

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :	11679361	
			Catalog # :	60036ET3G588/9S-W22	
Frame	: 588/9TS	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>	: 4763 lb		
Protection degree	: IP55	Moment of inertia (J)	: 155 sq.ft.lb		
Output [HP]	600	500	500	500	
Poles	2	2	2	2	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	636	647	622	599	
L. R. Amperes [A]	6042	5435	5847	6290	
LRC [A]	9.5x(Code K)	8.4x(Code J)	9.4x(Code K)	10.5x(Code L)	
No load current [A]	142	140	153	162	
Rated speed [RPM]	3586	2985	2987	2988	
Slip [%]	0.39	0.50	0.43	0.40	
Rated torque [ft.lb]	879	880	879	879	
Locked rotor torque [%]	300	270	300	300	
Breakdown torque [%]	320	320	350	360	
Service factor	1.00	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	59s (cold) 33s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	
Noise level <sup>2</sup>	89.0 dB(A)	83.0 dB(A)	83.0 dB(A)	83.0 dB(A)	
Efficiency (%)	25%				
	50%	96.0	96.2	96.2	
	75%	96.5	96.5	96.5	
	100%	96.5	96.5	96.5	
Power Factor	25%				
	50%	0.84	0.84	0.82	
	75%	0.89	0.89	0.88	
	100%	0.90	0.90	0.89	
Bearing type	: <u>Drive end</u> 6314 C3	<u>Non drive end</u> 6314 C3	Foundation loads		
Sealing	: Taconite	Taconite	Max. traction	: 4219 lb	
	Labyrinth	Labyrinth	Max. compression	: 8981 lb	
Lubrication interval	: 4000 h	4000 h			
Lubricant amount	: 27 g	27 g			
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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# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



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

### Space heater information

Voltage: 200 - 240 V

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# TORQUE AND CURRENT VS SPEED CURVE



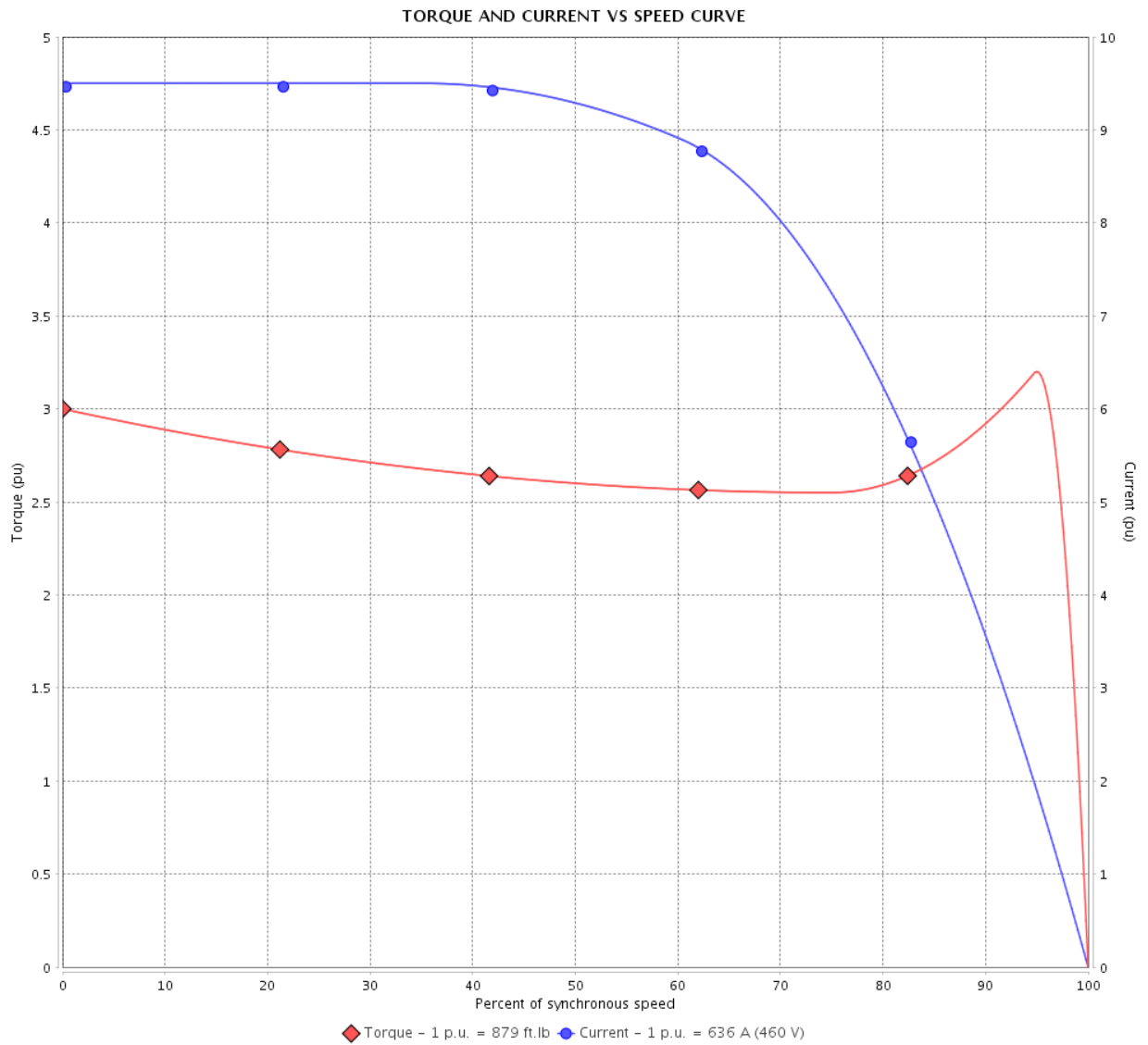
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11679361

Catalog # : 60036ET3G588/9S-W22



Performance : 460 V 60 Hz 2P

Rated current : 636 A	Moment of inertia (J) : 155 sq.ft.lb
LRC : 9.5	Duty cycle : Cont.(S1)
Rated torque : 879 ft.lb	Insulation class : F
Locked rotor torque : 300 %	Service factor : 1.00
Breakdown torque : 320 %	Temperature rise : 80 K
Rated speed : 3586 rpm	

Locked rotor time : 59s (cold) 33s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



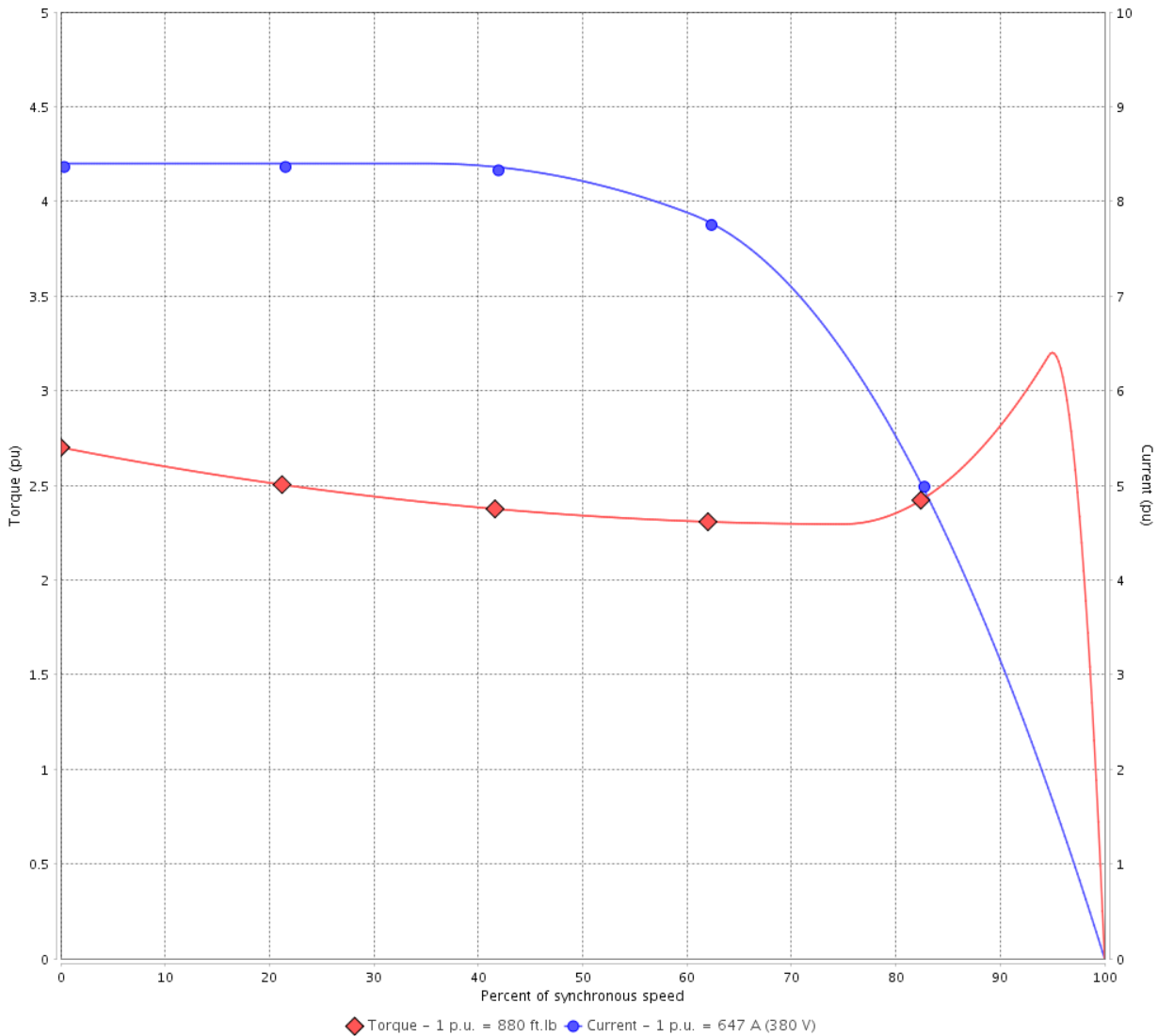
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11679361

