

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15838497

Frame : 71
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 : 11.6 kg
Moment of inertia (J) : 0.0005 kgm²

Output [kW]	0.55	0.55	0.55	0.55
Poles	2	2	2	2
Frequency [Hz]	50	50	50	60
Rated voltage [V]	220/380	230/400	240/415	460
Rated current [A]	2.16/1.25	2.14/1.23	2.13/1.23	1.13
L. R. Amperes [A]	11.9/6.88	12.4/7.13	13.0/7.50	8.48
LRC [A]	5.5	5.8	6.1	7.5
No load current [A]	1.21/0.700	1.39/0.800	1.47/0.850	0.700
Rated speed [RPM]	2815	2835	2850	3460
Slip [%]	6.17	5.50	5.00	3.89
Rated torque [kgfm]	0.190	0.189	0.188	0.155
Locked rotor torque [%]	220	240	260	310
Breakdown torque [%]	240	280	310	360
Service factor	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	25s (cold) 14s (hot)	23s (cold) 13s (hot)	21s (cold) 12s (hot)	19s (cold) 11s (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	74.0
	75%	75.7	76.0	75.5
	100%	77.8	77.8	77.0
Power Factor	25%			
	50%	0.66	0.60	0.56
	75%	0.79	0.74	0.70
	100%	0.86	0.83	0.80

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

Losses (%)	P1 (0,9;1,0)	28.7	28.7	30.0
	P2 (0,5;1,0)	26.8	26.8	28.0
	P3 (0,25;1,0)	24.7	24.7	25.8
	P4 (0,9;0,5)	15.4	15.4	16.1
	P5 (0,5;0,5)	10.8	10.8	11.3
	P6 (0,5;0,25)	8.0	8.0	8.4
	P7 (0,25;0,25)	5.6	5.6	5.8

Drive end Non drive end
Bearing type : 6202 ZZ 6202 ZZ
Sealing : V'Ring V'Ring
Lubrication interval : - -
Lubricant amount : - -
Lubricant type : Mobil Polyrex EM

Foundation loads
Max. traction : 14 kgf
Max. compression : 25 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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Three Phase Induction Motor - Squirrel Cage



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Three Phase Induction Motor - Squirrel Cage



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

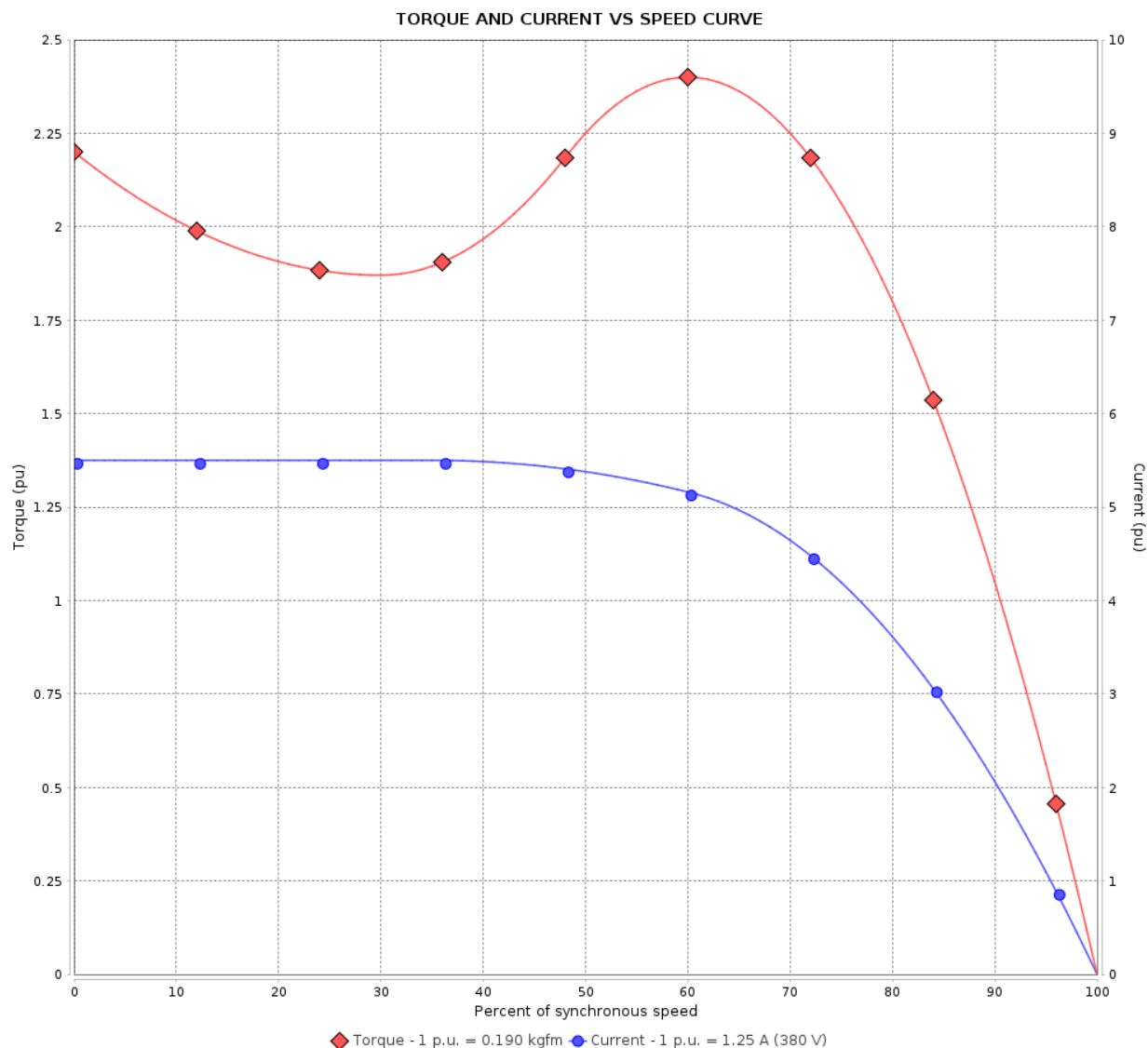
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15838497



Performance : 220/380 V 50 Hz 2P

Rated current : 2.16/1.25 A
LRC : 5.5
Rated torque : 0.190 kgfm
Locked rotor torque : 220 %
Breakdown torque : 240 %
Rated speed : 2815 rpm

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

Locked rotor time : 25s (cold) 14s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

