

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer		: Astraprom d.o.o.			
Product line		: W22		Product code : 12868103	
Frame	: 90L	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: B5T		
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 ²	: 24.2 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.0026 kgm ²		
Design	: N				
Output [kW]	2.2	2.2	2.2	2.2	2.2
Poles	2	2	2	2	2
Frequency [Hz]	50	50	50	50	60
Rated voltage [V]	220/380	230/400	240/415	460	
Rated current [A]	7.91/4.58	7.84/4.51	7.80/4.51	3.99	
L. R. Amperes [A]	55.4/32.1	58.8/33.8	62.4/36.1	34.7	
LRC [A]	7.0	7.5	8.0	8.7	
No load current [A]	3.45/2.00	4.17/2.40	4.67/2.70	2.20	
Rated speed [RPM]	2870	2885	2895	3500	
Slip [%]	4.33	3.83	3.50	2.78	
Rated torque [kgfm]	0.747	0.743	0.740	0.612	
Locked rotor torque [%]	310	350	370	409	
Breakdown torque [%]	300	340	380	440	
Service factor	1.00	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	18s (cold) 10s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)	18s (cold) 10s (hot)	
Noise level ²	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)	68.0 dB(A)	
Efficiency (%)	25%				
	50%	85.0	83.0	83.0	84.0
	75%	85.5	85.9	85.0	85.5
	100%	85.9	85.9	85.9	86.5
Power Factor	25%				
	50%	0.68	0.62	0.57	0.60
	75%	0.79	0.75	0.70	0.73
	100%	0.85	0.82	0.79	0.80
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	16.0	16.0	16.0	15.3
	P2 (0,5;1,0)	14.1	14.1	14.1	13.4
	P3 (0,25;1,0)	12.8	12.8	12.8	12.2
	P4 (0,9;0,5)	7.6	7.6	7.6	7.2
	P5 (0,5;0,5)	5.3	5.3	5.3	5.0
	P6 (0,5;0,25)	3.5	3.5	3.5	3.3
	P7 (0,25;0,25)	2.5	2.5	2.5	2.4
Bearing type	: Drive end : 6205 ZZ	Non drive end : 6204 ZZ	Foundation loads		
Sealing	: Oil Seal	Lip Seal	Max. traction	: 64 kgf	
Lubrication interval	: -	-	Max. compression	: 89 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

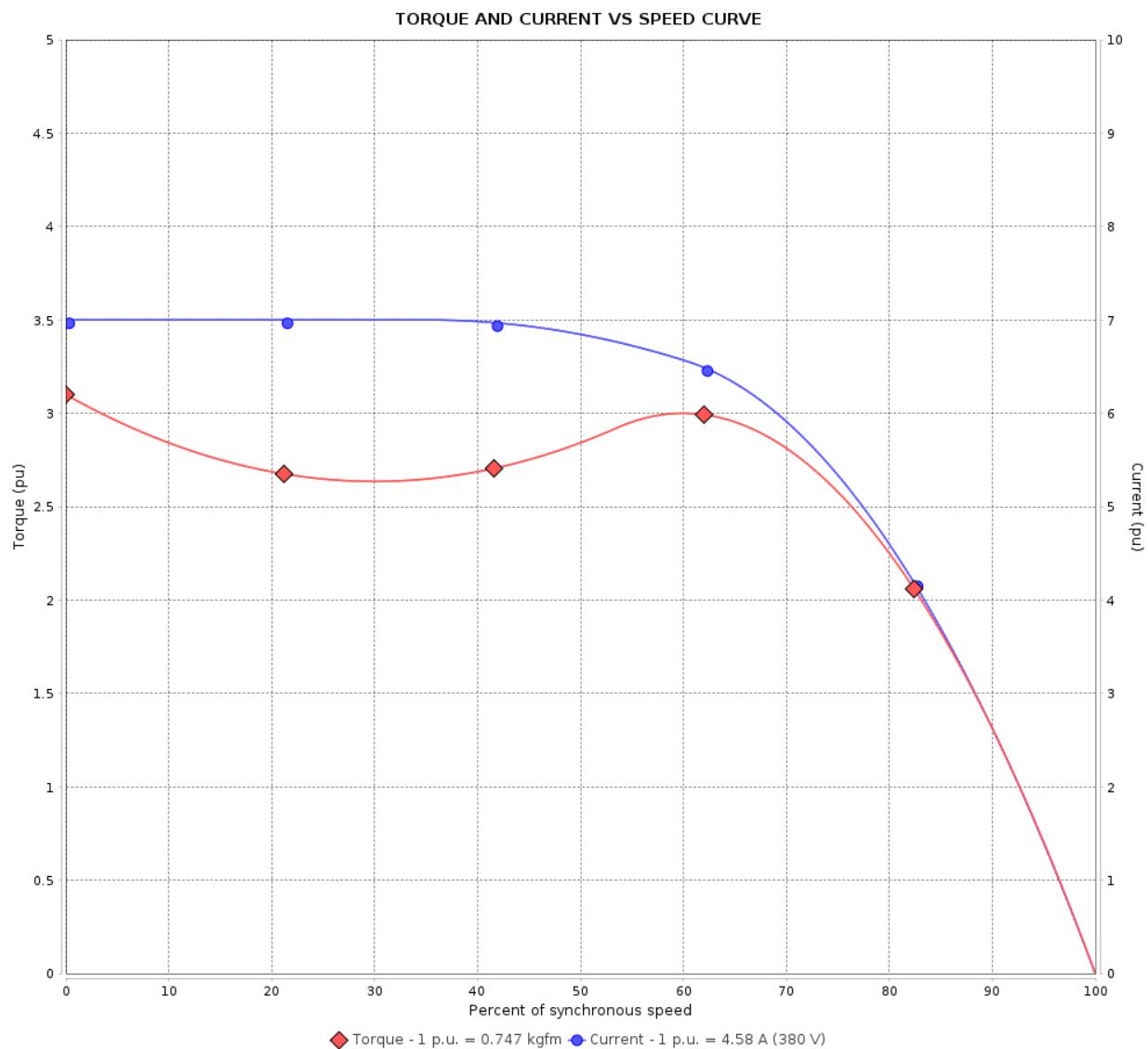
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22

Product code : 12868103



Performance : 220/380 V 50 Hz 2P

Rated current	: 7.91/4.58 A	Moment of inertia (J)	: 0.0026 kgm ²
LRC	: 7.0	Duty cycle	: S1
Rated torque	: 0.747 kgfm	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 2870 rpm	Design	: N

