

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer		: Astraprom d.o.o.			
Product line		: W22 IE3 Three-Phase		Product code : 12868104	
Frame	: 100L	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	: 33.8 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.0064 kgm ²		
Design	: N				
Output [kW]	3	3	3	3	
Poles	2	2	2	2	
Frequency [Hz]	50	50	50	60	
Rated voltage [V]	220/380	230/400	240/415	460	
Rated current [A]	10.4/6.02	10.2/5.85	9.98/5.77	5.07	
L. R. Amperes [A]	78.0/45.1	81.4/46.8	84.8/49.0	47.2	
LRC [A]	7.5	8.0	8.5	9.3	
No load current [A]	4.40/2.55	4.96/2.85	5.45/3.15	2.60	
Rated speed [RPM]	2905	2915	2920	3530	
Slip [%]	3.17	2.83	2.67	1.94	
Rated torque [kgfm]	1.01	1.00	1.00	0.828	
Locked rotor torque [%]	220	240	260	290	
Breakdown torque [%]	300	330	360	440	
Service factor	1.00	1.00	1.00	1.25	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	18s (cold) 10s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)	18s (cold) 10s (hot)	
Noise level ²	67.0 dB(A)	67.0 dB(A)	67.0 dB(A)	71.0 dB(A)	
Efficiency (%)	25%				
	50%	85.5	85.0	84.5	82.5
	75%	86.5	86.5	86.5	86.5
	100%	87.1	87.1	87.2	88.5
Power Factor	25%				
	50%	0.71	0.67	0.64	0.66
	75%	0.82	0.79	0.76	0.77
	100%	0.87	0.85	0.83	0.84
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	14.9	14.9	14.7	13.0
	P2 (0,5;1,0)	13.6	13.6	13.5	11.9
	P3 (0,25;1,0)	12.1	12.1	12.0	10.6
	P4 (0,9;0,5)	7.2	7.2	7.1	6.3
	P5 (0,5;0,5)	5.0	5.0	5.0	4.4
	P6 (0,5;0,25)	3.3	3.3	3.3	2.9
	P7 (0,25;0,25)	2.4	2.4	2.4	2.1
Bearing type	: Drive end : 6206 ZZ	Non drive end : 6205 ZZ	Foundation loads		
Sealing	: Oil Seal	Lip Seal	Max. traction	: 74 kgf	
Lubrication interval	: -	-	Max. compression	: 107 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

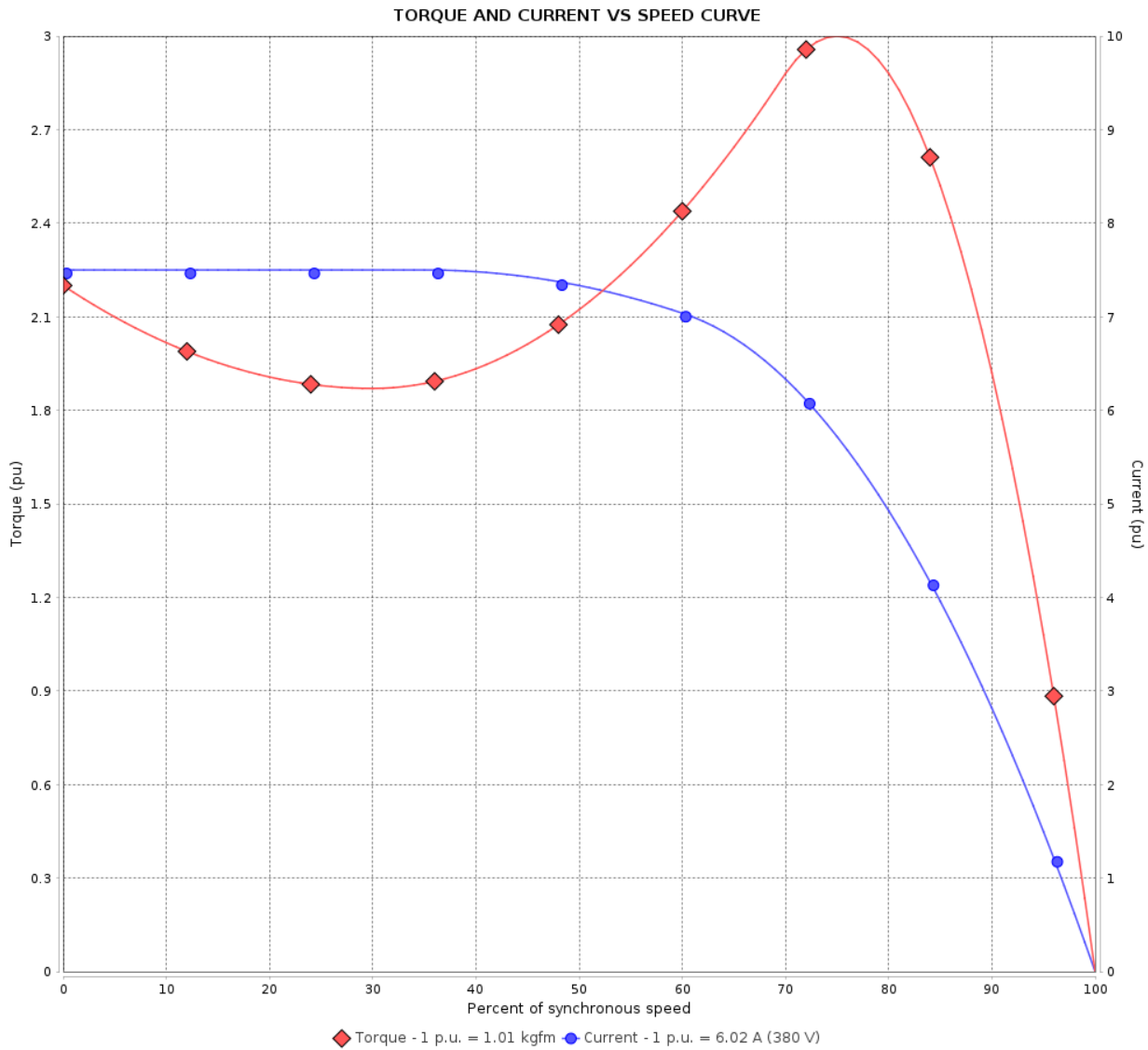
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12868104



Performance : 220/380 V 50 Hz 2P

Rated current	: 10.4/6.02 A	Moment of inertia (J)	: 0.0064 kgm ²
LRC	: 7.5	Duty cycle	: S1
Rated torque	: 1.01 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 2905 rpm	Design	: N

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

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TORQUE AND CURRENT VS SPEED CURVE

