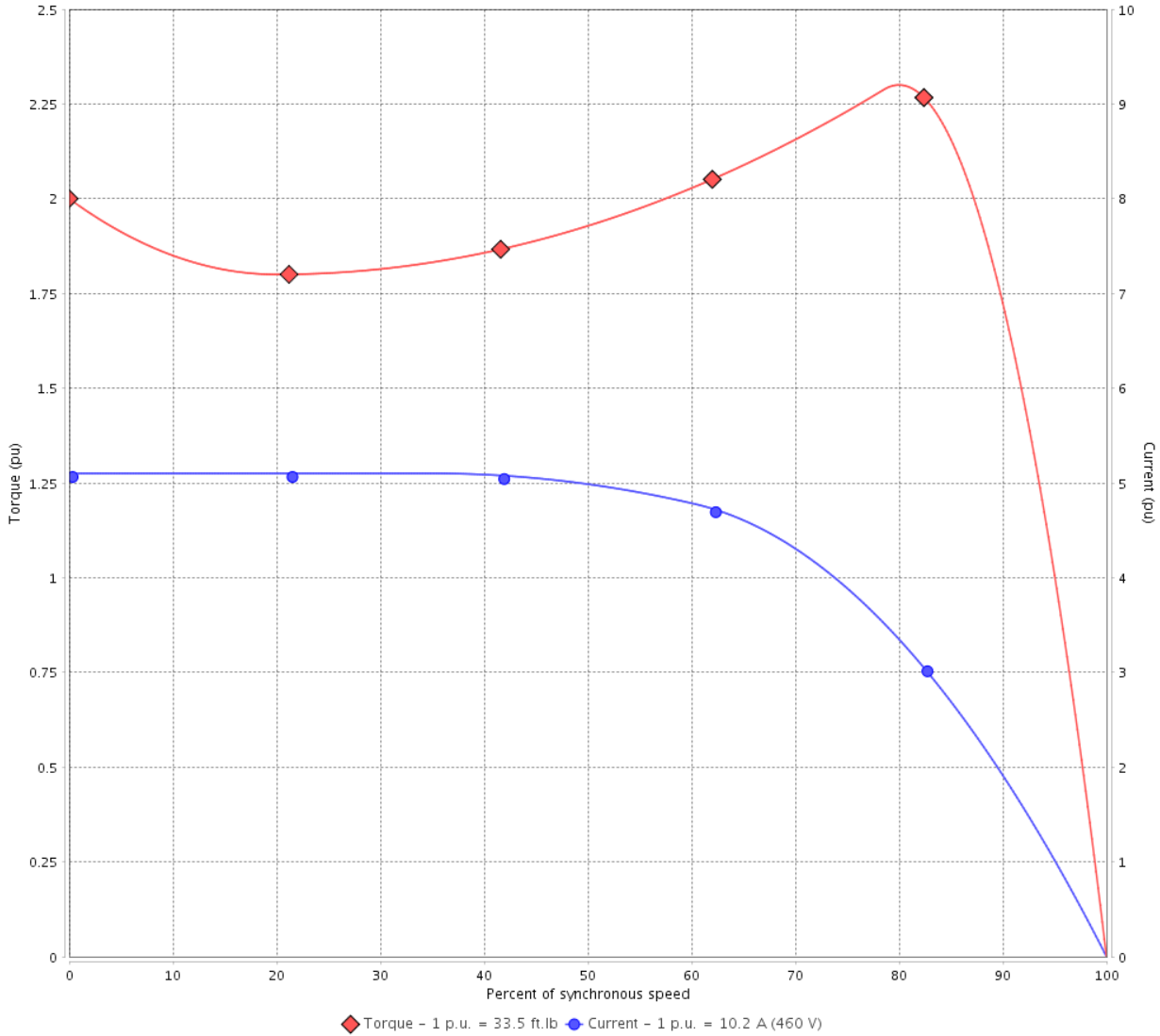
Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 12840736

Catalog # : 007120T3E254JM-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current	: 20.4/10.2 A	Moment of inertia (J)	: 2.00 sq.ft.lb
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 33.5 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1175 rpm	Design	: B

Locked rotor time : 66s (cold) 37s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



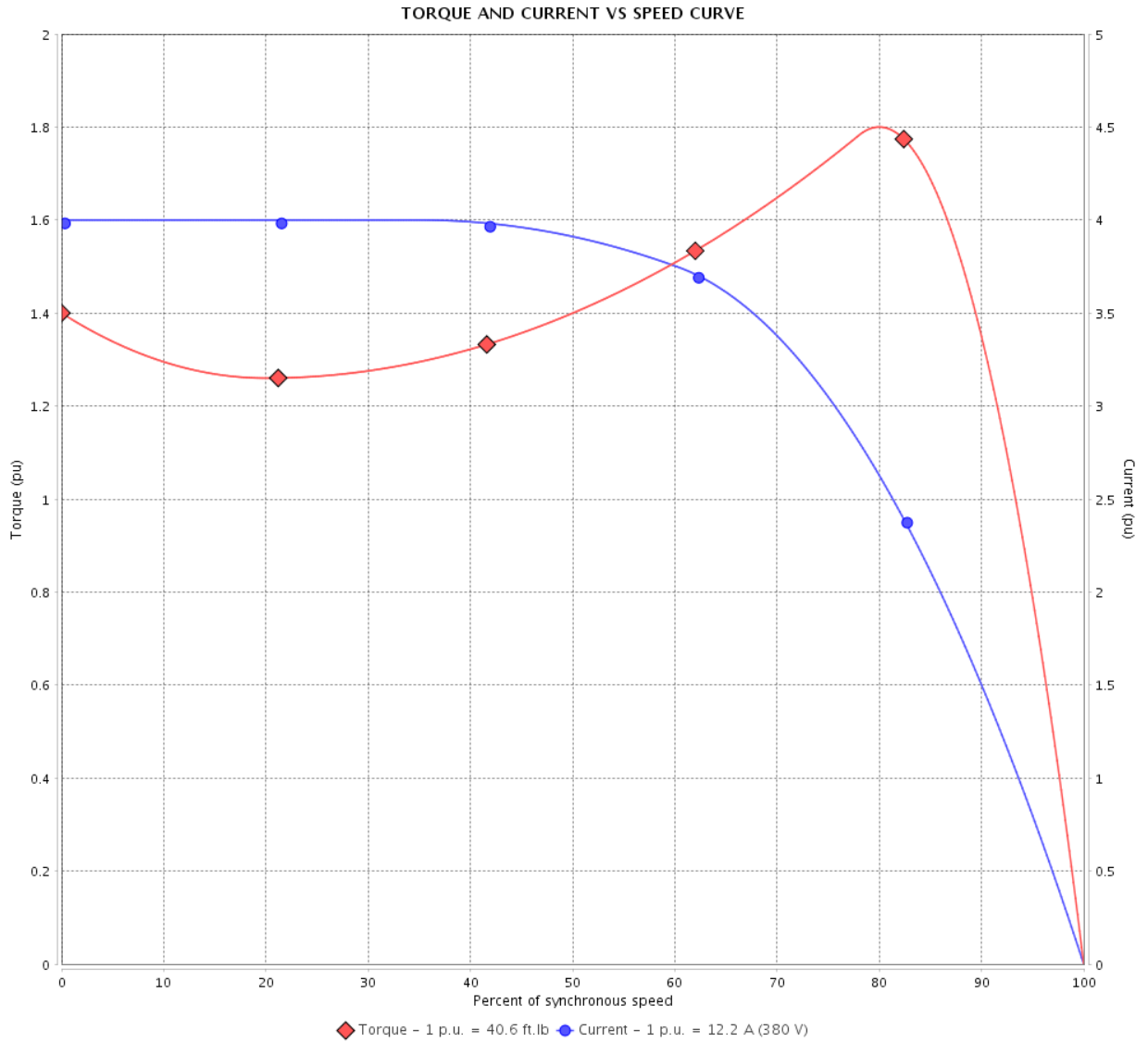
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 12840736