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

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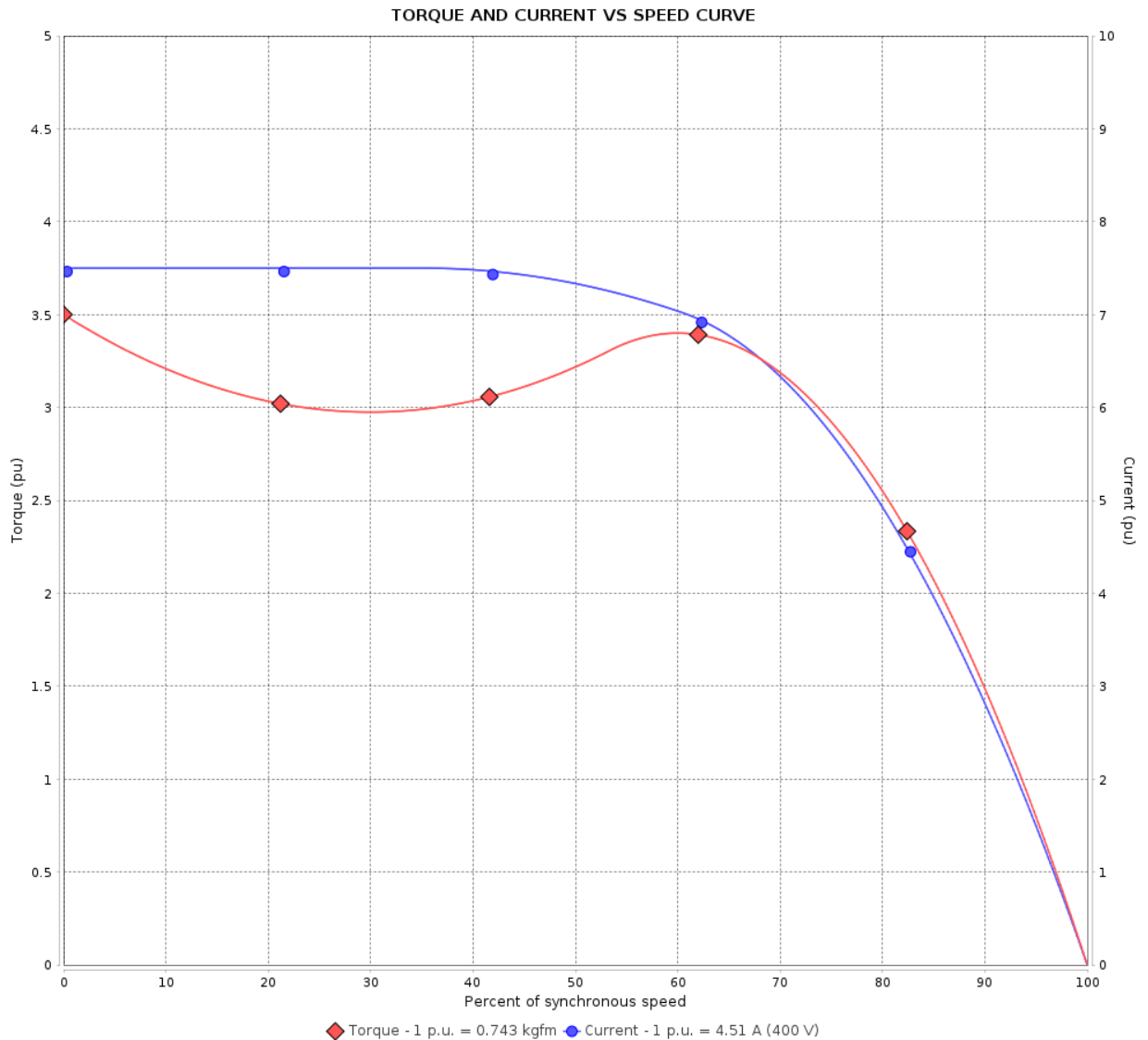
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22

Product code : 12868103



Performance : 230/400 V 50 Hz 2P

Rated current	: 7.84/4.51 A	Moment of inertia (J)	: 0.0026 kgm ²
LRC	: 7.5	Duty cycle	: S1
Rated torque	: 0.743 kgfm	Insulation class	: F
Locked rotor torque	: 350 %	Service factor	: 1.00
Breakdown torque	: 340 %	Temperature rise	: 80 K
Rated speed	: 2885 rpm	Design	: N

Locked rotor time : 16s (cold) 9s (hot)

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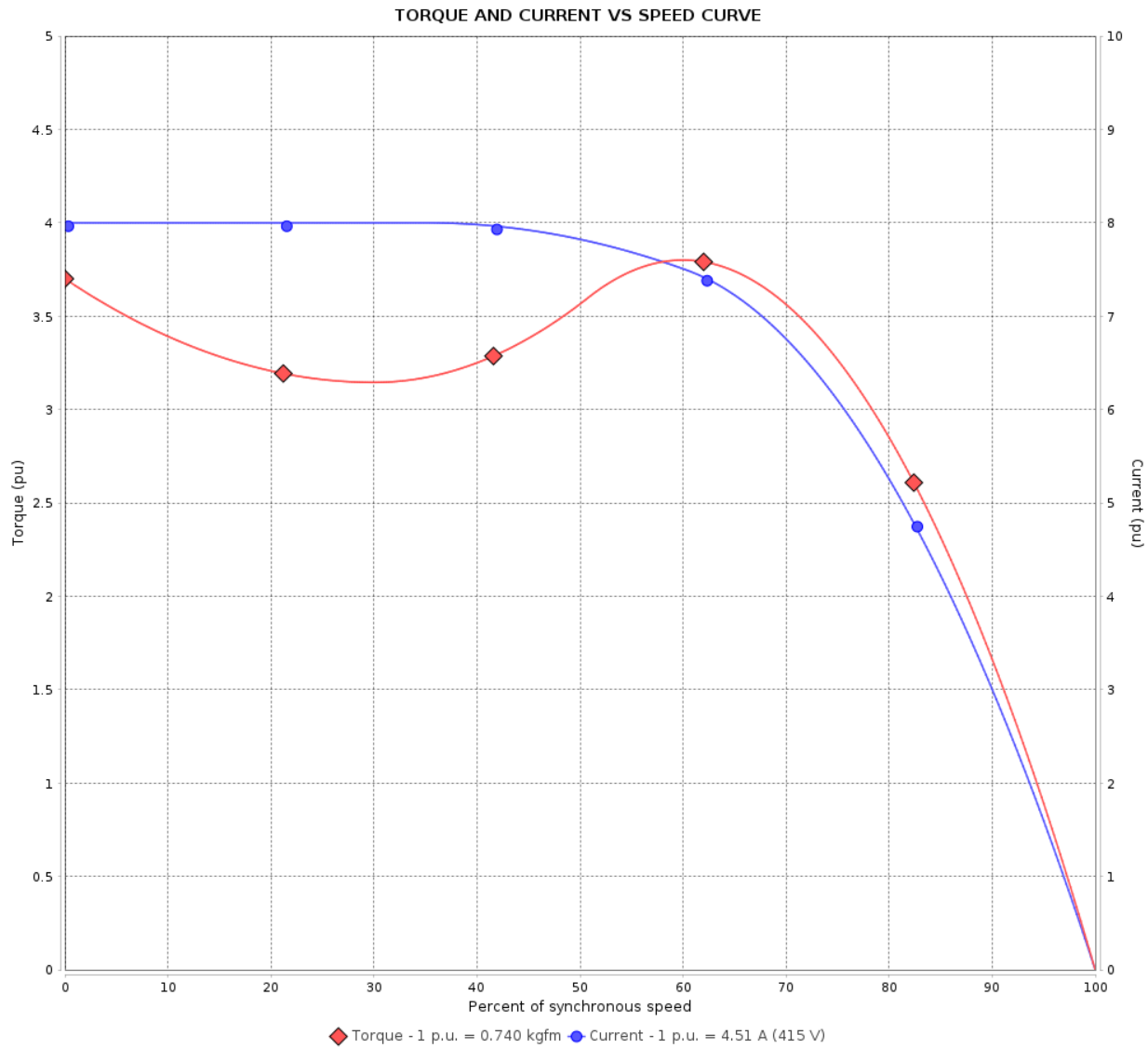
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22

Product code : 12868103



Performance : 240/415 V 50 Hz 2P

Rated current	: 7.80/4.51 A	Moment of inertia (J)	: 0.0026 kgm ²
LRC	: 8.0	Duty cycle	: S1
Rated torque	: 0.740 kgfm	Insulation class	: F
Locked rotor torque	: 370 %	Service factor	: 1.00
Breakdown torque	: 380 %	Temperature rise	: 80 K
Rated speed	: 2895 rpm	Design	: N

Locked rotor time : 16s (cold) 9s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