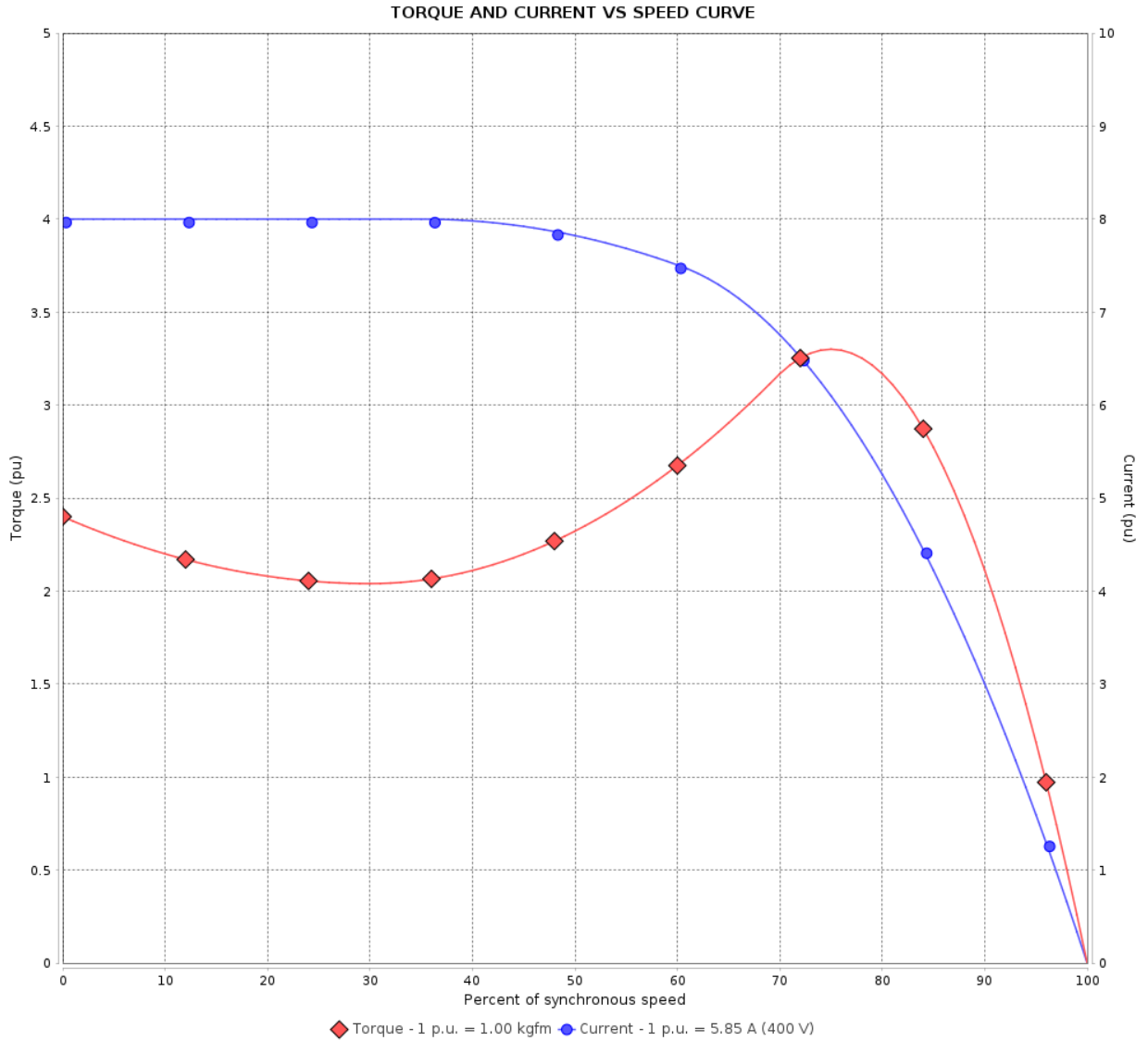


Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12868104



Performance : 230/400 V 50 Hz 2P

Rated current	: 10.2/5.85 A	Moment of inertia (J)	: 0.0064 kgm ²
LRC	: 8.0	Duty cycle	: S1
Rated torque	: 1.00 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 2915 rpm	Design	: N

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

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TORQUE AND CURRENT VS SPEED CURVE

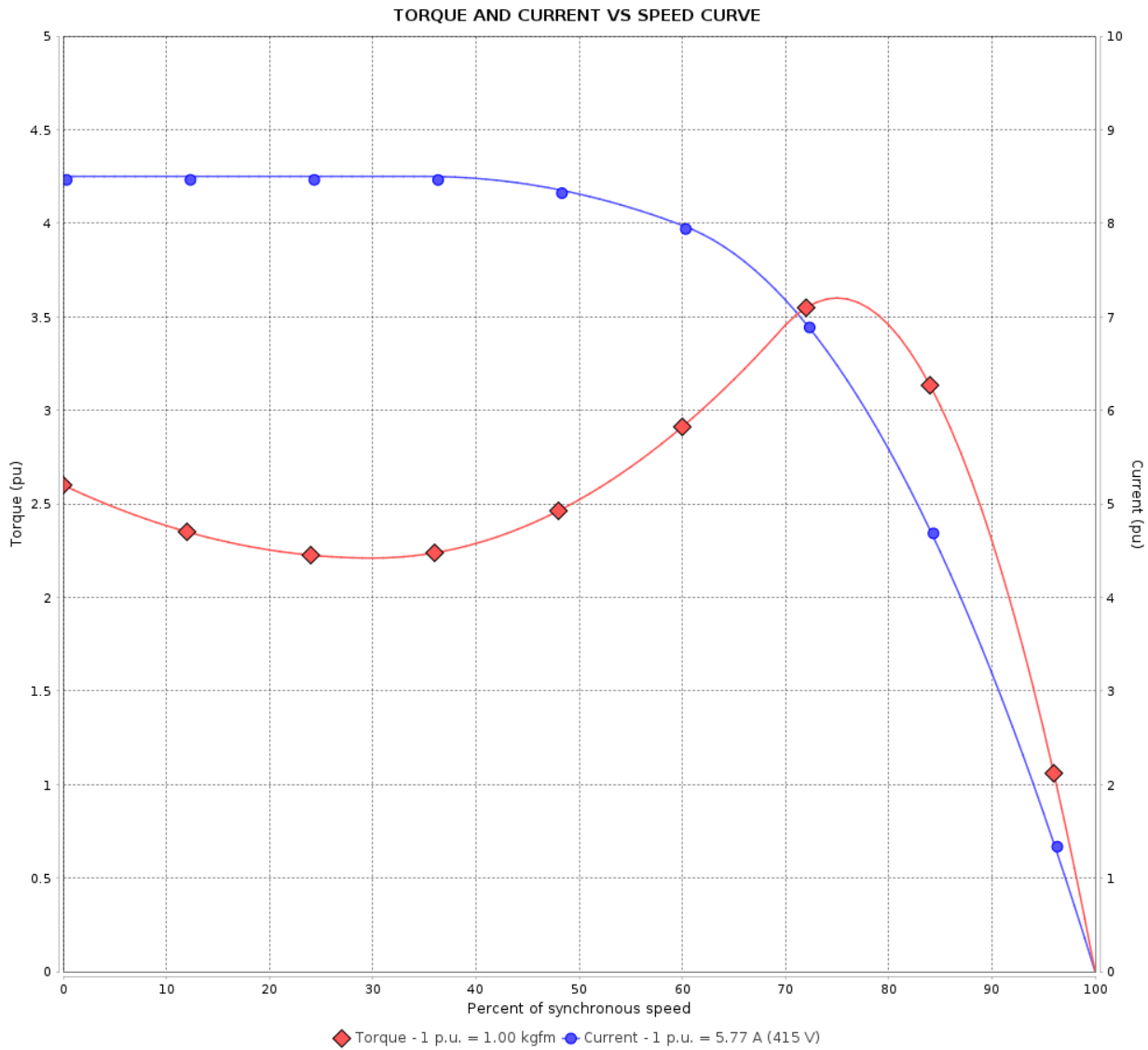
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12868104



Performance : 240/415 V 50 Hz 2P

Rated current	: 9.98/5.77 A	Moment of inertia (J)	: 0.0064 kgm ²
LRC	: 8.5	Duty cycle	: S1
Rated torque	: 1.00 kgfm	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 360 %	Temperature rise	: 80 K
Rated speed	: 2920 rpm	Design	: N

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

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TORQUE AND CURRENT VS SPEED CURVE



