

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: JP Pump NEMA Premium Efficiency Three-Phase	Product code :	14327838	
		Catalog # :	02036OT3E254JP-SG	
Frame	: 254/6JP	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>	: 151 lb	
Design	: B	Moment of inertia (J)	: 0.7848 sq.ft.lb	
Output [HP]	20	20	20	
Poles	2	2	2	
Frequency [Hz]	60	50	50	
Rated voltage [V]	230/460	190/380	220/415	
Rated current [A]	47.6/23.8	58.0/29.0	51.7/27.4	
L. R. Amperes [A]	286/143	261/131	264/140	
LRC [A]	6.0x(Code G)	4.5x(Code D)	5.1x(Code E)	
No load current [A]	17.0/8.50	16.2/8.09	17.1/9.04	
Rated speed [RPM]	3525	2895	2905	
Slip [%]	2.08	3.50	3.17	
Rated torque [ft.lb]	29.8	36.3	36.2	
Locked rotor torque [%]	180	130	140	
Breakdown torque [%]	240	190	210	
Service factor	1.15	1.00	1.00	
Temperature rise	80 K	105 K	80 K	
Locked rotor time	23s (cold) 13s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)	
Noise level <sup>2</sup>	70.0 dB(A)	68.0 dB(A)	68.0 dB(A)	
Efficiency (%)	25%	90.0	91.6	
	50%	90.2	90.6	
	75%	91.0	90.0	
	100%	91.0	88.7	
Power Factor	25%	0.49	0.51	
	50%	0.76	0.78	
	75%	0.83	0.86	
	100%	0.87	0.89	
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	: 439 lb	
Lubrication interval	: 20000 h 20000 h			
Lubricant amount	: 13 g 8 g			
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V 52.6A SF 1.00 SFA 52.6A				
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



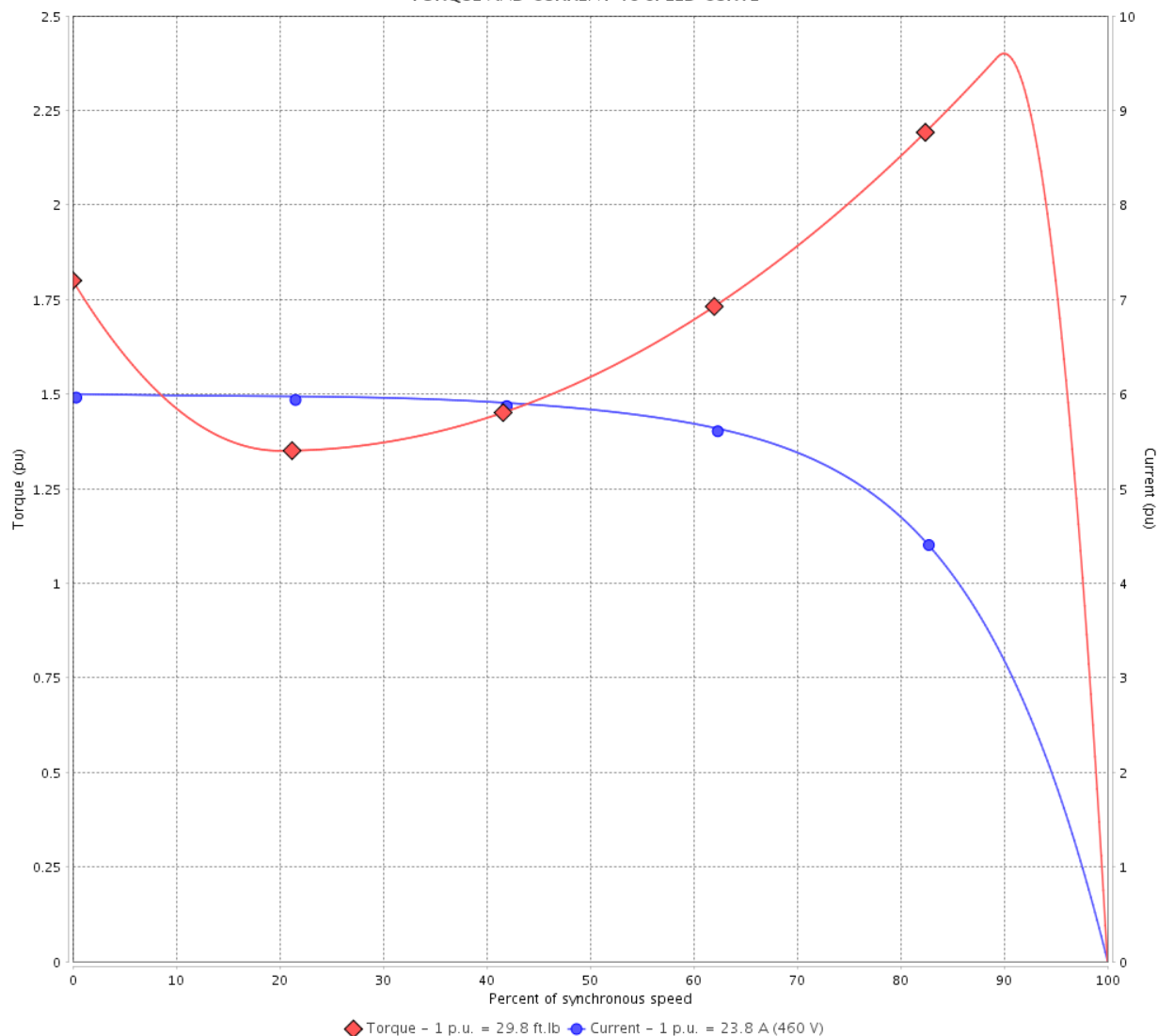
Customer :

Product line : JP Pump NEMA Premium  
Efficiency Three-Phase

Product code : 14327838

Catalog # : 020360T3E254JP-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 2P

Rated current : 47.6/23.8 A  
LRC : 6.0  
Rated torque : 29.8 ft.lb  
Locked rotor torque : 180 %  
Breakdown torque : 240 %  
Rated speed : 3525 rpm

Moment of inertia (J) : 0.7848 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

Locked rotor time : 23s (cold) 13s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



