

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :					
Product line		: Rolled Steel Premium Efficiency Three-Phase		Product code : 14799098	
Frame	: 56HC	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>3</sup>	: 19.4 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.0055 kgm <sup>2</sup>		
Design	: B				
Output [HP]	2	2	2		
Poles	4	4	4		
Frequency [Hz]	60	50	50		
Rated voltage [V]	230/460	190-220/380	415		
Rated current [A]	5.44/2.72	6.50-5.61/3.25	3.07		
L. R. Amperes [A]	44.6/22.3	39.0-33.7/19.5	21.8		
LRC [A]	8.2x(Code K)	6.0x(Code H)	7.1x(Code J)		
No load current [A]	2.80/1.40	2.75-2.37/1.37	1.64		
Rated speed [RPM]	1745	1415	1435		
Slip [%]	3.06	5.67	4.33		
Rated torque [kgfm]	0.832	1.03	1.01		
Locked rotor torque [%]	270	210	270		
Breakdown torque [%]	300	240	300		
Service factor		1.15	1.15		
Temperature rise	80 K	80 K	80 K		
Locked rotor time	27s (cold) 15s (hot)	25s (cold) 14s (hot)	21s (cold) 12s (hot)		
Noise level <sup>2</sup>	52.0 dB(A)		49.0 dB(A)		
Efficiency (%)	25%				
	50%	85.5	85.4	84.2	
	75%	87.5	84.9	85.1	
	100%	86.5	82.6	84.0	
Power Factor	25%				
	50%	0.60	0.68	0.60	
	75%	0.73	0.80	0.73	
	100%	0.80	0.85	0.81	
Bearing type	: <u>Drive end</u> 6204 ZZ	<u>Non drive end</u> 6202 ZZ	Foundation loads		
Sealing	: V'Ring	Without Bearing Seal	Max. traction	: 88 kgf	
			Max. compression	: 107 kgf	
Lubrication interval	: -	-			
Lubricant amount	: -	-			
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 6.02A SF 1.00 SFA 6.02A					
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

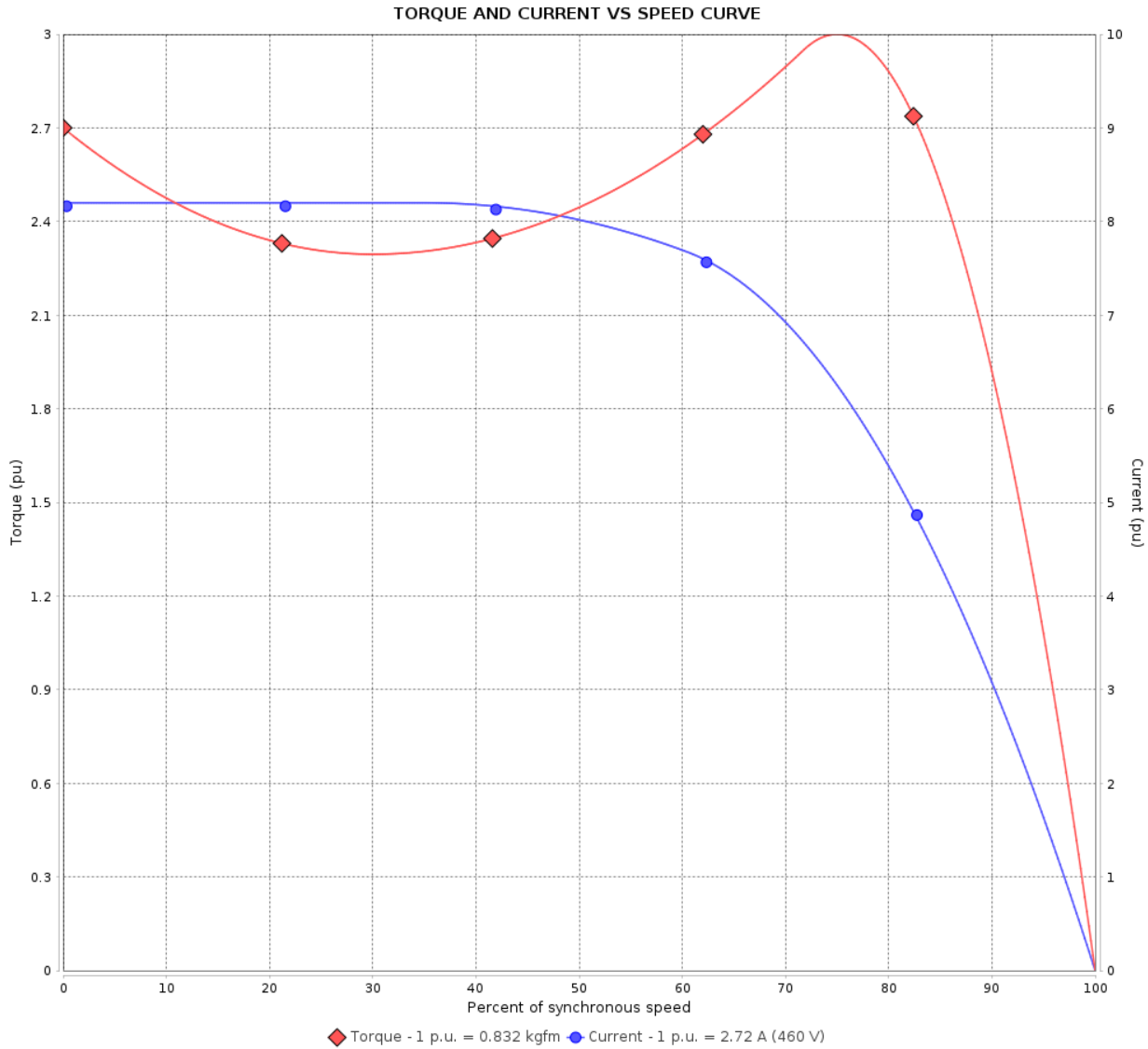
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Rolled Steel Premium Efficiency Three-Phase

Product code : 14799098



Performance : 230/460 V 60 Hz 4P

Rated current : 5.44/2.72 A  
 LRC : 8.2  
 Rated torque : 0.832 kgfm  
 Locked rotor torque : 270 %  
 Breakdown torque : 300 %  
 Rated speed : 1745 rpm

Moment of inertia (J) : 0.0055 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 27s (cold) 15s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

