

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: High Efficiency Three-Phase	Product code :	13982681		
		Catalog # :	.1818EP3EAL63-W22		
Frame	: 63	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: B3L(E)		
Duty cycle	: 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>3</sup>	: 14.9 lb		
Protection degree	: IP55	Moment of inertia (J)	: 0.0133 sq.ft.lb		
Design	: N				
Output [HP]	0.25	0.25	0.25	0.25	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	1.02/0.512	0.551	0.554	0.567	
L. R. Amperes [A]	4.71/2.36	2.53	2.55	2.61	
LRC [A]	4.6	4.6	4.6	4.6	
No load current [A]	0.940/0.470	0.460	0.520	0.540	
Rated speed [RPM]	1710	1390	1400	1410	
Slip [%]	5.00	7.33	6.67	6.00	
Rated torque [ft.lb]	0.768	0.944	0.938	0.931	
Locked rotor torque [%]	280	200	229	260	
Breakdown torque [%]	290	210	240	270	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	34s (cold) 19s (hot)	34s (cold) 19s (hot)	34s (cold) 19s (hot)	34s (cold) 19s (hot)	
Noise level <sup>2</sup>	48.0 dB(A)	44.0 dB(A)	44.0 dB(A)	44.0 dB(A)	
Efficiency (%)	25%	61.0	61.0	59.5	58.0
	50%	63.0	63.0	61.5	60.0
	75%	67.0	66.0	66.0	66.0
	100%	69.0	68.0	68.0	68.0
Power Factor	25%	0.22	0.27	0.24	0.22
	50%	0.42	0.50	0.46	0.42
	75%	0.54	0.63	0.59	0.54
	100%	0.64	0.73	0.69	0.65
Bearing type	: <u>Drive end</u> 6201 ZZ <u>Non drive end</u> 6201 ZZ	Foundation loads			
Sealing	: Oil Seal Oil Seal	Max. traction	: 23 lb		
Lubrication interval	: - -	Max. compression	: 38 lb		
Lubricant amount	: - -				
Lubricant type	: Mobil Polyrex EM				
Notes					
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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Date	05/04/2022		1 / 17		

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : High Efficiency Three-Phase

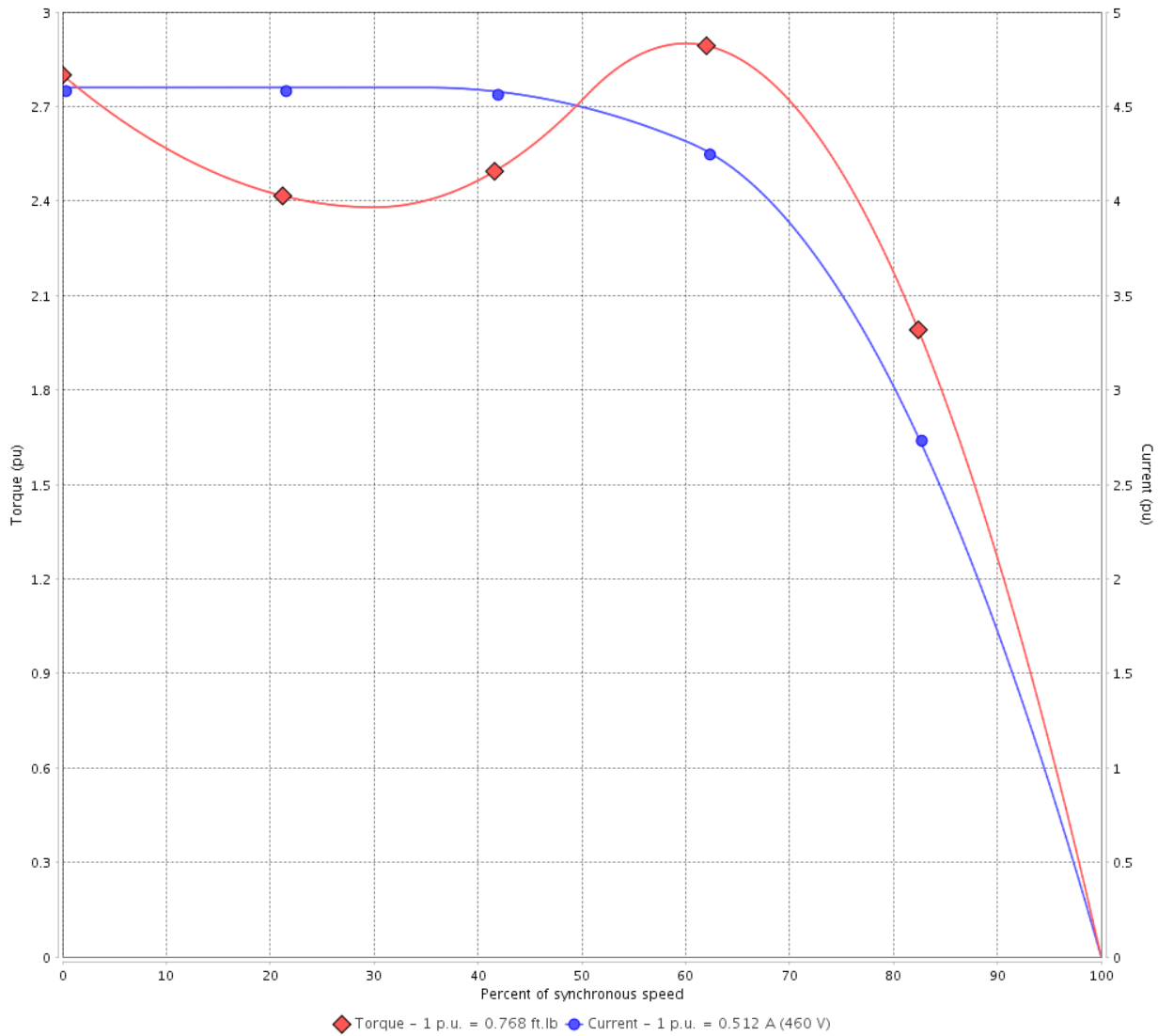
Product code :

13982681

Catalog # :

.1818EP3EAL63-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 1.02/0.512 A  
 LRC : 4.6  
 Rated torque : 0.768 ft.lb  
 Locked rotor torque : 280 %  
 Breakdown torque : 290 %  
 Rated speed : 1710 rpm

Moment of inertia (J) : 0.0133 sq.ft.lb  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : N

Locked rotor time : 34s (cold) 19s (hot)

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Date	05/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



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

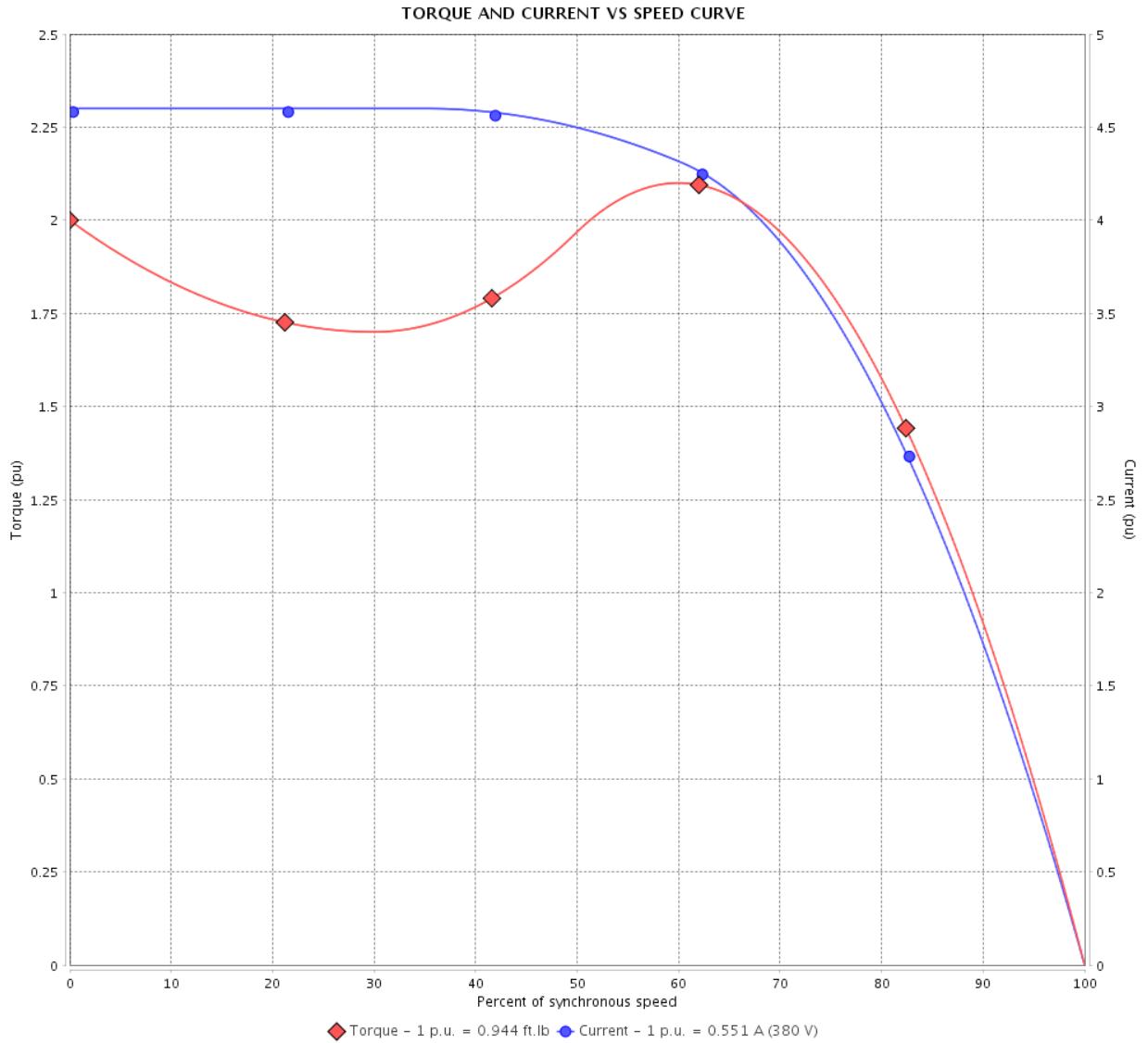
Product line : High Efficiency Three-Phase