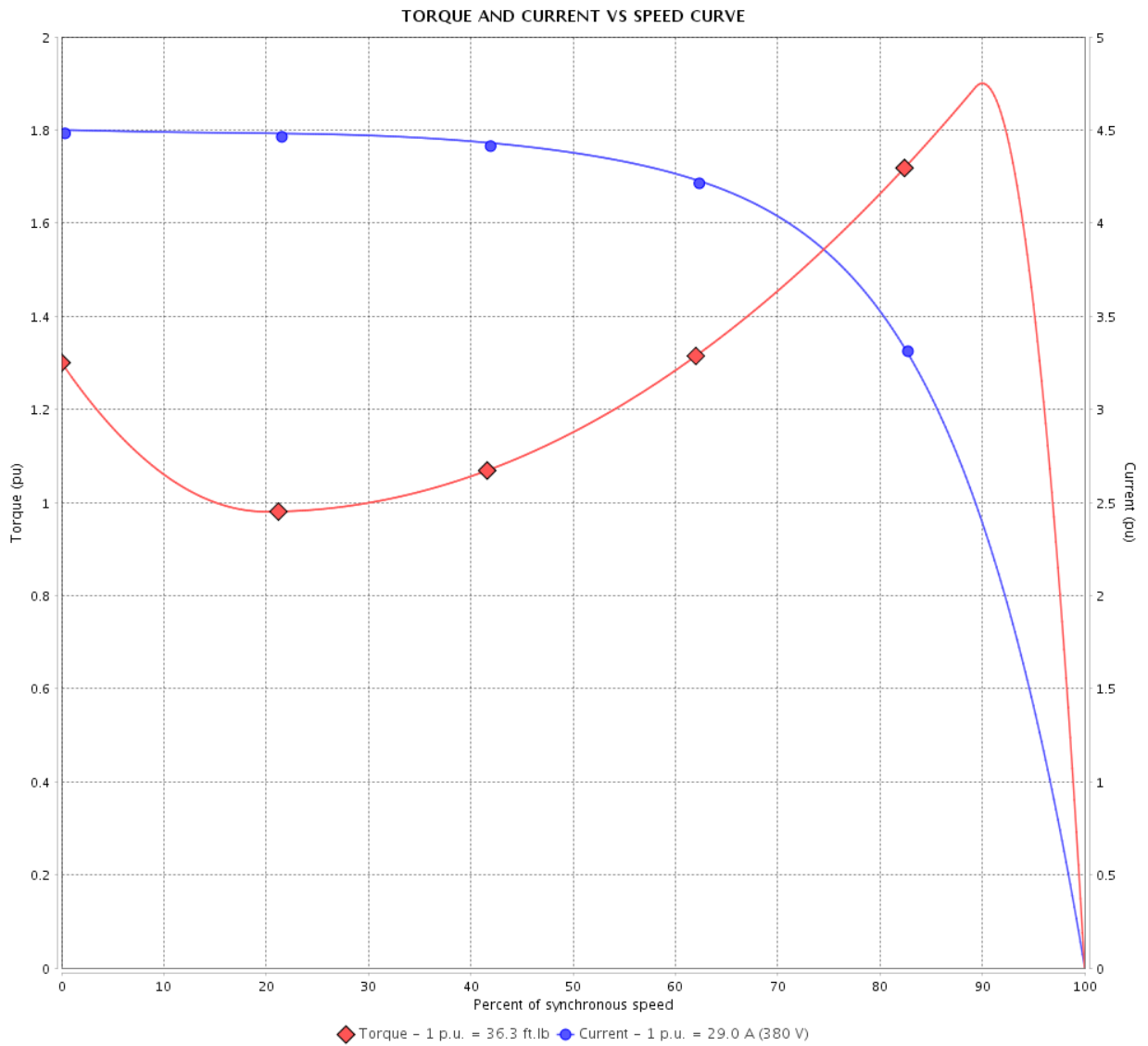
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JP Pump NEMA Premium Efficiency Three-Phase

Product code : 14327838

Catalog # : 02036OT3E254JP-SG



Performance : 190/380 V 50 Hz 2P

Rated current : 58.0/29.0 A  
 LRC : 4.5  
 Rated torque : 36.3 ft.lb  
 Locked rotor torque : 130 %  
 Breakdown torque : 190 %  
 Rated speed : 2895 rpm

Moment of inertia (J) : 0.7848 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



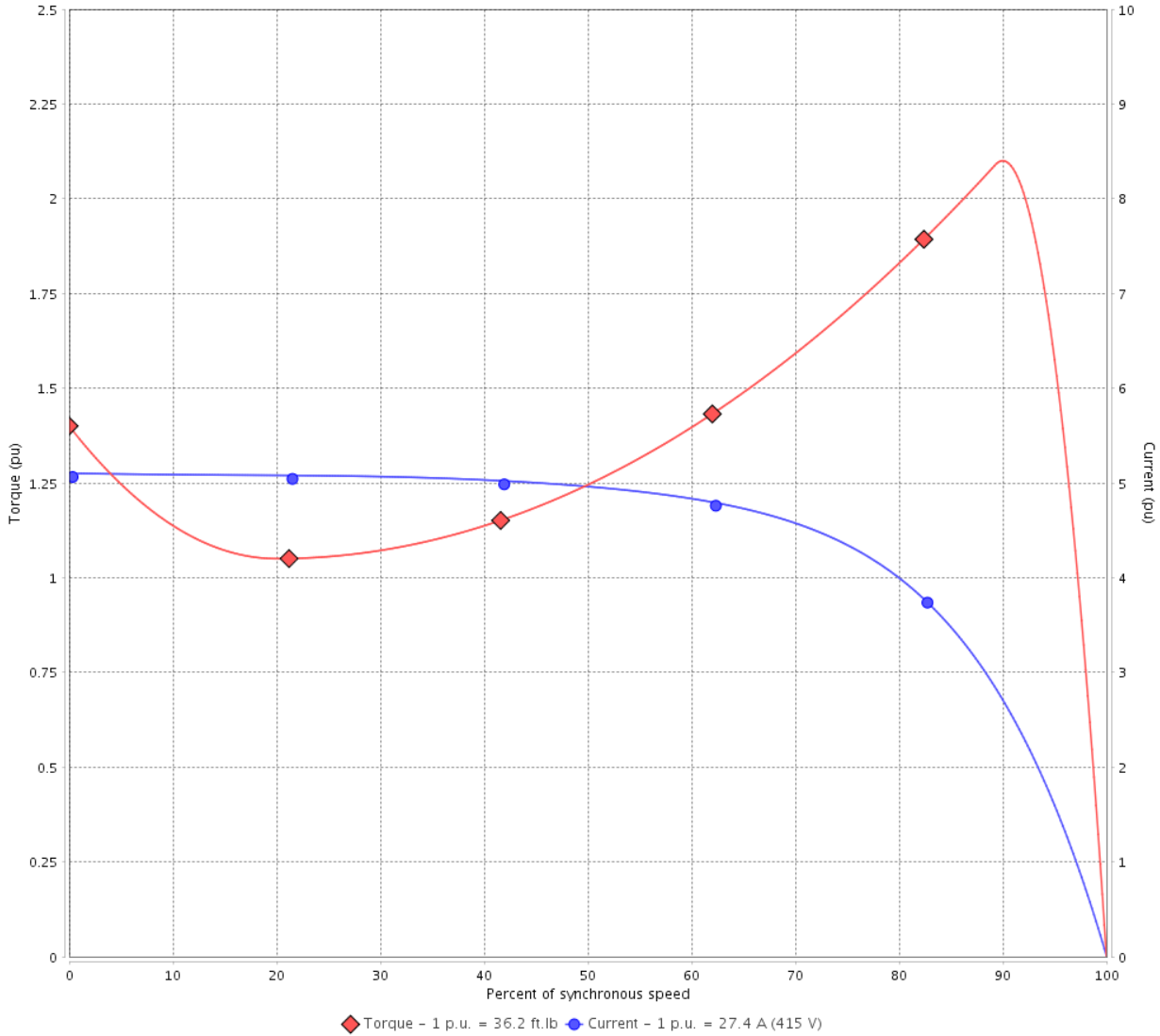
Customer :

