

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15839419

Frame : 100L
Insulation class : F
Duty cycle : S1
Ambient temperature : -20°C to +40°C
Altitude : 1000 m.a.s.l.
Protection degree : IP55
Design : N

Cooling method : IC411 - TEFC
Mounting : B5T
Rotation¹ : Both (CW and CCW)
Starting method : Direct On Line
Approx. weight³ : 35.7 kg
Moment of inertia (J) : 0.0090 kgm²

Output [kW]	2.2	2.2	2.2	2.2
Poles	4	4	4	4
Frequency [Hz]	50	50	50	60
Rated voltage [V]	220/380	230/400	240/415	460
Rated current [A]	8.22/4.76	8.03/4.62	7.89/4.56	4.06
L. R. Amperes [A]	60.8/35.2	62.7/36.0	64.7/37.4	36.5
LRC [A]	7.4	7.8	8.2	9.0
No load current [A]	3.80/2.20	4.17/2.40	4.50/2.60	2.20
Rated speed [RPM]	1430	1435	1440	1745
Slip [%]	4.67	4.33	4.00	3.06
Rated torque [kgfm]	1.50	1.49	1.49	1.23
Locked rotor torque [%]	310	350	380	409
Breakdown torque [%]	290	340	370	400
Service factor	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	30s (cold) 17s (hot)	28s (cold) 16s (hot)	27s (cold) 15s (hot)	30s (cold) 17s (hot)
Noise level ²	53.0 dB(A)	53.0 dB(A)	53.0 dB(A)	54.0 dB(A)
Efficiency (%)	25%			
	50%	87.2	86.5	84.0
	75%	87.1	87.0	86.5
	100%	86.7	87.0	89.5
Power Factor	25%			
	50%	0.62	0.59	0.55
	75%	0.75	0.72	0.68
	100%	0.81	0.79	0.76

Losses at normative operating points (speed;torque), in percentage of rated output power

Losses (%)	P1 (0,9;1,0)	14.9	14.5	14.2	11.4
	P2 (0,5;1,0)	13.5	13.2	12.9	10.3
	P3 (0,25;1,0)	13.5	13.2	13.0	10.4
	P4 (0,9;0,5)	6.5	6.3	6.2	4.9
	P5 (0,5;0,5)	4.8	4.7	4.6	3.7
	P6 (0,5;0,25)	3.0	2.9	2.9	2.3
	P7 (0,25;0,25)	2.3	2.2	2.2	1.7

Drive end Non drive end
Bearing type : 6206 ZZ 6205 ZZ
Sealing : V'Ring V'Ring
Lubrication interval : - -
Lubricant amount : - -
Lubricant type : 00088

Foundation loads
Max. traction : 104 kgf
Max. compression : 140 kgf

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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Customer : _____

Thermal protection

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

Space heater information

Voltage: 110 - 127 V

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TORQUE AND CURRENT VS SPEED CURVE

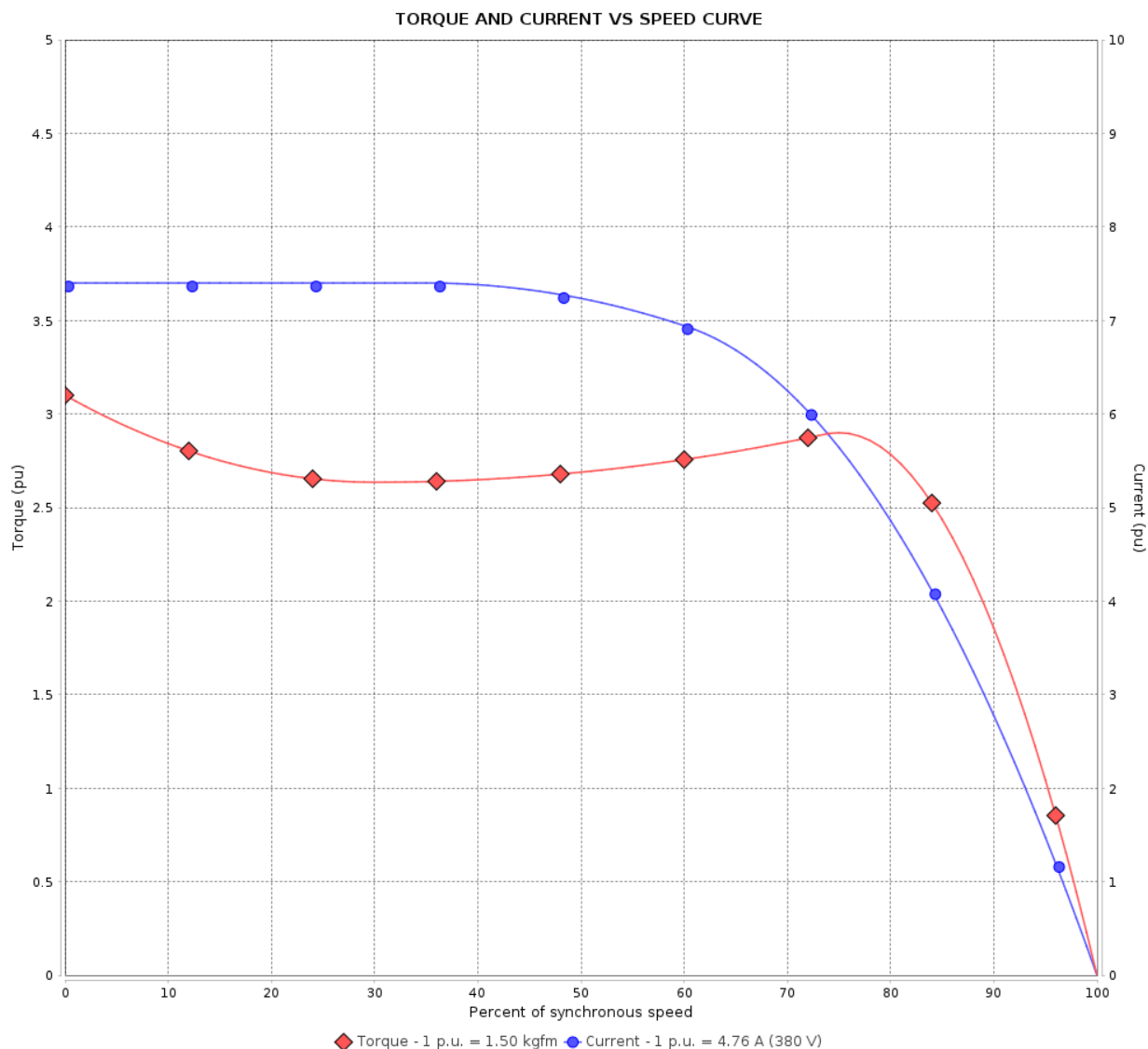
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15839419



Performance : 220/380 V 50 Hz 4P

Rated current : 8.22/4.76 A
LRC : 7.4
Rated torque : 1.50 kgfm
Locked rotor torque : 310 %
Breakdown torque : 290 %
Rated speed : 1430 rpm

Moment of inertia (J) : 0.0090 kgm²
Duty cycle : S1
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : N

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

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TORQUE AND CURRENT VS SPEED CURVE