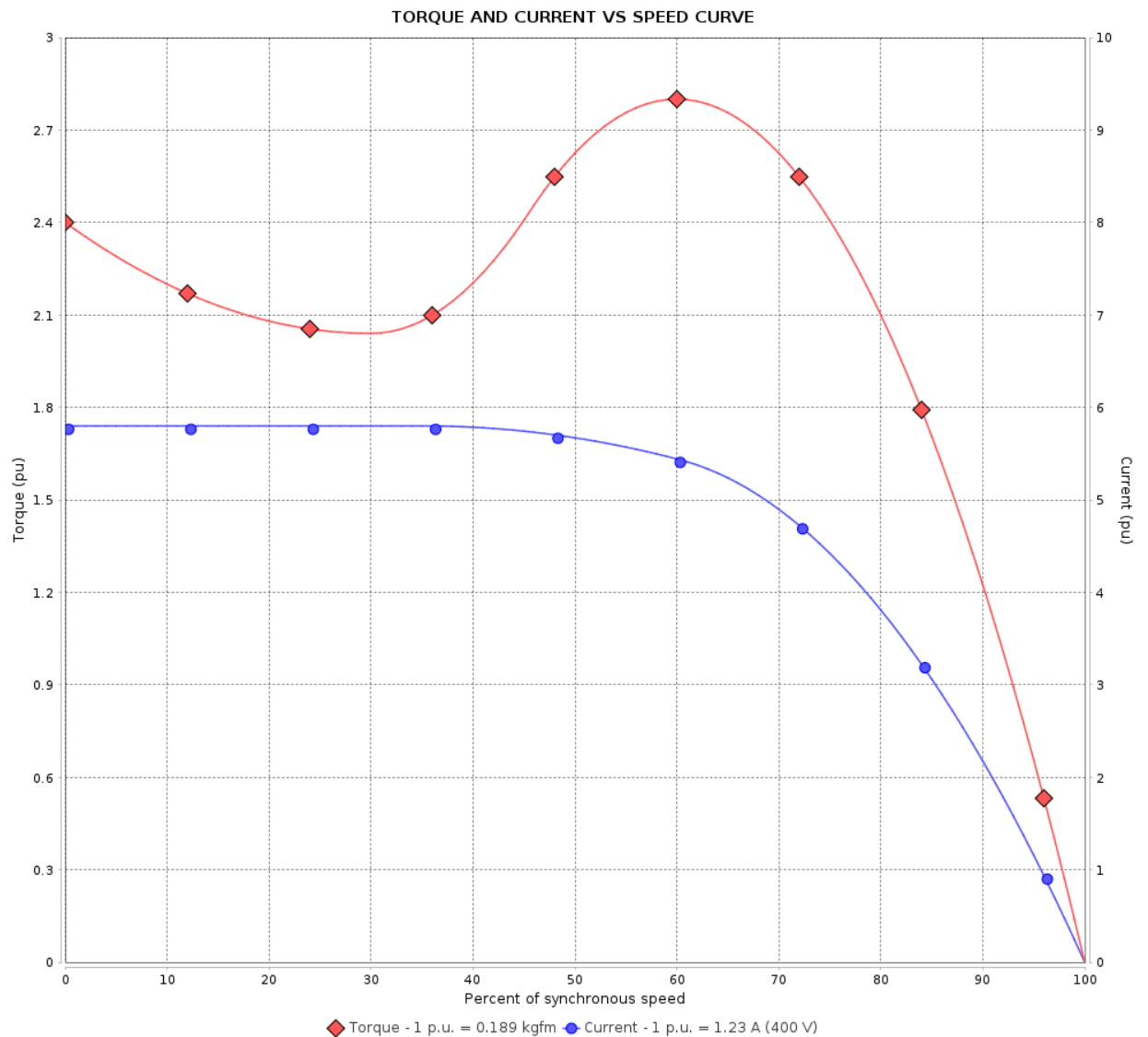
Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 230/400 V 50 Hz 2P

Rated current : 2.14/1.23 A
LRC : 5.8
Rated torque : 0.189 kgfm
Locked rotor torque : 240 %
Breakdown torque : 280 %
Rated speed : 2835 rpm

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

Locked rotor time : 23s (cold) 13s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

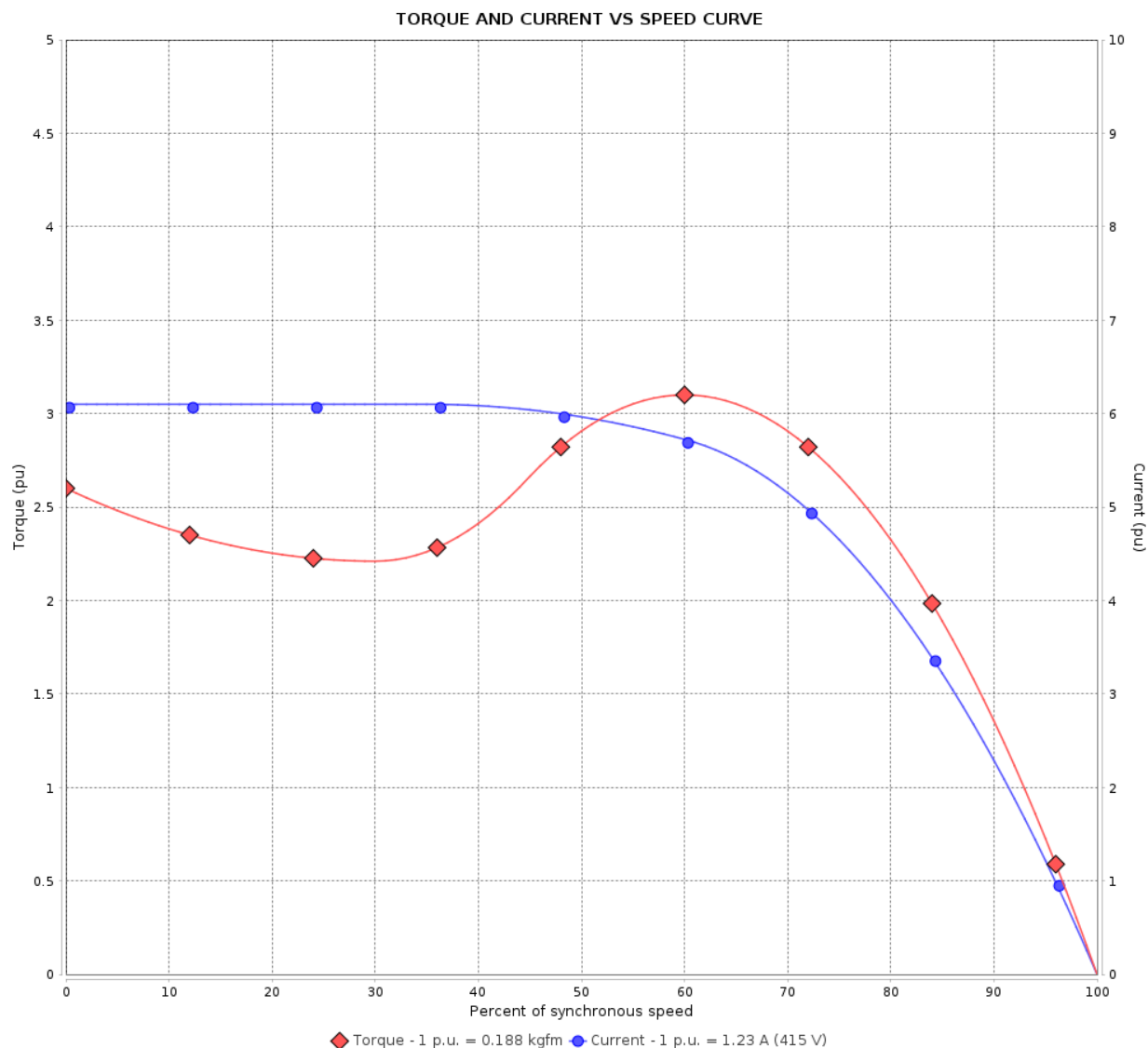
Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 240/415 V 50 Hz 2P

Rated current : 2.13/1.23 A
LRC : 6.1
Rated torque : 0.188 kgfm
Locked rotor torque : 260 %
Breakdown torque : 310 %
Rated speed : 2850 rpm

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

Locked rotor time : 21s (cold) 12s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

