

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer	:		
Product line	: JP Pump NEMA Premium Efficiency Three-Phase	Product code :	14329722
		Catalog # :	02018ET3E256JP-SG
Frame	: 254/6JP	Cooling method	: IC411 - TEFC
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>	: 227 lb
Protection degree	: IP55	Moment of inertia (J)	: 2.64 sq.ft.lb
Design	: B		
Output [HP]	20	15	15
Poles	4	4	4
Frequency [Hz]	60	50	50
Rated voltage [V]	230/460	190/380	220/415
Rated current [A]	49.4/24.7	44.4/22.2	41.3/21.9
L. R. Amperes [A]	331/165	329/164	330/175
LRC [A]	6.7x(Code H)	7.4x(Code J)	8.0x(Code K)
No load current [A]	22.2/11.1	21.9/10.9	22.5/11.9
Rated speed [RPM]	1765	1470	1475
Slip [%]	1.94	2.00	1.67
Rated torque [ft.lb]	59.5	53.6	53.4
Locked rotor torque [%]	270	270	310
Breakdown torque [%]	300	320	360
Service factor	1.15	1.15	1.15
Temperature rise	80 K	80 K	80 K
Locked rotor time	28s (cold) 16s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)
Noise level <sup>2</sup>	68.0 dB(A)	65.0 dB(A)	65.0 dB(A)
Efficiency (%)	25%	91.0	91.1
	50%	91.7	91.1
	75%	92.4	92.1
	100%	93.0	91.9
Power Factor	25%	0.40	0.34
	50%	0.66	0.58
	75%	0.77	0.71
	100%	0.82	0.79
Bearing type	: <u>Drive end</u> 6309 Z C3 <u>Non drive end</u> 6208 Z C3	Foundation loads	
Sealing	: V'Ring Without Bearing Seal	Max. traction	: 809 lb
		Max. compression	: 1036 lb
Lubrication interval	: 20000 h 20000 h		
Lubricant amount	: 13 g 8 g		
Lubricant type	: Mobil Polyrex EM		
Notes USABLE @208V 54.6A SF 1.00 SFA 54.6A			
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

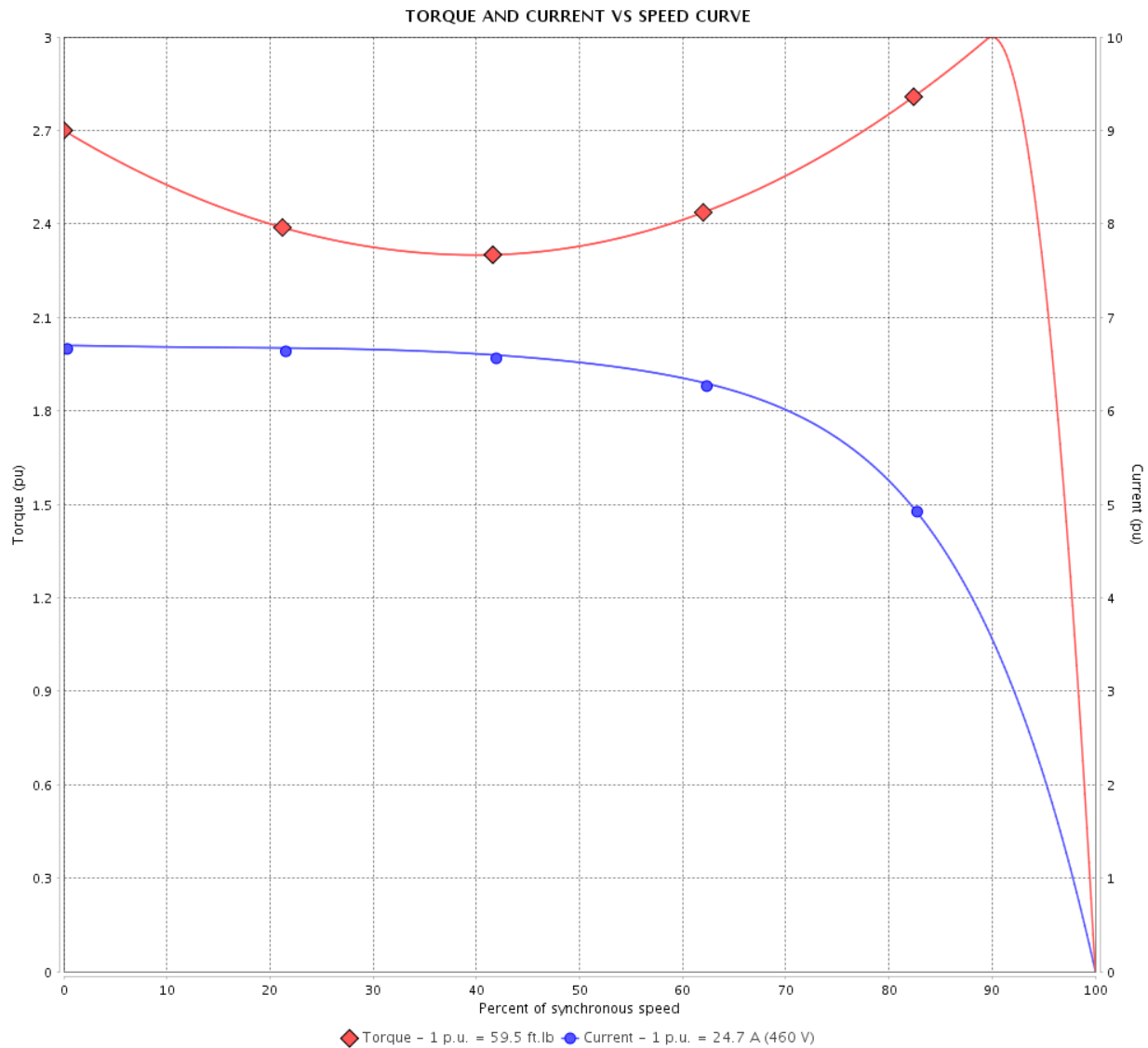


Customer :

Product line : JP Pump NEMA Premium  
Efficiency Three-Phase

Product code : 14329722

Catalog # : 02018ET3E256JP-SG



Performance : 230/460 V 60 Hz 4P

Rated current	: 49.4/24.7 A	Moment of inertia (J)	: 2.64 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 59.5 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.15
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1765 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