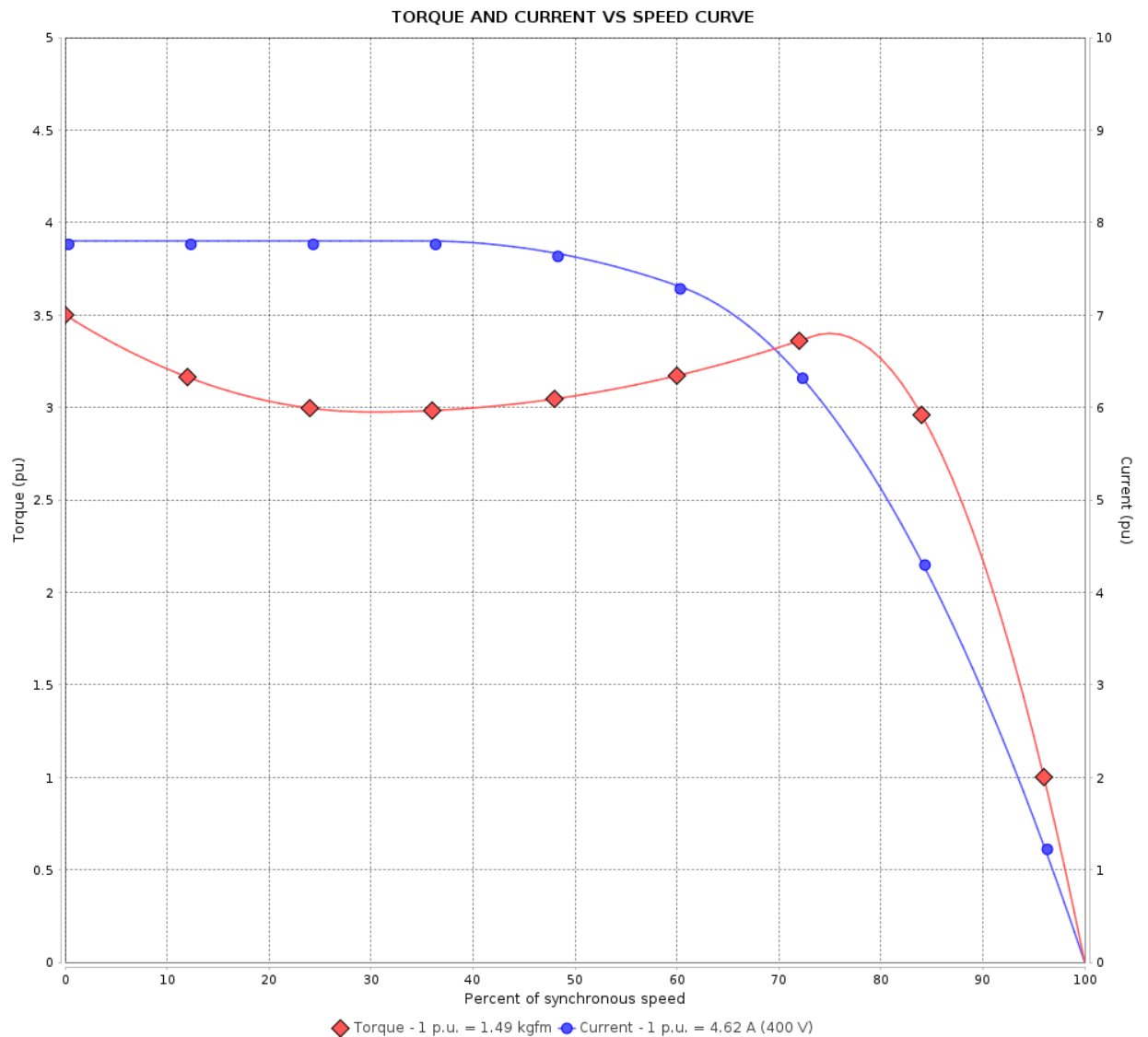
Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 230/400 V 50 Hz 4P

Rated current : 8.03/4.62 A
LRC : 7.8
Rated torque : 1.49 kgfm
Locked rotor torque : 350 %
Breakdown torque : 340 %
Rated speed : 1435 rpm

Moment of inertia (J) : 0.0090 kgm²
Duty cycle : S1
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : N

Locked rotor time : 28s (cold) 16s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

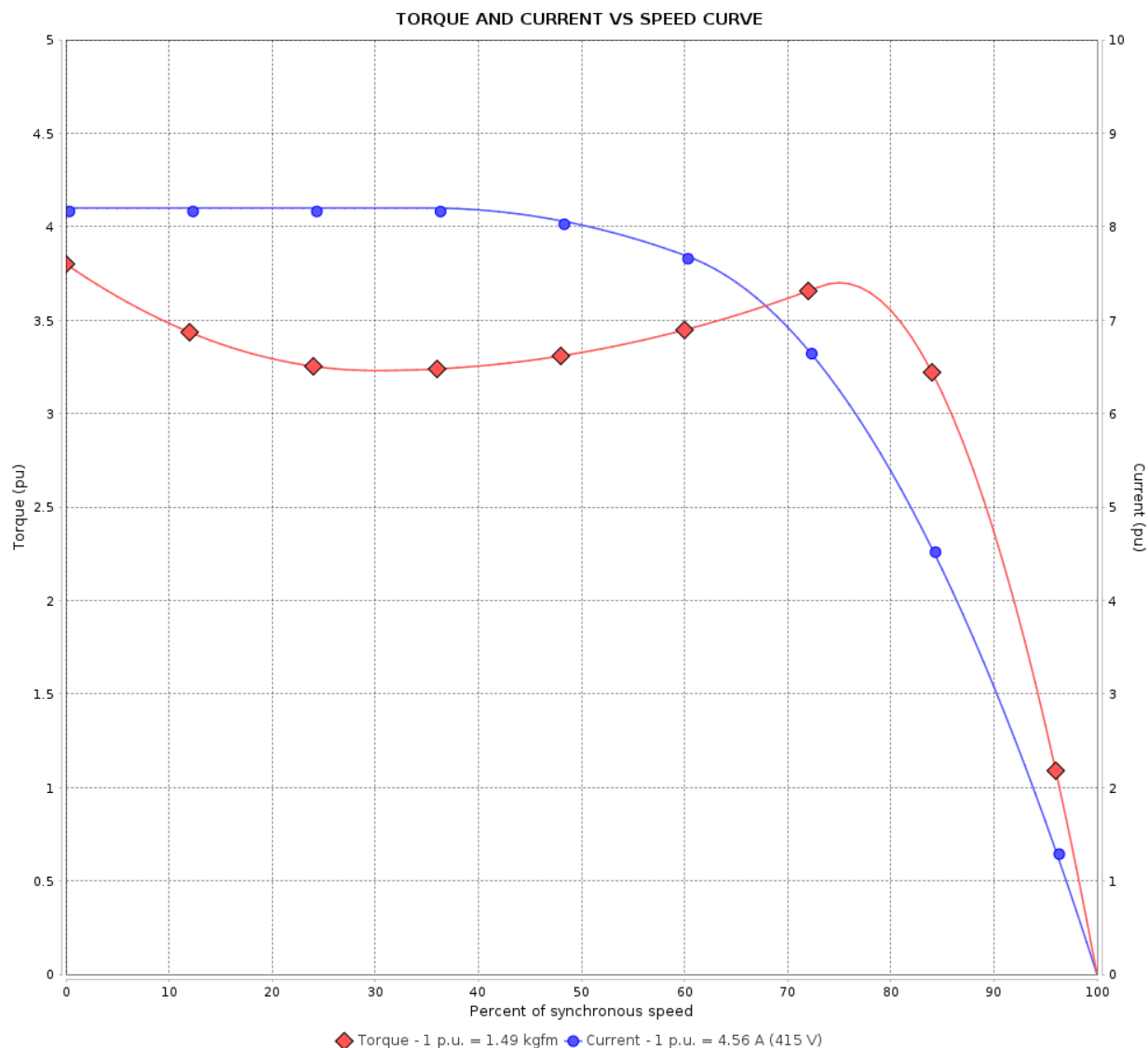
Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 240/415 V 50 Hz 4P

Rated current : 7.89/4.56 A
LRC : 8.2
Rated torque : 1.49 kgfm
Locked rotor torque : 380 %
Breakdown torque : 370 %
Rated speed : 1440 rpm

Moment of inertia (J) : 0.0090 kgm²
Duty cycle : S1
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : N

