

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer		: Astraprom d.o.o.			
Product line		: W22 IE3 Three-Phase		Product code : 12882011	
Frame	: 132S	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: B3T		
Duty cycle	: S1	Rotation ¹	: Both (CW and CCW)		
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line		
Altitude	: 1000 m.a.s.l.	Approx. weight ³	: 65.9 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.0416 kgm ²		
Design	: N				
Output [kW]	3	3	3		
Poles	6	6	6		
Frequency [Hz]	50	50	50		
Rated voltage [V]	220/380	230/400	240/415		
Rated current [A]	12.1/7.01	12.1/6.93	11.9/6.87		
L. R. Amperes [A]	67.8/39.3	73.5/42.3	78.4/45.3		
LRC [A]	5.6	6.1	6.6		
No load current [A]	6.29/3.64	6.96/4.00	7.40/4.28		
Rated speed [RPM]	965	970	975		
Slip [%]	3.50	3.00	2.50		
Rated torque [kgfm]	3.03	3.01	3.00		
Locked rotor torque [%]	160	190	220		
Breakdown torque [%]	210	240	260		
Service factor	1.00	1.00	1.00		
Temperature rise	80 K	80 K	80 K		
Locked rotor time	72s (cold) 40s (hot)	72s (cold) 40s (hot)	72s (cold) 40s (hot)		
Noise level ²	53.0 dB(A)	53.0 dB(A)	53.0 dB(A)		
Efficiency (%)	25%				
	50%	85.0	85.0	85.2	
	75%	85.6	85.6	85.8	
	100%	85.6	85.6	85.6	
Power Factor	25%				
	50%	0.57	0.53	0.49	
	75%	0.69	0.66	0.63	
	100%	0.76	0.73	0.71	
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	16.7	16.7	16.7	
	P2 (0,5;1,0)	15.6	15.6	15.6	
	P3 (0,25;1,0)	14.6	14.6	14.6	
	P4 (0,9;0,5)	8.1	8.1	8.1	
	P5 (0,5;0,5)	6.4	6.4	6.4	
	P6 (0,5;0,25)	4.5	4.5	4.5	
	P7 (0,25;0,25)	3.6	3.6	3.6	
Bearing type	: Drive end 6308 ZZ	Non drive end 6207 ZZ	Foundation loads		
Sealing	: V'Ring	V'Ring	Max. traction	: 111 kgf	
Lubrication interval	: -	-	Max. compression	: 177 kgf	
Lubricant amount	: -	-			
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). (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 IEC 60034-1.		
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Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermistor - 2 wires	1 x Phase	155 °C

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TORQUE AND CURRENT VS SPEED CURVE

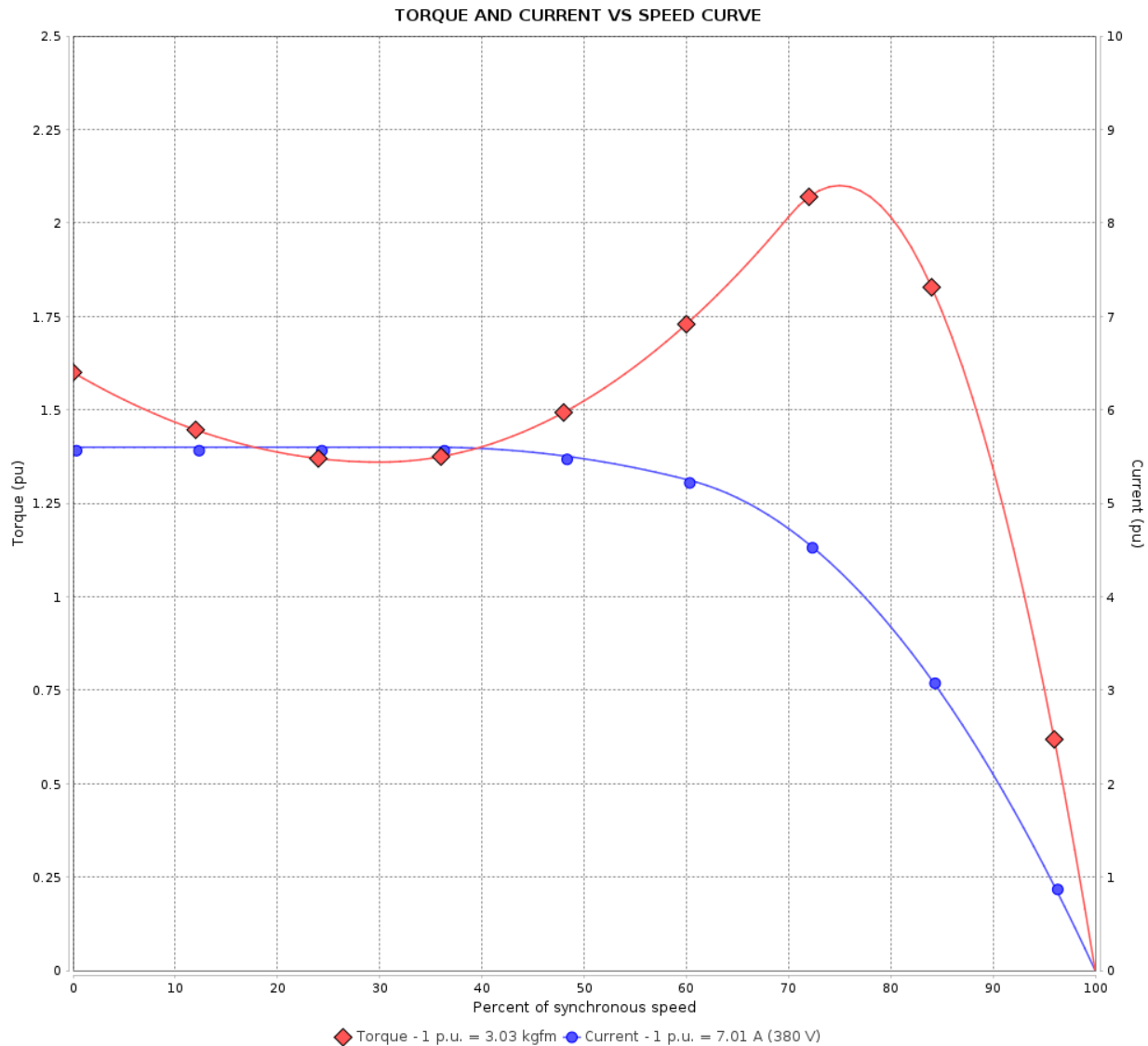
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12882011