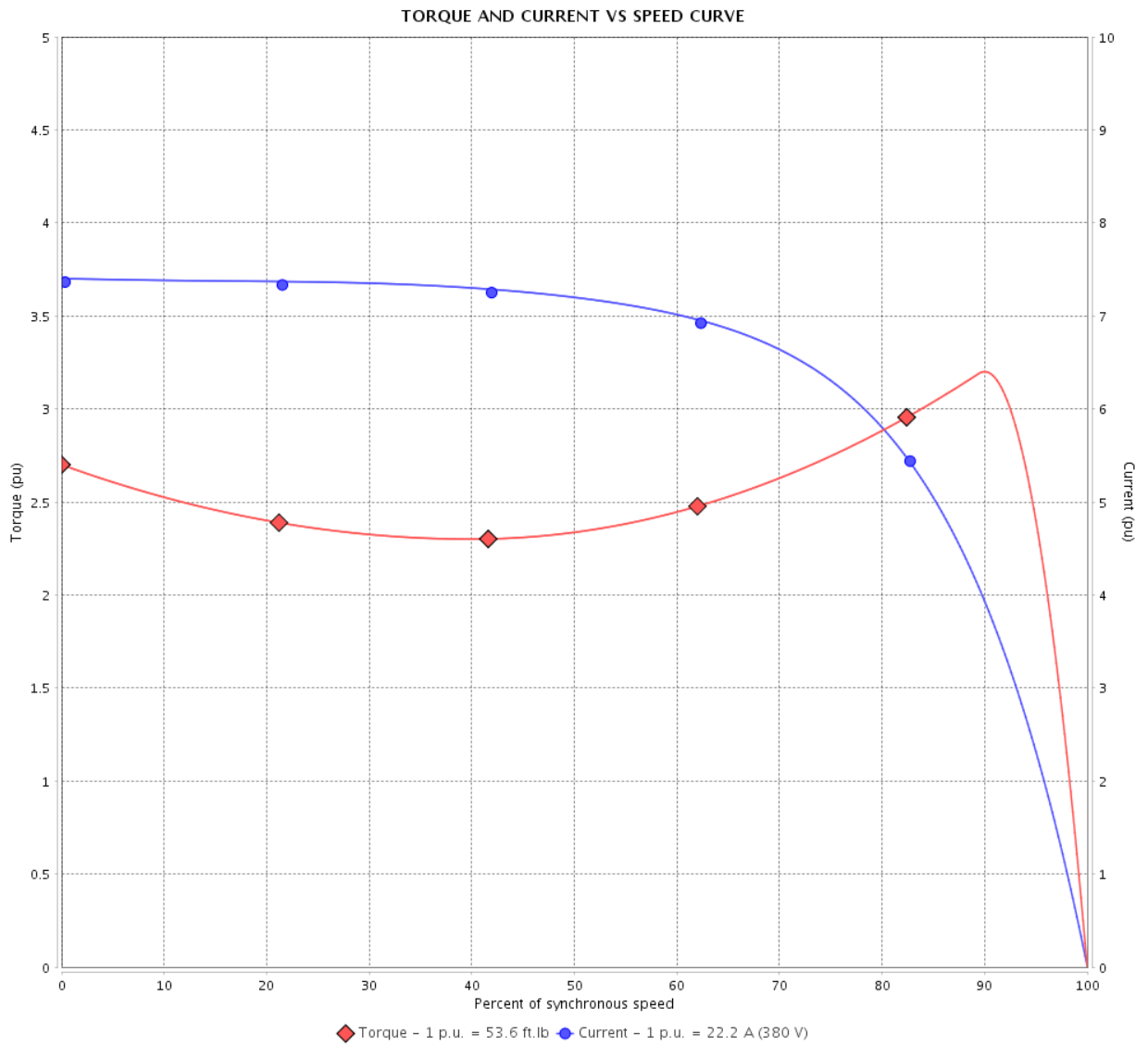
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JP Pump NEMA Premium Efficiency Three-Phase

Product code : 14329722

Catalog # : 02018ET3E256JP-SG



Performance : 190/380 V 50 Hz 4P

Rated current : 44.4/22.2 A  
 LRC : 7.4  
 Rated torque : 53.6 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 320 %  
 Rated speed : 1470 rpm

Moment of inertia (J) : 2.64 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



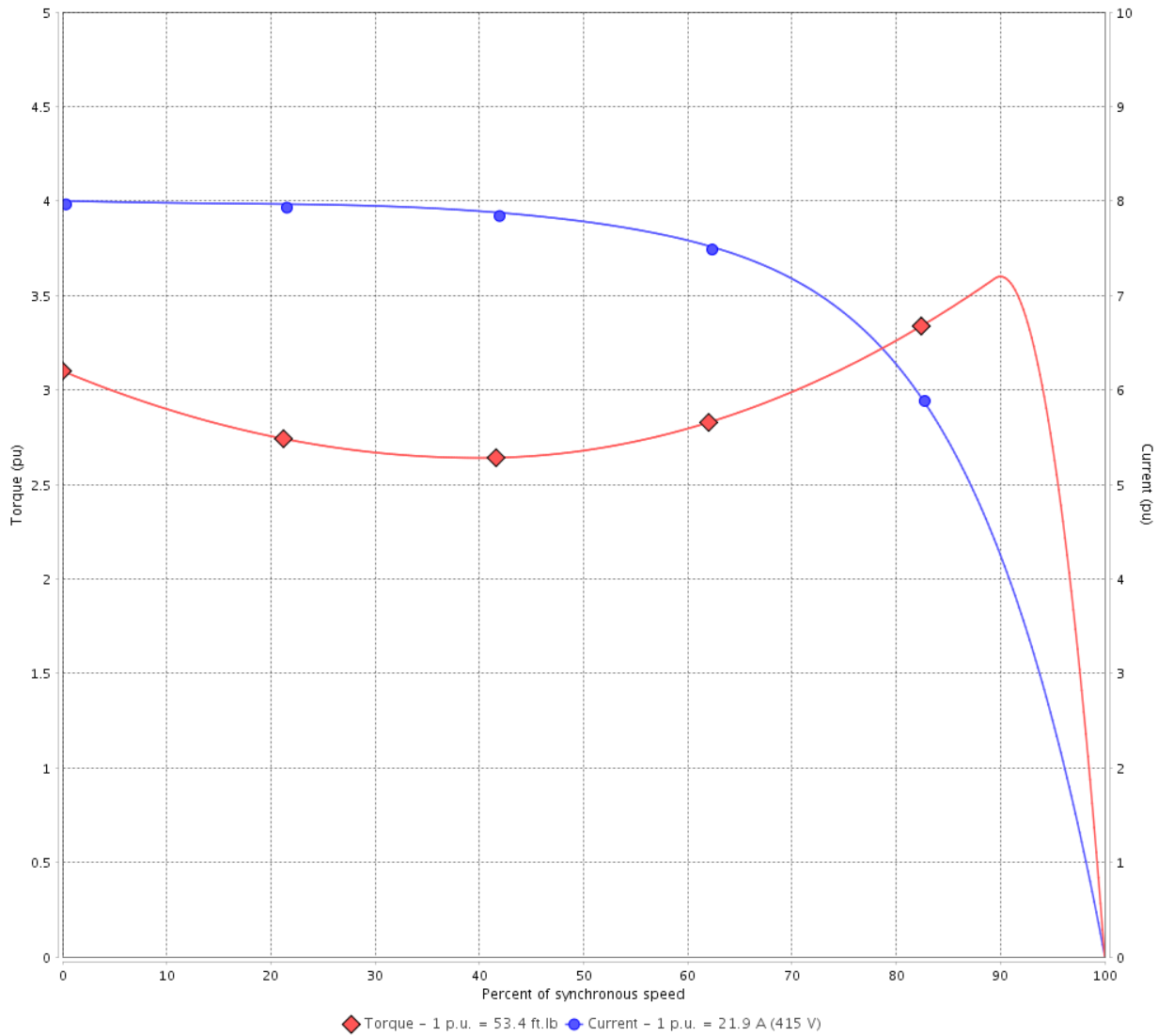
Customer :

Product line : JP Pump NEMA Premium  
Efficiency Three-Phase

Product code : 14329722

Catalog # : 02018ET3E256JP-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 4P

Rated current	: 41.3/21.9 A	Moment of inertia (J)	: 2.64 sq.ft.lb
LRC	: 8.0	Duty cycle	: Cont.(S1)
Rated torque	: 53.4 ft.lb	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.15
Breakdown torque	: 360 %	Temperature rise	: 80 K
Rated speed	: 1475 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