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

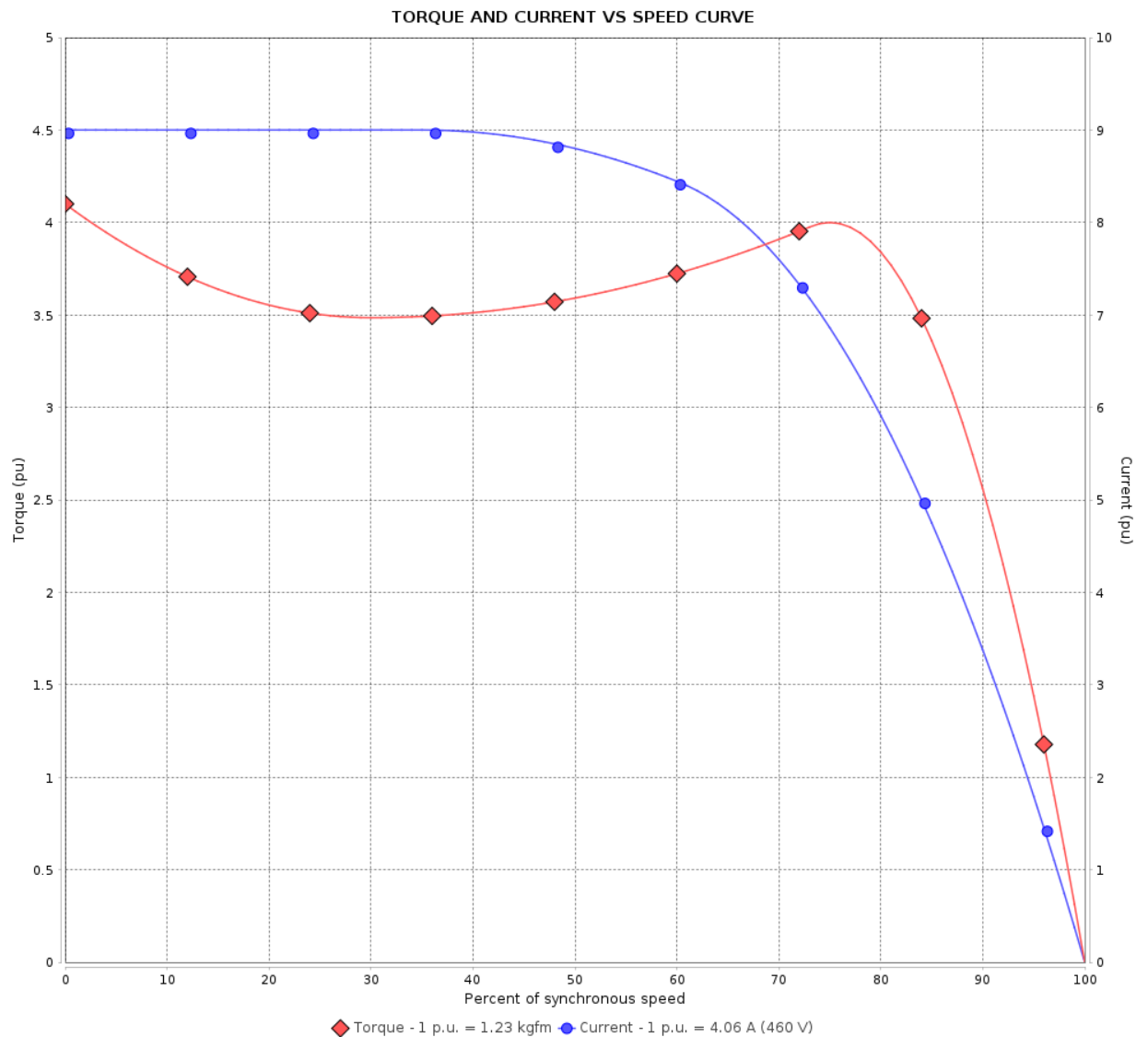
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15839419



Performance : 460 V 60 Hz 4P

Rated current	: 4.06 A	Moment of inertia (J)	: 0.0090 kgm ²
LRC	: 9.0	Duty cycle	: S1
Rated torque	: 1.23 kgfm	Insulation class	: F
Locked rotor torque	: 409 %	Service factor	: 1.00
Breakdown torque	: 400 %	Temperature rise	: 80 K
Rated speed	: 1745 rpm	Design	: N

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

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LOAD PERFORMANCE CURVE

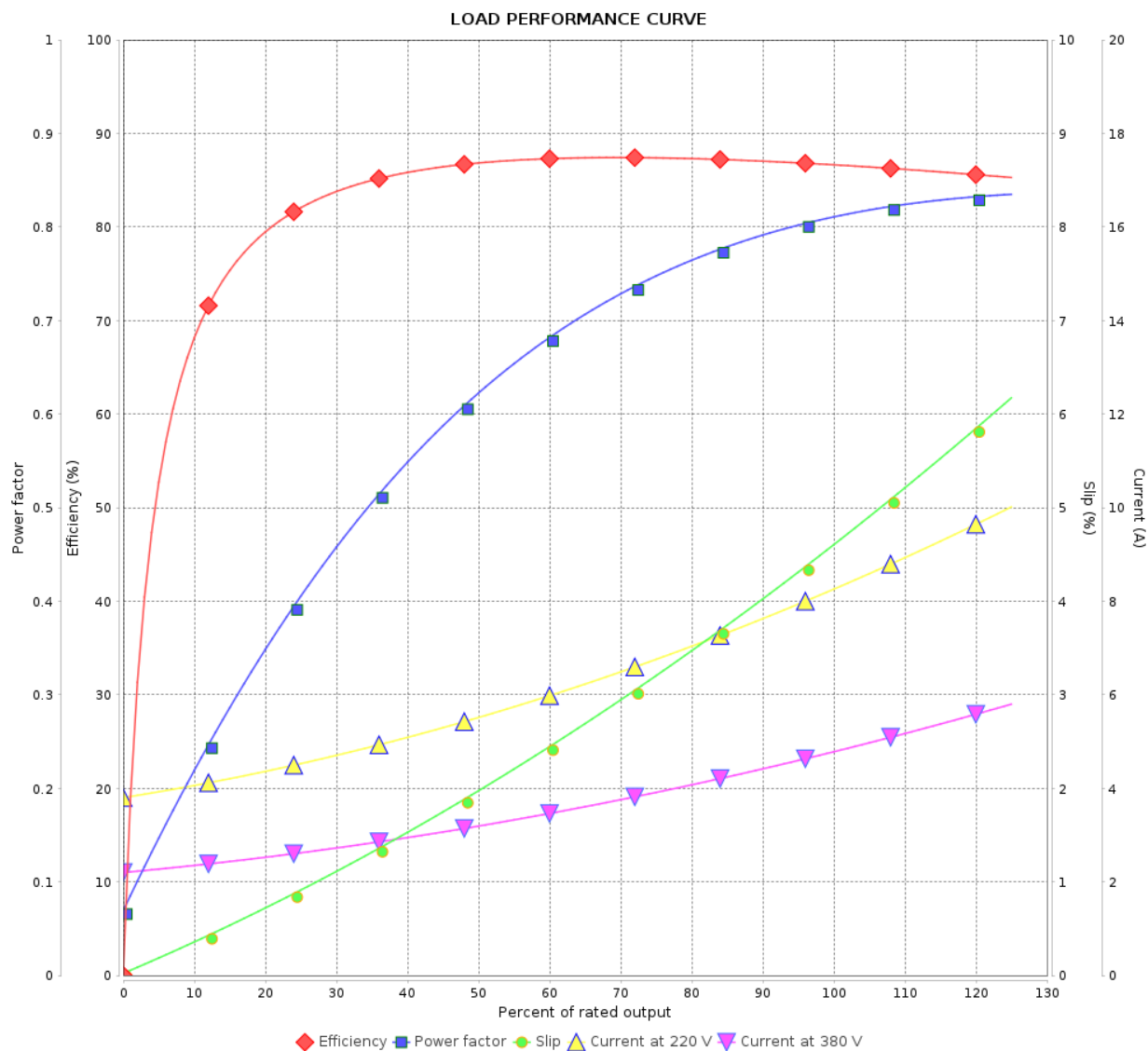
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Duty cycle : S1
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : N