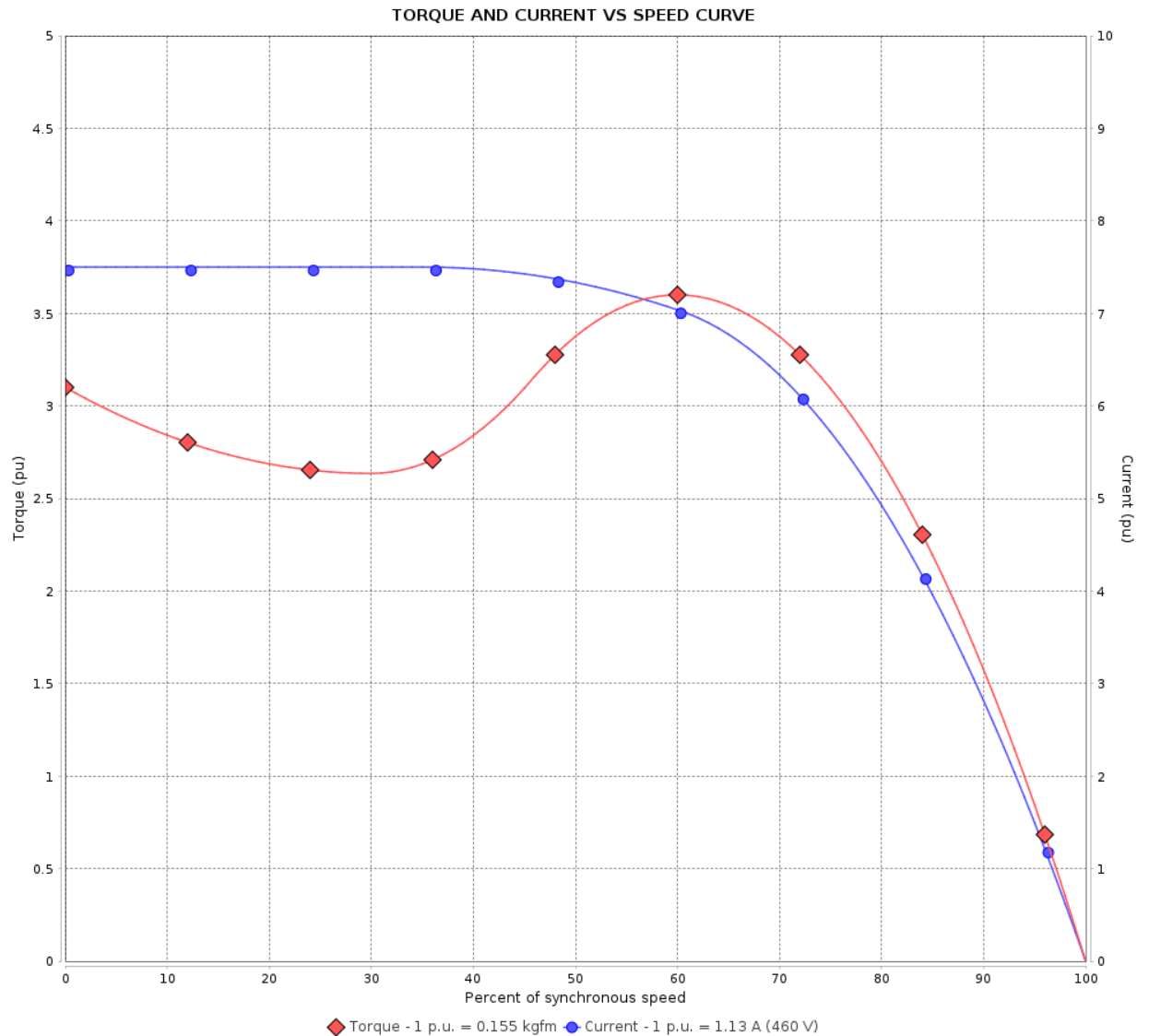
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15838497



Performance : 460 V 60 Hz 2P

Rated current	: 1.13 A	Moment of inertia (J)	: 0.0005 kgm ²
LRC	: 7.5	Duty cycle	: S1
Rated torque	: 0.155 kgfm	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 360 %	Temperature rise	: 80 K
Rated speed	: 3460 rpm	Design	: N

Locked rotor time : 19s (cold) 11s (hot)

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LOAD PERFORMANCE CURVE

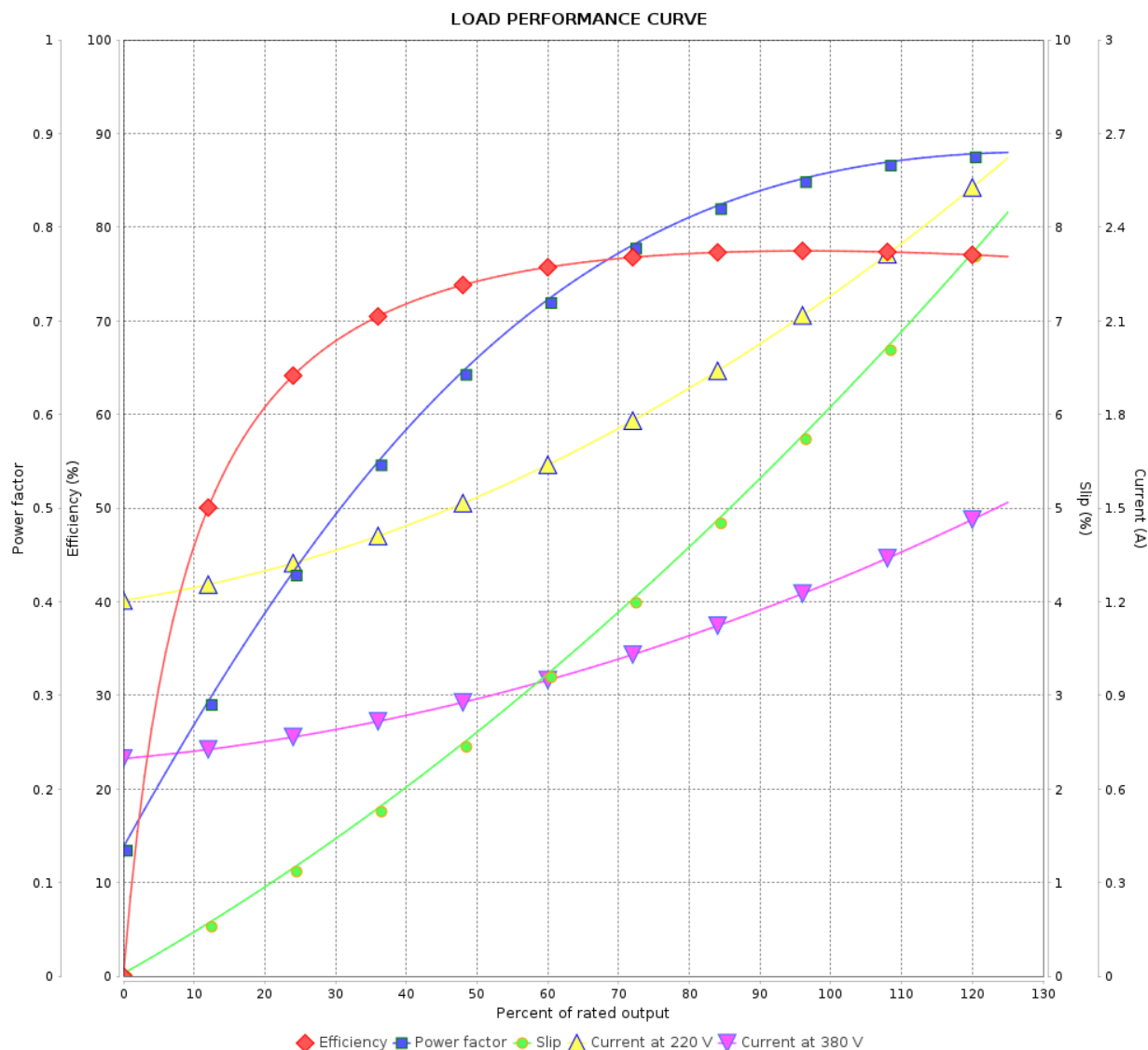
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Breakdown torque : 240 %
Rated speed : 2815 rpm