Catalog # : 60036ET3G588/9S-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 2P IE4

Rated current	: 647 A	Moment of inertia (J)	: 155 sq.ft.lb
LRC	: 8.4	Duty cycle	: Cont.(S1)
Rated torque	: 880 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 2985 rpm		

Locked rotor time : 54s (cold) 30s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



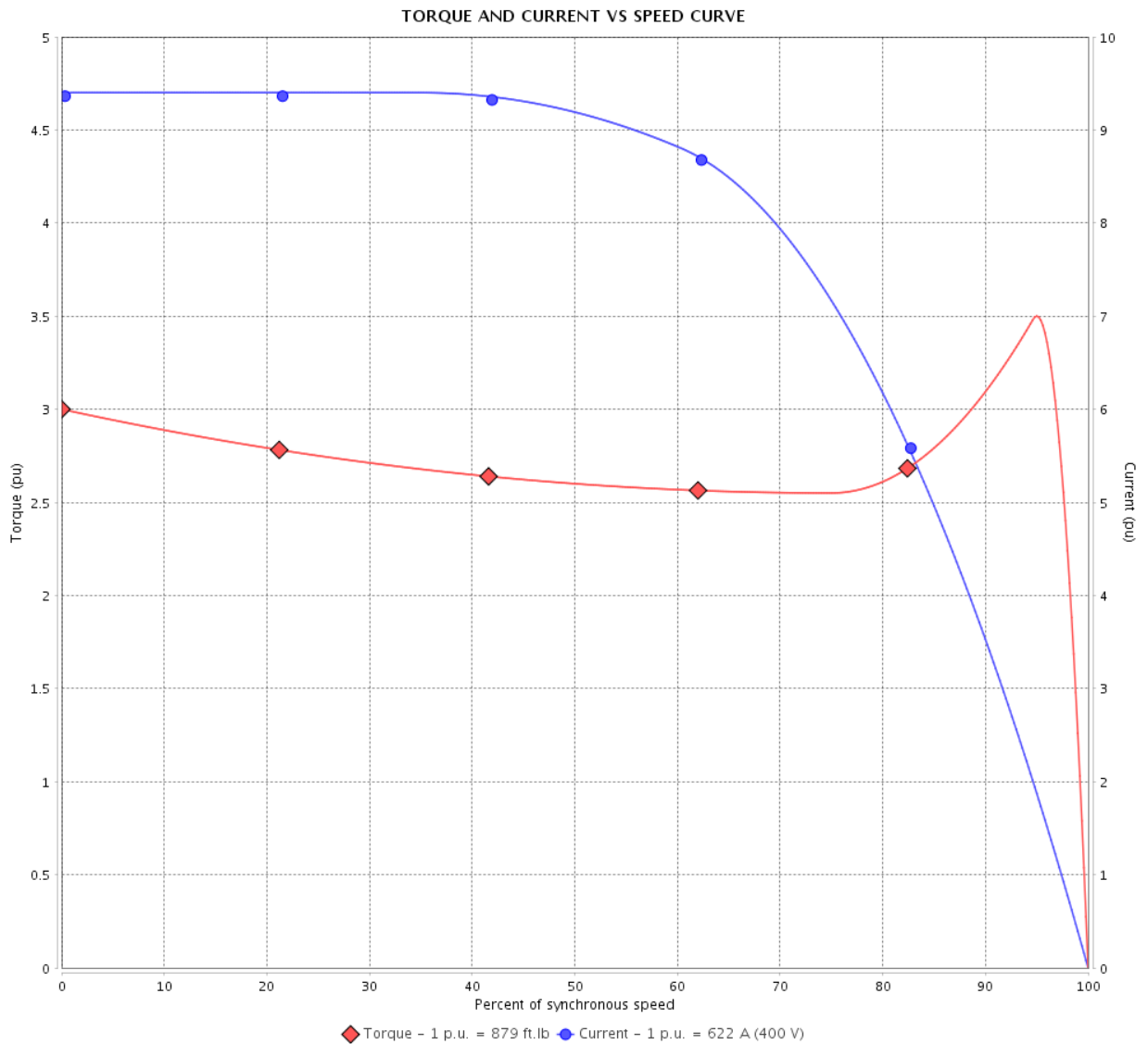
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11679361

Catalog # : 60036ET3G588/9S-W22



Performance : 400 V 50 Hz 2P IE4

Rated current : 622 A  
 LRC : 9.4  
 Rated torque : 879 ft.lb  
 Locked rotor torque : 300 %  
 Breakdown torque : 350 %  
 Rated speed : 2987 rpm

Moment of inertia (J) : 155 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K

Locked rotor time : 54s (cold) 30s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



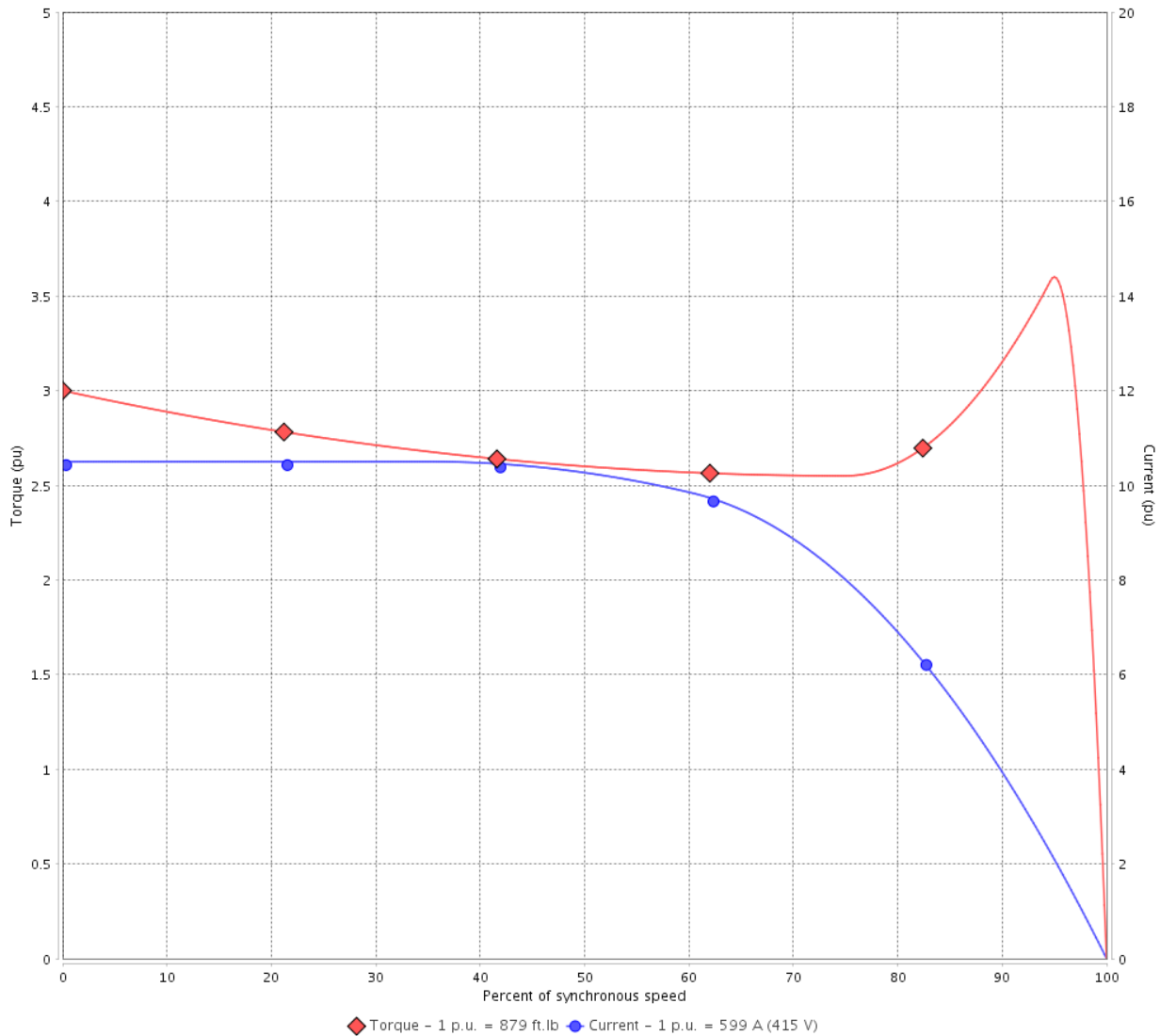
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Product code : 11679361