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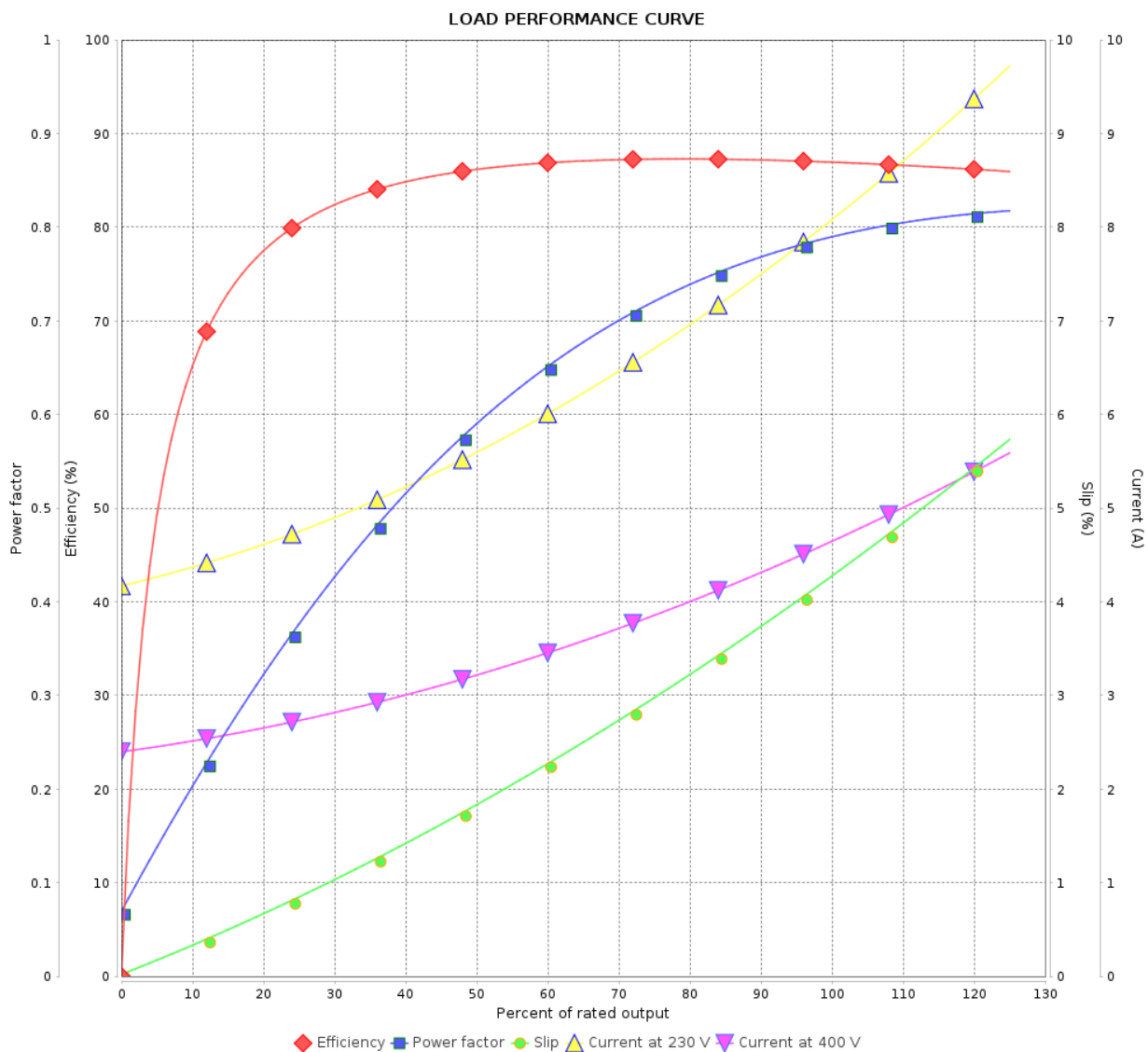
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Service factor : 1.00
Temperature rise : 80 K
Design : N

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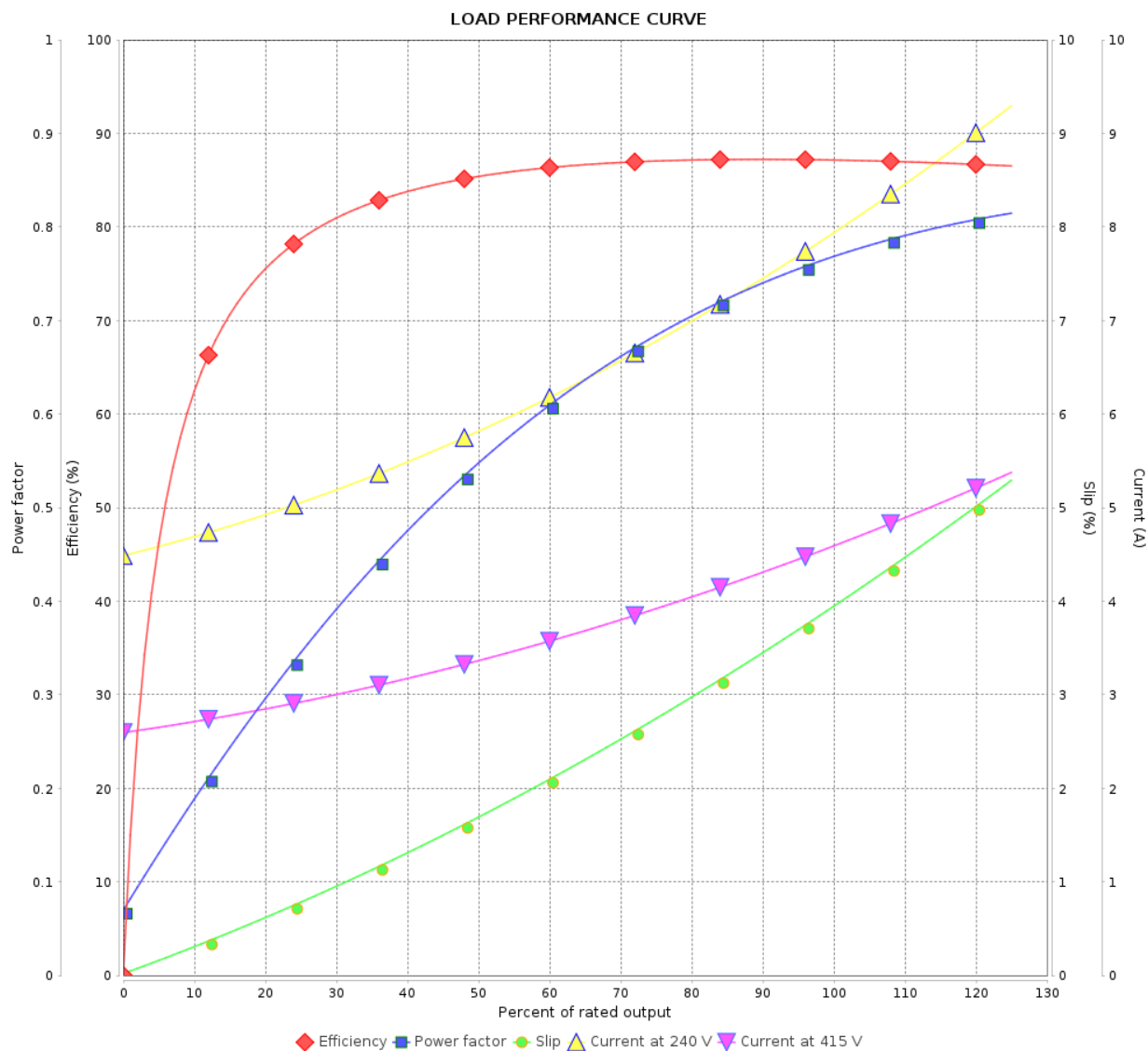
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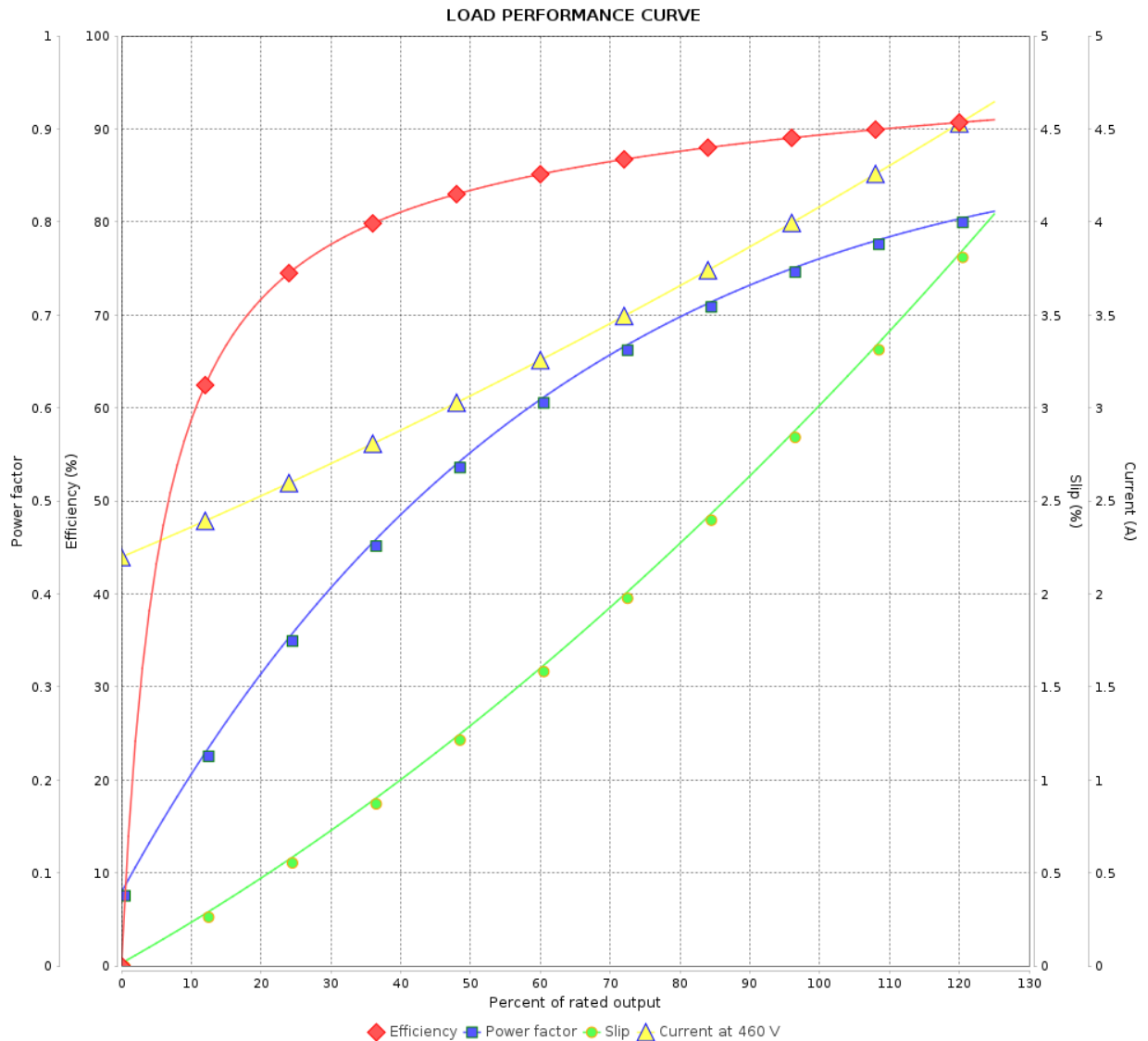
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THERMAL LIMIT CURVE