Catalog # : 007120T3E254JM-S



Performance : 190/380 V 50 Hz 6P

Rated current : 24.4/12.2 A  
 LRC : 4.0  
 Rated torque : 40.6 ft.lb  
 Locked rotor torque : 140 %  
 Breakdown torque : 180 %  
 Rated speed : 970 rpm

Moment of inertia (J) : 2.00 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

## Three Phase Induction Motor - Squirrel Cage



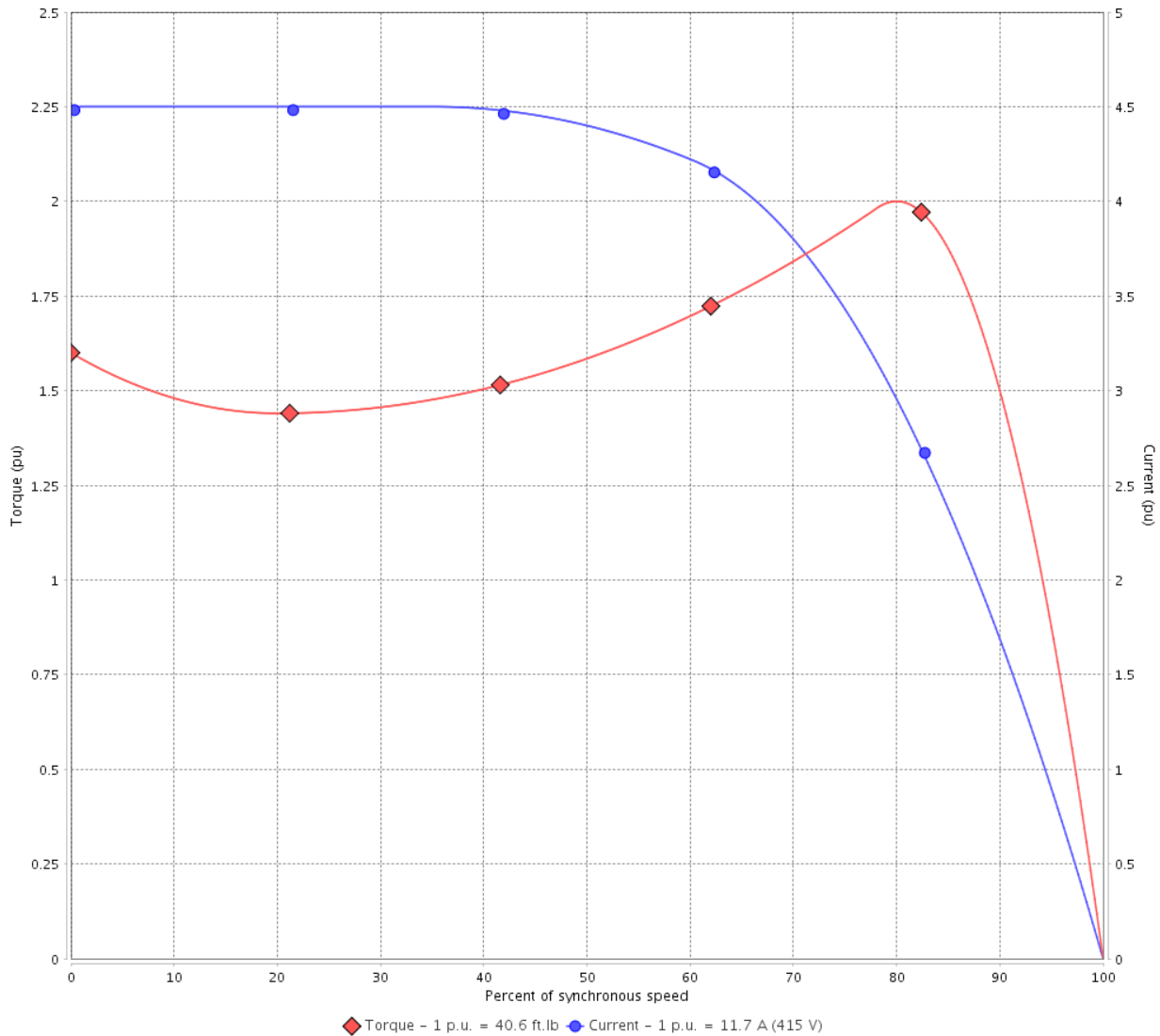
Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 12840736

Catalog # : 007120T3E254JM-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 6P

Rated current	: 22.1/11.7 A	Moment of inertia (J)	: 2.00 sq.ft.lb
LRC	: 4.5	Duty cycle	: Cont.(S1)
Rated torque	: 40.6 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.15
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