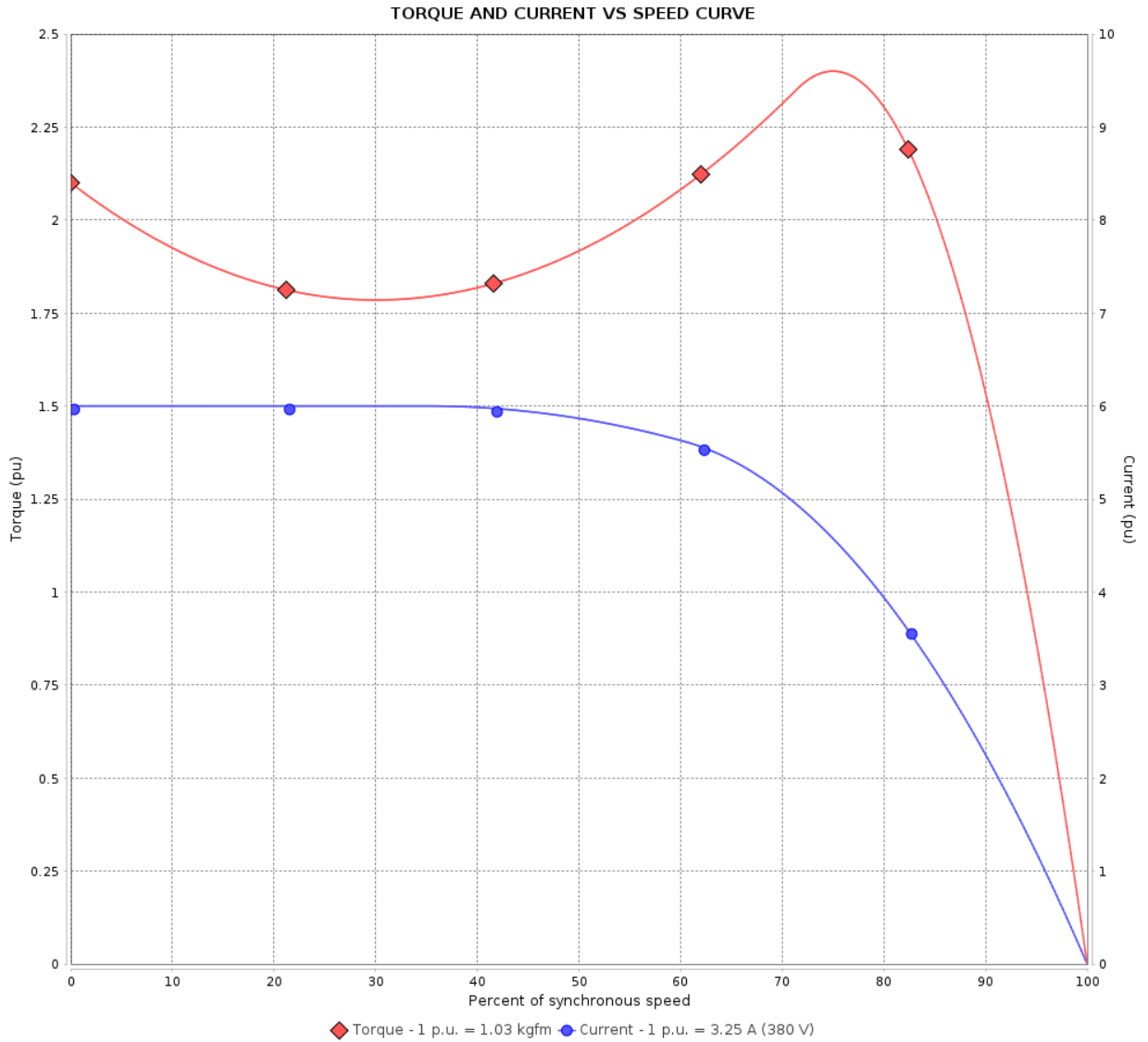


## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Rolled Steel Premium Efficiency Three-Phase

Product code : 14799098



Performance : 190-220/380 V 50 Hz 4P

Rated current	: 6.50-5.61/3.25 A	Moment of inertia (J)	: 0.0055 kgm <sup>2</sup>
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 1.03 kgfm	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1415 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

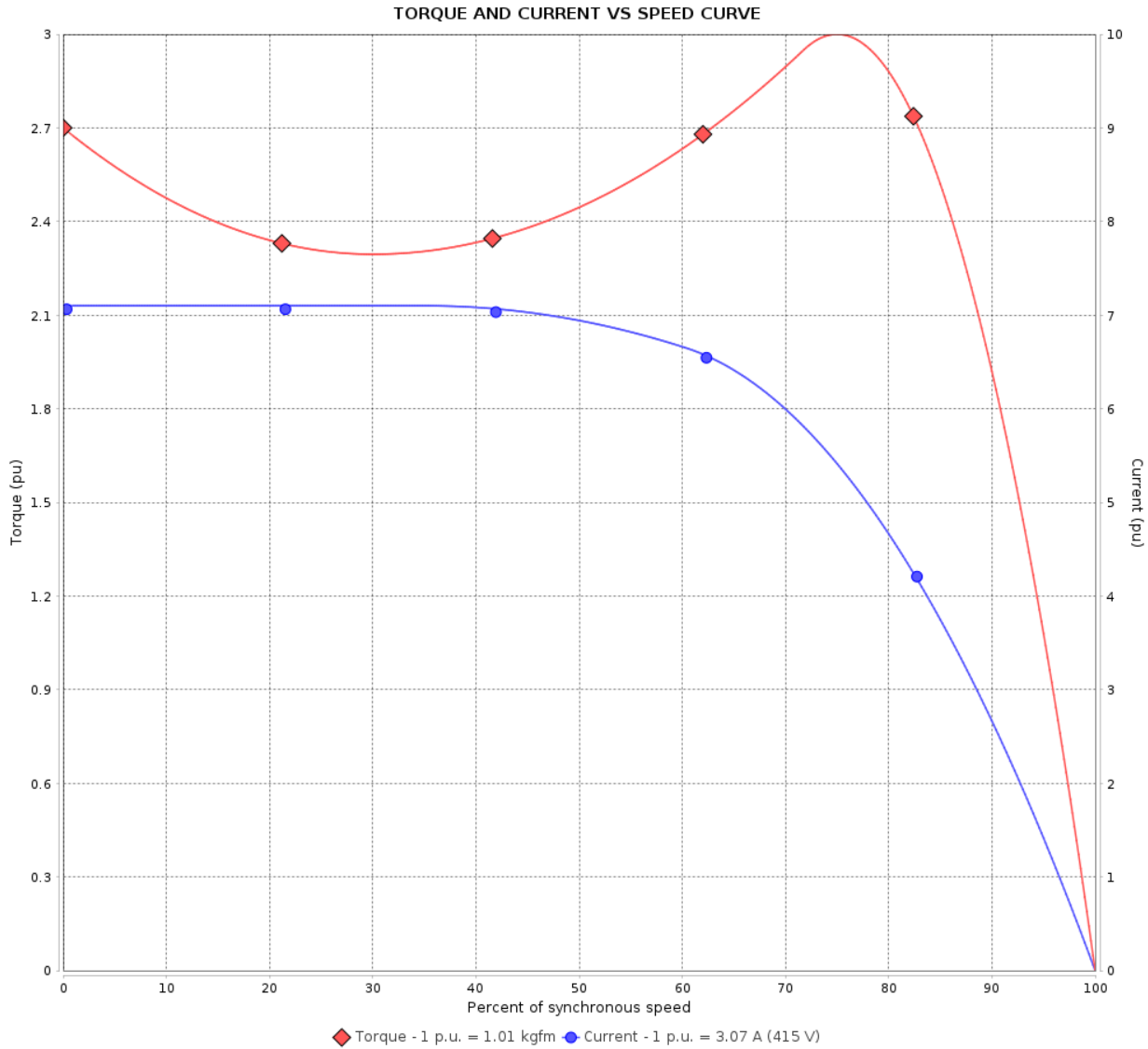
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Rolled Steel Premium Efficiency Three-Phase