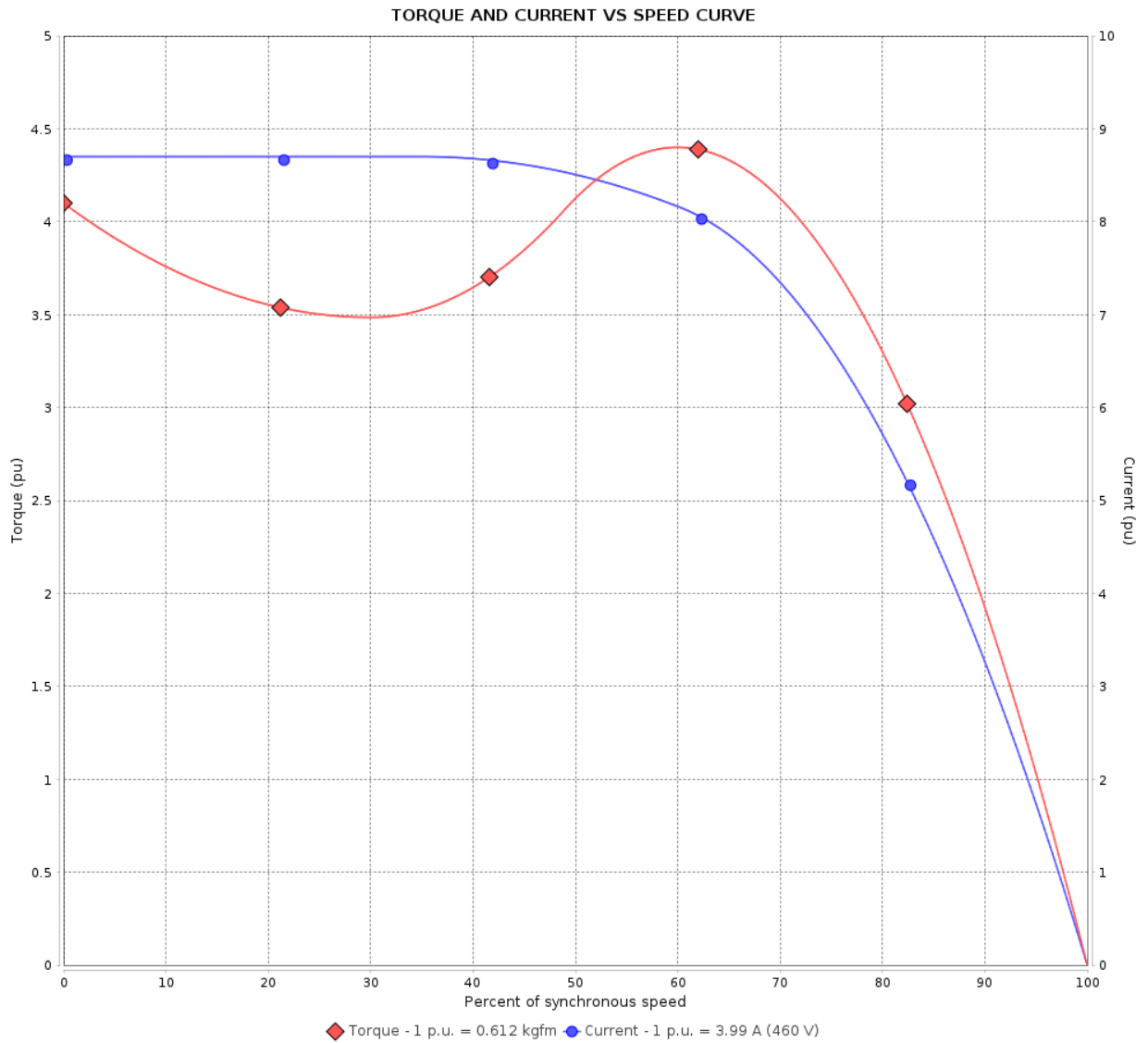
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22

Product code : 12868103



Performance : 460 V 60 Hz 2P

Rated current	: 3.99 A	Moment of inertia (J)	: 0.0026 kgm ²
LRC	: 8.7	Duty cycle	: S1
Rated torque	: 0.612 kgfm	Insulation class	: F
Locked rotor torque	: 409 %	Service factor	: 1.00
Breakdown torque	: 440 %	Temperature rise	: 80 K
Rated speed	: 3500 rpm	Design	: N

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

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LOAD PERFORMANCE CURVE

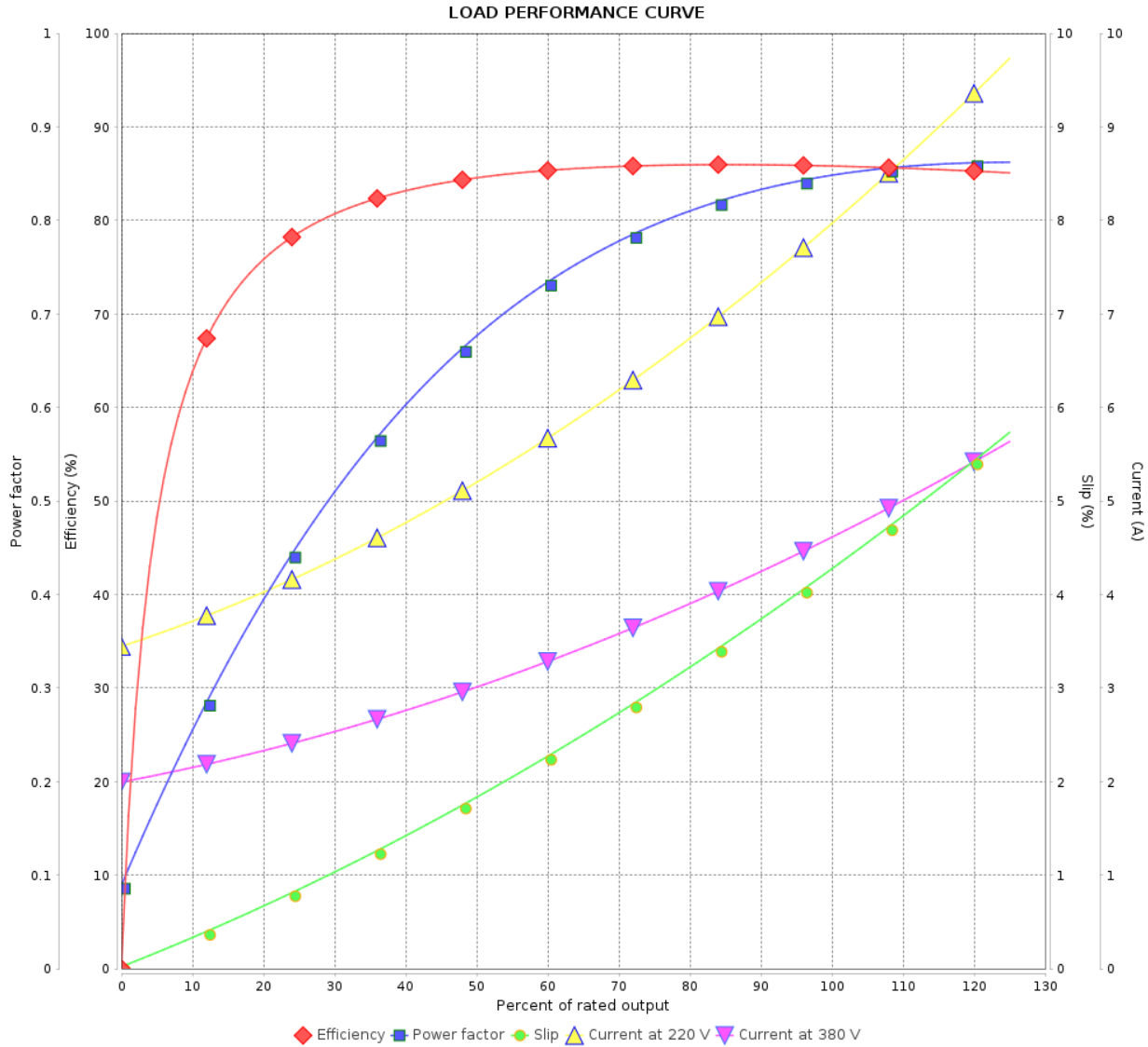
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 Breakdown torque : 300 %
 Rated speed : 2870 rpm