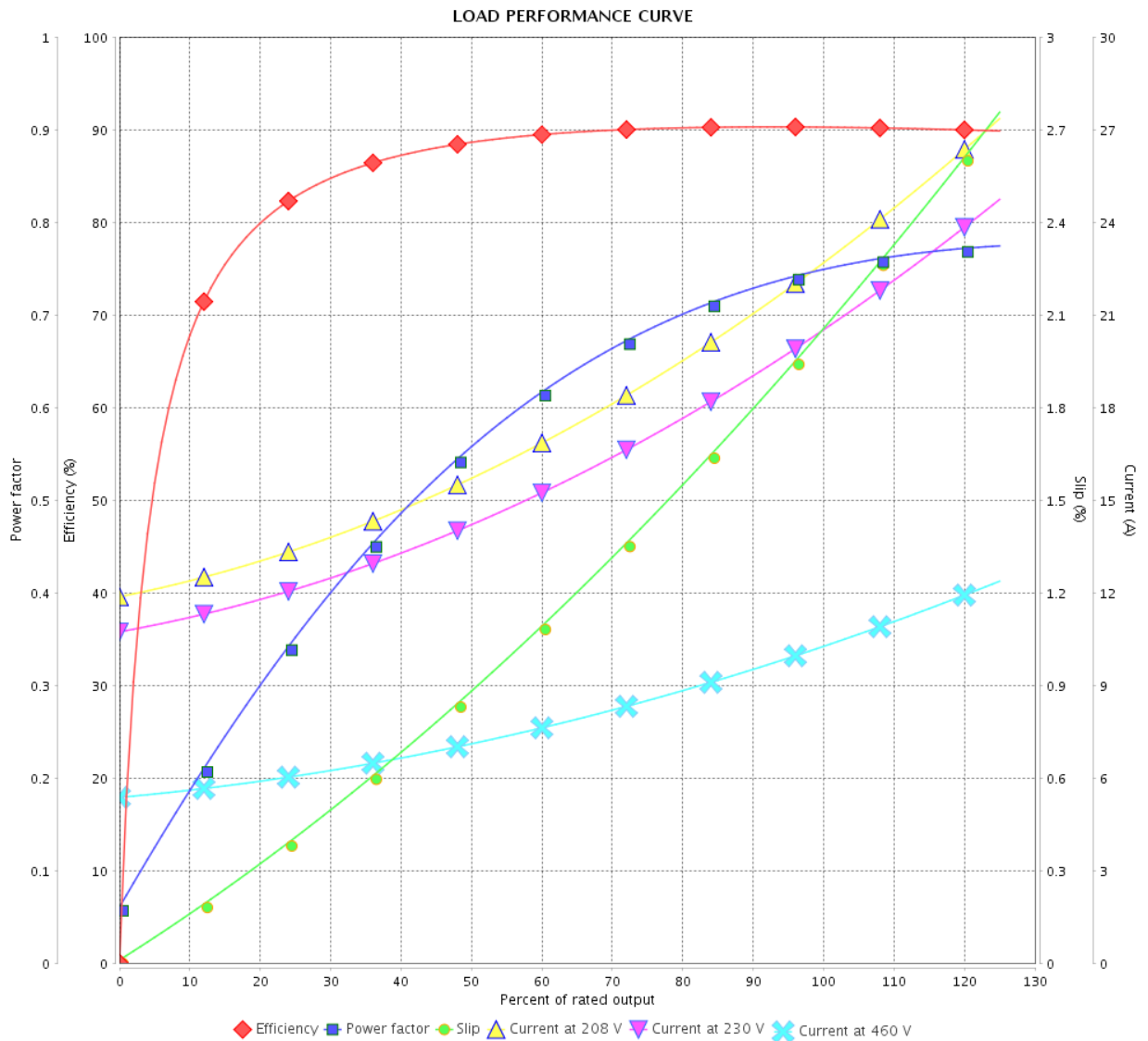


Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 12840736

Catalog # : 007120T3E254JM-S



Performance : 230/460 V 60 Hz 6P

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 Locked rotor torque : 200 %  
 Breakdown torque : 229 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 2.00 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



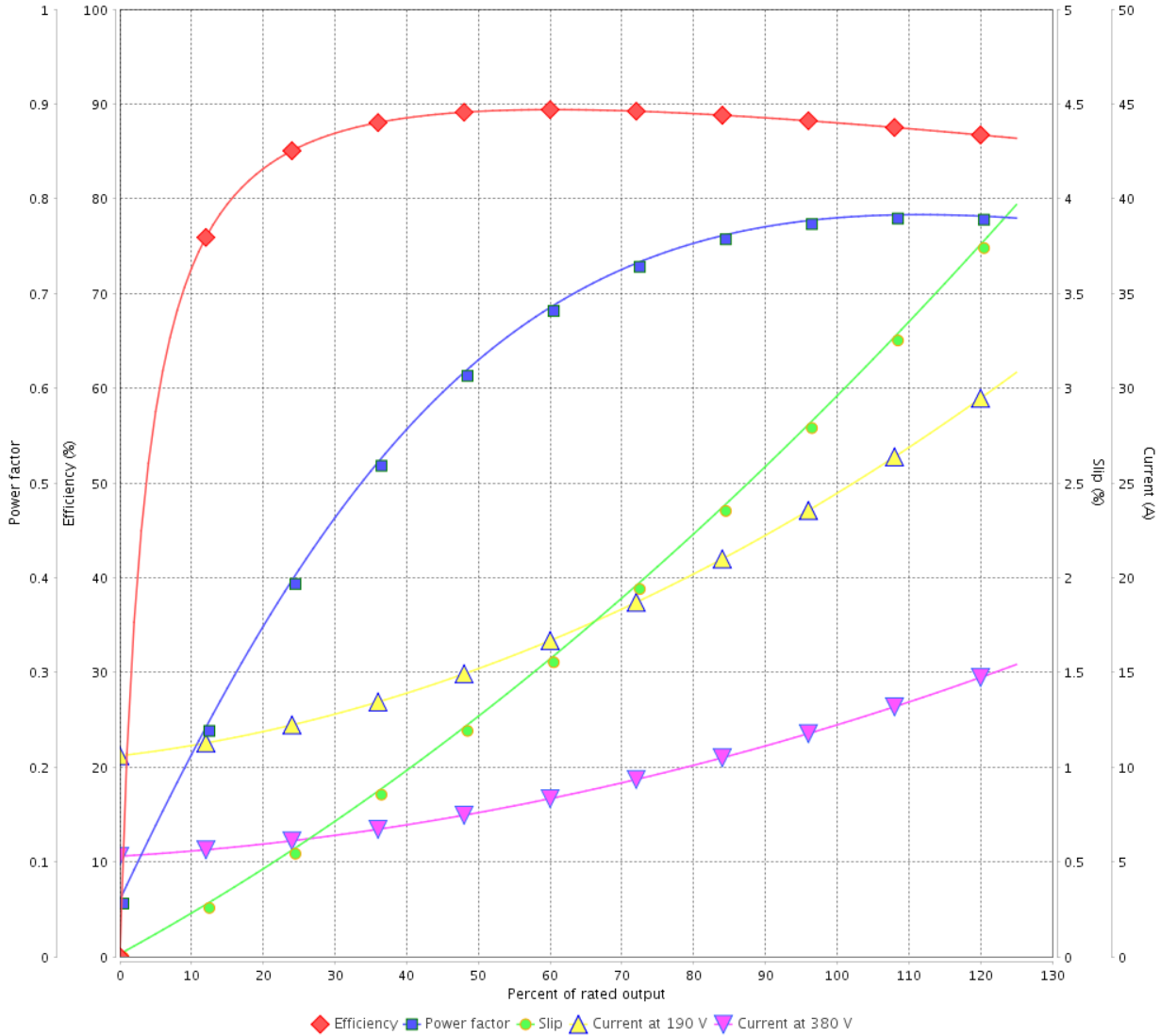
Customer :

Product line : JM Pump NEMA Premium  
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Product code : 12840736

Catalog # : 007120T3E254JM-S

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 6P

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Rated torque : 40.6 ft.lb  
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Breakdown torque : 180 %  
Rated speed : 970 rpm

Moment of inertia (J) : 2.00 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

