

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer		: Astraprom d.o.o.			
Product line		: IE3 Three-Phase		Product code : 13749698	
Frame	: 71	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: B14T		
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	: 8.7 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.0005 kgm ²		
Design	: N				
Output [kW]	0.550	0.550	0.550	0.550	0.550
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]	2.12/1.23	2.07/1.19	2.08/1.20	1.11	
L. R. Amperes [A]	11.3/6.52	11.6/6.66	12.2/7.08	8.21	
LRC [A]	5.3	5.6	5.9	7.4	
No load current [A]	1.00/0.580	1.10/0.630	1.18/0.680	0.590	
Rated speed [RPM]	2805	2835	2845	3455	
Slip [%]	6.50	5.50	5.17	4.03	
Rated torque [kgfm]	0.191	0.189	0.188	0.155	
Locked rotor torque [%]	229	260	290	310	
Breakdown torque [%]	240	270	300	340	
Service factor	1.00	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	34s (cold) 19s (hot)	32s (cold) 18s (hot)	30s (cold) 17s (hot)	32s (cold) 18s (hot)	
Noise level ²	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	60.0 dB(A)	
Efficiency (%)	25%				
	50%	75.6	75.0	74.4	74.0
	75%	75.7	76.0	76.0	75.5
	100%	77.8	77.8	77.8	77.0
Power Factor	25%				
	50%	0.69	0.65	0.62	0.63
	75%	0.81	0.77	0.75	0.74
	100%	0.87	0.85	0.82	0.81
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	28.8	28.8	28.8	30.1
	P2 (0,5;1,0)	27.9	27.9	27.9	29.2
	P3 (0,25;1,0)	26.6	26.6	26.6	27.8
	P4 (0,9;0,5)	14.3	14.3	14.3	15.0
	P5 (0,5;0,5)	10.1	10.1	10.1	10.6
	P6 (0,5;0,25)	7.0	7.0	7.0	7.3
	P7 (0,25;0,25)	4.9	4.9	4.9	5.1
Bearing type	: Drive end 6203 ZZ	Non drive end 6202 ZZ	Foundation loads		
Sealing	: Oil Seal	Oil Seal	Max. traction	: 14 kgf	
Lubrication interval	: -	-	Max. compression	: 23 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

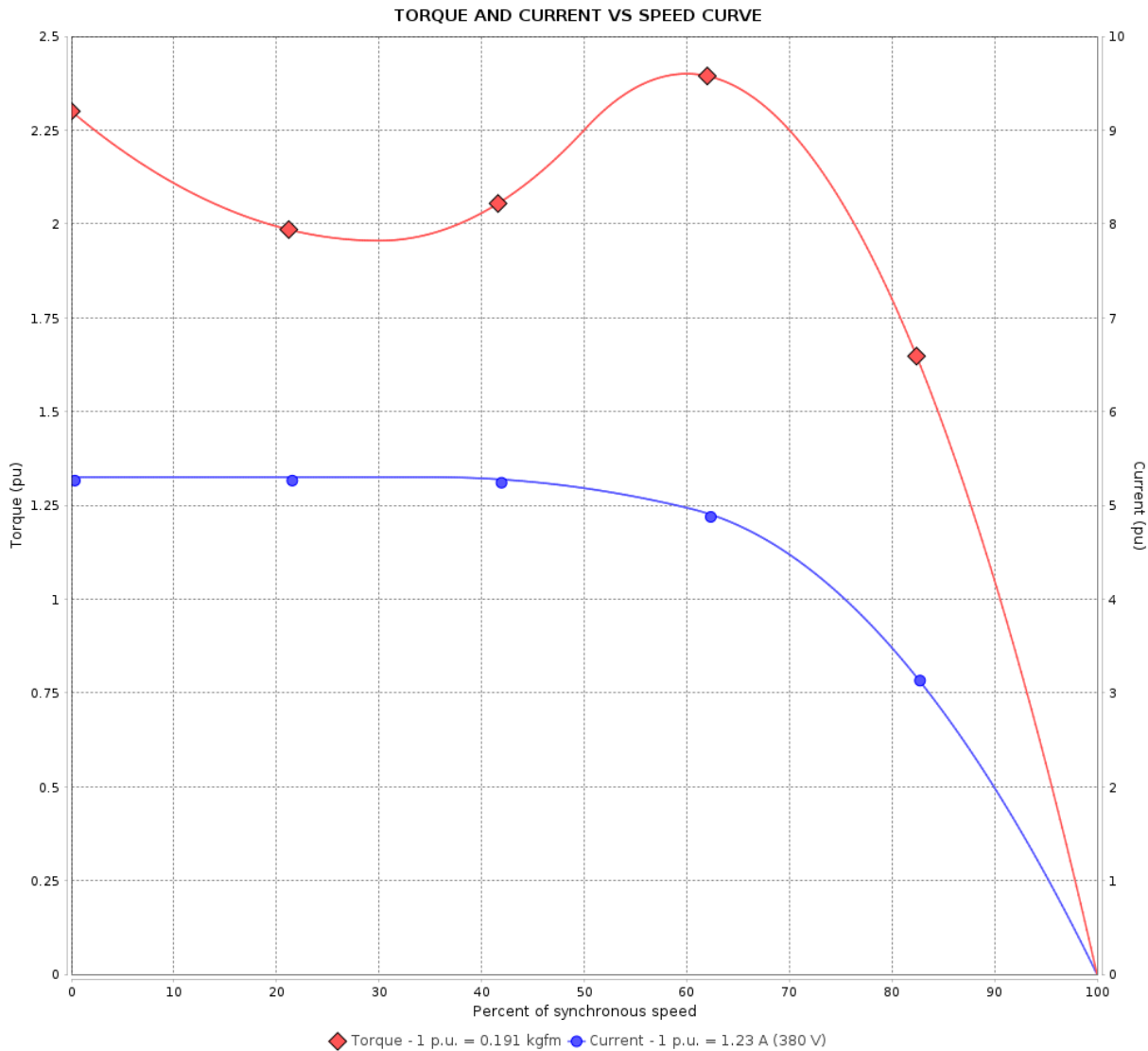
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 13749698



Performance : 220/380 V 50 Hz 2P

Rated current	: 2.12/1.23 A	Moment of inertia (J)	: 0.0005 kgm ²
LRC	: 5.3	Duty cycle	: S1
Rated torque	: 0.191 kgfm	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 2805 rpm	Design	: N

Locked rotor time : 34s (cold) 19s (hot)