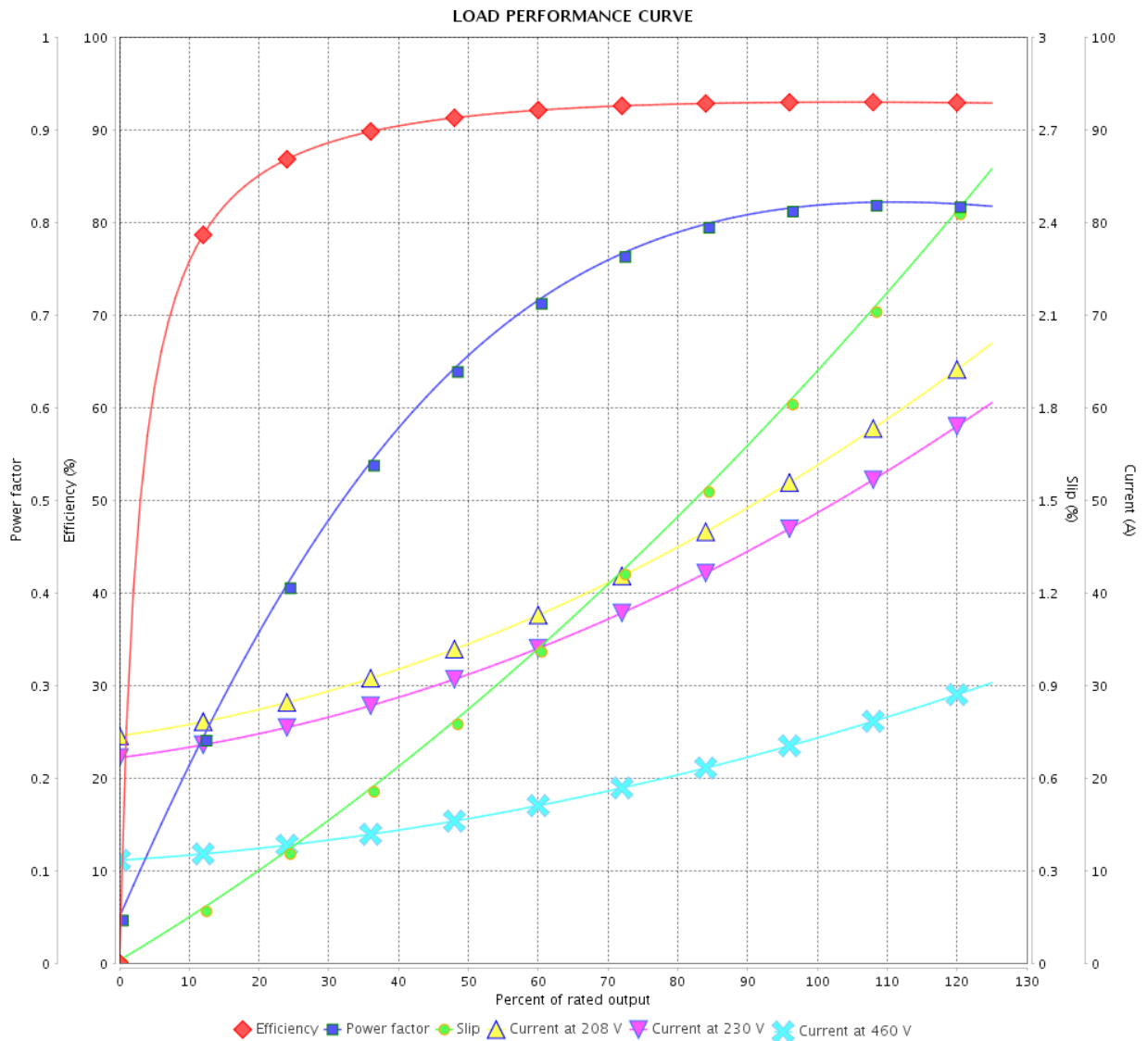


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Performance : 230/460 V 60 Hz 4P

Rated current : 49.4/24.7 A  
 LRC : 6.7  
 Rated torque : 59.5 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 300 %  
 Rated speed : 1765 rpm

Moment of inertia (J) : 2.64 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
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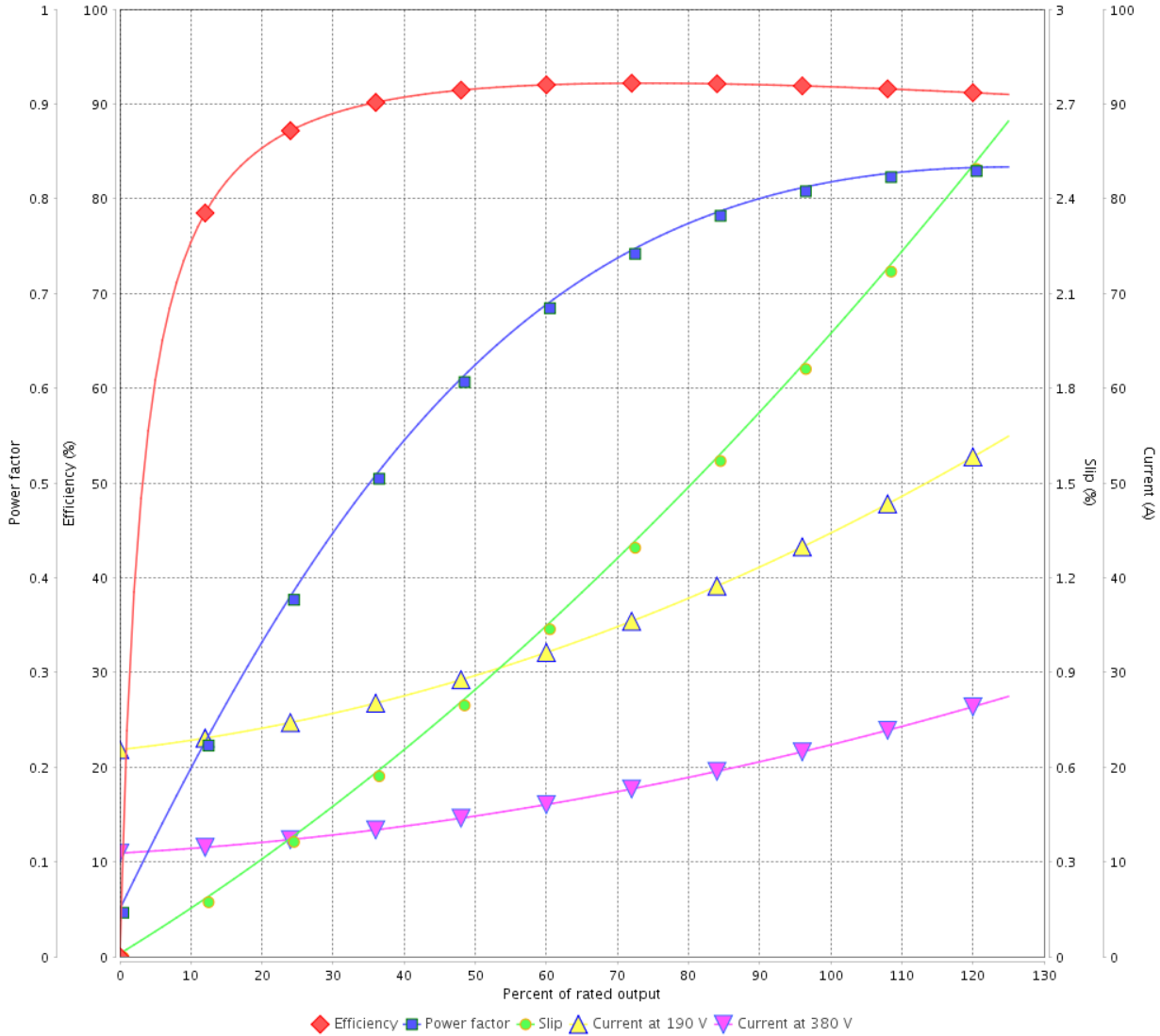
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LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 4P