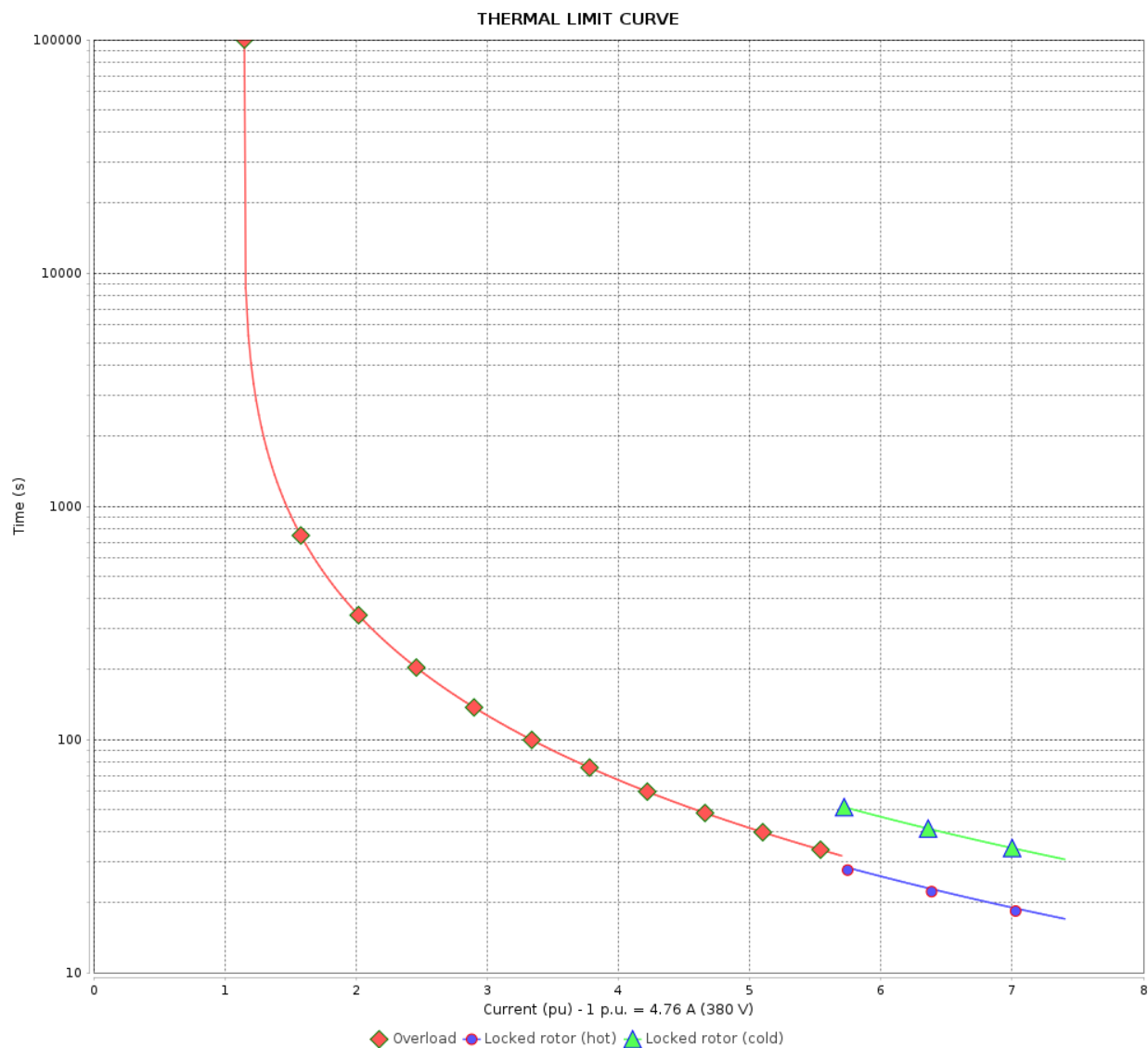
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Temperature rise : 80 K
Design : N

