

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15838624

Frame	: 132S	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 ³	: 72.6 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0234 kgm ²
Design	: N		

Output [kW]	7.5	7.5	7.5	7.5
Poles	2	2	2	2
Frequency [Hz]	50	50	50	60
Rated voltage [V]	380/660	400/690	415	460
Rated current [A]	14.4/8.27	14.1/8.19	13.9	12.4
L. R. Amperes [A]	115/66.2	120/69.6	125	117
LRC [A]	8.0	8.5	9.0	9.4
No load current [A]	5.44/3.13	6.05/3.51	6.50	5.24
Rated speed [RPM]	2930	2940	2945	3550
Slip [%]	2.33	2.00	1.83	1.39
Rated torque [kgfm]	2.49	2.48	2.48	2.06
Locked rotor torque [%]	229	260	280	310
Breakdown torque [%]	300	330	350	370
Service factor	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	16s (cold) 9s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)	18s (cold) 10s (hot)
Noise level ²	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	68.0 dB(A)
Efficiency (%)	25%			
	50%	89.2	88.5	87.9
	75%	90.1	89.8	89.7
	100%	90.1	90.2	90.2
Power Factor	25%			
	50%	0.73	0.68	0.63
	75%	0.83	0.80	0.76
	100%	0.88	0.85	0.83

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

Losses (%)	P1 (0,9;1,0)	10.8	10.6	10.6	10.6
	P2 (0,5;1,0)	9.3	9.2	9.2	9.2
	P3 (0,25;1,0)	8.9	8.8	8.8	8.8
	P4 (0,9;0,5)	5.1	5.1	5.1	5.1
	P5 (0,5;0,5)	3.5	3.5	3.5	3.5
	P6 (0,5;0,25)	2.3	2.3	2.3	2.3
	P7 (0,25;0,25)	1.6	1.5	1.5	1.5

	Drive end	Non drive end	Foundation loads
Bearing type	: 6308 ZZ	6207 ZZ	Max. traction : 104 kgf
Sealing	: V'Ring	V'Ring	Max. compression : 177 kgf
Lubrication interval	: -	-	
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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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: 110-127/200-240 V

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TORQUE AND CURRENT VS SPEED CURVE

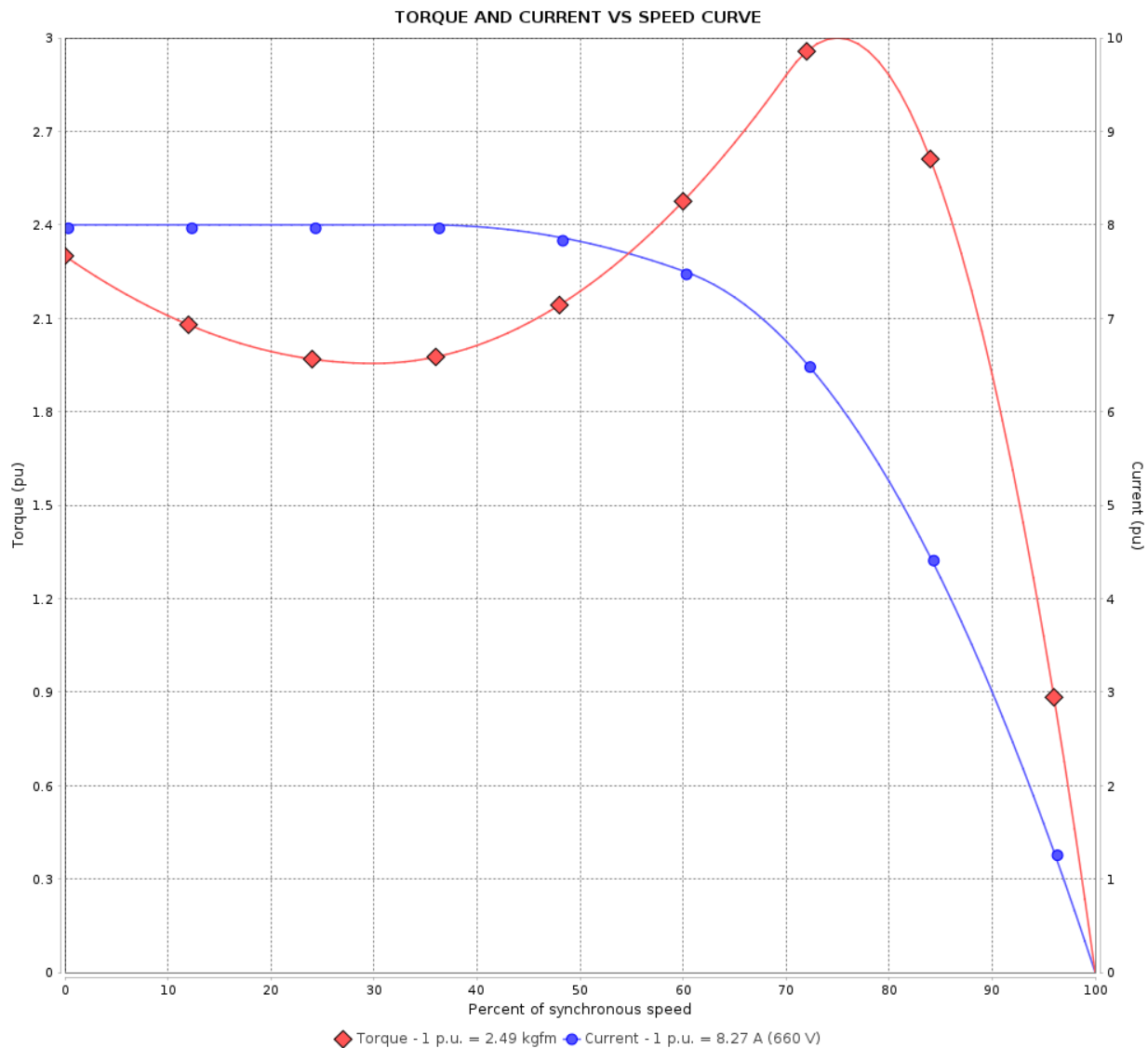
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15838624



Performance : 380/660 V 50 Hz 2P

Rated current : 14.4/8.27 A
LRC : 8.0
Rated torque : 2.49 kgfm
Locked rotor torque : 229 %
Breakdown torque : 300 %
Rated speed : 2930 rpm

Moment of inertia (J) : 0.0234 kgm²
Duty cycle : S1
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : N

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

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TORQUE AND CURRENT VS SPEED CURVE