Rated current : 44.4/22.2 A  
 LRC : 7.4  
 Rated torque : 53.6 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 320 %  
 Rated speed : 1470 rpm

Moment of inertia (J) : 2.64 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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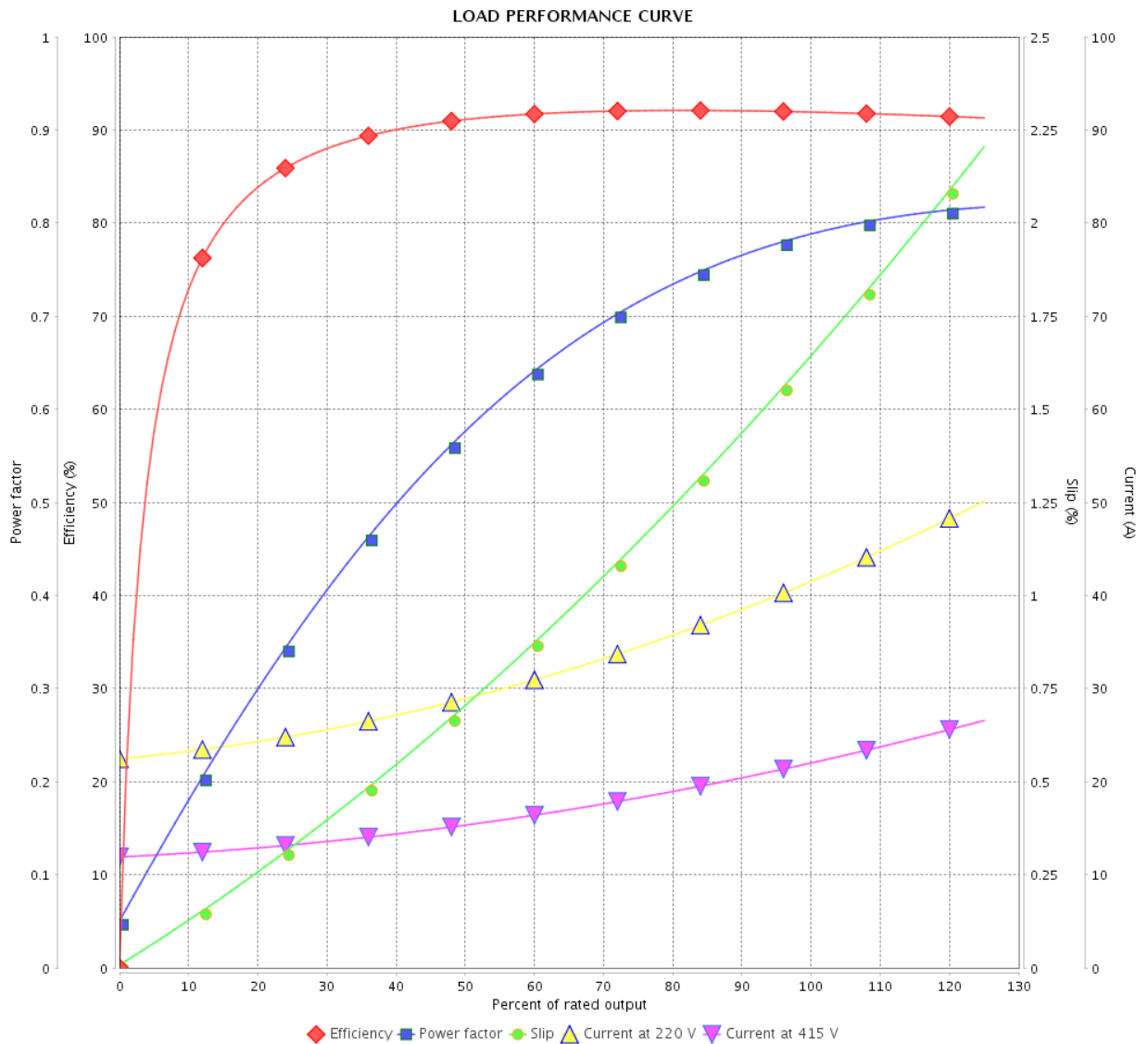


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Performance : 220/415 V 50 Hz 4P

Rated current : 41.3/21.9 A  
 LRC : 8.0  
 Rated torque : 53.4 ft.lb  
 Locked rotor torque : 310 %  
 Breakdown torque : 360 %  
 Rated speed : 1475 rpm

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# THERMAL LIMIT CURVE

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Performance : 230/460 V 60 Hz 4P

Rated current : 49.4/24.7 A  
LRC : 6.7  
Rated torque : 59.5 ft.lb  
Locked rotor torque : 270 %  
Breakdown torque : 300 %  
Rated speed : 1765 rpm

Moment of inertia (J) : 2.64 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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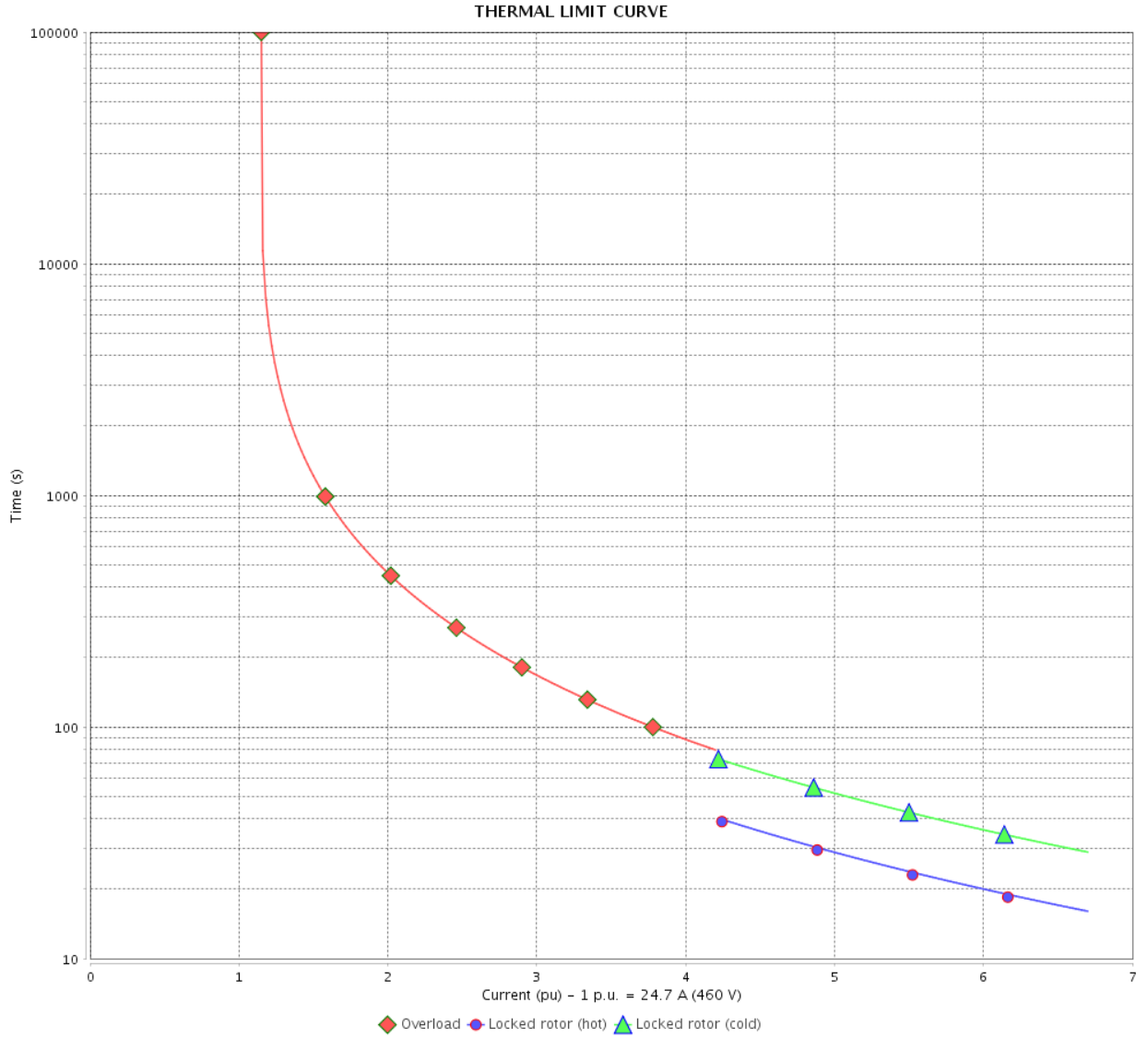