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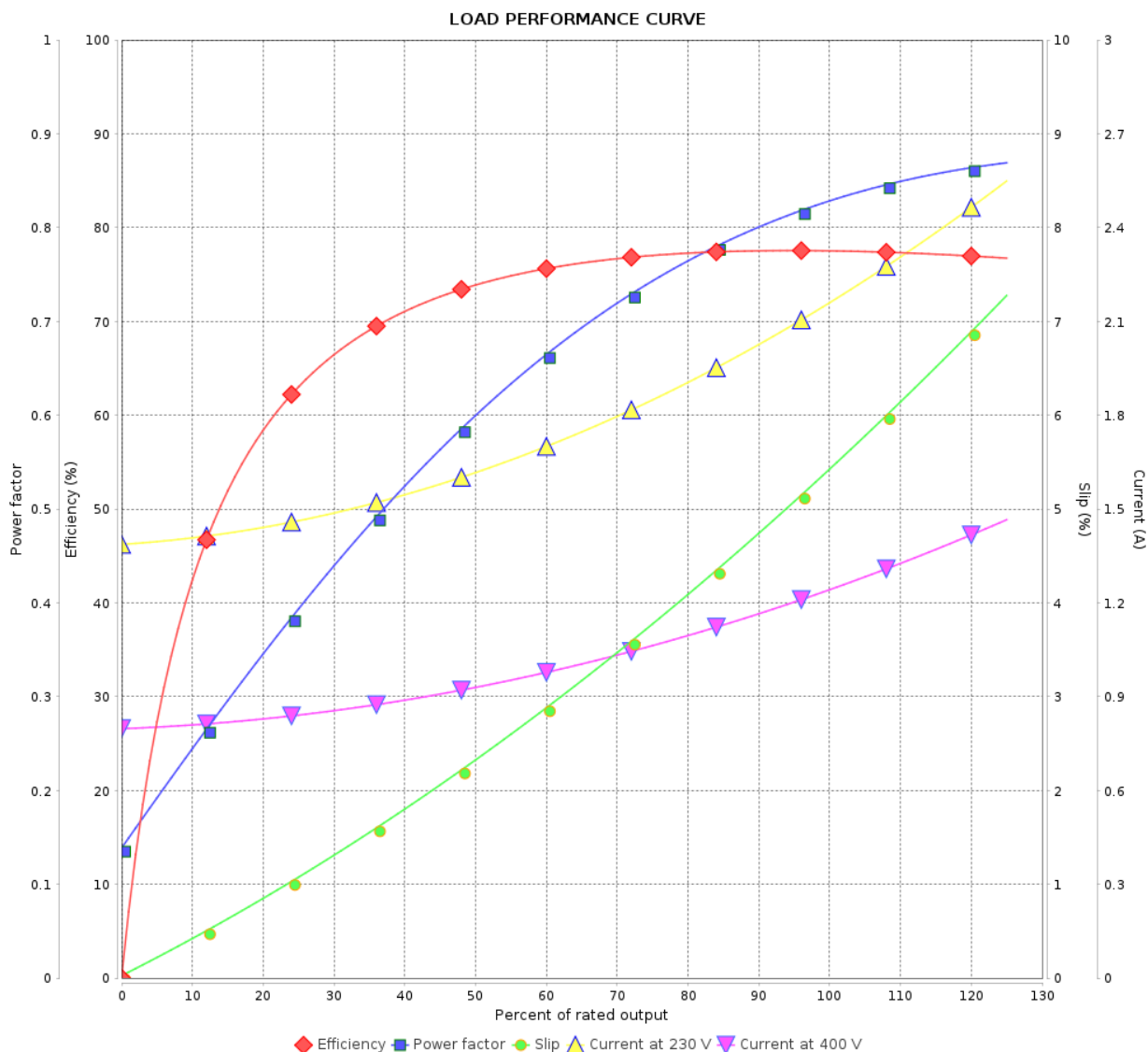
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Duty cycle : S1
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : N

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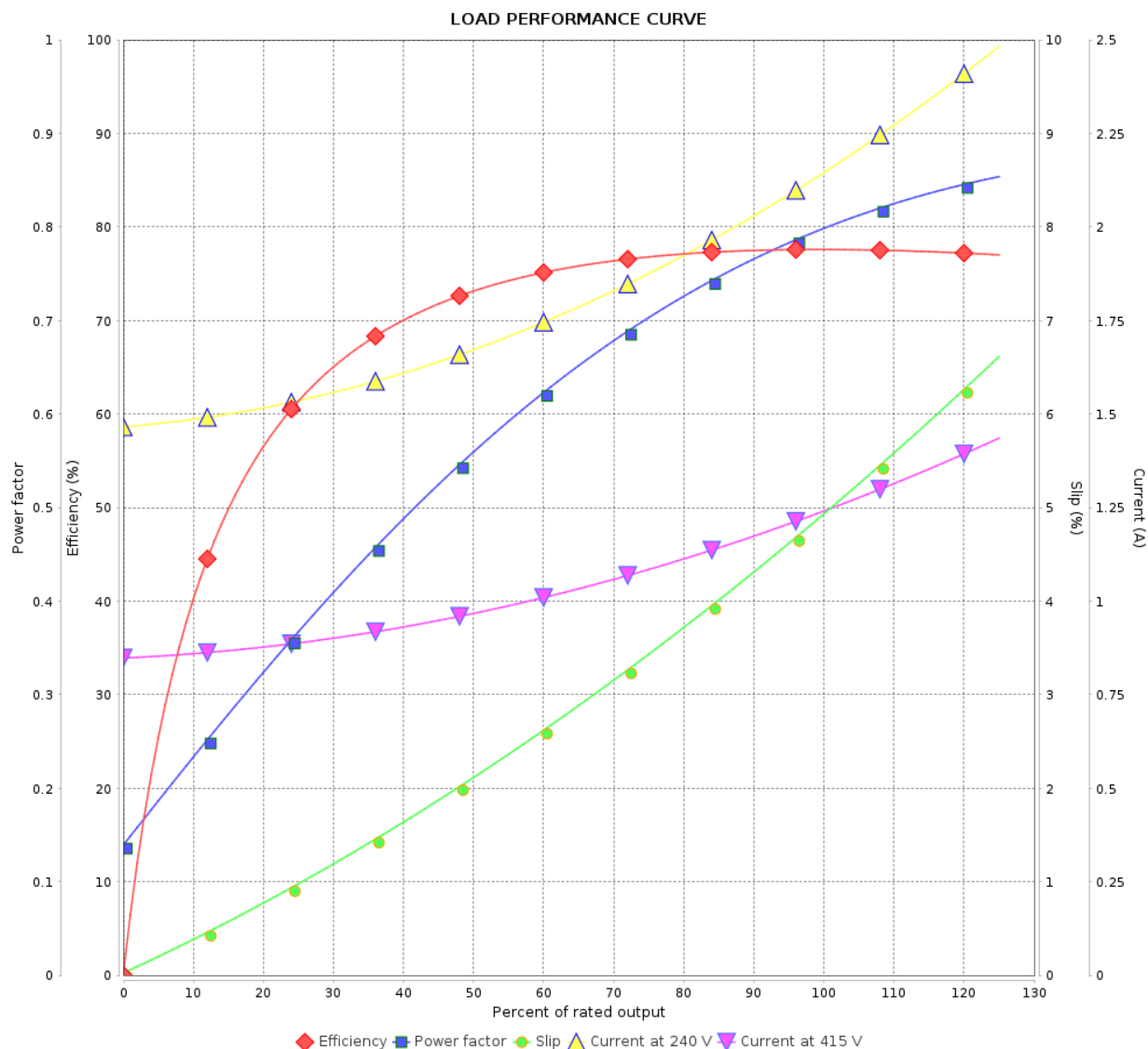
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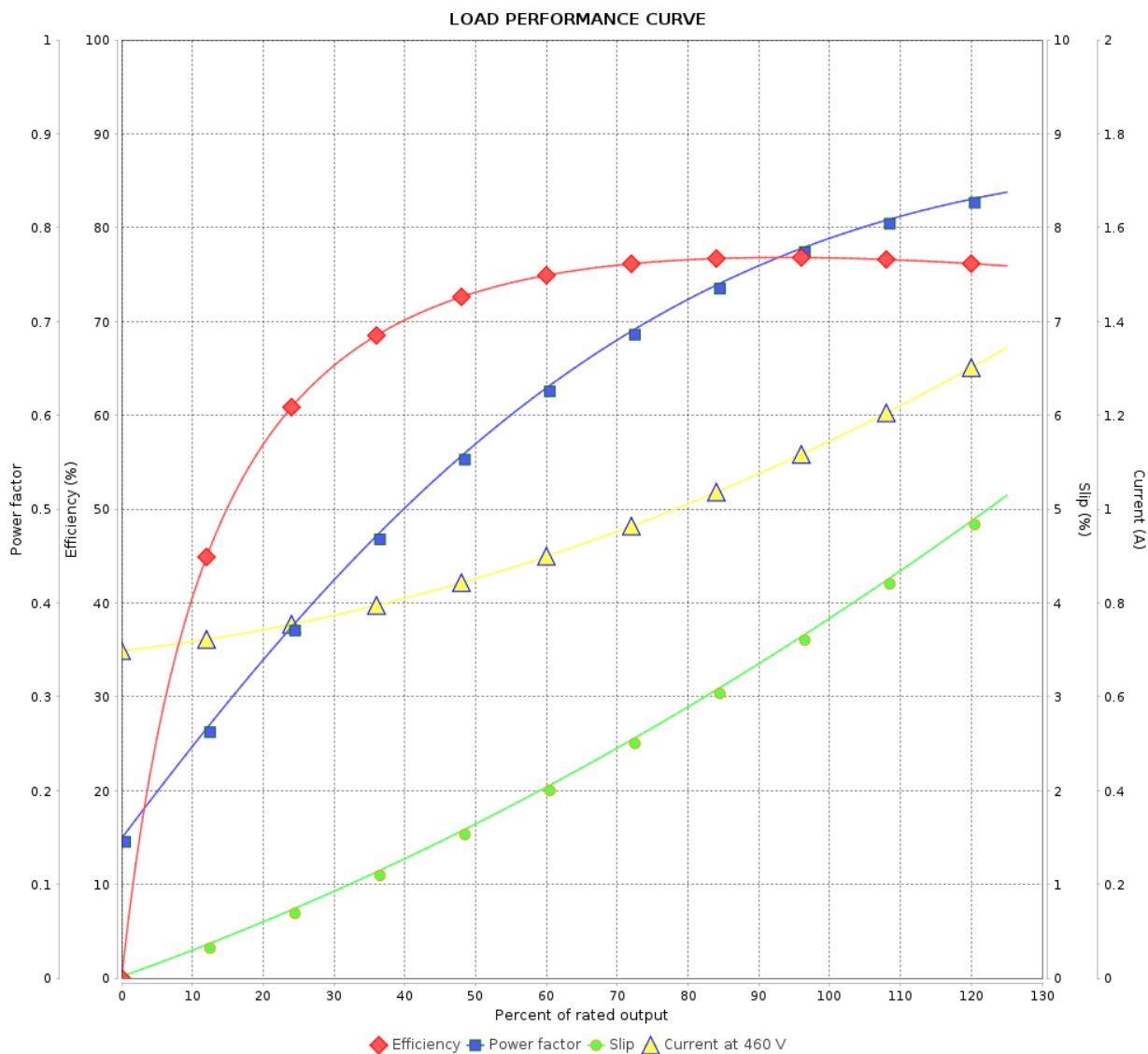
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Rated speed	: 3460 rpm	Design	: N