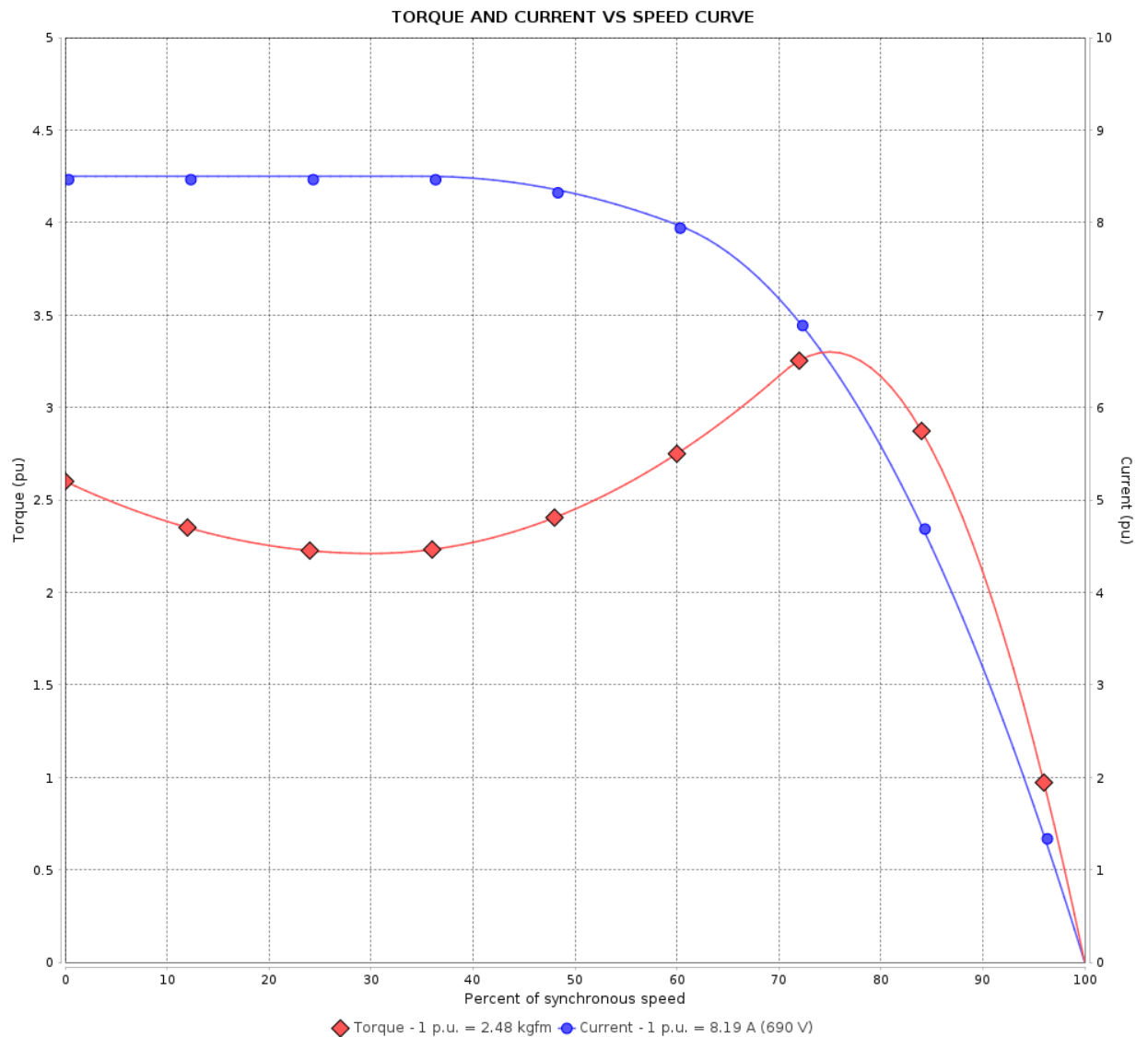
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

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Performance : 400/690 V 50 Hz 2P

Rated current : 14.1/8.19 A
LRC : 8.5
Rated torque : 2.48 kgfm
Locked rotor torque : 260 %
Breakdown torque : 330 %
Rated speed : 2940 rpm

Moment of inertia (J) : 0.0234 kgm²
Duty cycle : S1
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : N

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

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TORQUE AND CURRENT VS SPEED CURVE

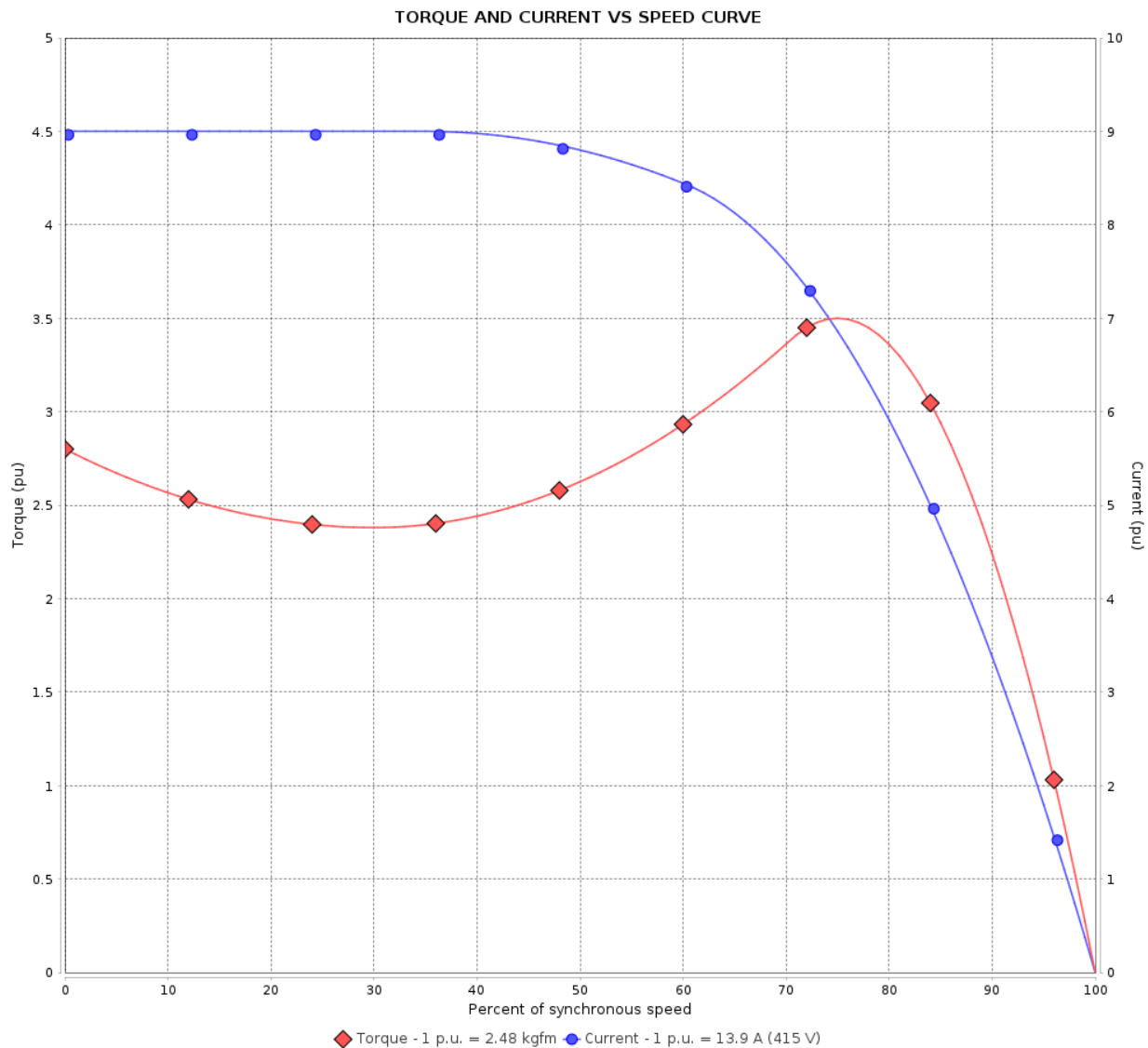
Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 415 V 50 Hz 2P

Rated current : 13.9 A
LRC : 9.0
Rated torque : 2.48 kgfm
Locked rotor torque : 280 %
Breakdown torque : 350 %
Rated speed : 2945 rpm

Moment of inertia (J) : 0.0234 kgm²
Duty cycle : S1
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : N

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

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TORQUE AND CURRENT VS SPEED CURVE