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Three Phase Induction Motor - Squirrel Cage



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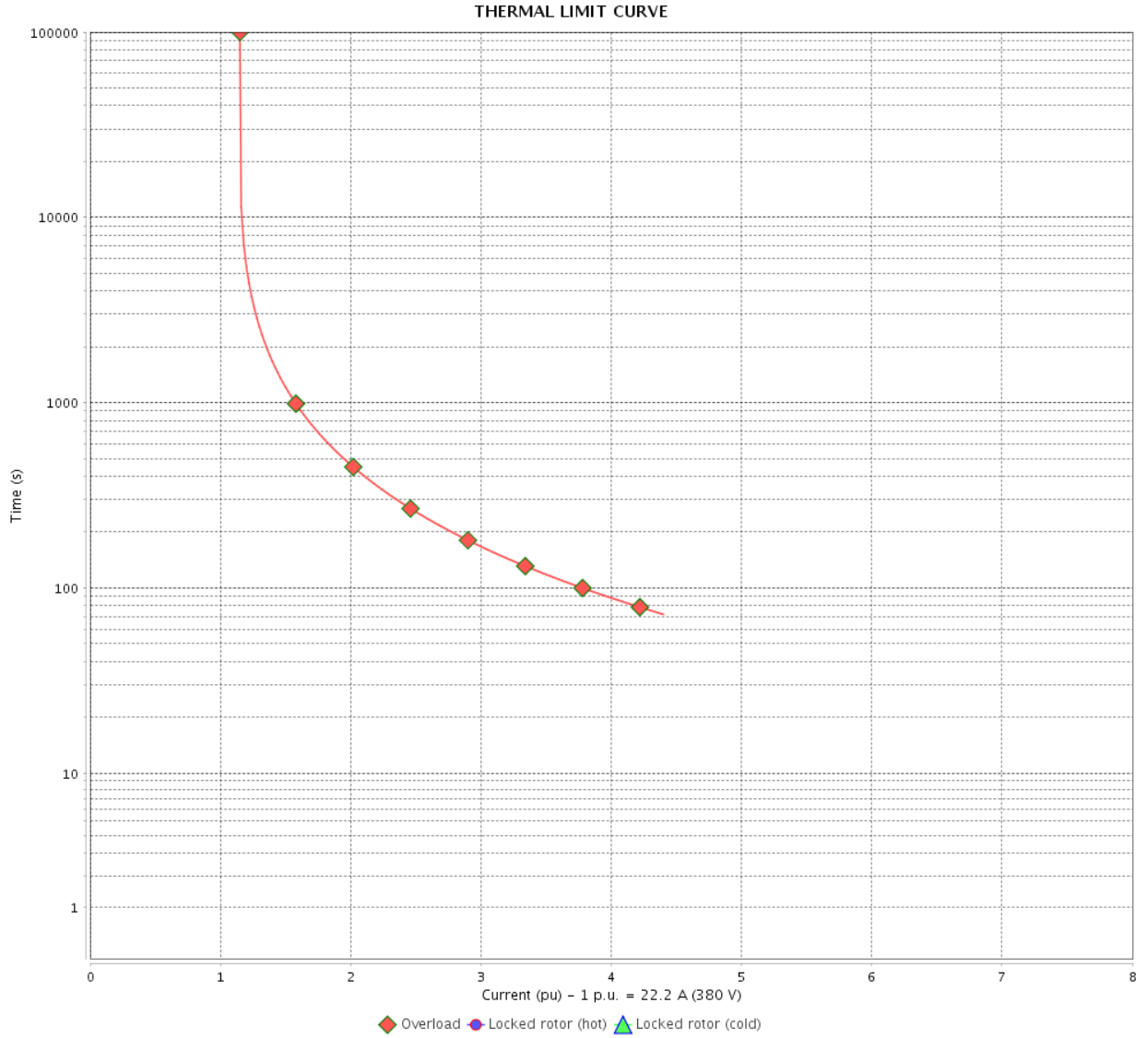
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Design : B