Heating constant

Cooling constant

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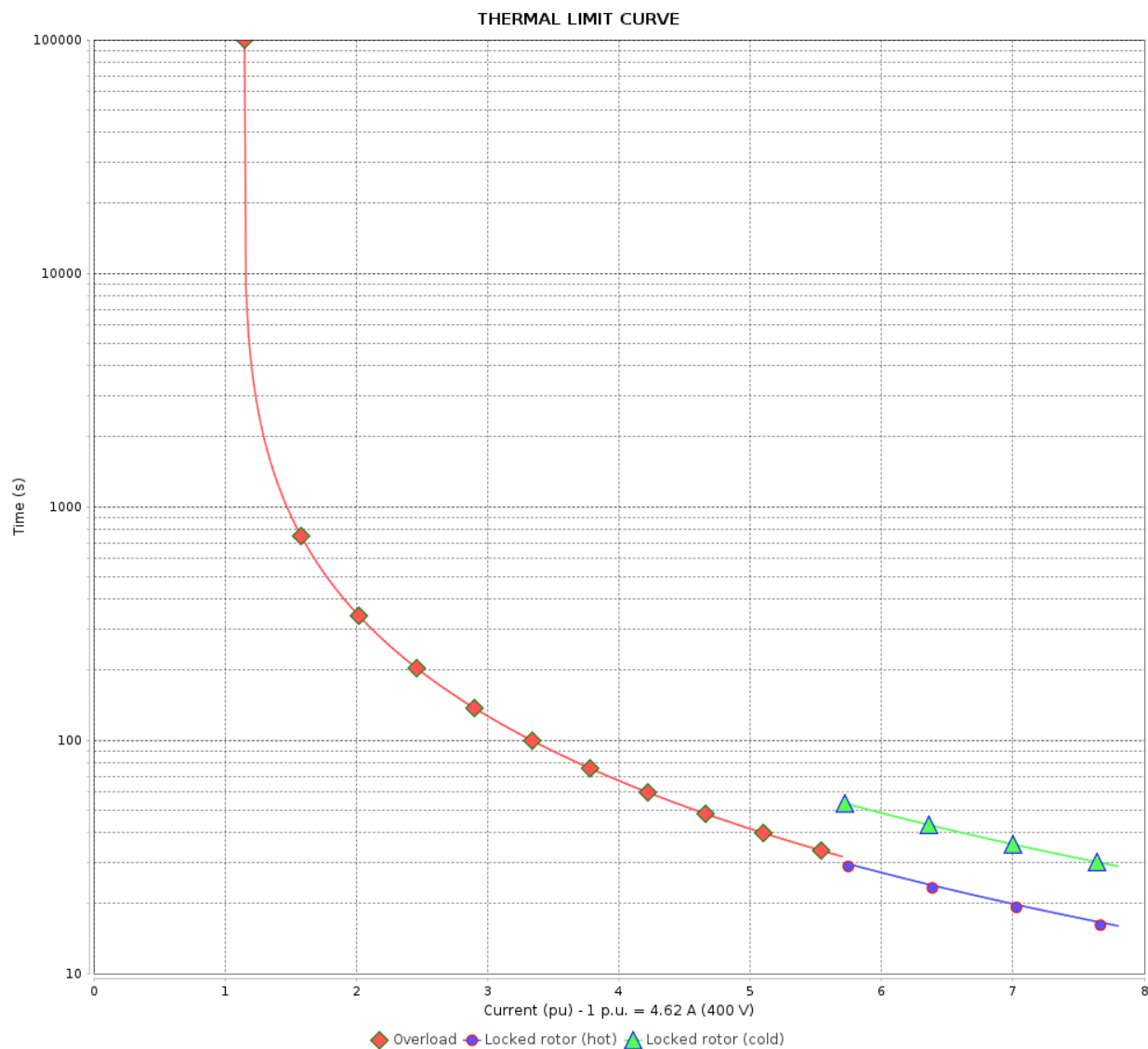
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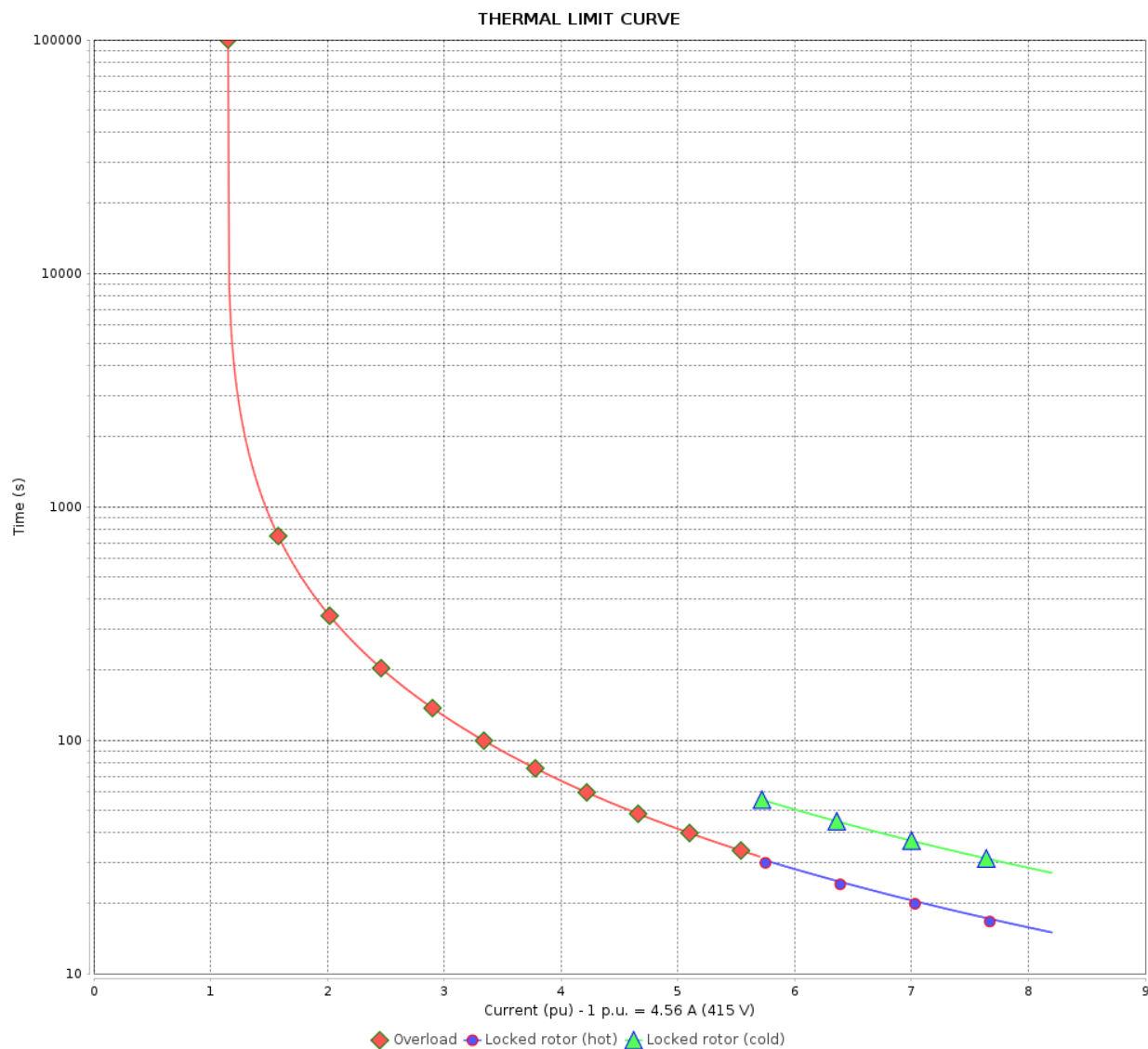
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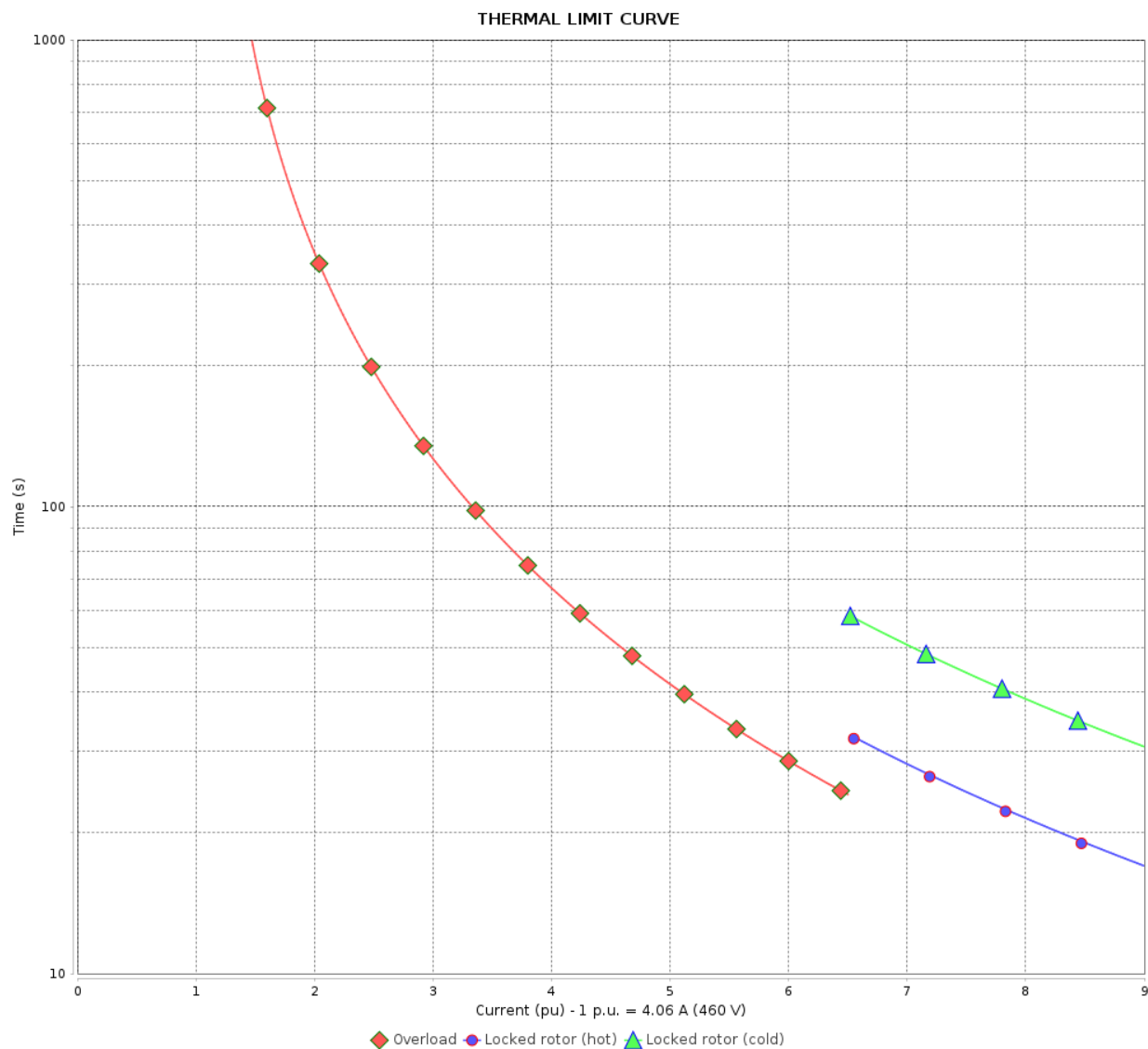
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Cooling constant