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THERMAL LIMIT CURVE

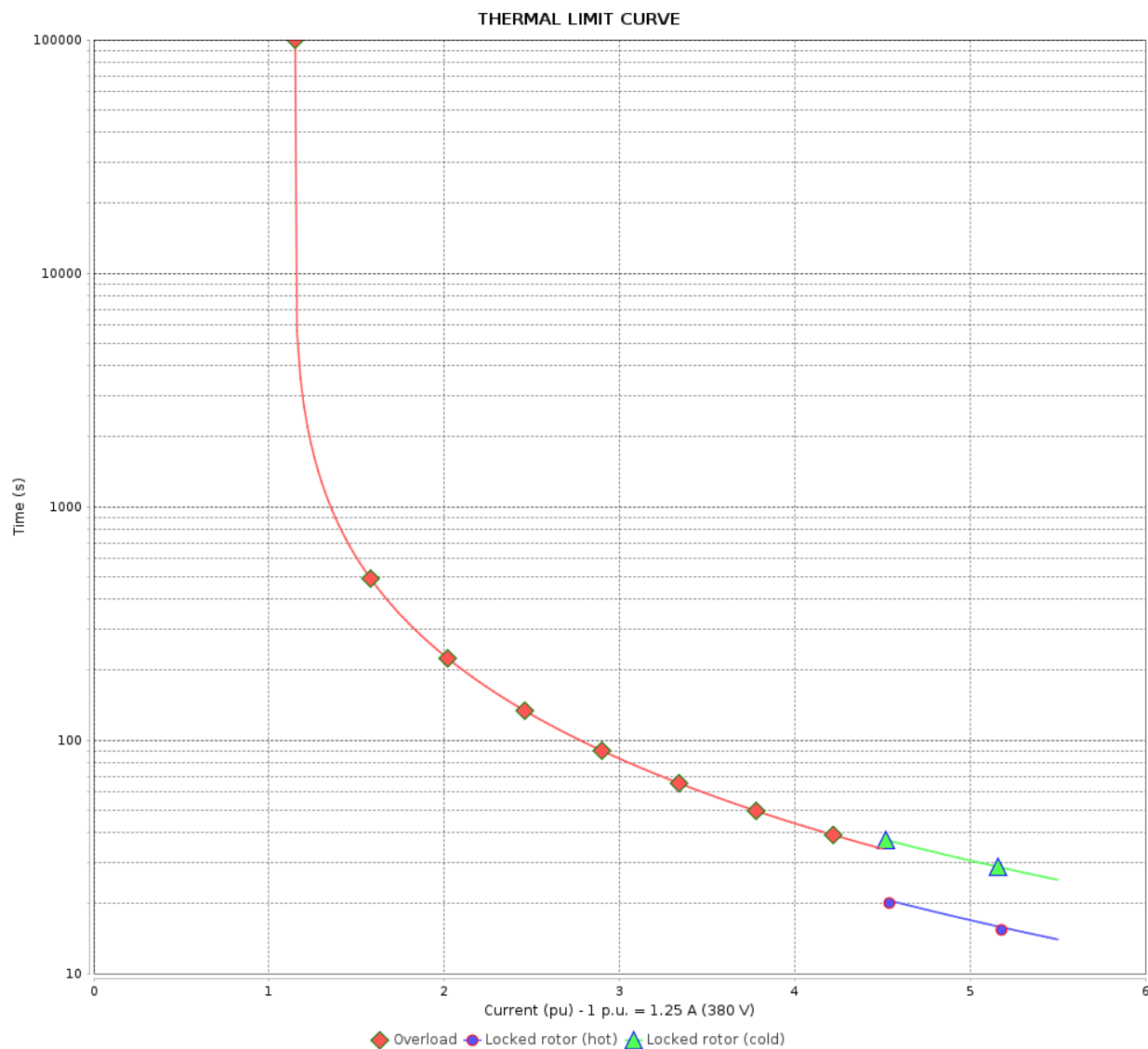
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Design : N