Product code :

13982681

Catalog # :

.1818EP3EAL63-W22



Performance : 380 V 50 Hz 4P IE2

Rated current	: 0.551 A	Moment of inertia (J)	: 0.0133 sq.ft.lb
LRC	: 4.6	Duty cycle	: S1
Rated torque	: 0.944 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 1390 rpm	Design	: N

Locked rotor time : 34s (cold) 19s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



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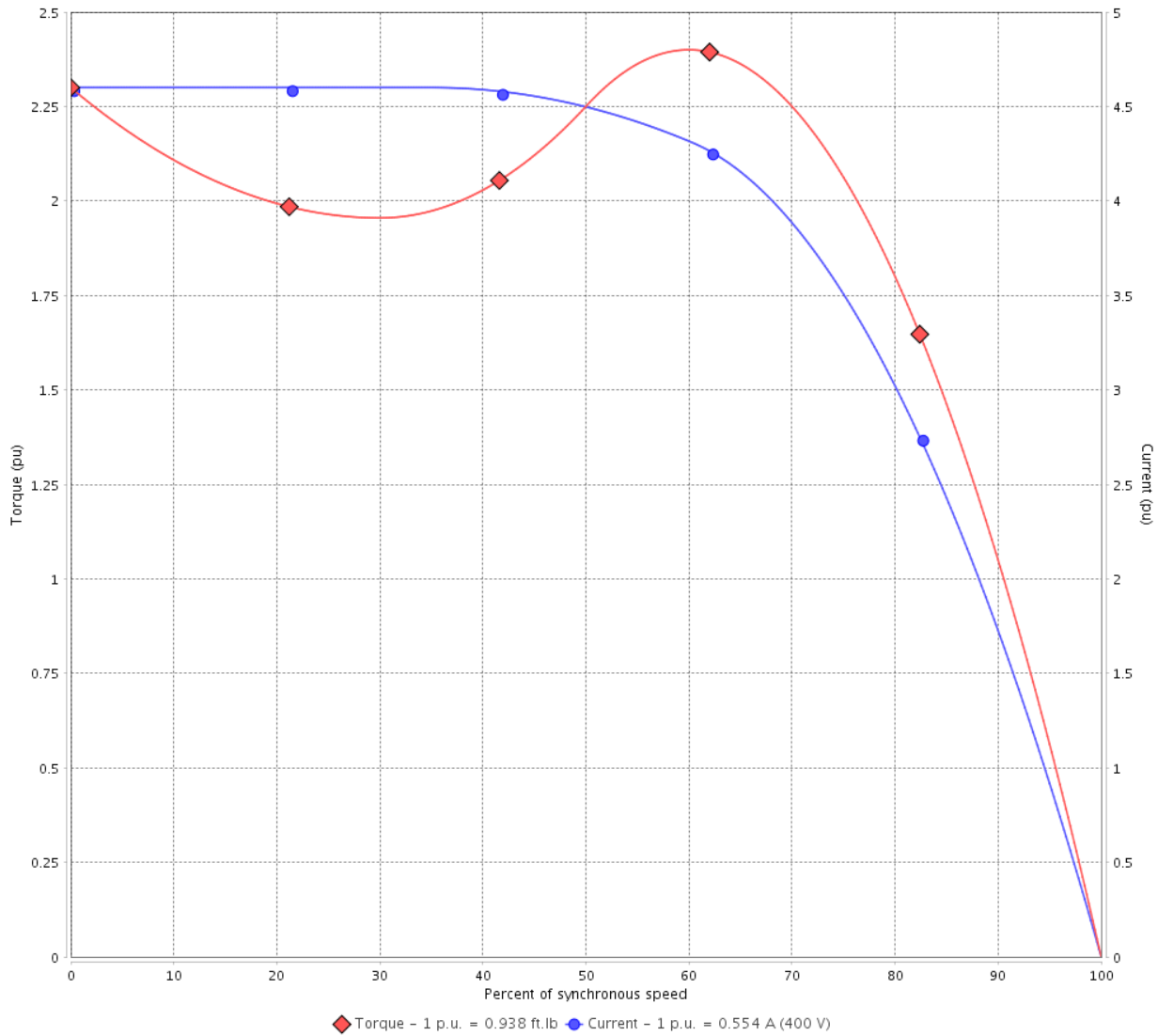
Product code :

13982681

Catalog # :

.1818EP3EAL63-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE2

Rated current : 0.554 A  
 LRC : 4.6  
 Rated torque : 0.938 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 240 %  
 Rated speed : 1400 rpm

Moment of inertia (J) : 0.0133 sq.ft.lb  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Locked rotor time : 34s (cold) 19s (hot)

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

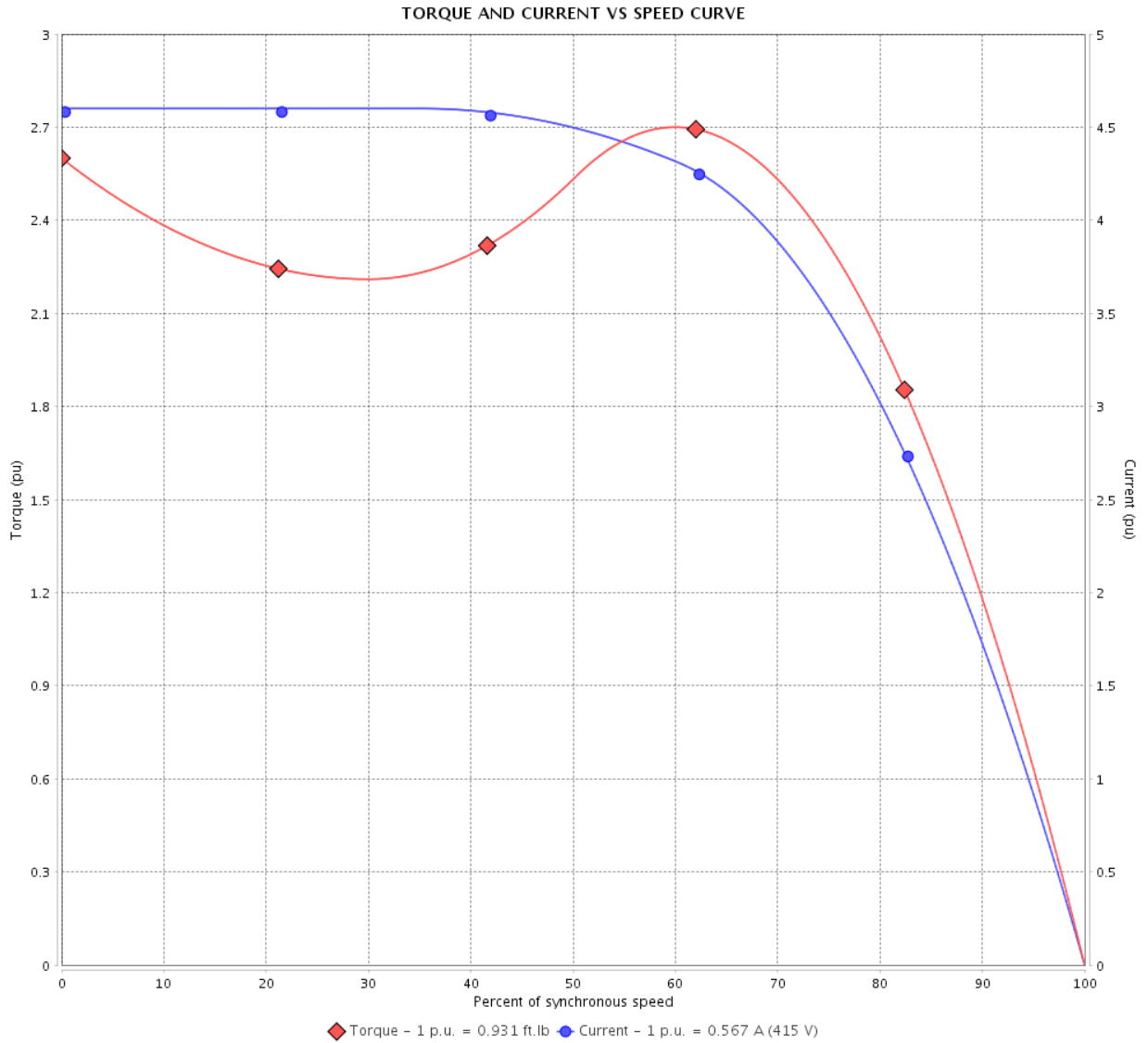
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Catalog # :