Product code : 14799098



Performance : 415 V 50 Hz 4P

Rated current	: 3.07 A	Moment of inertia (J)	: 0.0055 kgm <sup>2</sup>
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 1.01 kgfm	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.15
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1435 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

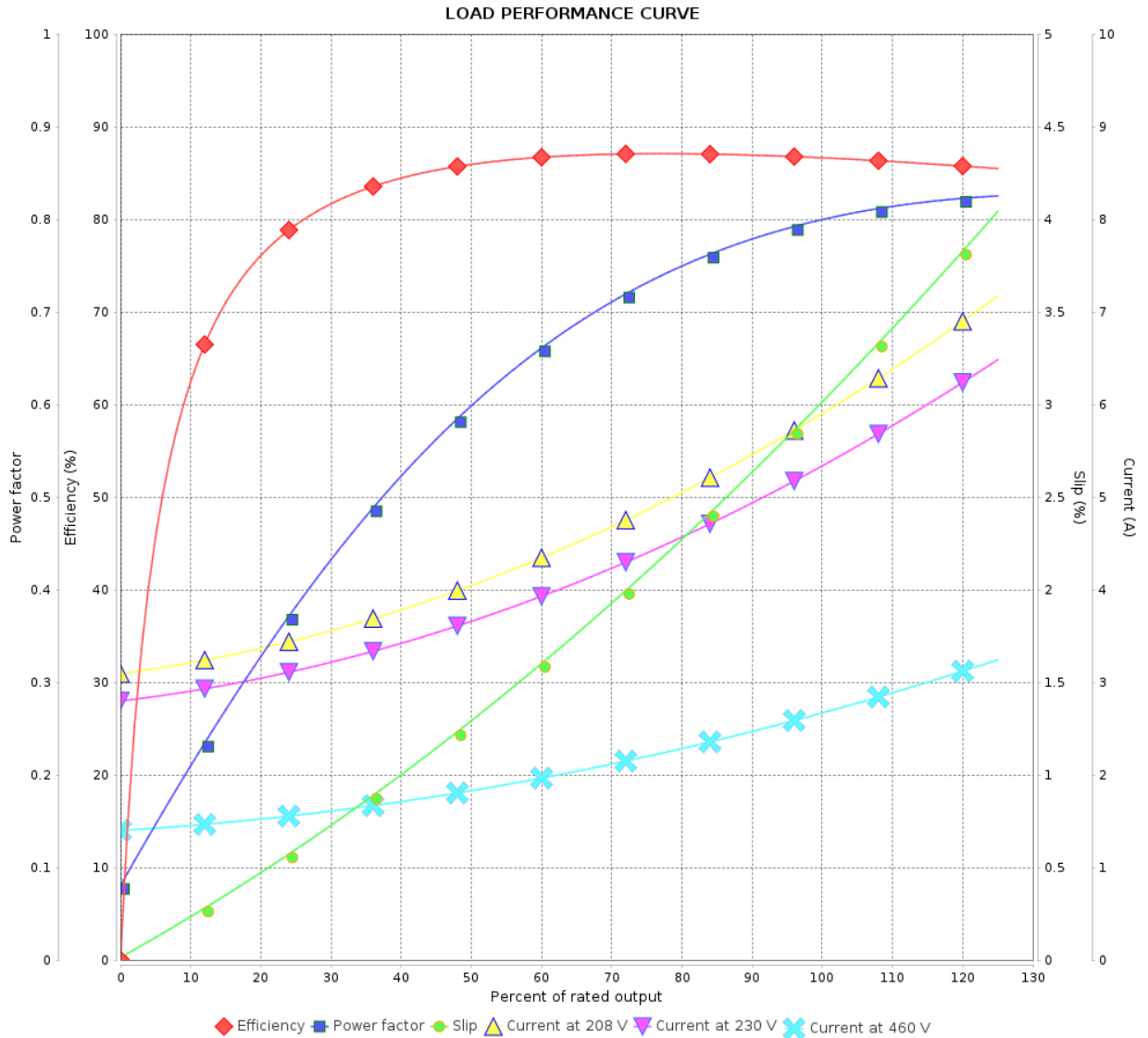
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Customer : \_\_\_\_\_

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Performance : 230/460 V 60 Hz 4P

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 Breakdown torque : 300 %  
 Rated speed : 1745 rpm

Moment of inertia (J) : 0.0055 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