Heating constant

Cooling constant

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THERMAL LIMIT CURVE

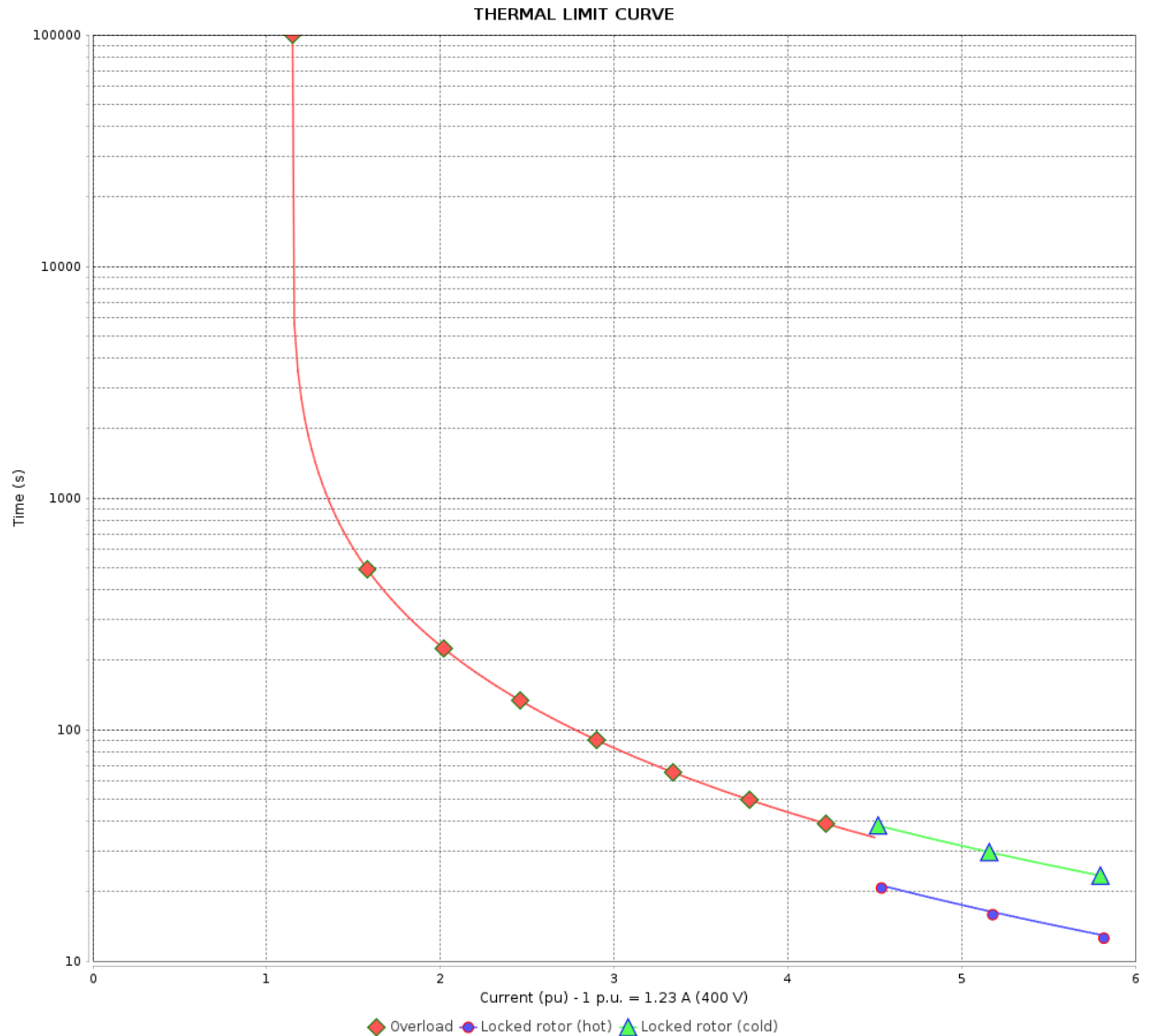
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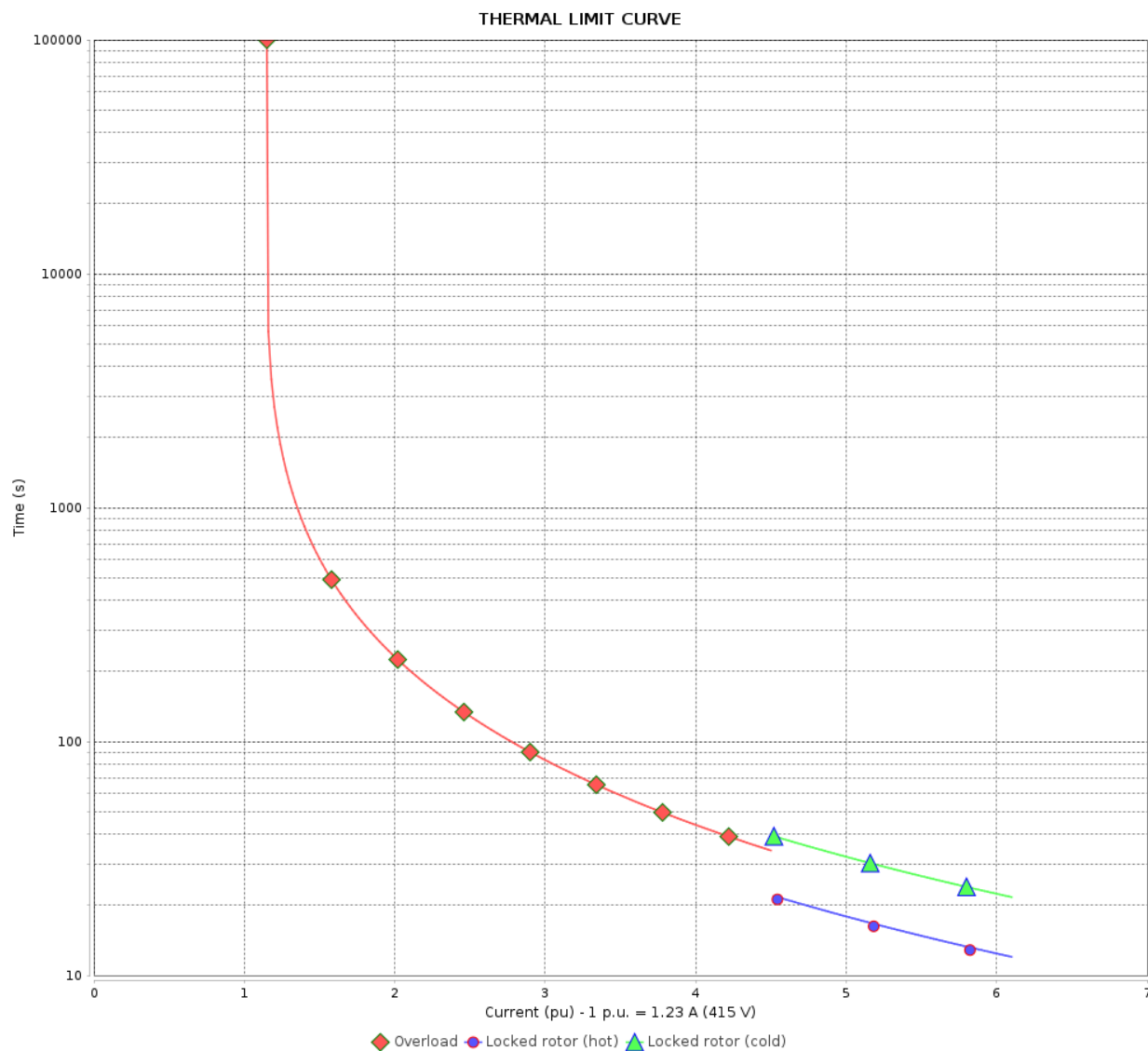
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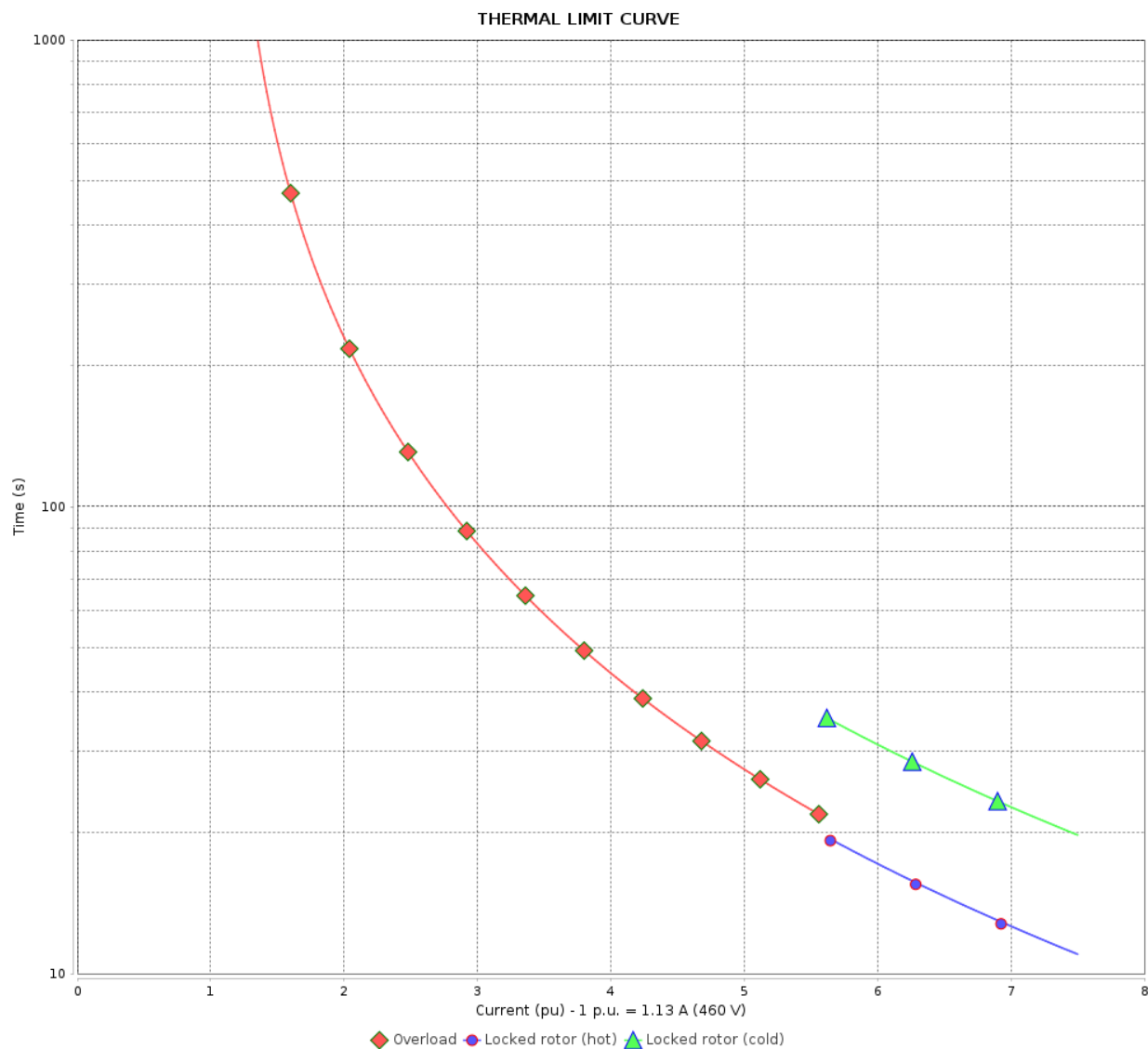
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VFD OPERATION CURVE