Product line : JP Pump NEMA Premium Efficiency Three-Phase

Product code : 14327838

Catalog # : 020360T3E254JP-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 2P

Rated current	: 51.7/27.4 A	Moment of inertia (J)	: 0.7848 sq.ft.lb
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 36.2 ft.lb	Insulation class	: F
Locked rotor torque	: 140 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 2905 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

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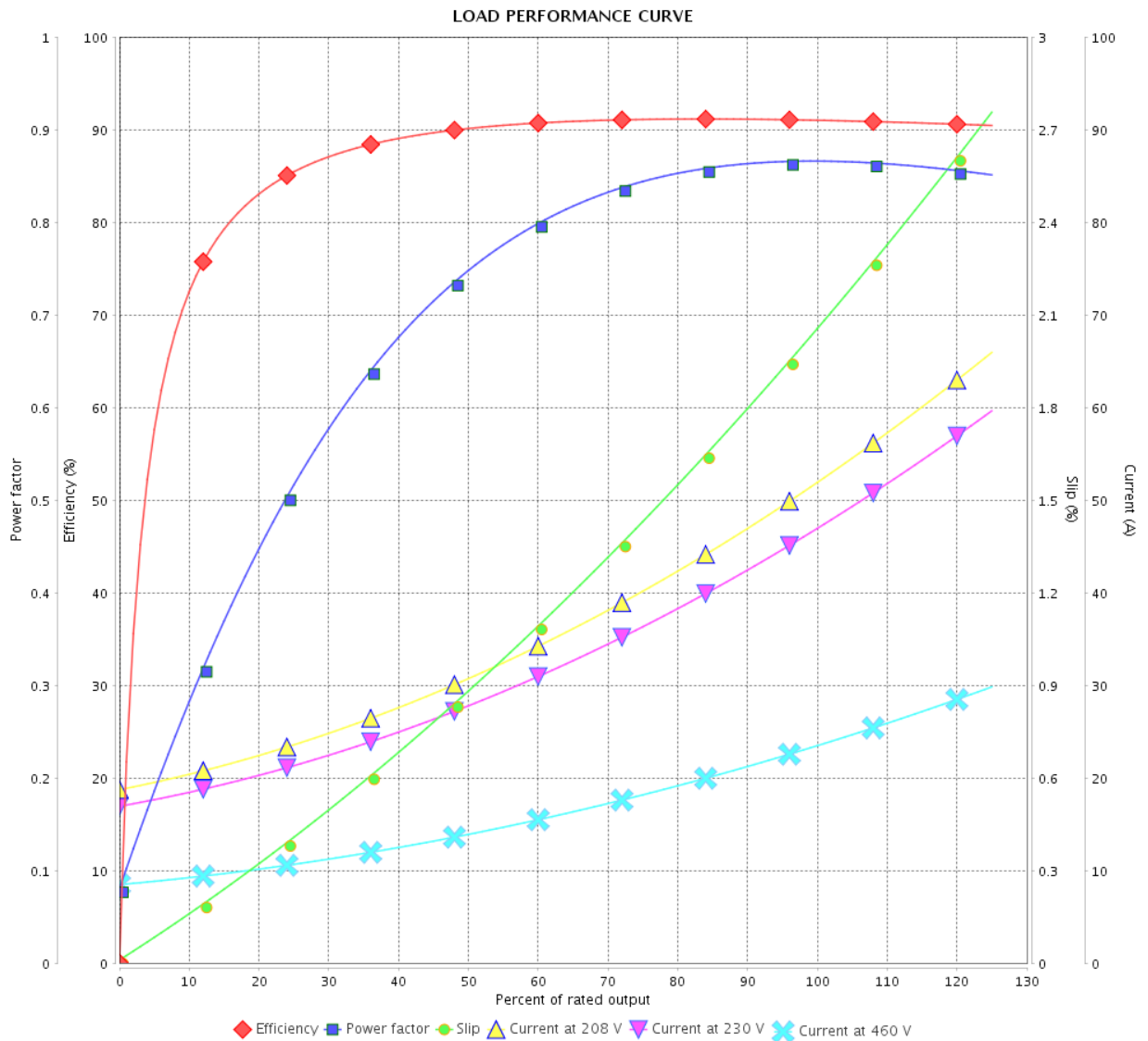


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Product line : JP Pump NEMA Premium  
Efficiency Three-Phase

Product code : 14327838

Catalog # : 02036OT3E254JP-SG



Performance : 230/460 V 60 Hz 2P

Rated current : 47.6/23.8 A  
 LRC : 6.0  
 Rated torque : 29.8 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 240 %  
 Rated speed : 3525 rpm

Moment of inertia (J) : 0.7848 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