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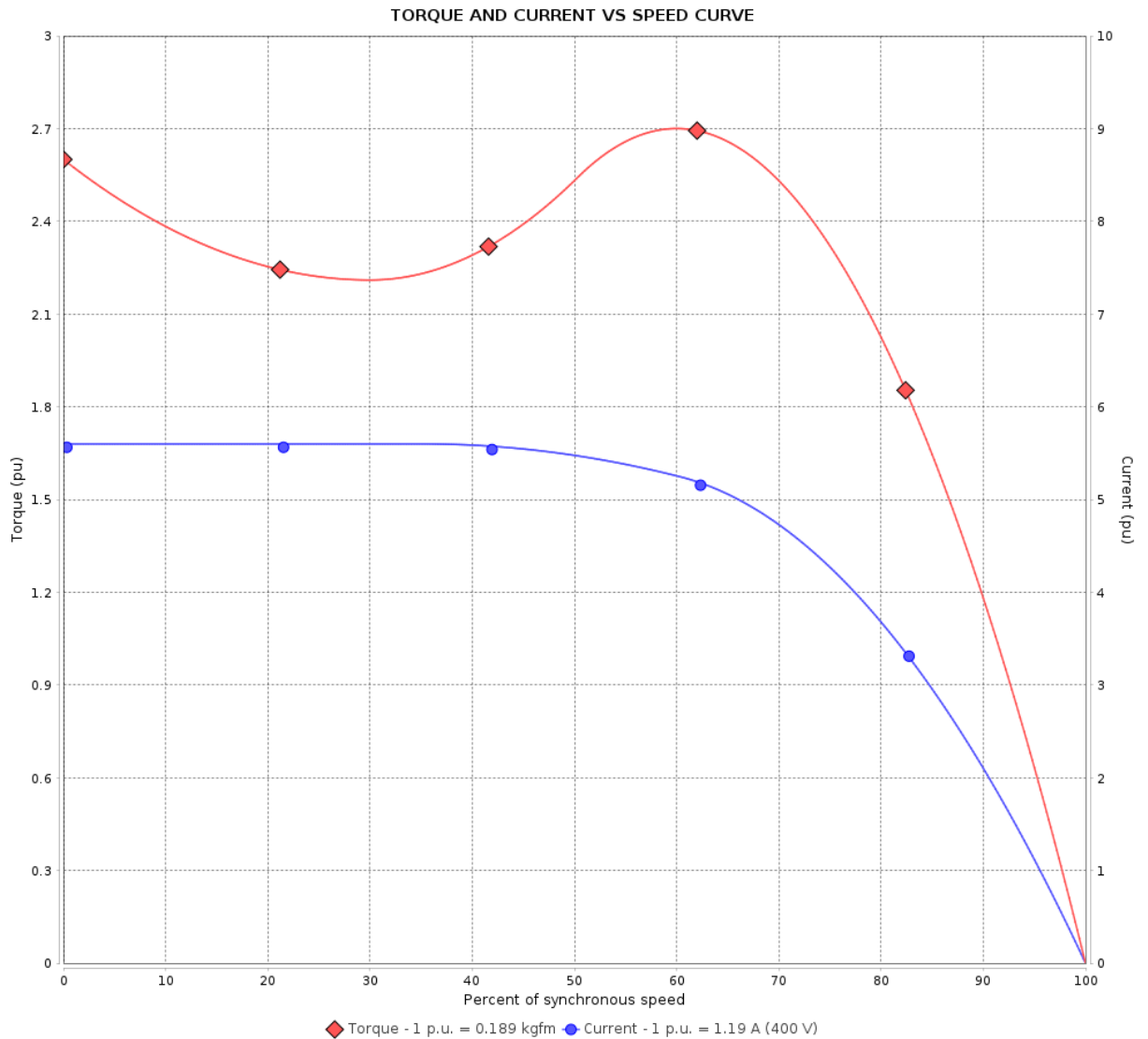


Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

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Performance : 230/400 V 50 Hz 2P

Rated current	: 2.07/1.19 A	Moment of inertia (J)	: 0.0005 kgm ²
LRC	: 5.6	Duty cycle	: S1
Rated torque	: 0.189 kgfm	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 2835 rpm	Design	: N

Locked rotor time : 32s (cold) 18s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

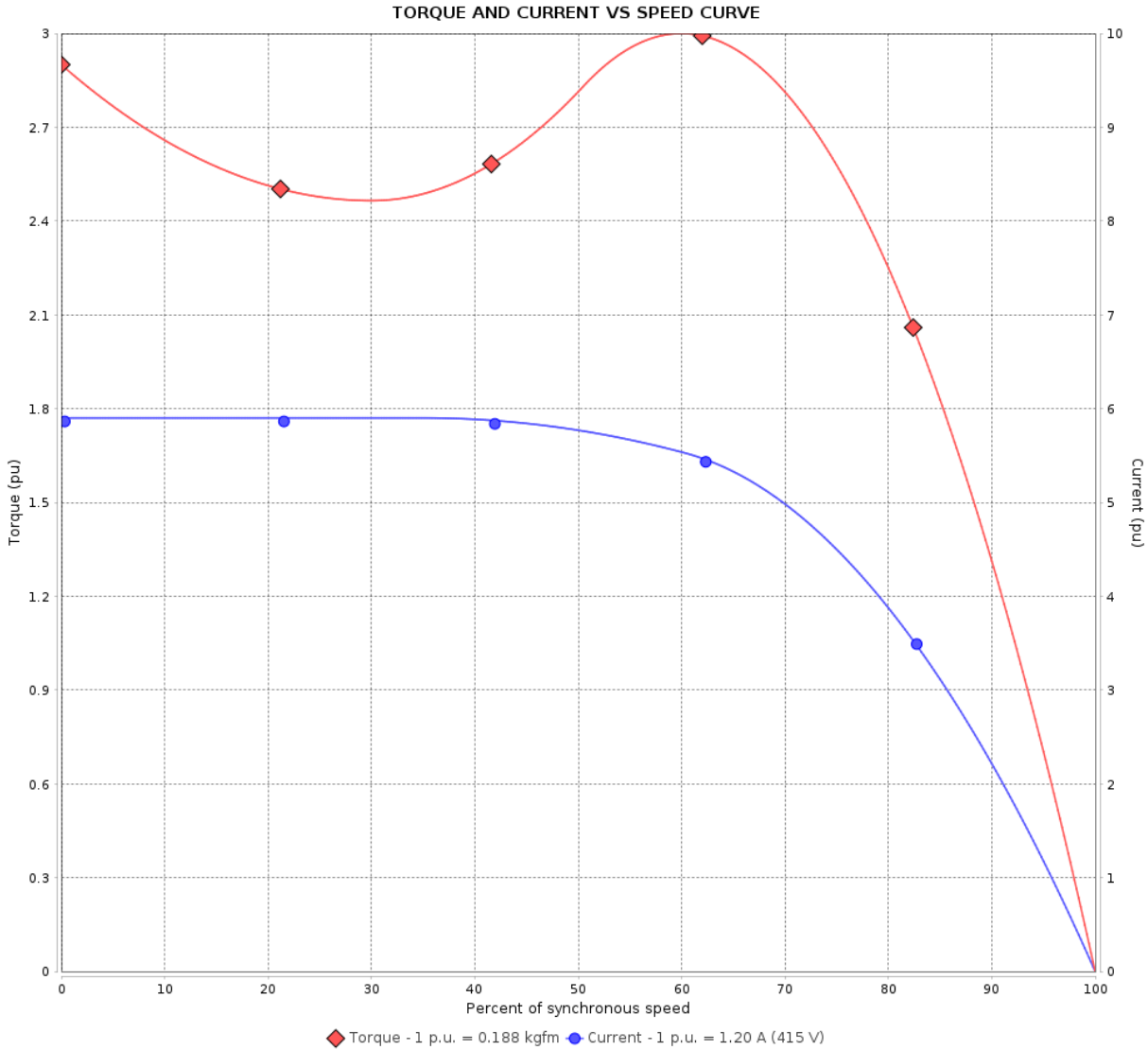
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 13749698



Performance : 240/415 V 50 Hz 2P

Rated current	: 2.08/1.20 A	Moment of inertia (J)	: 0.0005 kgm ²
LRC	: 5.9	Duty cycle	: S1
Rated torque	: 0.188 kgfm	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 2845 rpm	Design	: N

Locked rotor time : 30s (cold) 17s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