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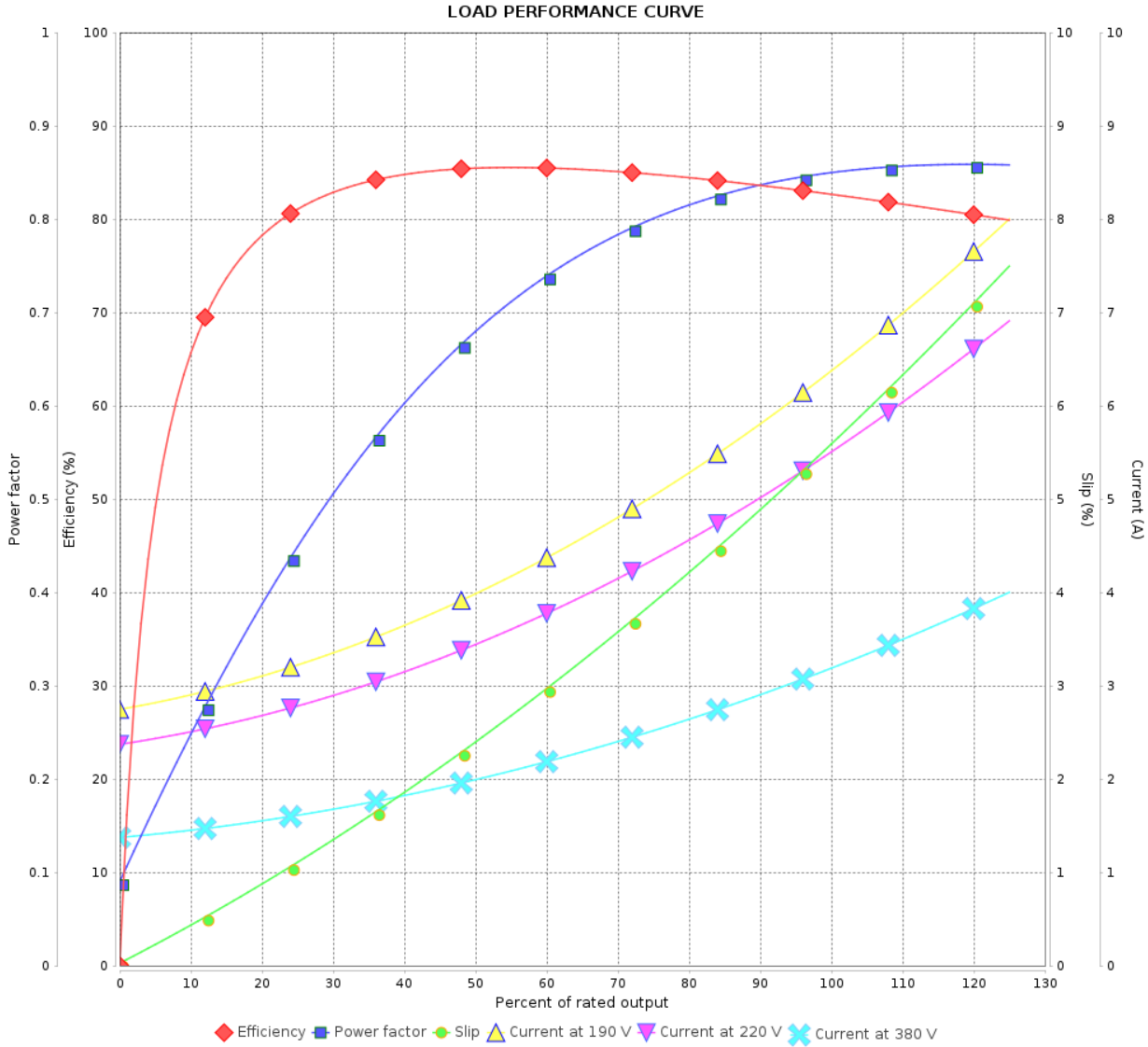
Three Phase Induction Motor - Squirrel Cage



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

Product line : Rolled Steel Premium Efficiency Three-Phase

Product code : 14799098



Performance : 190-220/380 V 50 Hz 4P

Rated current : 6.50-5.61/3.25 A  
 LRC : 6.0  
 Rated torque : 1.03 kgfm  
 Locked rotor torque : 210 %  
 Breakdown torque : 240 %  
 Rated speed : 1415 rpm

Moment of inertia (J) : 0.0055 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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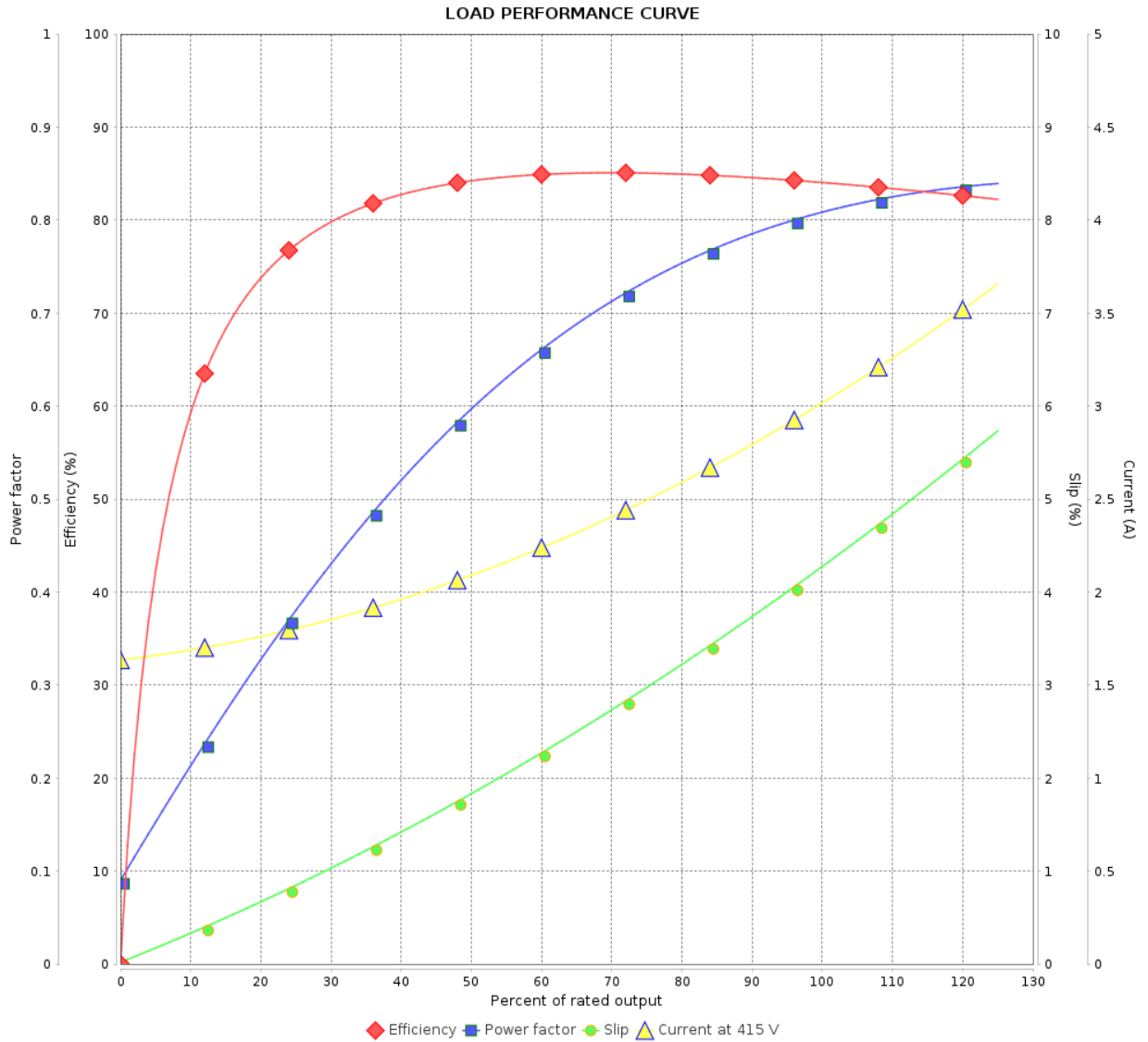
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Customer : \_\_\_\_\_