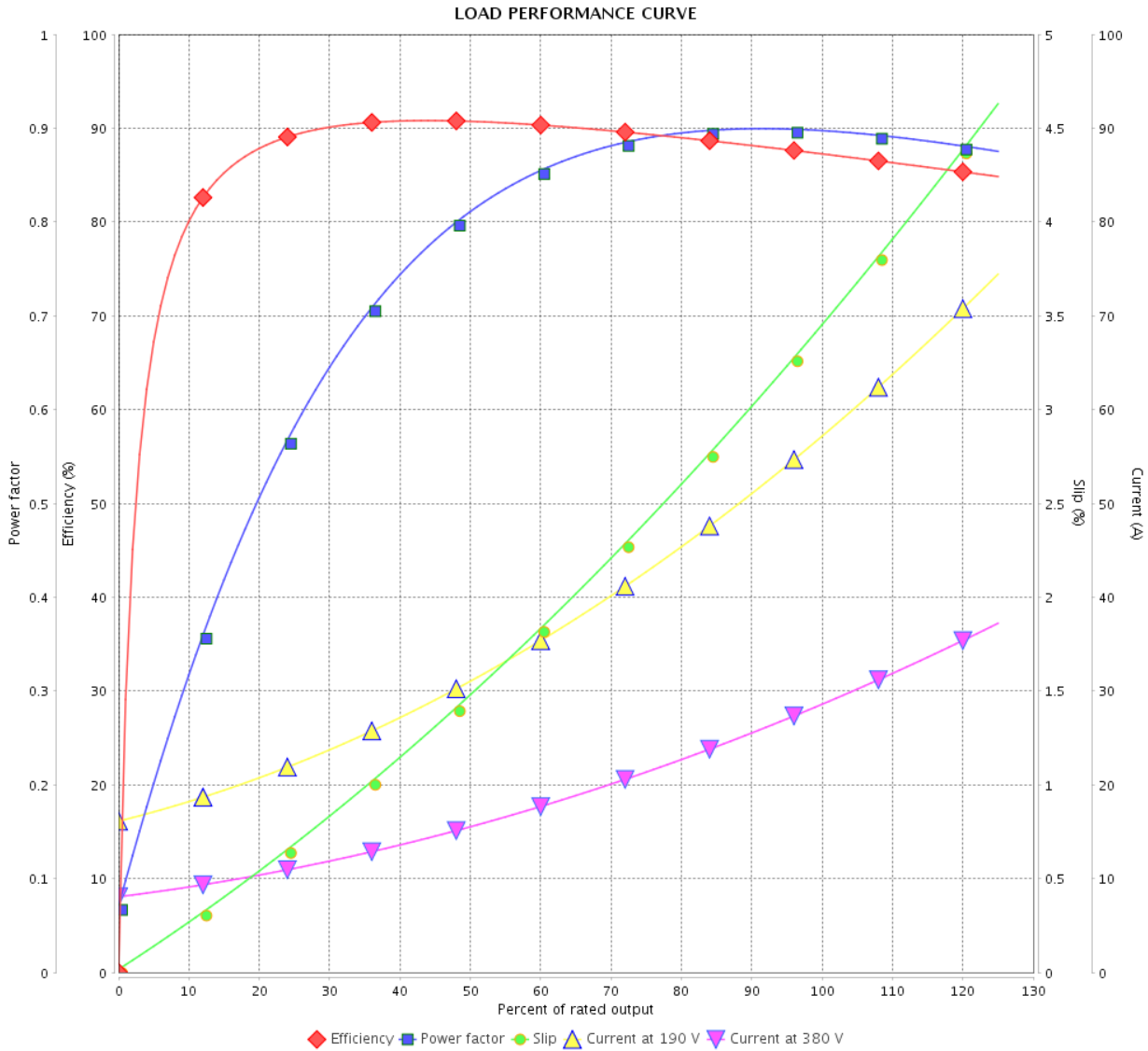


Customer :

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Performance : 190/380 V 50 Hz 2P

Rated current : 58.0/29.0 A  
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 Rated torque : 36.3 ft.lb  
 Locked rotor torque : 130 %  
 Breakdown torque : 190 %  
 Rated speed : 2895 rpm

Moment of inertia (J) : 0.7848 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

