

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer		: Astraprom d.o.o.			
Product line		: W22 IE3 Three-Phase		Product code : 12862408	
Frame	: 225S/M	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: B3T		
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	: 395 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.2861 kgm ²		
Design	: N				
Output [kW]	45	45	45	45	
Poles	2	2	2	2	
Frequency [Hz]	50	50	50	60	
Rated voltage [V]	380/660	400/690	415	460	
Rated current [A]	83.6/48.1	80.3/46.6	79.3	71.8	
L. R. Amperes [A]	644/371	666/386	706	653	
LRC [A]	7.7	8.3	8.9	9.1	
No load current [A]	27.0/15.5	29.0/16.8	31.0	27.0	
Rated speed [RPM]	2965	2970	2973	3575	
Slip [%]	1.17	1.00	0.90	0.69	
Rated torque [kgfm]	14.8	14.8	14.7	12.3	
Locked rotor torque [%]	260	290	320	320	
Breakdown torque [%]	320	370	400	420	
Service factor	1.00	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	14s (cold) 8s (hot)	14s (cold) 8s (hot)	12s (cold) 7s (hot)	16s (cold) 9s (hot)	
Noise level ²	74.0 dB(A)	74.0 dB(A)	74.0 dB(A)	79.0 dB(A)	
Efficiency (%)	25%	0.000	0.000	0.000	
	50%	92.5	92.0	92.0	91.5
	75%	93.5	93.0	93.0	93.6
	100%	94.0	94.0	94.0	93.6
Power Factor	25%	0.00	0.00	0.00	
	50%	0.74	0.72	0.68	0.69
	75%	0.83	0.82	0.79	0.79
	100%	0.87	0.86	0.84	0.84
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	6.0	6.0	6.0	6.4
	P2 (0,5;1,0)	4.6	4.6	4.6	4.9
	P3 (0,25;1,0)	4.2	4.2	4.2	4.5
	P4 (0,9;0,5)	3.3	3.3	3.3	3.6
	P5 (0,5;0,5)	2.0	2.0	2.0	2.1
	P6 (0,5;0,25)	1.4	1.4	1.4	1.5
	P7 (0,25;0,25)	0.9	0.9	0.9	0.9
Bearing type	: Drive end : 6314 C3	Non drive end : 6314 C3	Foundation loads		
Sealing	: WSeal	WSeal	Max. traction	: 380 kgf	
Lubrication interval	: 5000 h	5000 h	Max. compression	: 776 kgf	
Lubricant amount	: 27 g	27 g			
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

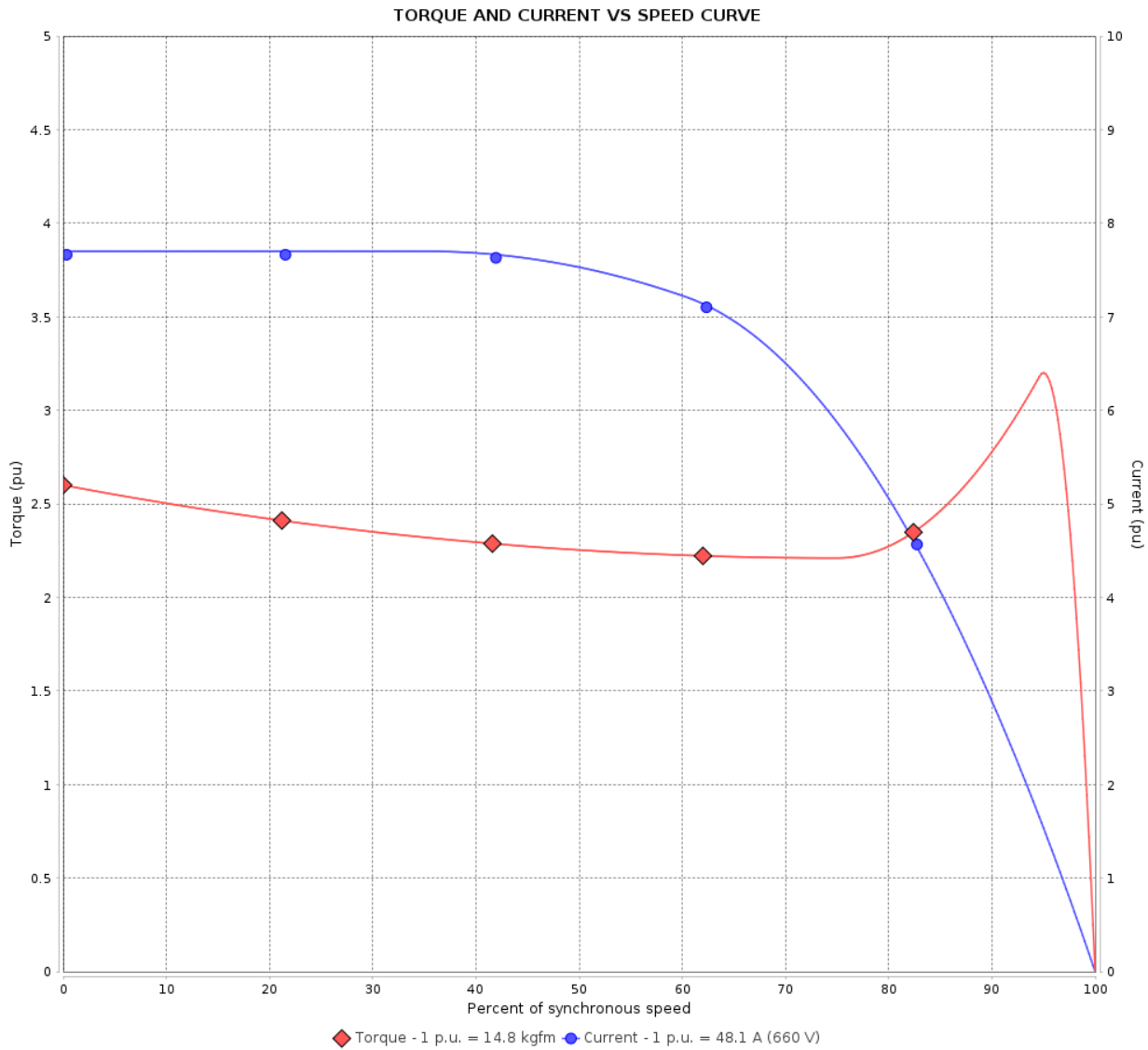
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12862408



Performance : 380/660 V 50 Hz 2P

Rated current	: 83.6/48.1 A	Moment of inertia (J)	: 0.2861 kgm ²
LRC	: 7.7	Duty cycle	: S1
Rated torque	: 14.8 kgfm	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 2965 rpm	Design	: N

Locked rotor time : 14s (cold) 8s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

