

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: W22 IEEE 841 NEMA Premium Efficiency Three-Phase	Product code :	16689599		
		Catalog # :	07518ST3QAP365T-W22		
Frame	: 364/5T	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: W-8		
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>	: 954 lb		
Protection degree	: IP56	Moment of inertia (J)	: 23.3 sq.ft.lb		
Design	: B				
Output [HP]	75	75	75	75	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	87.2	106	102	98.7	
L. R. Amperes [A]	558	541	571	602	
LRC [A]	6.4x(Code G)	5.1x(Code E)	5.6x(Code F)	6.1x(Code G)	
No load current [A]	33.0	33.0	35.0	38.0	
Rated speed [RPM]	1780	1475	1475	1480	
Slip [%]	1.11	1.67	1.67	1.33	
Rated torque [ft.lb]	221	267	267	266	
Locked rotor torque [%]	240	170	200	210	
Breakdown torque [%]	260	200	220	240	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	105 K	105 K	105 K	
Locked rotor time	25s (cold) 14s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)	
Noise level <sup>2</sup>	67.0 dB(A)	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	
Efficiency (%)	25%	94.0	94.9	94.7	94.0
	50%	94.5	94.5	94.5	94.1
	75%	95.0	94.1	94.5	94.5
	100%	95.4	93.6	94.1	94.5
Power Factor	25%	0.44	0.51	0.46	0.43
	50%	0.68	0.75	0.70	0.67
	75%	0.78	0.82	0.80	0.78
	100%	0.83	0.84	0.83	0.82
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	4.7	4.7	4.7	4.7
	P2 (0,5;1,0)	3.7	3.7	3.7	3.7
	P3 (0,25;1,0)	3.4	3.4	3.4	3.4
	P4 (0,9;0,5)	2.4	2.4	2.4	2.4
	P5 (0,5;0,5)	1.6	1.6	1.6	1.6
	P6 (0,5;0,25)	1.1	1.1	1.1	1.1
	P7 (0,25;0,25)	0.7	0.7	0.7	0.7
Bearing type	: Drive end : NU-314 C3 Non drive end : 6314 C3	Foundation loads			
Sealing	: Inpro/Seal Inpro/Seal	Max. traction : 1709 lb			
Lubrication interval	: 4000 h 6000 h	Max. compression : 2663 lb			
Lubricant amount	: 27 g 27 g				
Lubricant type	: Mobil Polyrex EM				
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).			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



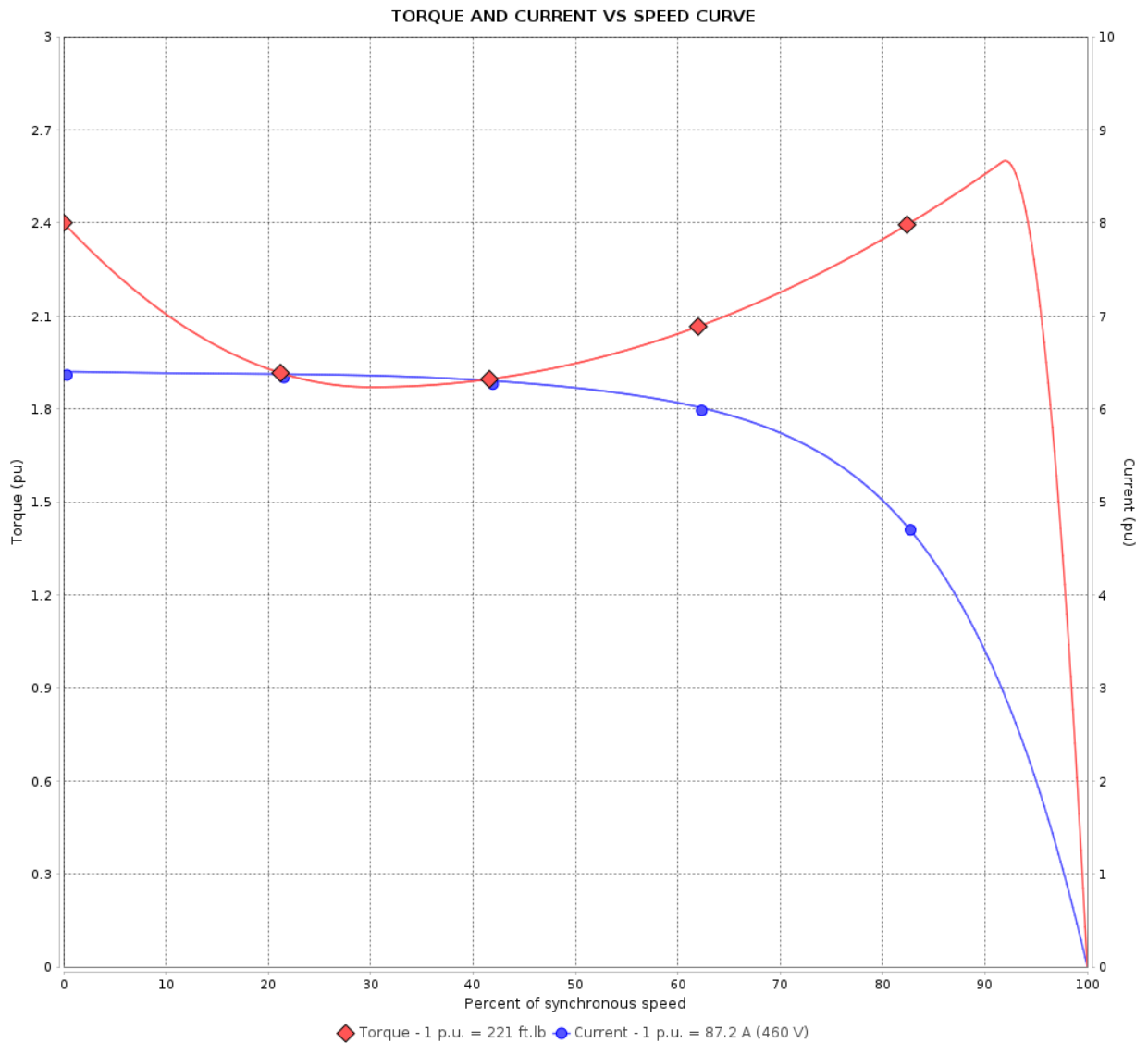
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Product code : 16689599

Catalog # : 07518ST3QAP365T-W22



Performance : 460 V 60 Hz 4P

Rated current	: 87.2 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 221 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.15
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1780 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



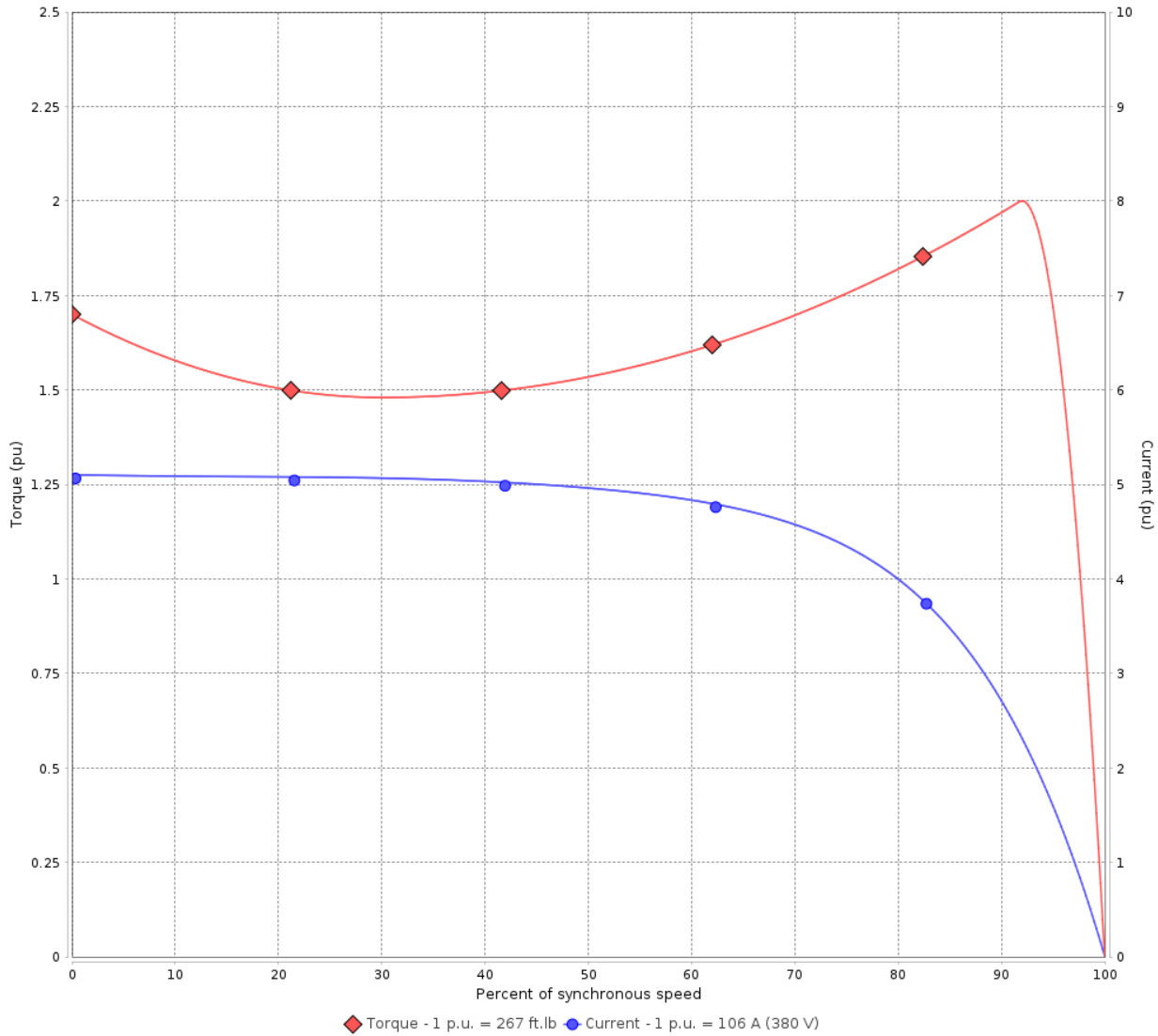
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Product code : 16689599