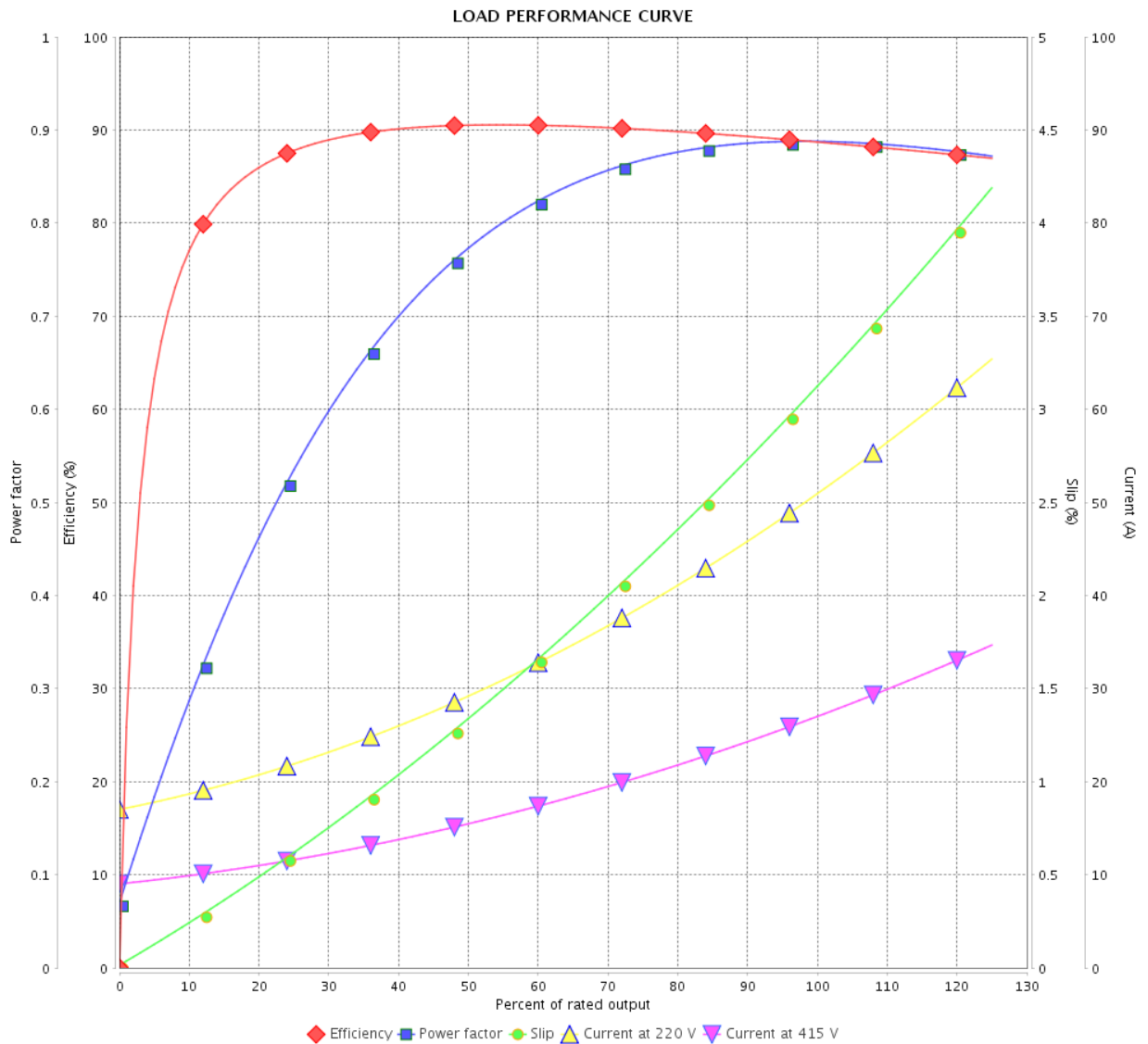


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Performance : 220/415 V 50 Hz 2P

Rated current : 51.7/27.4 A  
 LRC : 5.1  
 Rated torque : 36.2 ft.lb  
 Locked rotor torque : 140 %  
 Breakdown torque : 210 %  
 Rated speed : 2905 rpm

Moment of inertia (J) : 0.7848 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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# THERMAL LIMIT CURVE

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Performance : 230/460 V 60 Hz 2P

Rated current : 47.6/23.8 A  
LRC : 6.0  
Rated torque : 29.8 ft.lb  
Locked rotor torque : 180 %  
Breakdown torque : 240 %  
Rated speed : 3525 rpm

Moment of inertia (J) : 0.7848 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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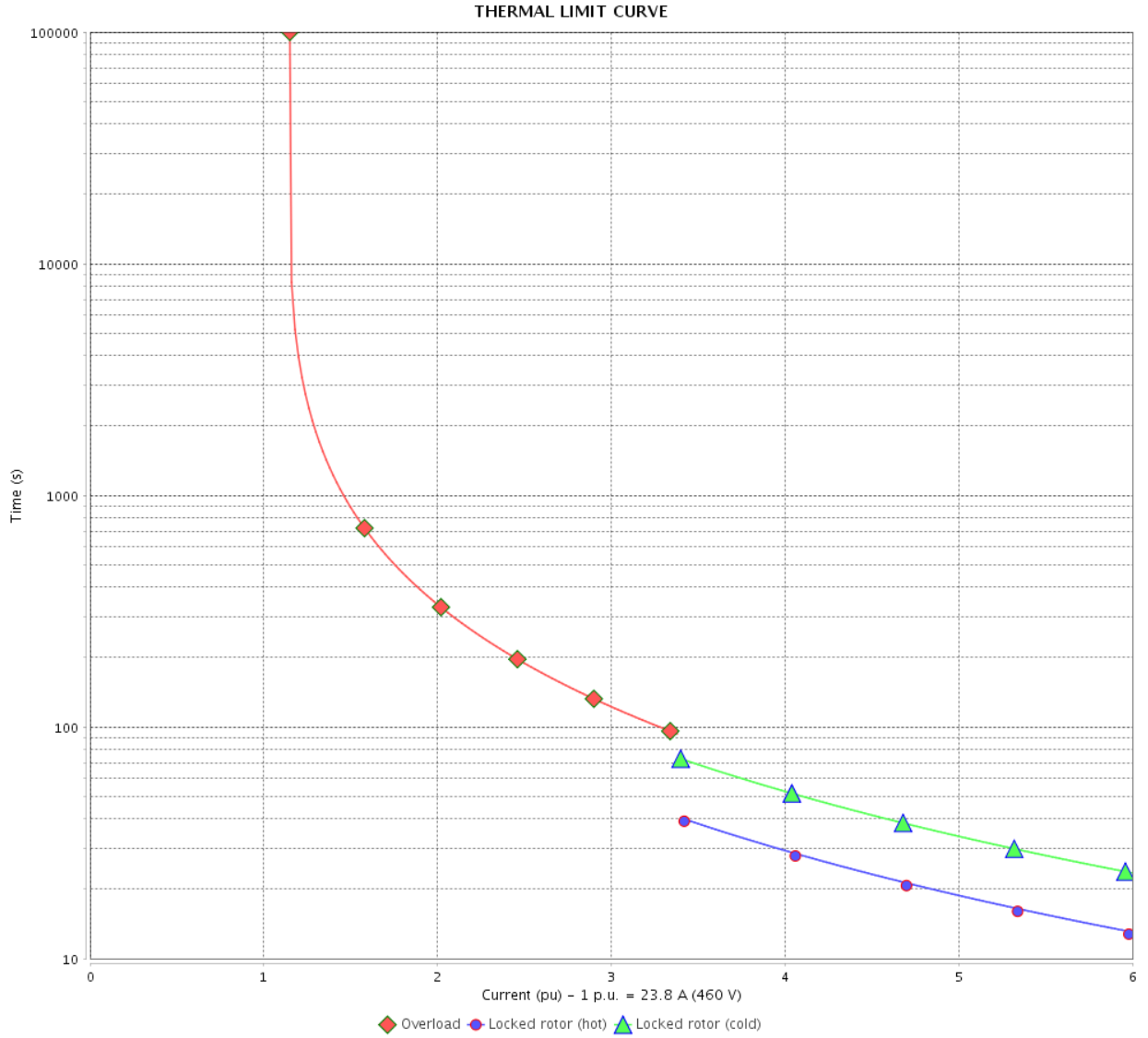


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Three Phase Induction Motor - Squirrel Cage