Catalog # : 60036ET3G588/9S-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 2P IE4

Rated current	: 599 A	Moment of inertia (J)	: 155 sq.ft.lb
LRC	: 10.5	Duty cycle	: Cont.(S1)
Rated torque	: 879 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 360 %	Temperature rise	: 80 K
Rated speed	: 2988 rpm		

Locked rotor time : 54s (cold) 30s (hot)

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

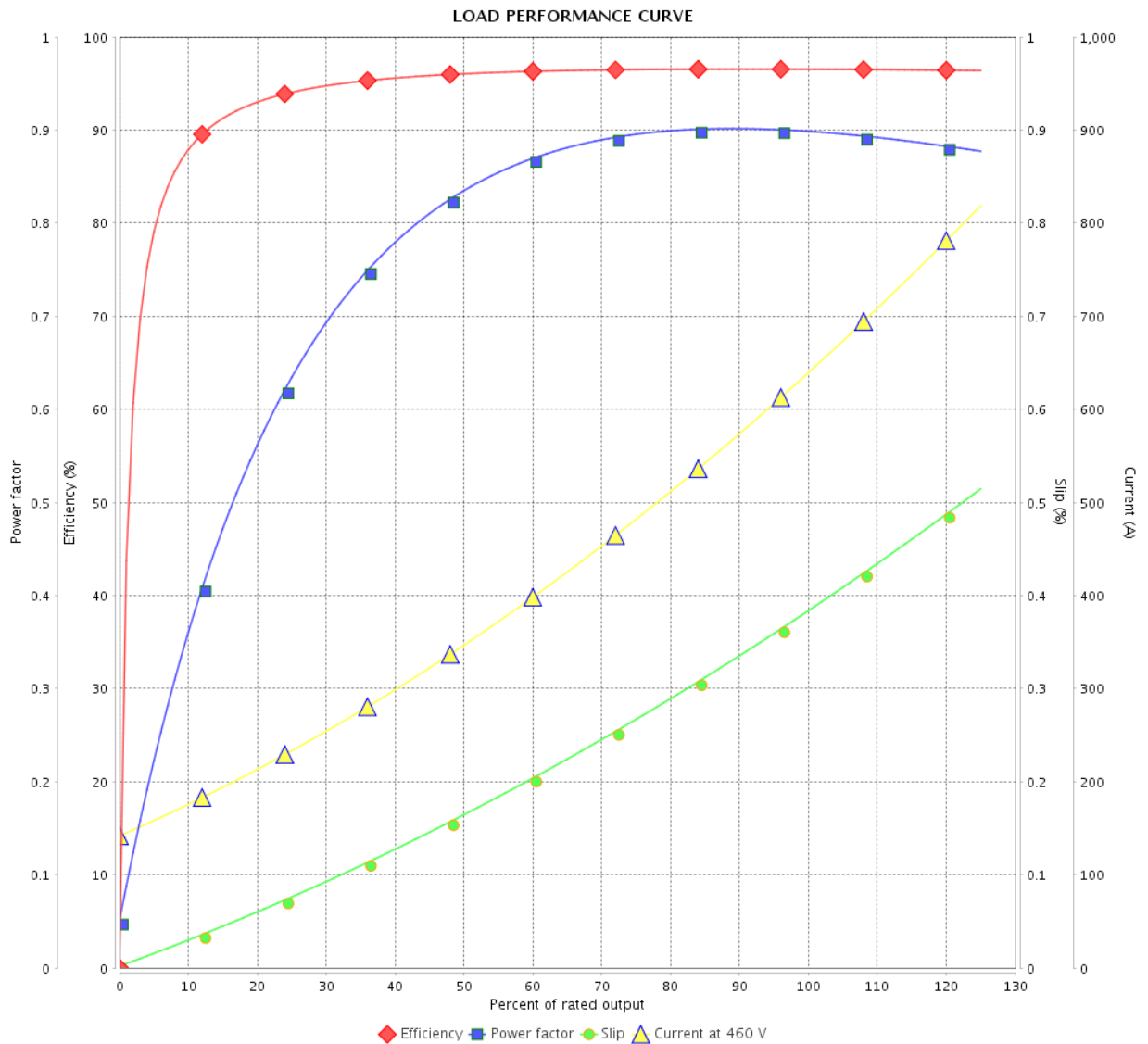


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Product line : NEMA Premium Efficiency Three-Phase

Product code : 11679361

Catalog # : 60036ET3G588/9S-W22



Performance : 460 V 60 Hz 2P

Rated current : 636 A  
 LRC : 9.5  
 Rated torque : 879 ft.lb  
 Locked rotor torque : 300 %  
 Breakdown torque : 320 %  
 Rated speed : 3586 rpm

Moment of inertia (J) : 155 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

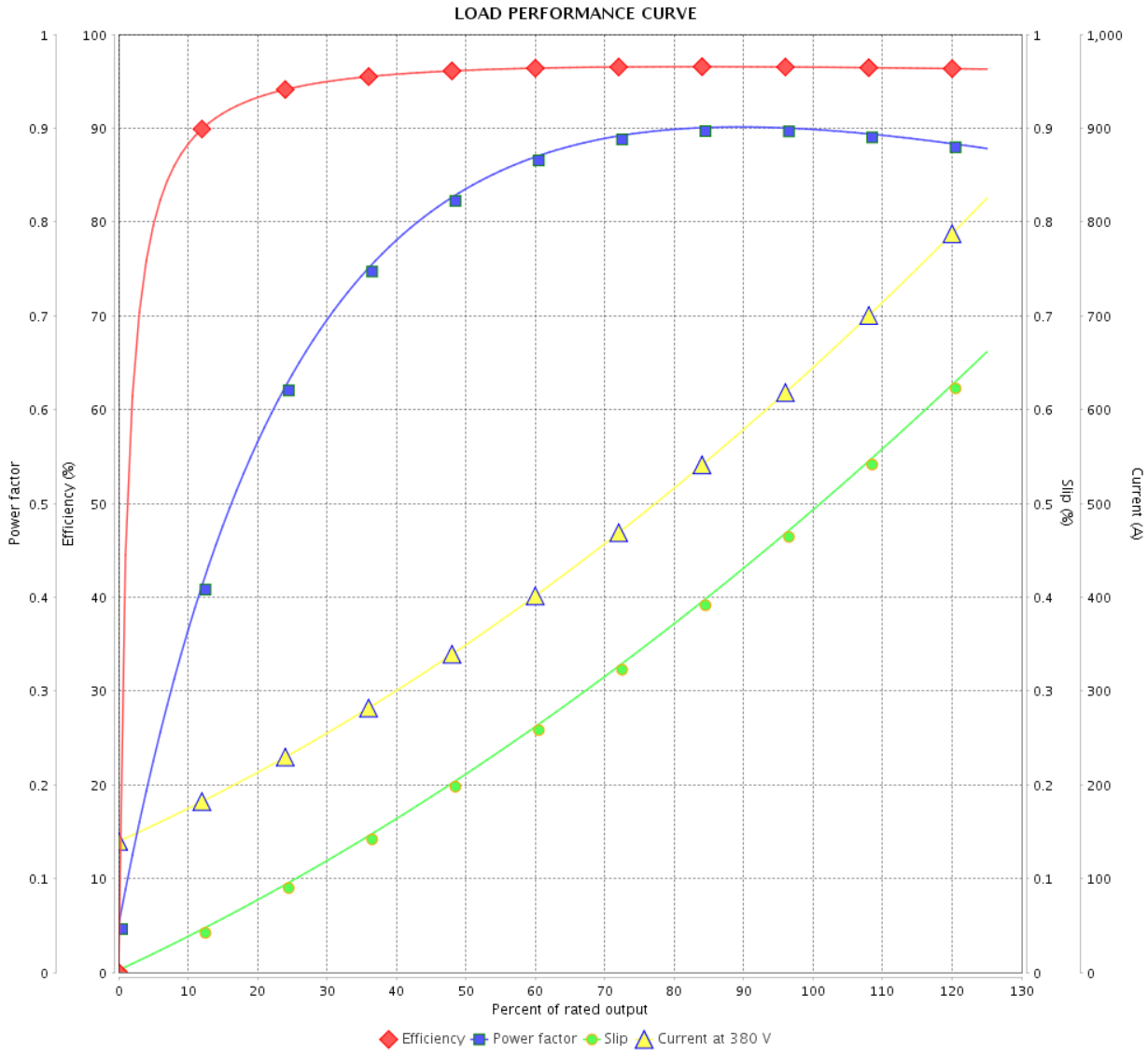


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Product code : 11679361

Catalog # : 60036ET3G588/9S-W22



Performance : 380 V 50 Hz 2P IE4

Rated current : 647 A  
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 Locked rotor torque : 270 %  
 Breakdown torque : 320 %  
 Rated speed : 2985 rpm

Moment of inertia (J) : 155 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K