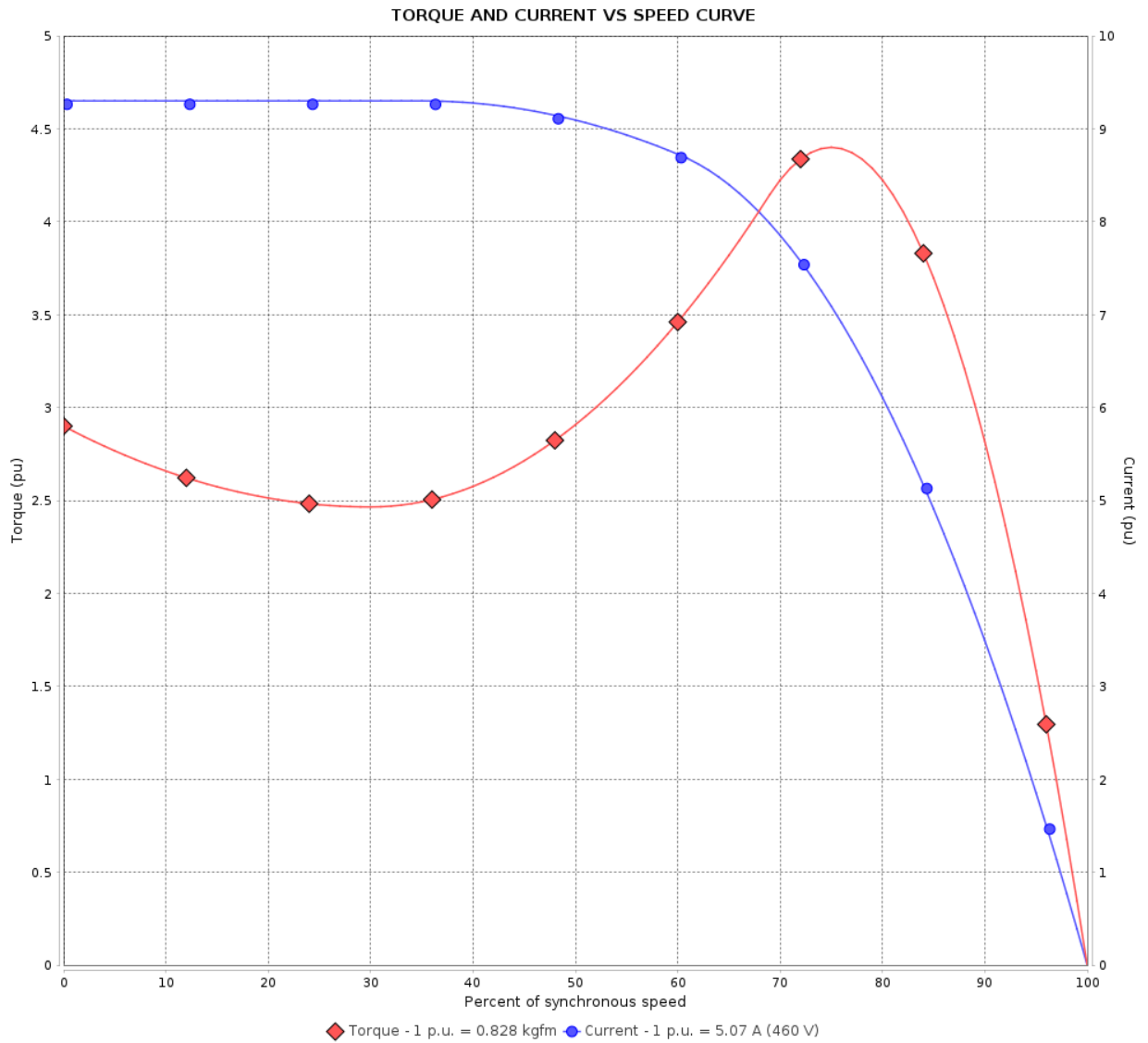
Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code :

12868104



Performance : 460 V 60 Hz 2P

Rated current	: 5.07 A	Moment of inertia (J)	: 0.0064 kgm ²
LRC	: 9.3	Duty cycle	: S1
Rated torque	: 0.828 kgfm	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.25
Breakdown torque	: 440 %	Temperature rise	: 80 K
Rated speed	: 3530 rpm	Design	: N

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

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LOAD PERFORMANCE CURVE

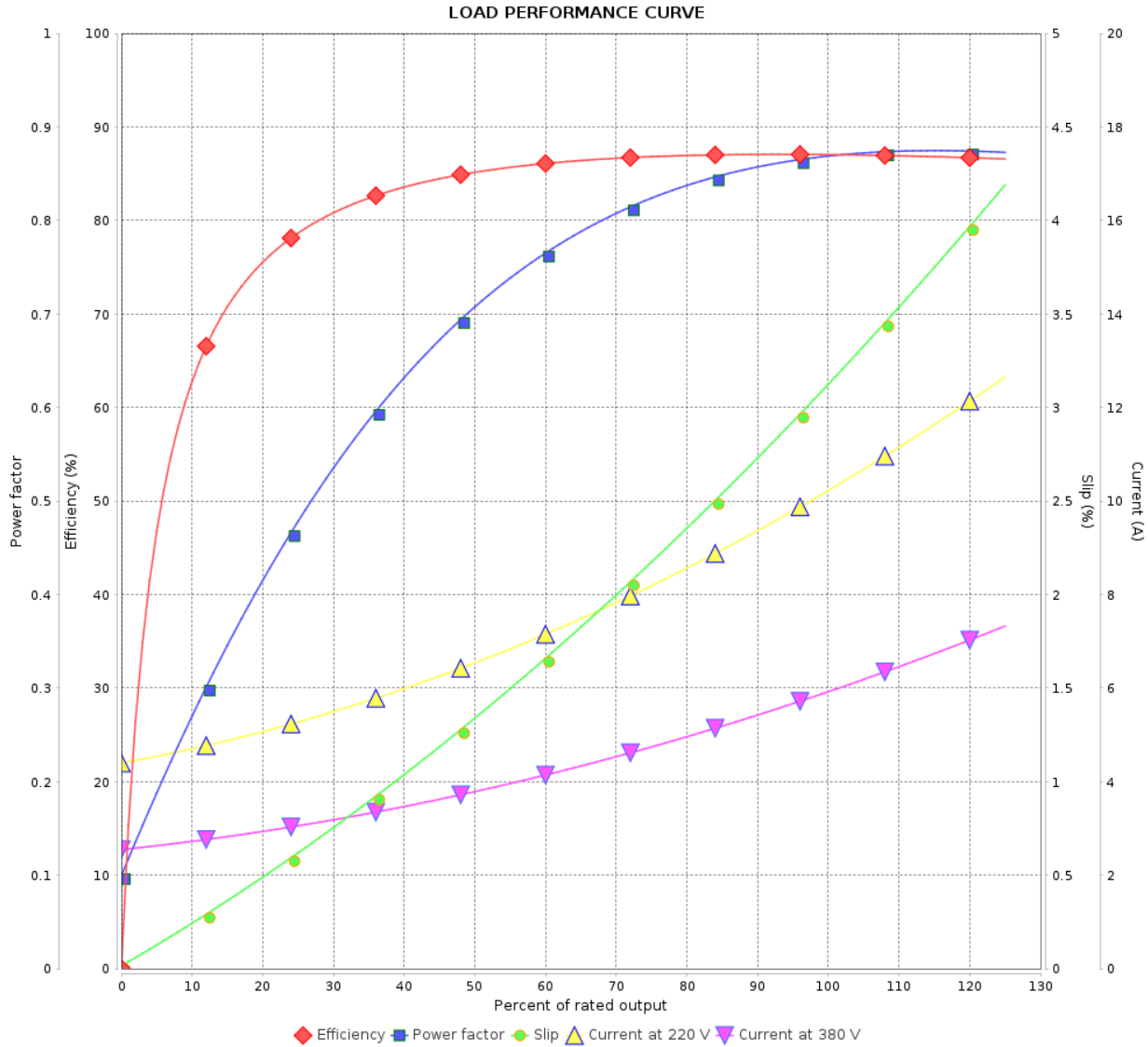
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Customer : Astraprom d.o.o.

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Product code : 12868104



Performance : 220/380 V 50 Hz 2P

Rated current : 10.4/6.02 A
 LRC : 7.5
 Rated torque : 1.01 kgfm
 Locked rotor torque : 220 %
 Breakdown torque : 300 %
 Rated speed : 2905 rpm