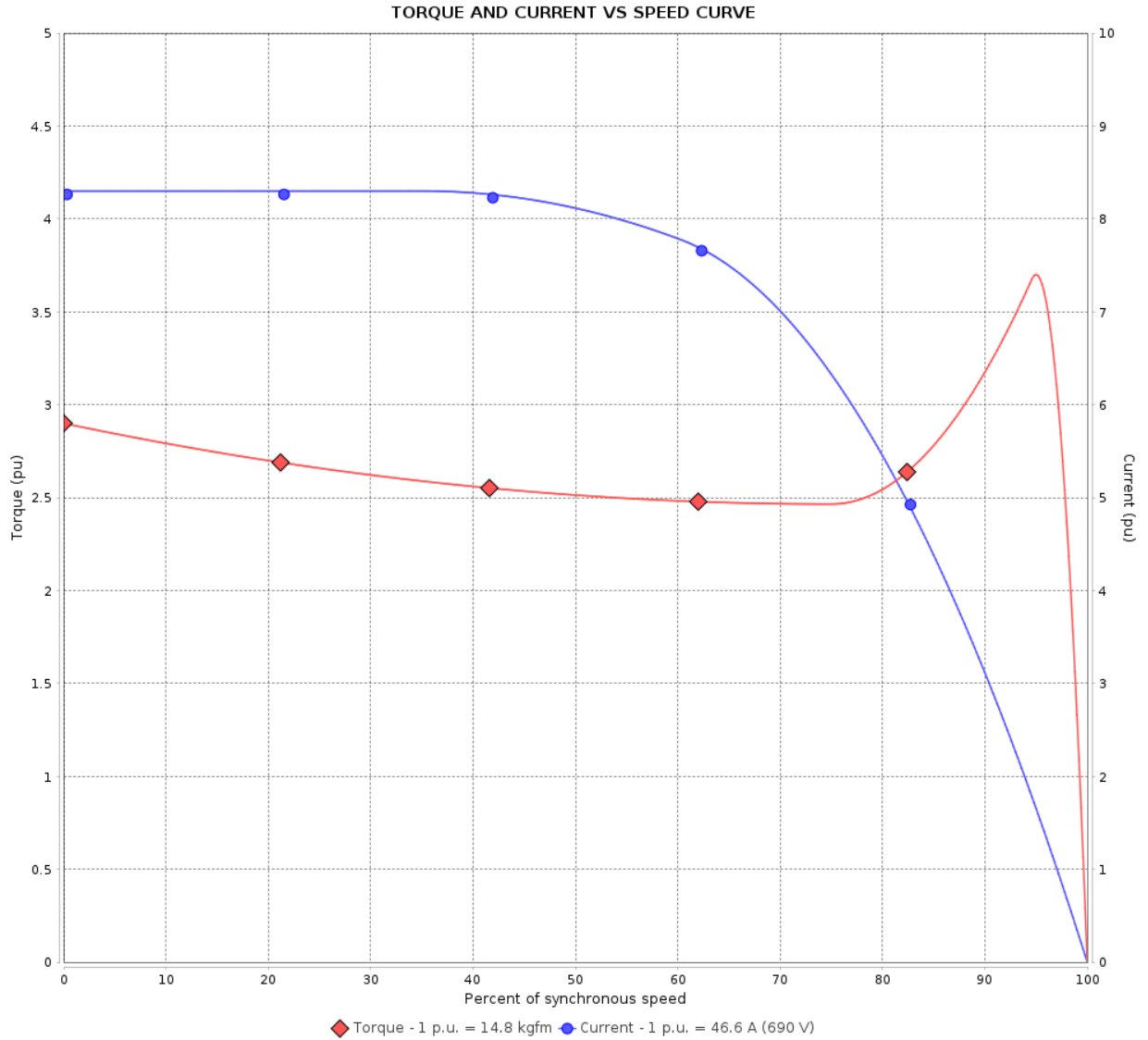
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12862408



Performance : 400/690 V 50 Hz 2P

Rated current	: 80.3/46.6 A	Moment of inertia (J)	: 0.2861 kgm ²
LRC	: 8.3	Duty cycle	: S1
Rated torque	: 14.8 kgfm	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 370 %	Temperature rise	: 80 K
Rated speed	: 2970 rpm	Design	: N

Locked rotor time : 14s (cold) 8s (hot)

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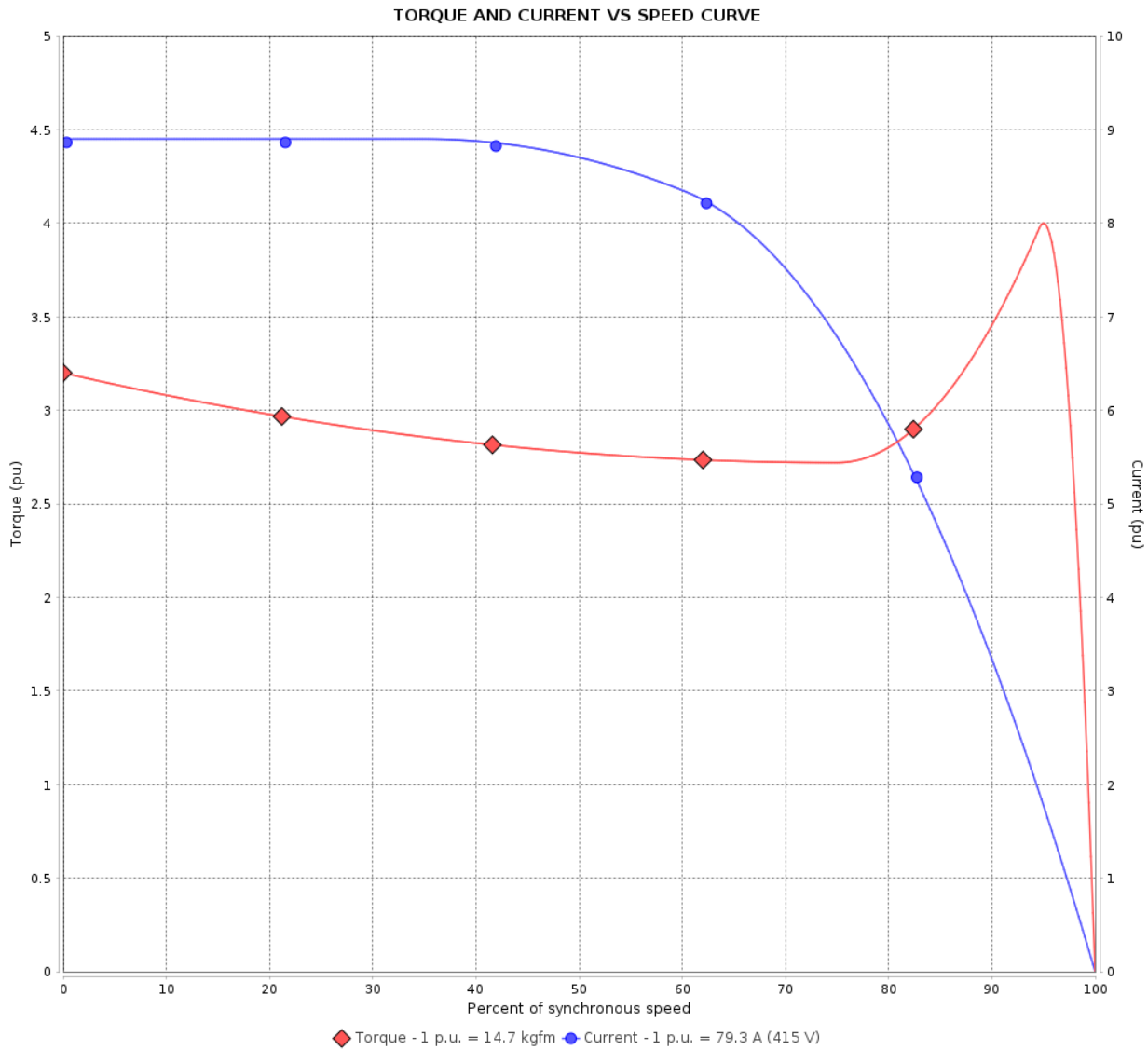
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12862408



Performance : 415 V 50 Hz 2P

Rated current	: 79.3 A	Moment of inertia (J)	: 0.2861 kgm ²
LRC	: 8.9	Duty cycle	: S1
Rated torque	: 14.7 kgfm	Insulation class	: F
Locked rotor torque	: 320 %	Service factor	: 1.00
Breakdown torque	: 400 %	Temperature rise	: 80 K
Rated speed	: 2973 rpm	Design	: N

Locked rotor time : 12s (cold) 7s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