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# LOAD PERFORMANCE CURVE

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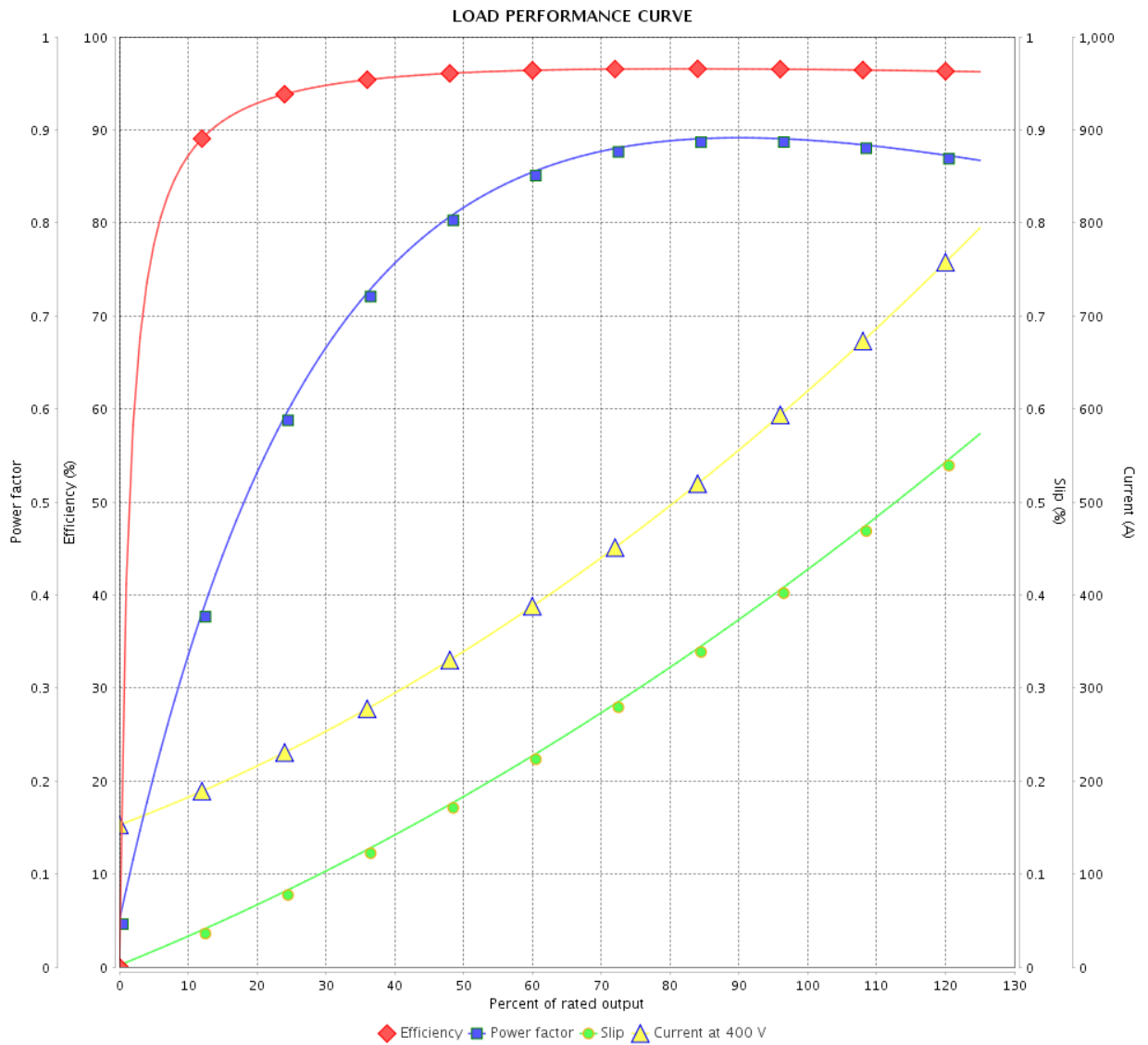


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Performance : 400 V 50 Hz 2P IE4

Rated current : 622 A  
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 Locked rotor torque : 300 %  
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 Insulation class : F  
 Service factor : 1.00  
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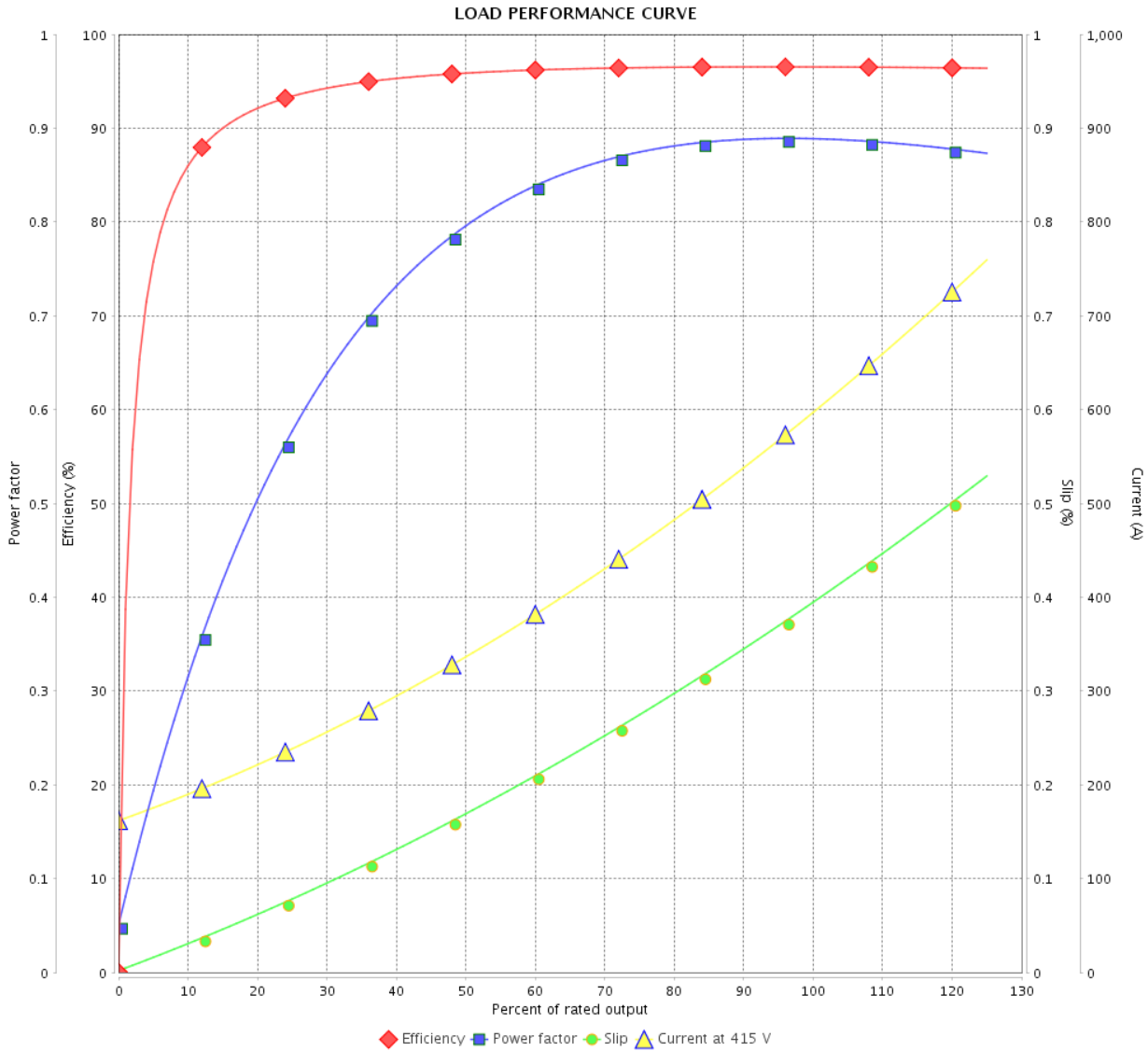


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 Rated speed : 2988 rpm

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 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K

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# THERMAL LIMIT CURVE



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 Rated speed : 3586 rpm

Moment of inertia (J) : 155 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K