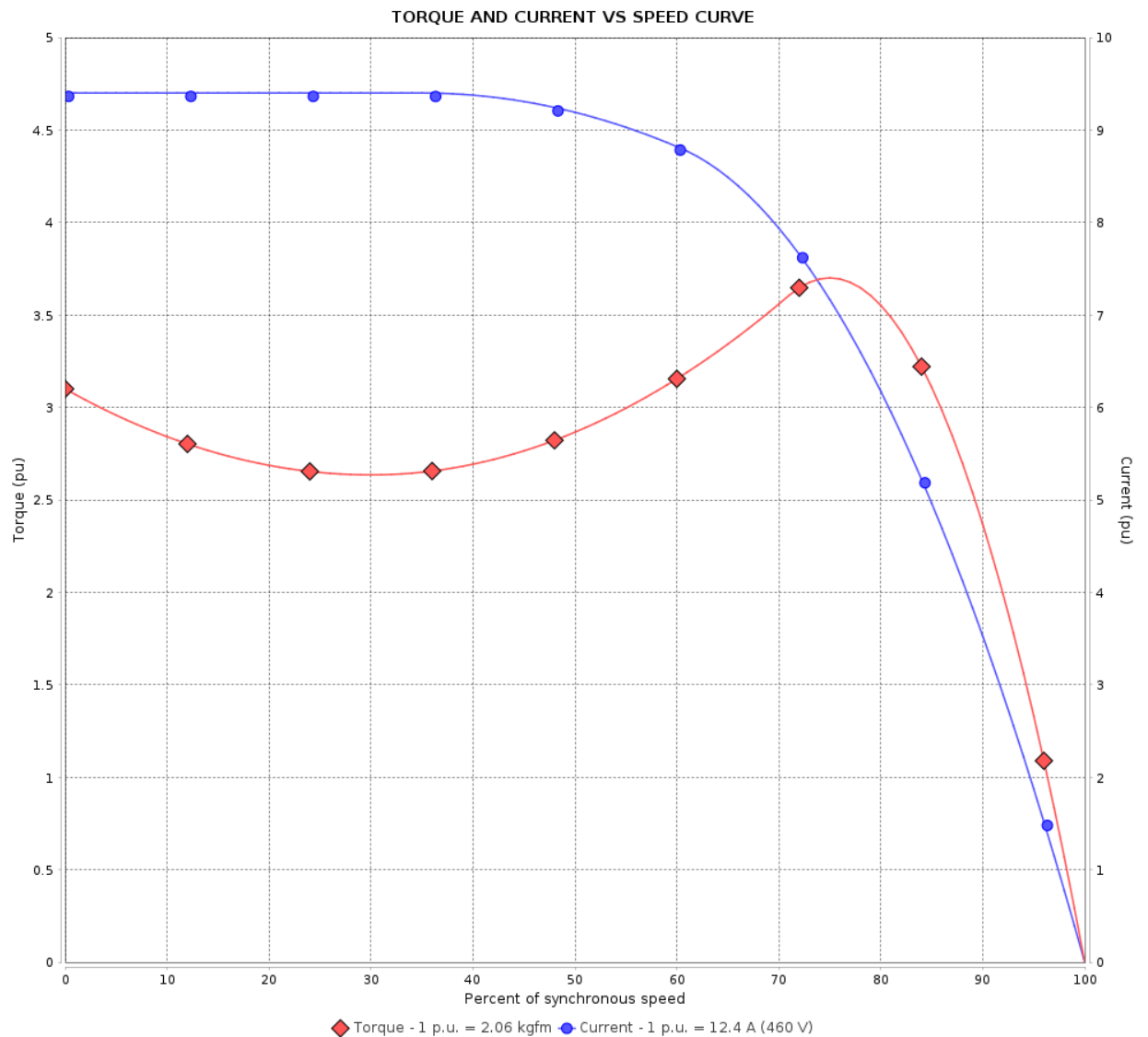
Three Phase Induction Motor - Squirrel Cage



Customer :

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Product code : 15838624



Performance : 460 V 60 Hz 2P

Rated current	: 12.4 A	Moment of inertia (J)	: 0.0234 kgm ²
LRC	: 9.4	Duty cycle	: S1
Rated torque	: 2.06 kgfm	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 370 %	Temperature rise	: 80 K
Rated speed	: 3550 rpm	Design	: N

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

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LOAD PERFORMANCE CURVE

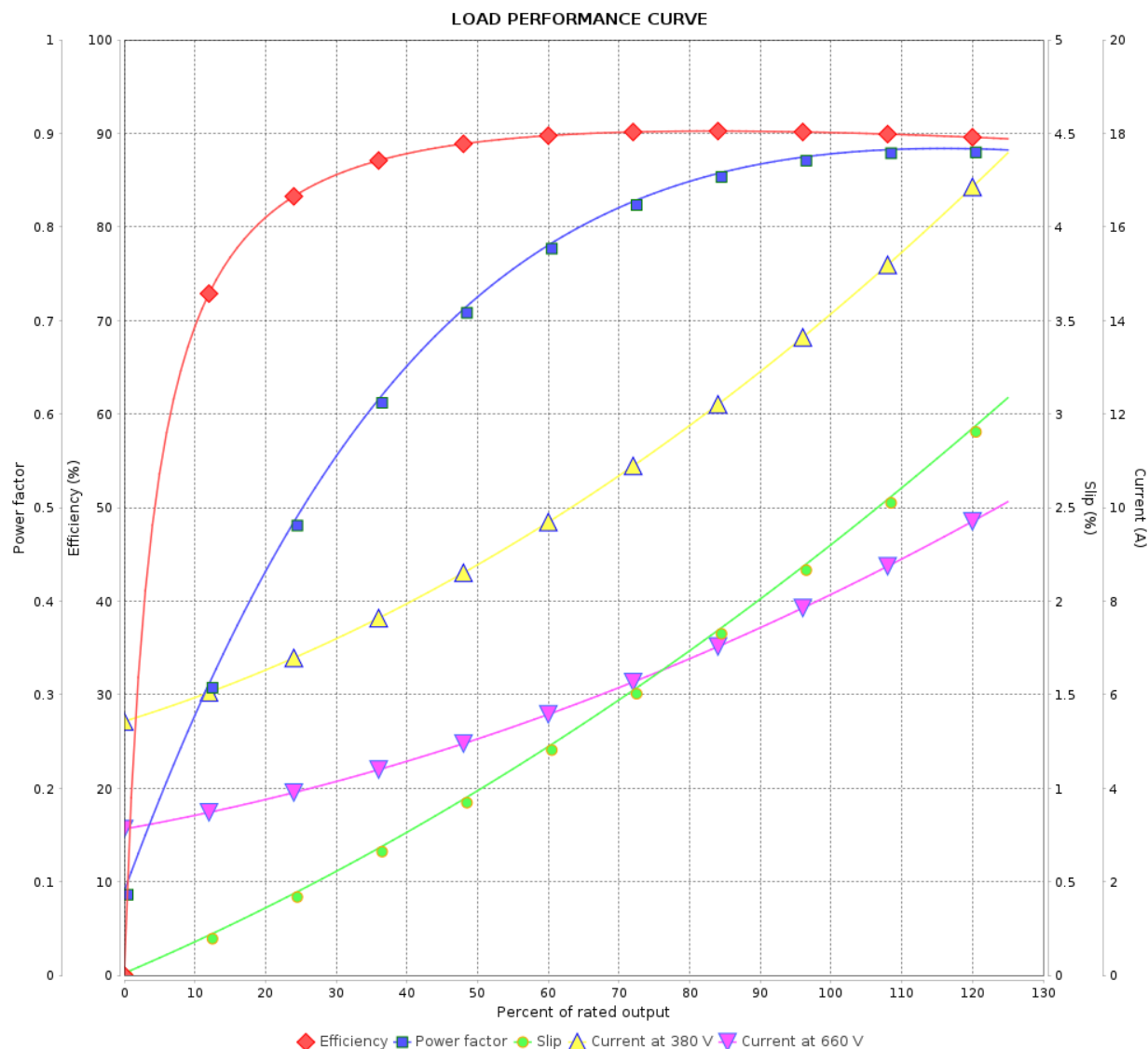
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Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : N