Moment of inertia (J) : 0.0064 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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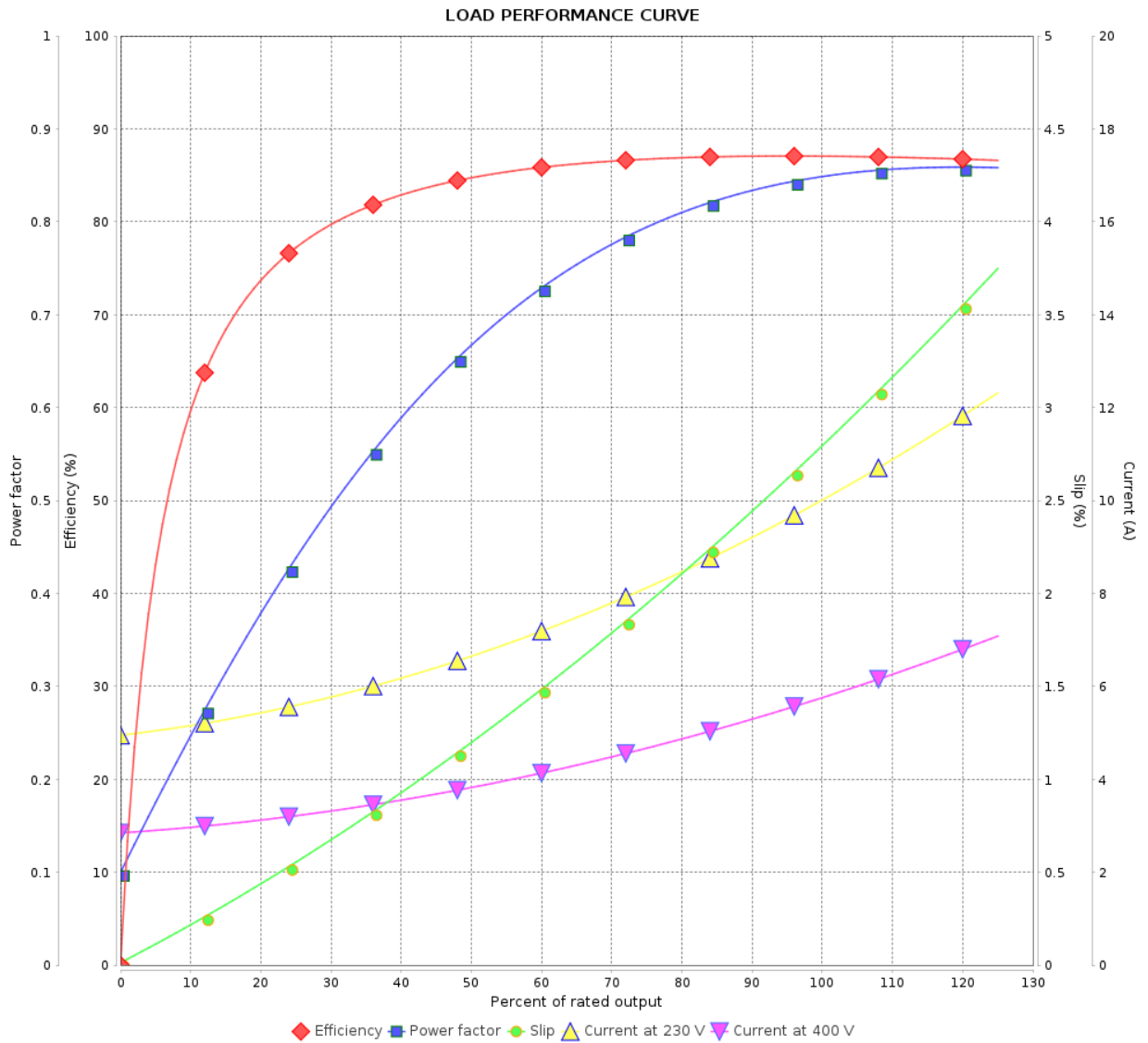
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Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

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Performance : 230/400 V 50 Hz 2P

Rated current : 10.2/5.85 A
 LRC : 8.0
 Rated torque : 1.00 kgfm
 Locked rotor torque : 240 %
 Breakdown torque : 330 %
 Rated speed : 2915 rpm

Moment of inertia (J) : 0.0064 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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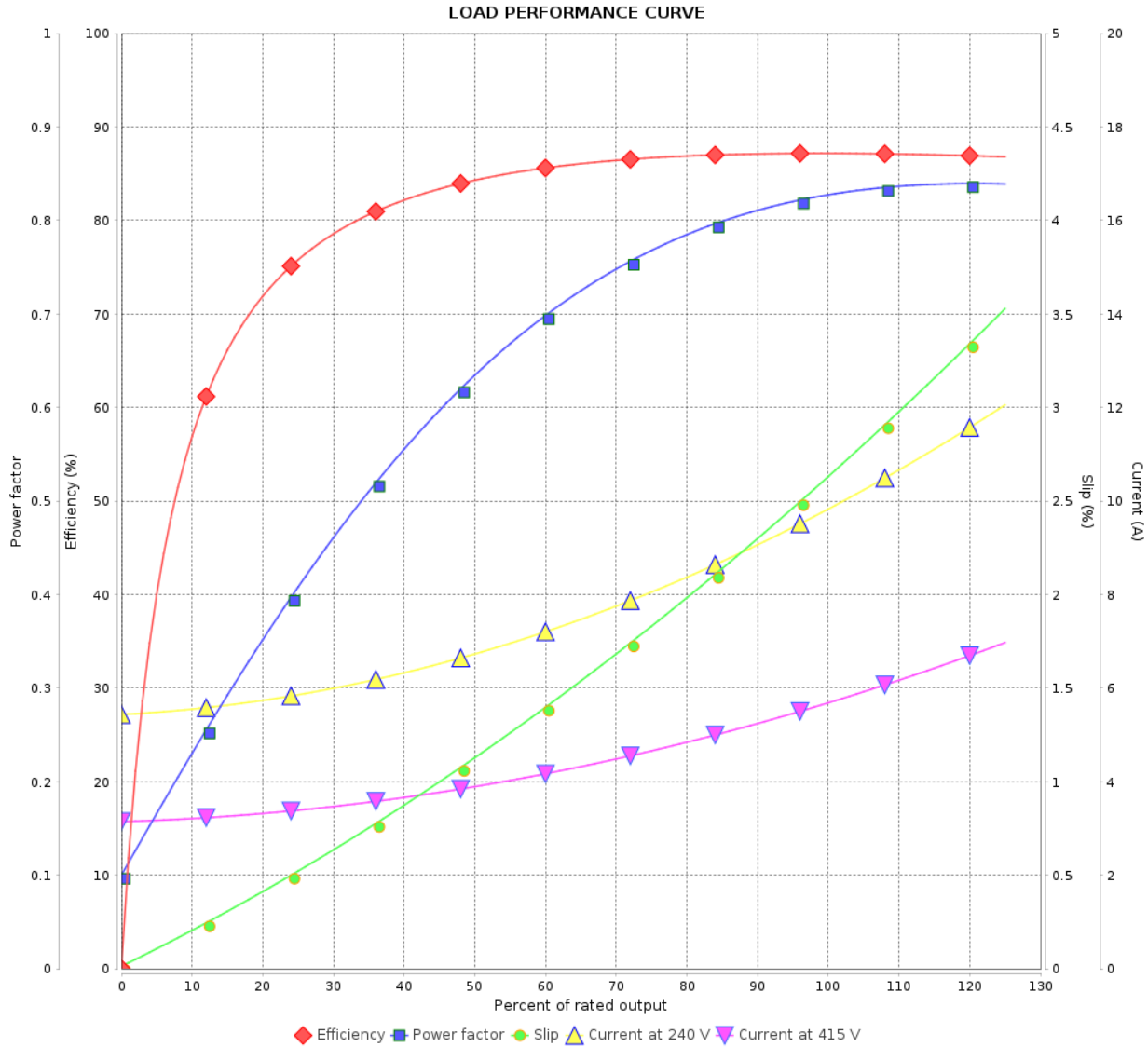
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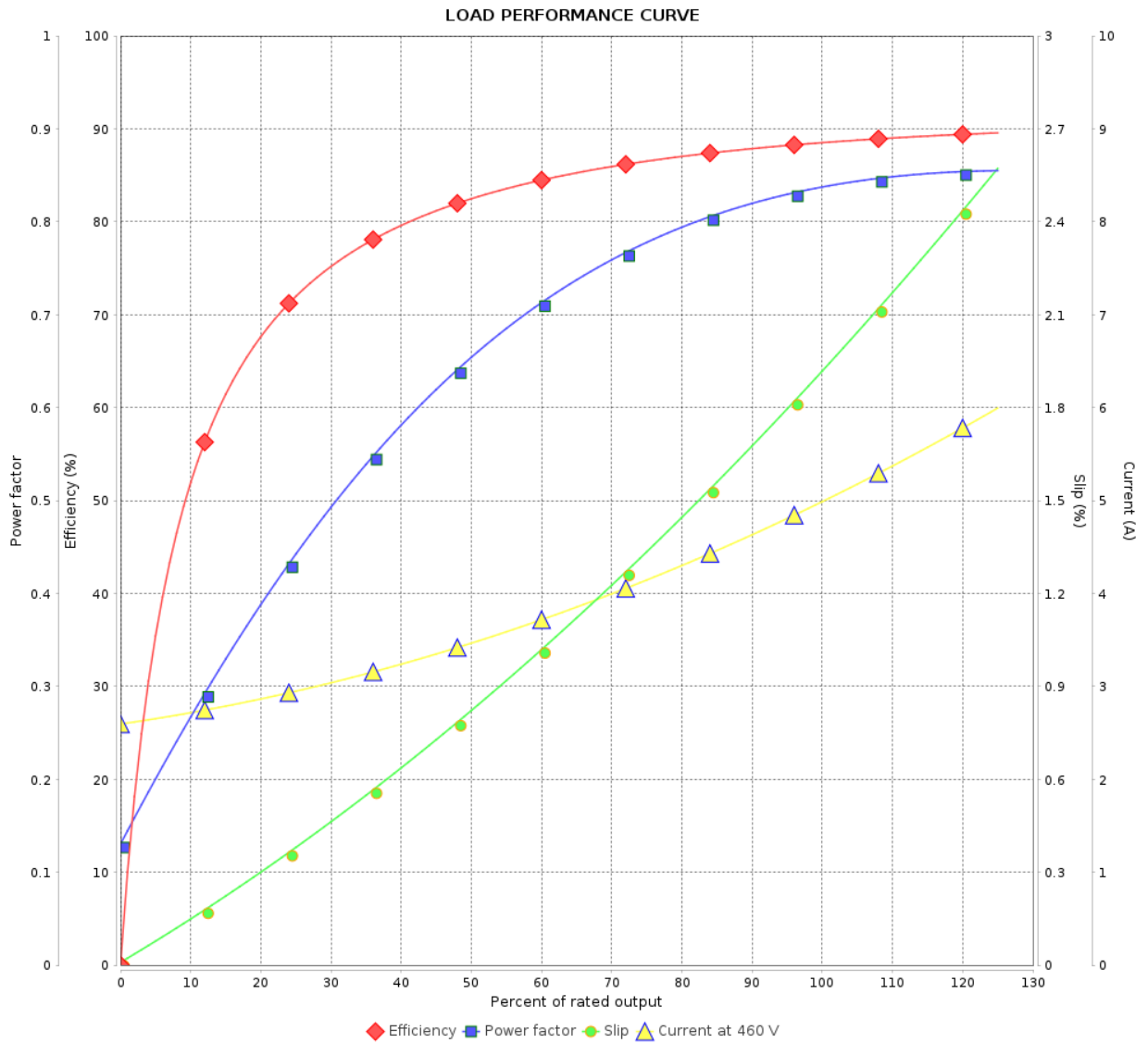
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Performance : 460 V 60 Hz 2P