Heating constant

Cooling constant

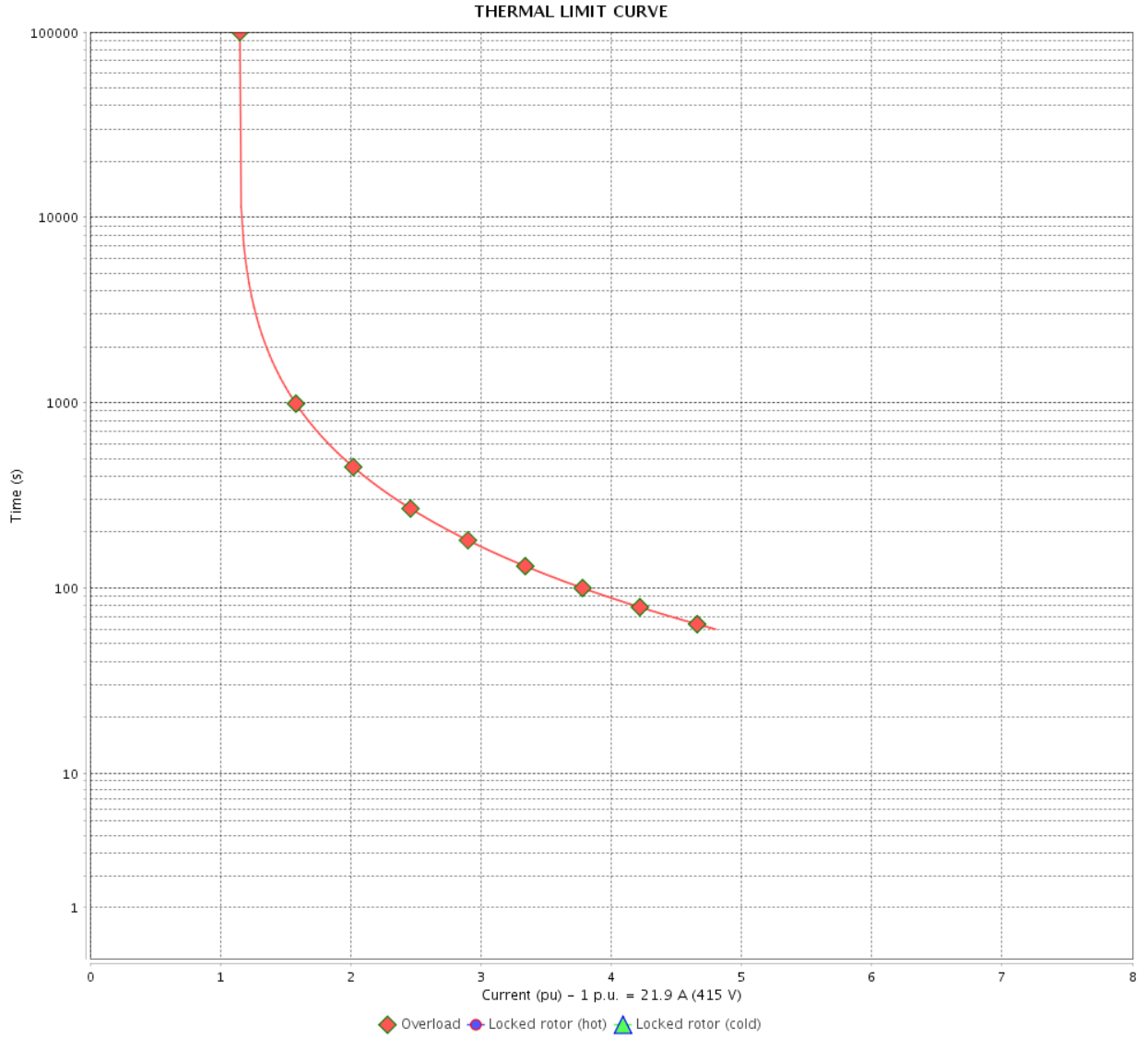
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# VFD OPERATION CURVE

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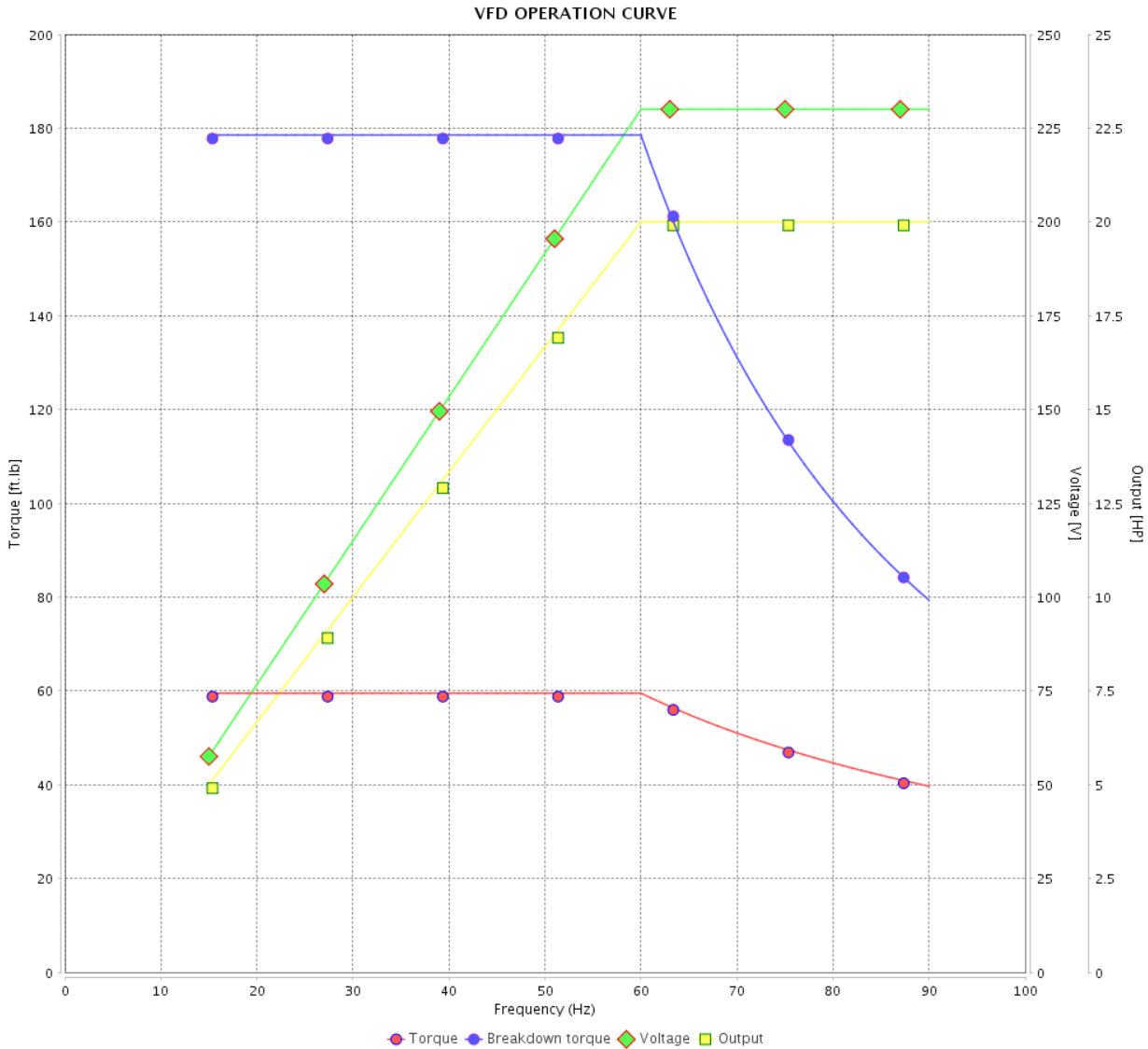