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



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Design : B

Heating constant

Cooling constant

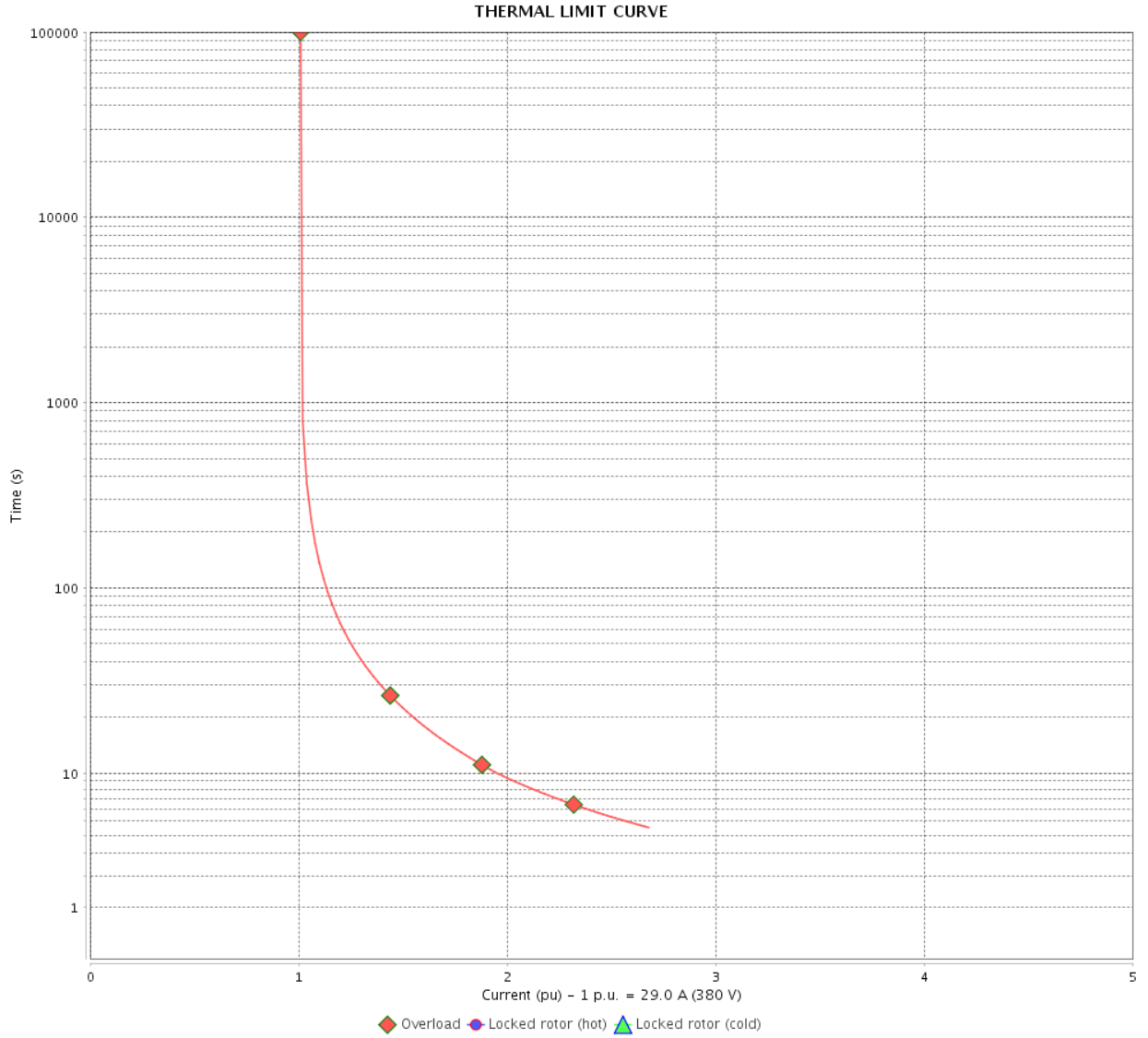
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Service factor : 1.00  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

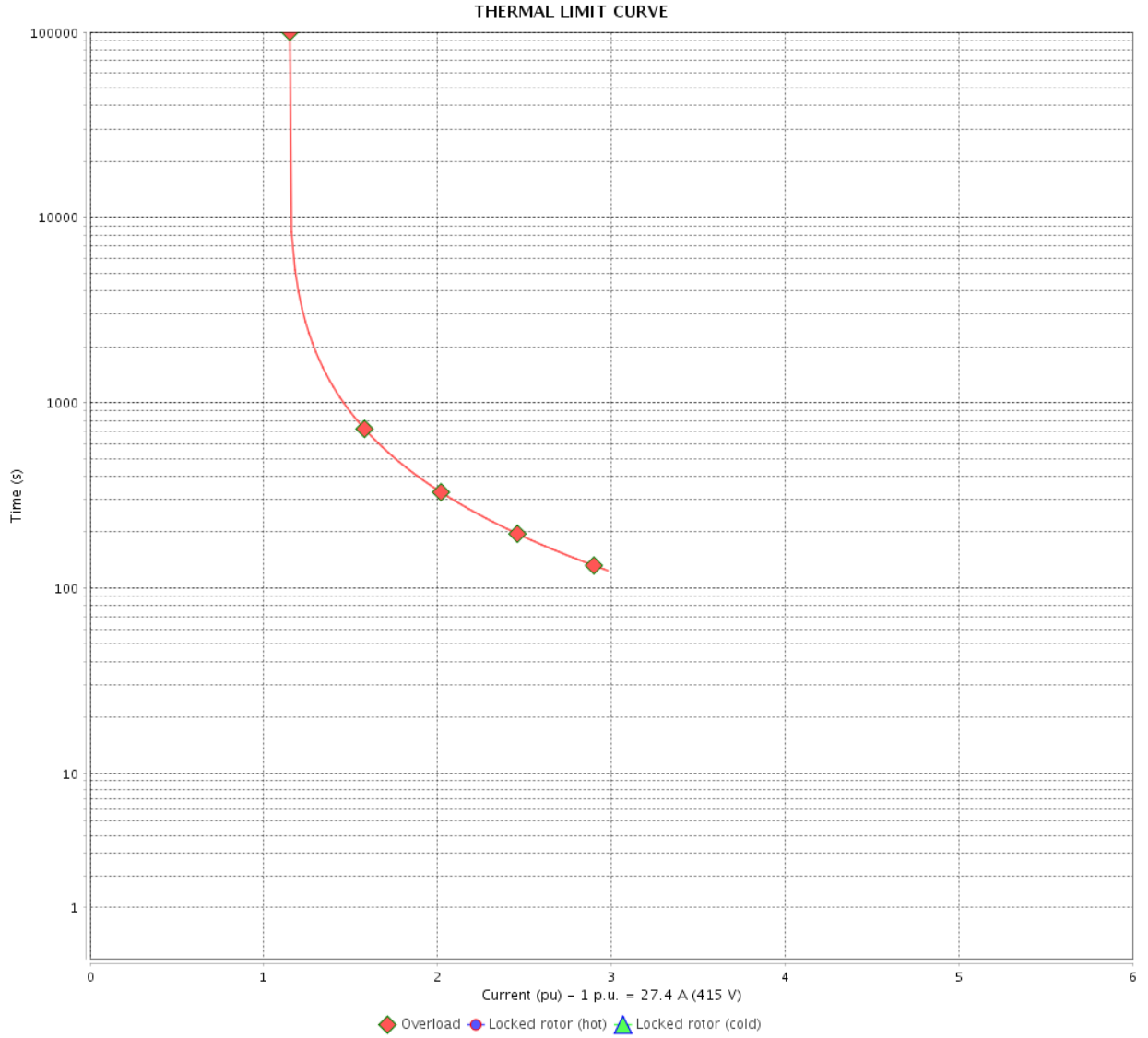
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Three Phase Induction Motor - Squirrel Cage