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VFD OPERATION CURVE

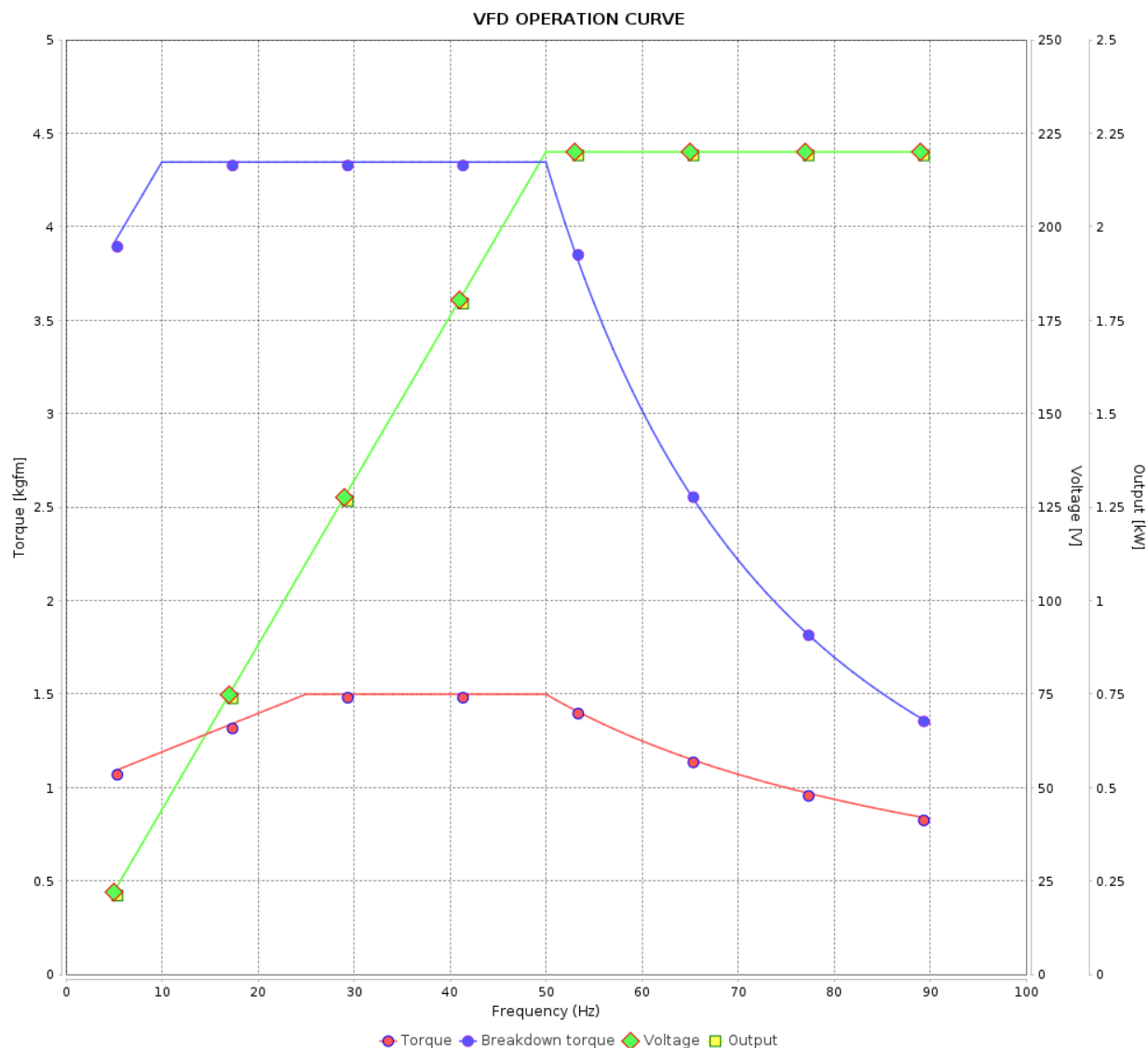
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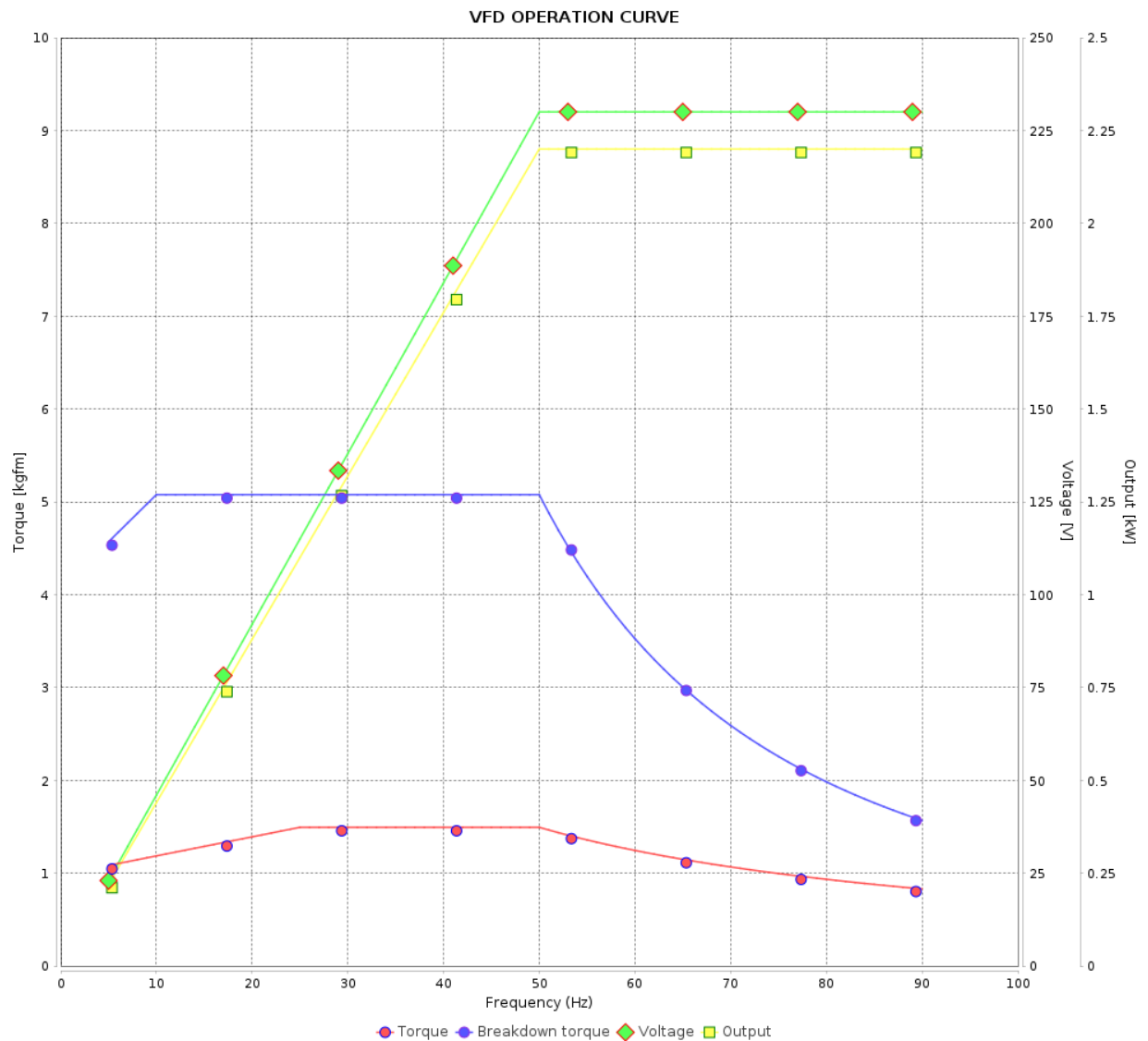