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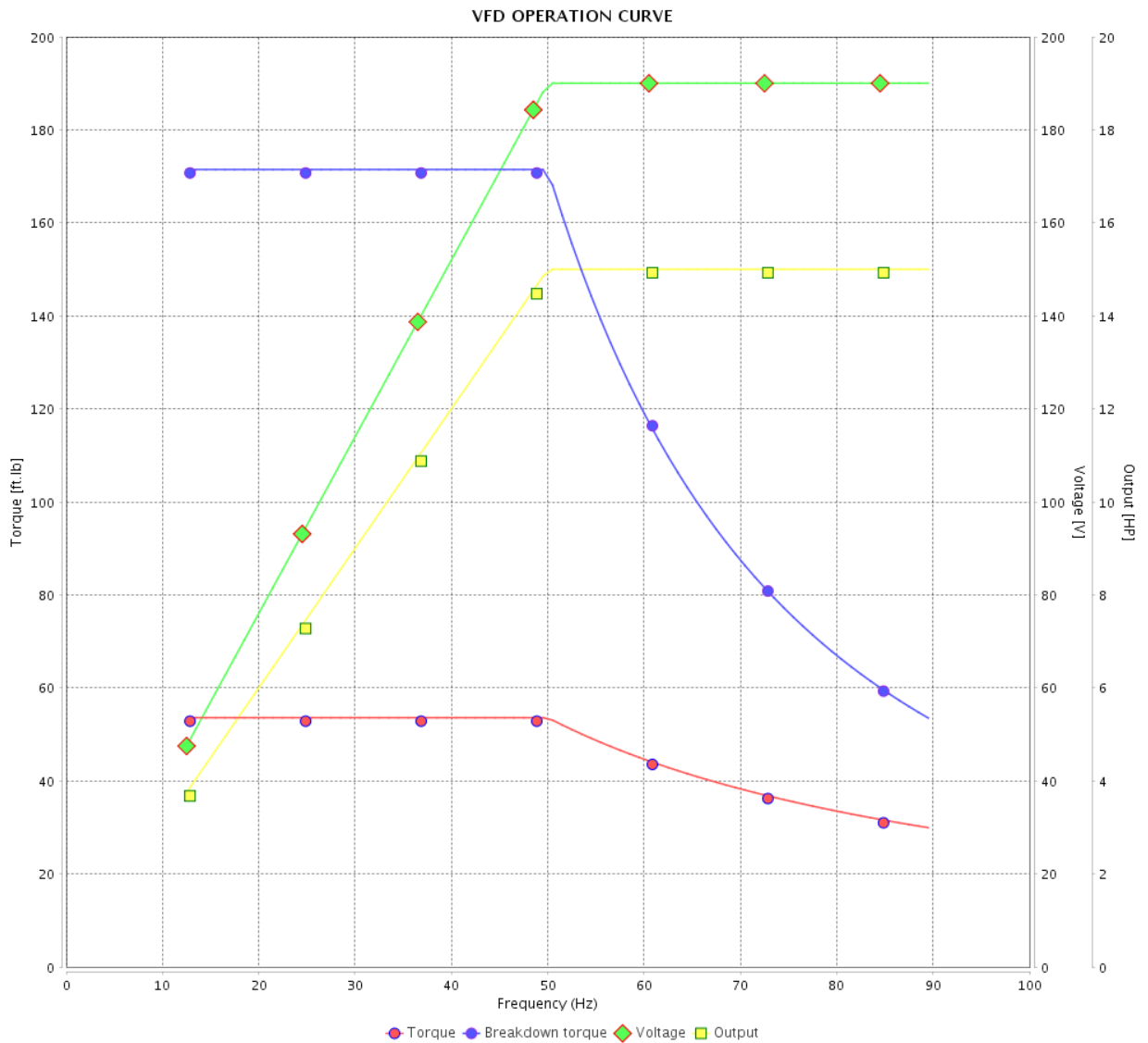