Product line : Rolled Steel Premium Efficiency Three-Phase

Product code : 14799098



Performance : 415 V 50 Hz 4P

Rated current : 3.07 A  
 LRC : 7.1  
 Rated torque : 1.01 kgfm  
 Locked rotor torque : 270 %  
 Breakdown torque : 300 %  
 Rated speed : 1435 rpm

Moment of inertia (J) : 0.0055 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
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# THERMAL LIMIT CURVE

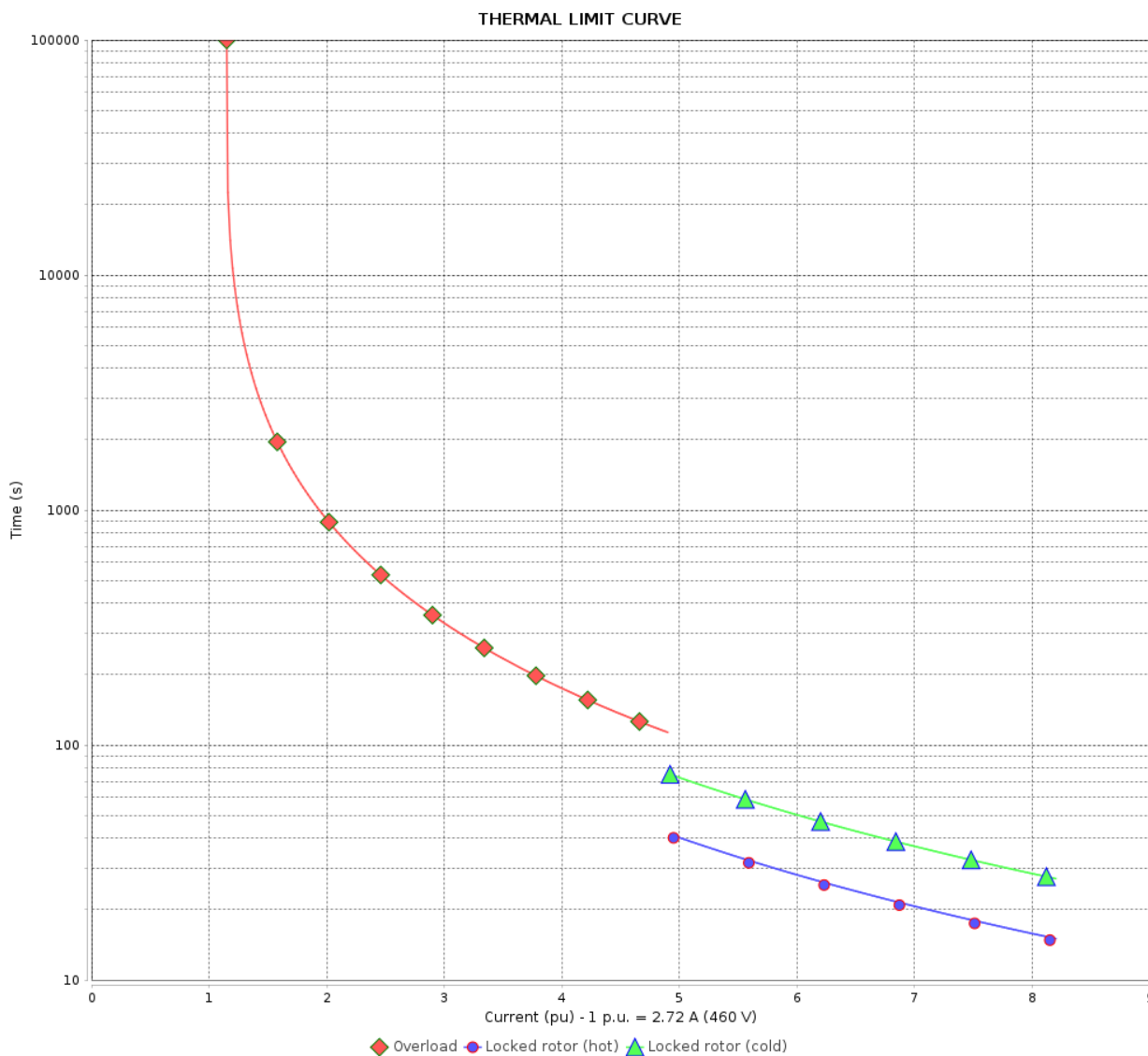
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Moment of inertia (J) : 0.0055 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