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

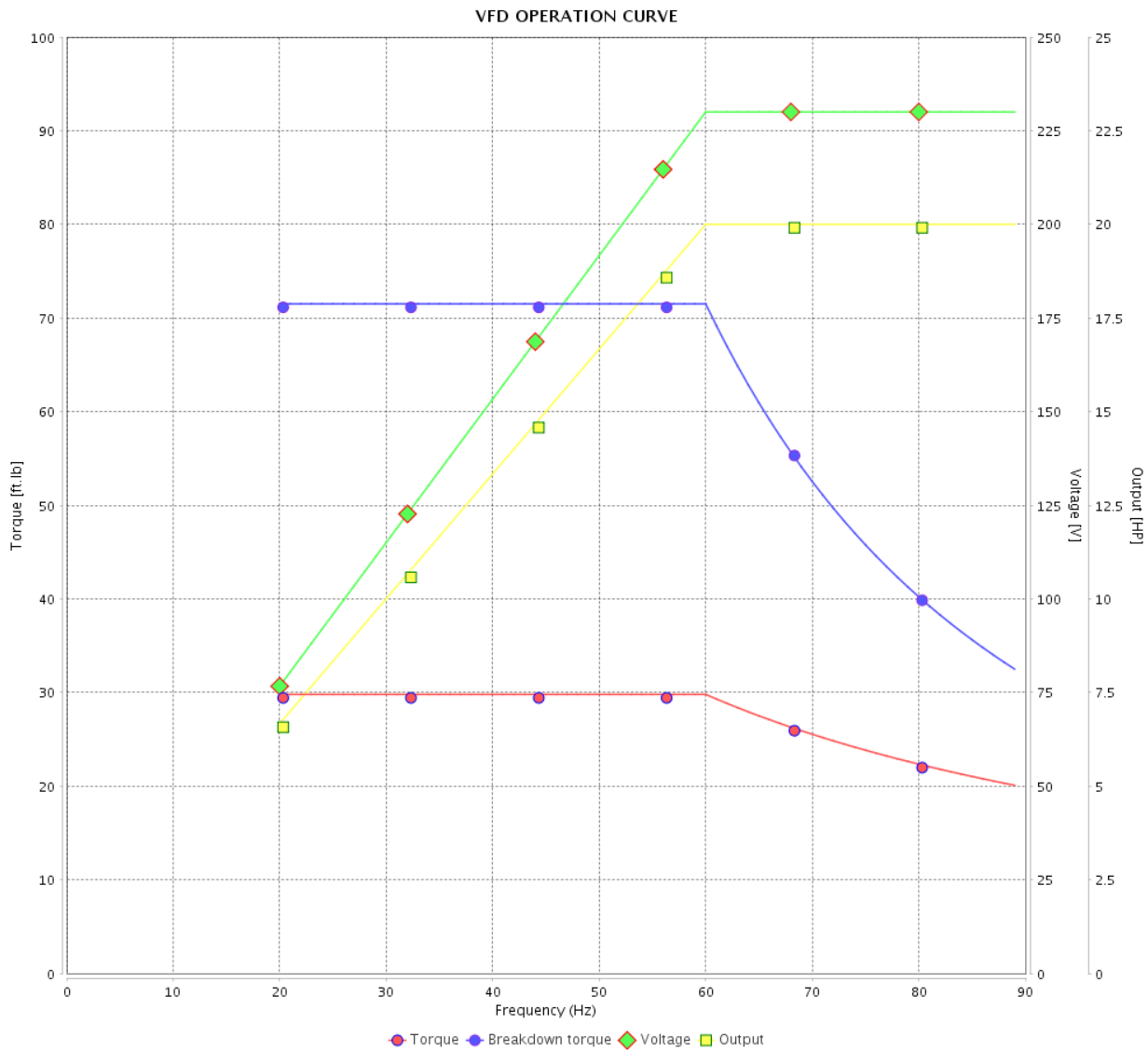


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Performance : 230/460 V 60 Hz 2P