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Performance : 415 V 50 Hz 4P IE2

Rated current	: 0.567 A	Moment of inertia (J)	: 0.0133 sq.ft.lb
LRC	: 4.6	Duty cycle	: S1
Rated torque	: 0.931 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1410 rpm	Design	: N

Locked rotor time : 34s (cold) 19s (hot)

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# LOAD PERFORMANCE CURVE

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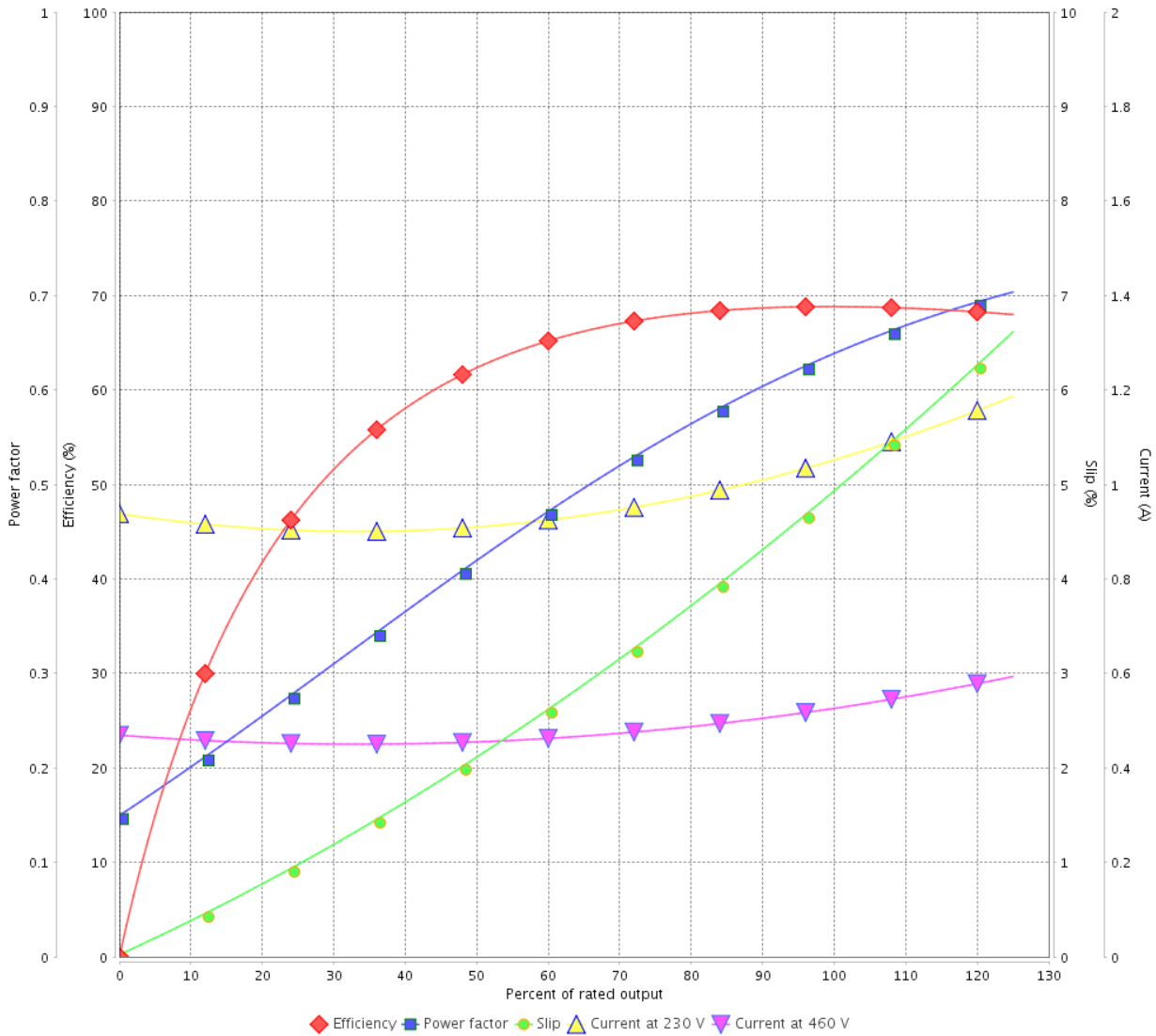
Product code :

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Catalog # :

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LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 1.02/0.512 A  
 LRC : 4.6  
 Rated torque : 0.768 ft.lb  
 Locked rotor torque : 280 %  
 Breakdown torque : 290 %  
 Rated speed : 1710 rpm

Moment of inertia (J) : 0.0133 sq.ft.lb  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : N

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



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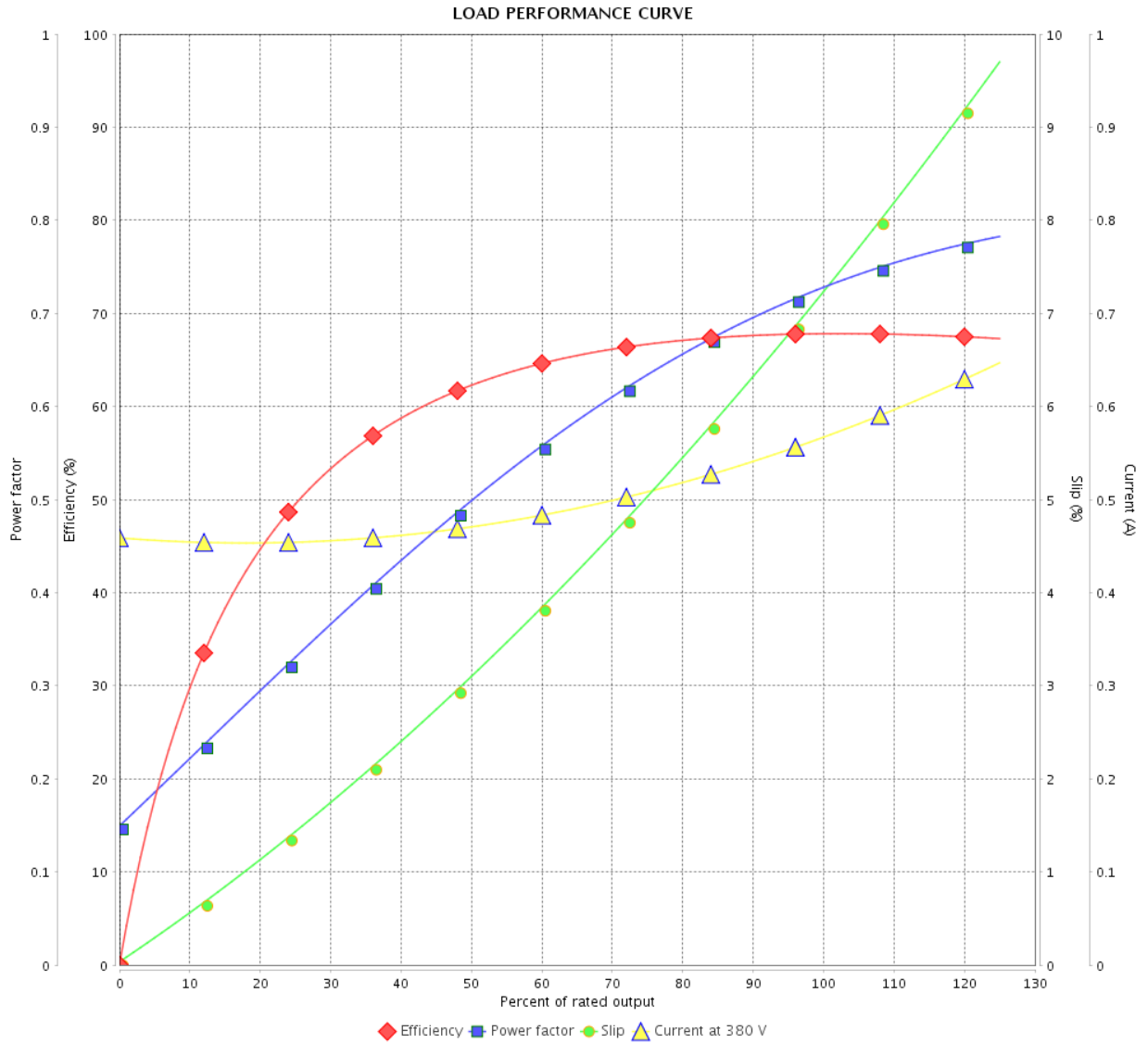
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Performance : 380 V 50 Hz 4P IE2

Rated current : 0.551 A  
 LRC : 4.6  
 Rated torque : 0.944 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 210 %  
 Rated speed : 1390 rpm