Rated current : 5.07 A
 LRC : 9.3
 Rated torque : 0.828 kgfm
 Locked rotor torque : 290 %
 Breakdown torque : 440 %
 Rated speed : 3530 rpm

Moment of inertia (J) : 0.0064 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : N

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THERMAL LIMIT CURVE

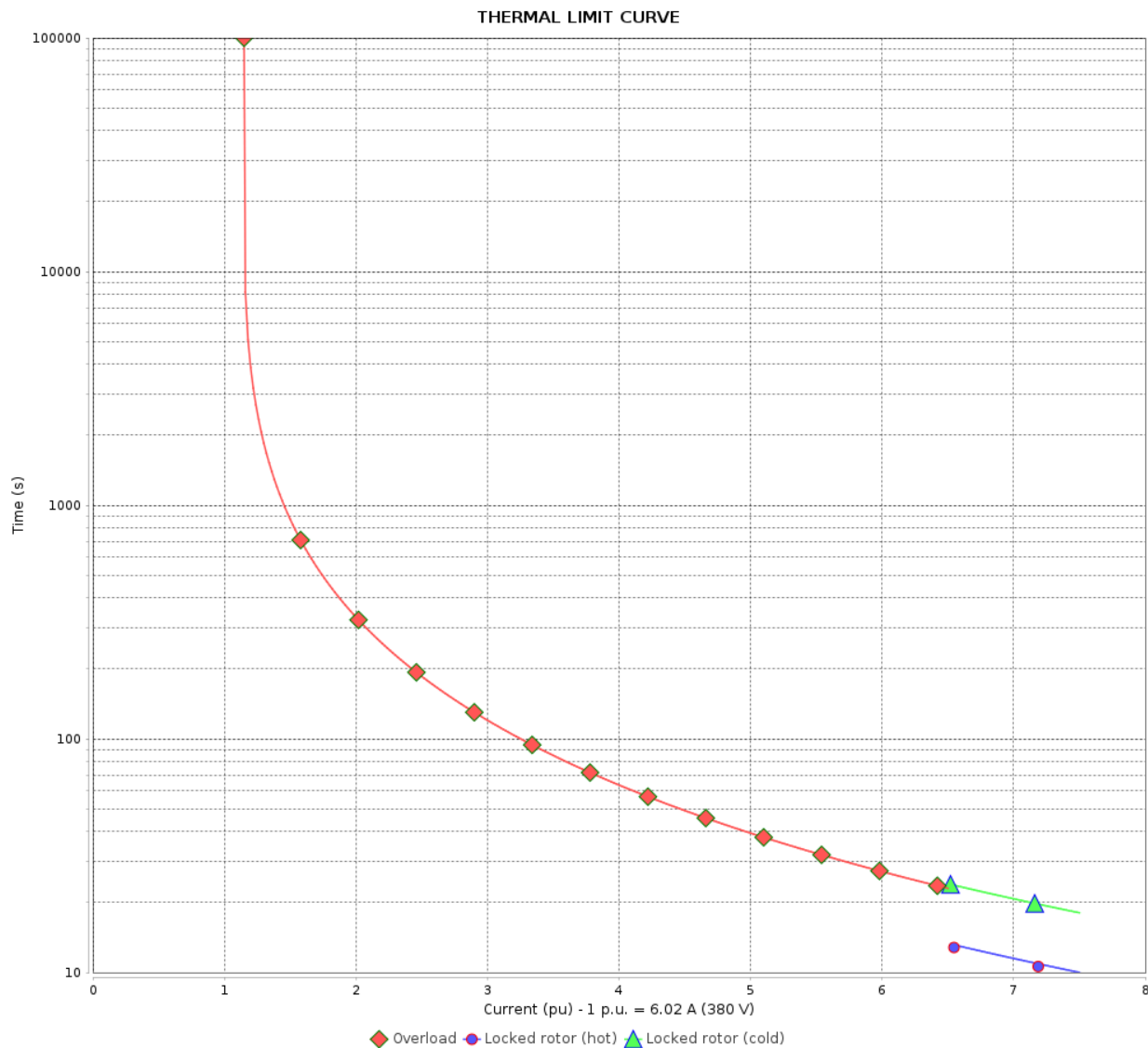
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Moment of inertia (J) : 0.0064 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Heating constant
 Cooling constant

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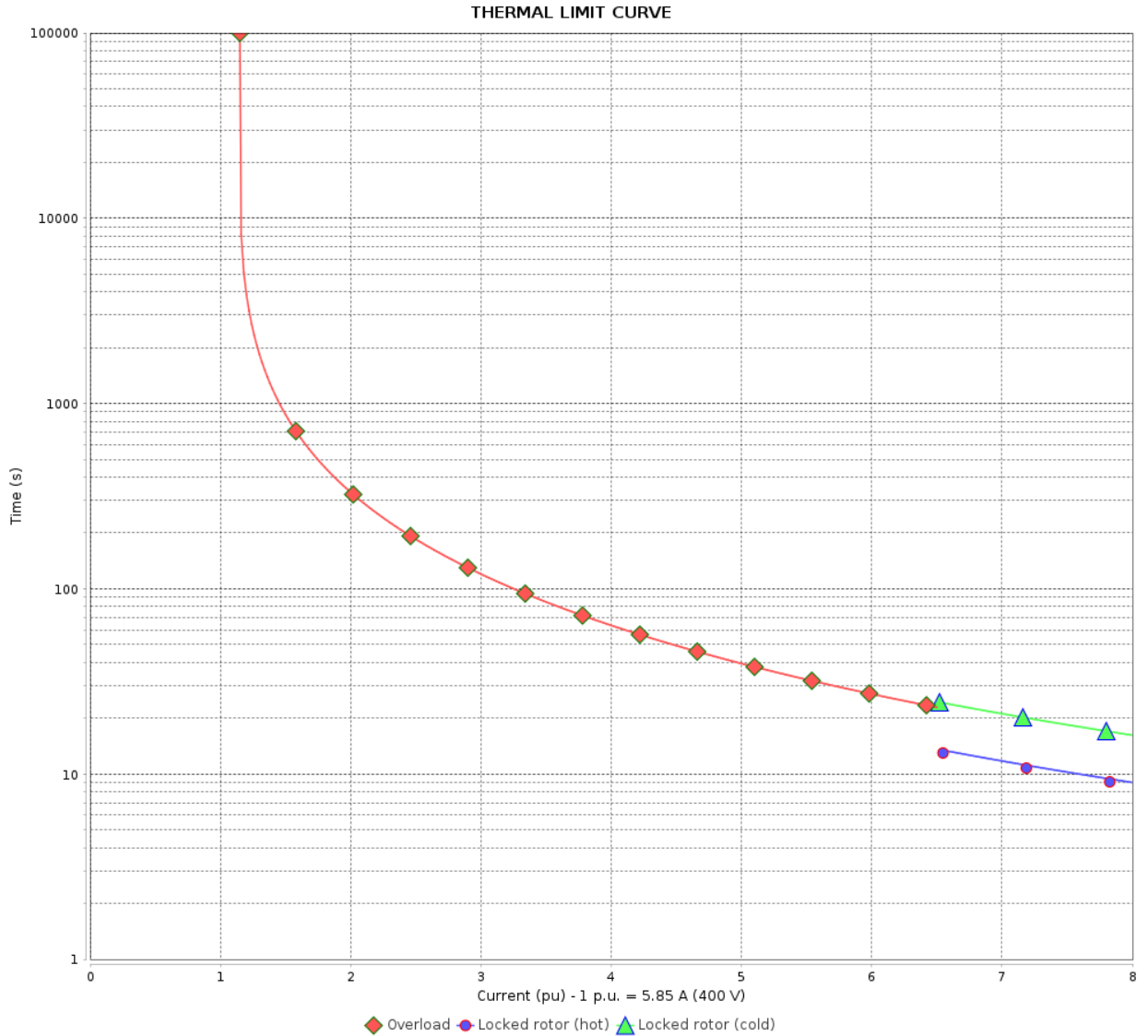
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 Temperature rise : 80 K
 Design : N

