

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer		: Astraprom d.o.o.			
Product line		: W22 IE3 Three-Phase		Product code : 13000262	
Frame	: 225S/M	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: B35T		
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	: 383 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.5177 kgm ²		
Design	: N				
Output [kW]	37	37	37	37	37
Poles	4	4	4	4	4
Frequency [Hz]	50	50	50	50	60
Rated voltage [V]	380/660	400/690	415	460	460
Rated current [A]	71.3/41.1	69.4/40.2	68.5	60.7	60.7
L. R. Amperes [A]	528/304	534/310	548	528	528
LRC [A]	7.4	7.7	8.0	8.7	8.7
No load current [A]	28.0/16.1	30.0/17.4	32.0	28.0	28.0
Rated speed [RPM]	1483	1485	1486	1787	1787
Slip [%]	1.13	1.00	0.93	0.72	0.72
Rated torque [kgfm]	24.3	24.3	24.3	20.2	20.2
Locked rotor torque [%]	250	280	310	320	320
Breakdown torque [%]	290	330	360	370	370
Service factor	1.00	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	18s (cold) 0s (hot)	18s (cold) 0s (hot)	16s (cold) 0s (hot)	18s (cold) 0s (hot)	18s (cold) 0s (hot)
Noise level ²	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	67.0 dB(A)	67.0 dB(A)
Efficiency (%)	25%				
	50%	93.0	93.0	92.5	92.6
	75%	93.9	93.9	93.5	94.0
	100%	93.9	93.9	93.9	94.5
Power Factor	25%				
	50%	0.69	0.65	0.61	0.63
	75%	0.79	0.76	0.73	0.75
	100%	0.84	0.82	0.80	0.81
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	6.2	6.2	6.2	5.5
	P2 (0,5;1,0)	5.2	5.2	5.2	4.6
	P3 (0,25;1,0)	5.1	5.1	5.1	4.5
	P4 (0,9;0,5)	3.1	3.1	3.1	2.8
	P5 (0,5;0,5)	2.1	2.1	2.1	1.9
	P6 (0,5;0,25)	1.4	1.4	1.4	1.2
	P7 (0,25;0,25)	1.0	1.0	1.0	0.9
Bearing type	: Drive end : 6314 C3	Non drive end : 6314 C3	Foundation loads		
Sealing	: WSeal	WSeal	Max. traction	: 646 kgf	
Lubrication interval	: 14000 h	14000 h	Max. compression	: 1030 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

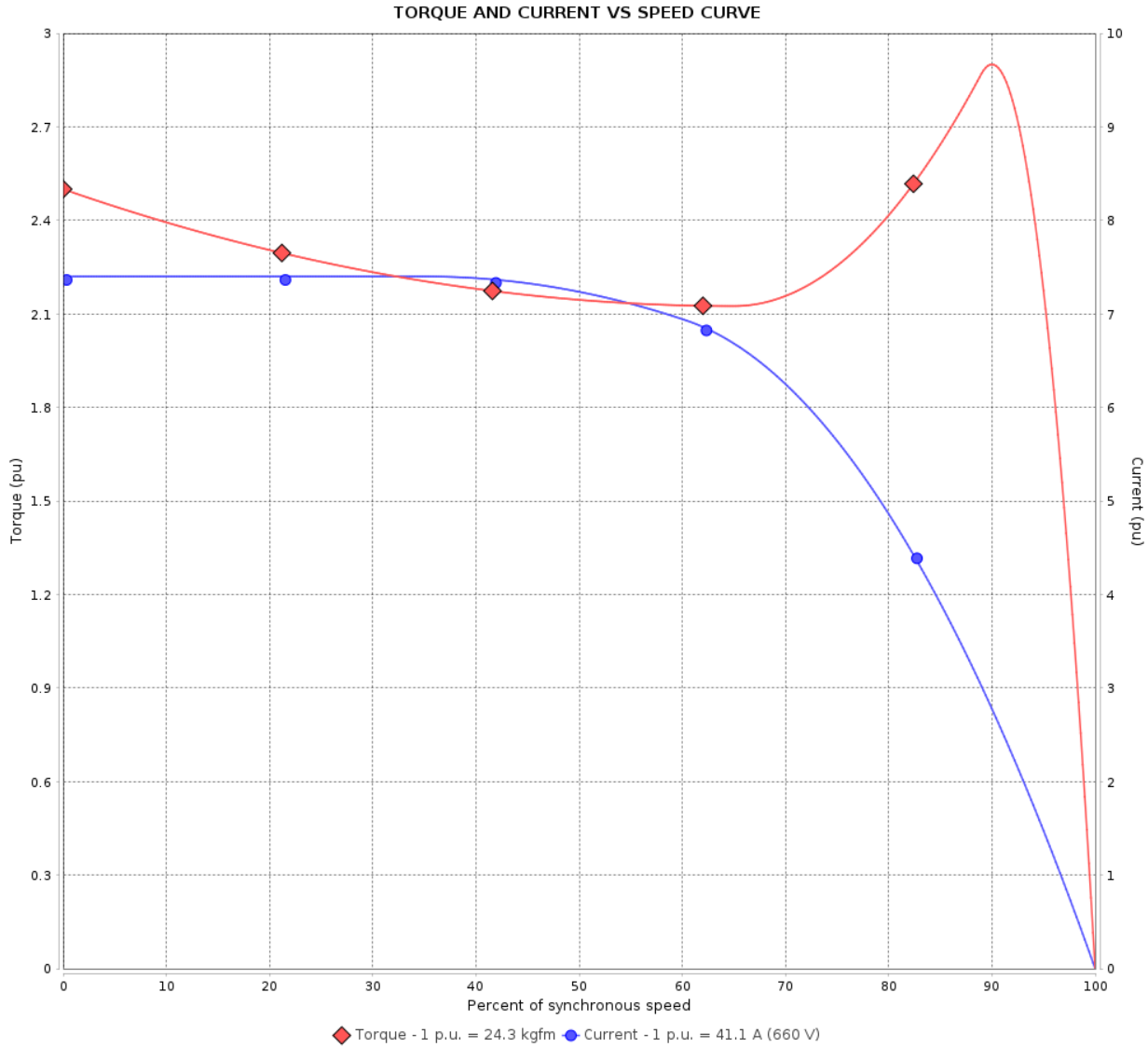
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 13000262