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TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE2

Rated current	: 106 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 267 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 1475 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



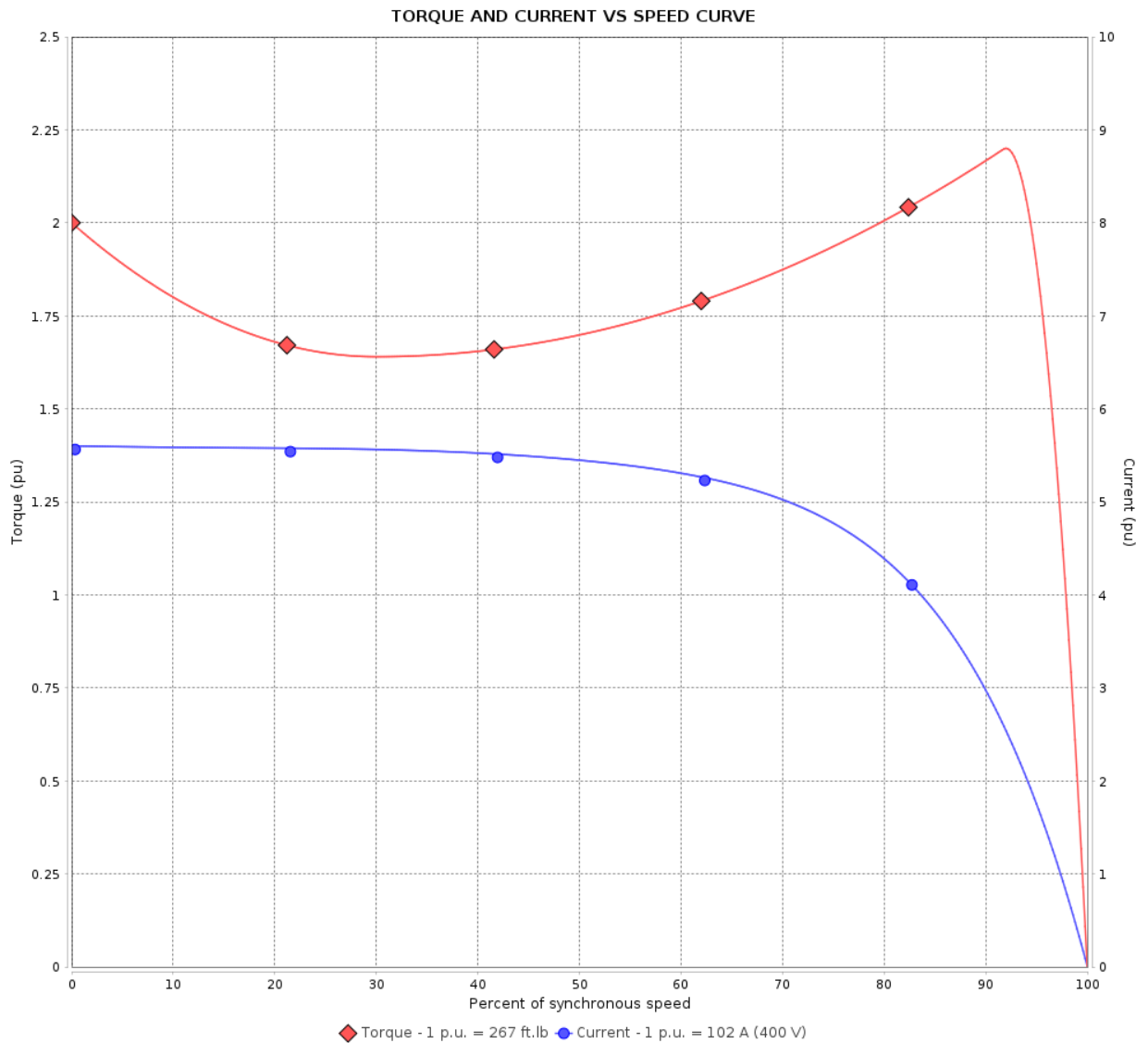
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Performance : 400 V 50 Hz 4P IE2

Rated current	: 102 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 267 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 105 K
Rated speed	: 1475 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

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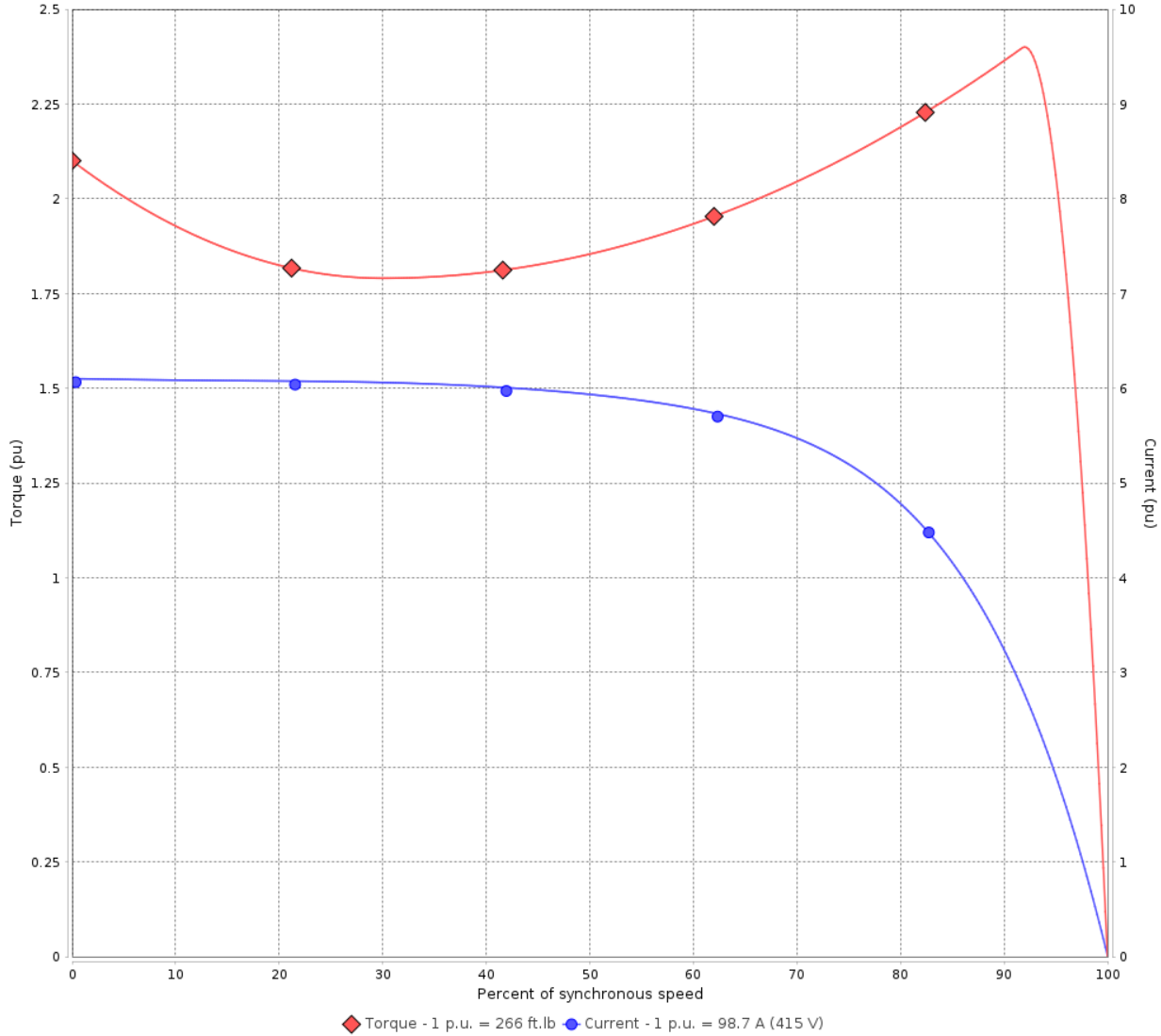
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE2