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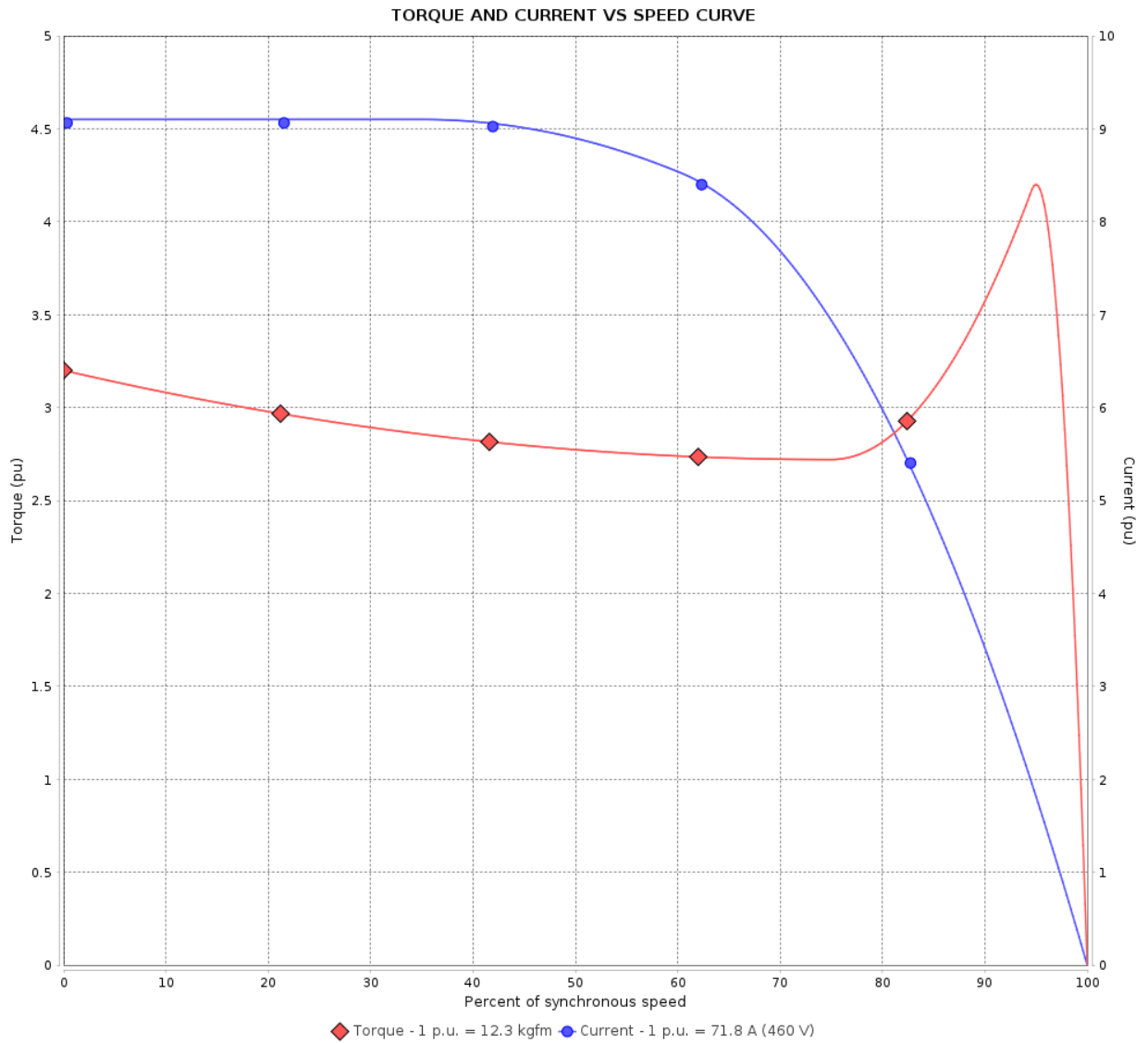


Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code :

12862408



Performance : 460 V 60 Hz 2P

Rated current	: 71.8 A	Moment of inertia (J)	: 0.2861 kgm ²
LRC	: 9.1	Duty cycle	: S1
Rated torque	: 12.3 kgfm	Insulation class	: F
Locked rotor torque	: 320 %	Service factor	: 1.00
Breakdown torque	: 420 %	Temperature rise	: 80 K
Rated speed	: 3575 rpm	Design	: N

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

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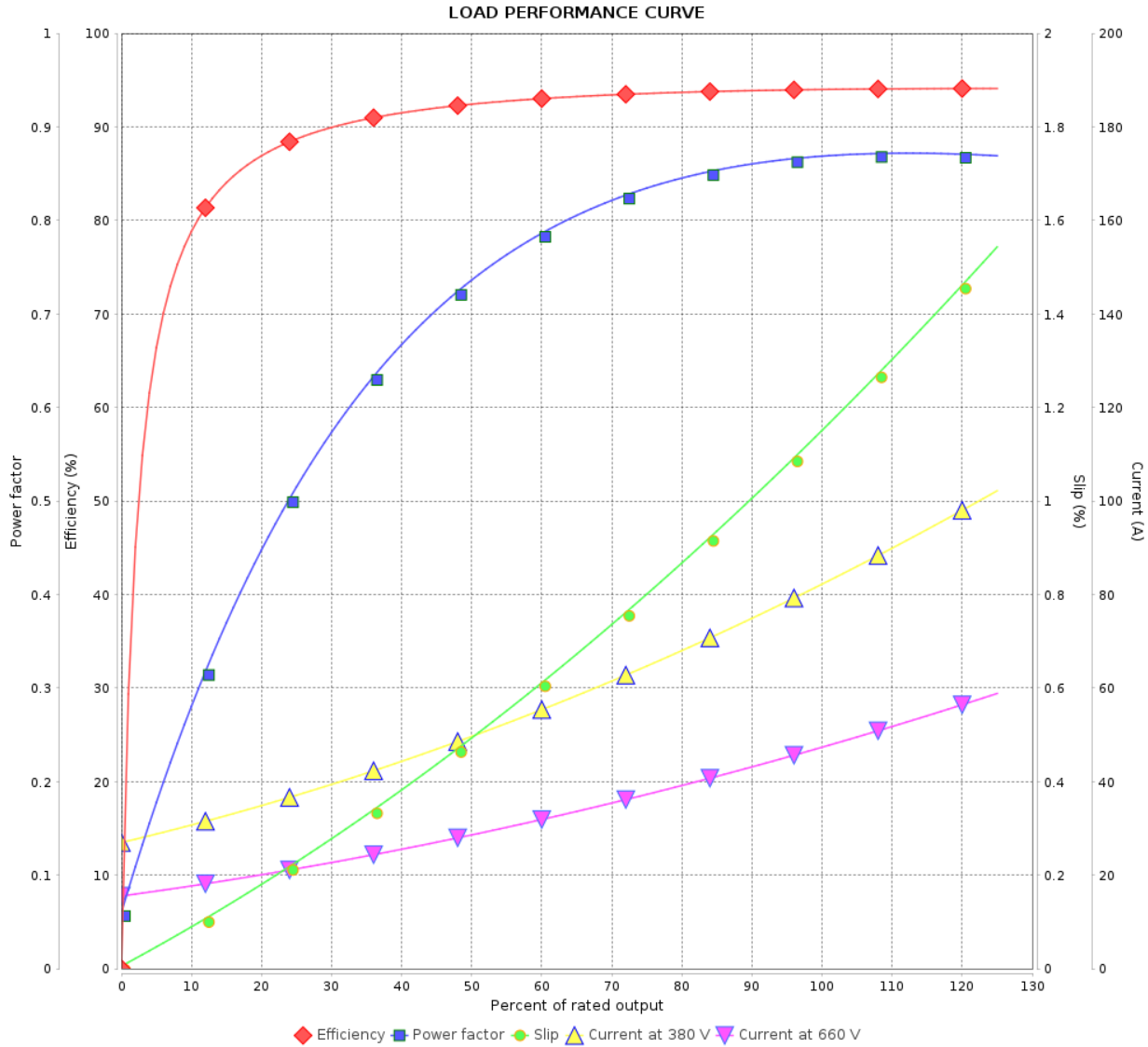
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Performance : 380/660 V 50 Hz 2P

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 Rated torque : 14.8 kgfm
 Locked rotor torque : 260 %
 Breakdown torque : 320 %
 Rated speed : 2965 rpm