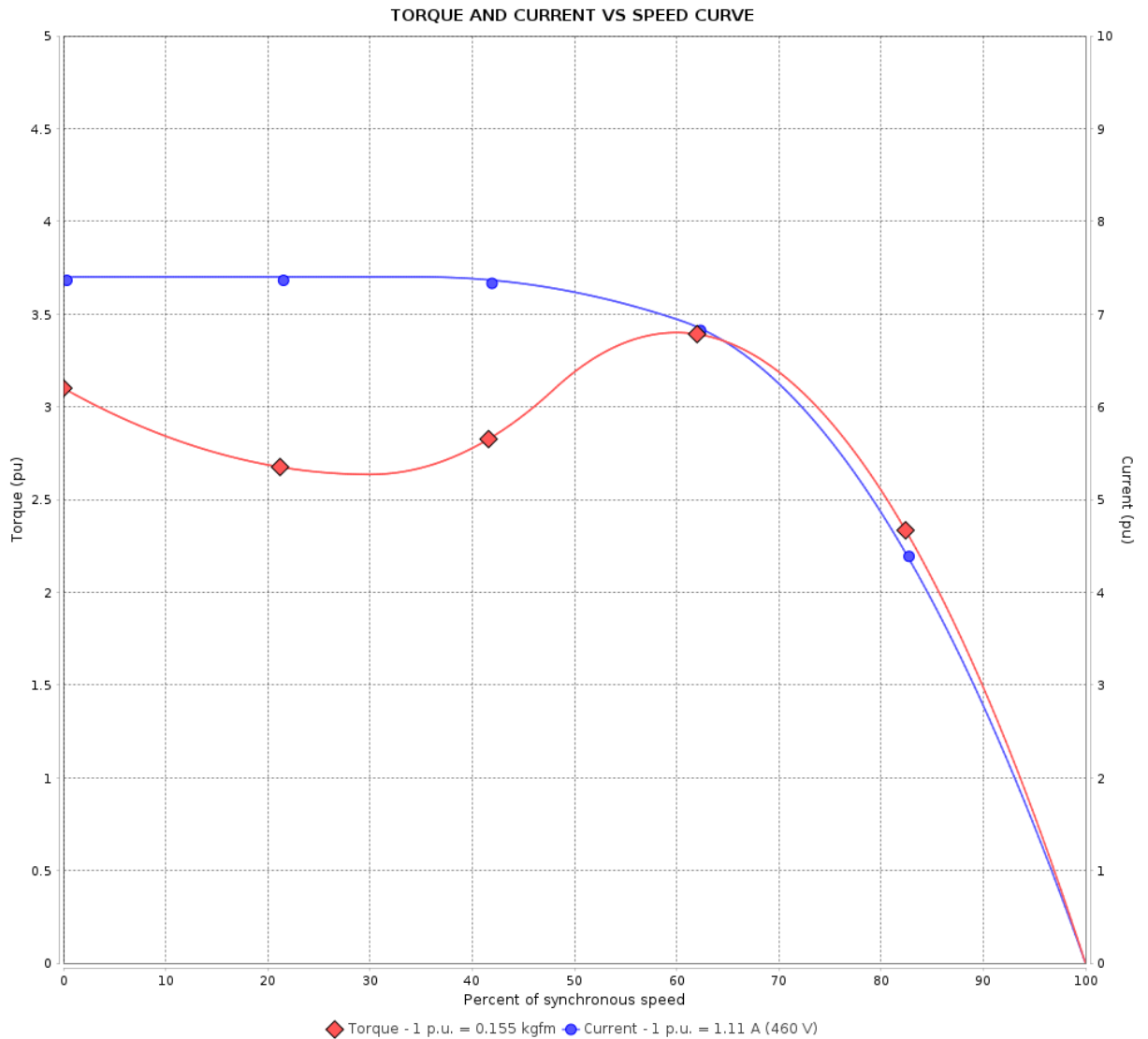


Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

Product line : IE3 Three-Phase

Product code : 13749698



Performance : 460 V 60 Hz 2P

Rated current	: 1.11 A	Moment of inertia (J)	: 0.0005 kgm ²
LRC	: 7.4	Duty cycle	: S1
Rated torque	: 0.155 kgfm	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 340 %	Temperature rise	: 80 K
Rated speed	: 3455 rpm	Design	: N

Locked rotor time : 32s (cold) 18s (hot)

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LOAD PERFORMANCE CURVE

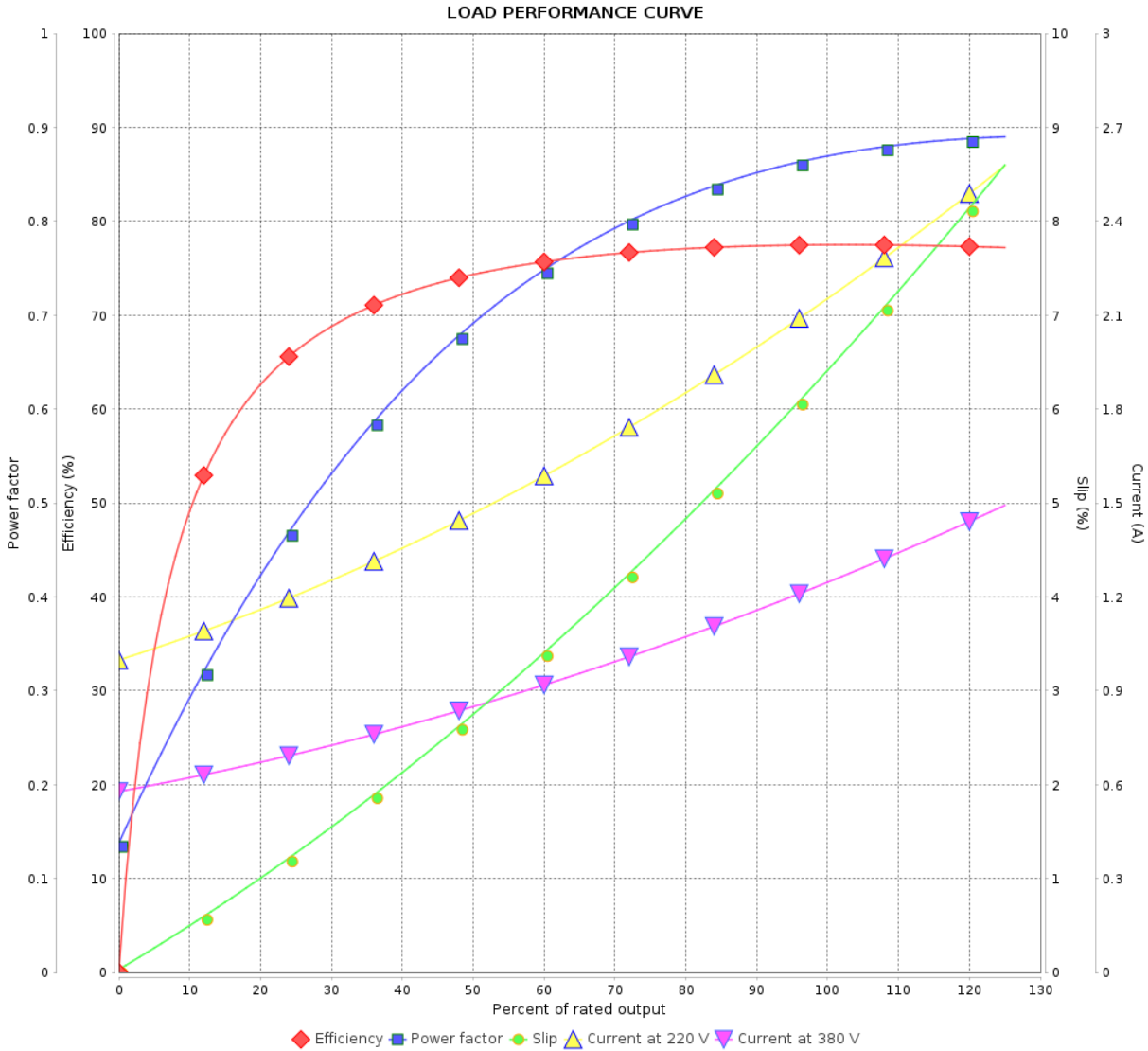
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Performance : 220/380 V 50 Hz 2P

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 Rated torque : 0.191 kgfm
 Locked rotor torque : 229 %
 Breakdown torque : 240 %
 Rated speed : 2805 rpm