Rated current	: 98.7 A	Moment of inertia (J)	: 23.3 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 266 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

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# LOAD PERFORMANCE CURVE

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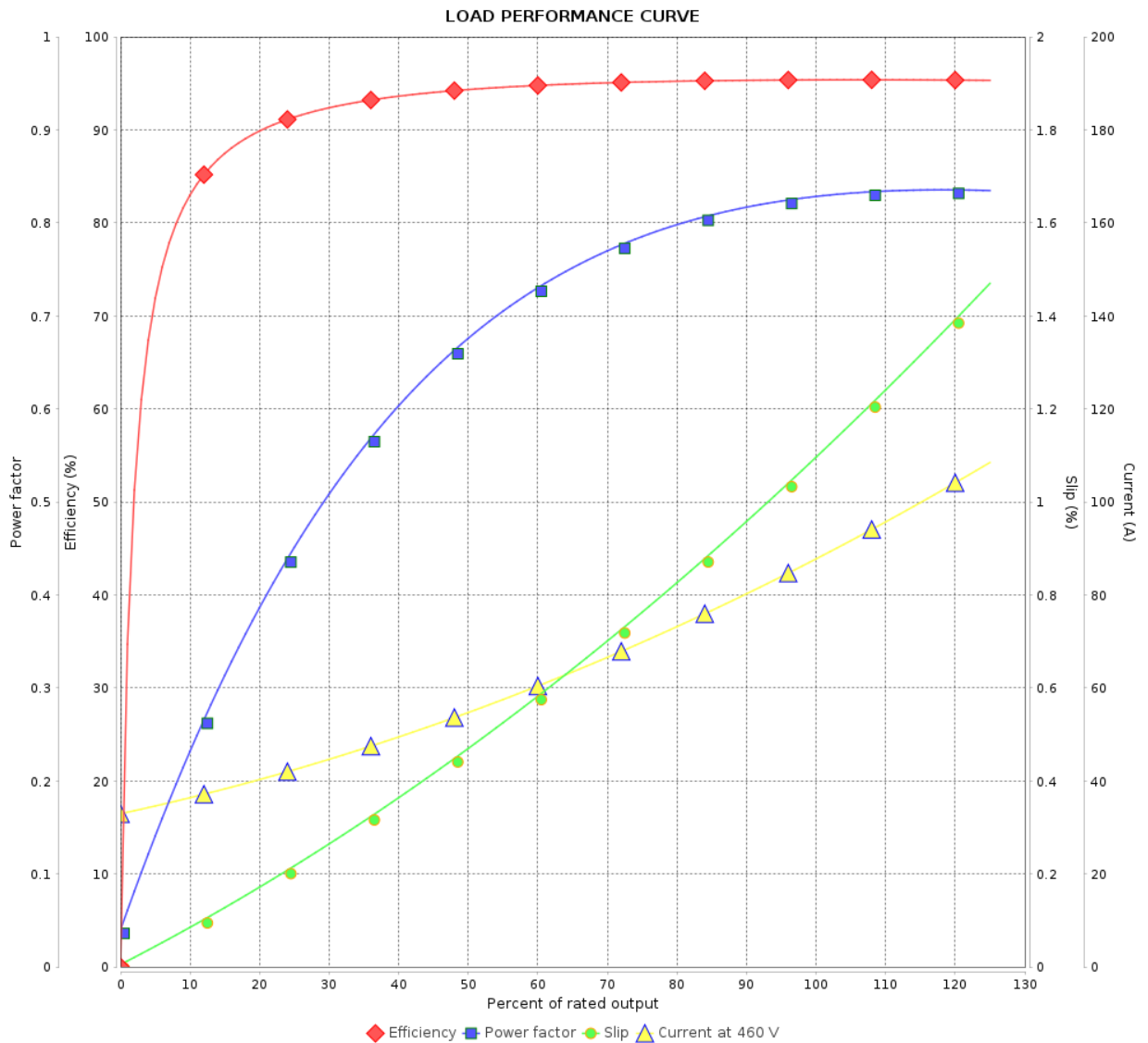


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Performance : 460 V 60 Hz 4P

Rated current : 87.2 A  
 LRC : 6.4  
 Rated torque : 221 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 260 %  
 Rated speed : 1780 rpm

Moment of inertia (J) : 23.3 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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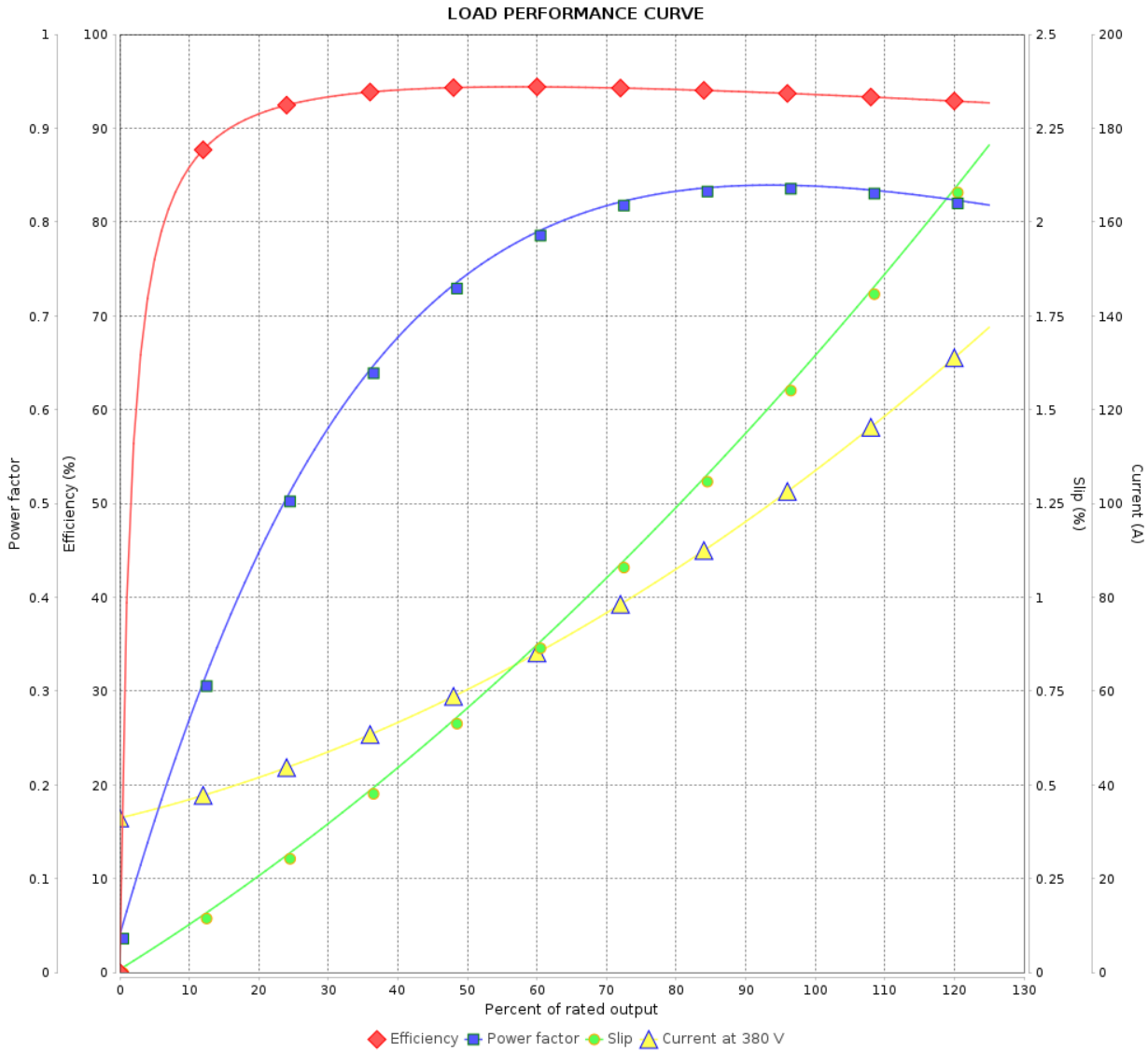


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Performance : 380 V 50 Hz 4P IE2