Heating constant

Cooling constant

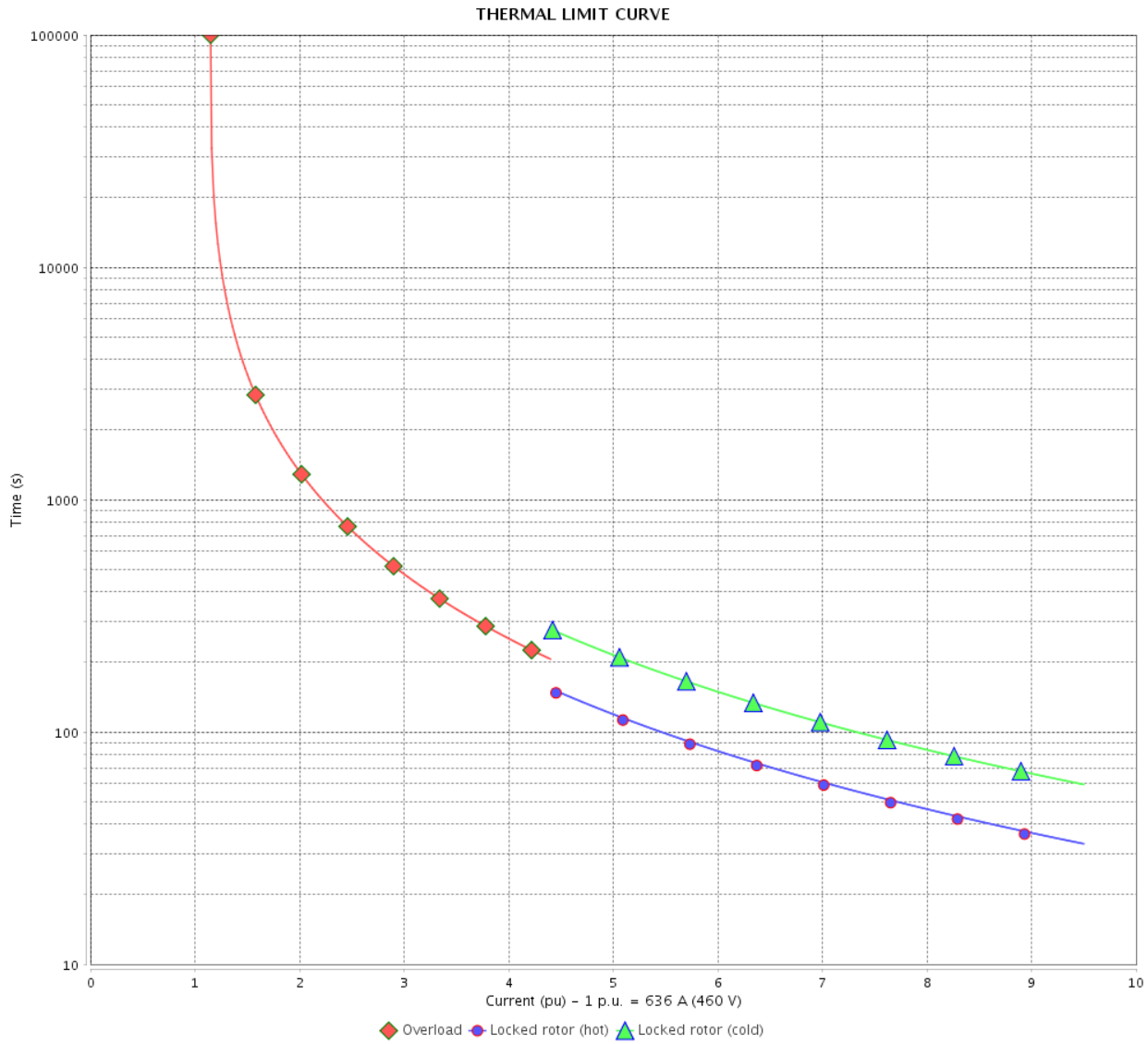
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 Locked rotor torque : 270 %  
 Breakdown torque : 320 %  
 Rated speed : 2985 rpm

Moment of inertia (J) : 155 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K

Heating constant

Cooling constant

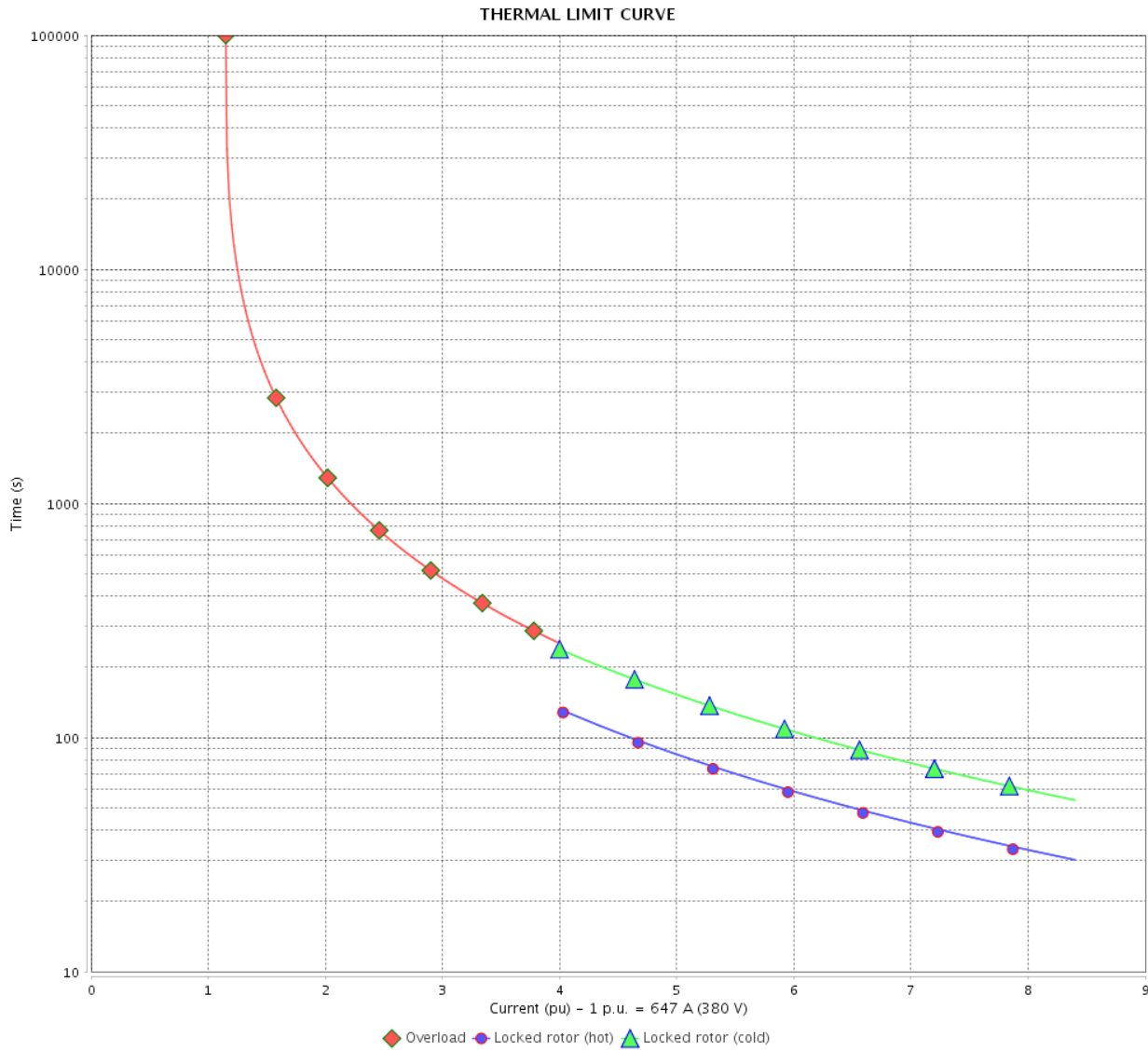
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Rated current : 622 A	Moment of inertia (J) : 155 sq.ft.lb
LRC : 9.4	Duty cycle : Cont.(S1)
Rated torque : 879 ft.lb	Insulation class : F
Locked rotor torque : 300 %	Service factor : 1.00
Breakdown torque : 350 %	Temperature rise : 80 K
Rated speed : 2987 rpm	