Moment of inertia (J) : 0.2861 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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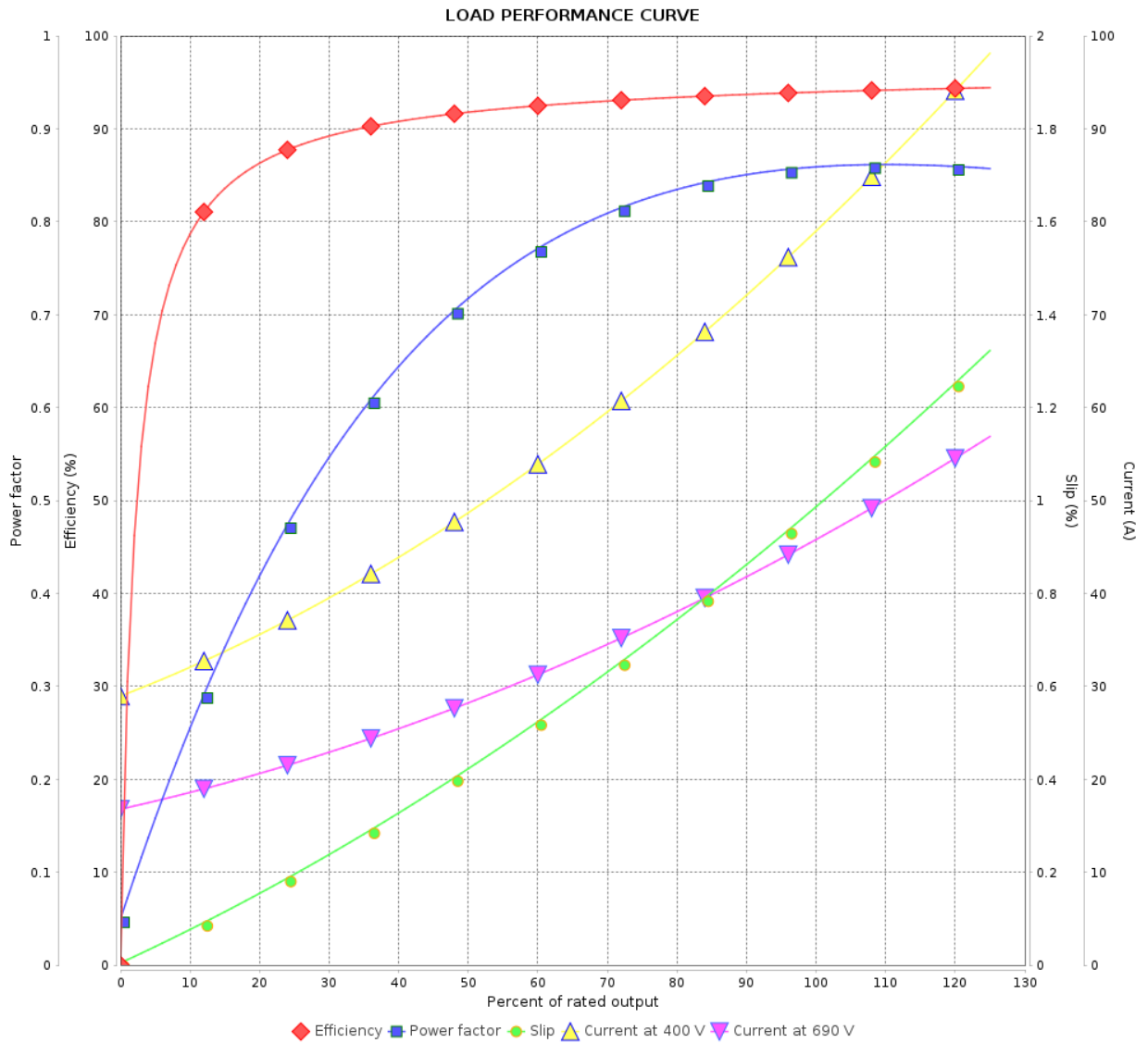
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Performance : 400/690 V 50 Hz 2P

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 LRC : 8.3
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 Locked rotor torque : 290 %
 Breakdown torque : 370 %
 Rated speed : 2970 rpm

Moment of inertia (J) : 0.2861 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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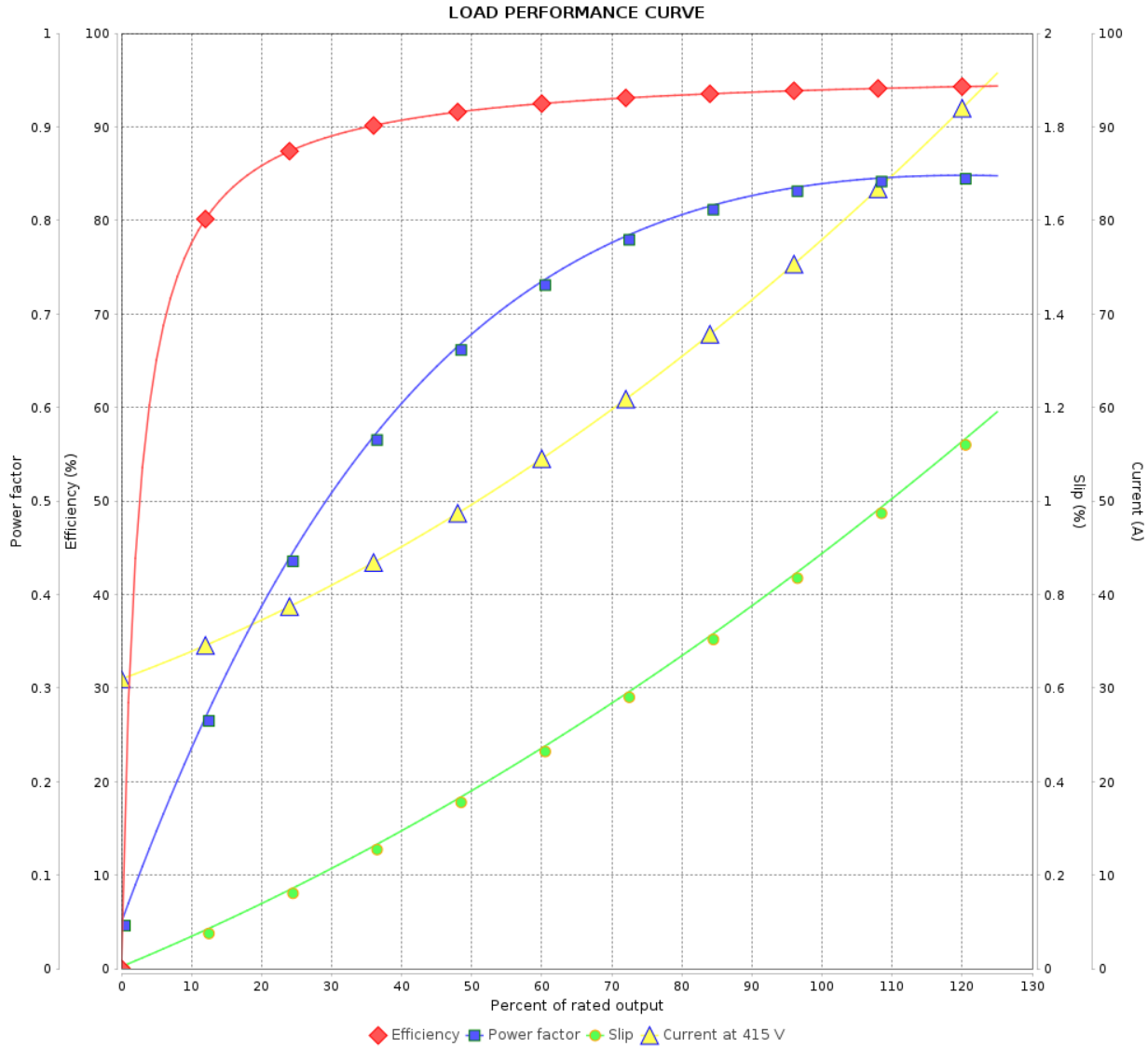
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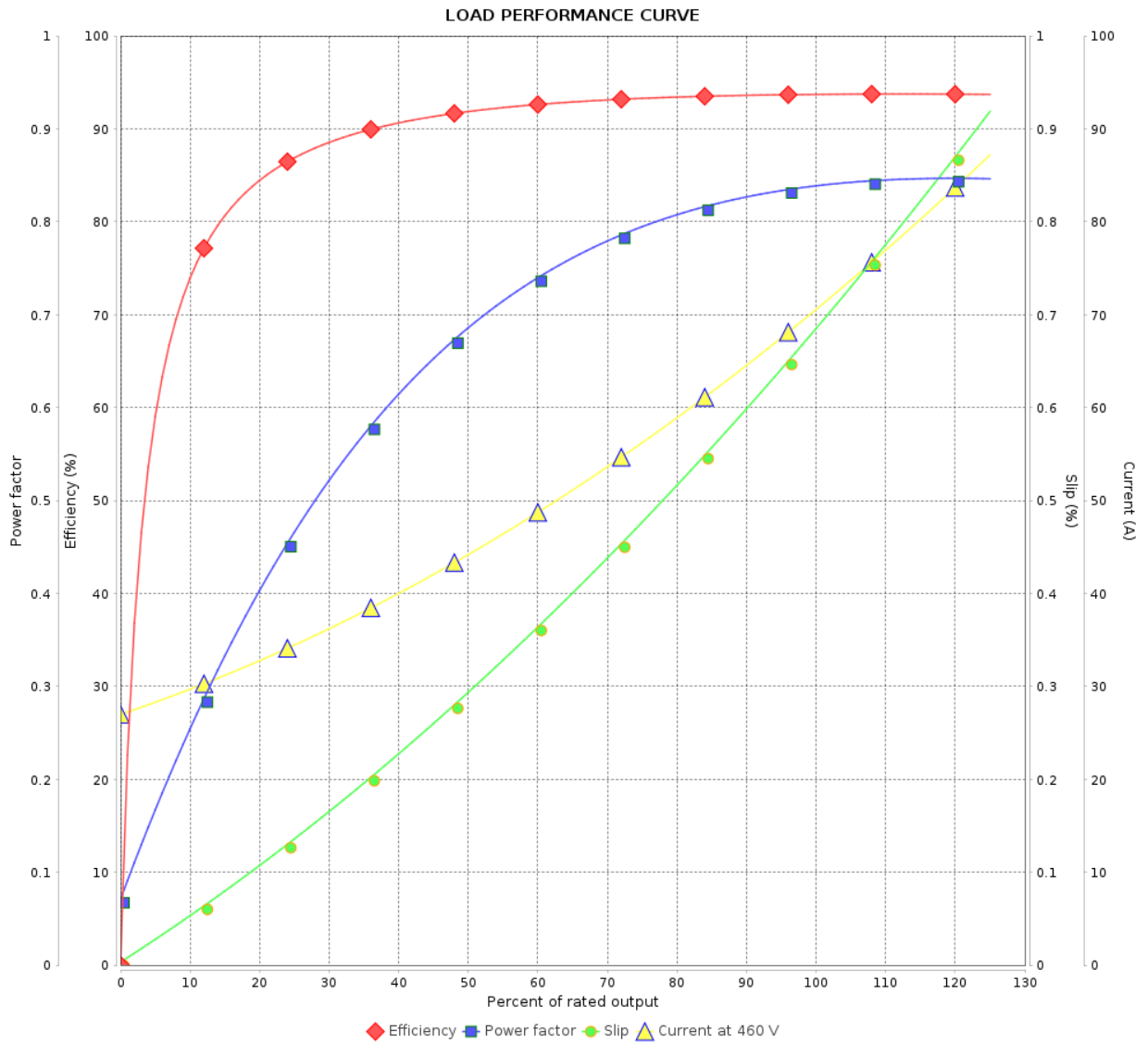
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THERMAL LIMIT CURVE