Moment of inertia (J) : 0.0005 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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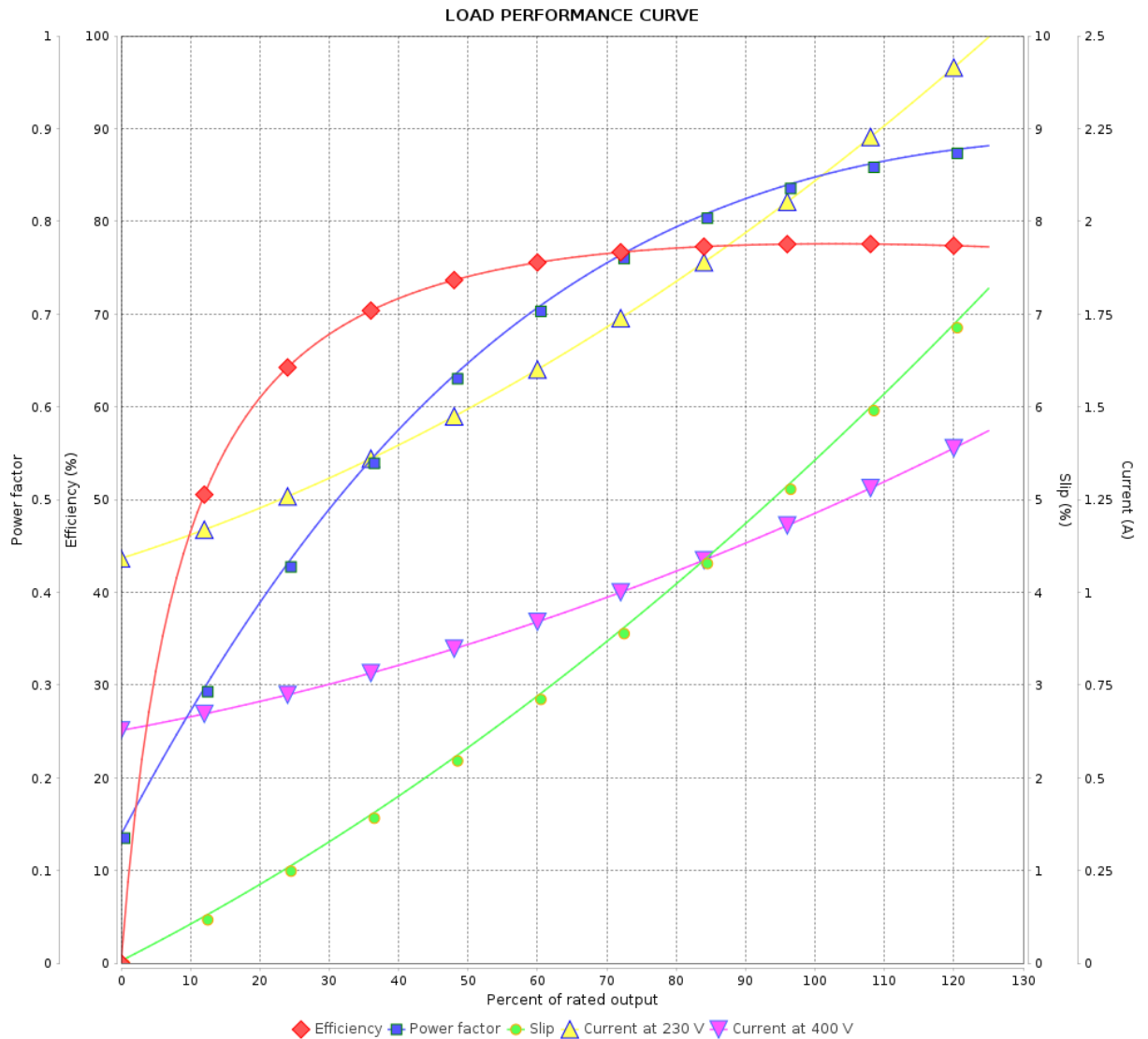
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 Service factor : 1.00
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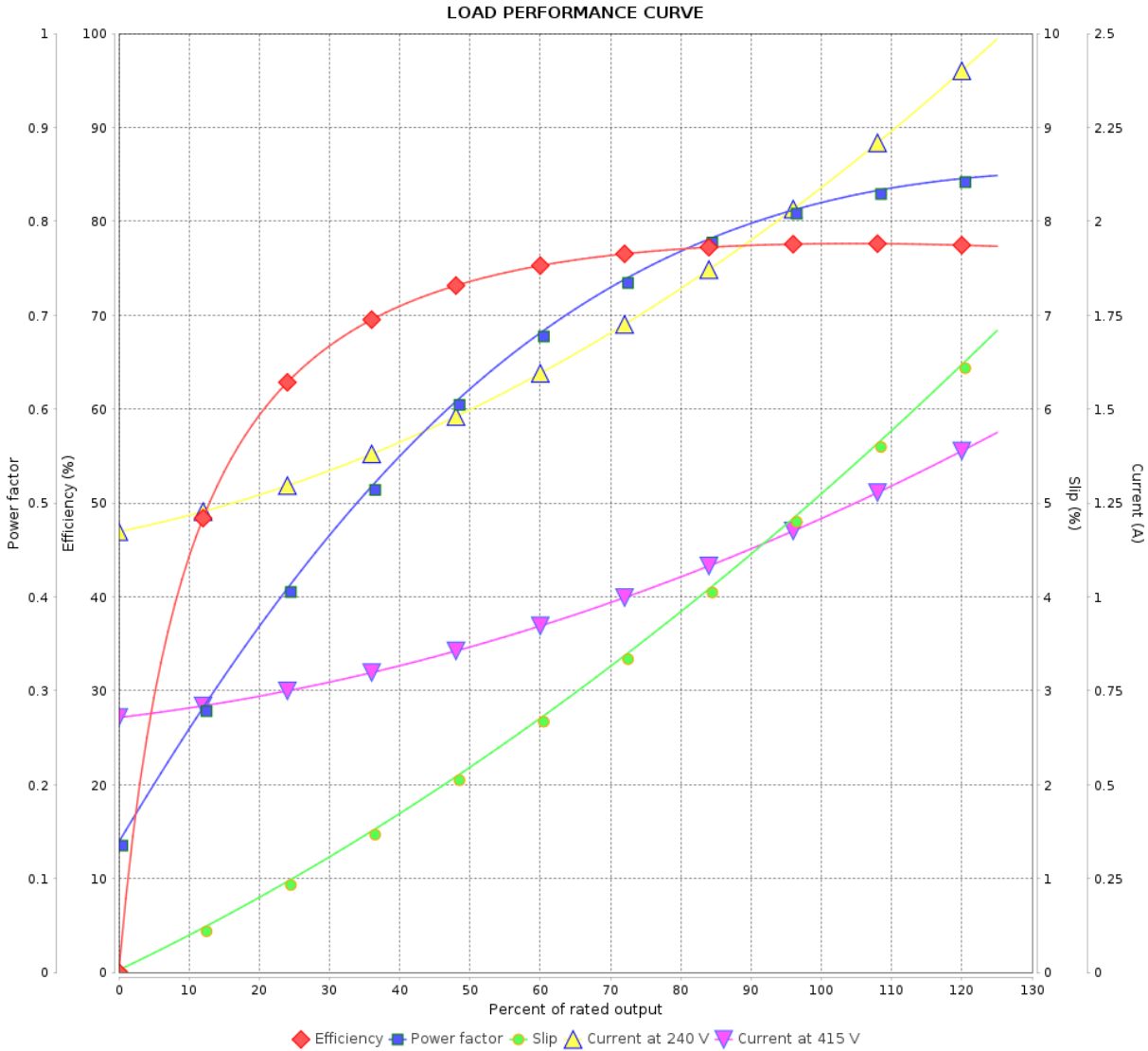
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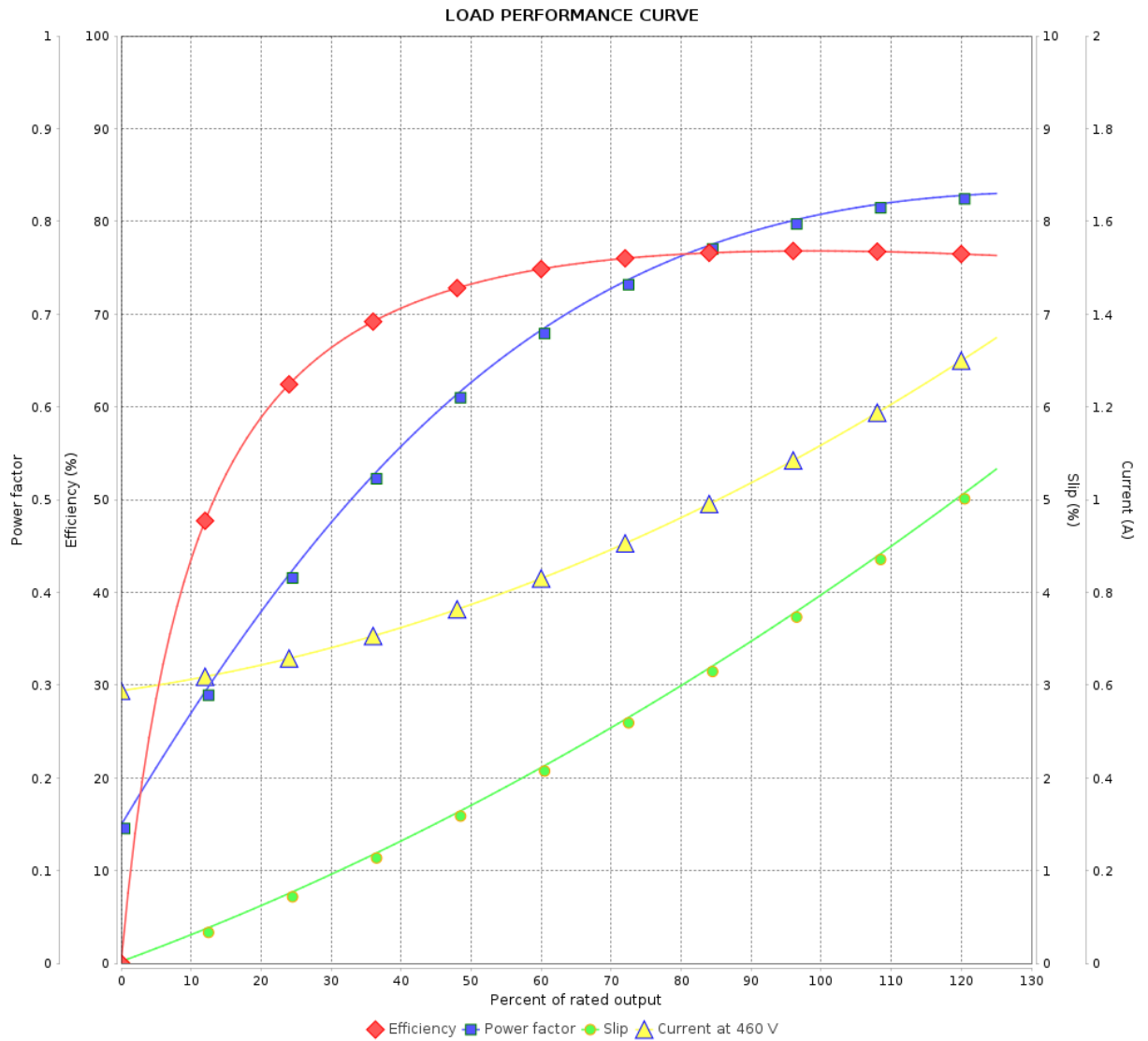
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THERMAL LIMIT CURVE