Heating constant

Cooling constant

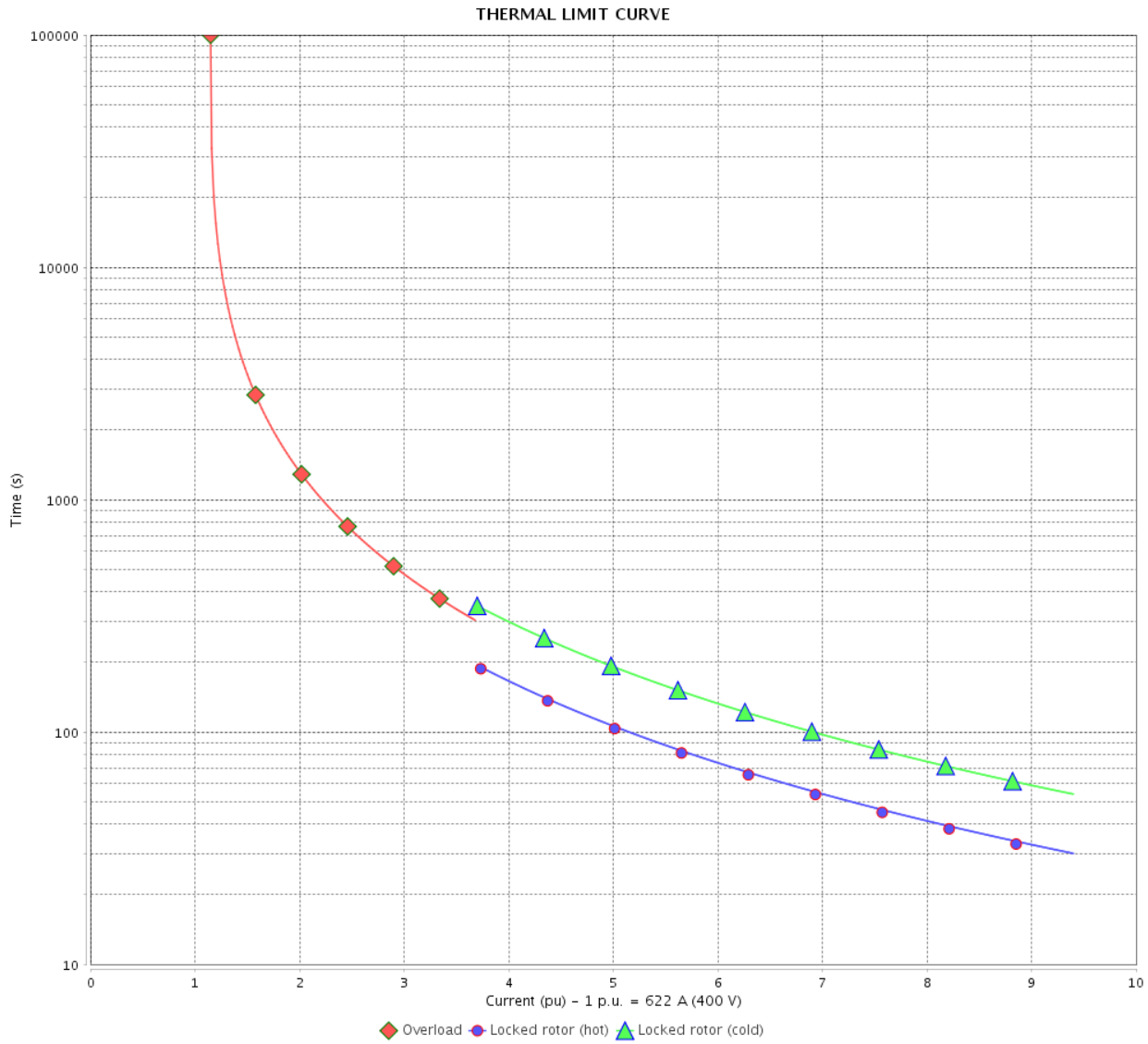
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# THERMAL LIMIT CURVE

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



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LRC : 10.5	Duty cycle : Cont.(S1)
Rated torque : 879 ft.lb	Insulation class : F
Locked rotor torque : 300 %	Service factor : 1.00
Breakdown torque : 360 %	Temperature rise : 80 K
Rated speed : 2988 rpm	

Heating constant

Cooling constant

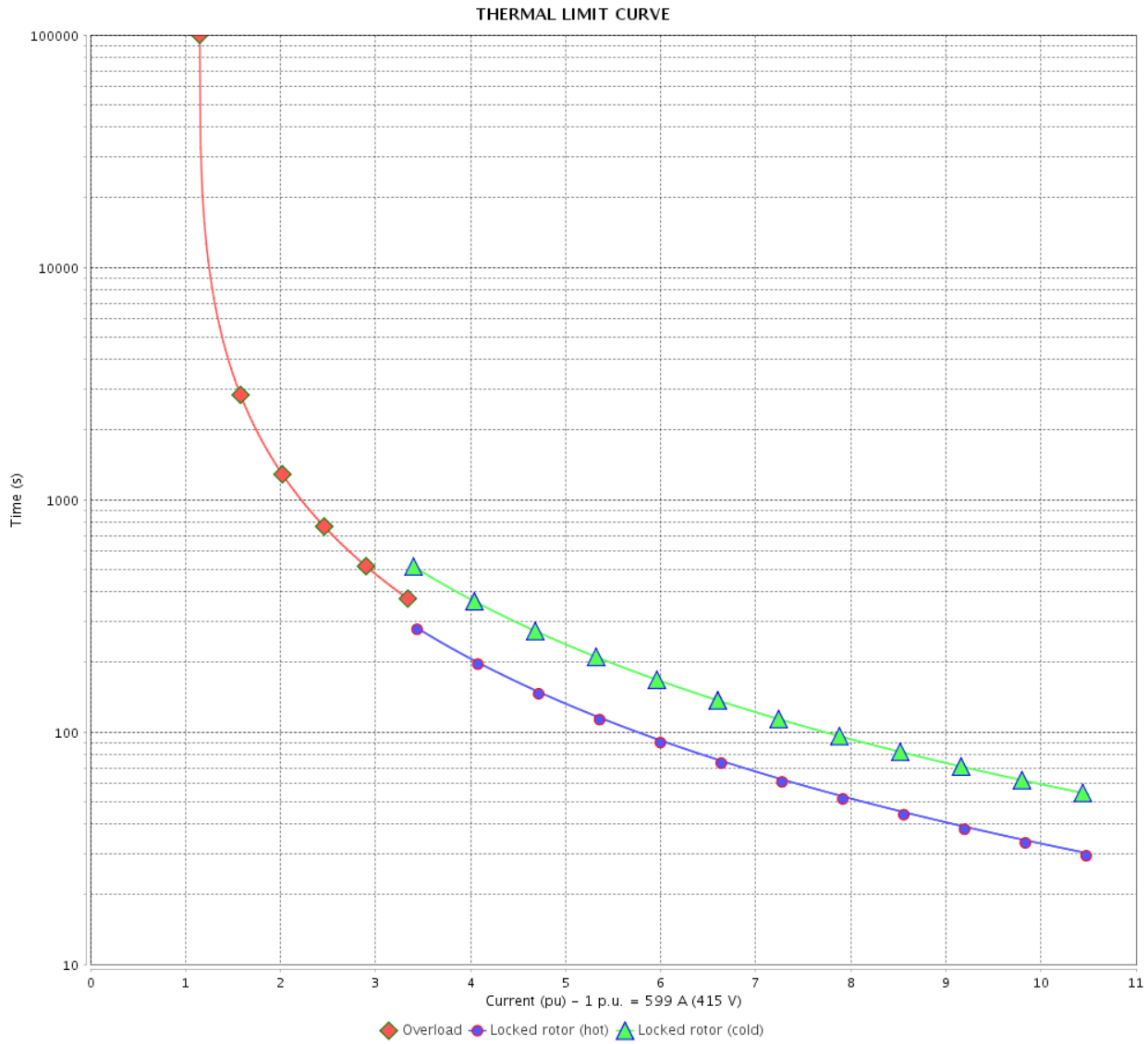
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# THERMAL LIMIT CURVE

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



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# VFD OPERATION CURVE

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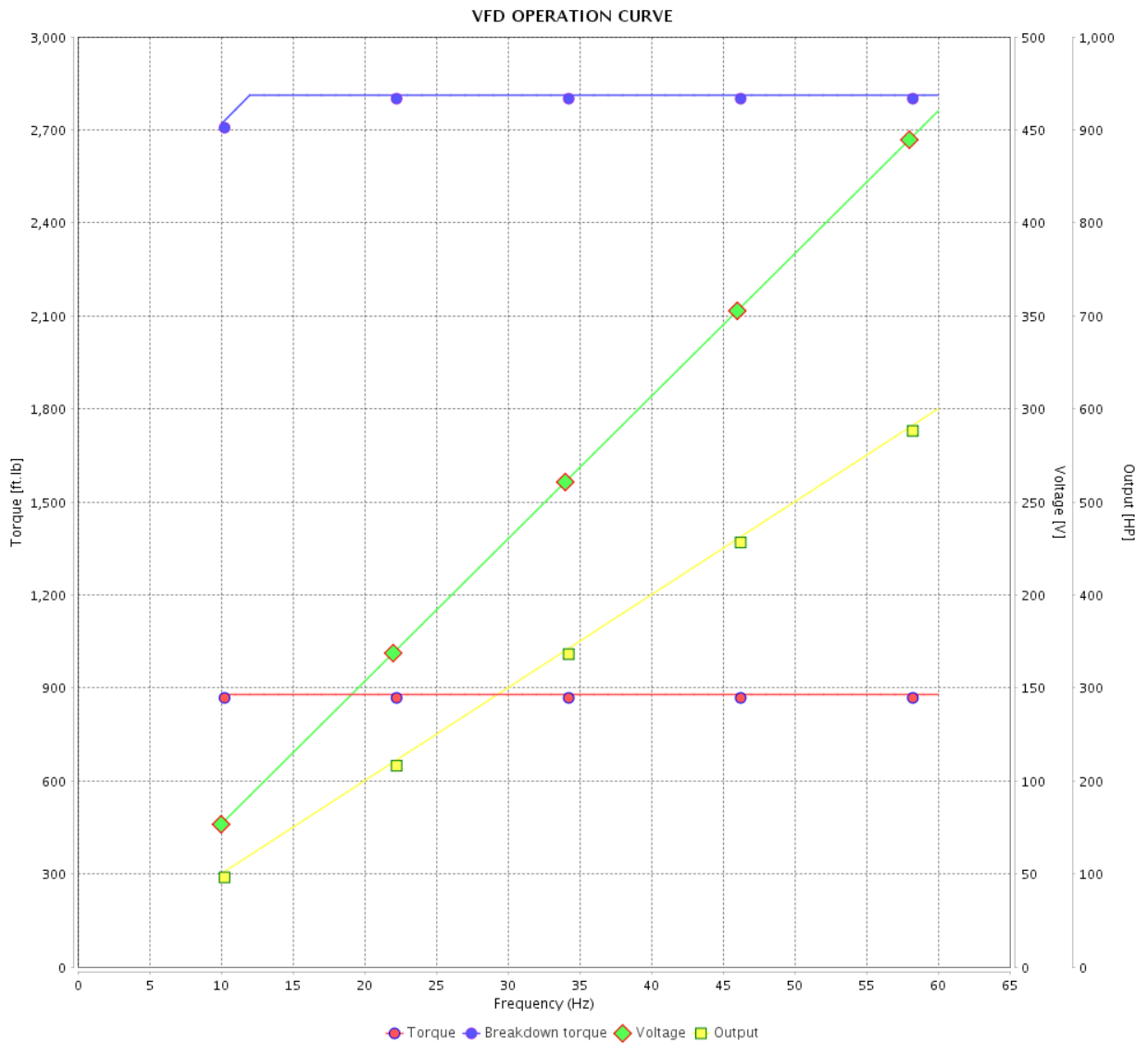