Moment of inertia (J) : 0.0133 sq.ft.lb  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
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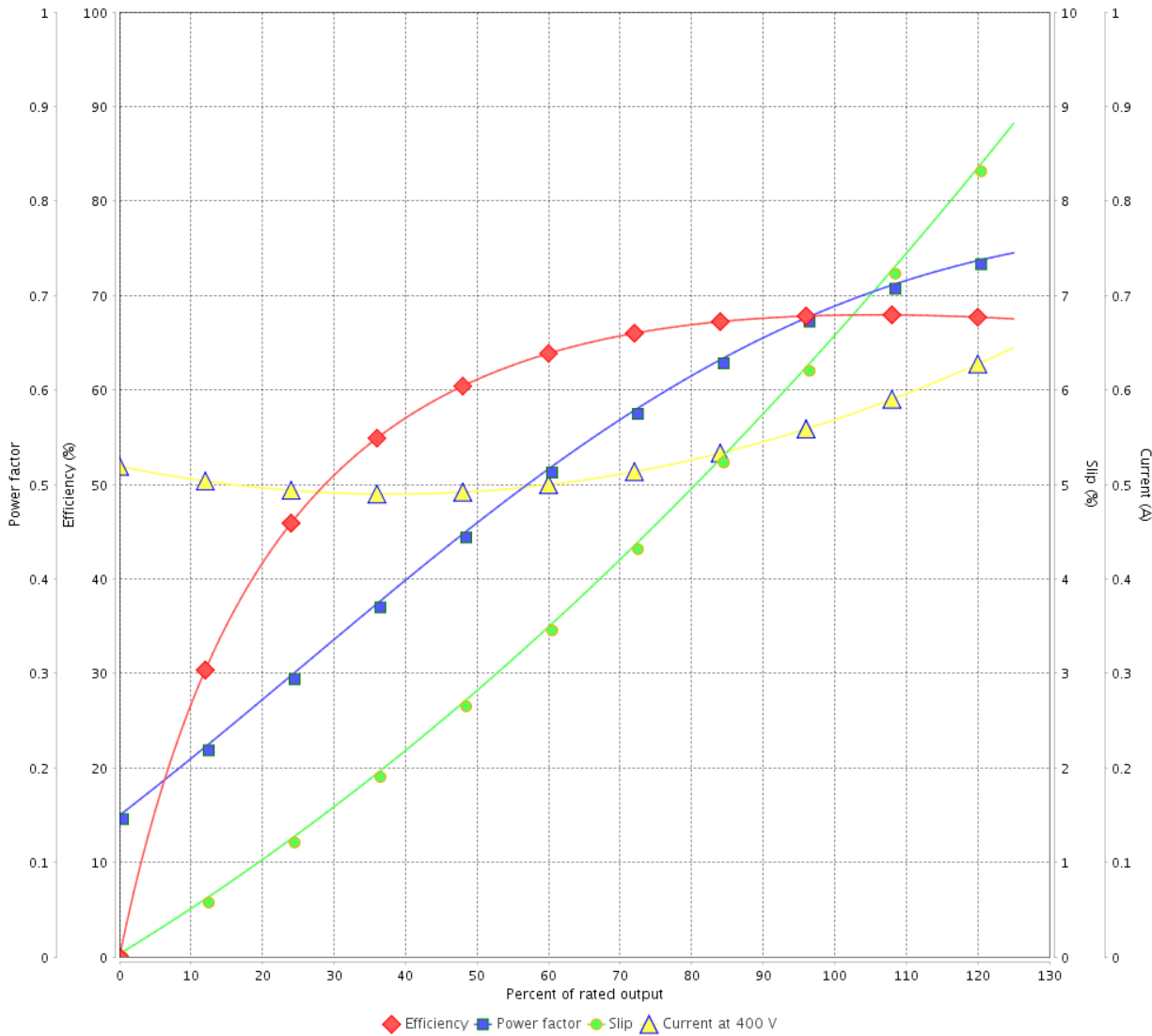
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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 4P IE2

Rated current : 0.554 A  
 LRC : 4.6  
 Rated torque : 0.938 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 240 %  
 Rated speed : 1400 rpm

Moment of inertia (J) : 0.0133 sq.ft.lb  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



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

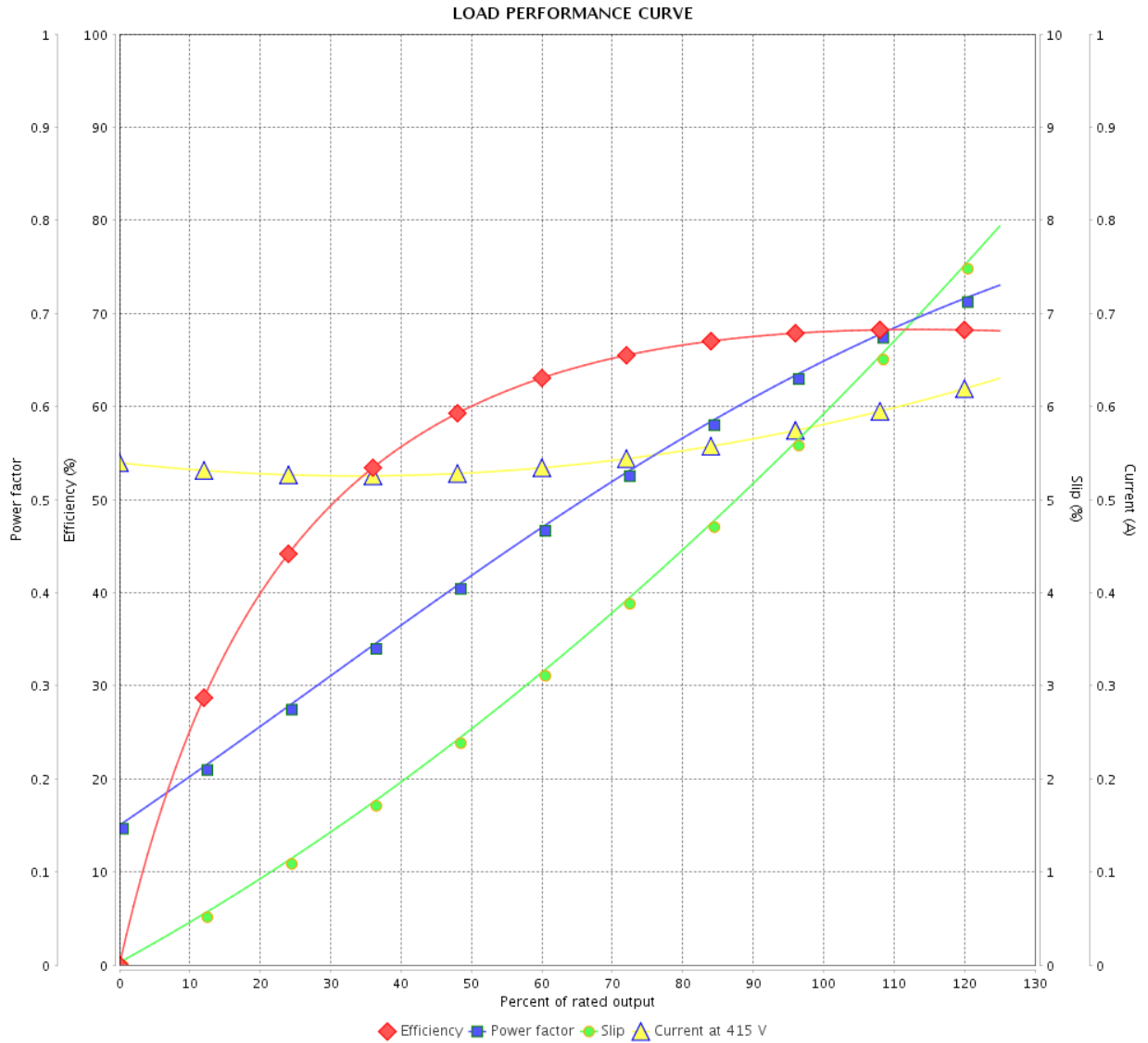
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 Locked rotor torque : 260 %  
 Breakdown torque : 270 %  
 Rated speed : 1410 rpm

Moment of inertia (J) : 0.0133 sq.ft.lb  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