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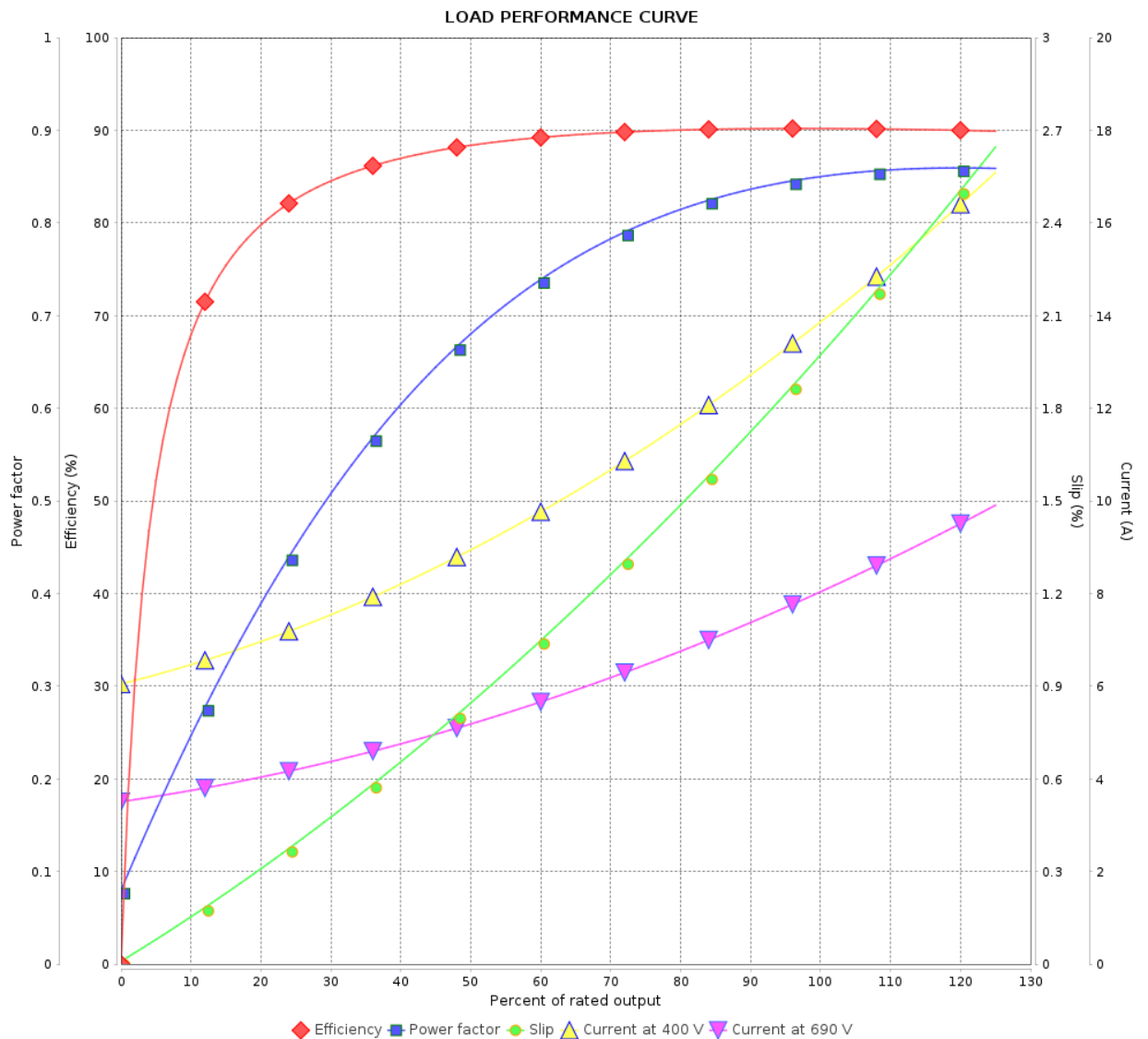
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Duty cycle : S1
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : N

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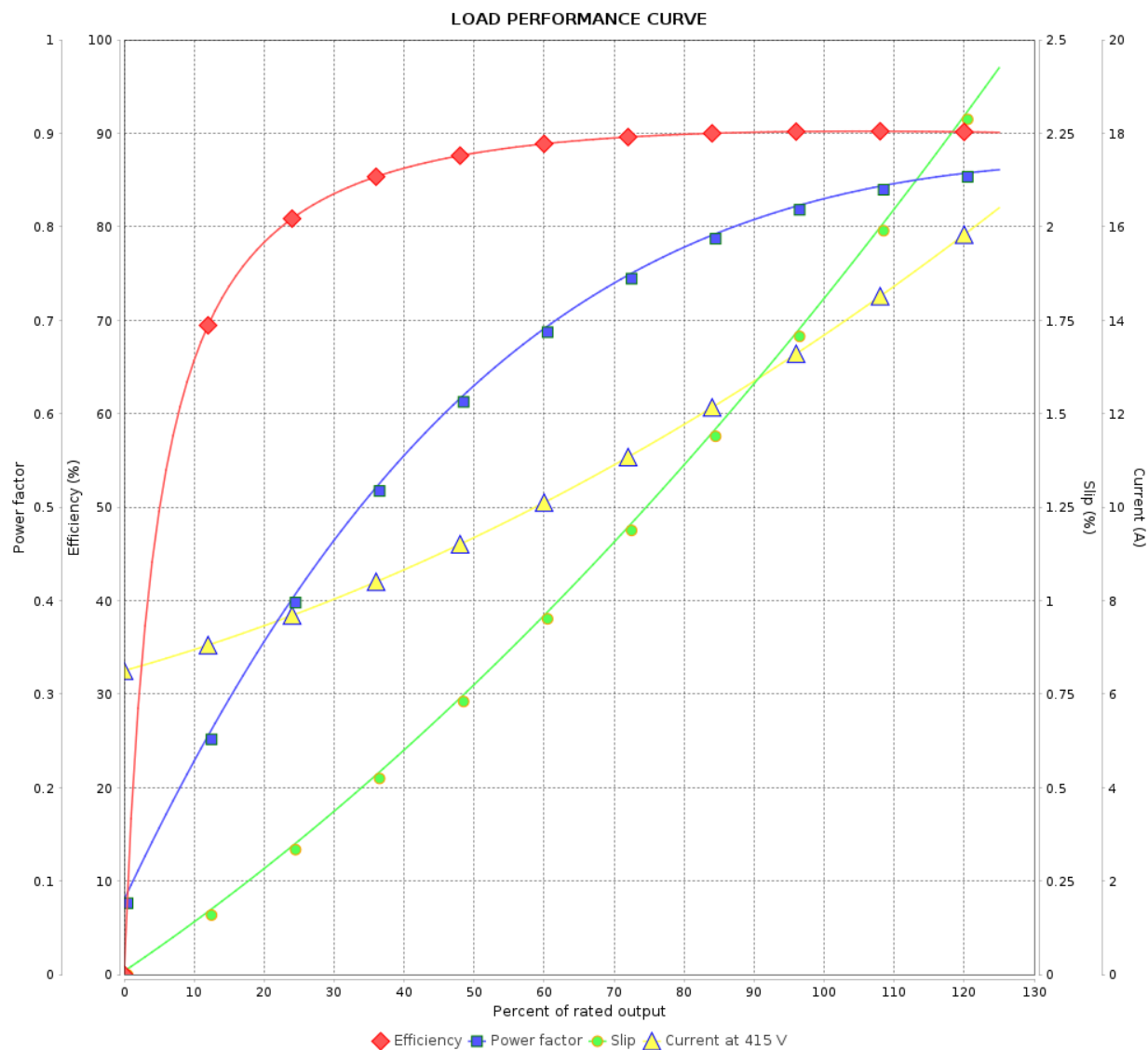
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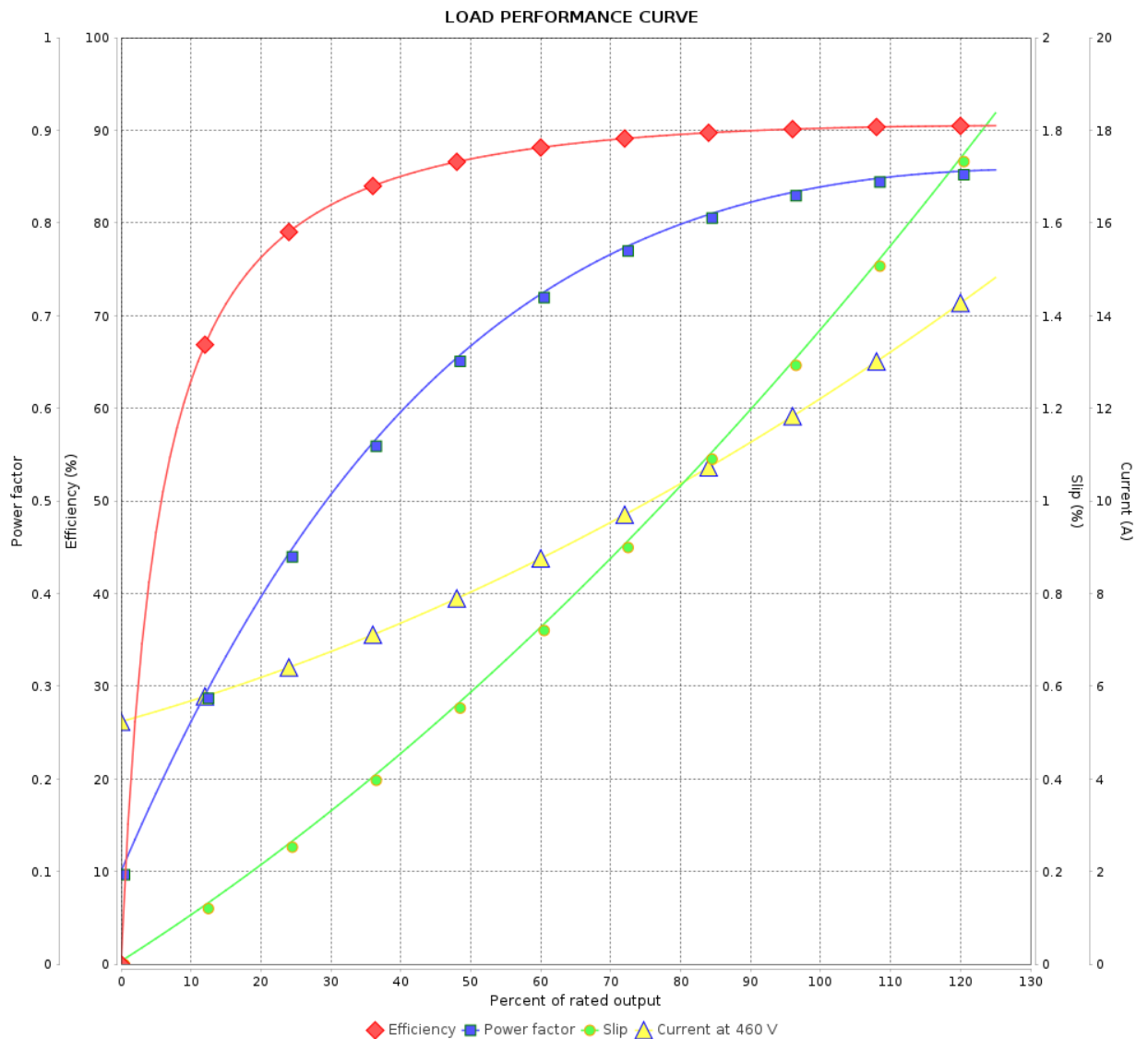
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Breakdown torque	: 370 %	Temperature rise	: 80 K
Rated speed	: 3550 rpm	Design	: N