Performance : 220/380 V 50 Hz 6P

Rated current	: 12.1/7.01 A	Moment of inertia (J)	: 0.0416 kgm ²
LRC	: 5.6	Duty cycle	: S1
Rated torque	: 3.03 kgfm	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: N

Locked rotor time : 72s (cold) 40s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

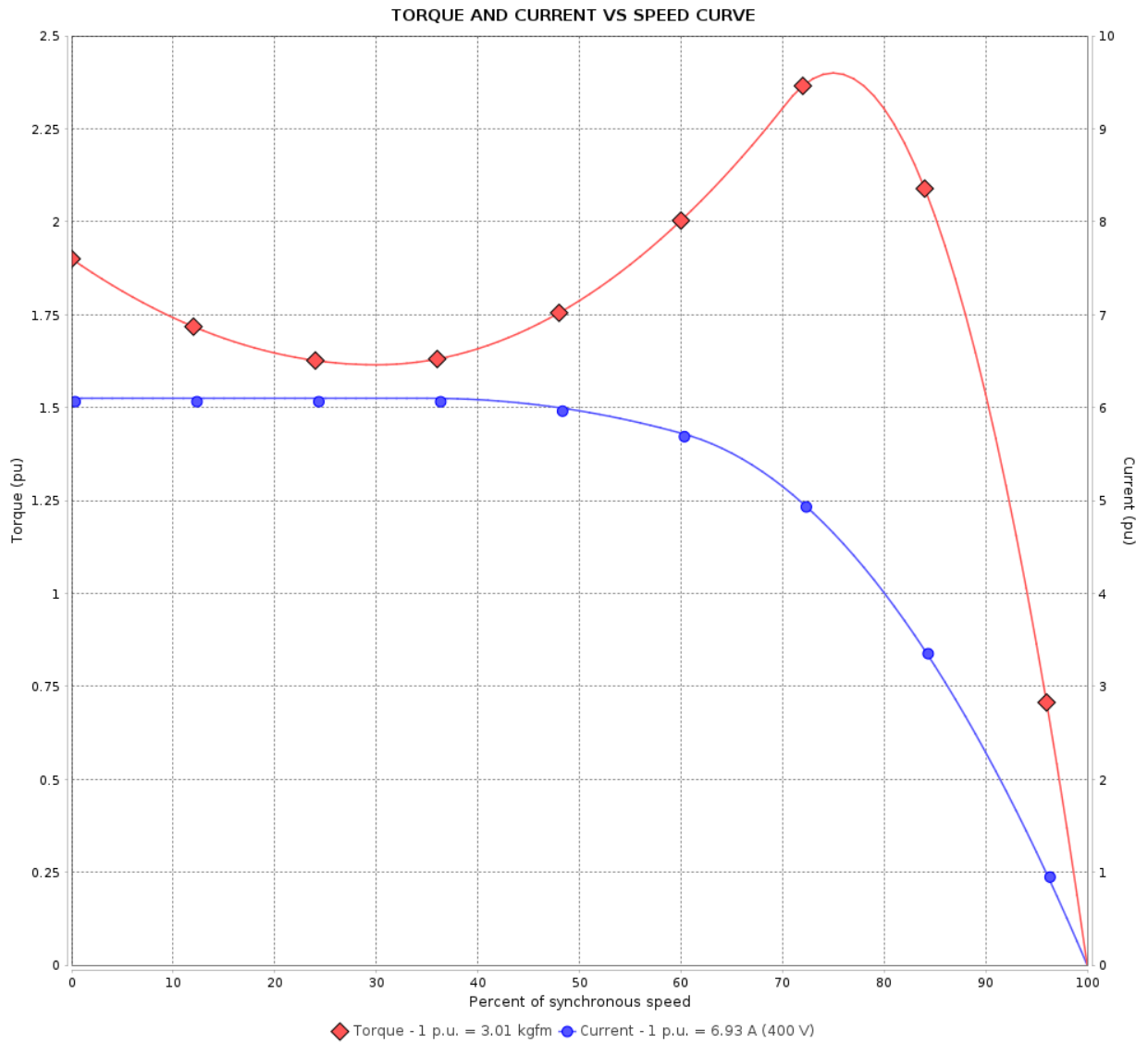
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Customer : Astraprom d.o.o.

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Performance : 230/400 V 50 Hz 6P

Rated current	: 12.1/6.93 A	Moment of inertia (J)	: 0.0416 kgm ²
LRC	: 6.1	Duty cycle	: S1
Rated torque	: 3.01 kgfm	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: N

Locked rotor time : 72s (cold) 40s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