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# LOAD PERFORMANCE CURVE

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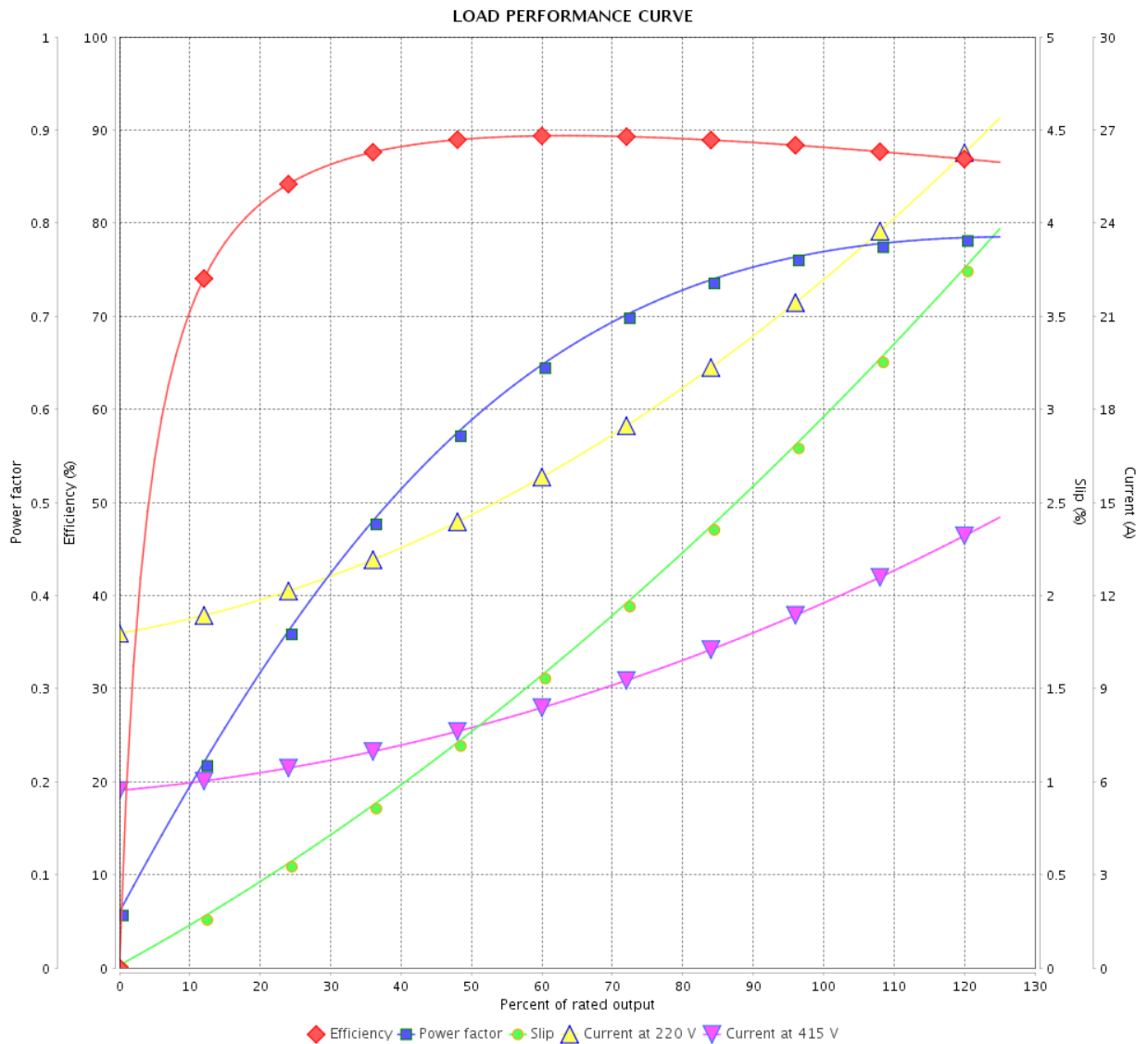


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Catalog # : 007120T3E254JM-S



Performance : 220/415 V 50 Hz 6P

Rated current : 22.1/11.7 A  
 LRC : 4.5  
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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 12840736

Catalog # : 00712OT3E254JM-S

Performance : 230/460 V 60 Hz 6P

Rated current : 20.4/10.2 A  
LRC : 5.1  
Rated torque : 33.5 ft.lb  
Locked rotor torque : 200 %  
Breakdown torque : 229 %  
Rated speed : 1175 rpm

Moment of inertia (J) : 2.00 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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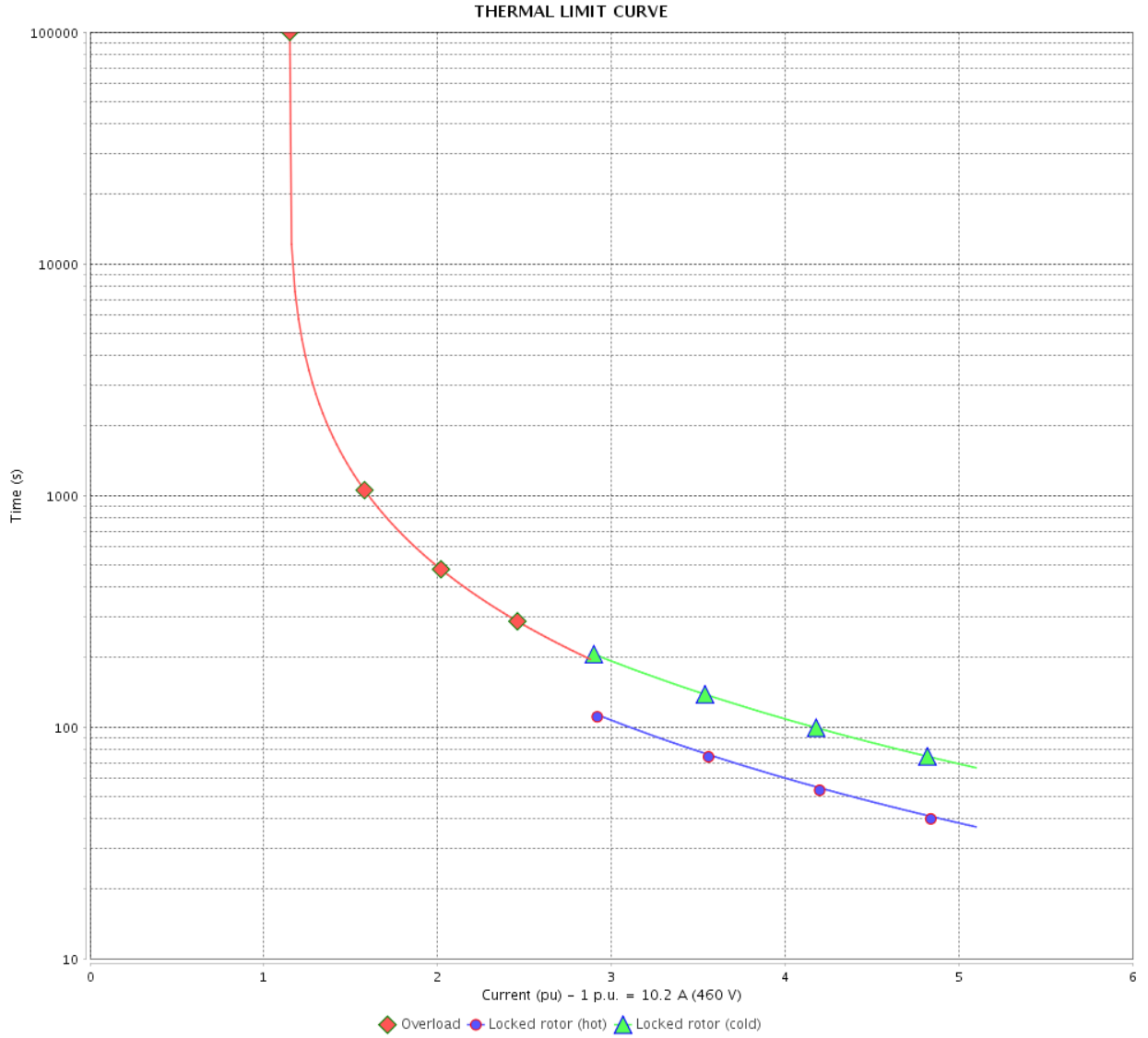


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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## Three Phase Induction Motor - Squirrel Cage

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Performance : 190/380 V 50 Hz 6P

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LRC : 4.0  
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Locked rotor torque : 140 %  
Breakdown torque : 180 %  
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Heating constant