Moment of inertia (J) : 0.0026 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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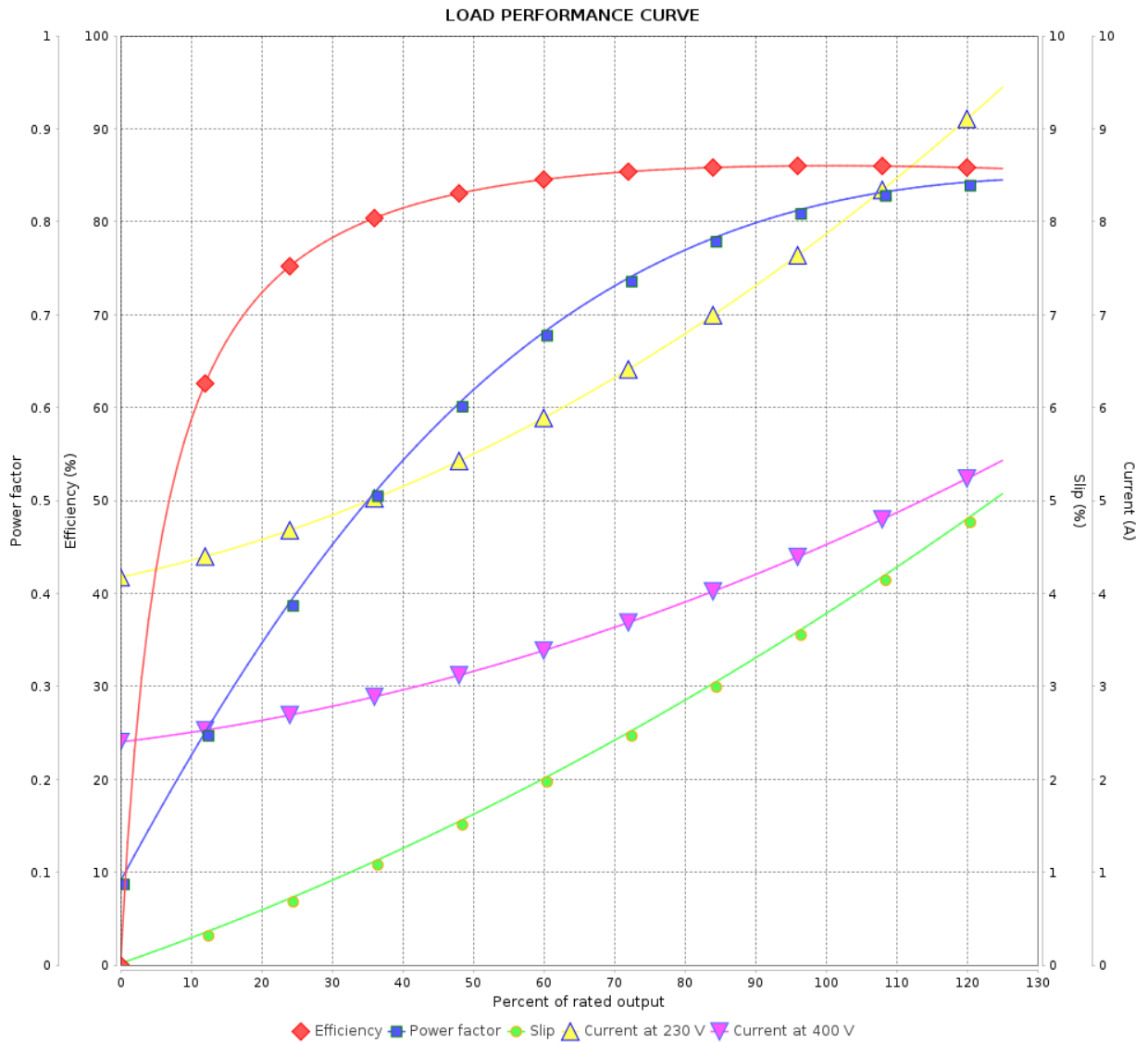
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Performance : 230/400 V 50 Hz 2P

Rated current : 7.84/4.51 A
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 Rated torque : 0.743 kgfm
 Locked rotor torque : 350 %
 Breakdown torque : 340 %
 Rated speed : 2885 rpm

Moment of inertia (J) : 0.0026 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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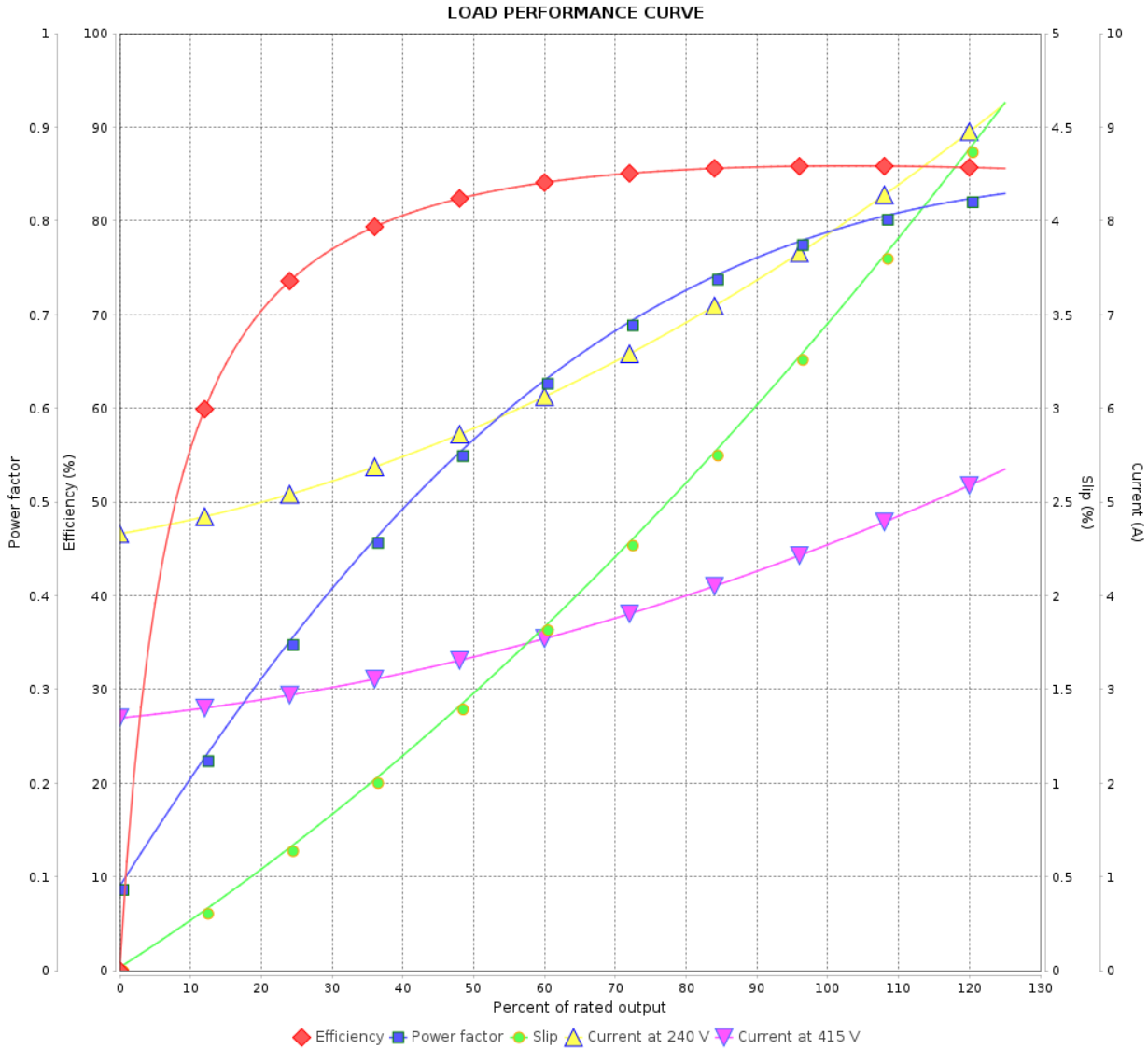
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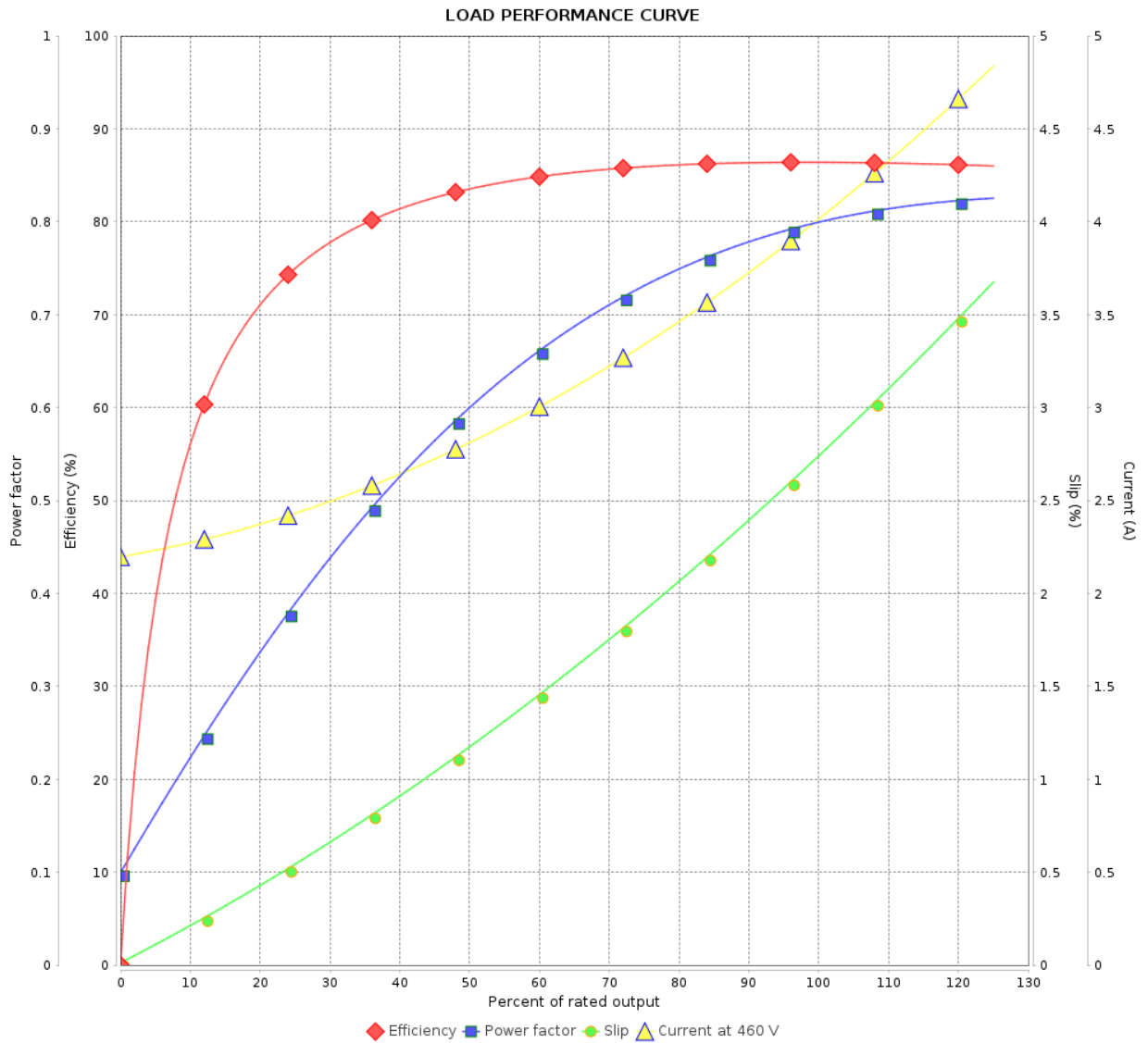
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THERMAL LIMIT CURVE