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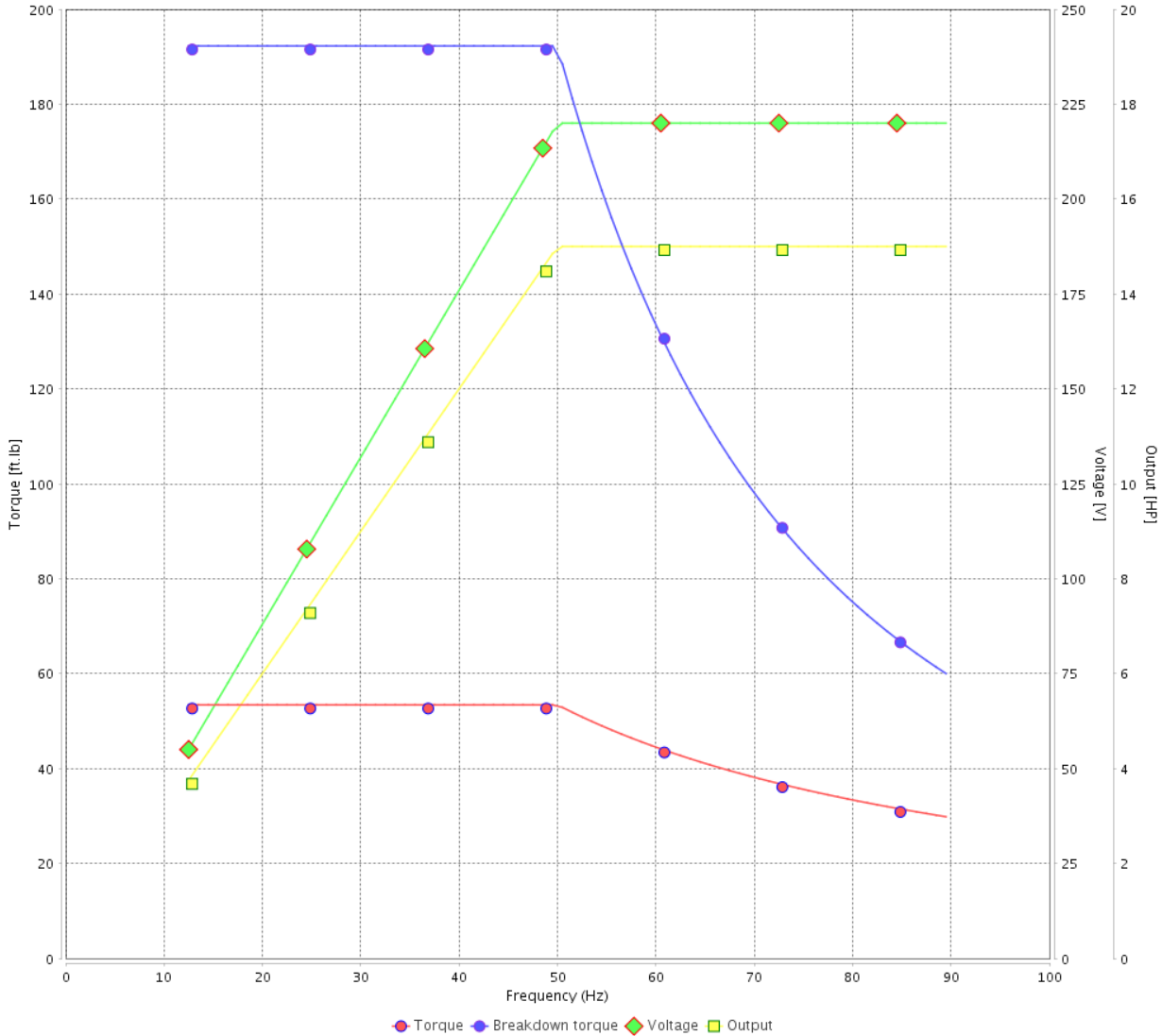
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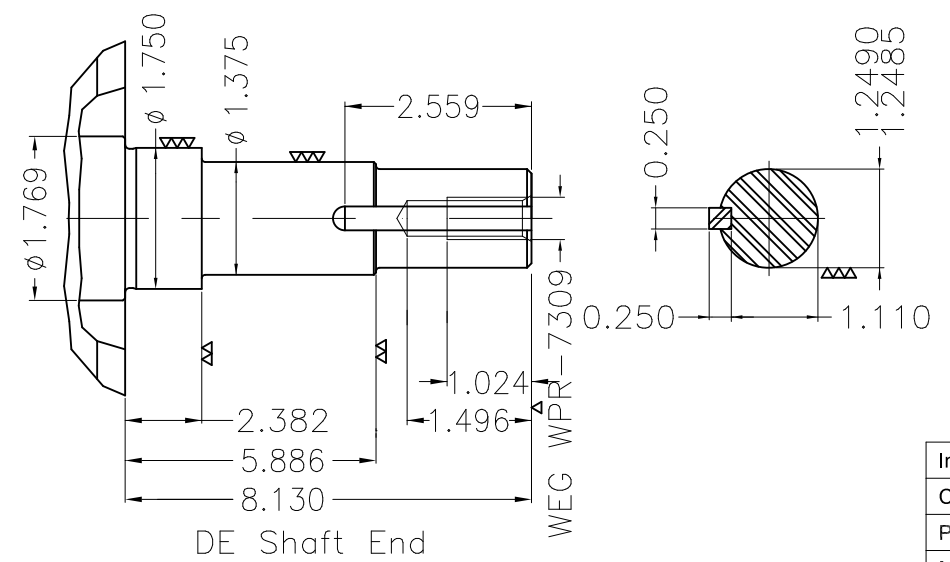
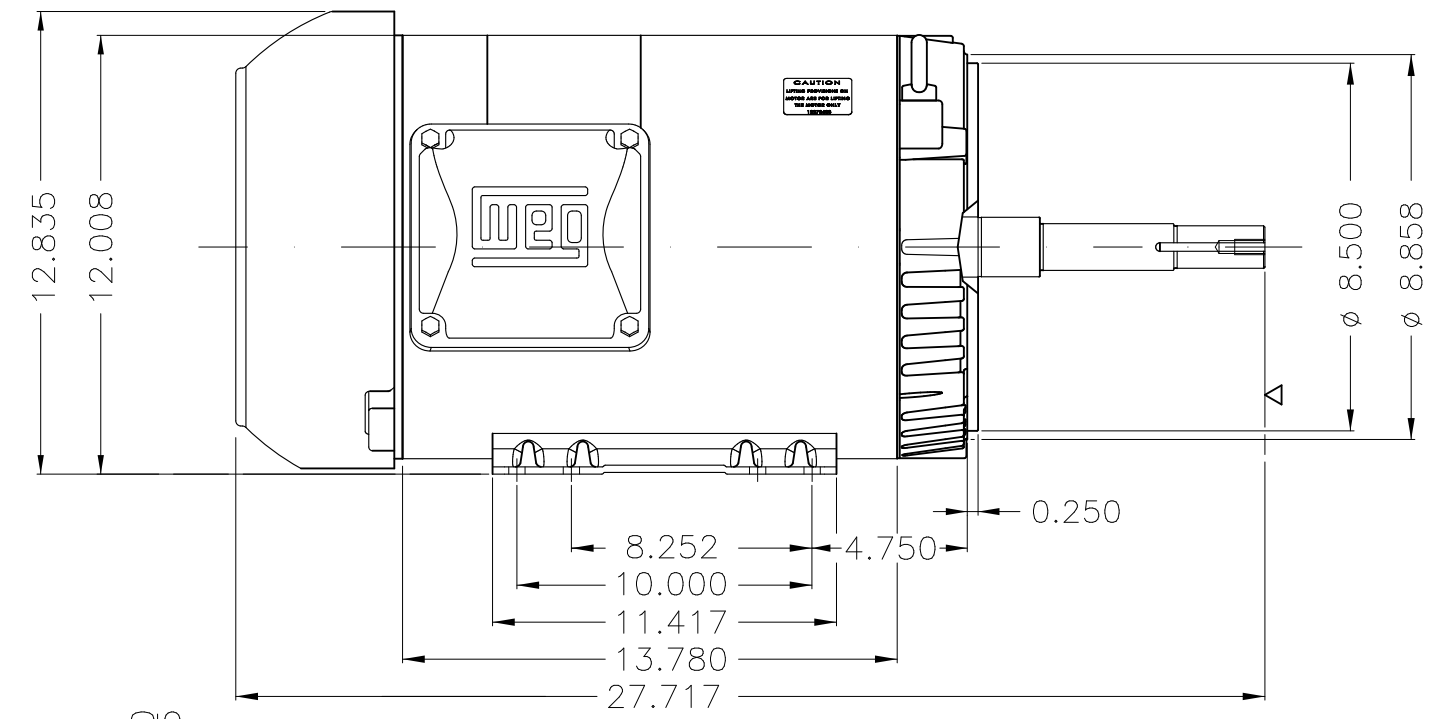
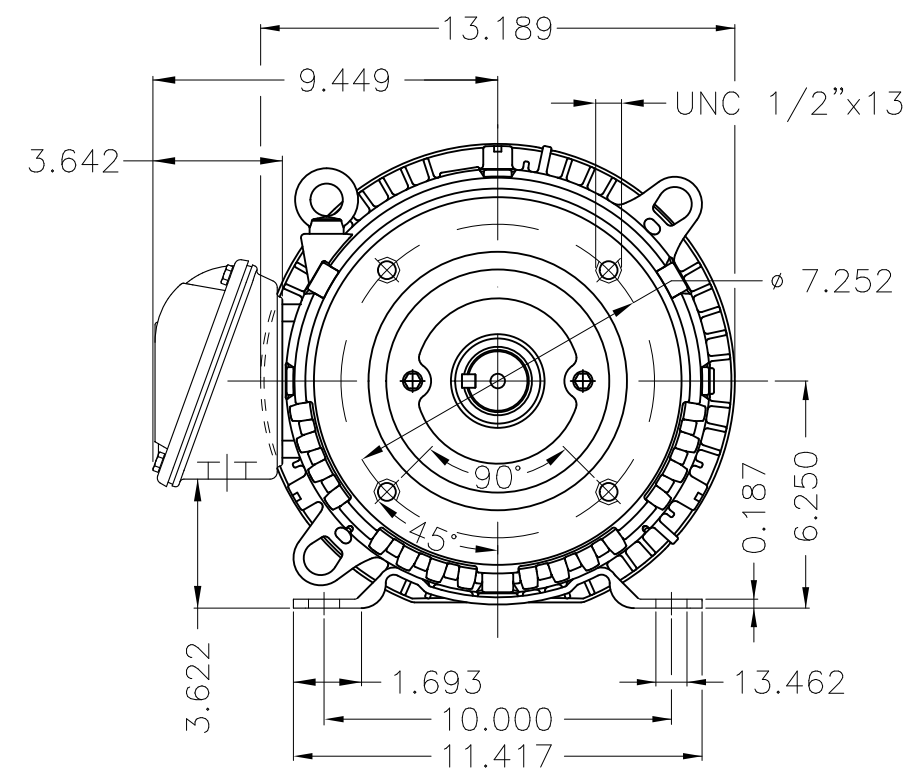
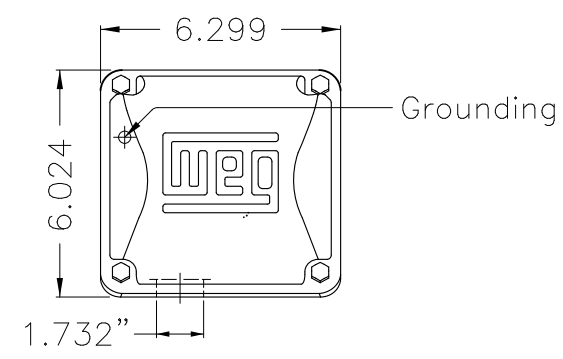
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1 2 3 4 5 6

A  
B  
C  
D  
E



EUNC 1/2"-13 WEG WPR-7309

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	PIRBUSER	THREE PH. MOTOR ROLLED STEEL CLOSE COUPLED PUMP JP 254/6P IP55 TEFC					
CHECKED		FRAME 254/6JP IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	WDD			

20 HP 04 Poles 60 Hz

REL DT. WMO Jaragua do Sul Product Engineering SHEET 1 / 1



Dimensions in inches XME A3