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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



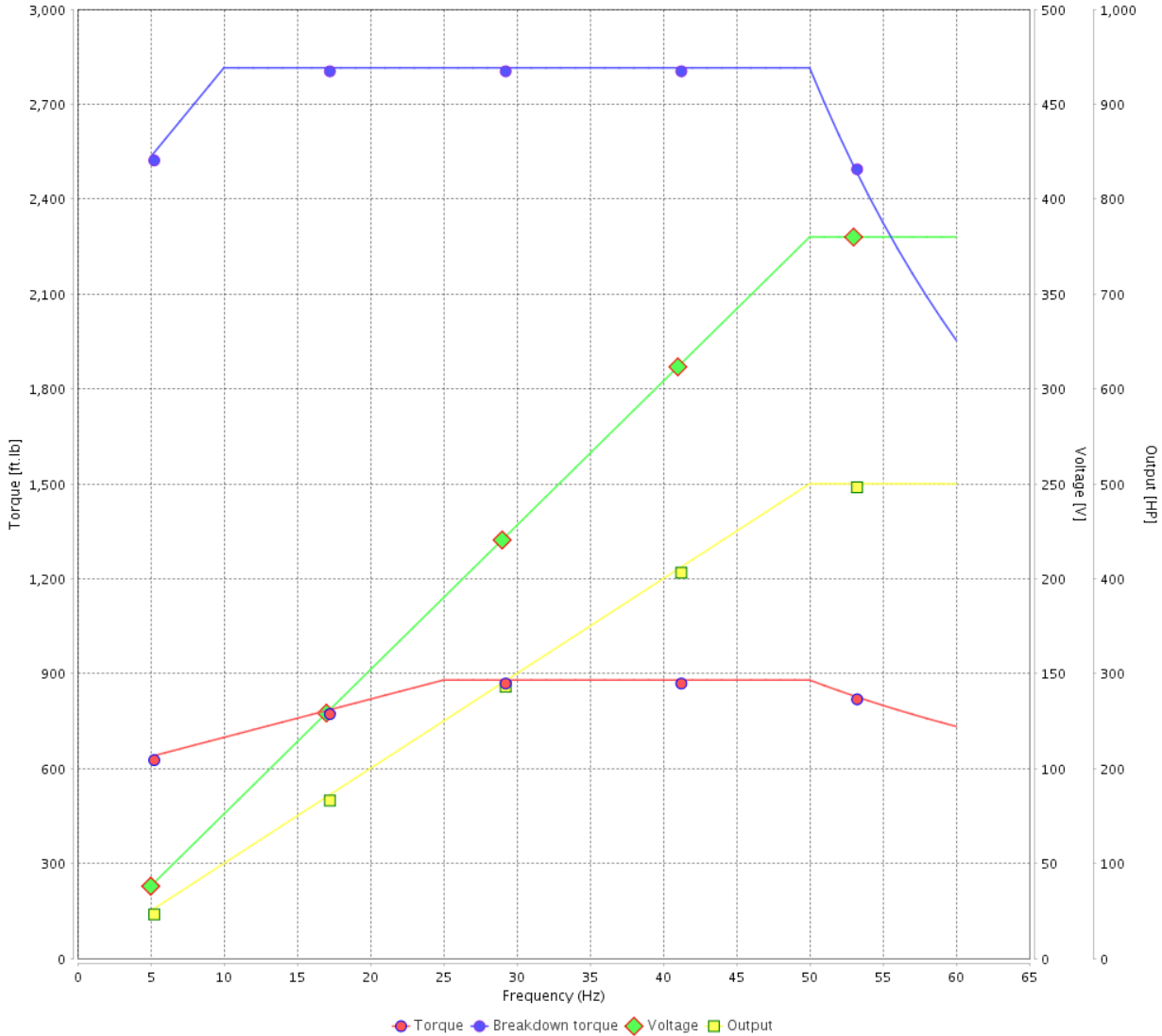
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VFD OPERATION CURVE



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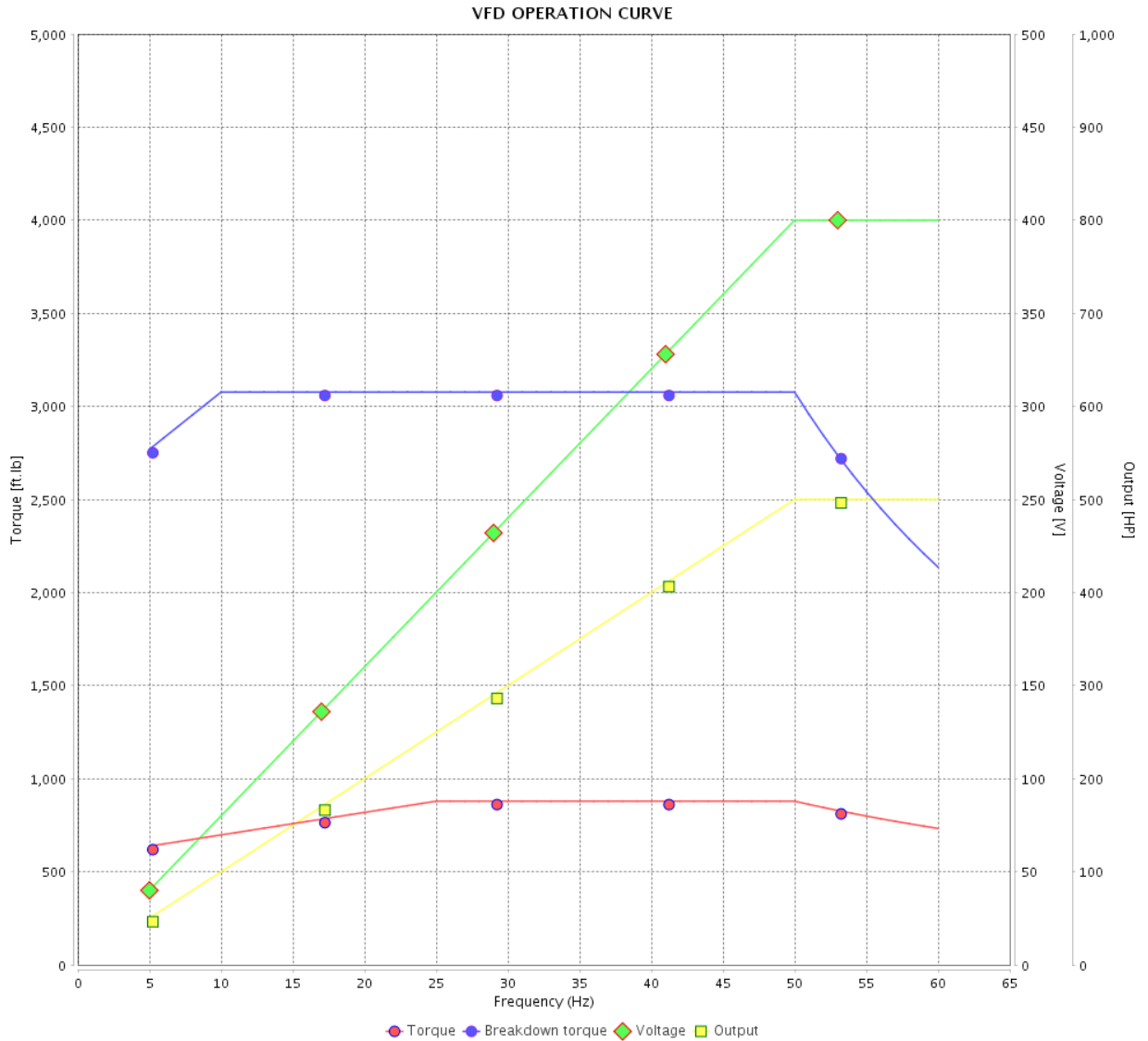