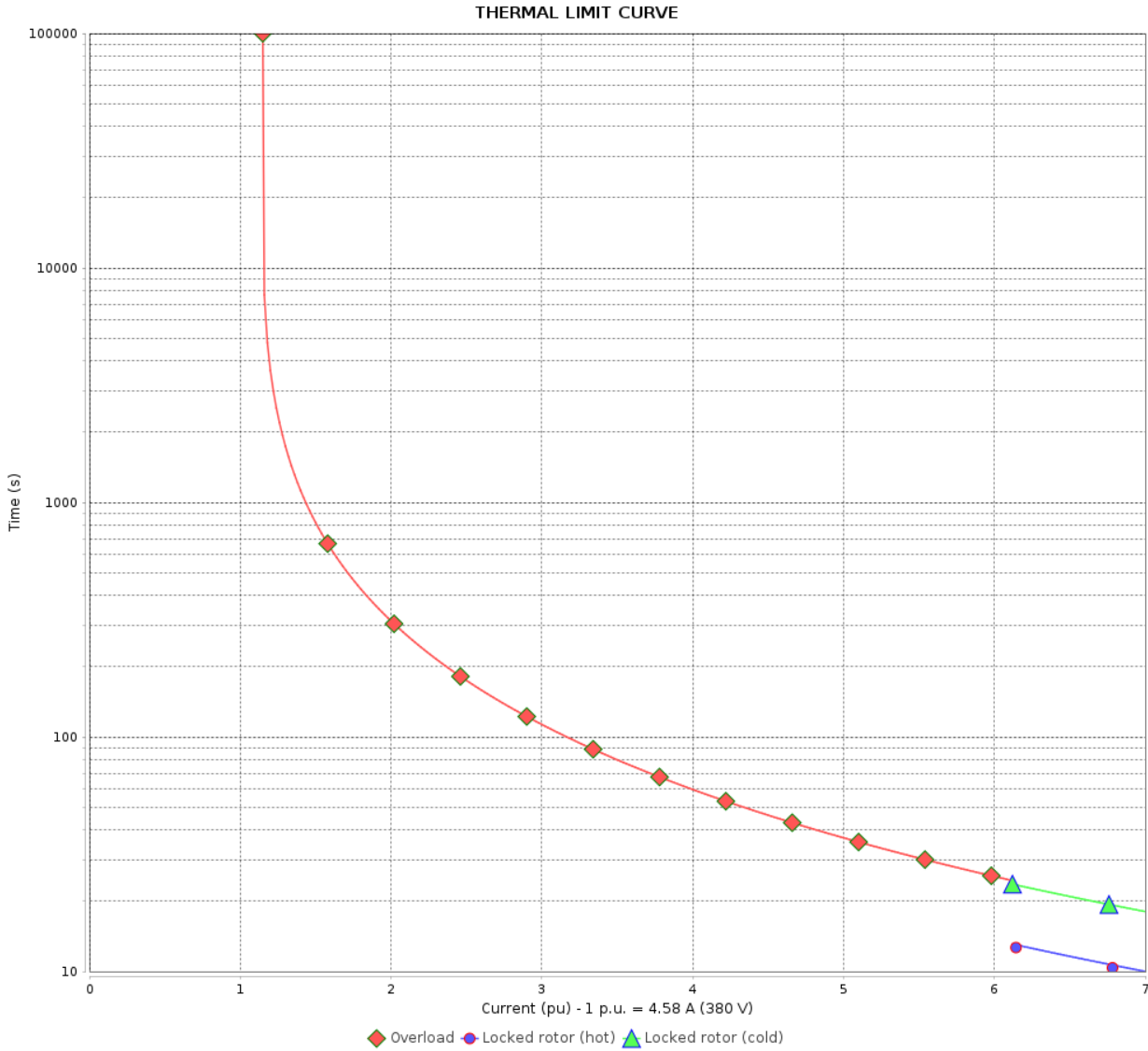
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Moment of inertia (J) : 0.0026 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Heating constant

Cooling constant

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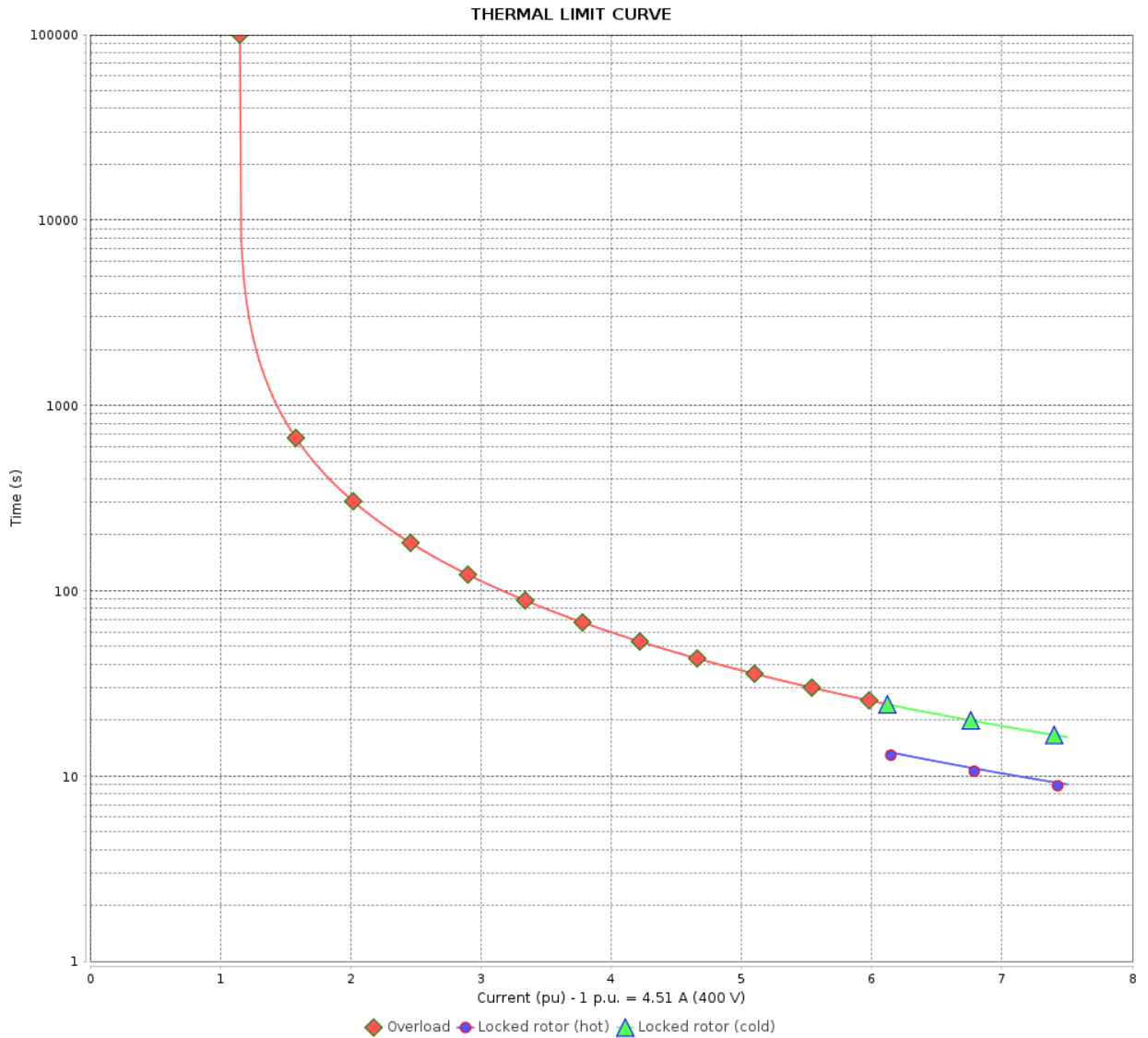
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 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
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Heating constant