Heating constant  
 Cooling constant

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# THERMAL LIMIT CURVE

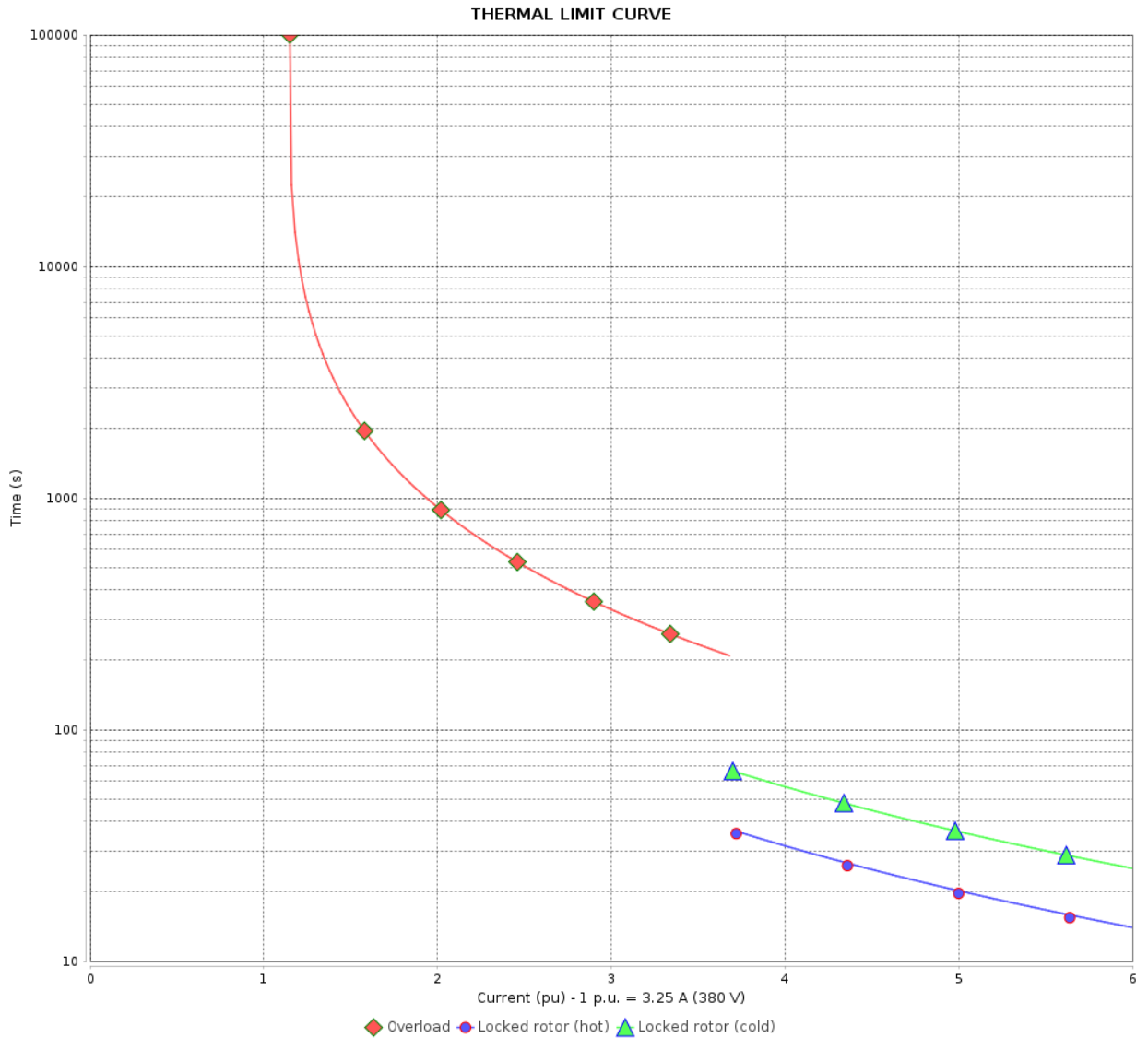
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Customer :

Product line : Rolled Steel Premium Efficiency Three-Phase

Product code : 14799098



Performance : 190-220/380 V 50 Hz 4P

Rated current : 6.50-5.61/3.25 A  
 LRC : 6.0  
 Rated torque : 1.03 kgfm  
 Locked rotor torque : 210 %  
 Breakdown torque : 240 %  
 Rated speed : 1415 rpm

Moment of inertia (J) : 0.0055 kgm<sup>2</sup>  
 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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Three Phase Induction Motor - Squirrel Cage