Rated current : 106 A  
 LRC : 5.1  
 Rated torque : 267 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 200 %  
 Rated speed : 1475 rpm

Moment of inertia (J) : 23.3 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

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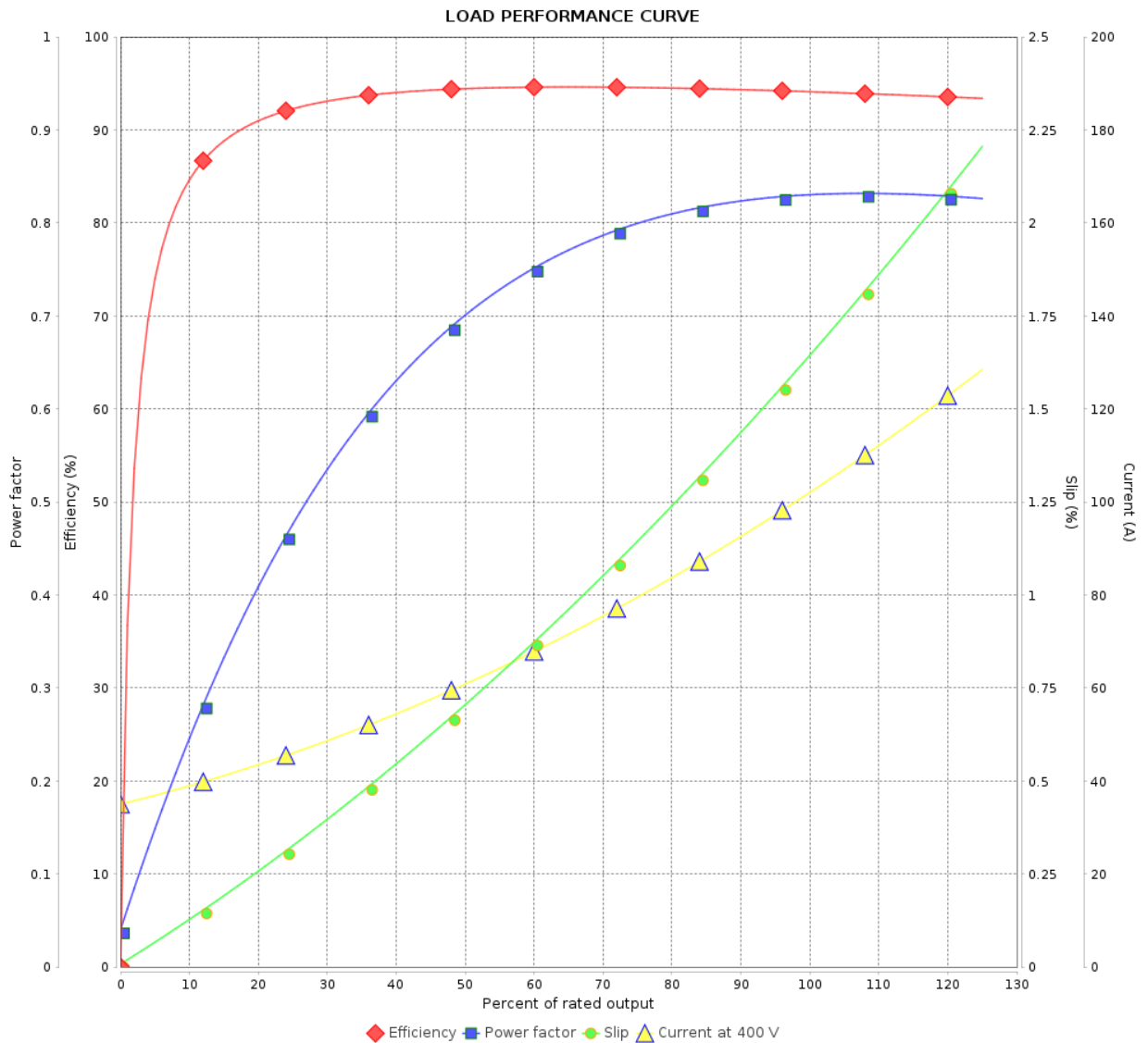


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Performance : 400 V 50 Hz 4P IE2

Rated current : 102 A  
 LRC : 5.6  
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 Breakdown torque : 220 %  
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Moment of inertia (J) : 23.3 sq.ft.lb  
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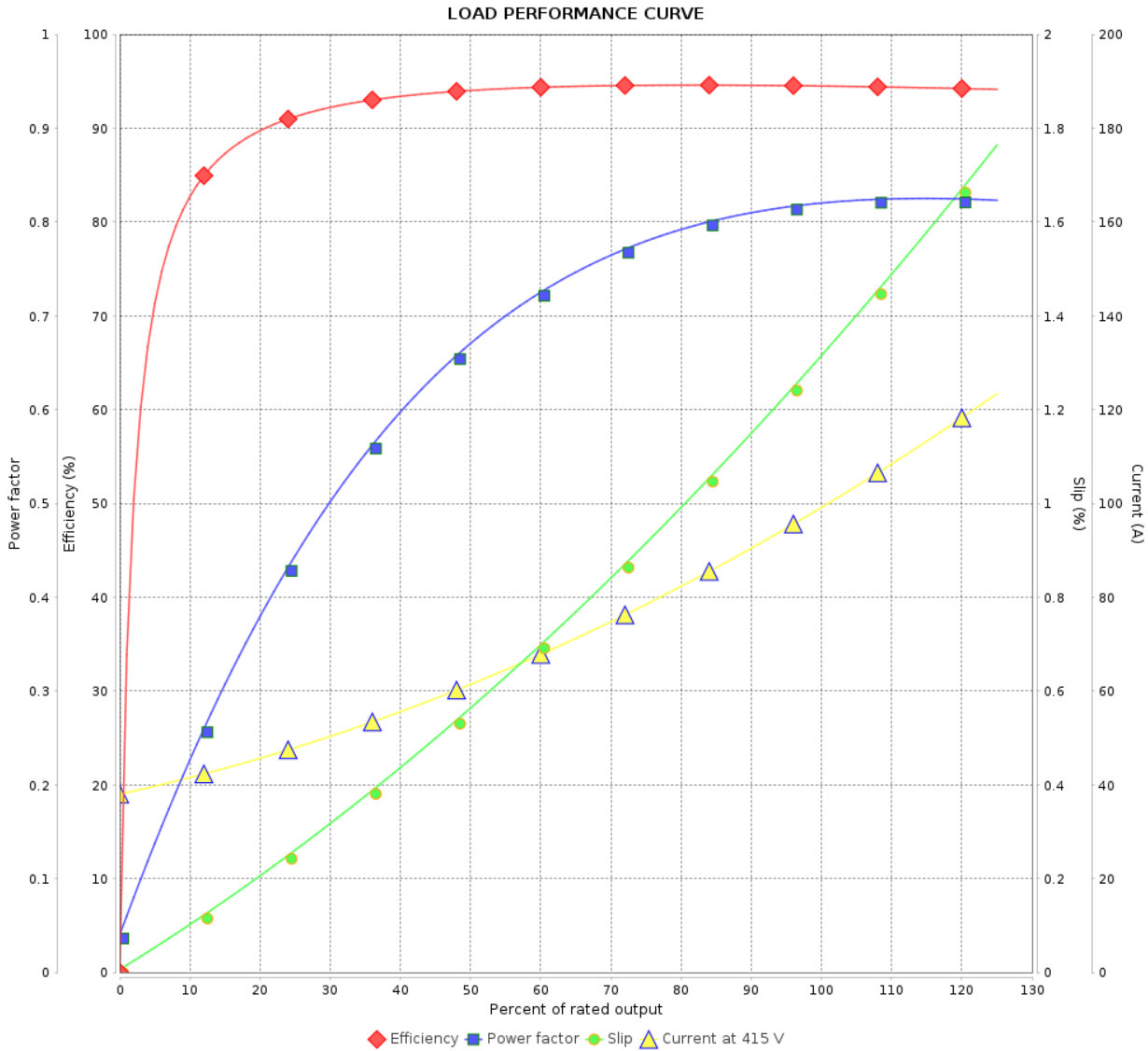


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 Service factor : 1.00  
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# THERMAL LIMIT CURVE



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Rated speed : 1780 rpm	Design : B