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THERMAL LIMIT CURVE

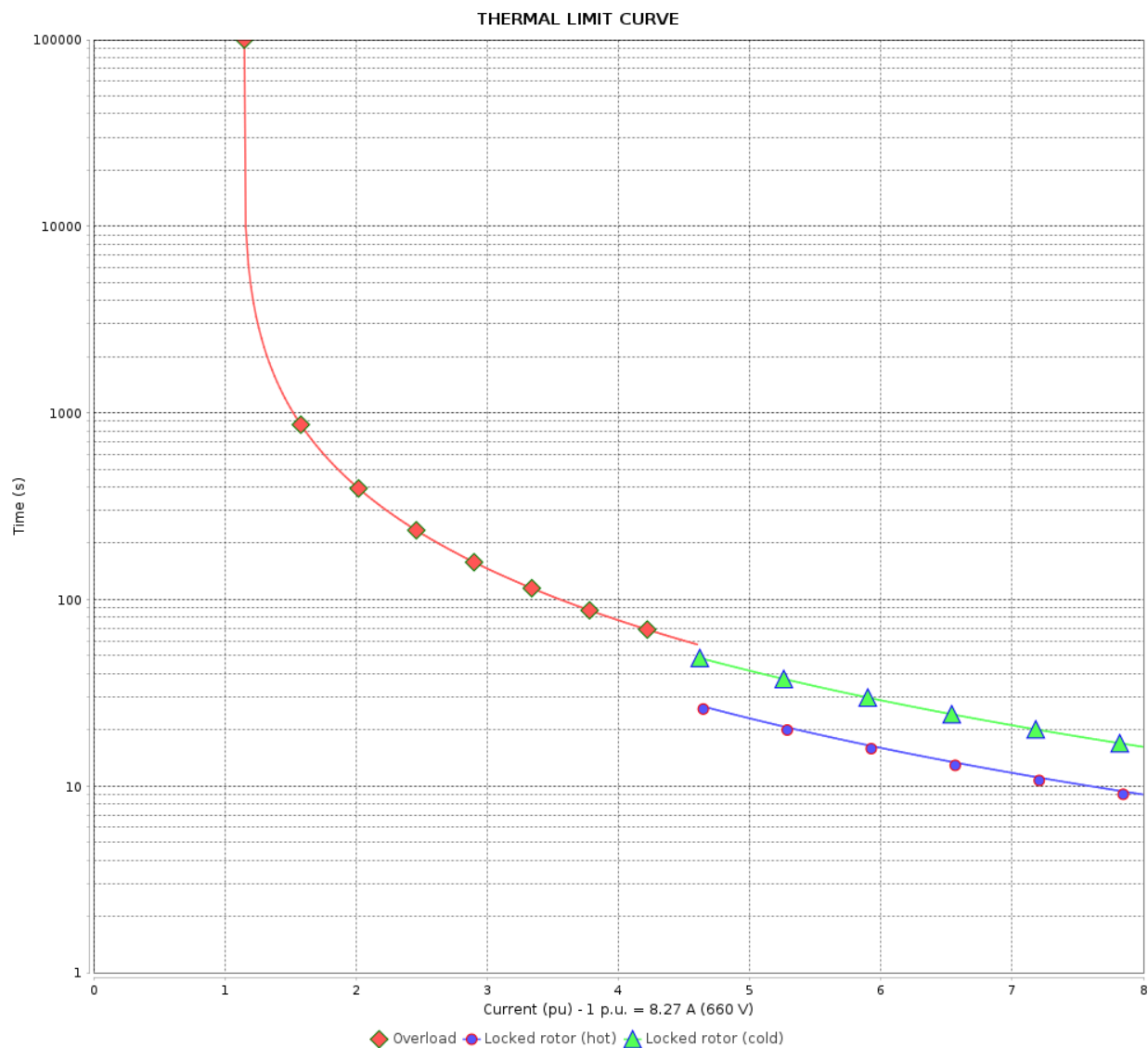
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Service factor : 1.00
Temperature rise : 80 K
Design : N