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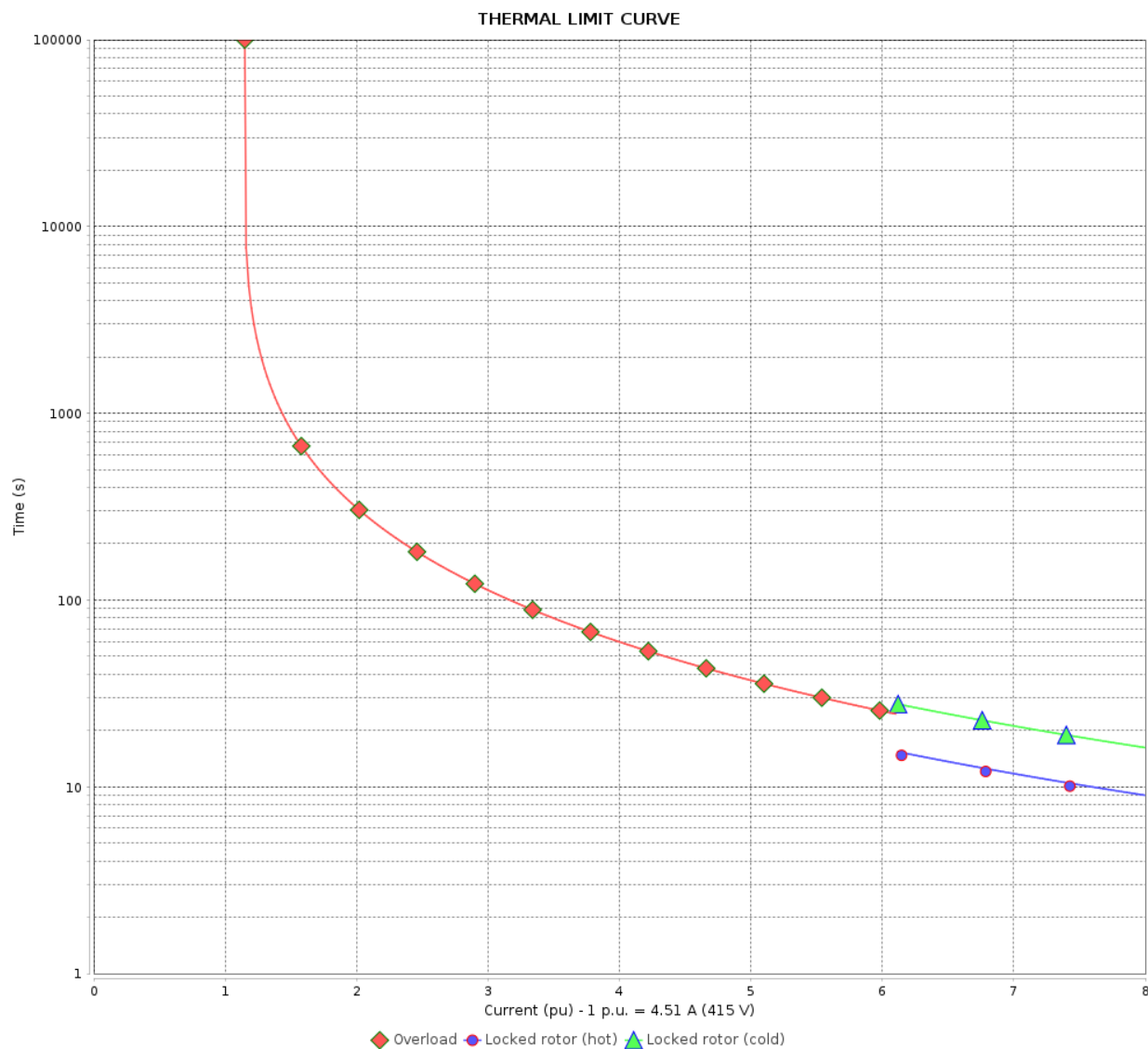
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Moment of inertia (J) : 0.0026 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Heating constant
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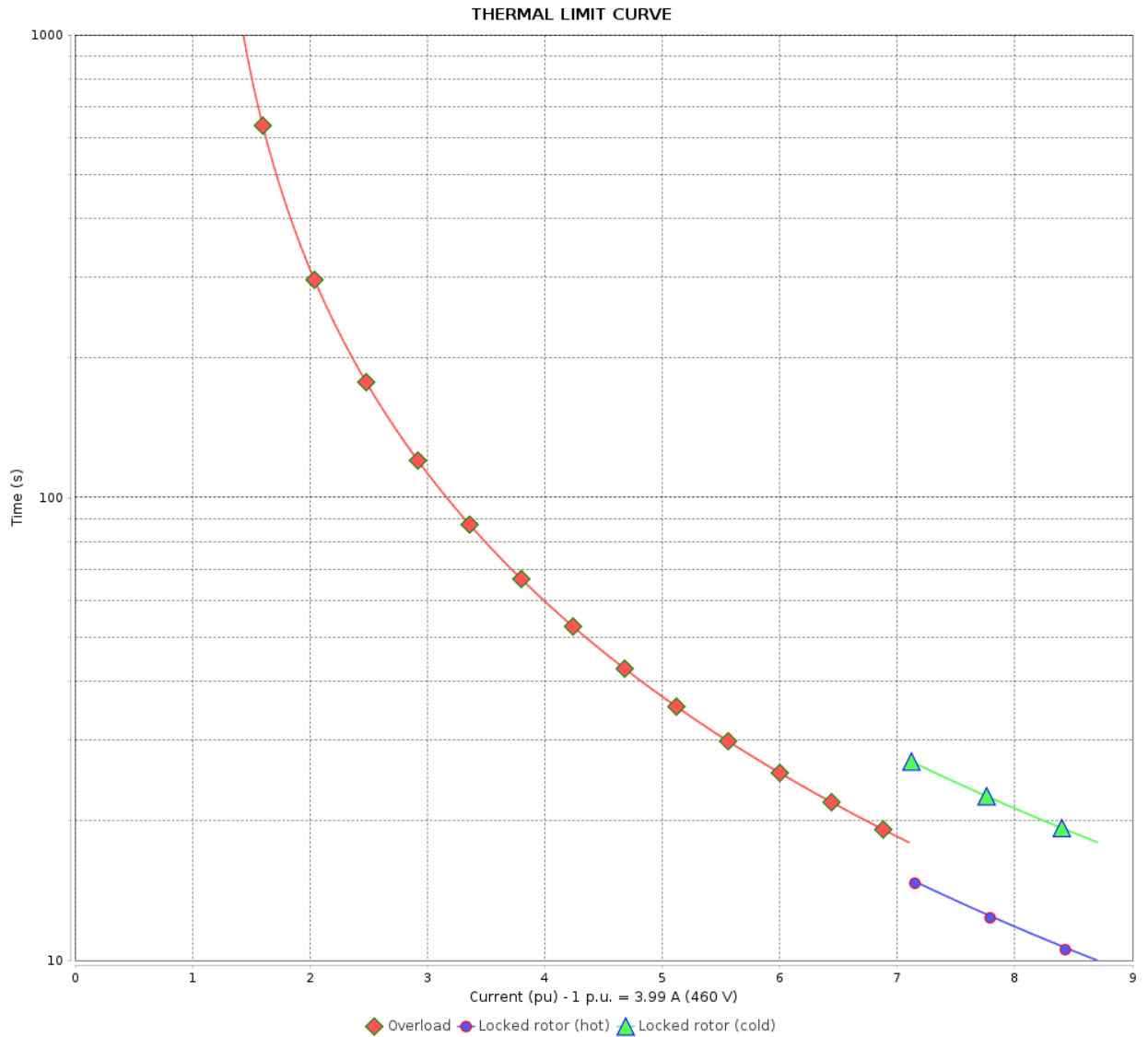
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LRC	: 8.7	Duty cycle	: S1
Rated torque	: 0.612 kgfm	Insulation class	: F
Locked rotor torque	: 409 %	Service factor	: 1.00
Breakdown torque	: 440 %	Temperature rise	: 80 K
Rated speed	: 3500 rpm	Design	: N