Heating constant

Cooling constant

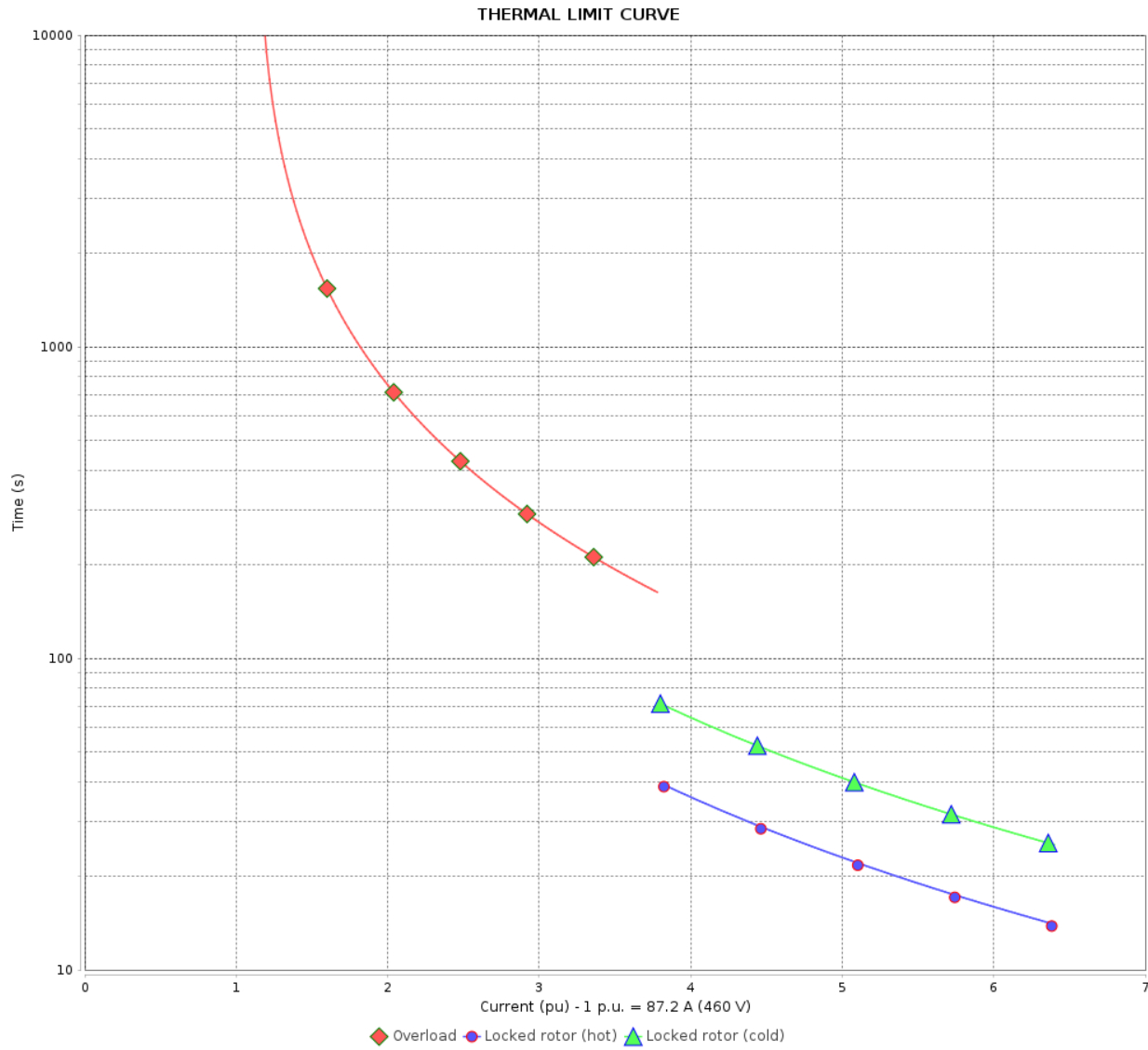
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Cooling constant

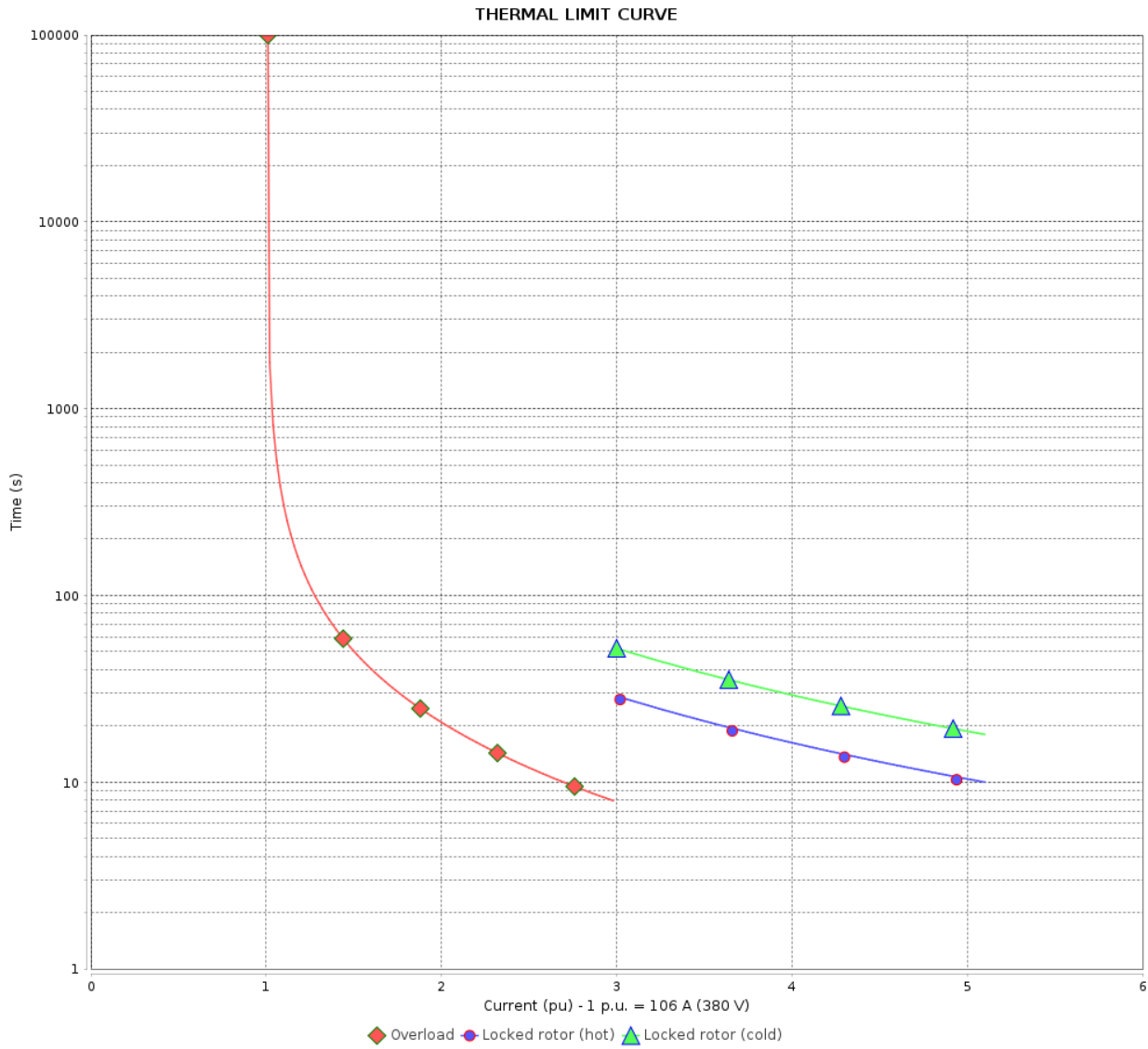
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Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 105 K  
Design : B