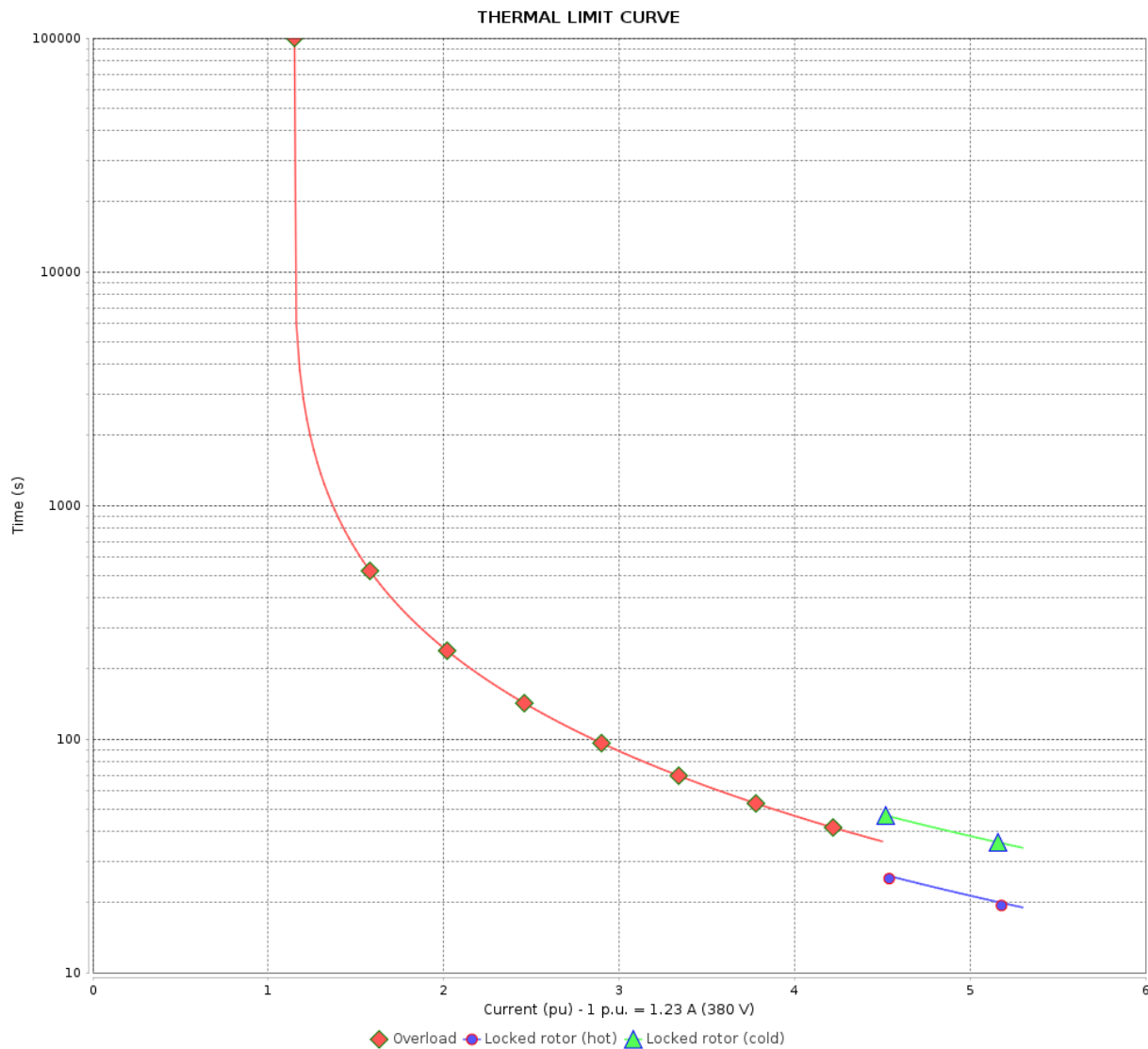
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Heating constant
 Cooling constant