Heating constant

Cooling constant

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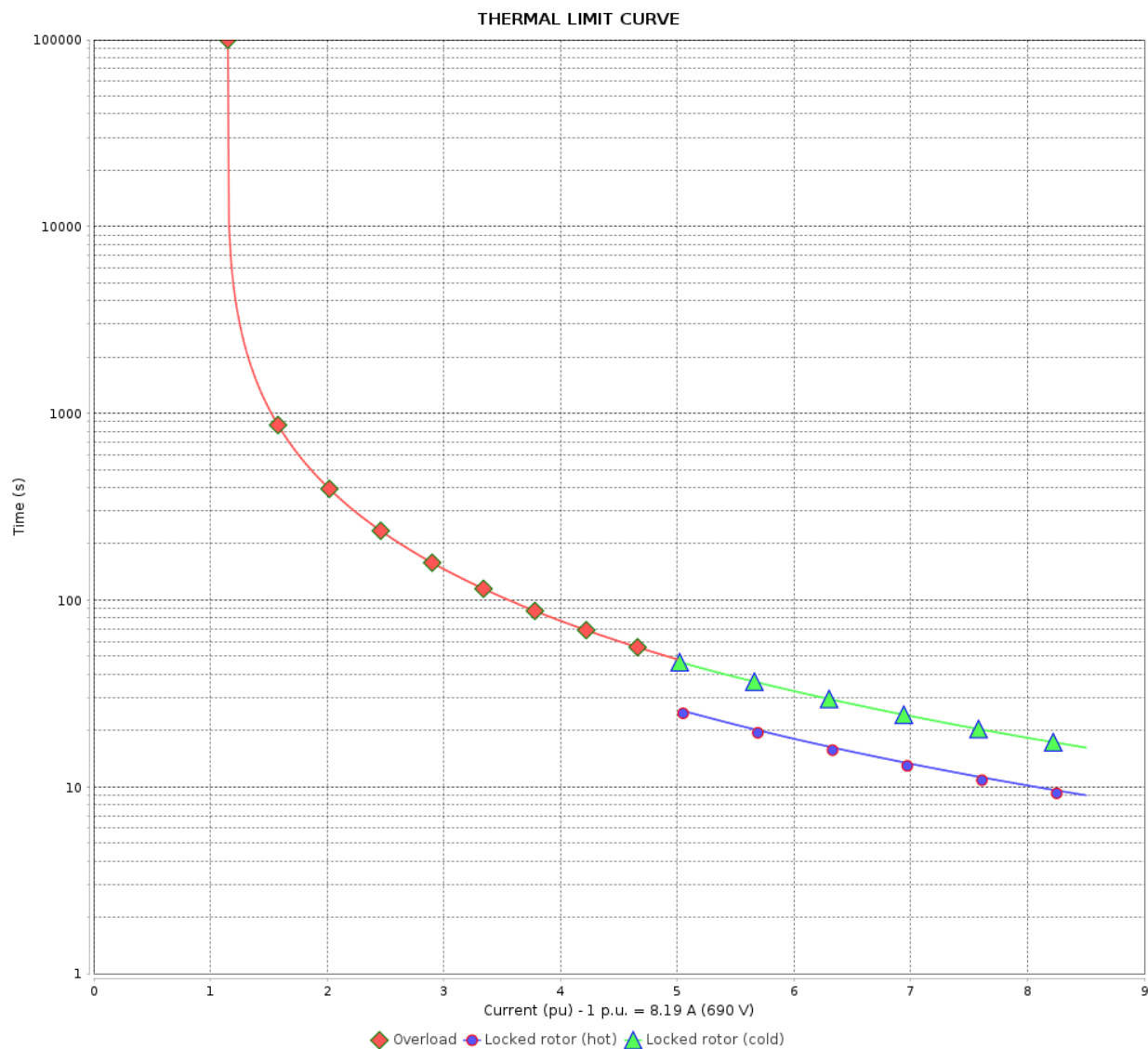
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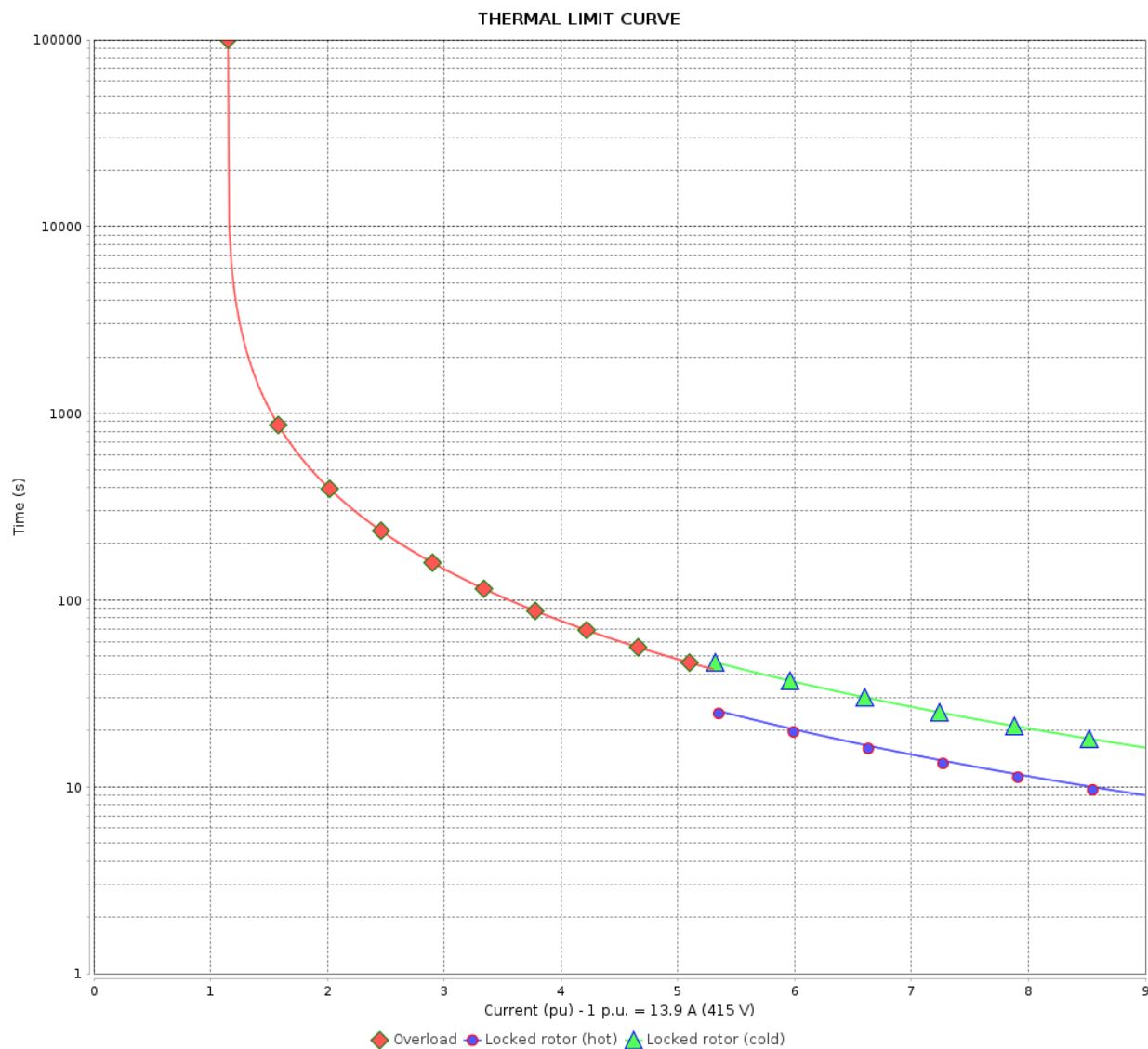
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Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 2945 rpm	Design	: N

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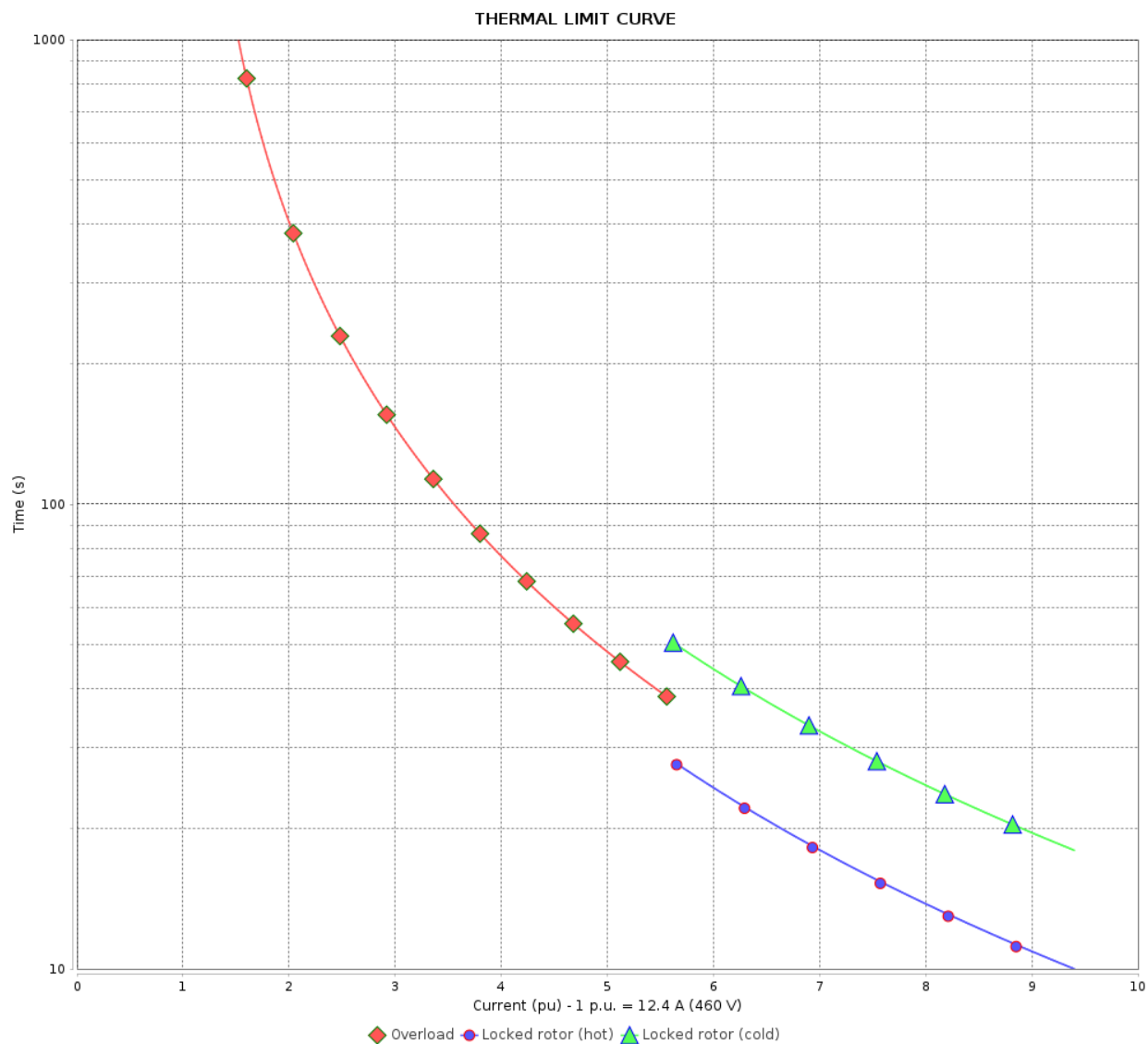
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Service factor : 1.00
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Cooling constant