Heating constant

Cooling constant

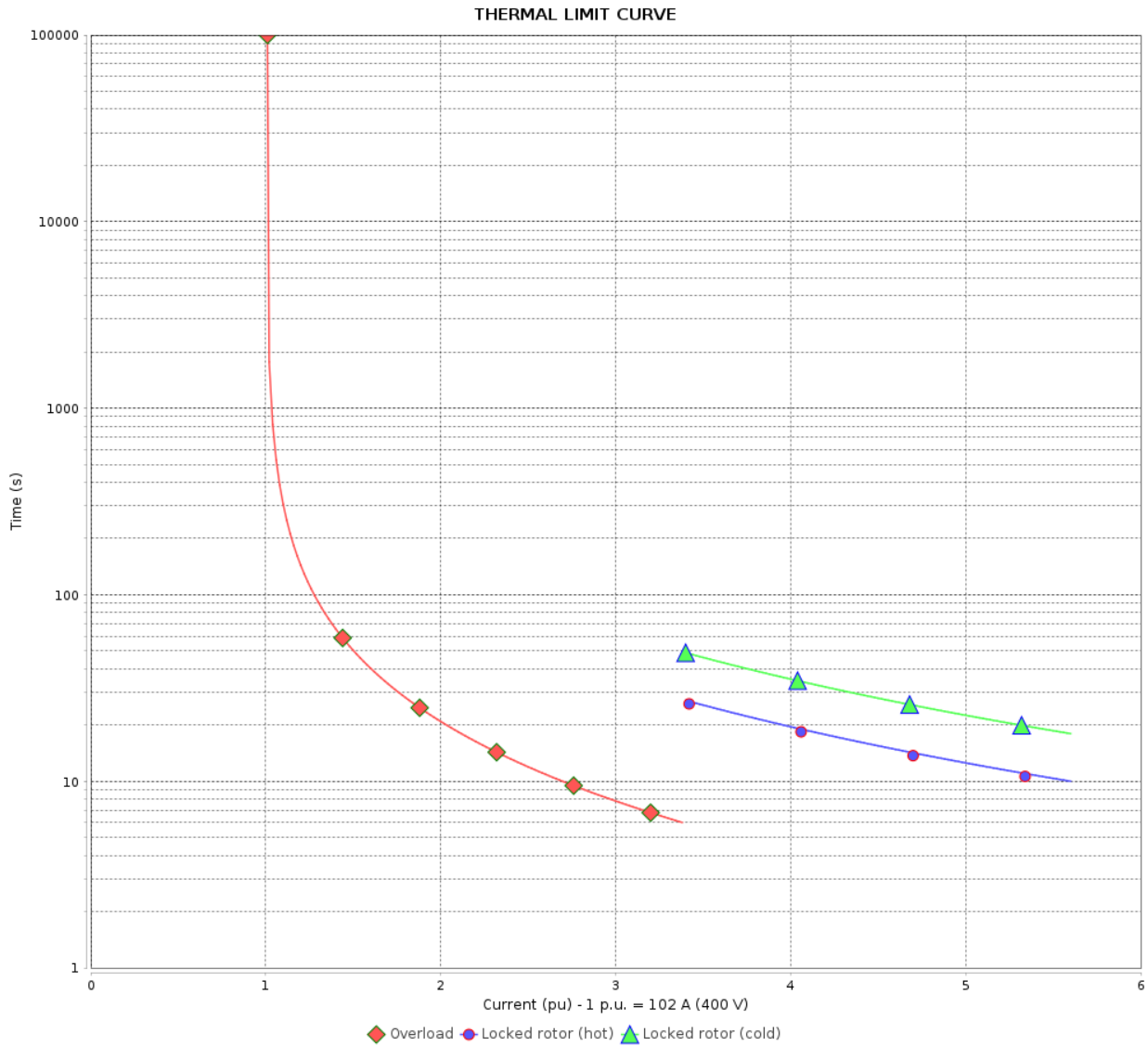
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Heating constant

Cooling constant

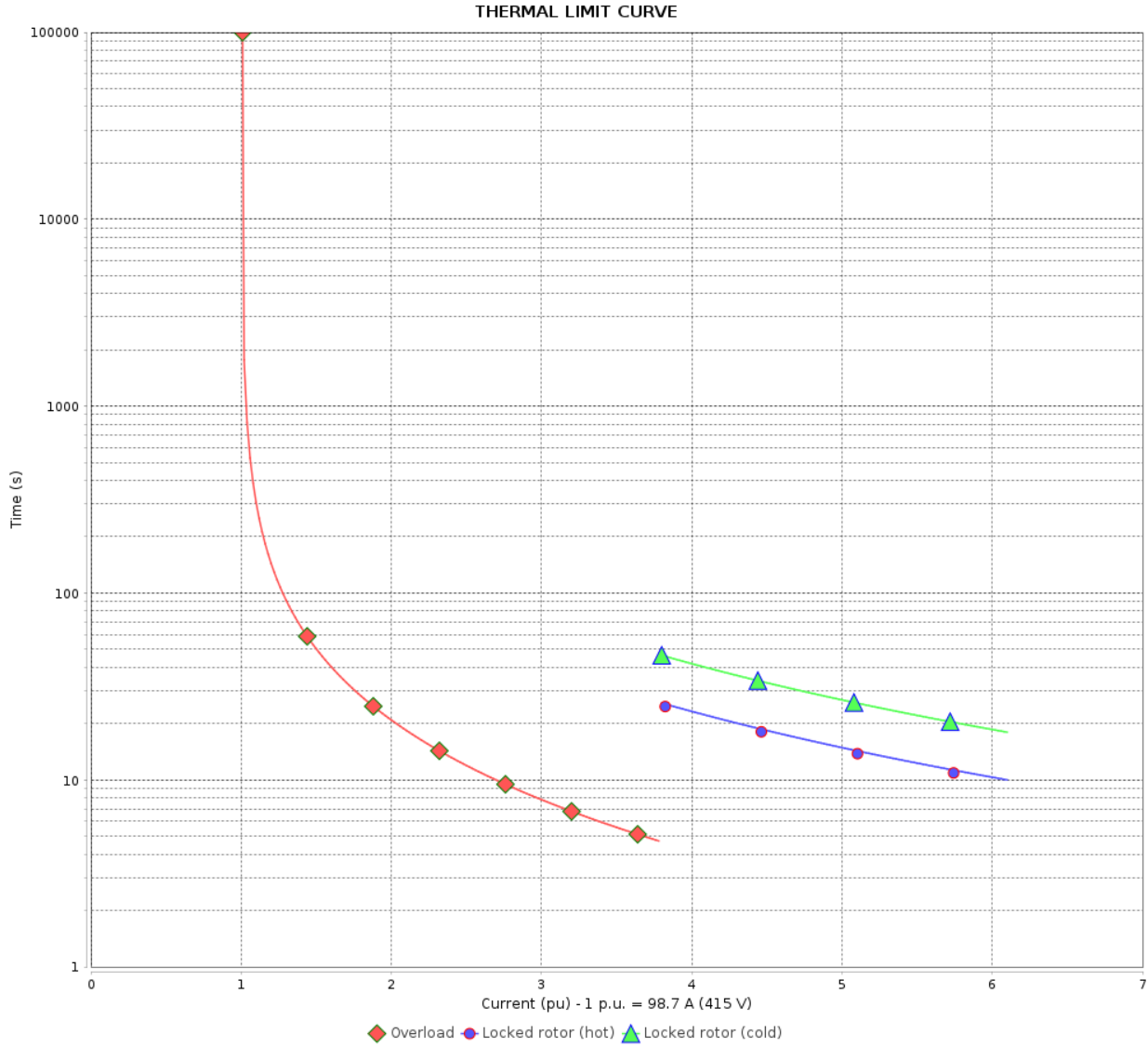
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# VFD OPERATION CURVE

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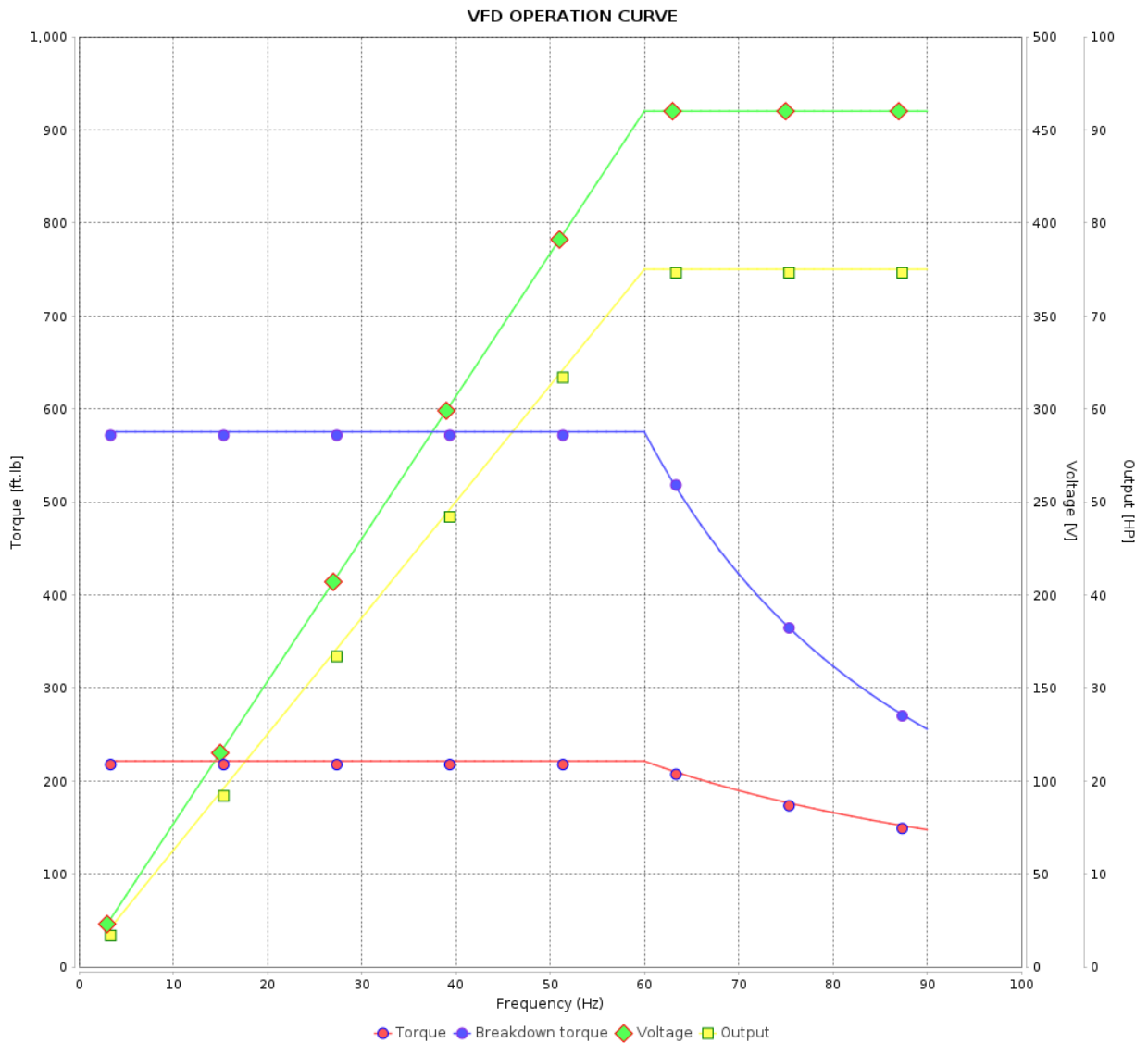