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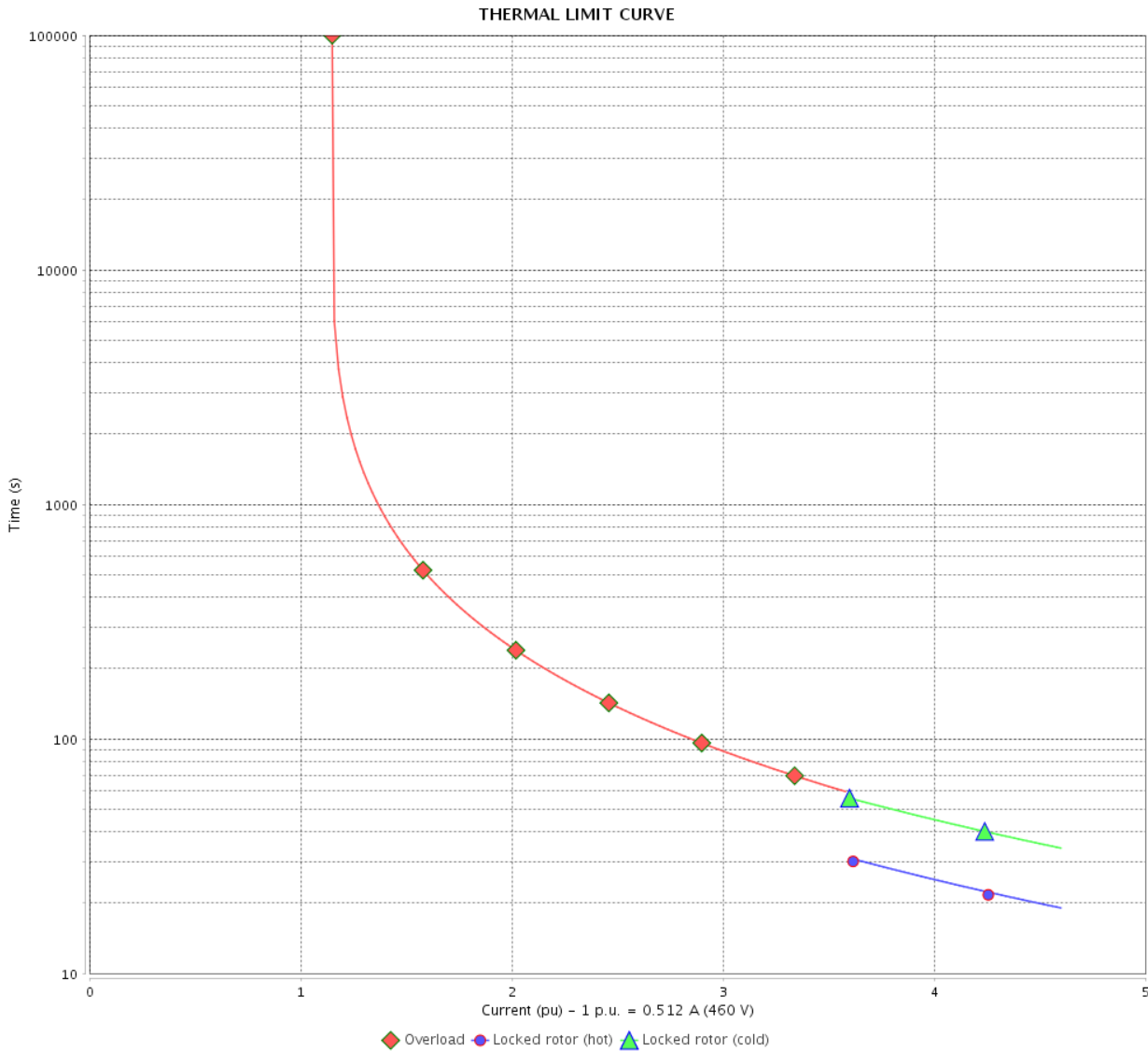
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Rated current : 1.02/0.512 A  
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 Locked rotor torque : 280 %  
 Breakdown torque : 290 %  
 Rated speed : 1710 rpm

Moment of inertia (J) : 0.0133 sq.ft.lb  
 Duty cycle : S1  
 Insulation class : F  
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 Temperature rise : 80 K  