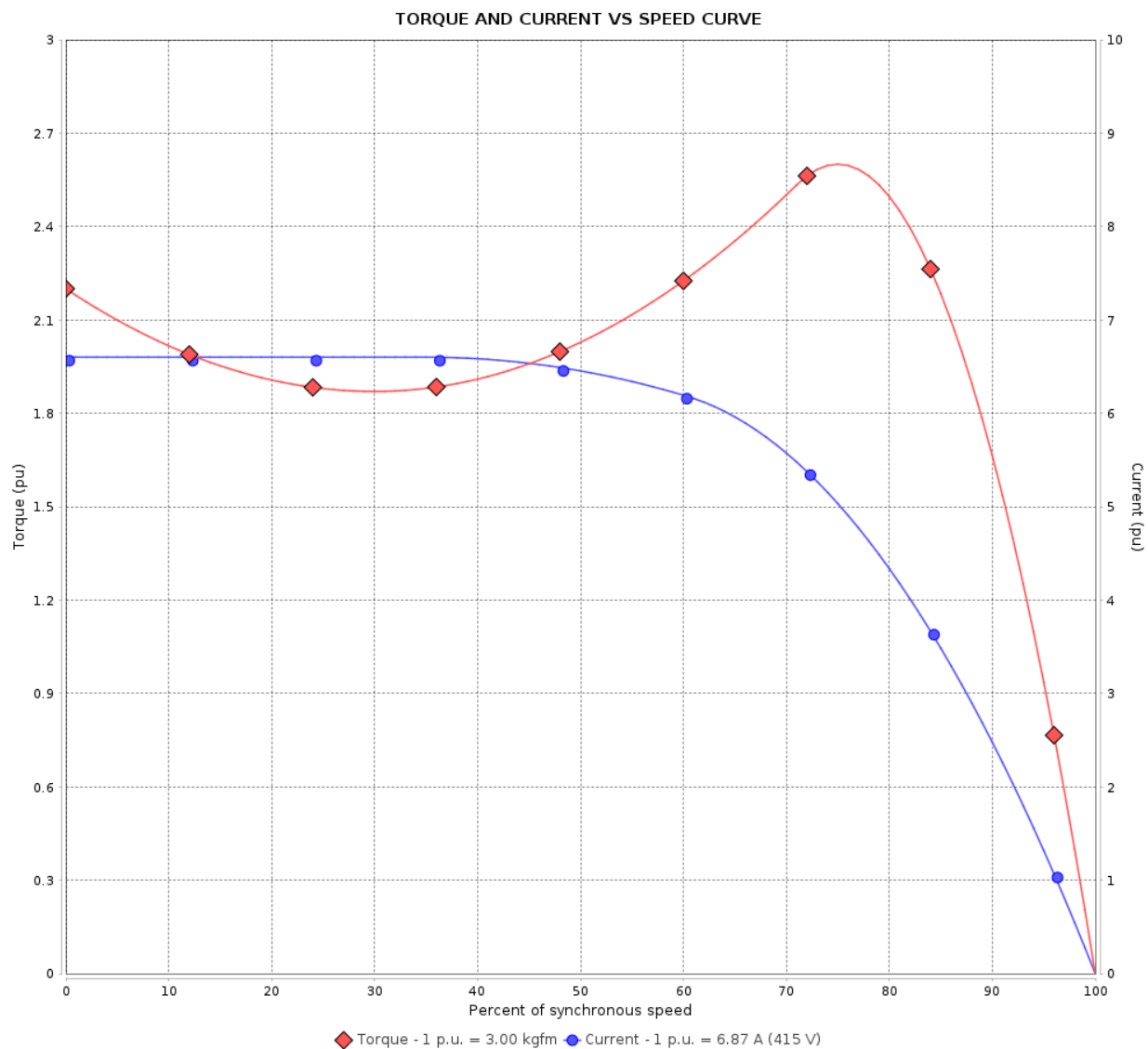
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

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Performance : 240/415 V 50 Hz 6P

Rated current	: 11.9/6.87 A	Moment of inertia (J)	: 0.0416 kgm ²
LRC	: 6.6	Duty cycle	: S1
Rated torque	: 3.00 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: N

Locked rotor time : 72s (cold) 40s (hot)

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LOAD PERFORMANCE CURVE

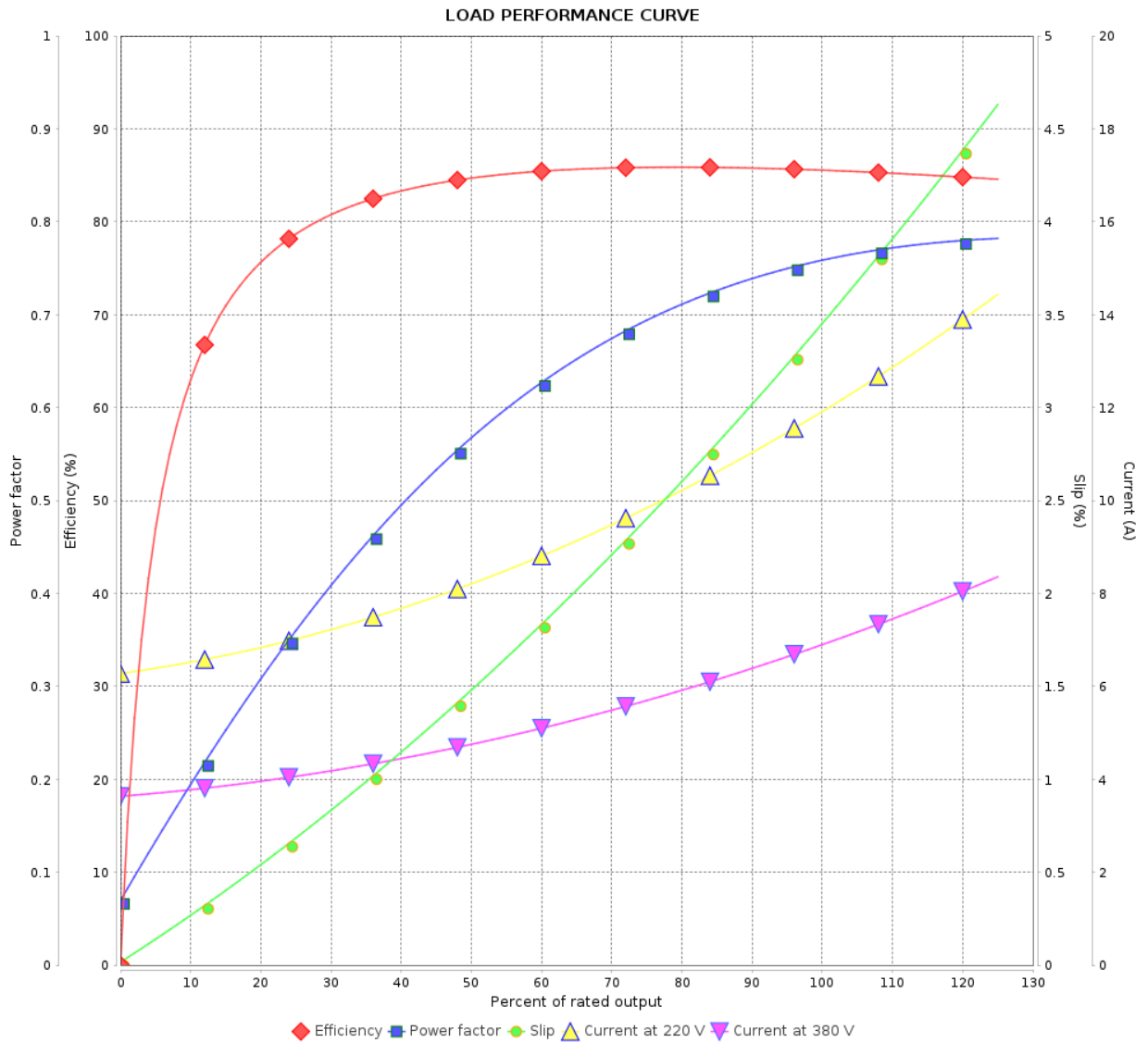
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Performance : 220/380 V 50 Hz 6P