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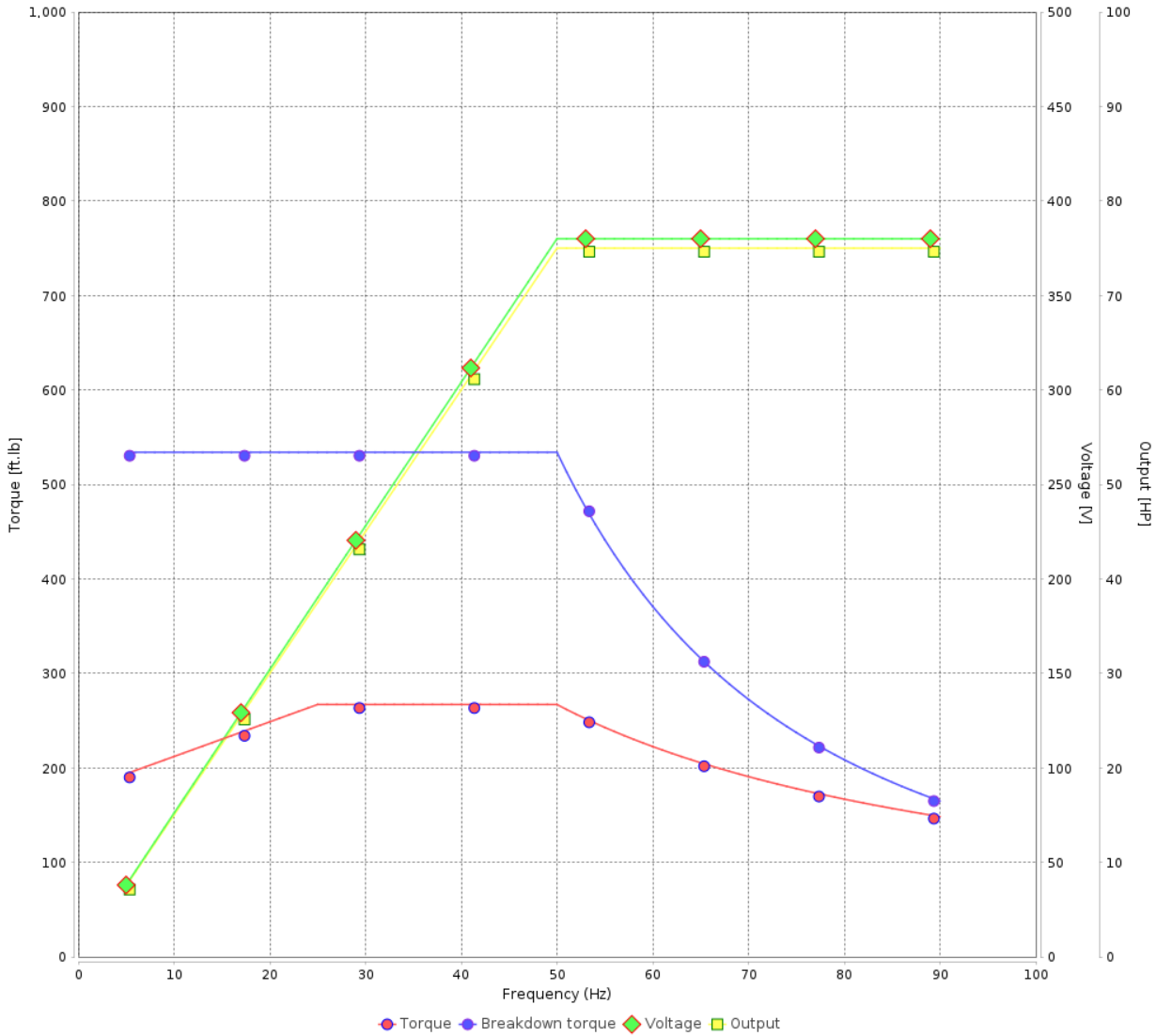
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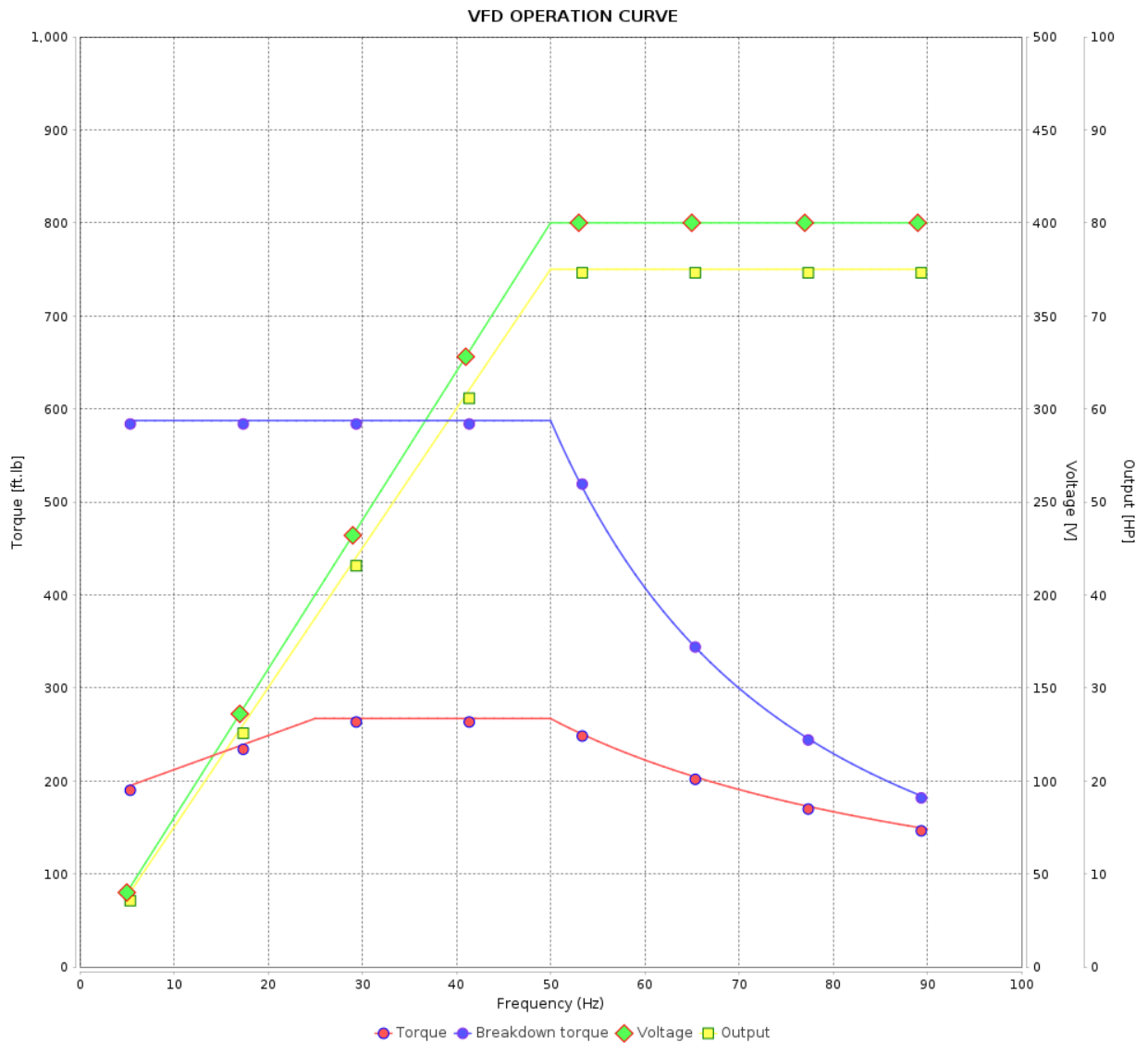