Heating constant

Cooling constant

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VFD OPERATION CURVE

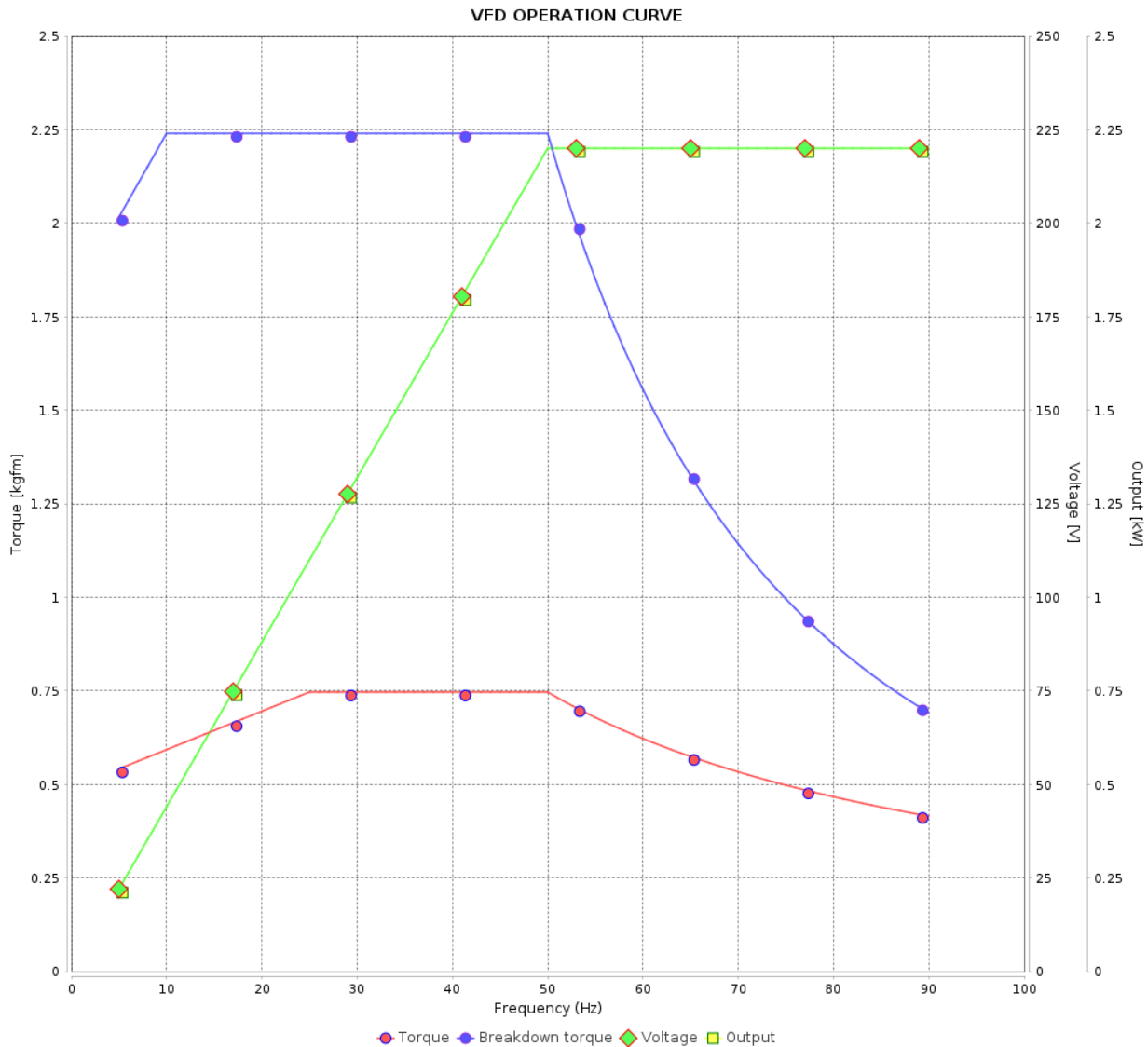
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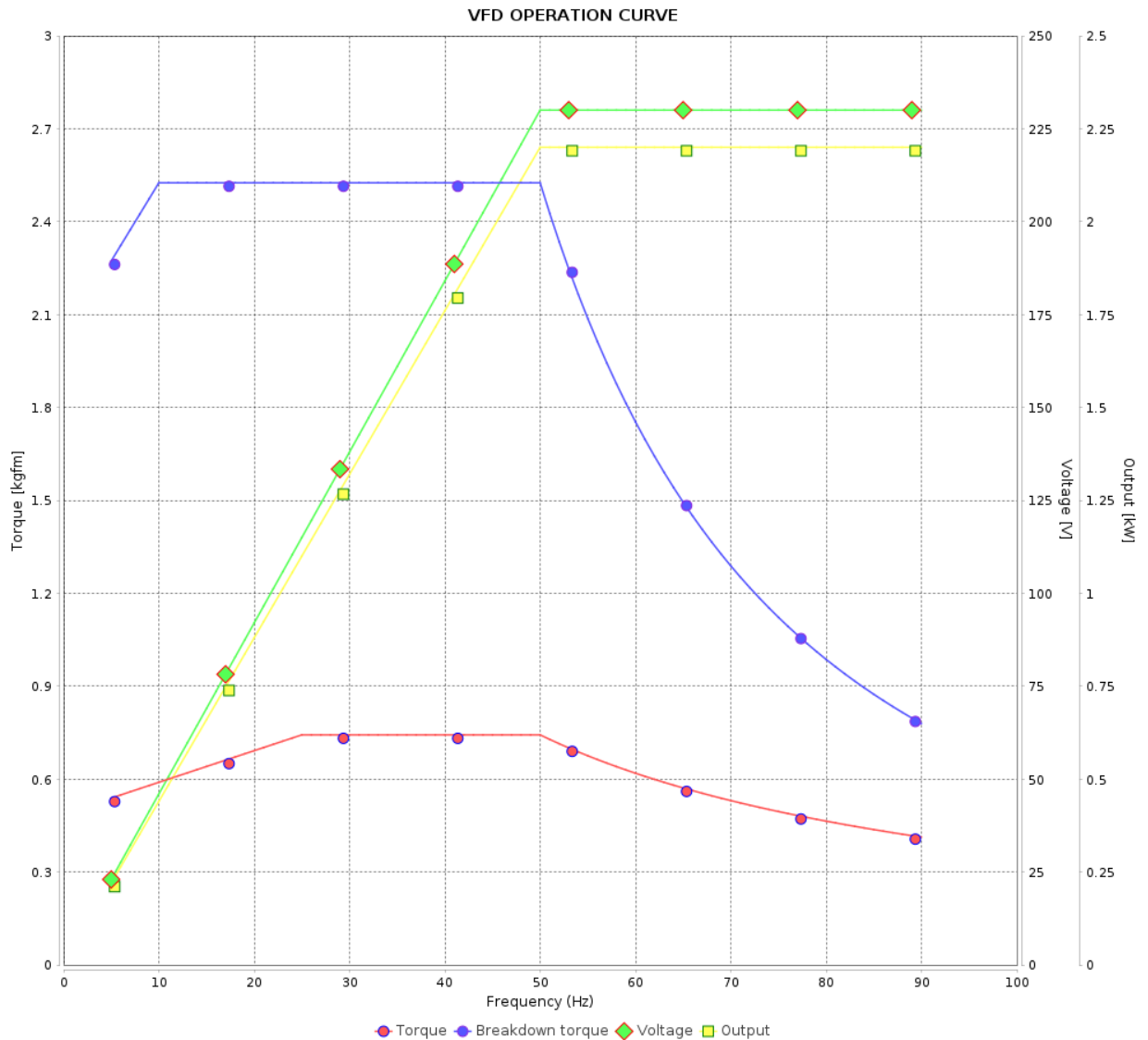