Cooling constant

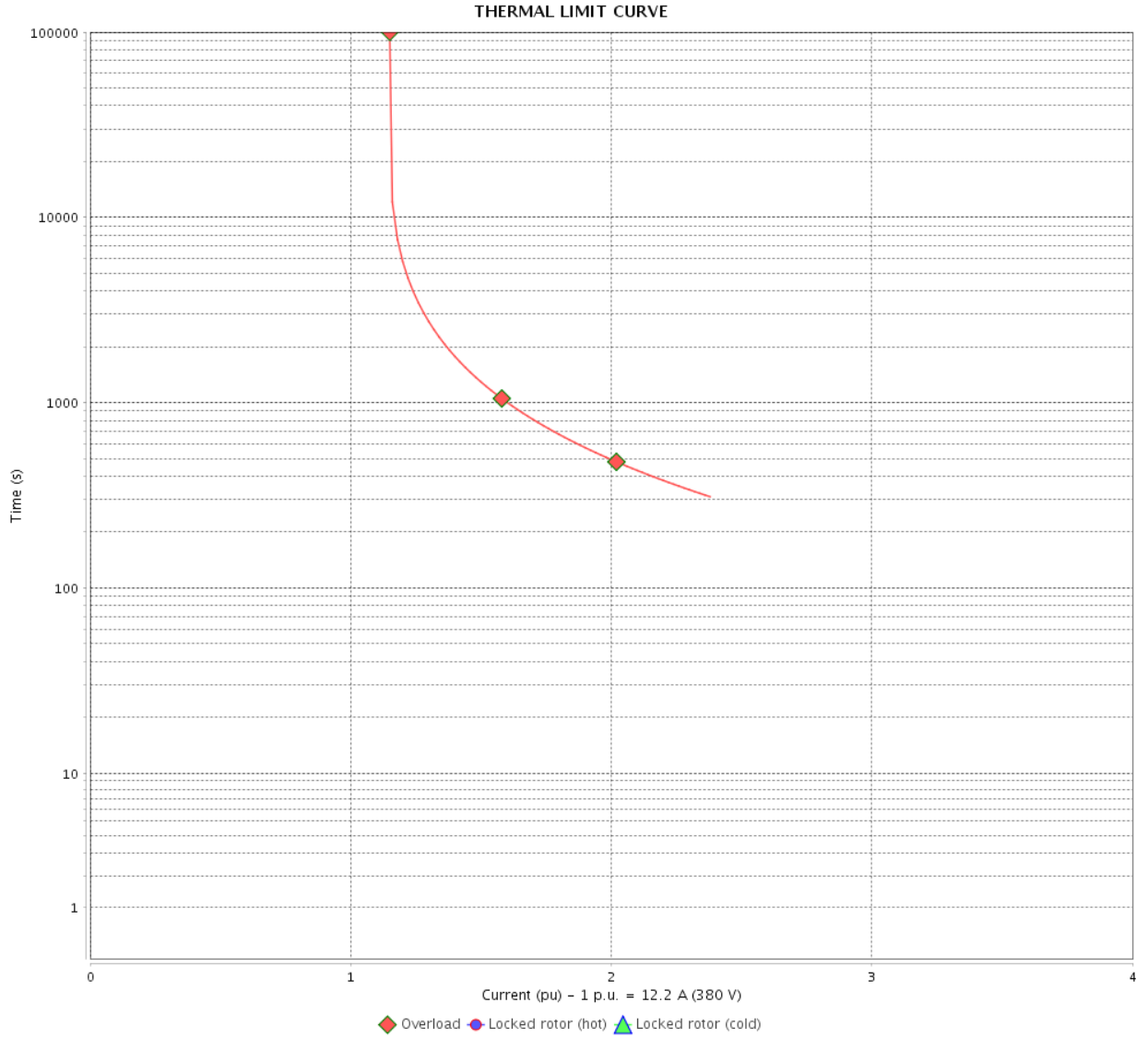
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Design : B

Heating constant

Cooling constant

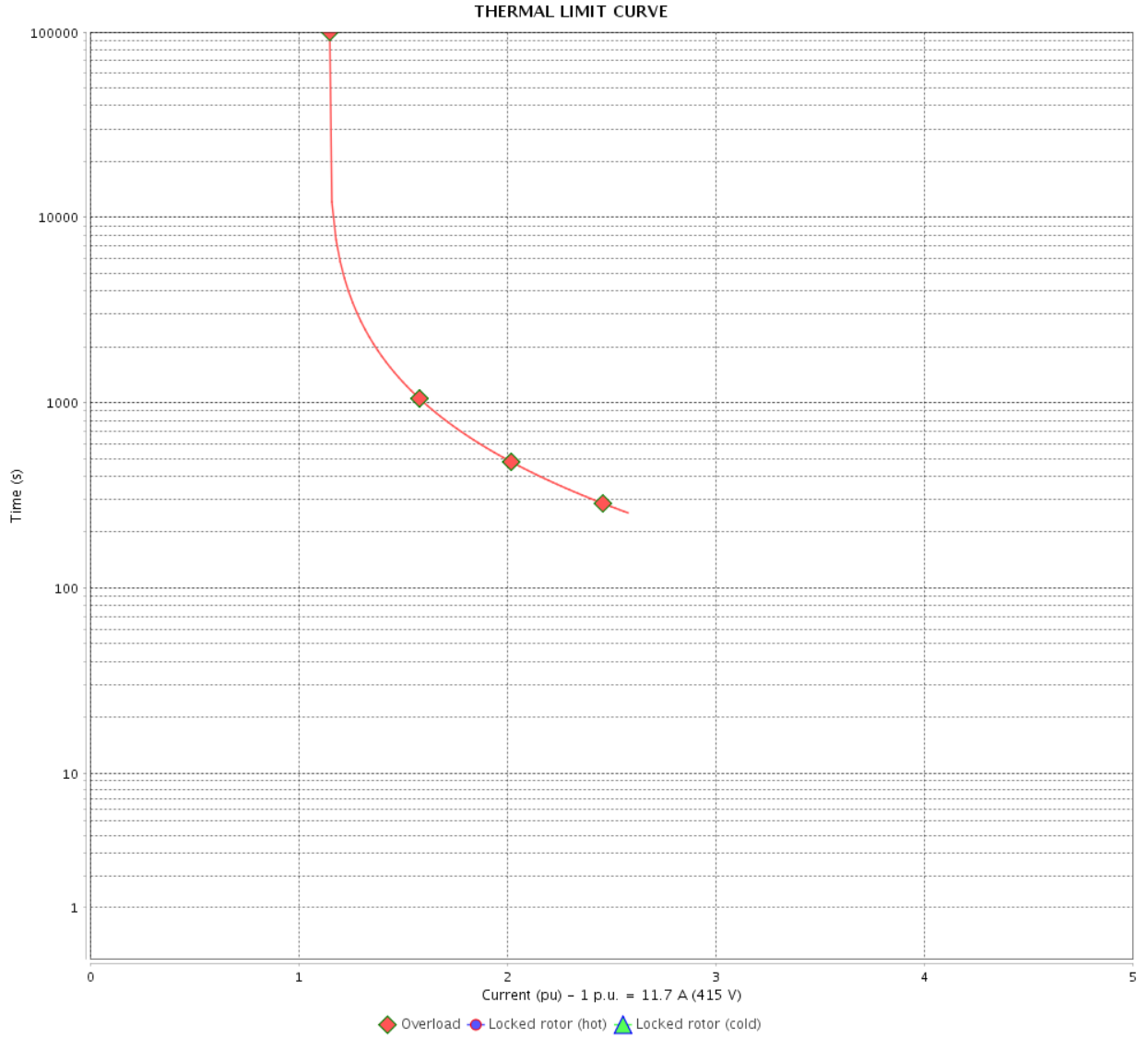
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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