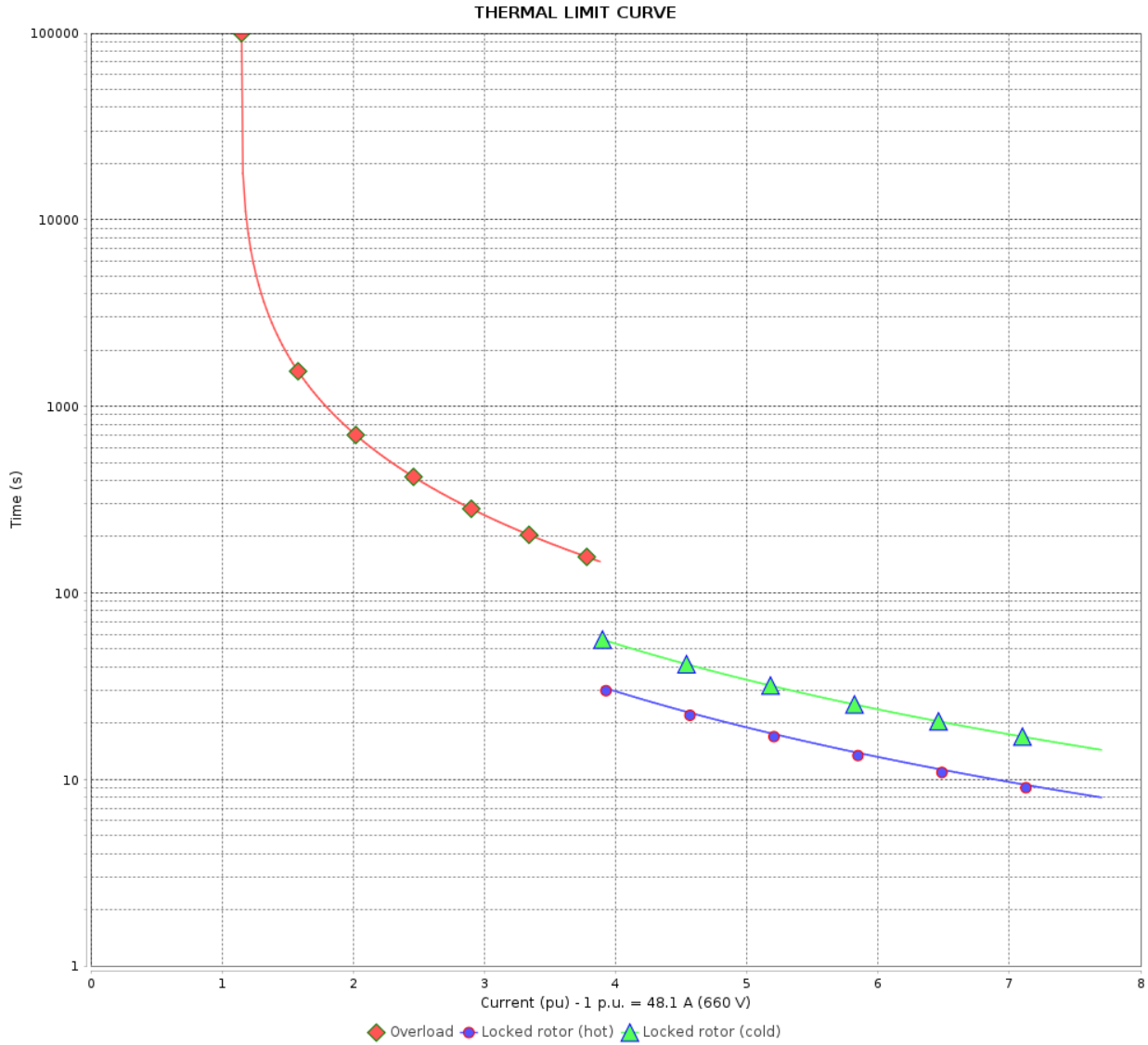
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Moment of inertia (J) : 0.2861 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Heating constant

Cooling constant

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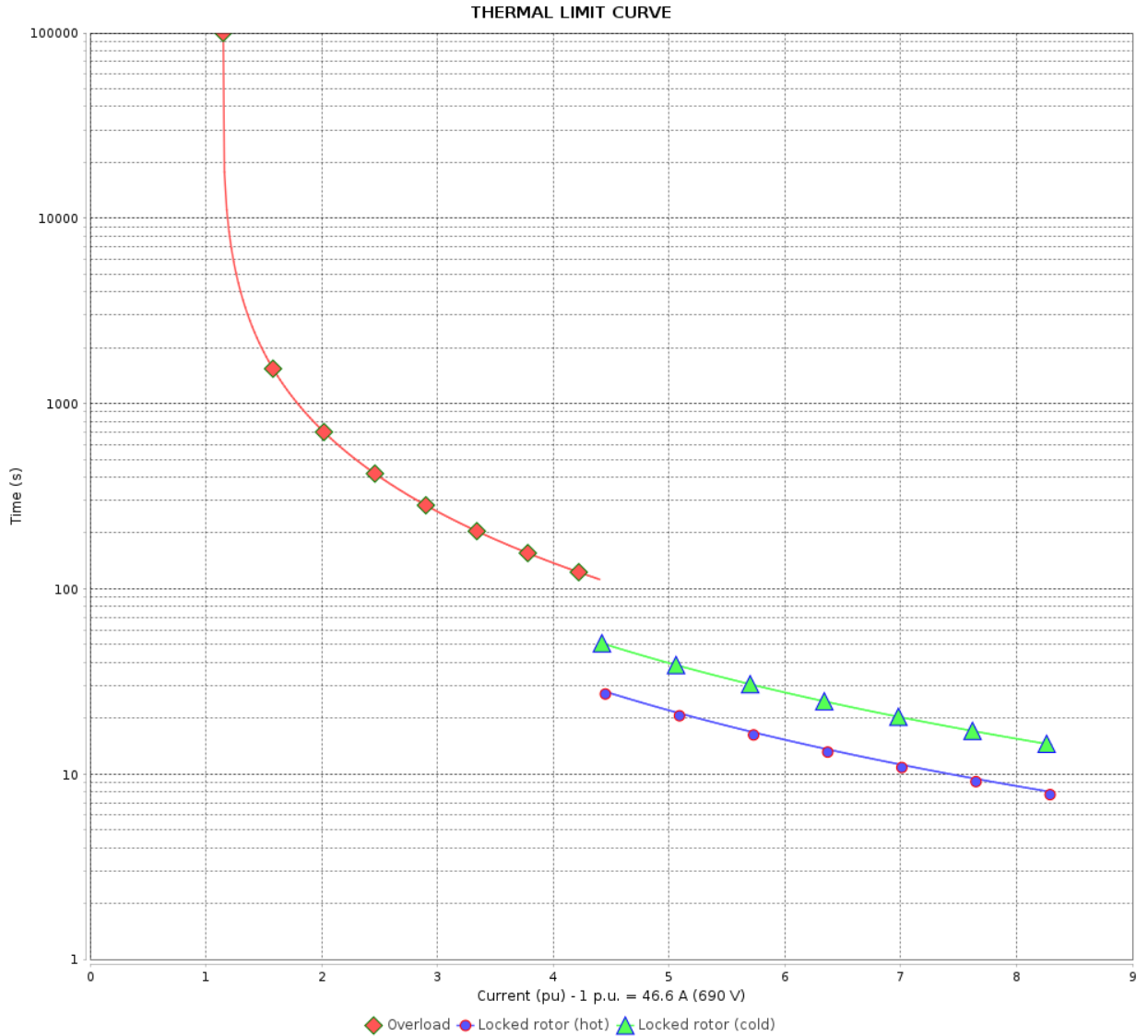
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Heating constant