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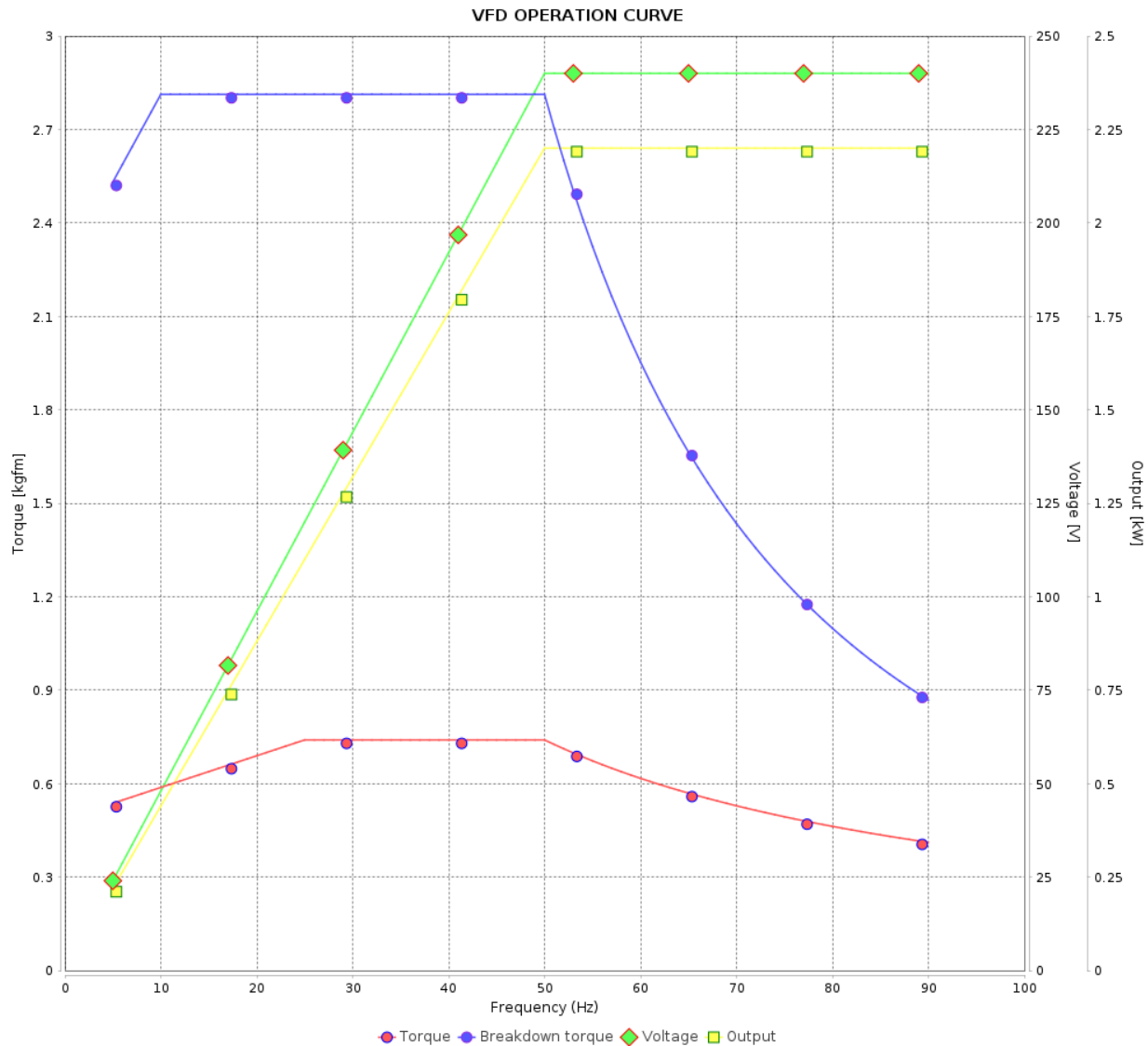
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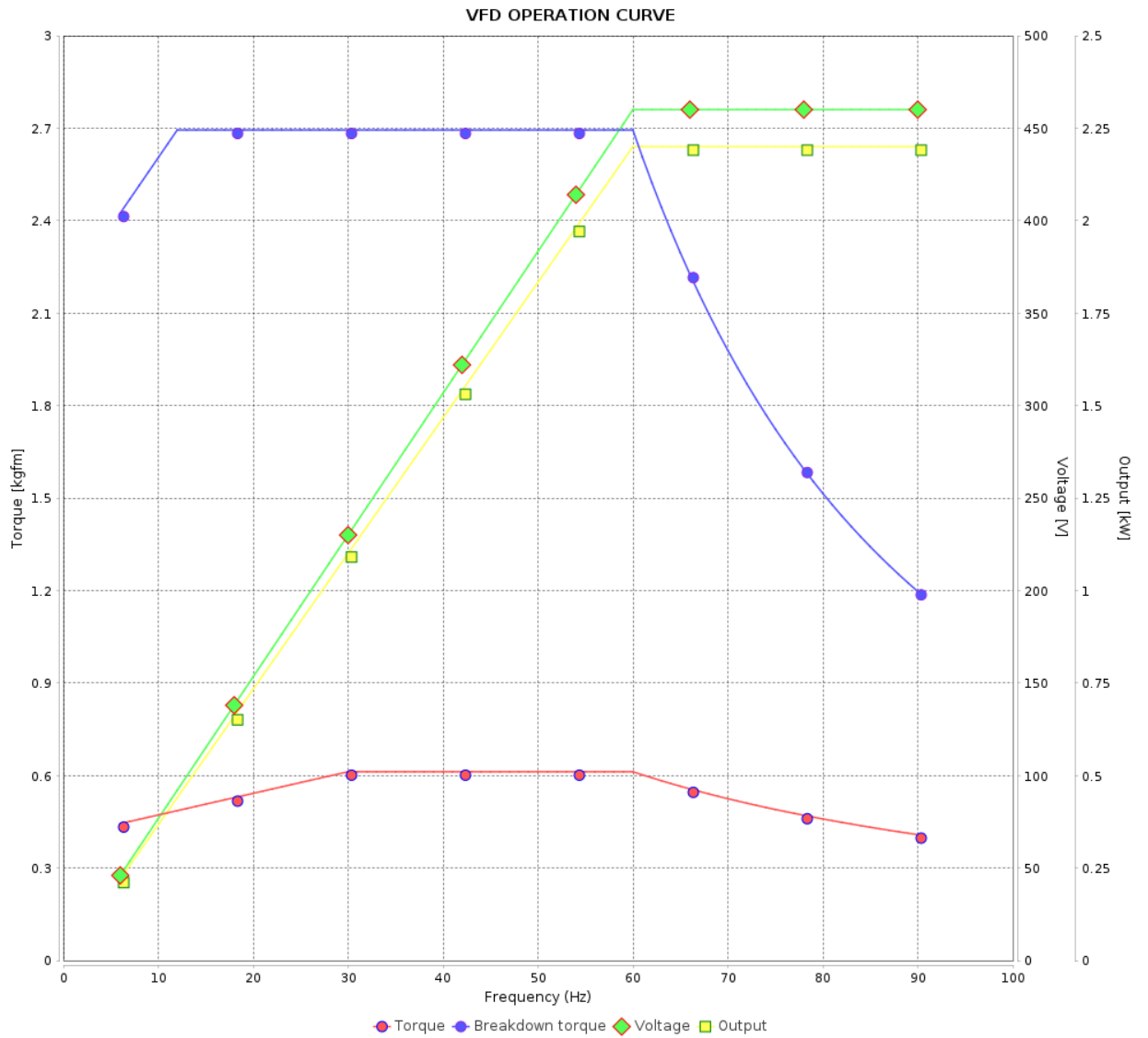
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