Rated current : 12.1/7.01 A
 LRC : 5.6
 Rated torque : 3.03 kgfm
 Locked rotor torque : 160 %
 Breakdown torque : 210 %
 Rated speed : 965 rpm

Moment of inertia (J) : 0.0416 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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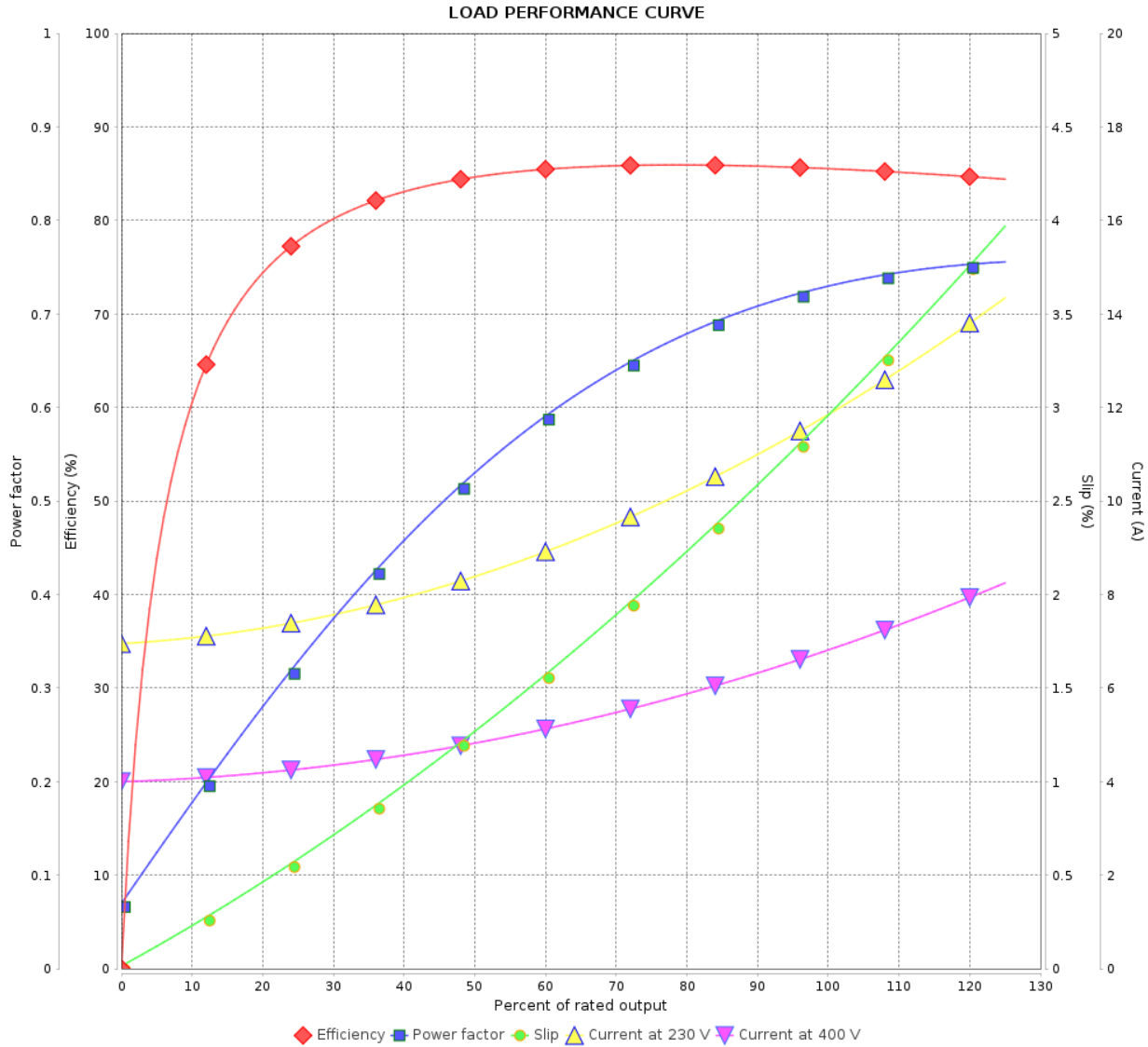
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Performance : 230/400 V 50 Hz 6P

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 Locked rotor torque : 190 %
 Breakdown torque : 240 %
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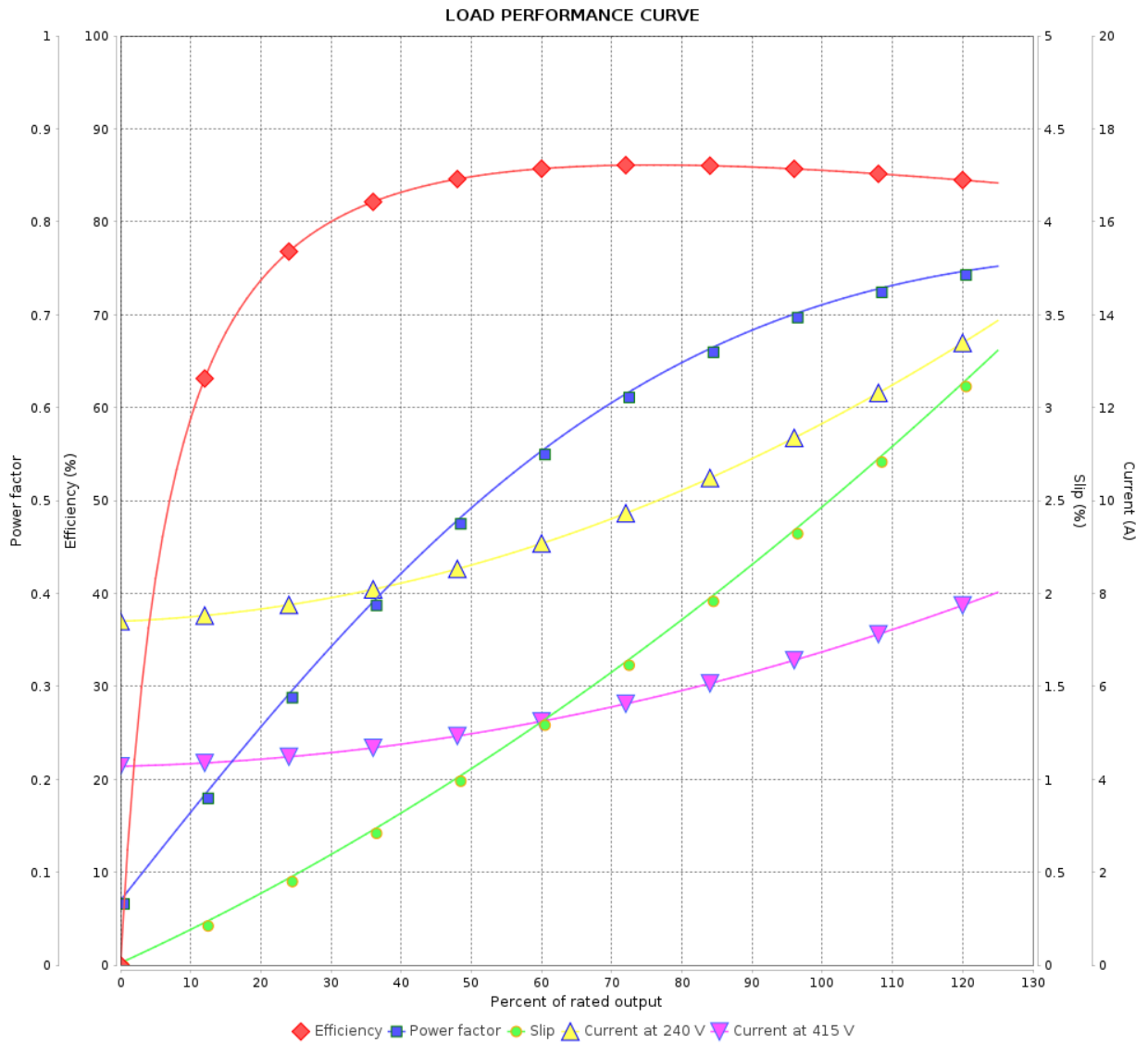
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THERMAL LIMIT CURVE