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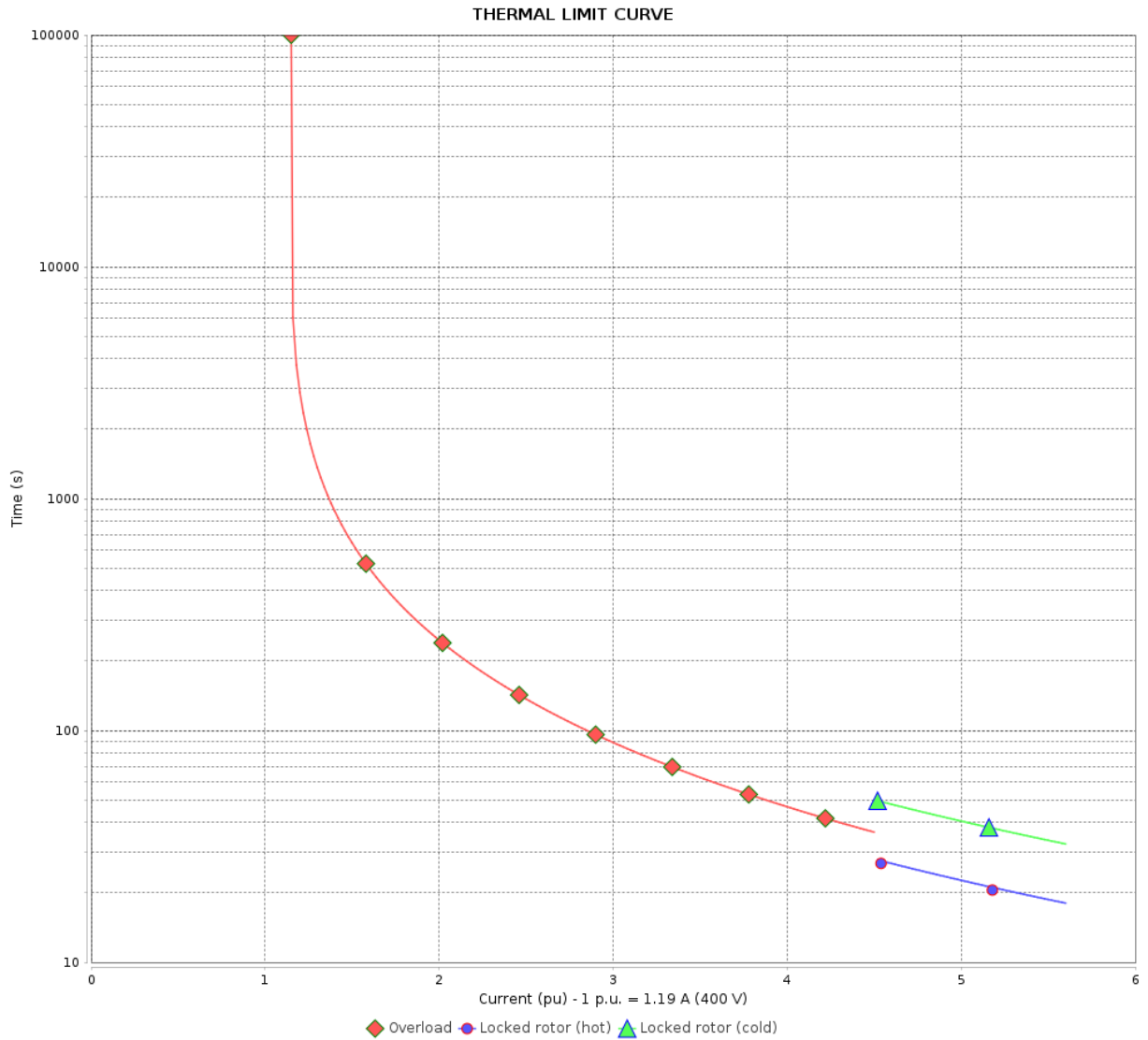
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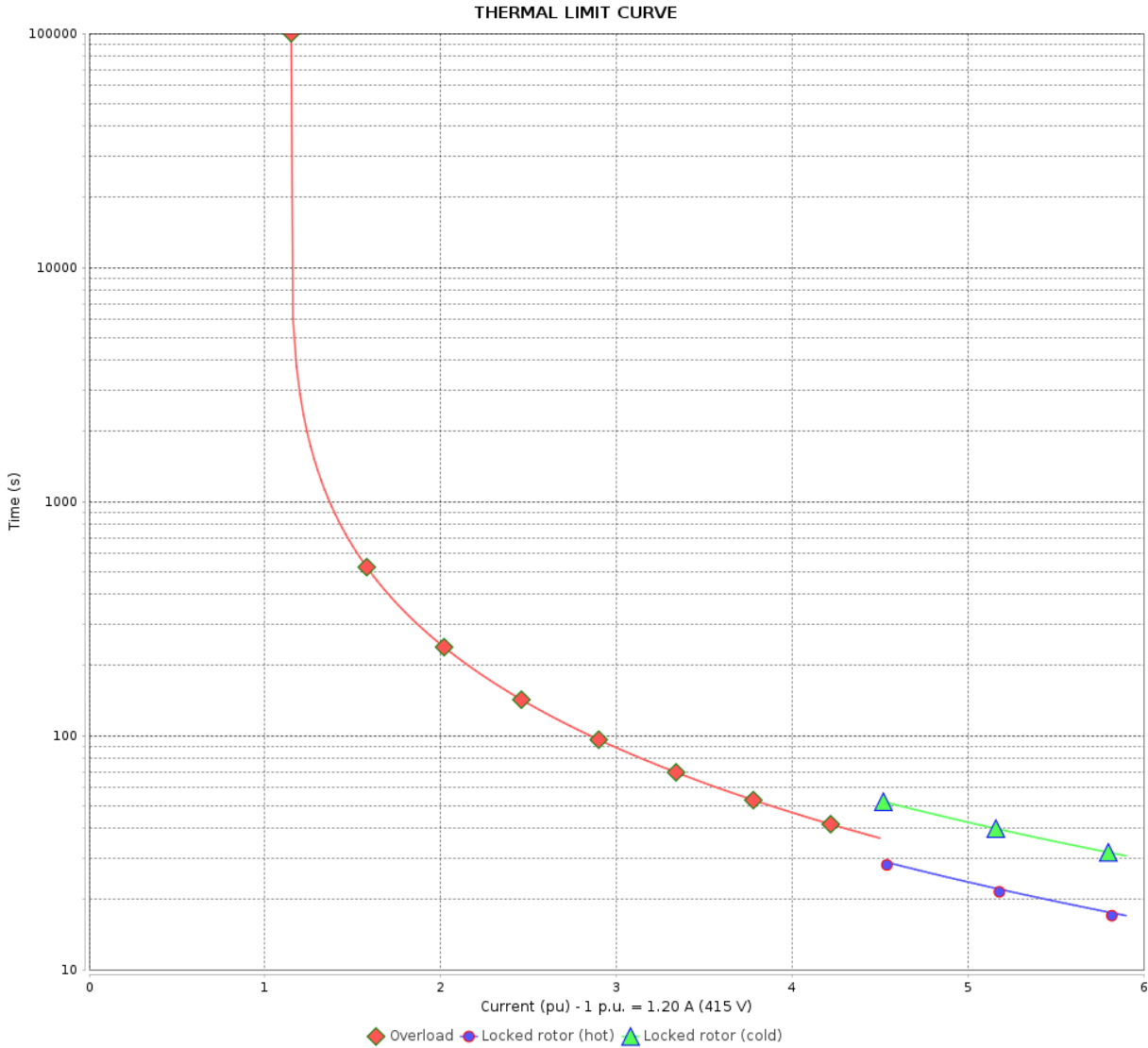
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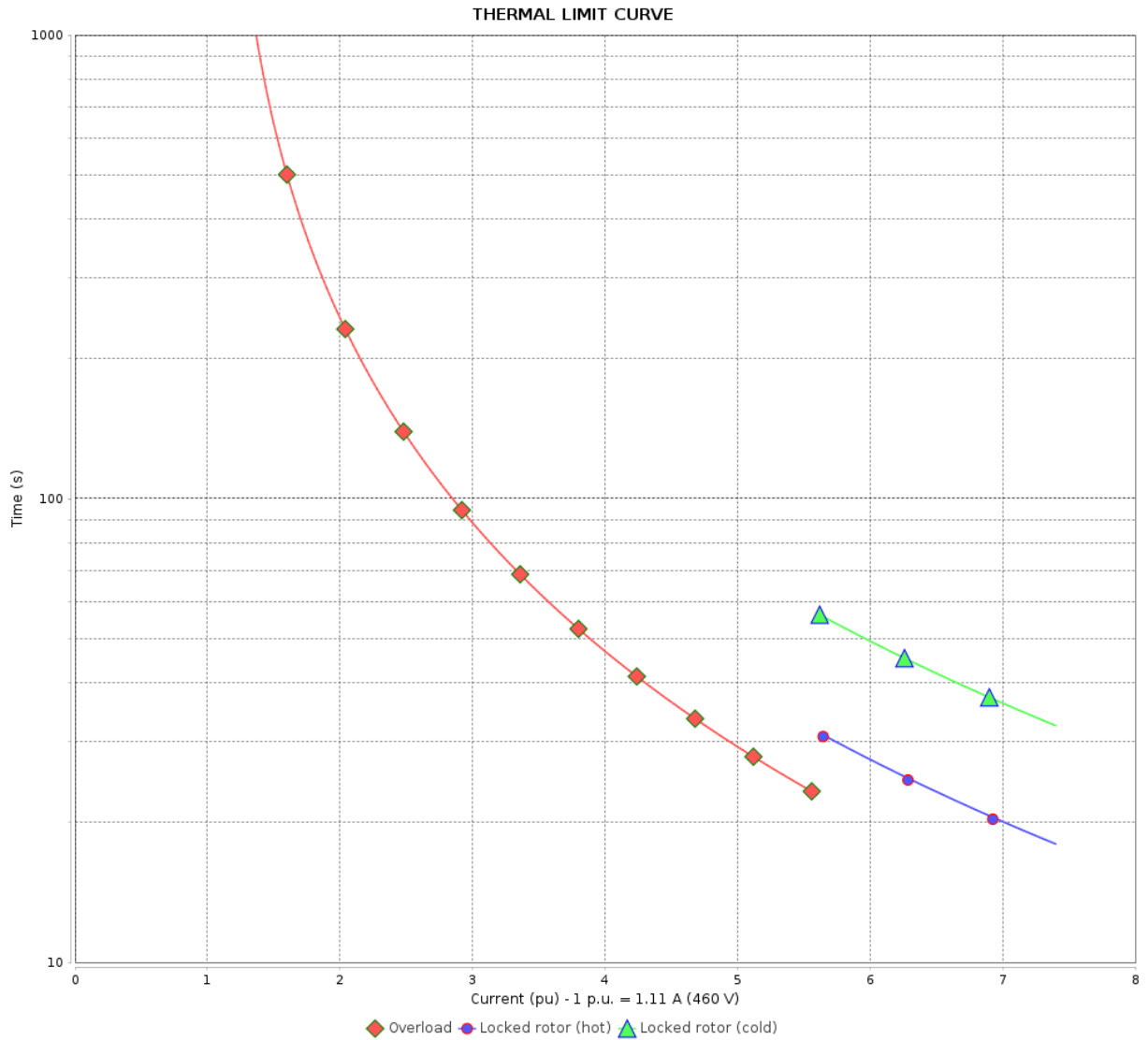
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VFD OPERATION CURVE