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 Temperature rise : 80 K

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



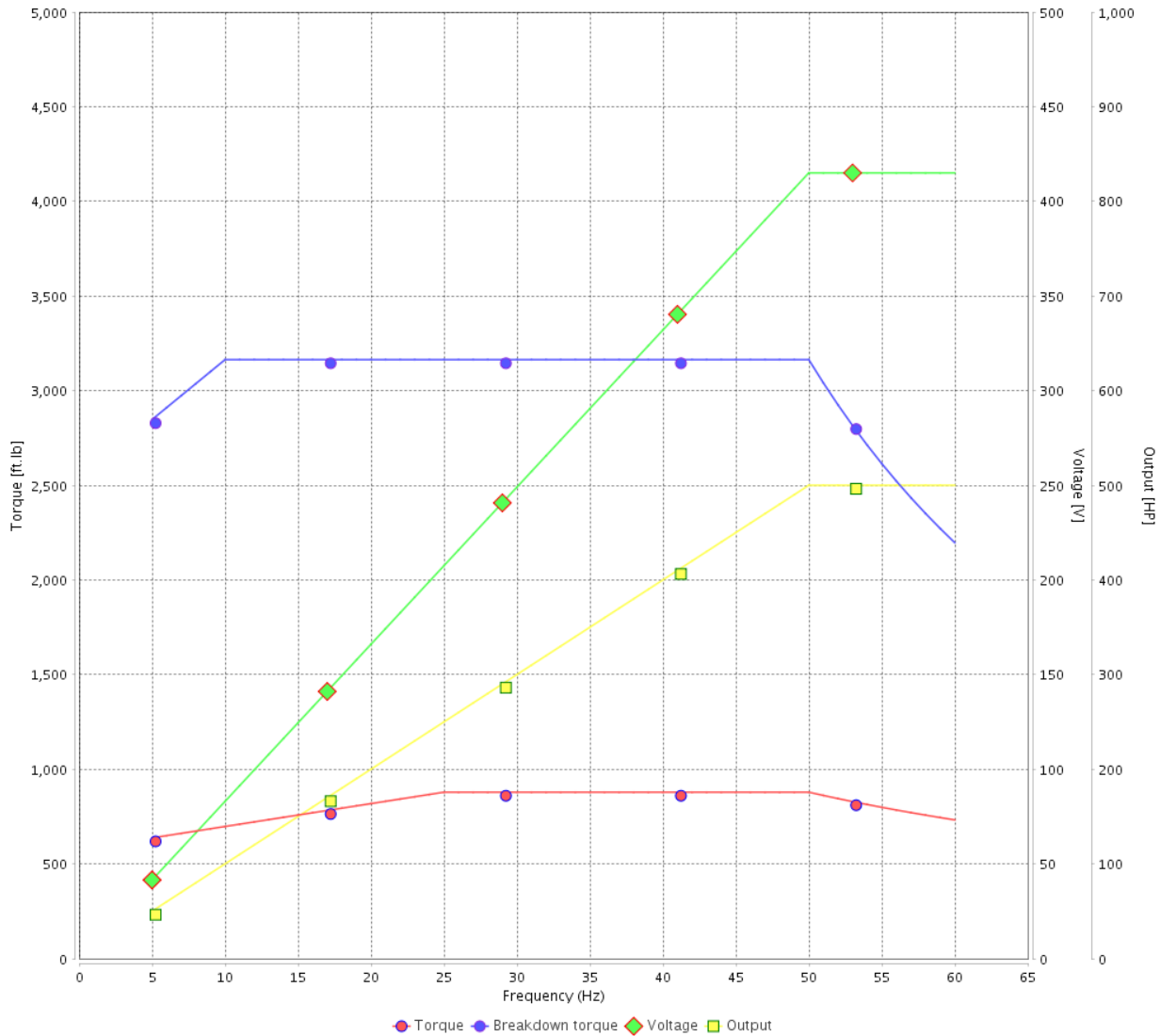
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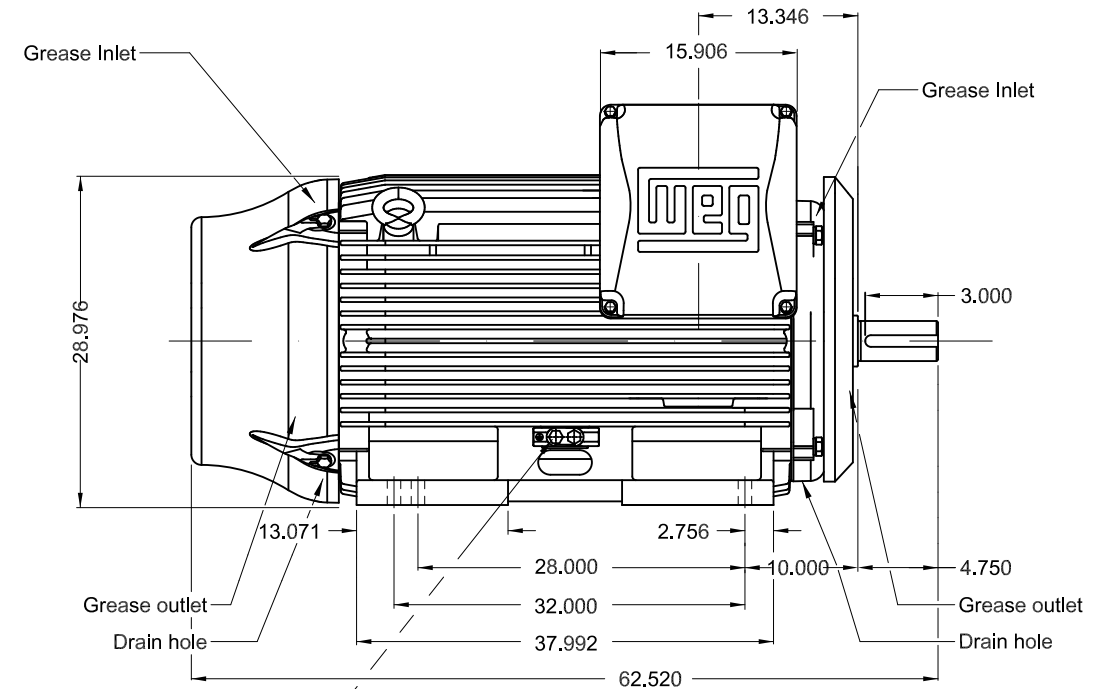
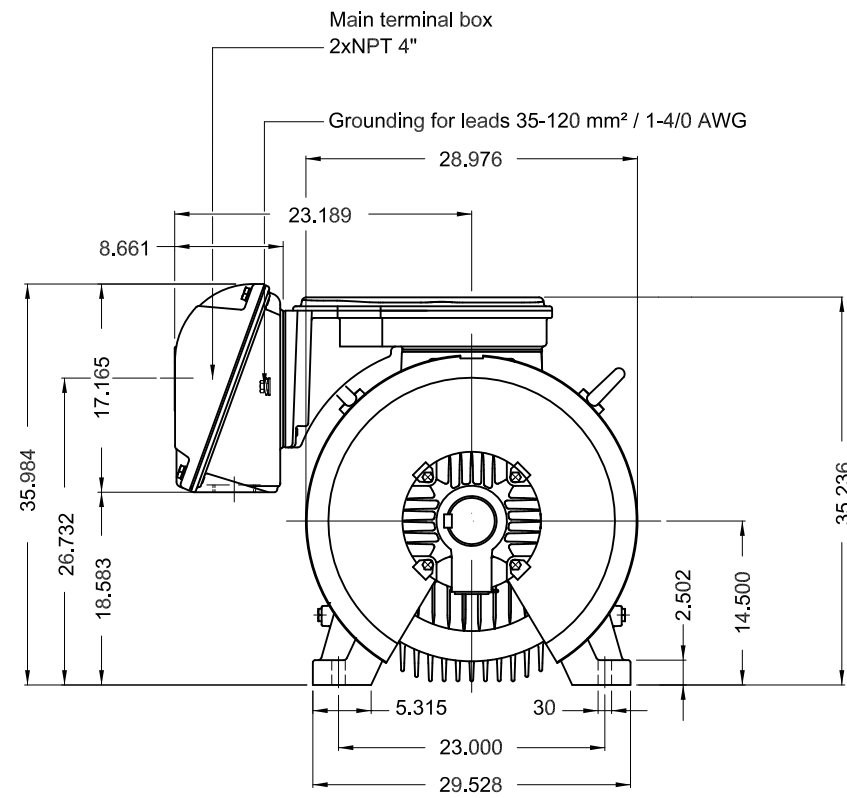


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 Duty cycle : Cont.(S1)  
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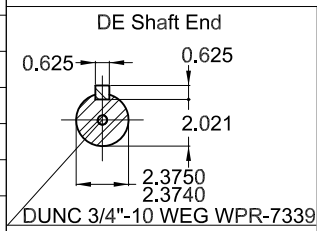


Grounding for leads 25-185 mm<sup>2</sup> / 3AWG-350MCM

600 HP 02 Poles 60 Hz

Dimensions in inches

- Without vertical jackscrews
- NDE endshield with electrically insulated bearing hub
- Drive-End Air Deflector
- Color RAL 5009
- Painting plan 203A
- Mounting NEMA F-1
- Mounting B3R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W22 PREM. EFF. FRAME 588/9TS IP55 TEFC					
CHECKED							
RELEASED							
REL DT.	WMO		Jaragua do Sul	Product Engineering	SHEET	1 / 1	

**PREVIEW**  
WDD