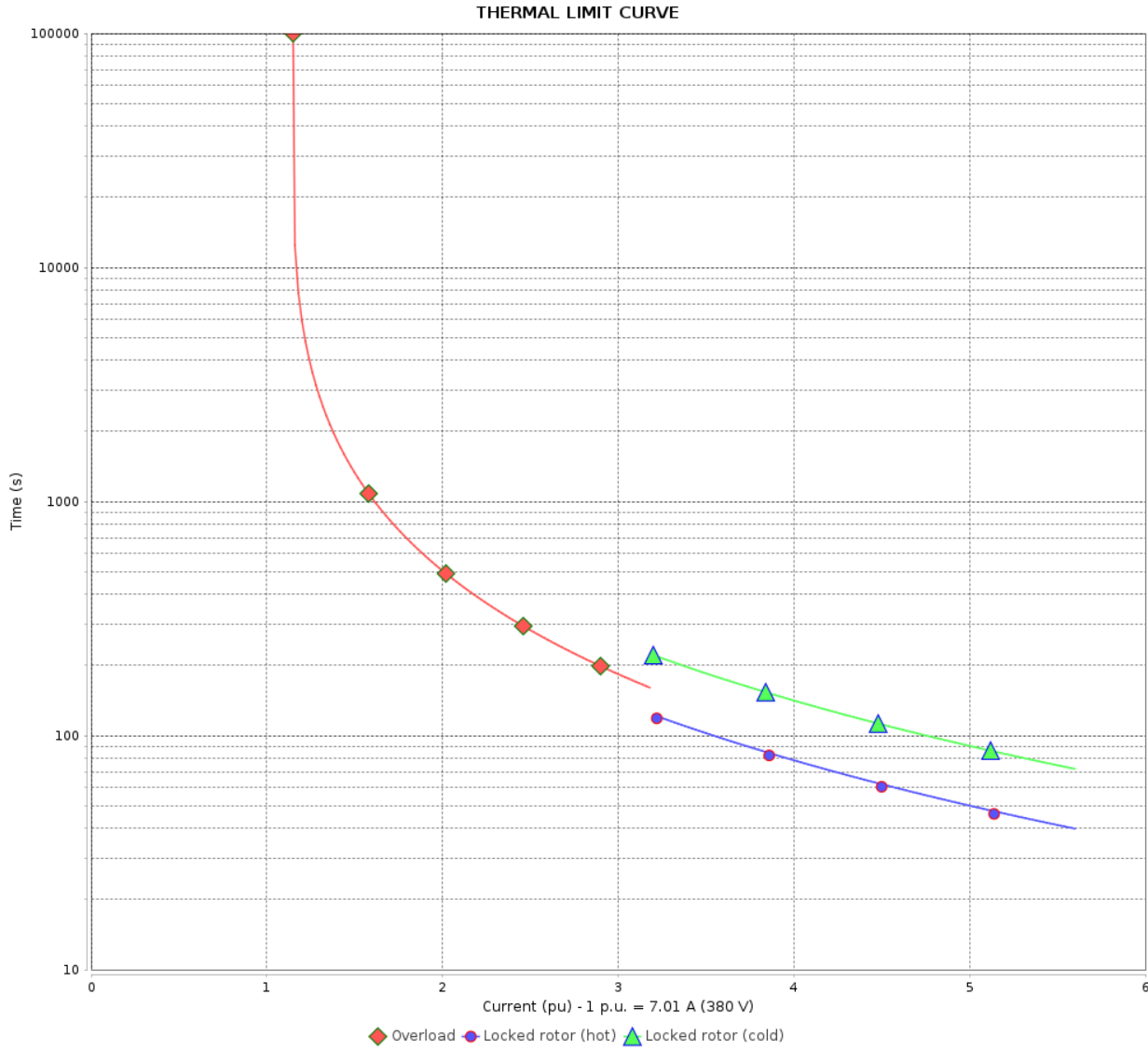
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Moment of inertia (J) : 0.0416 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Heating constant