Heating constant

Cooling constant

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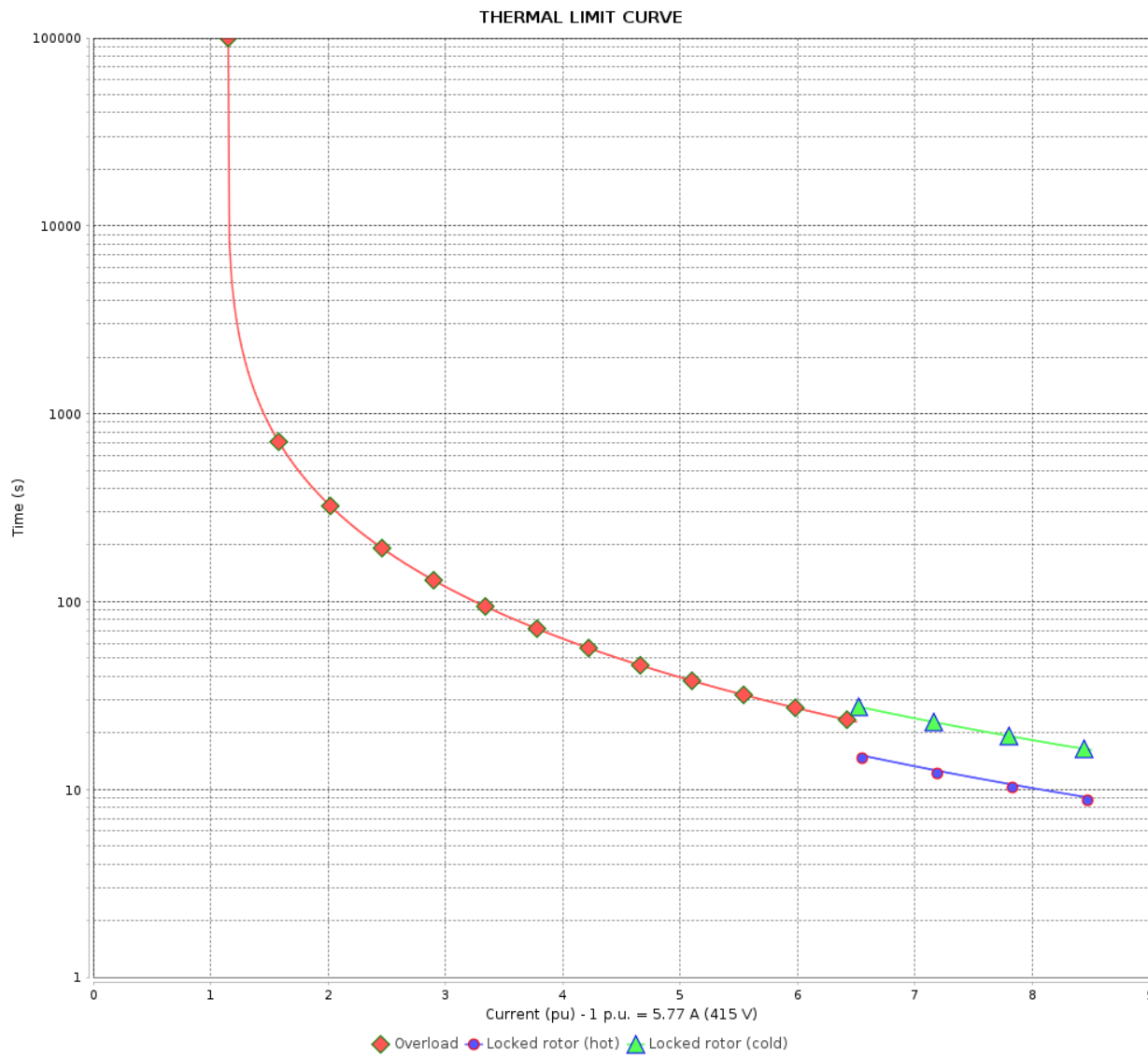
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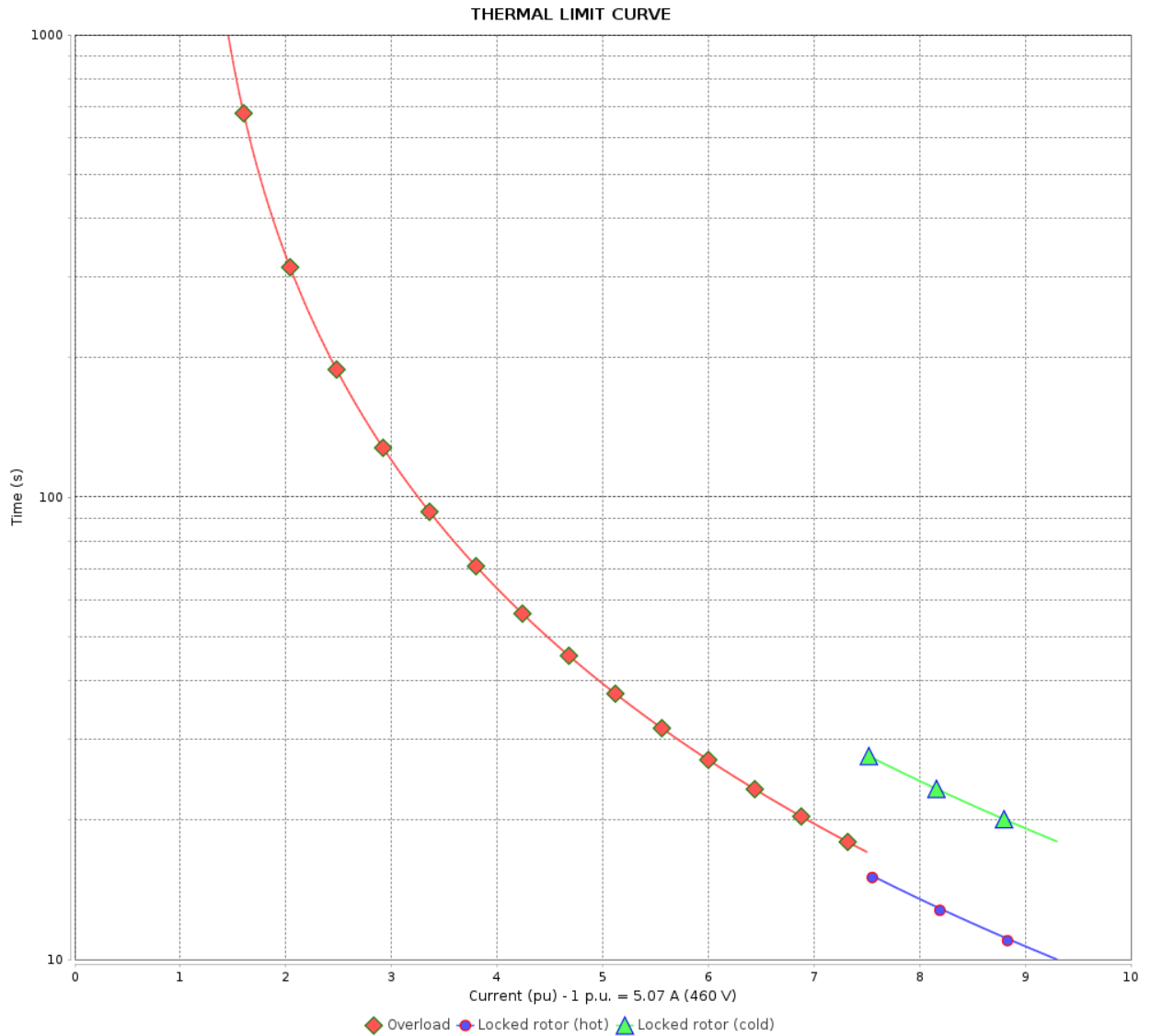
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Performance : 460 V 60 Hz 2P