 Design : N

Heating constant

Cooling constant

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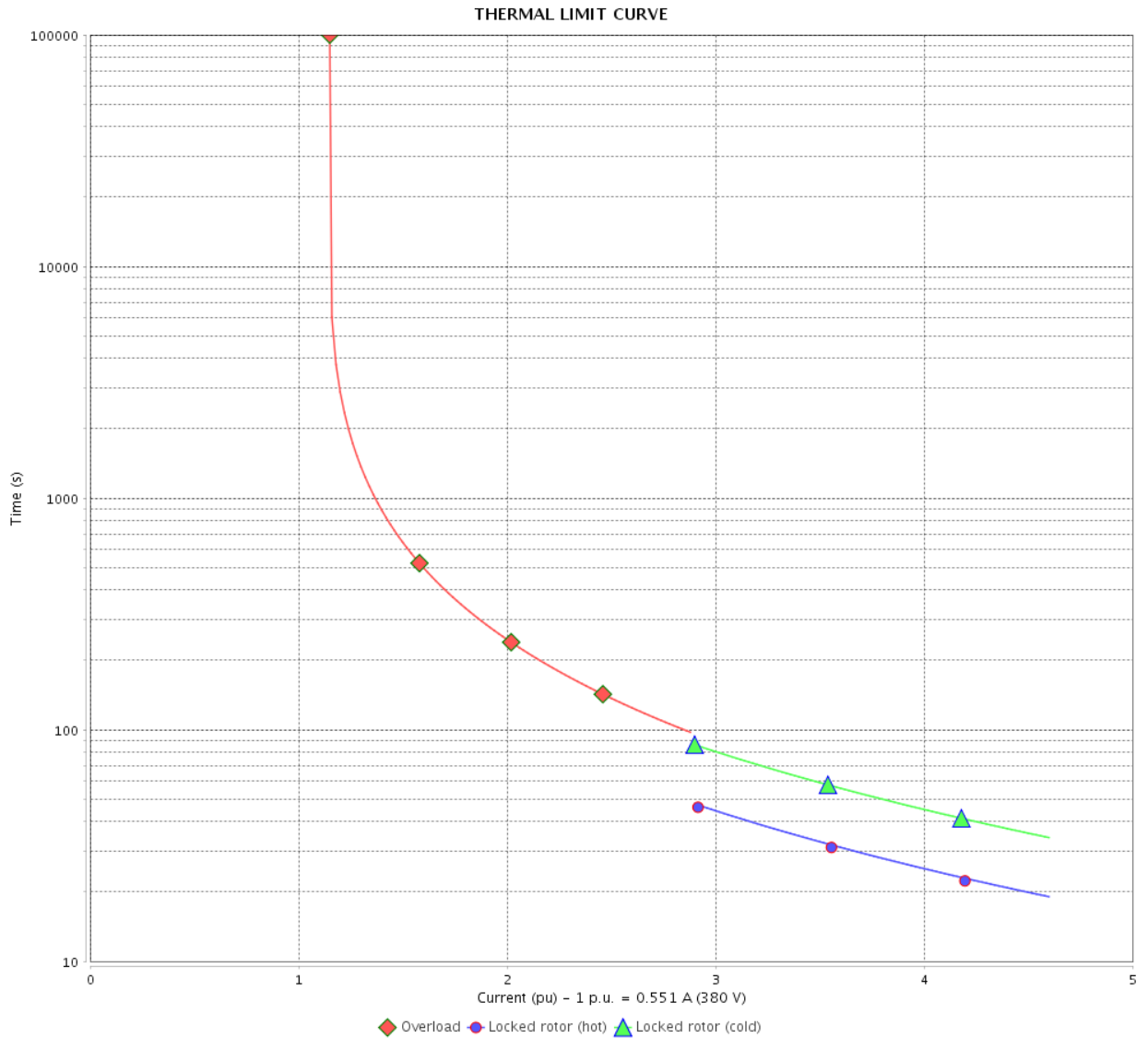
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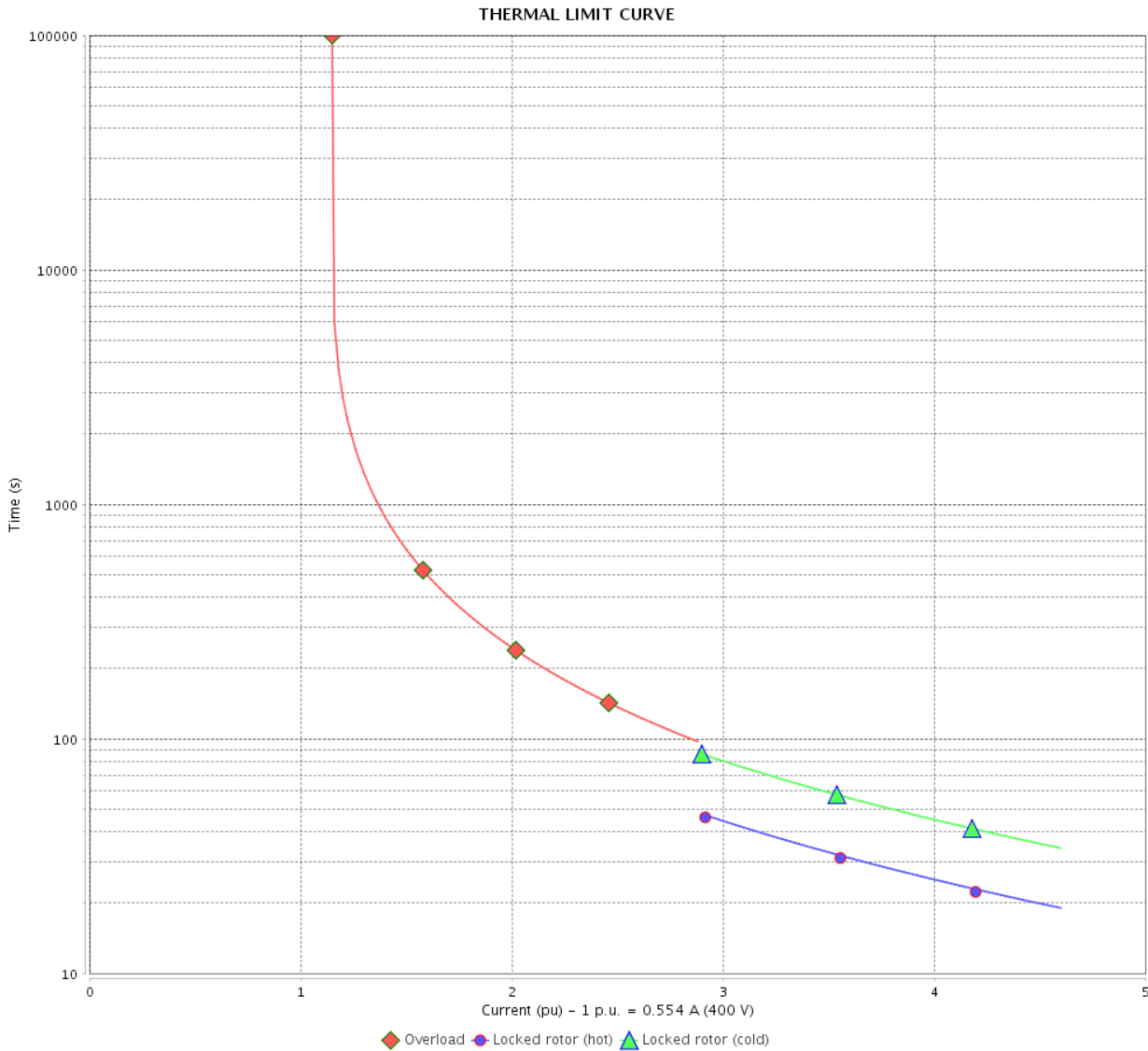
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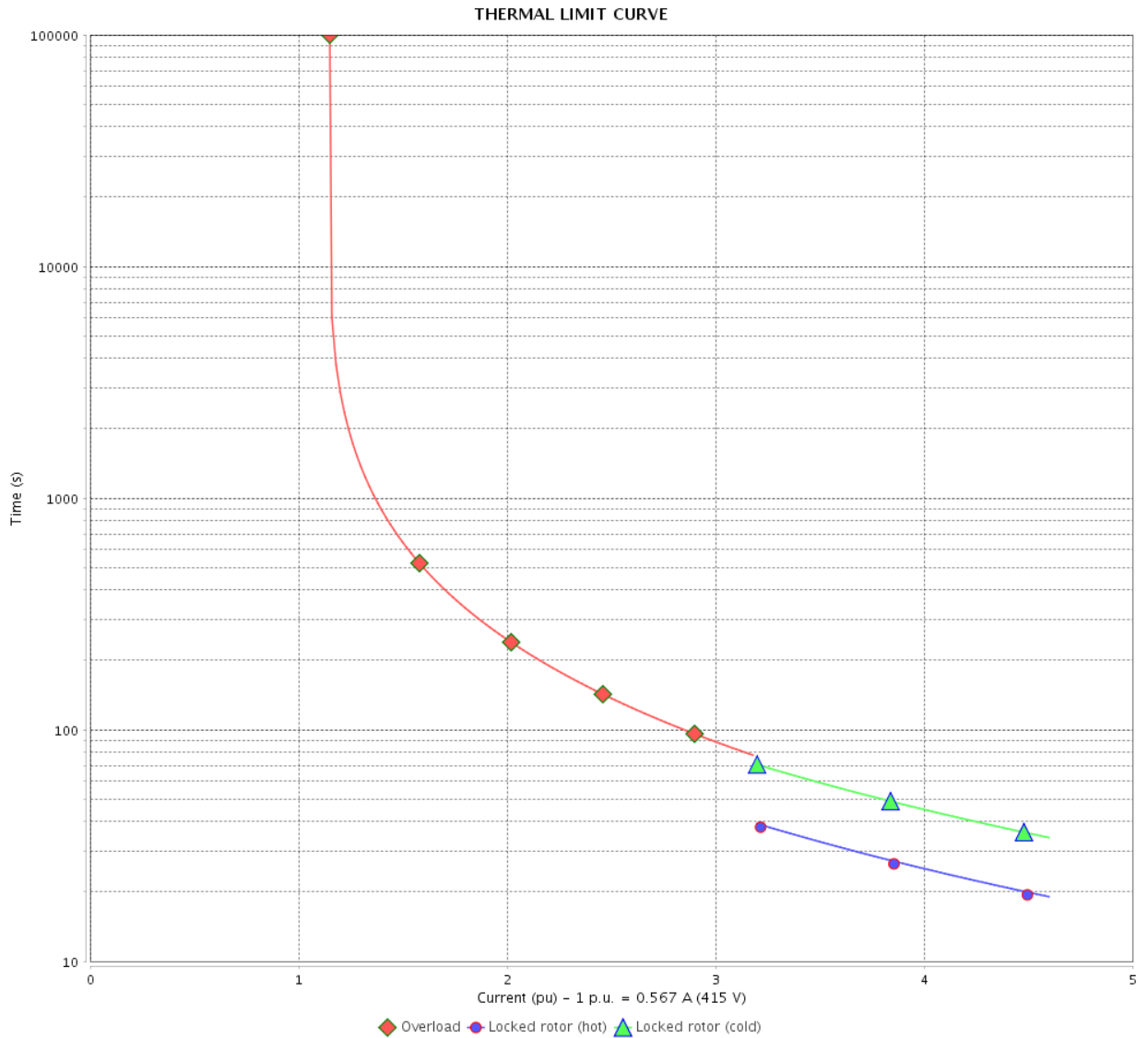
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Performance : 415 V 50 Hz 4P IE2