Cooling constant

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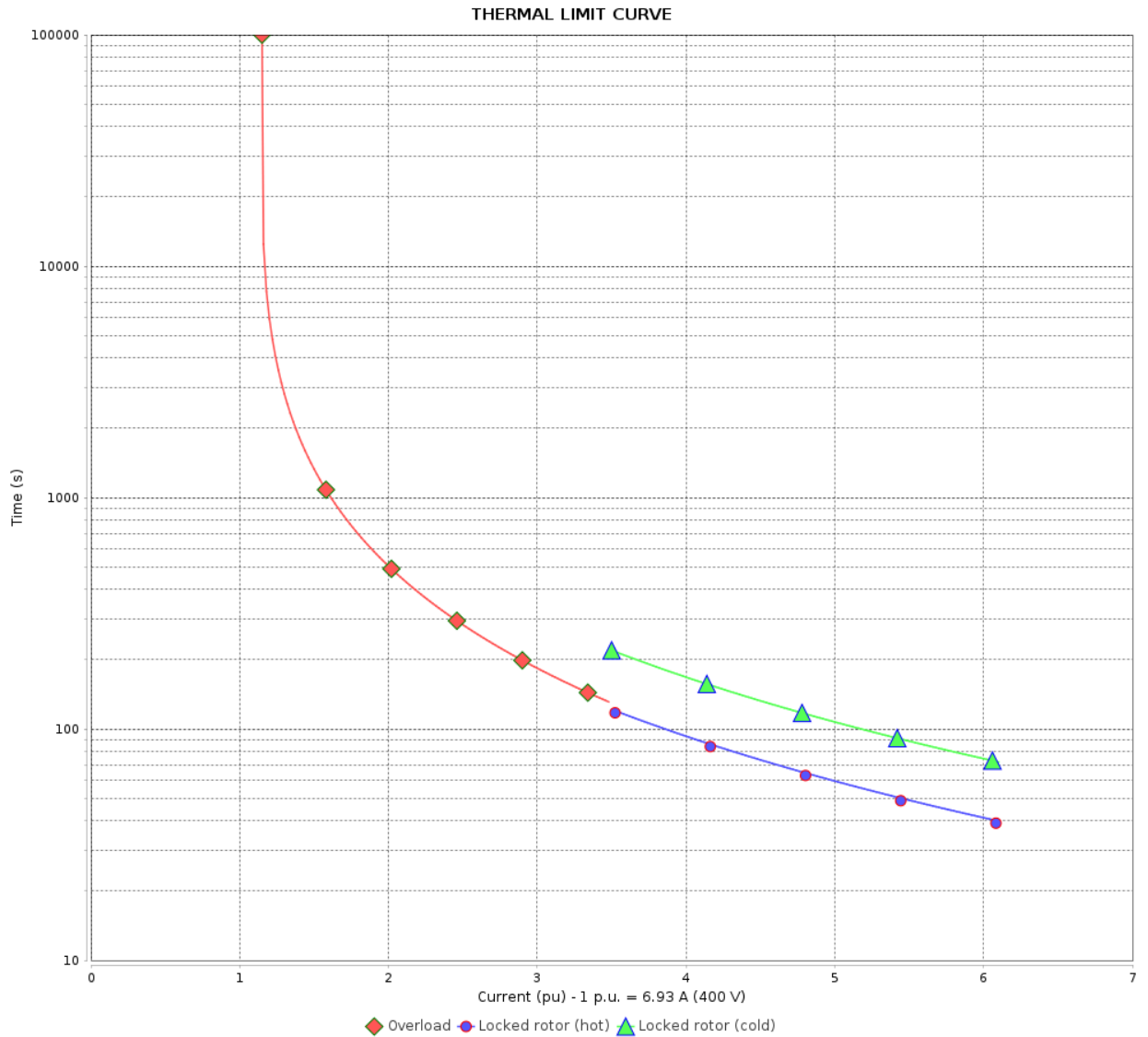
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Heating constant
 Cooling constant

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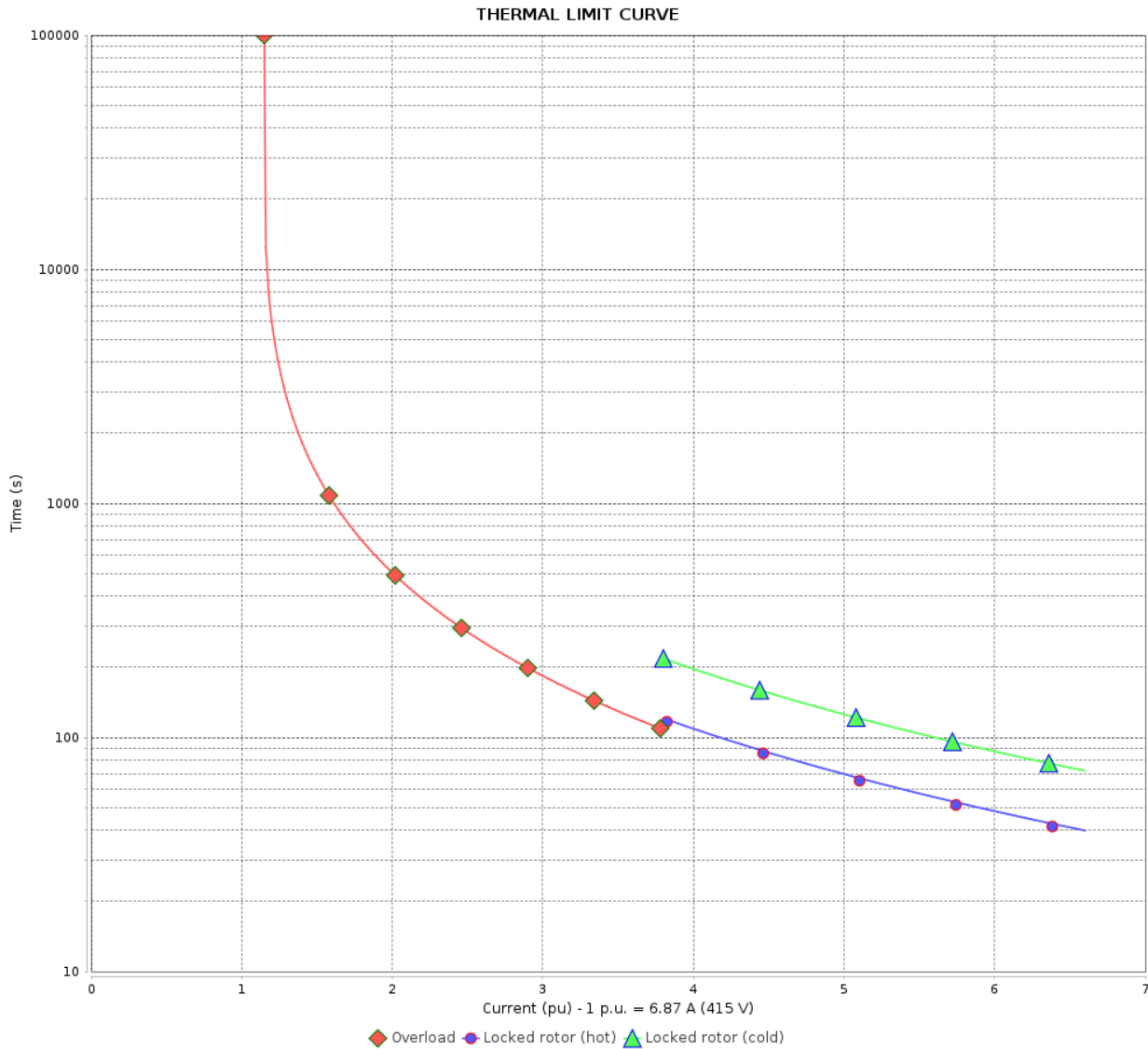
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VFD OPERATION CURVE