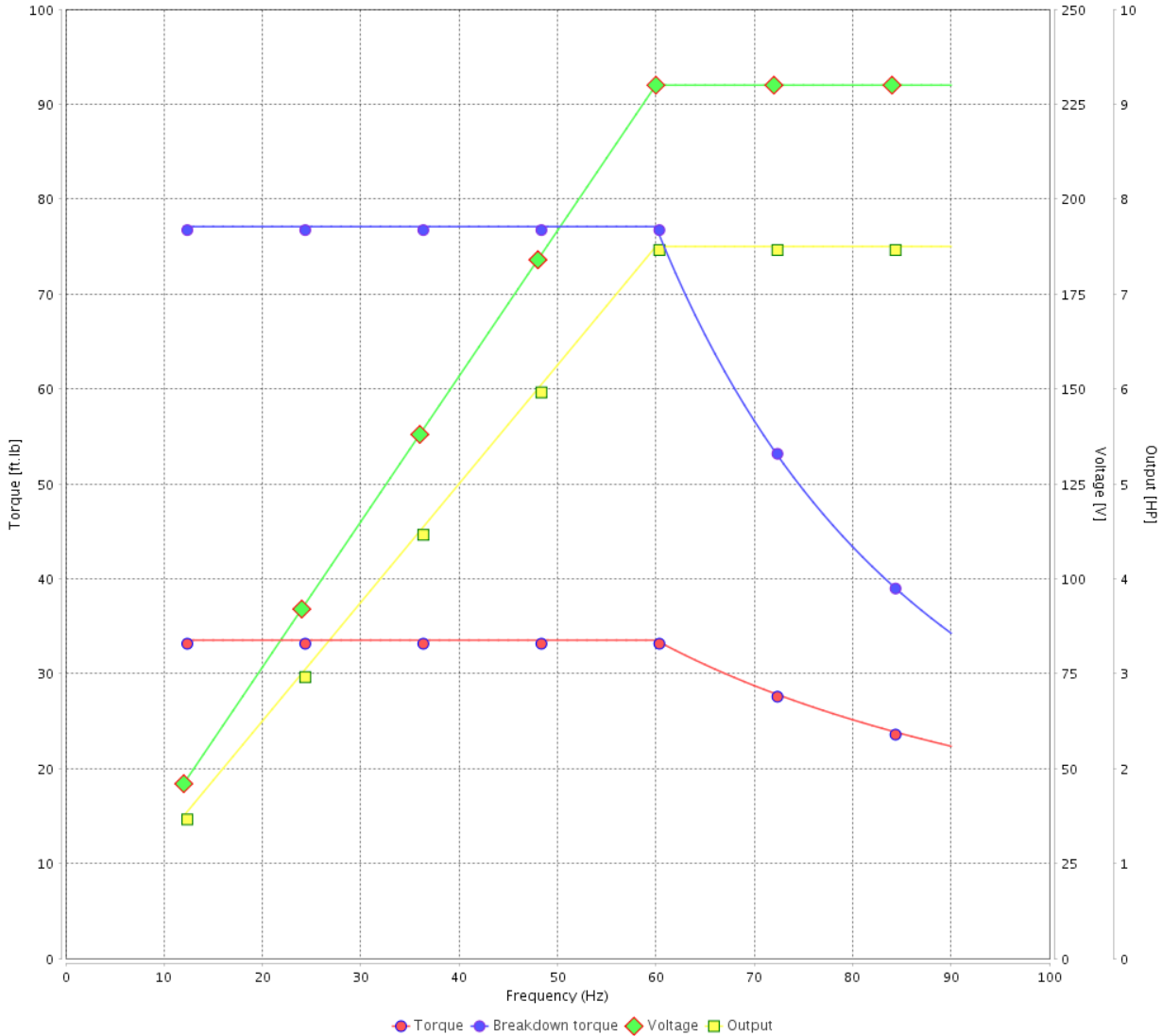
Customer :

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VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 6P

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 LRC : 5.1  
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 Breakdown torque : 229 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 2.00 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

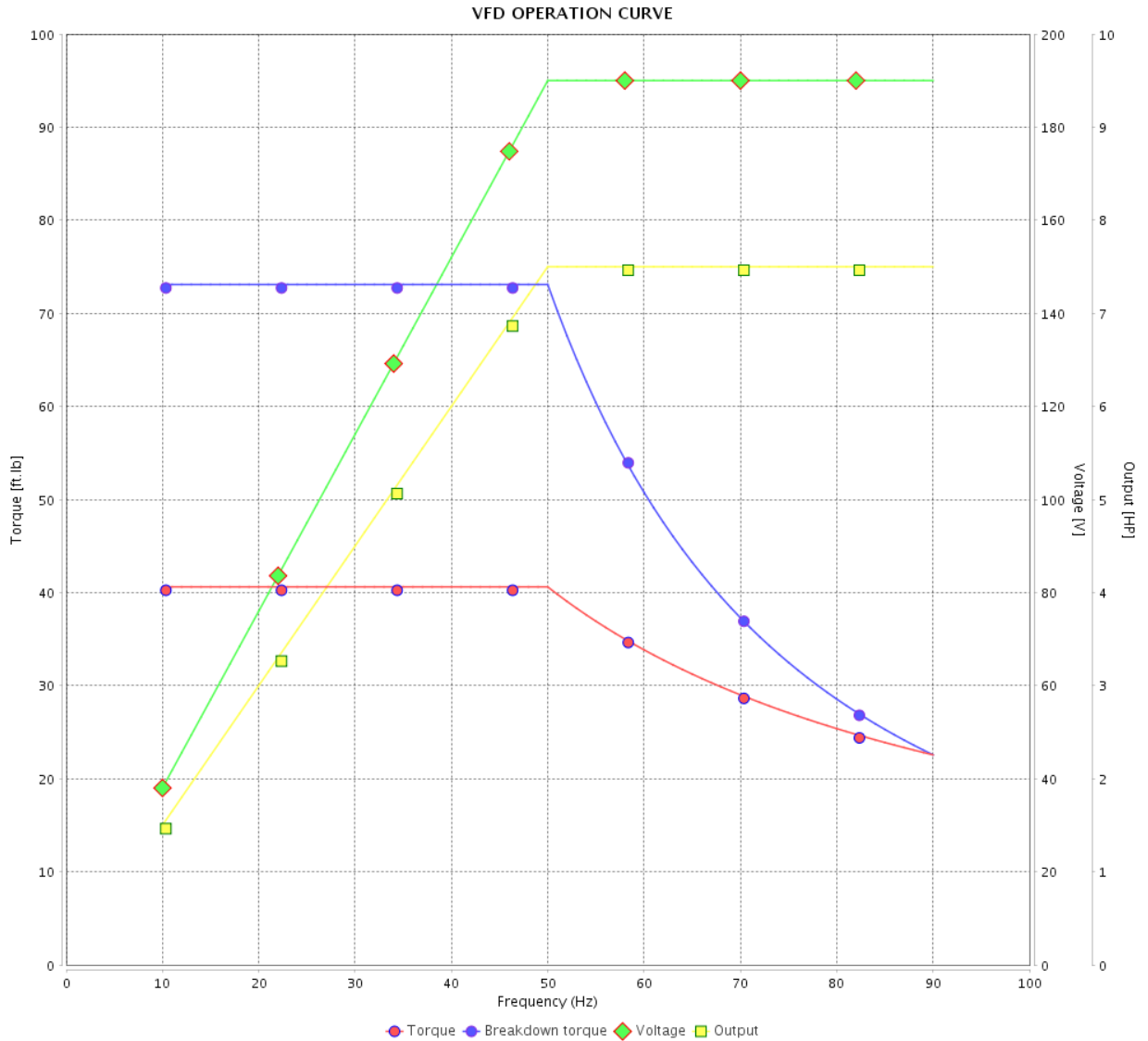


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Product code : 12840736

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 Rated torque : 40.6 ft.lb  
 Locked rotor torque : 140 %  
 Breakdown torque : 180 %  
 Rated speed : 970 rpm