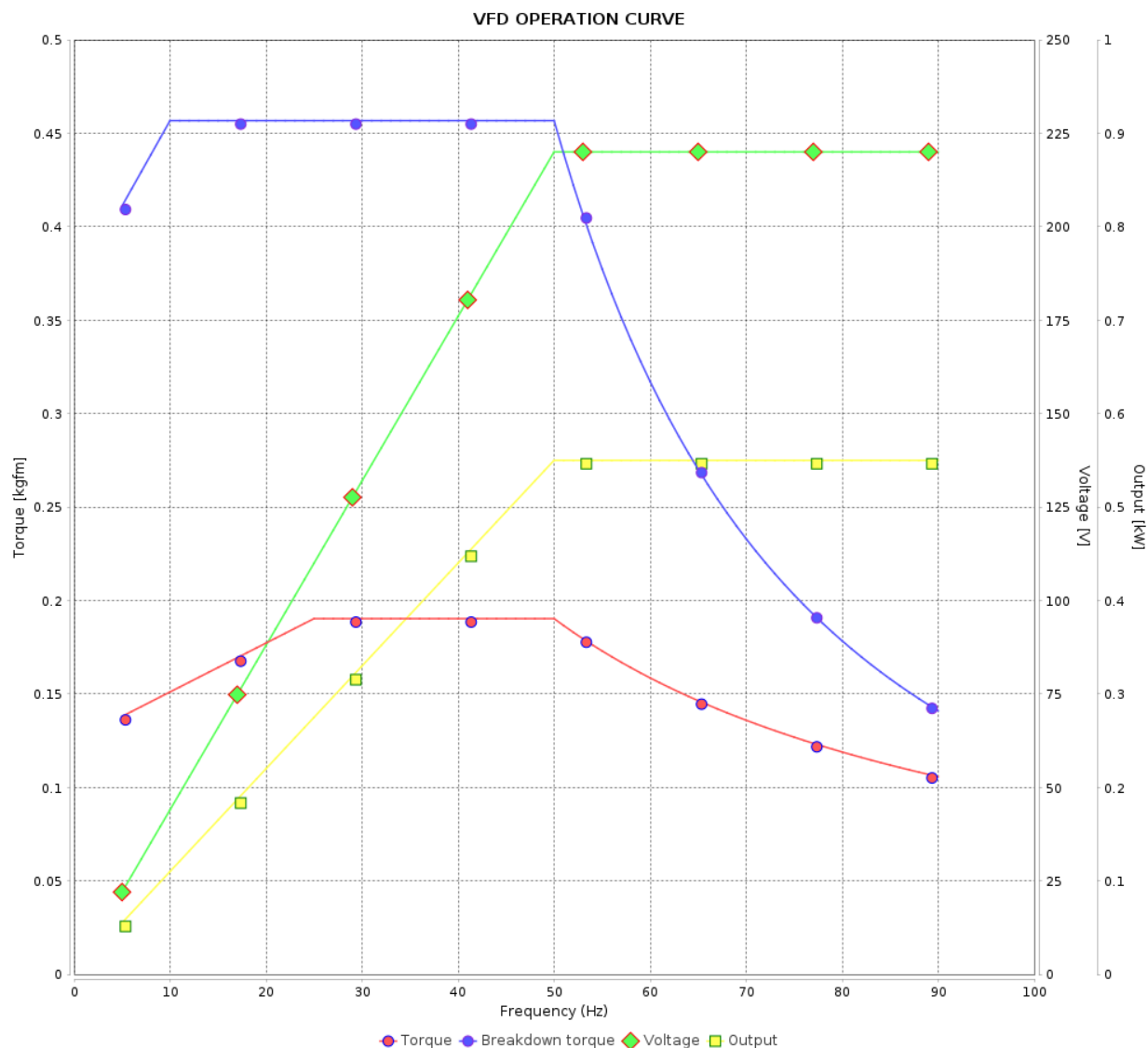
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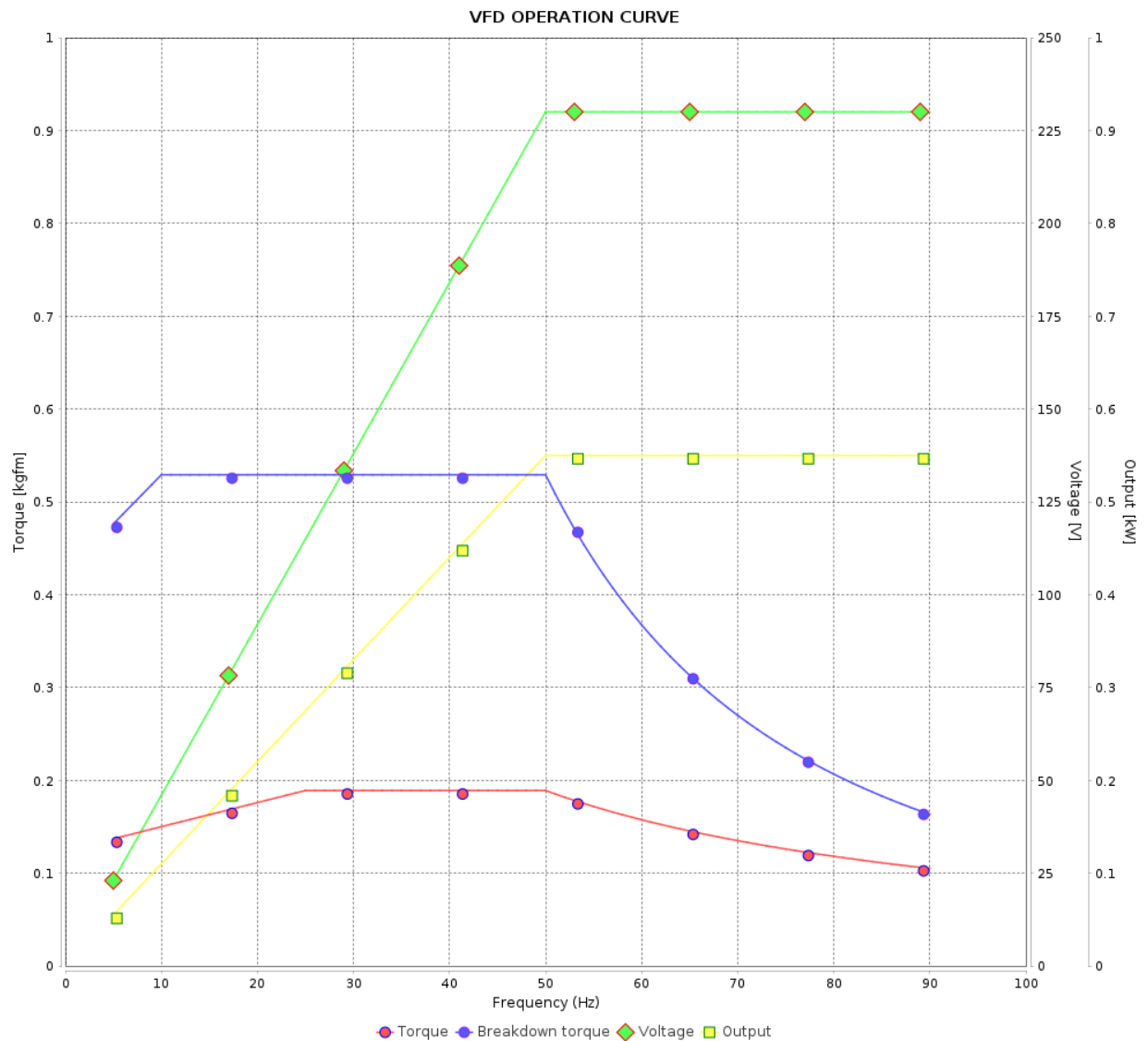
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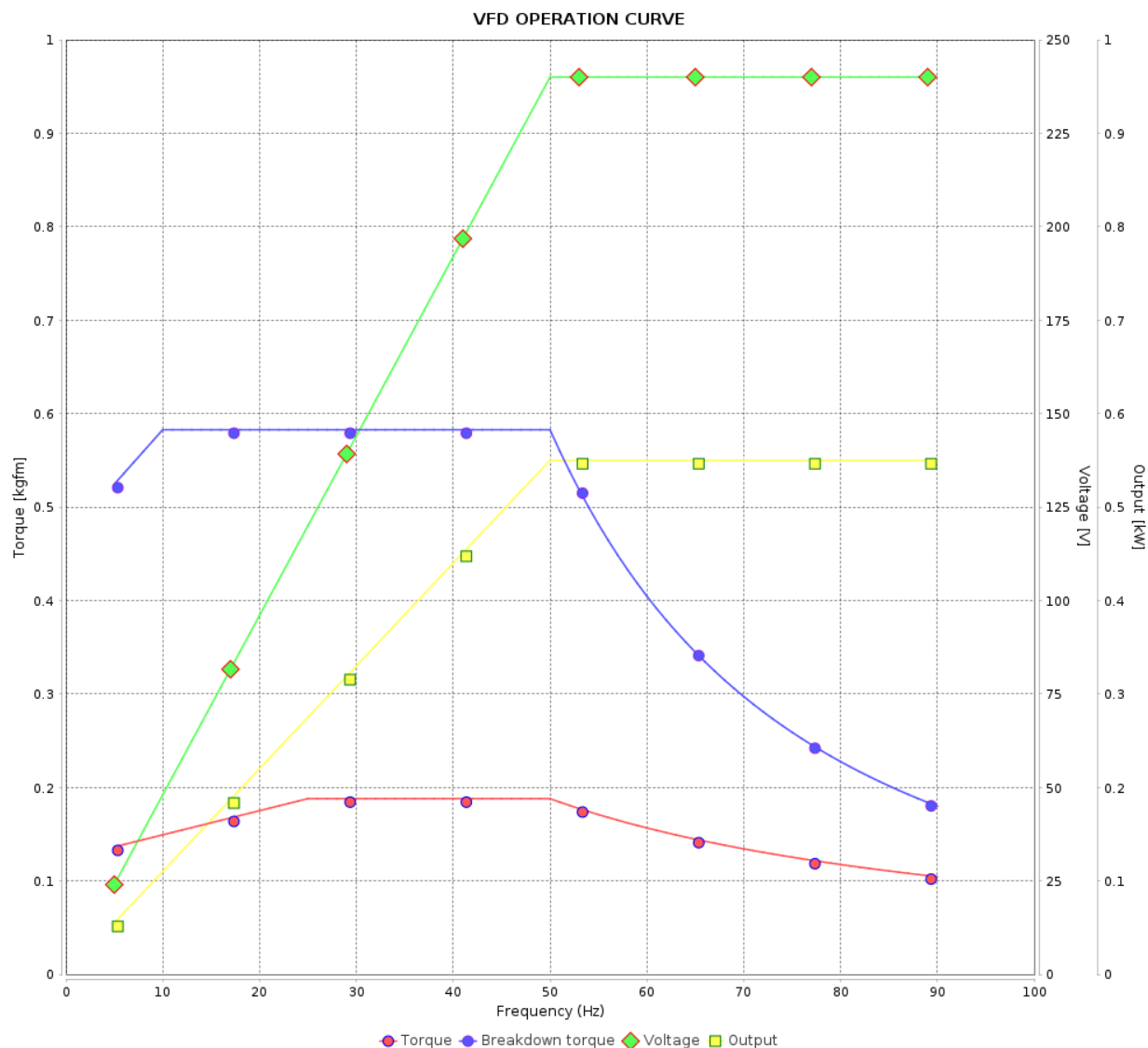
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VFD OPERATION CURVE