Rated current : 5.07 A
 LRC : 9.3
 Rated torque : 0.828 kgfm
 Locked rotor torque : 290 %
 Breakdown torque : 440 %
 Rated speed : 3530 rpm

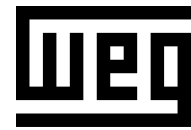
Moment of inertia (J) : 0.0064 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : N

Heating constant
 Cooling constant

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VFD OPERATION CURVE

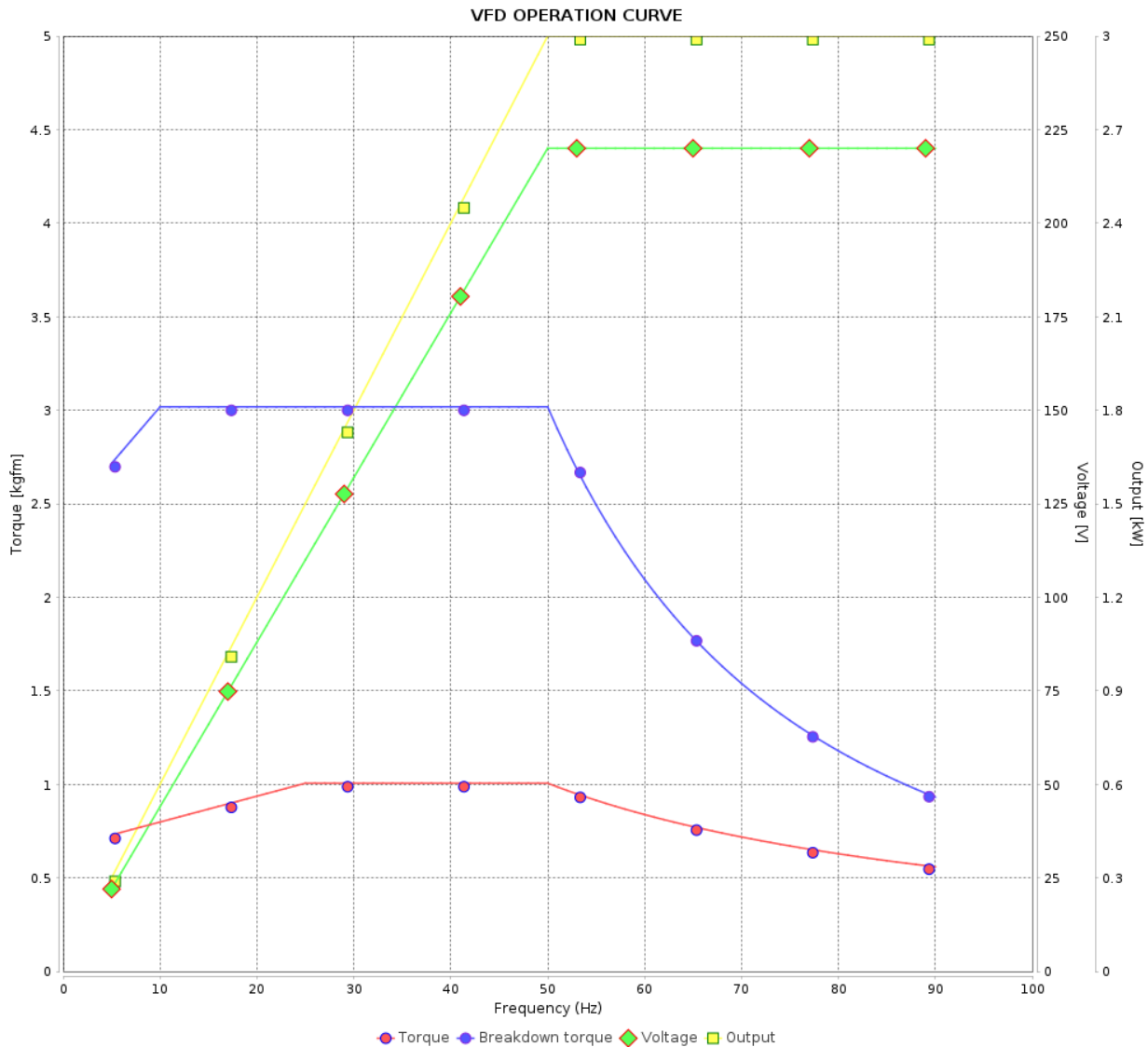
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 Breakdown torque : 300 %
 Rated speed : 2905 rpm