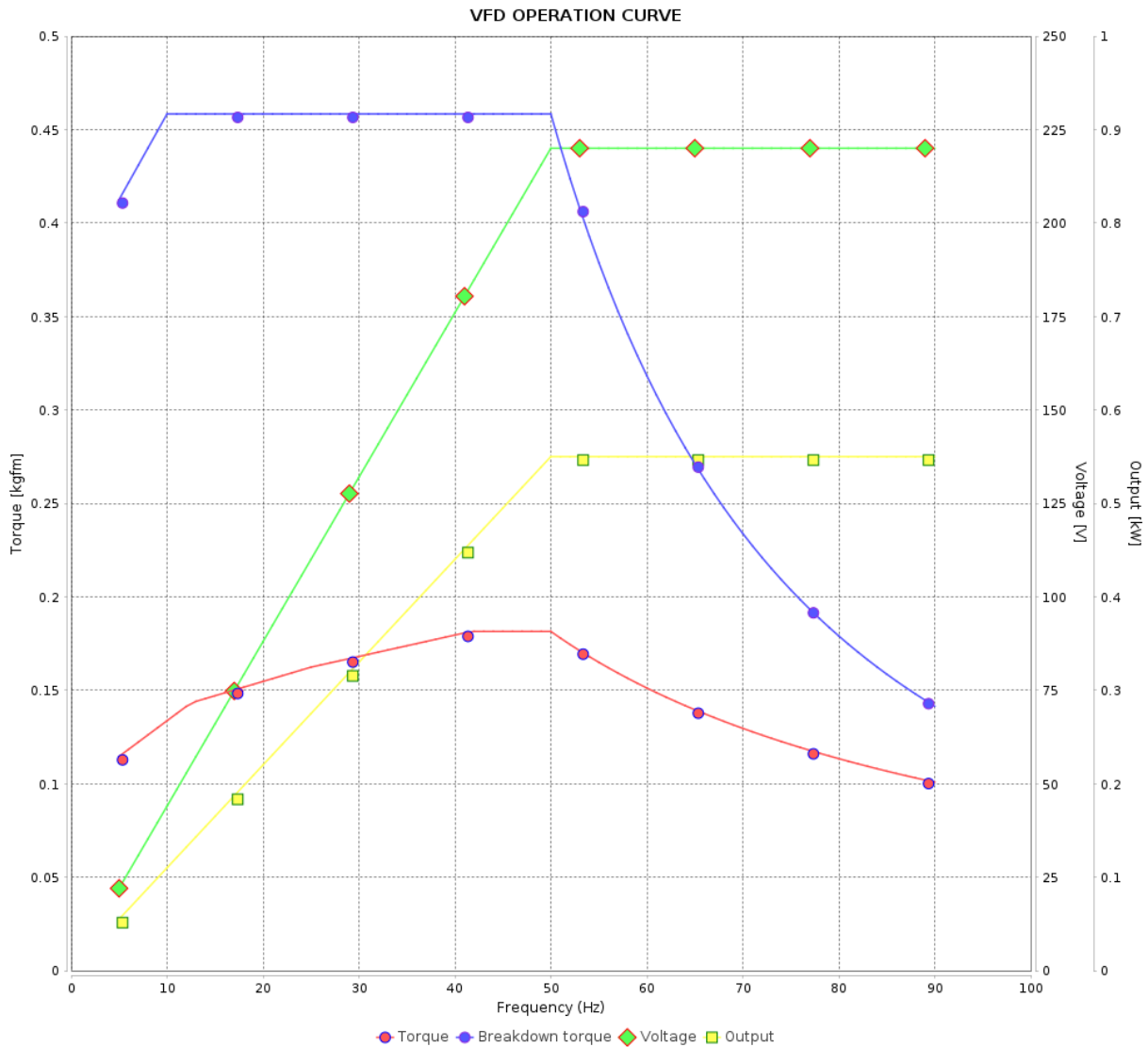
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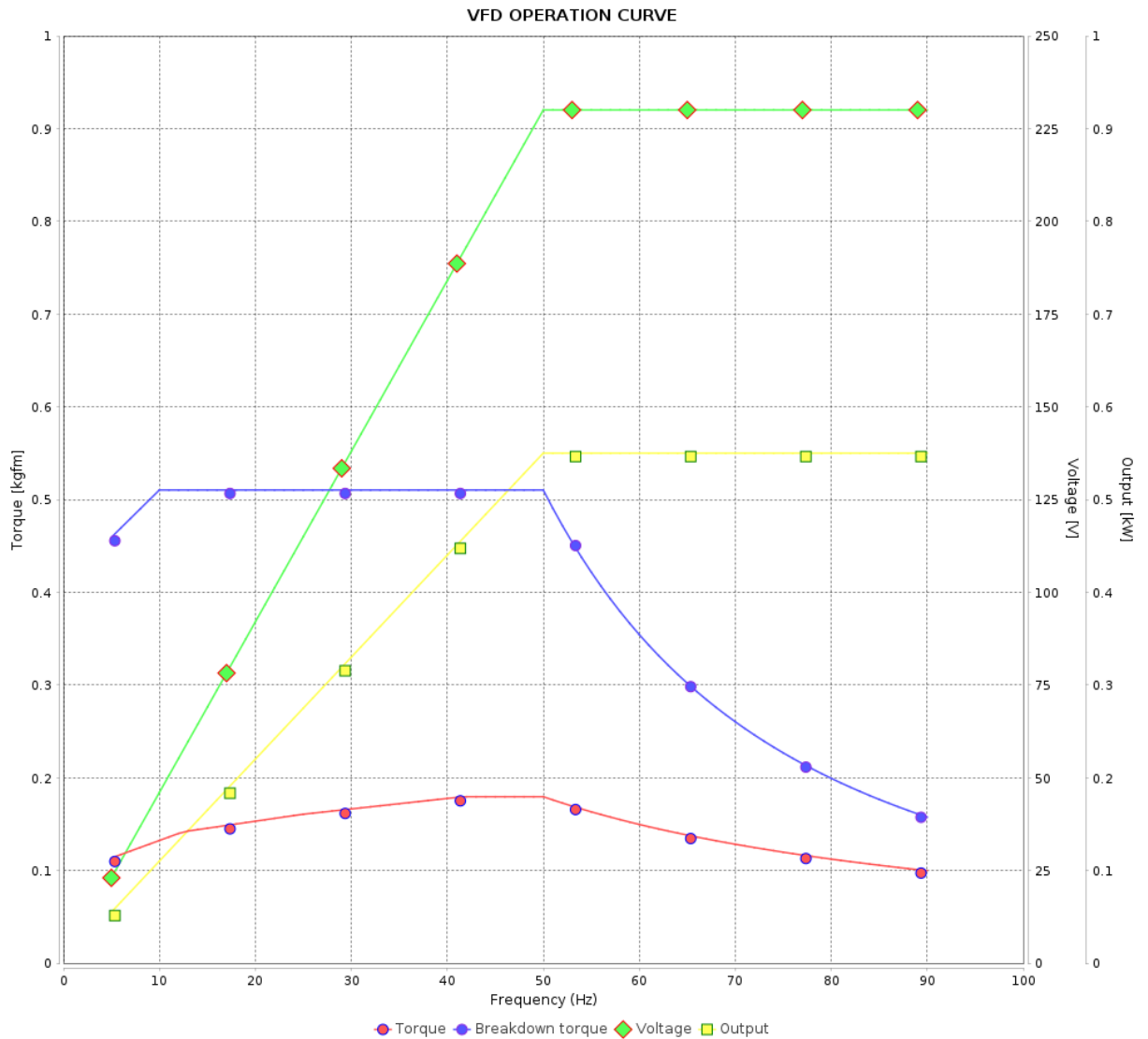
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