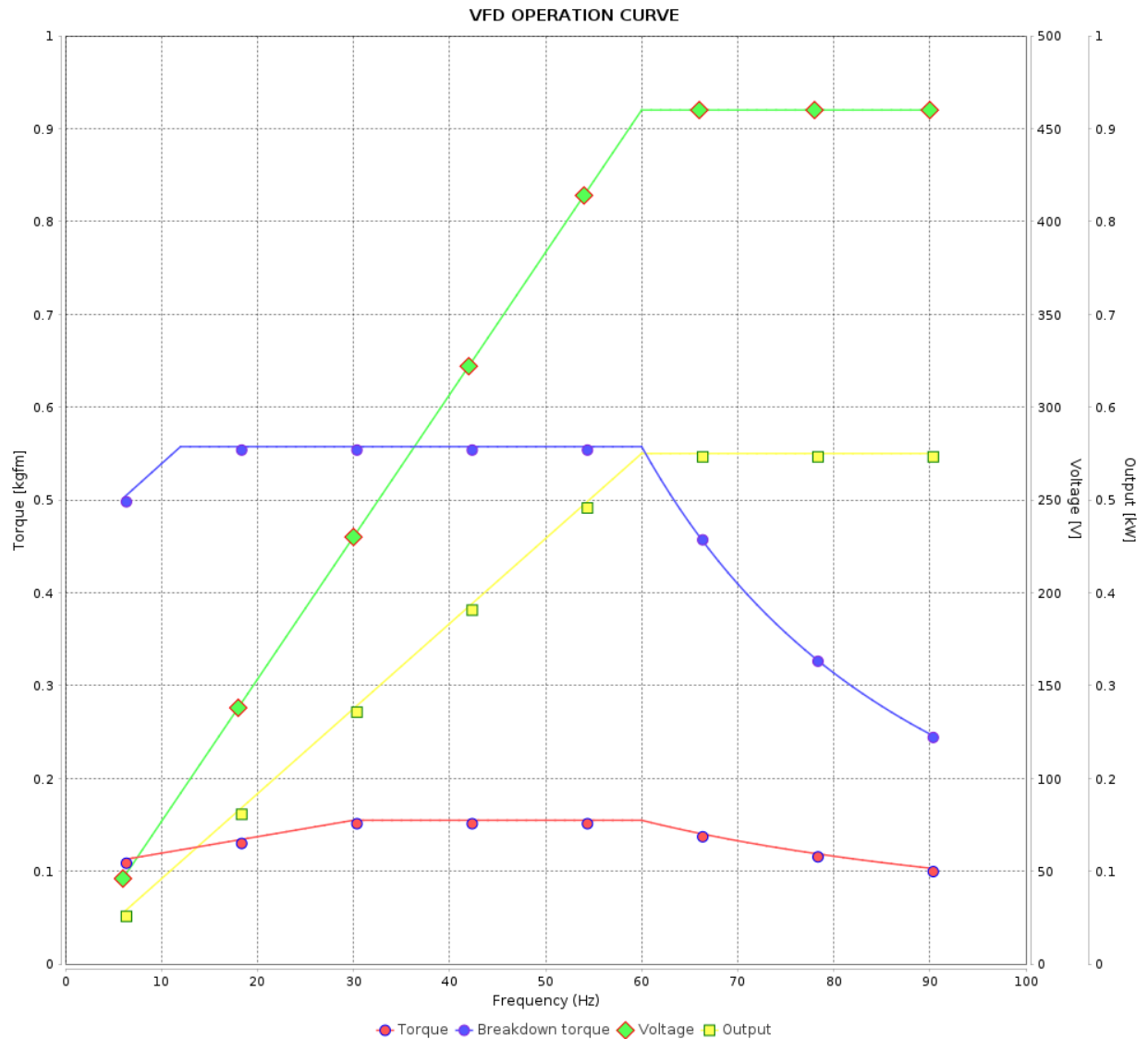
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