Moment of inertia (J) : 0.0064 kgm²
 Duty cycle : S1
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 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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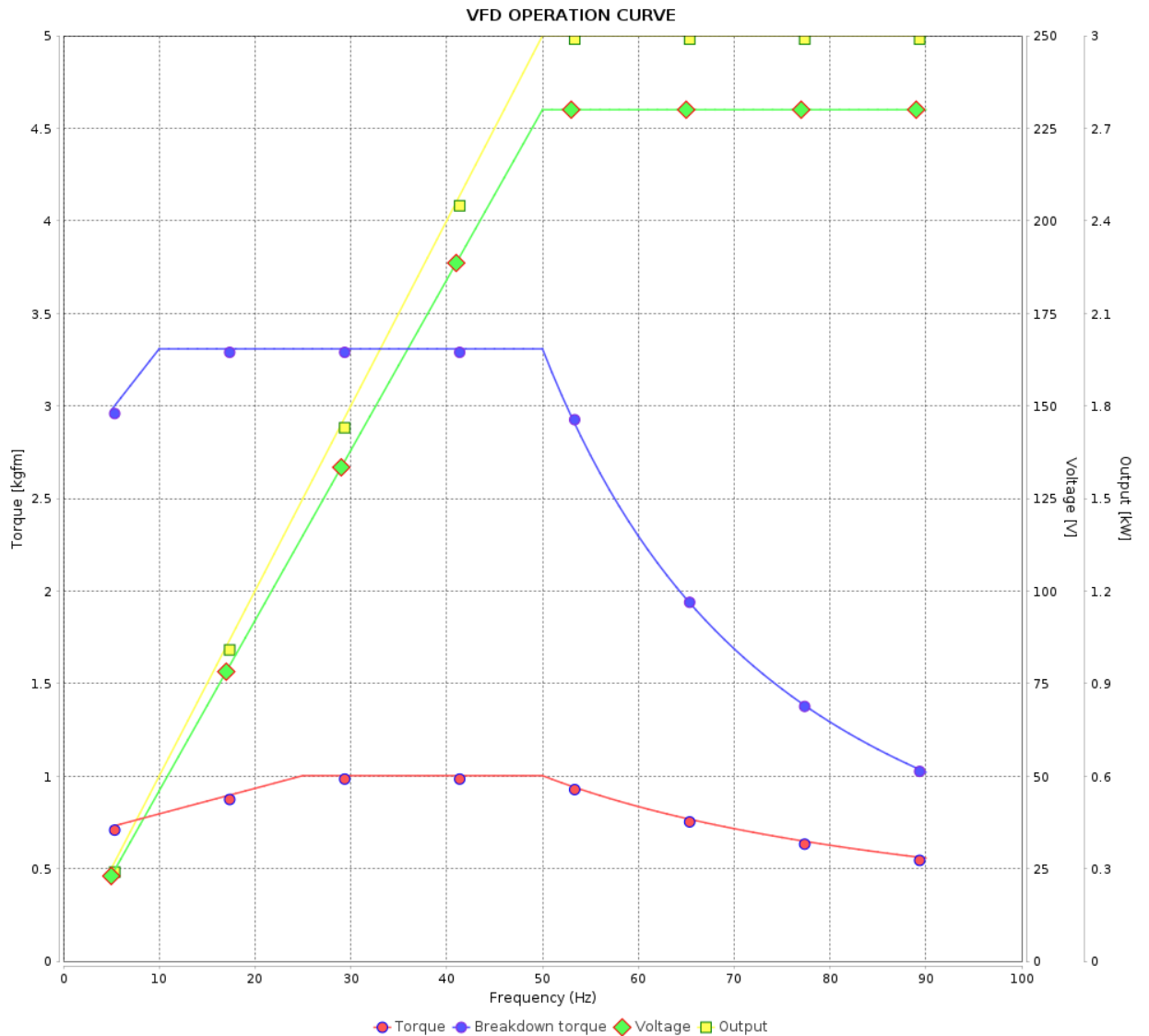
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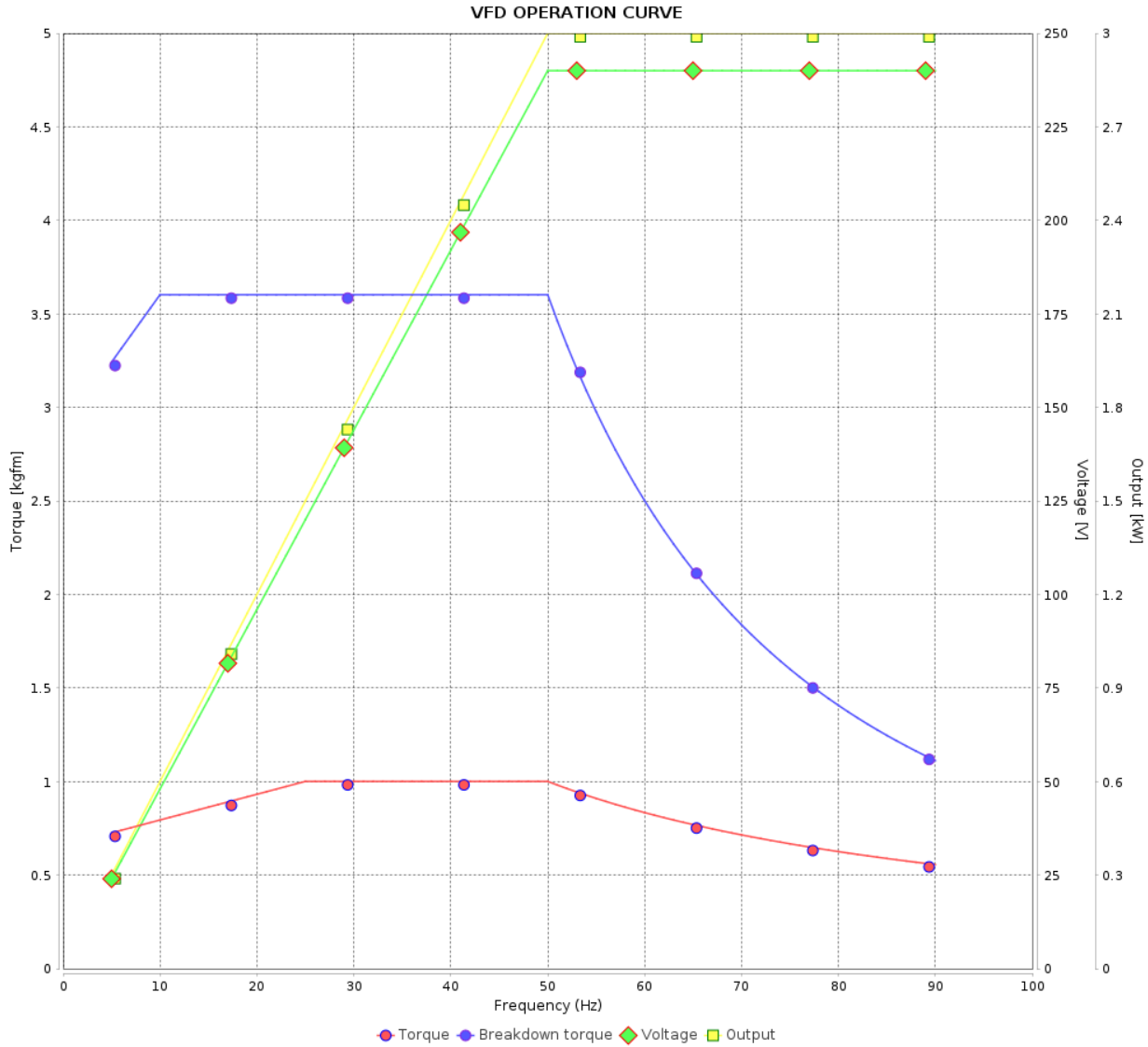
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 Service factor : 1.00
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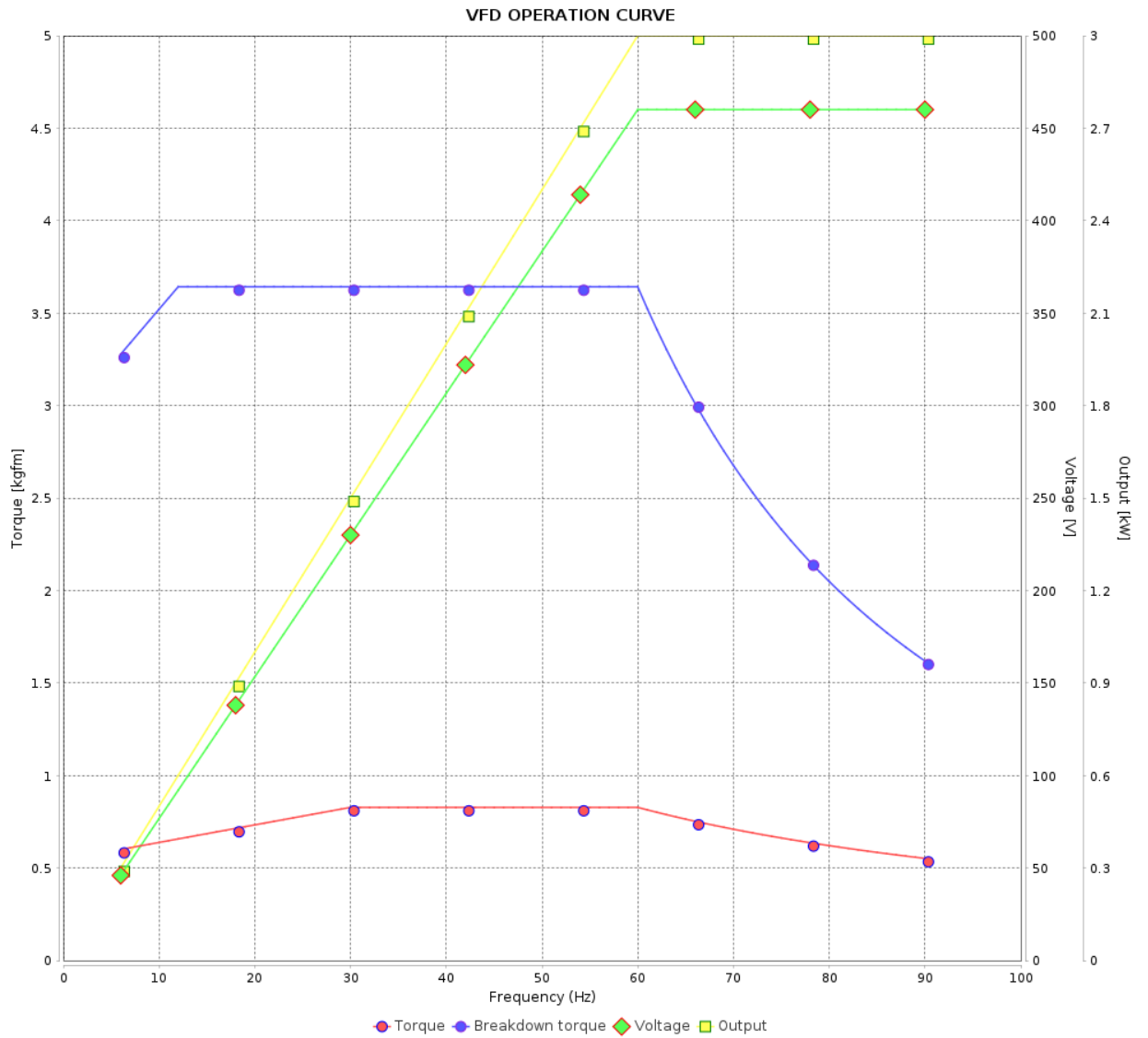
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