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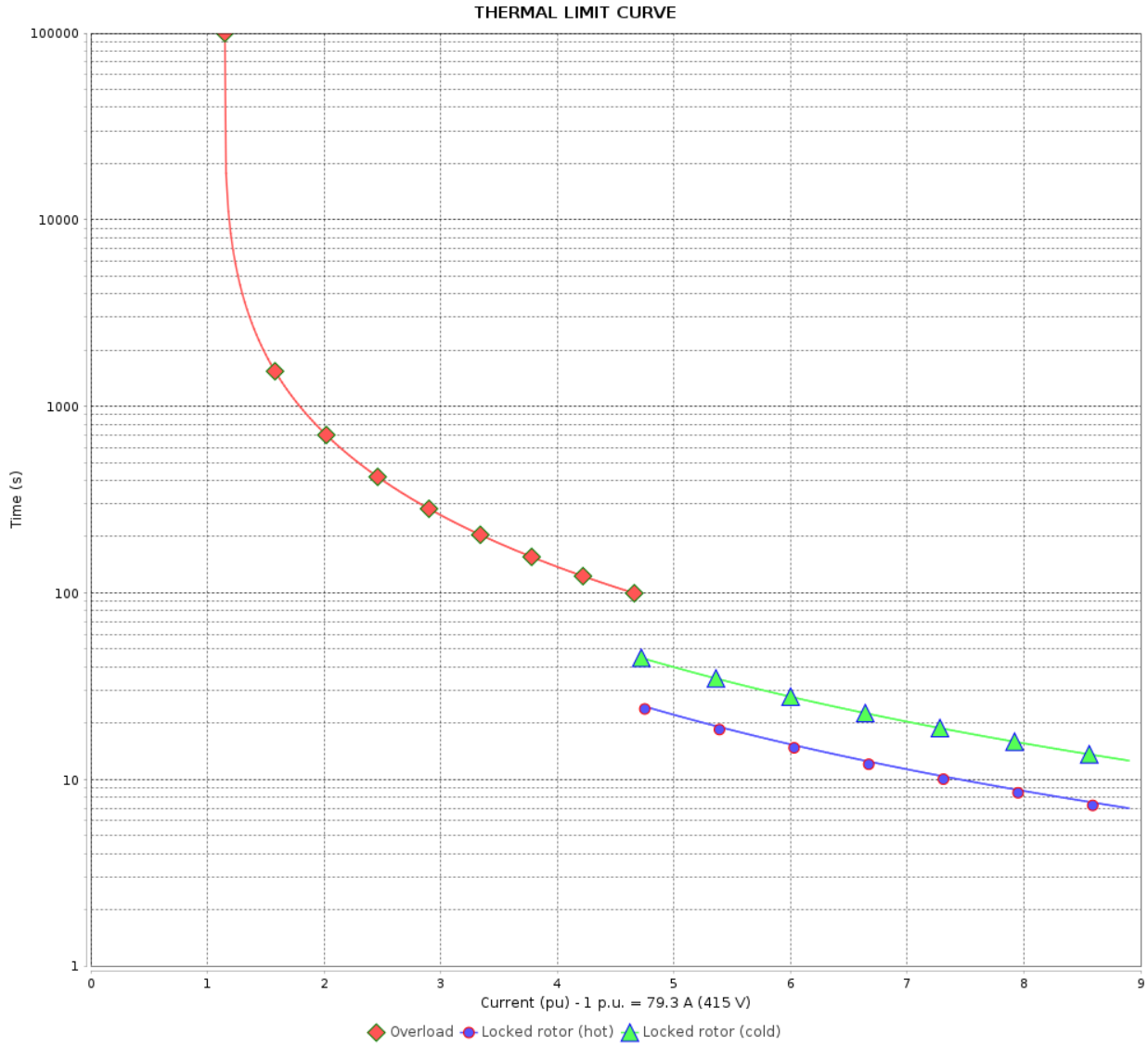
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Rated speed	: 2973 rpm	Design	: N

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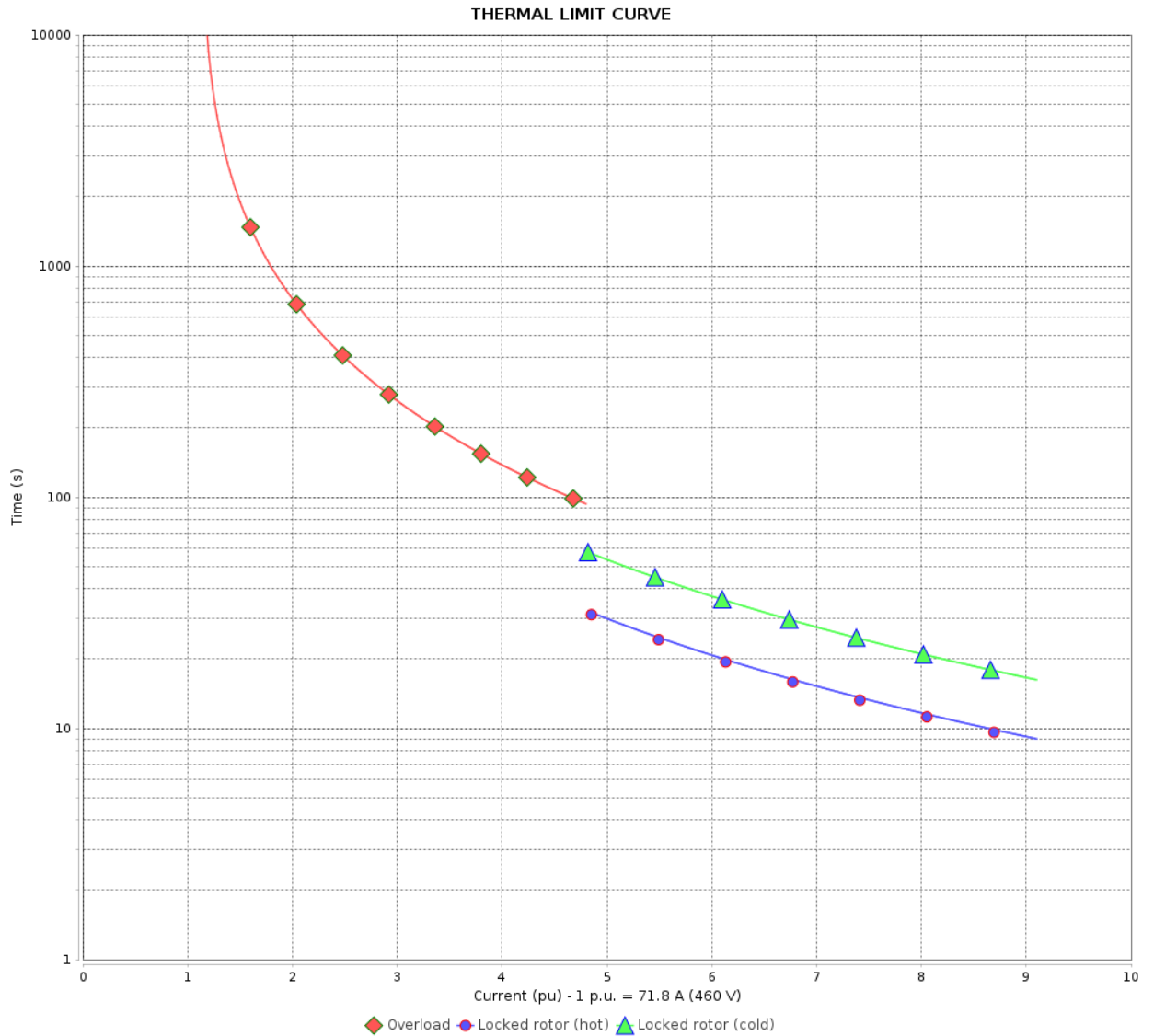
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 Breakdown torque : 420 %
 Rated speed : 3575 rpm