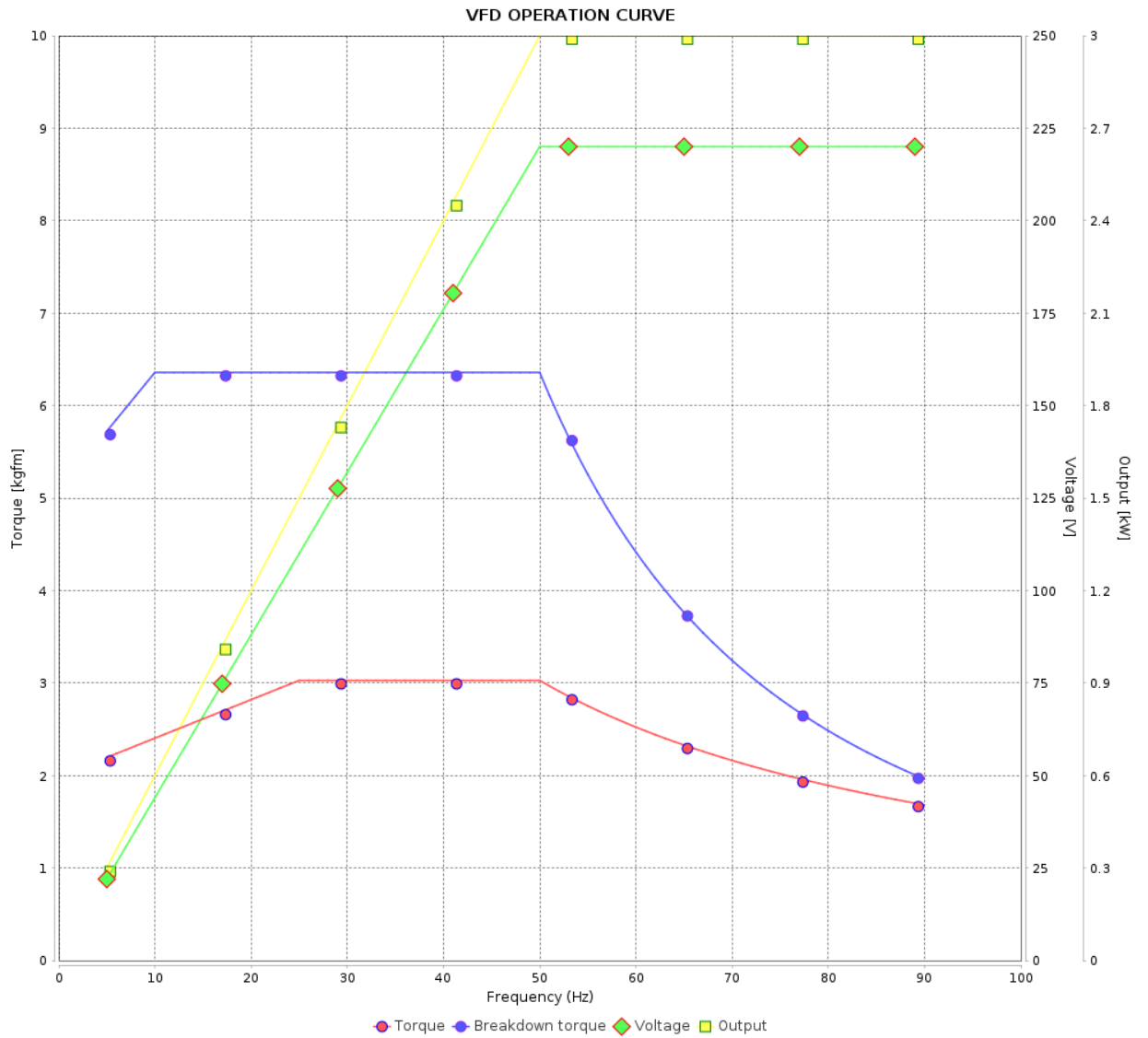
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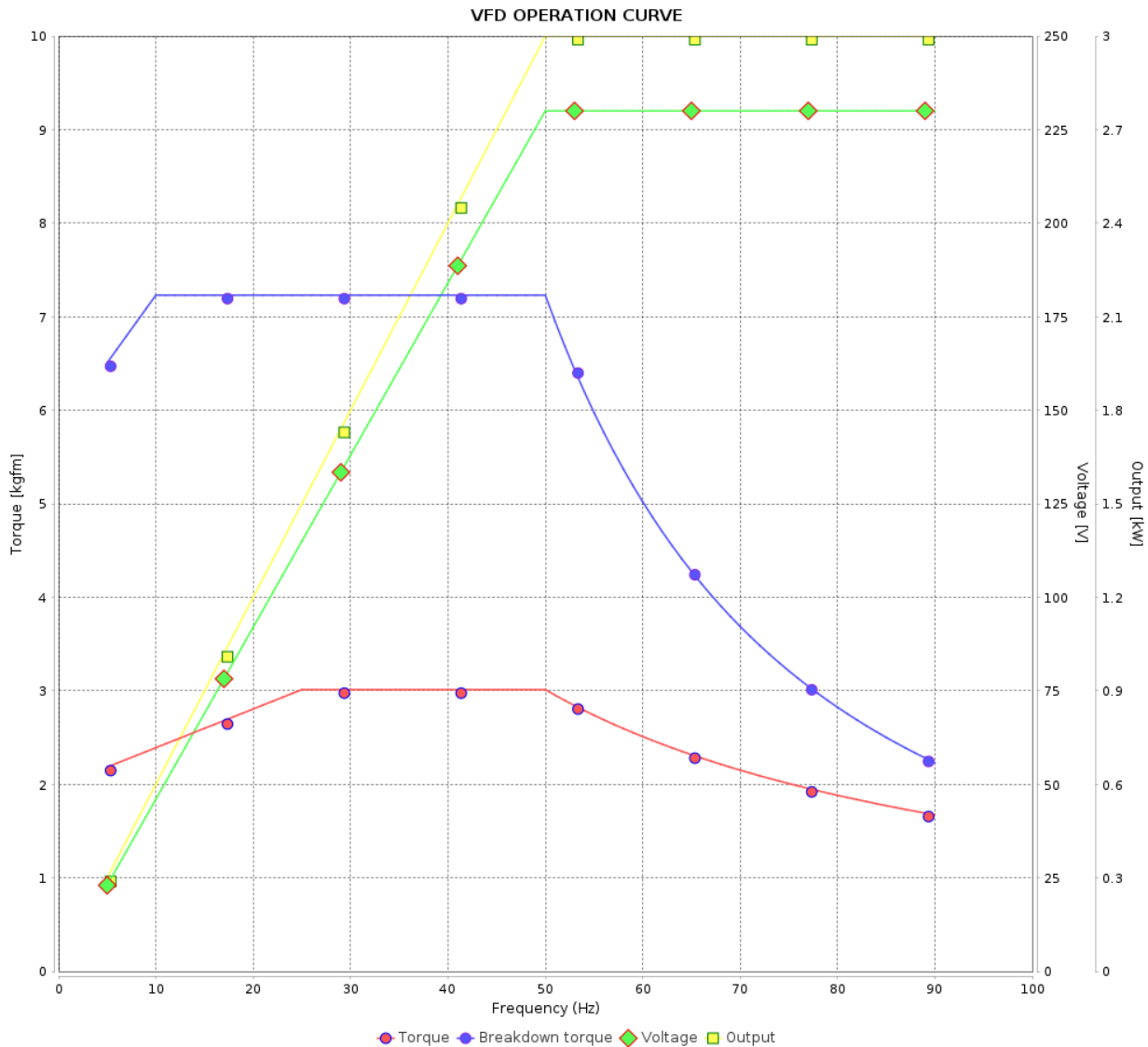