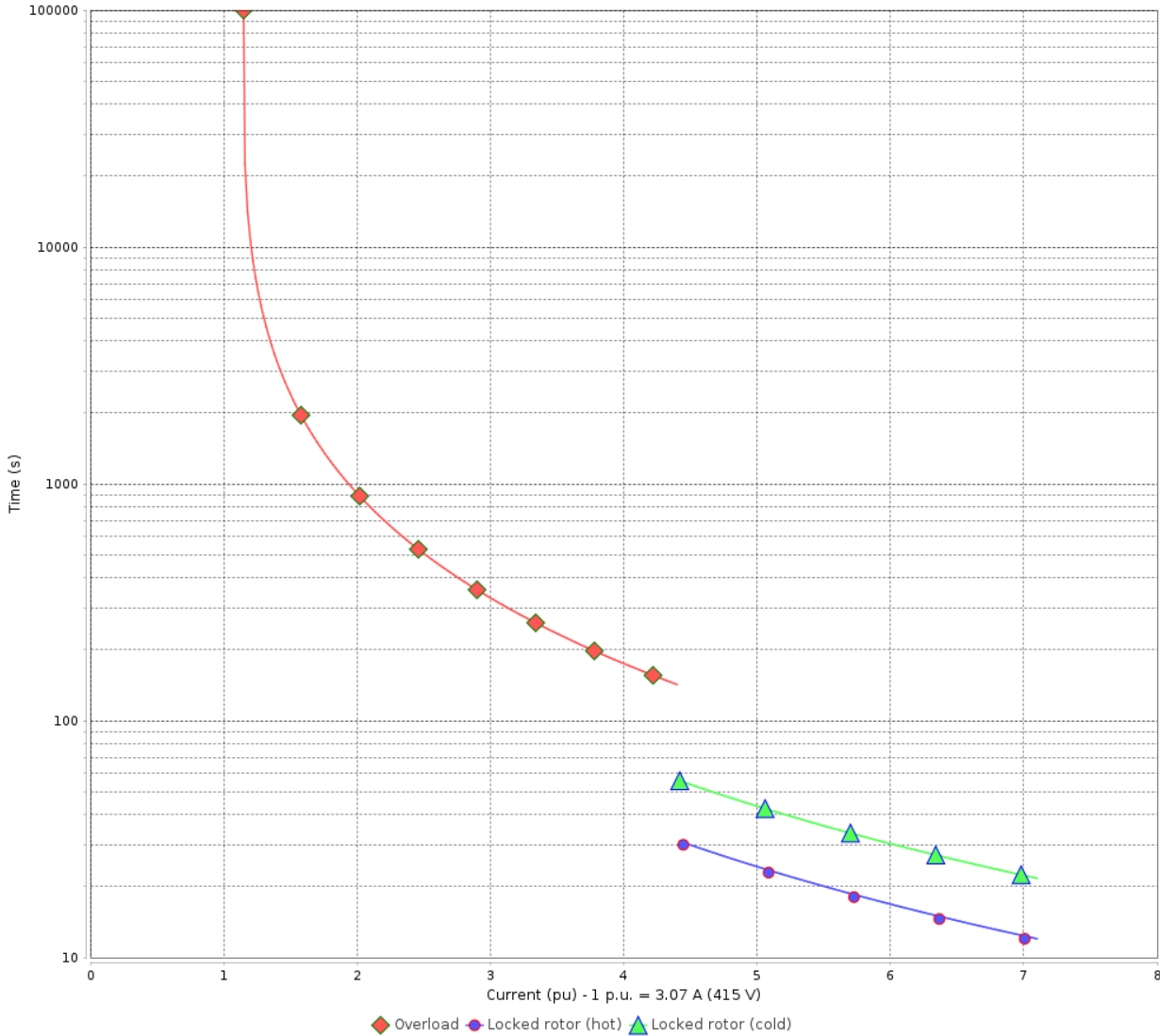


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THERMAL LIMIT CURVE



Performance : 415 V 50 Hz 4P

Rated current	: 3.07 A	Moment of inertia (J)	: 0.0055 kgm <sup>2</sup>
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 1.01 kgfm	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.15
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1435 rpm	Design	: B