Moment of inertia (J) : 2.00 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



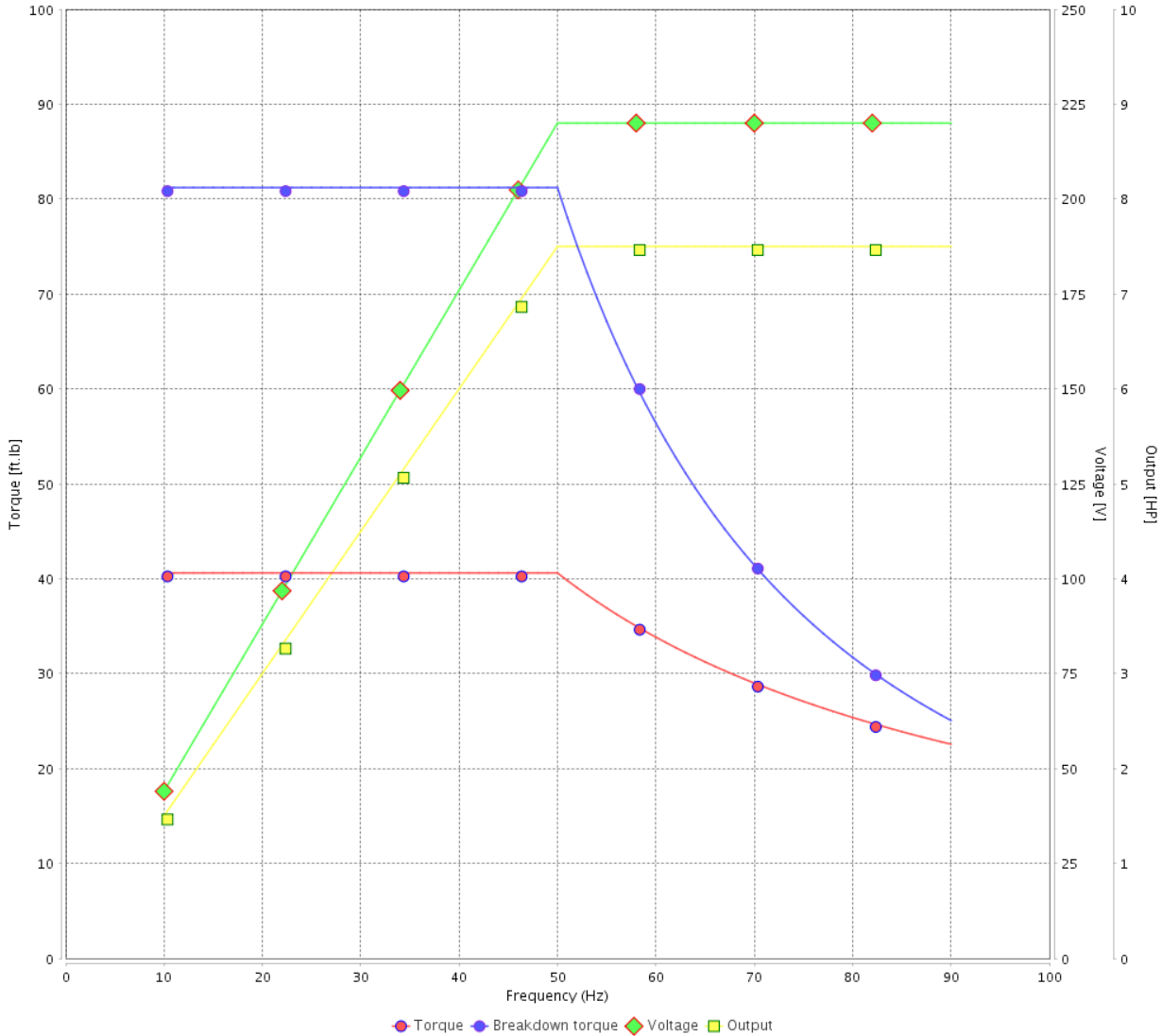
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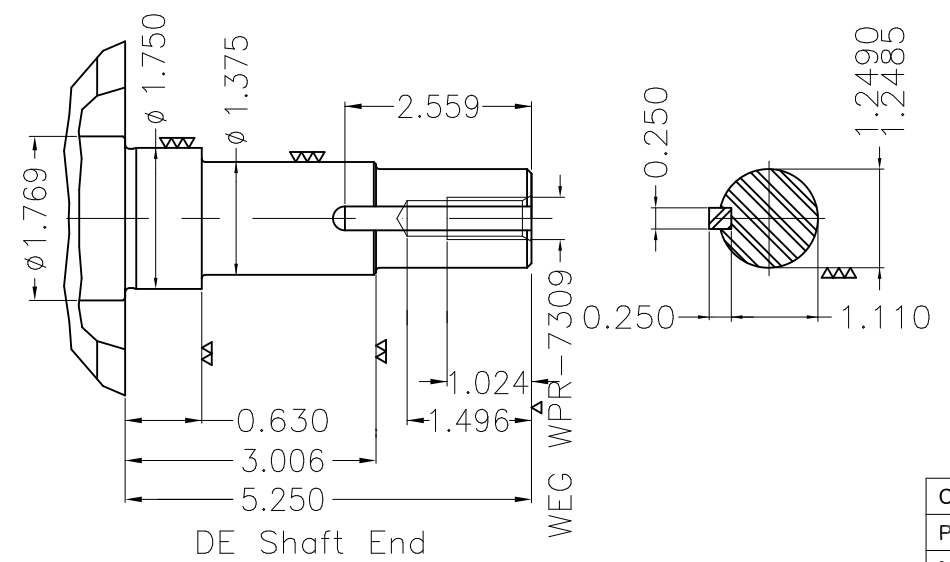
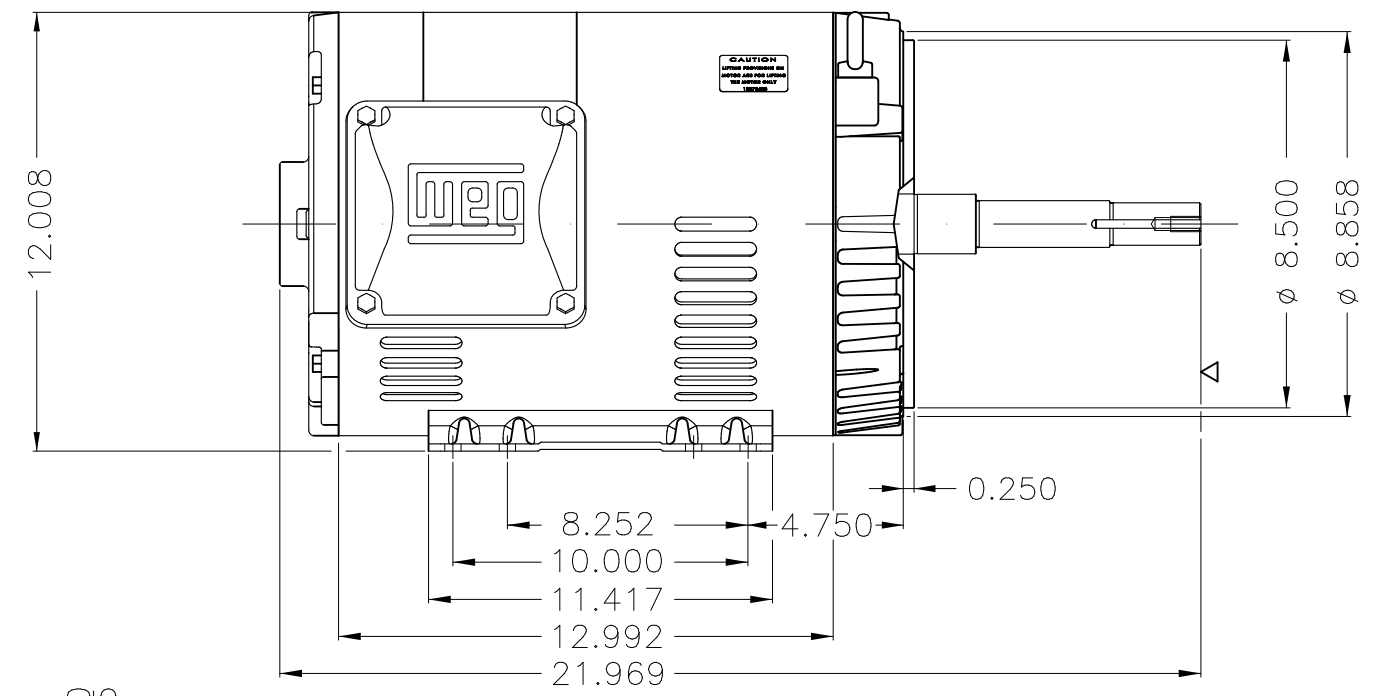
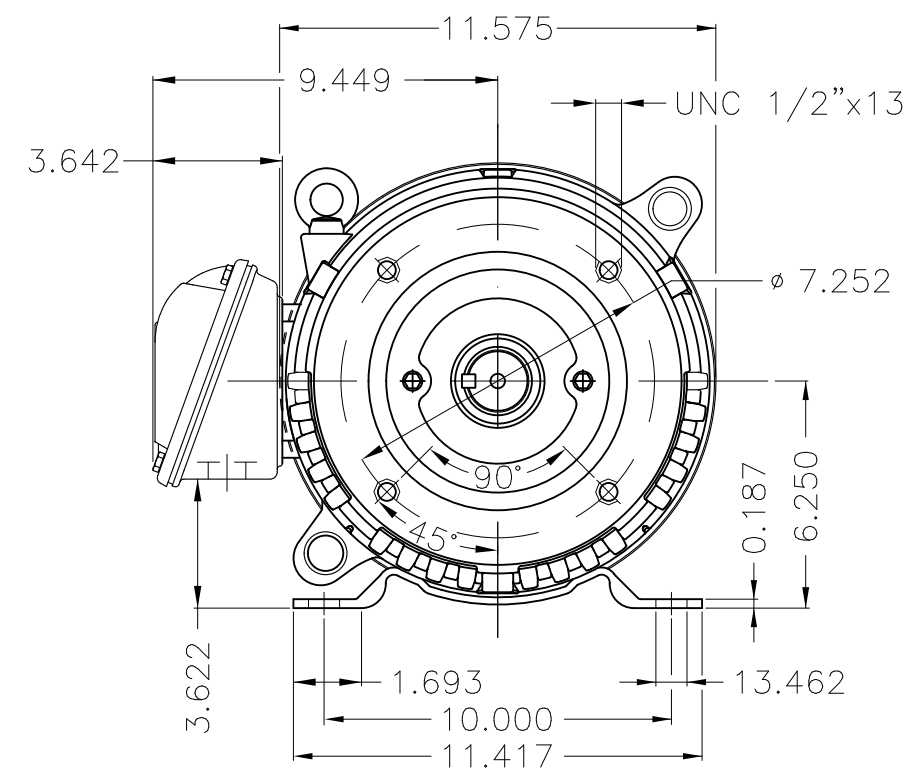
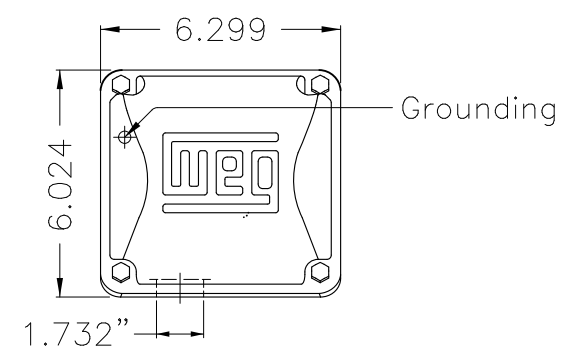
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Service factor : 1.15  
Temperature rise : 80 K  
Design : B