Moment of inertia (J) : 0.2861 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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VFD OPERATION CURVE

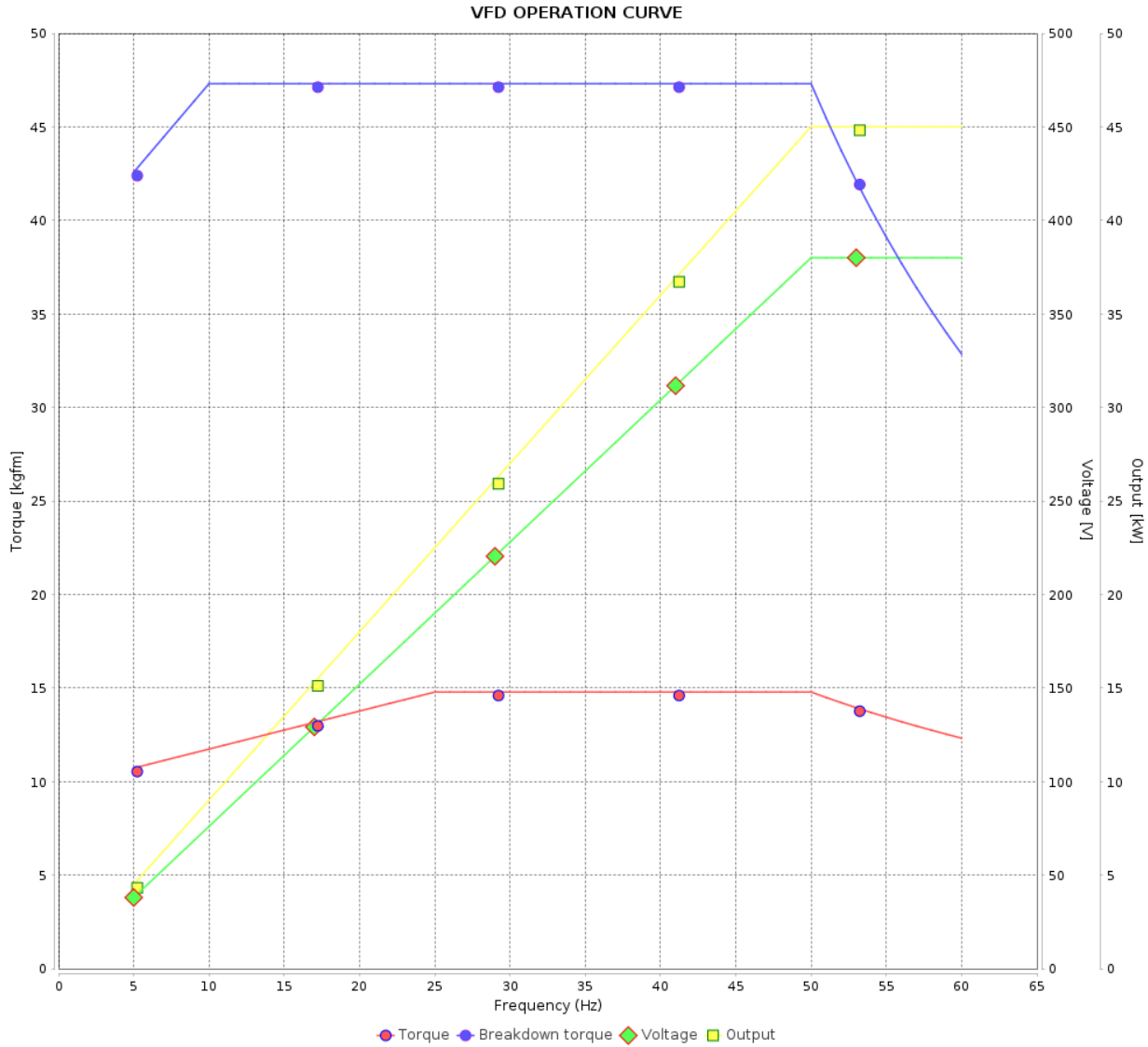
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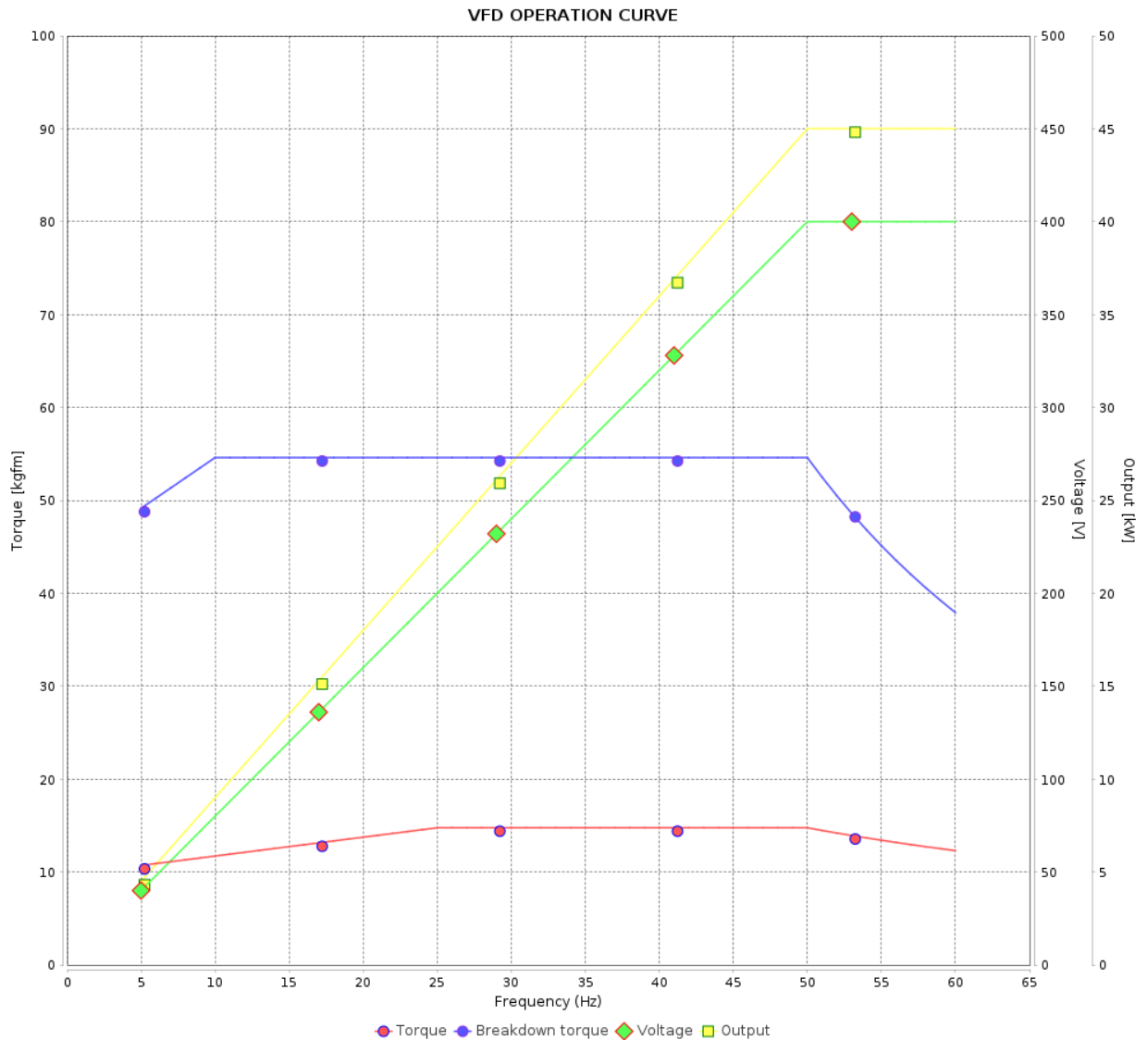