Heating constant

Cooling constant

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# VFD OPERATION CURVE

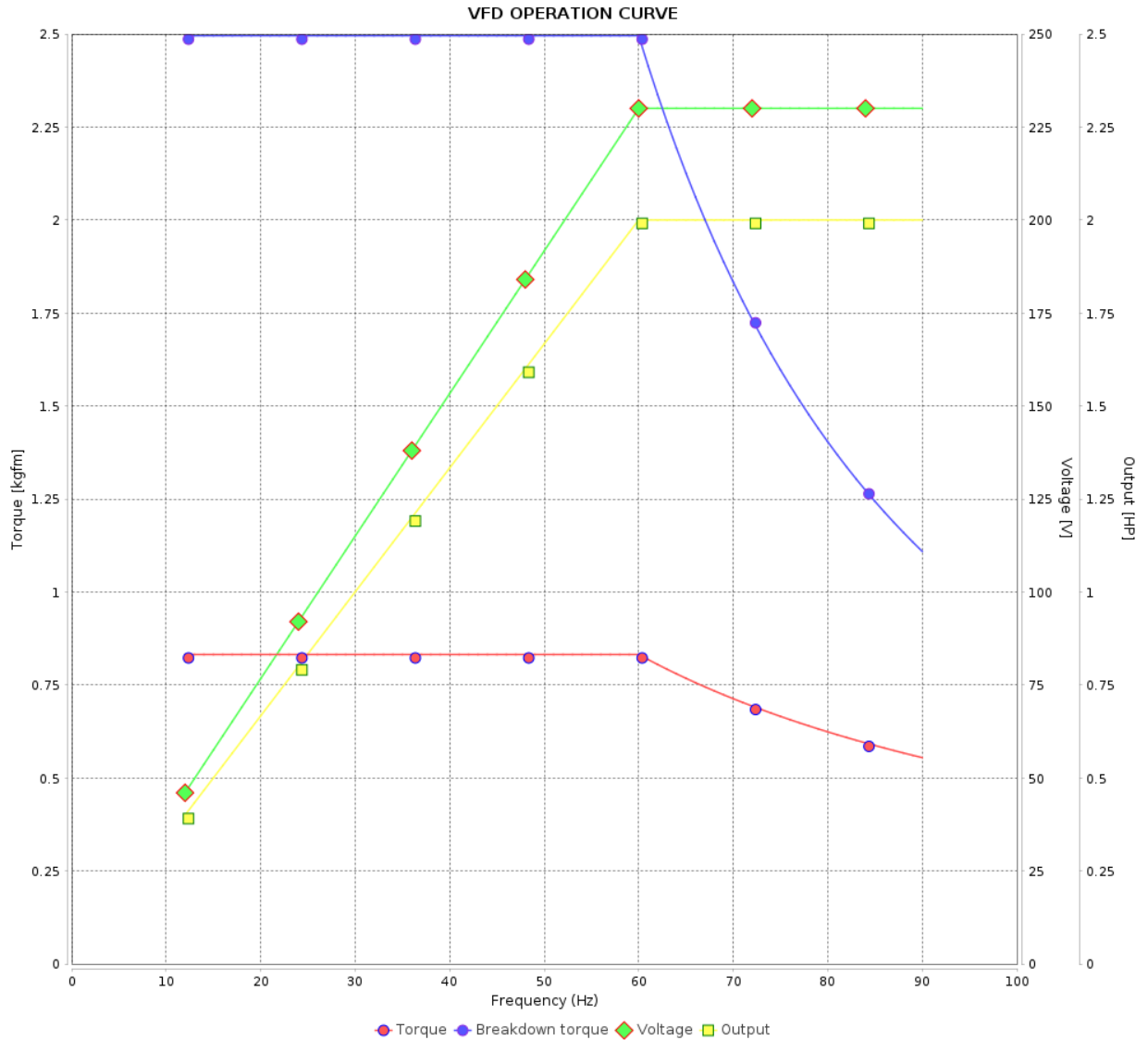
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 Insulation class : F  
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 Temperature rise : 80 K  
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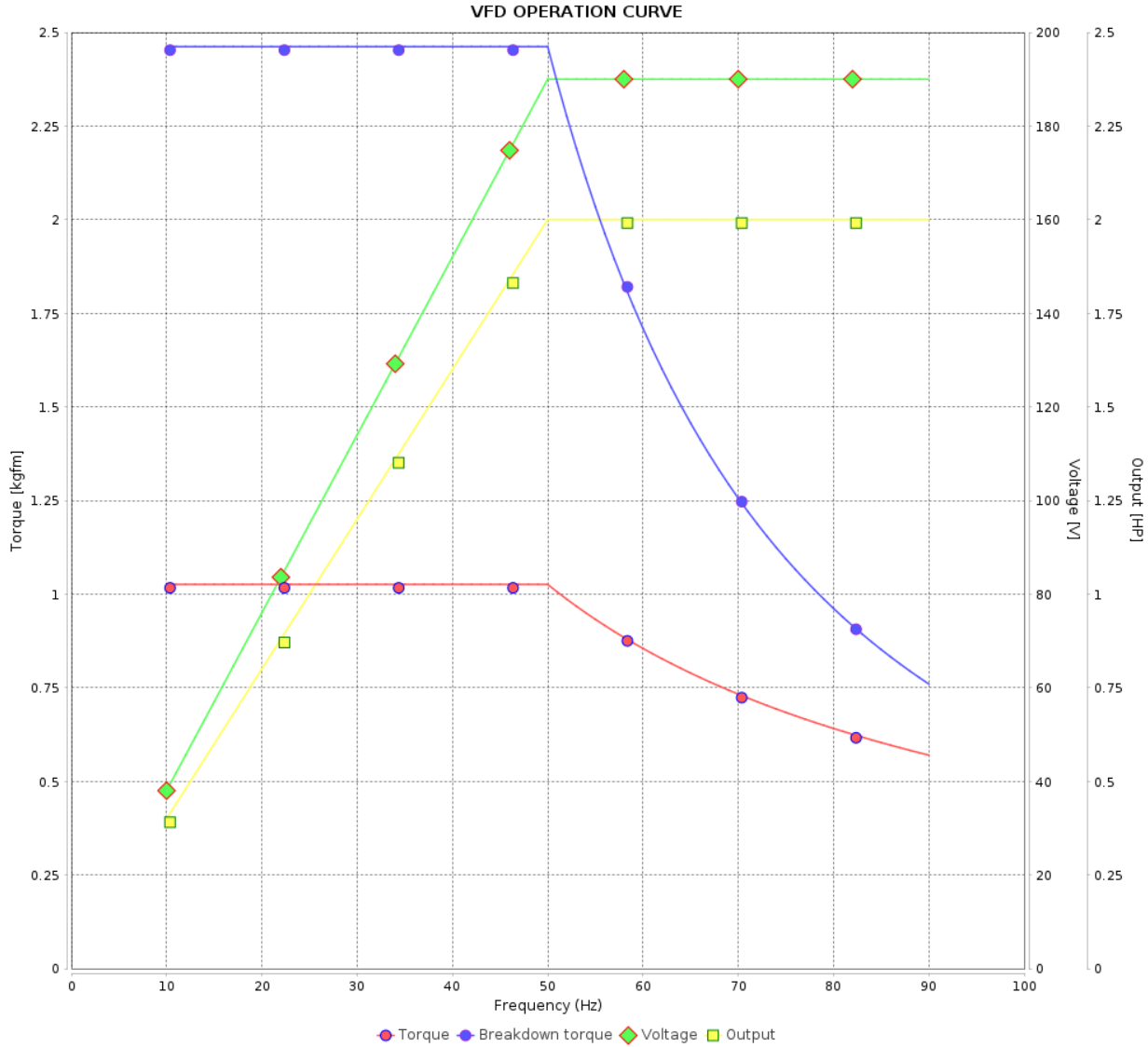
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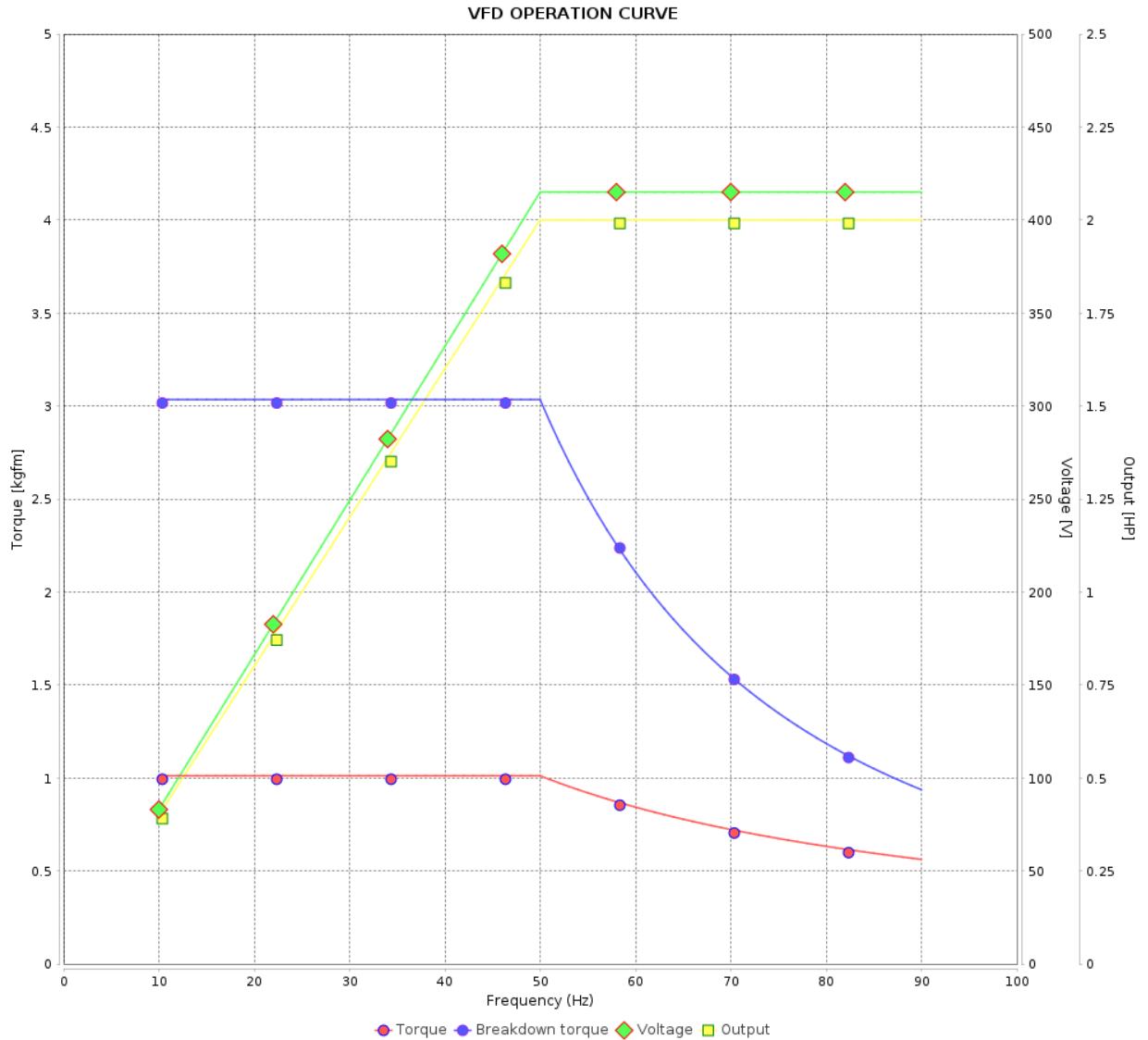
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 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
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