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VFD OPERATION CURVE

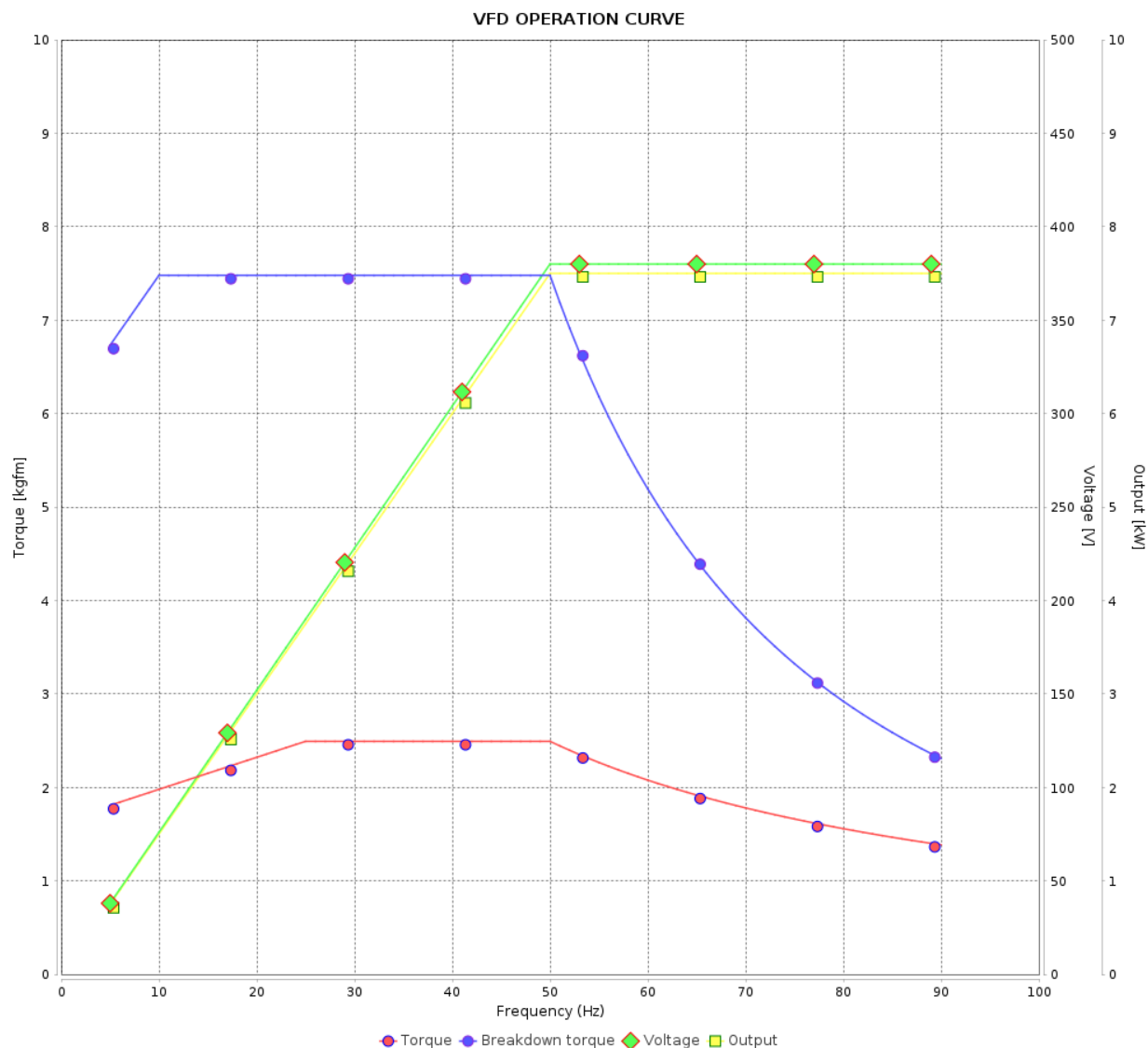
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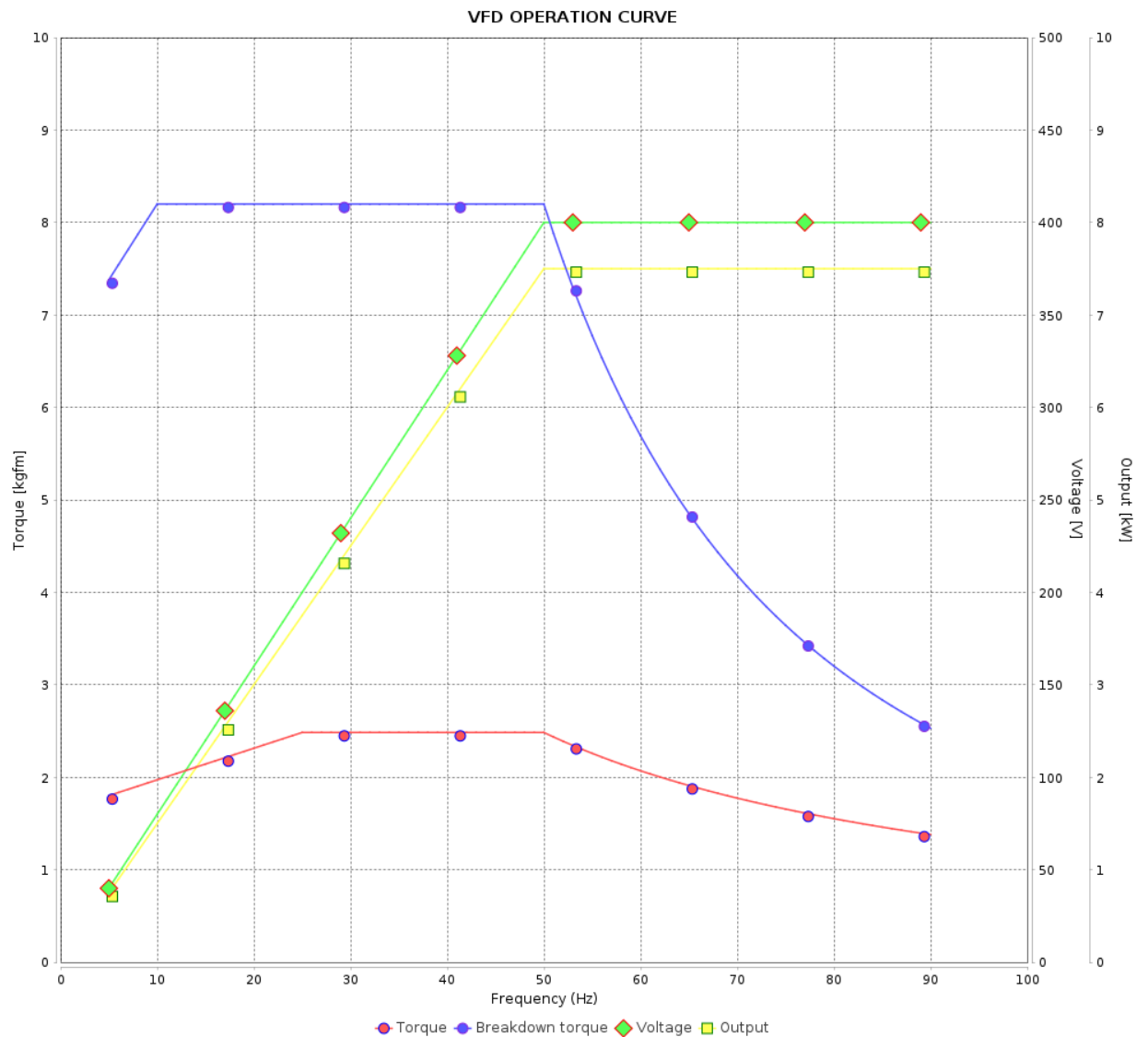
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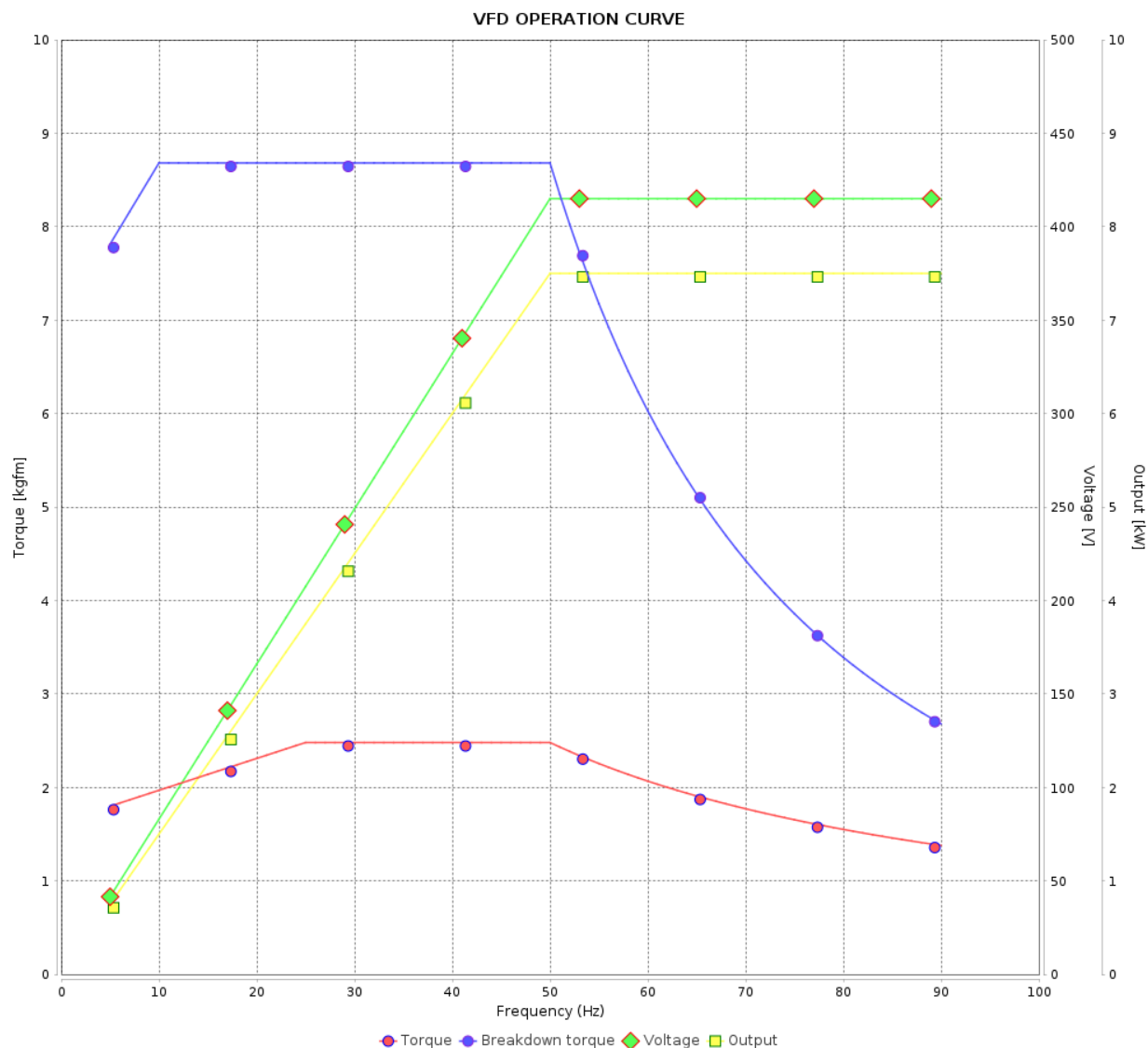
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VFD OPERATION CURVE