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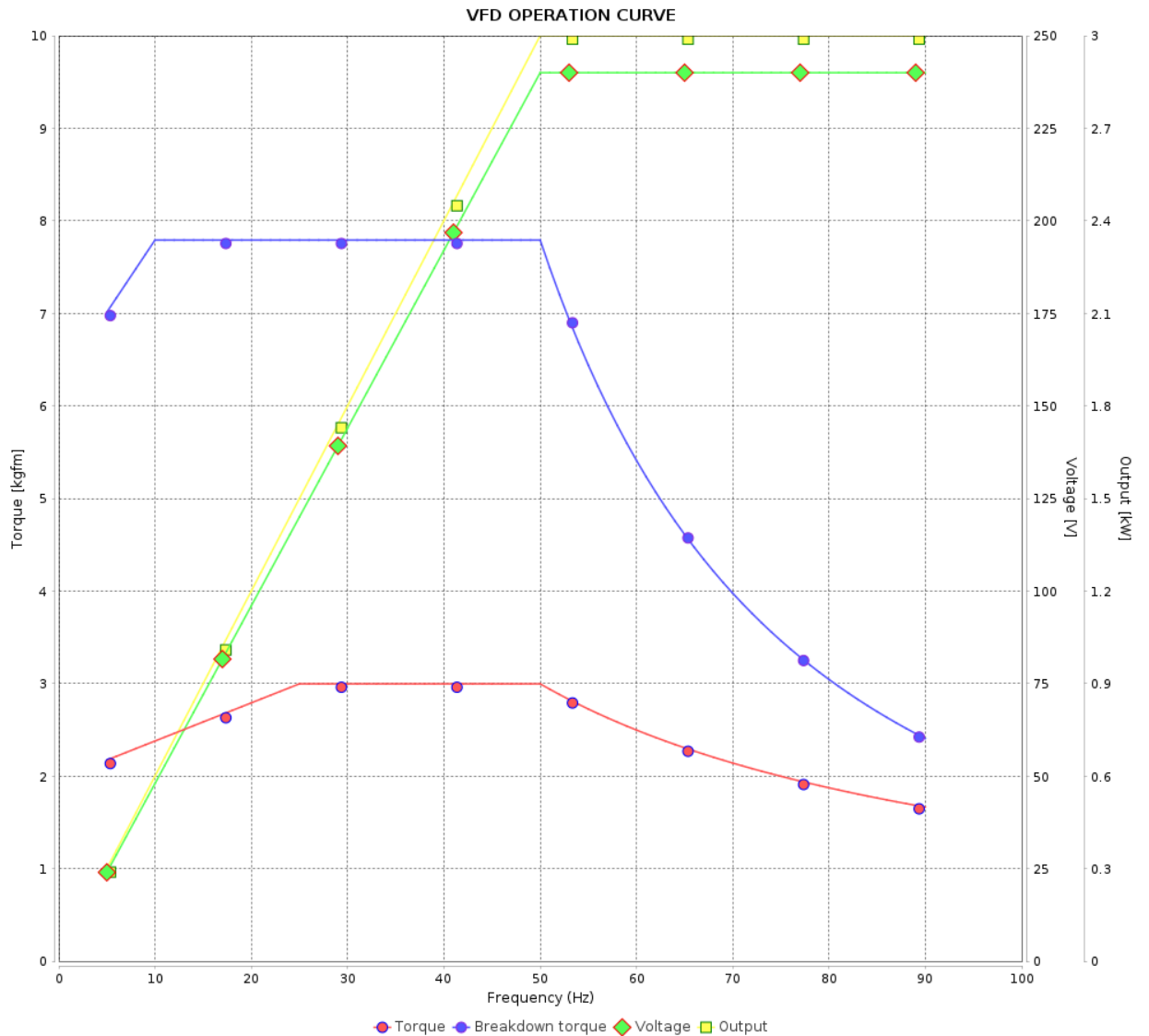
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