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1 2 3 4 5 6

A  
B  
C  
D  
E



EUNC 1/2"-13 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	PIRBUSER	THREE PH. MOTOR ROLLED STEEL CLOSE COUPLED PUMP JN TYPE PSE 1/2"							
CHECKED		FRAME 254/6JM IP21 ODP							
RELEASED									
REL DT.		WMO	Jaragua do Sul	Product Engineering					

7.5 HP 06 Poles 60 Hz

PREVIEW  
WDD

**NEMA**  
**Premium**

3PT9



Energy Verified

MADE IN MEXICO

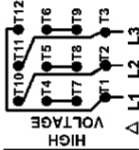
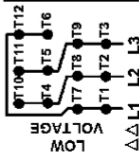
**MAT: 12840736 CC029A****W01.T00IC0X0N****MODEL 007120T3E254JM-S****13DEC2021 S/N:**

<b>PH 3</b>	<b>Hz 60</b>	<b>HP 7.5</b>
<b>FR 254/6JM</b>		<b>KW 5.5</b>
<b>DUTY CONT.</b>		<b>V 230/460</b>
<b>ALT 1000 m.a.s.l.</b>		<b>A 20.4/10.2</b>
<b>INS CL F AT 80K</b>		<b>SFA 23.5/11.7</b>
<b>AMB 40°C</b>	<b>DES B</b>	<b>SF 1.15</b>
<b>ENCL ODP</b>	<b>CODE F</b>	<b>PF 0.75</b>
<b>USABLE @ 208V 22.5A</b>		<b>RPM 1175</b>
<b>SF1.00</b>		<b>NEMA NOM. EFF 90.2%</b>

**ALTERNATE RATING: 7.5HP 50Hz 190-220/380-415V SF1.15**  
**24.4-21.7/12.2-11.5A 970RPM EFF 88.0% (IE3) IEC 60034-1**

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

**DE 6309-Z-C3 ODE 6208-Z-C3 MOBIL POLYREX EM 20000h**



**T1-BLU T2-WHT**  
**T3-ORG T4-YEL**  
**T5-BLK T6-GRY**  
**T7-PNK T8-RED**  
**T9-BRK RED**  
**T10-CURRY**  
**T11-GRN T12-VLT**

**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.