Rated current : 0.567 A  
 LRC : 4.6  
 Rated torque : 0.931 ft.lb  
 Locked rotor torque : 260 %  
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 Duty cycle : S1  
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 Design : N

Heating constant

Cooling constant

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



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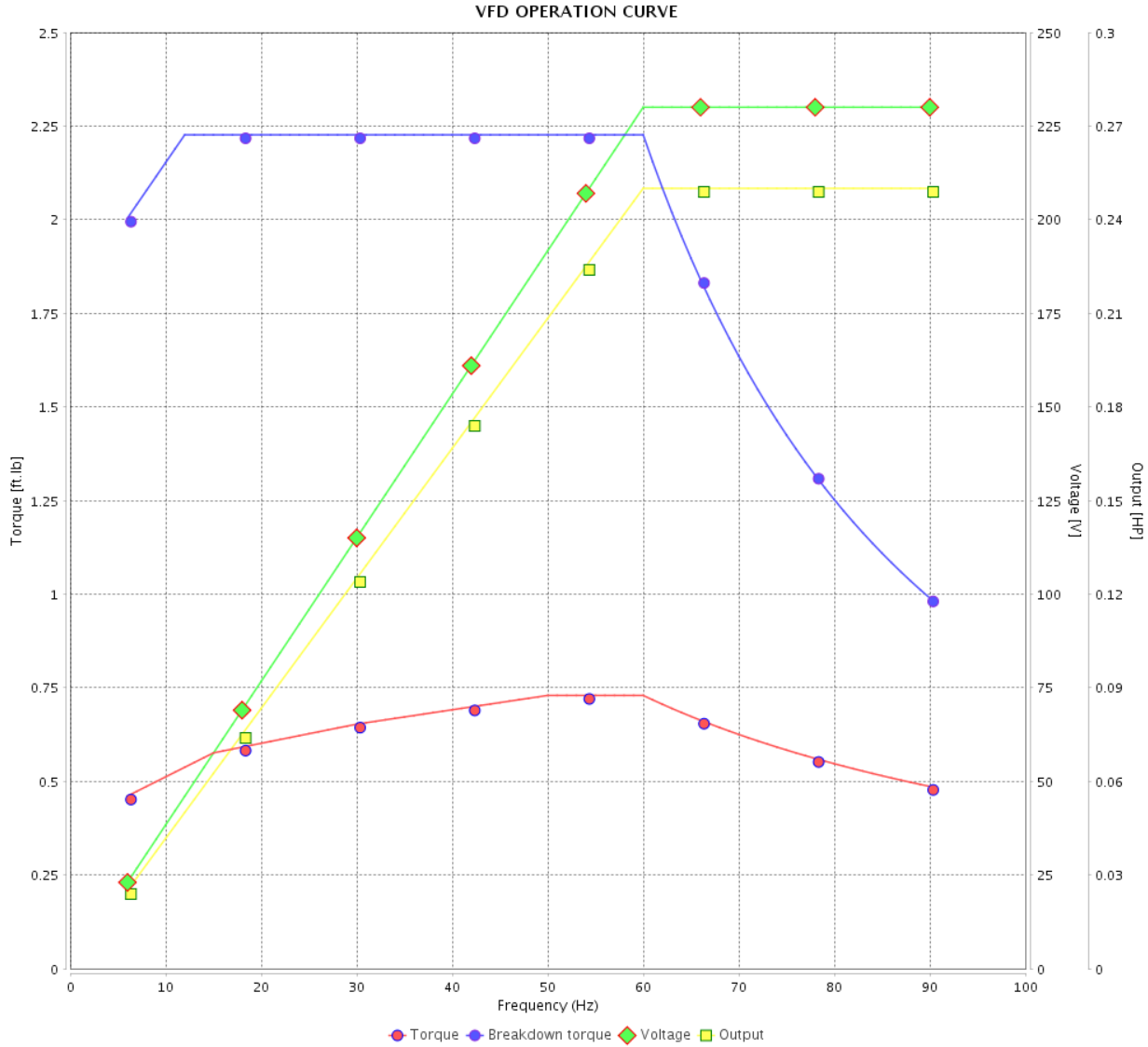
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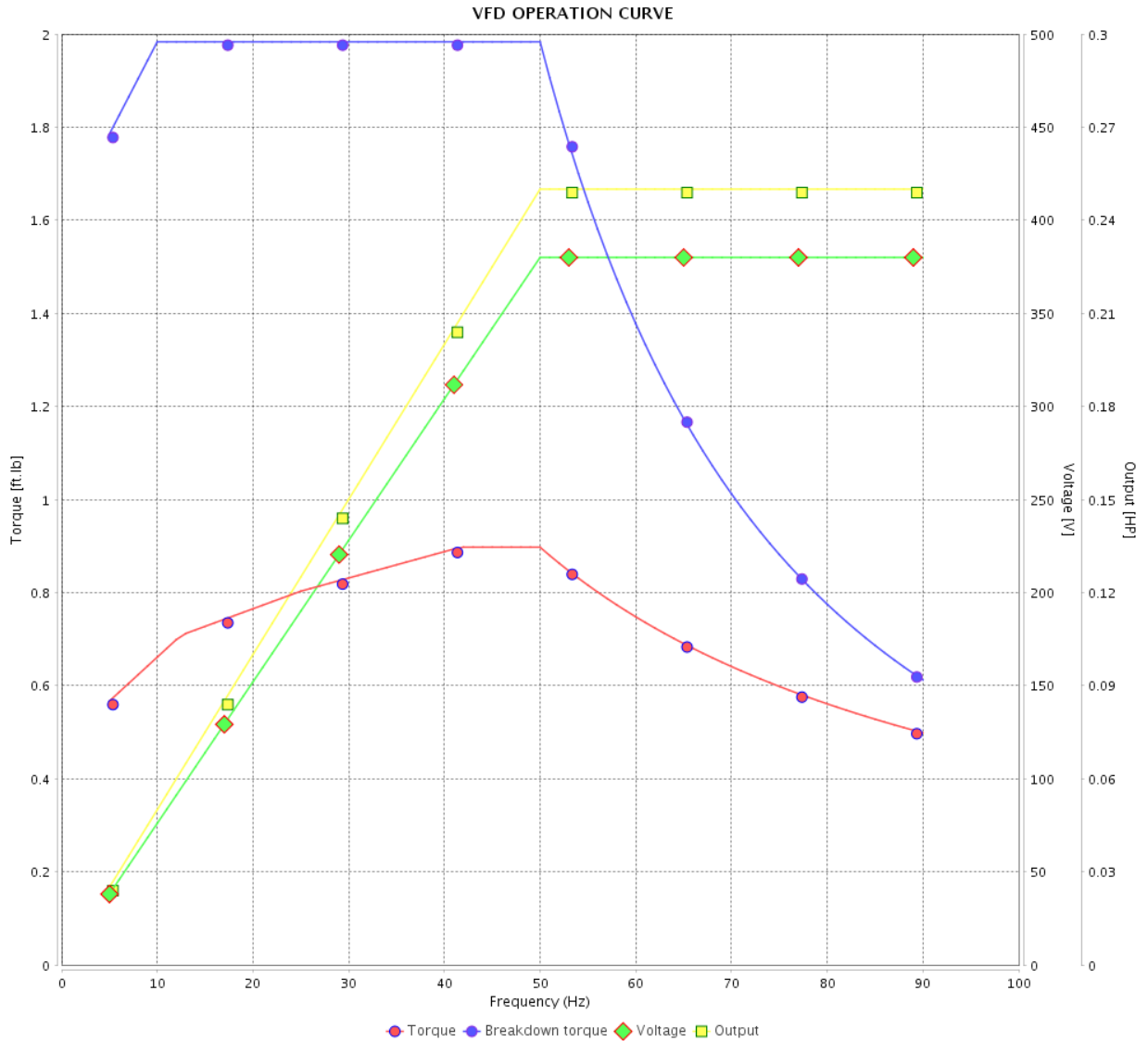
## Three Phase Induction Motor - Squirrel Cage



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

Product line : High Efficiency Three-Phase

Product code : 13982681  
 Catalog # : .1818EP3EAL63-W22



Performance : 380 V 50 Hz 4P IE2

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Date		05/04/2022		

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



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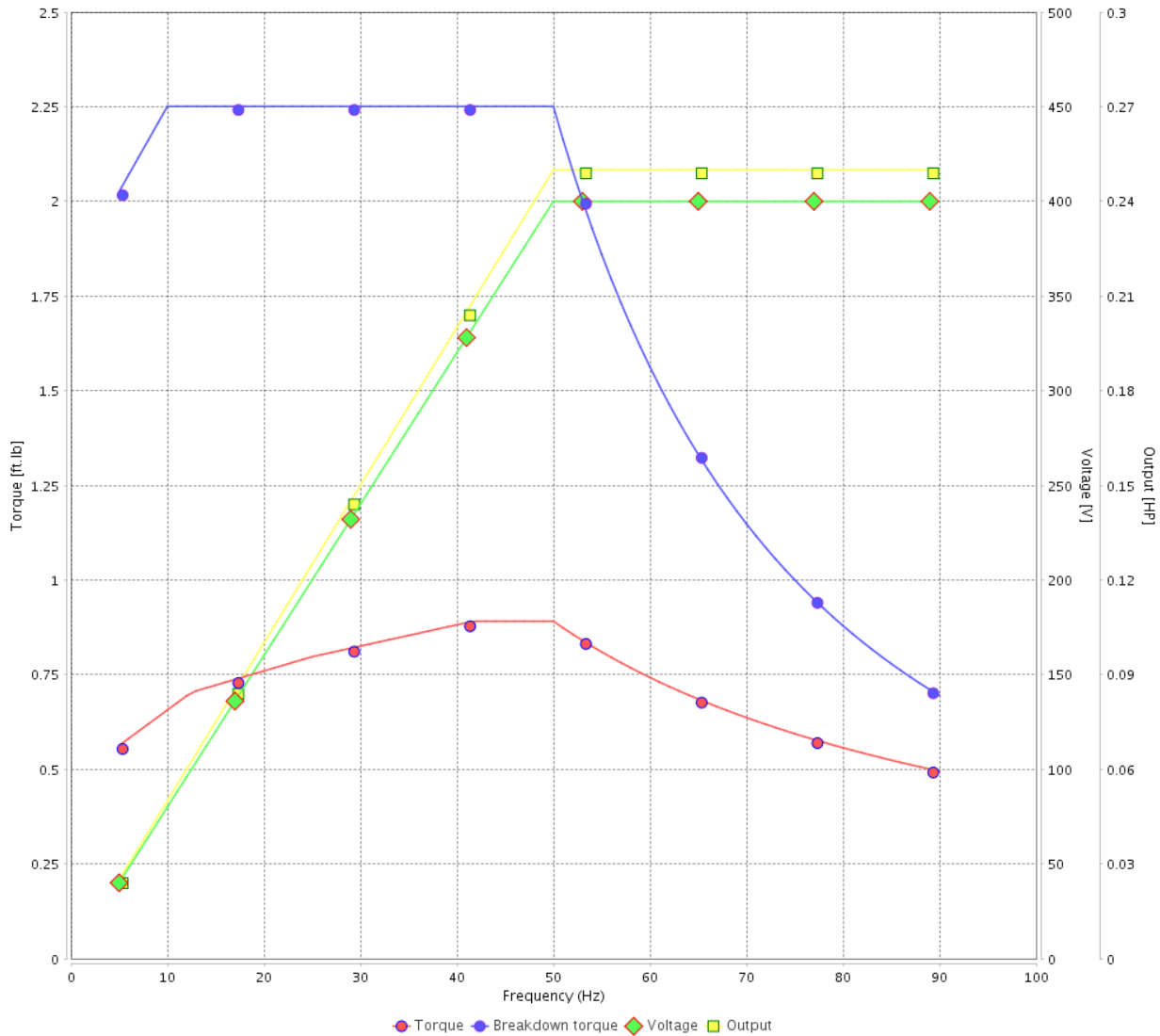
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VFD OPERATION CURVE



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# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage



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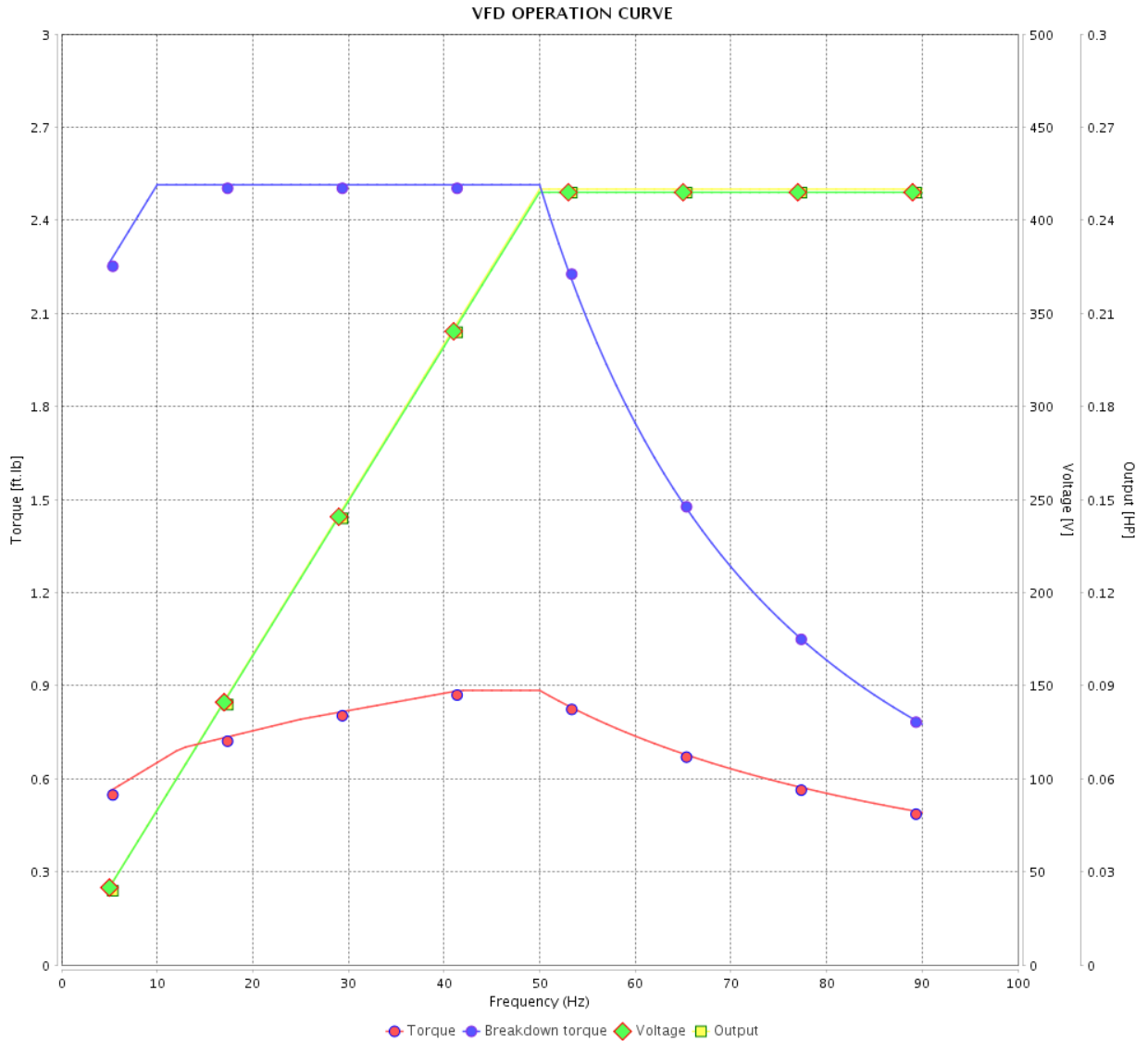
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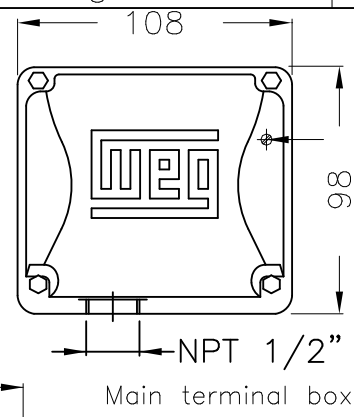
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B

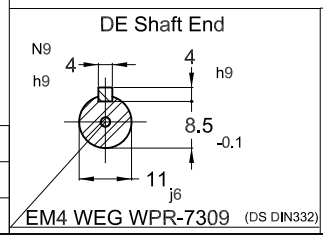
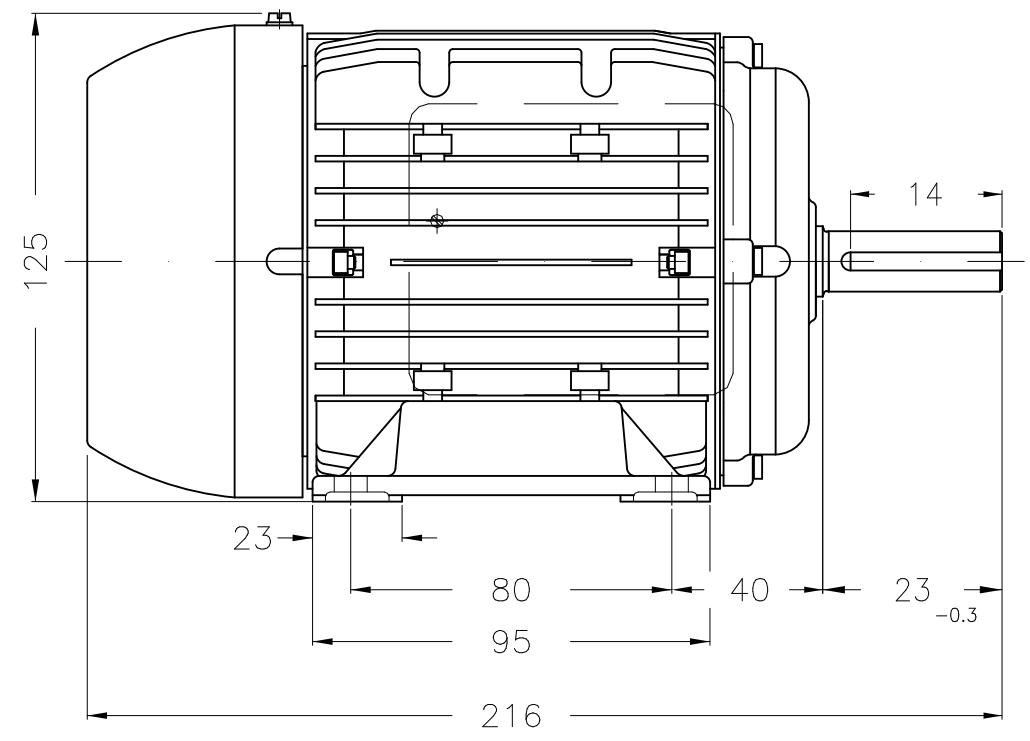
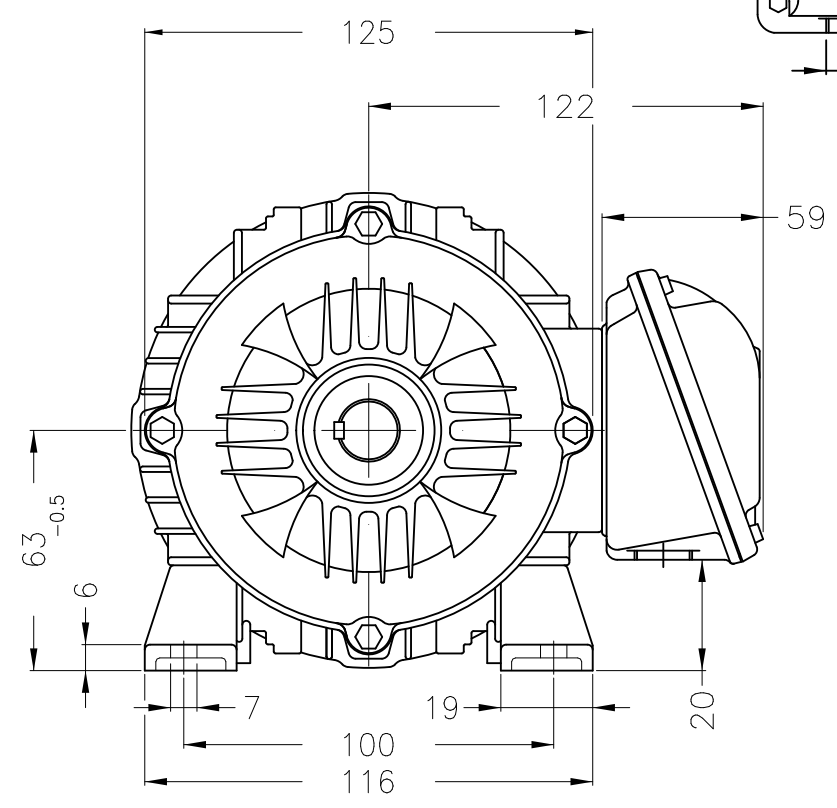
C

D

E



Grounding for leads 0.5–6 mm<sup>2</sup> / 20–10 AWG



EM4 WEG WPR-7309 (DS DIN332)

Color RAL 7022  
Painting plan 207N  
Mounting B3L(E)

0.25 HP 04 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR MULTIMOUNTIN HIGH EFF.					
CHECKED		FRAME 63 IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW  
WDD



Dimensions in mm

XME A3