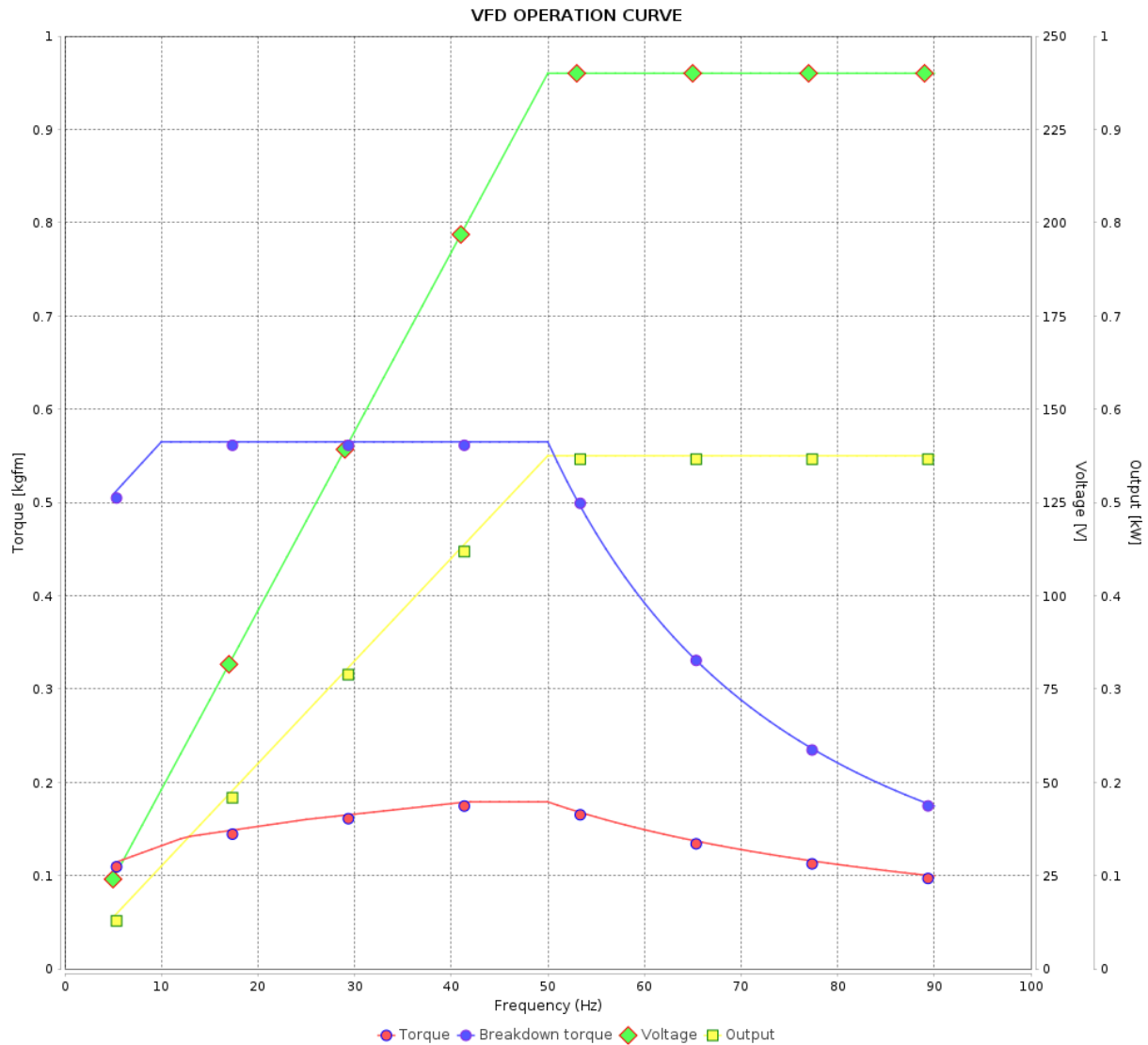
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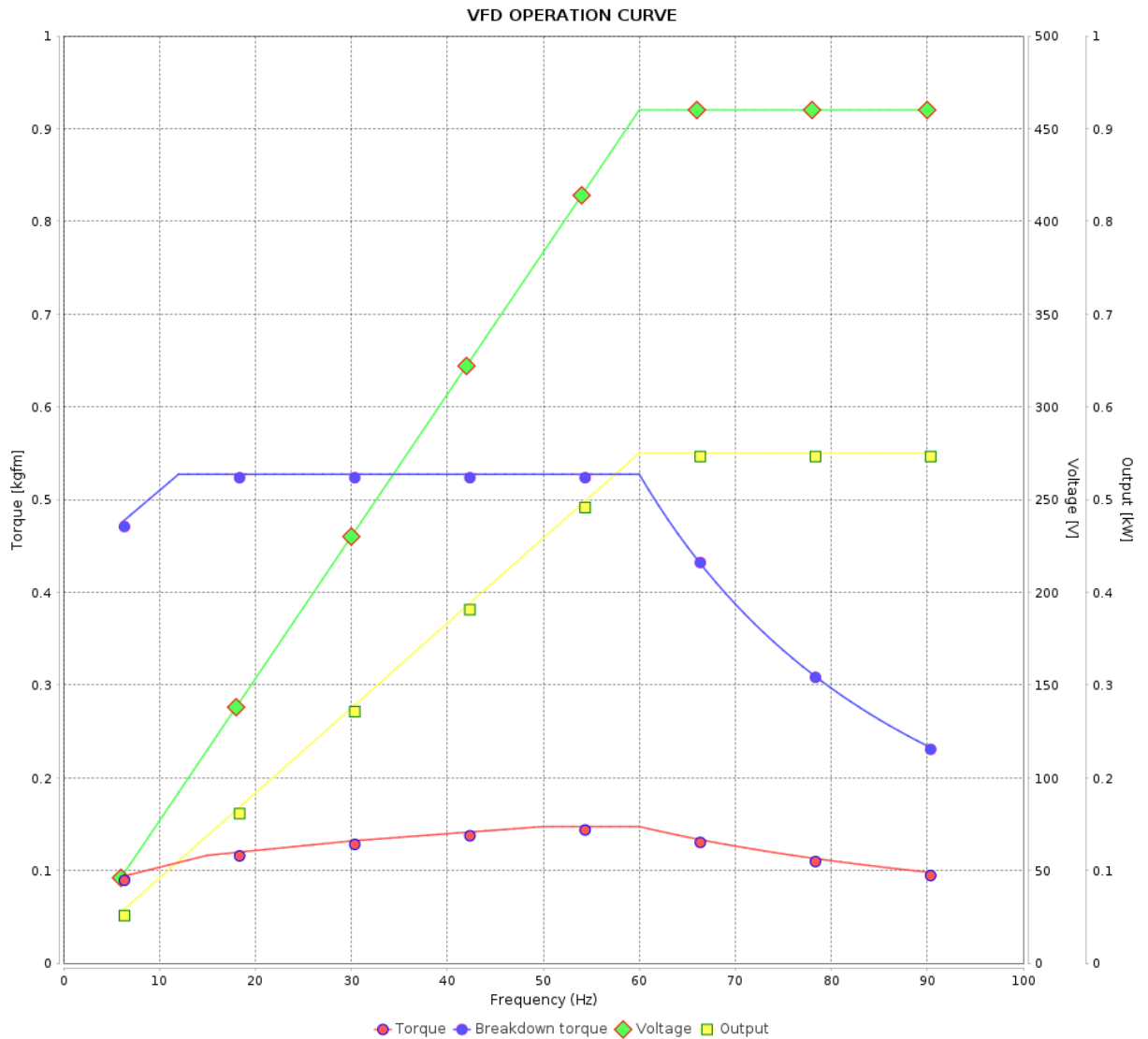
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