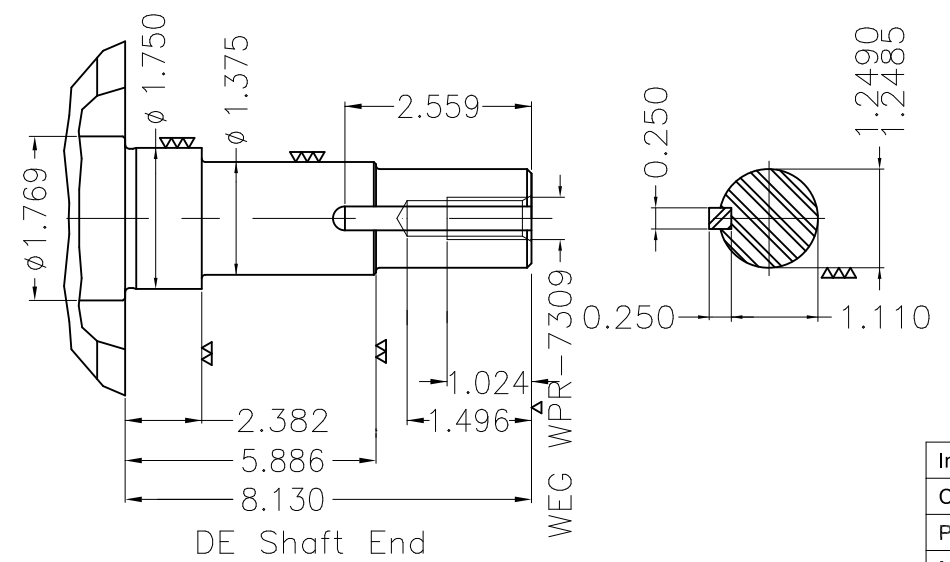
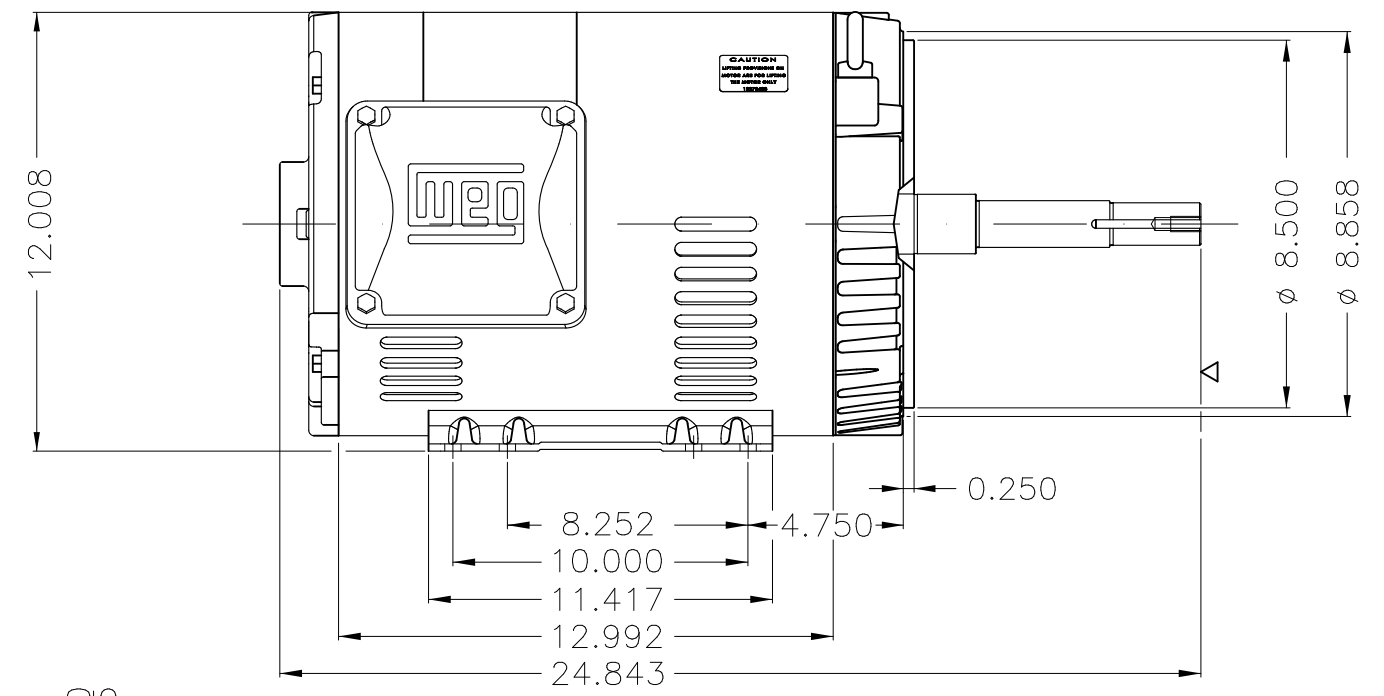
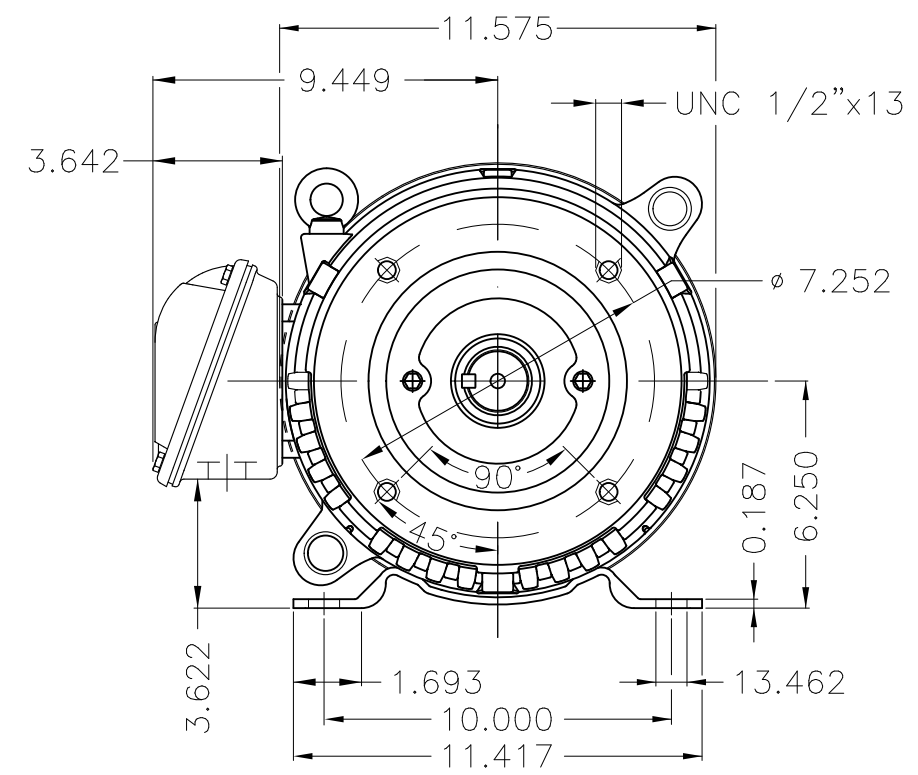
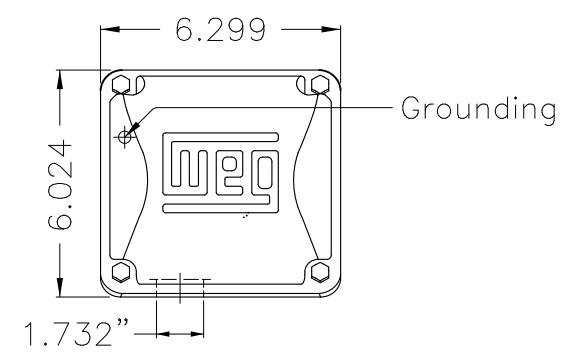
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 Temperature rise : 80 K  
 Design : B

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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

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 JP 300 DE PREM LTR					
CHECKED		FRAME 254/6JP IP21 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	WDD	SHEET	1 / 1	

20 HP 02 Poles 60 Hz