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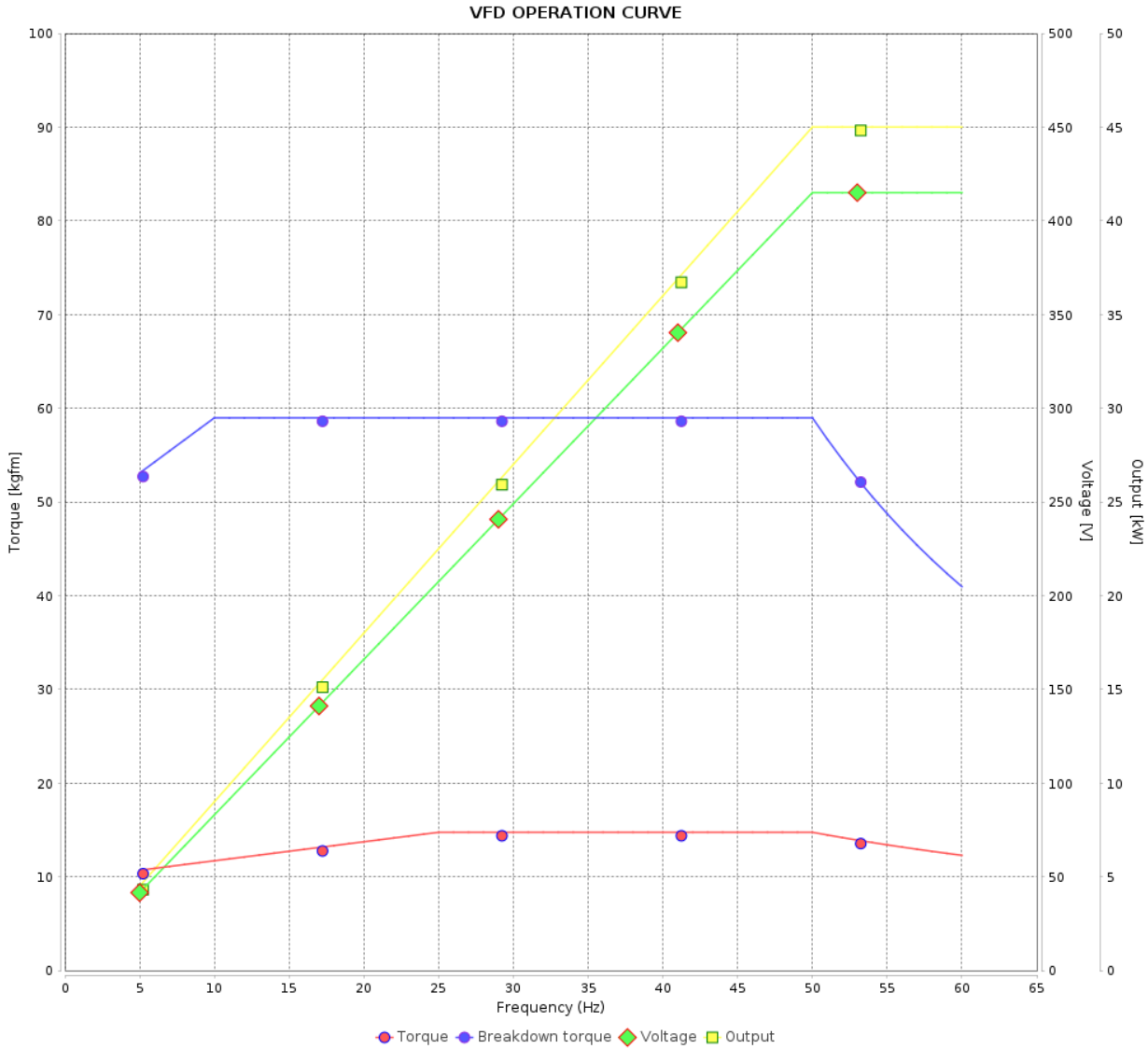
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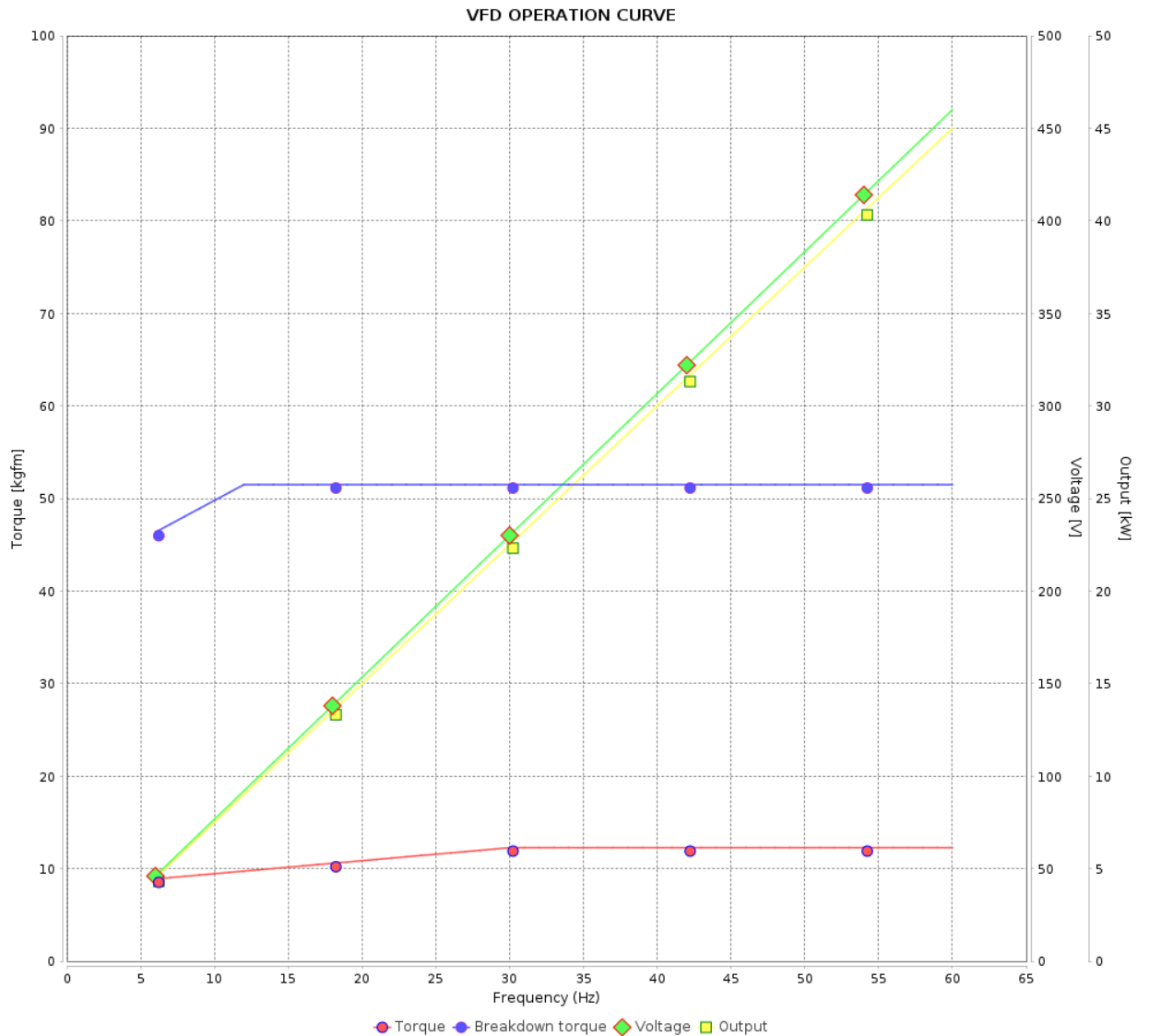
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