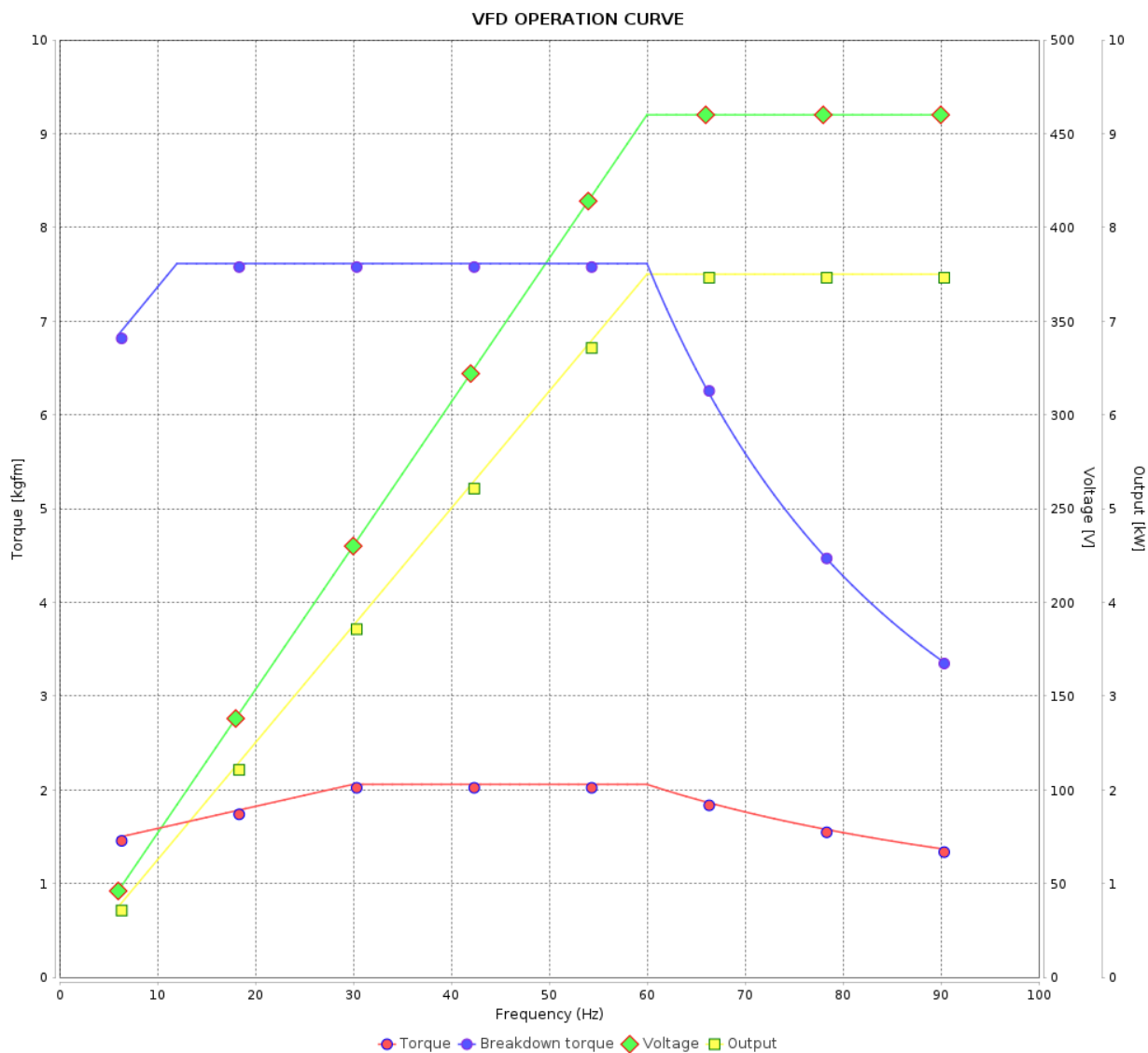
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