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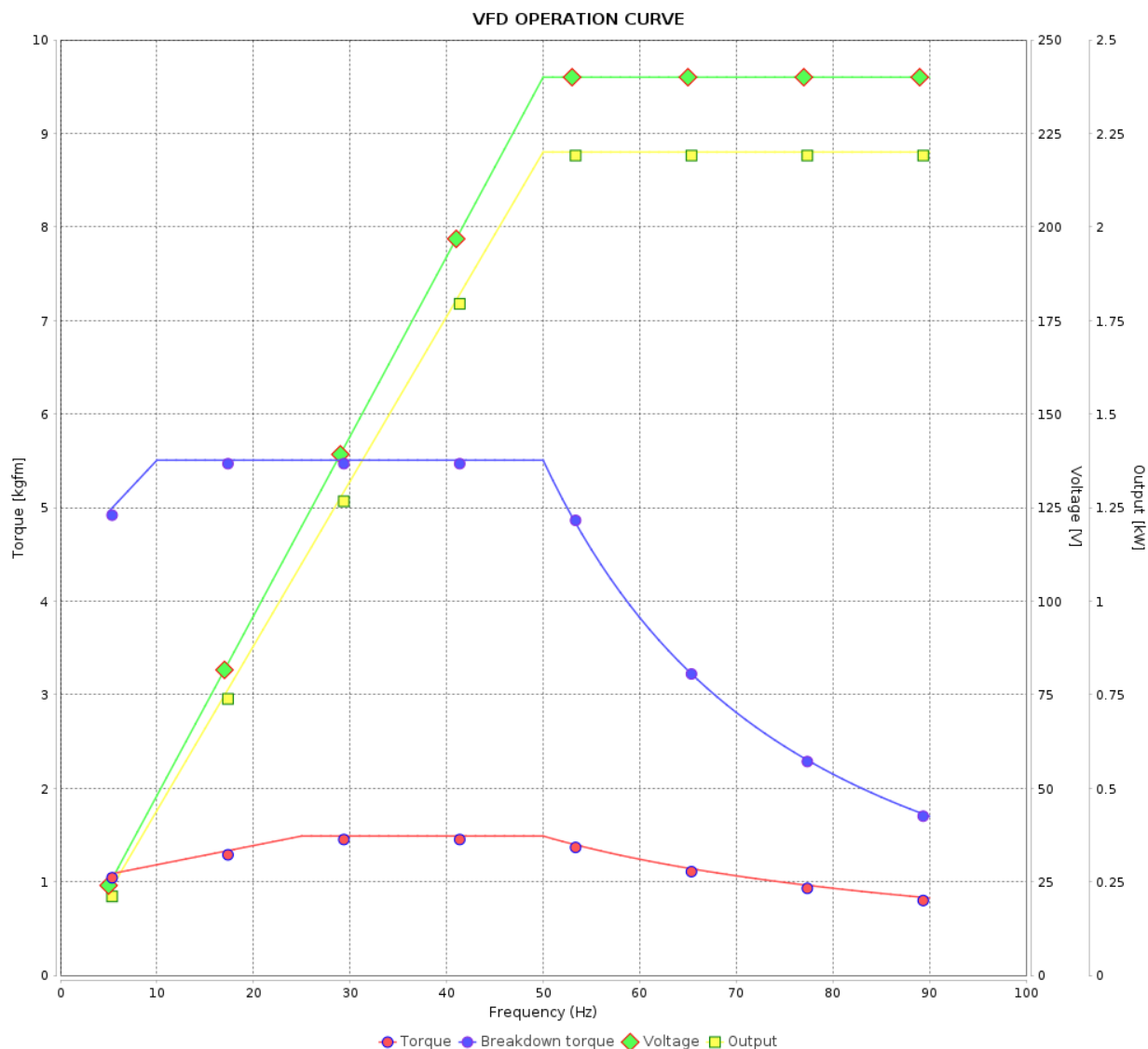
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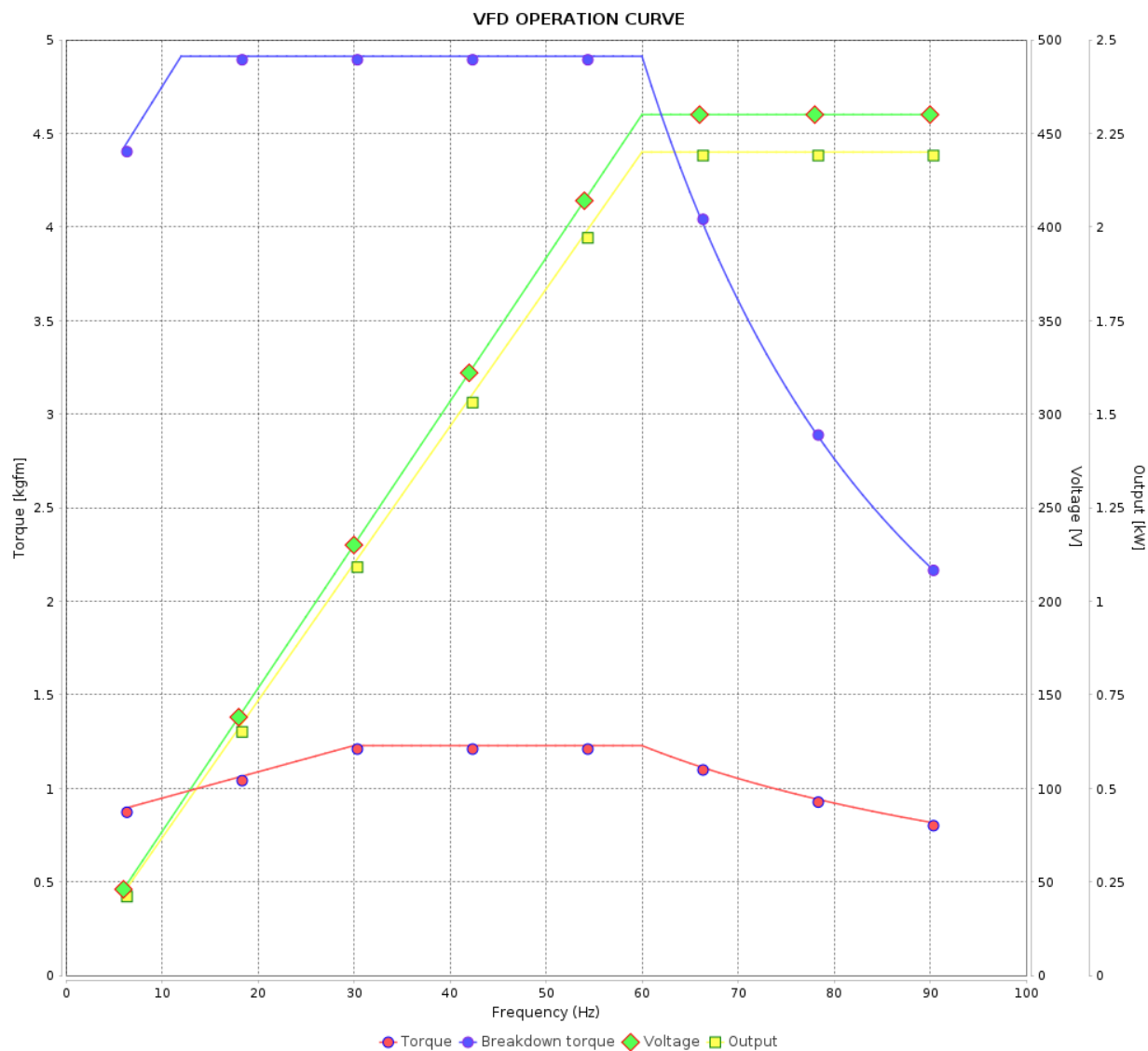
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