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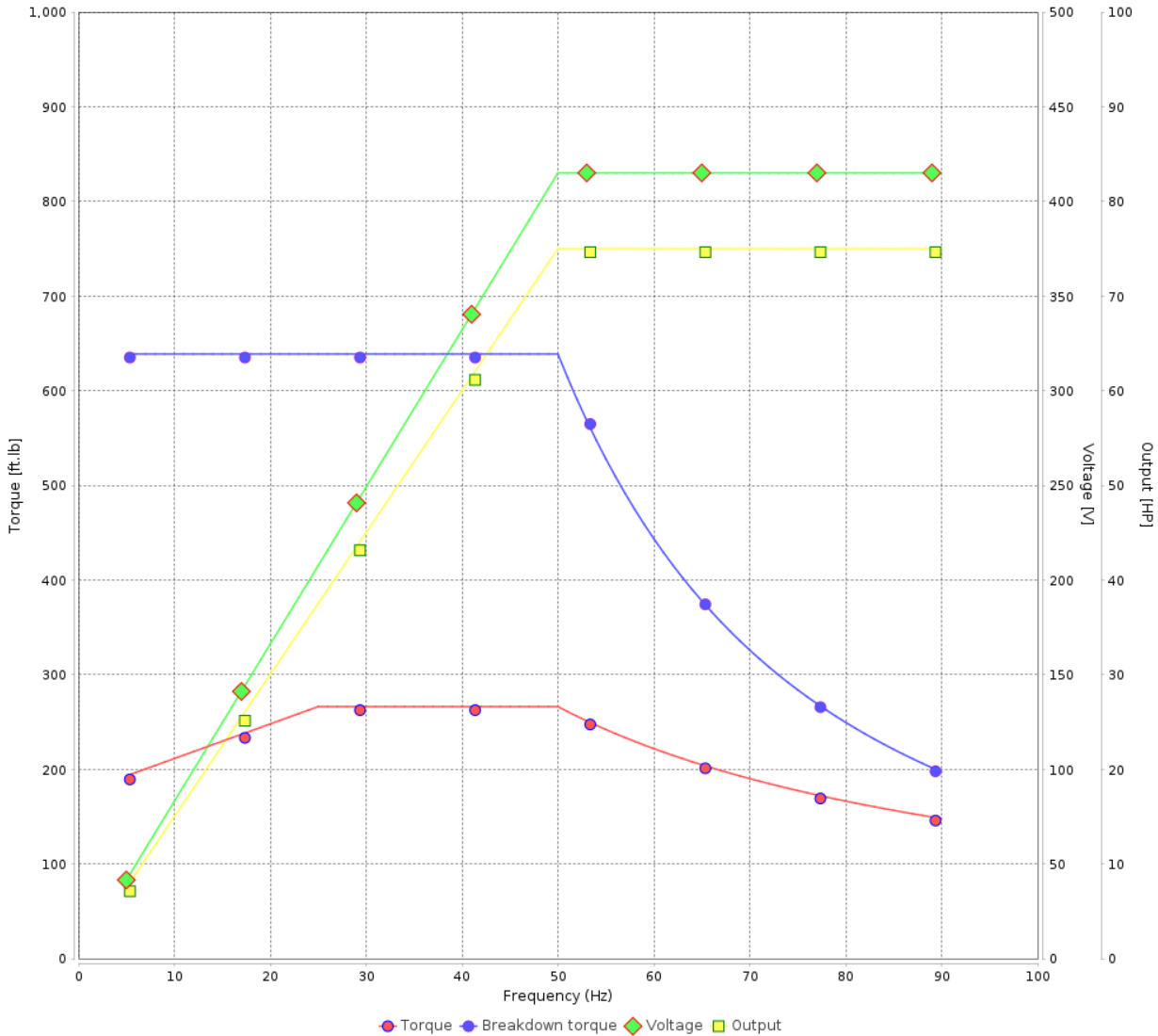
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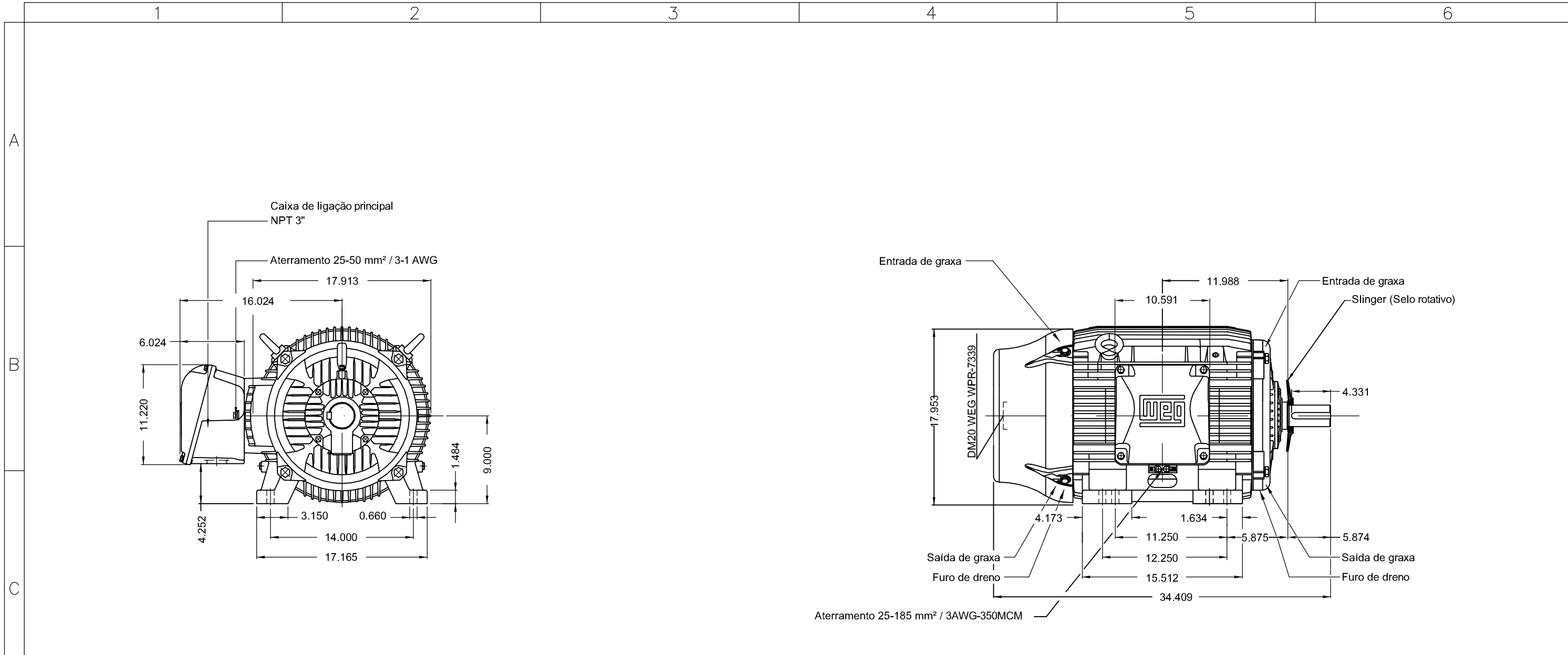


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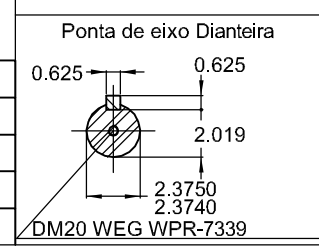


420104067  
421801240 PLACAS

75 HP 04 Polos 60 Hz A

**WEC HOUSE ACCOUNT MOTORS**

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ECM	LOC	RESUMO MODIFICAÇÃO			EXECUTADO	VERIFICADO	LIBERADO	DATA	VER
EXECUTOR	SCARMAGNANI	MOTOR TRIF. W22 NEMA P. EFF. IEEEE841				10009788577			
VERIFICADOR	SCARMAGNANI	CARÇAÇA 364/5T IP56 TEFC				000	03		
LIBERADOR	MARLONB								
DATA LB.	09.06.2022	WMO	JARAGUA DO SUL	Engenharia de Produto	FOLHA	1 / 1			



- Placa de identificação com a marcação API 661
- Placa de identificação com marcação especial
- Saída de graxa conforme IEEEE841
- Forma construtiva NEMA W-8
- Forma construtiva V6D

A  
B  
C  
D  
E

UNCONTROLLED COPY  
Dimensões em polegadas  
RELEASED  
ZME A3