Performance : 380/660 V 50 Hz 4P

Rated current	: 71.3/41.1 A	Moment of inertia (J)	: 0.5177 kgm ²
LRC	: 7.4	Duty cycle	: S1
Rated torque	: 24.3 kgfm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1483 rpm	Design	: N

Locked rotor time : 18s (cold) 0s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

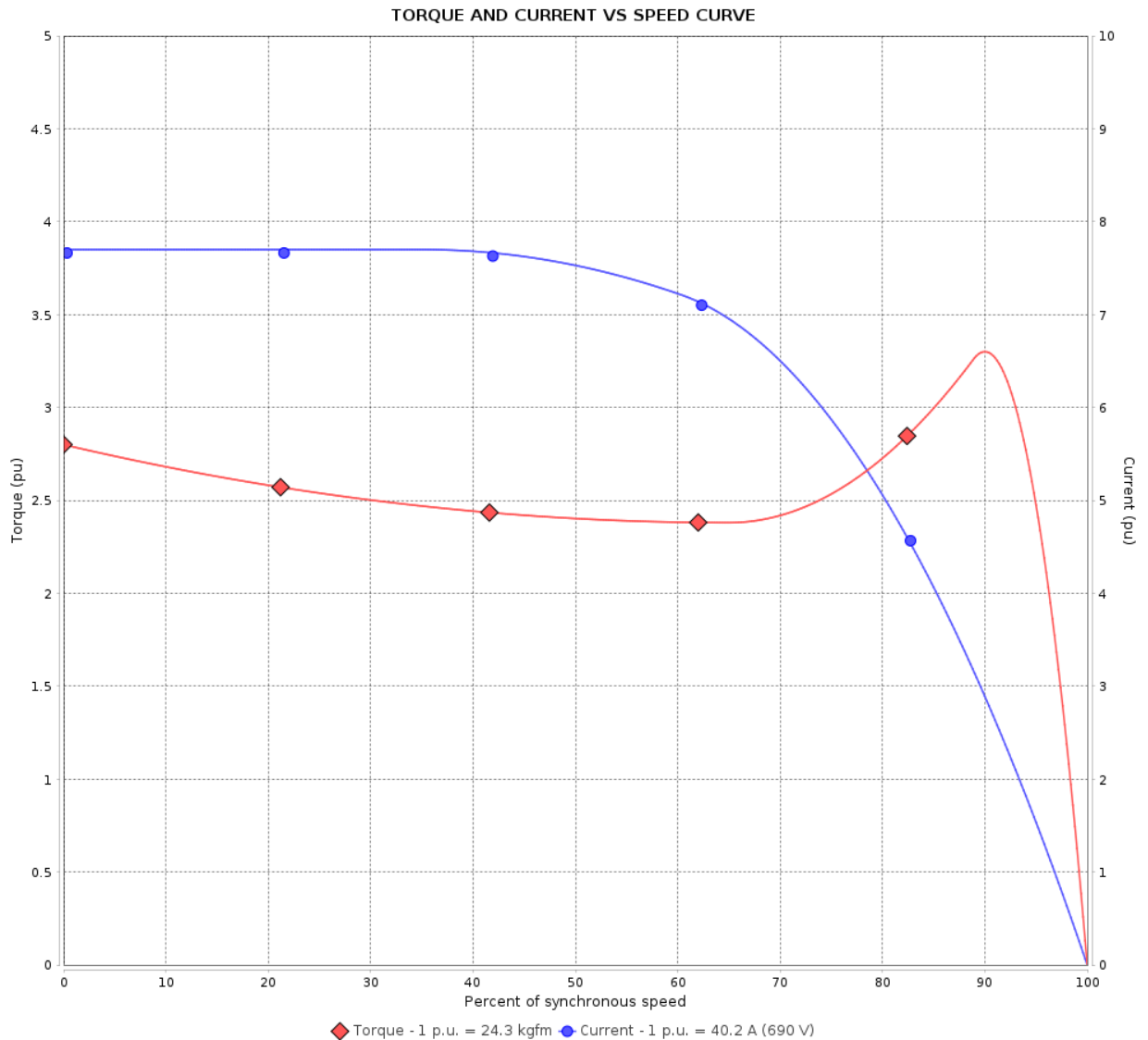


Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code :

13000262



Performance : 400/690 V 50 Hz 4P

Rated current : 69.4/40.2 A
 LRC : 7.7
 Rated torque : 24.3 kgfm
 Locked rotor torque : 280 %
 Breakdown torque : 330 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 0.5177 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Locked rotor time : 18s (cold) 0s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

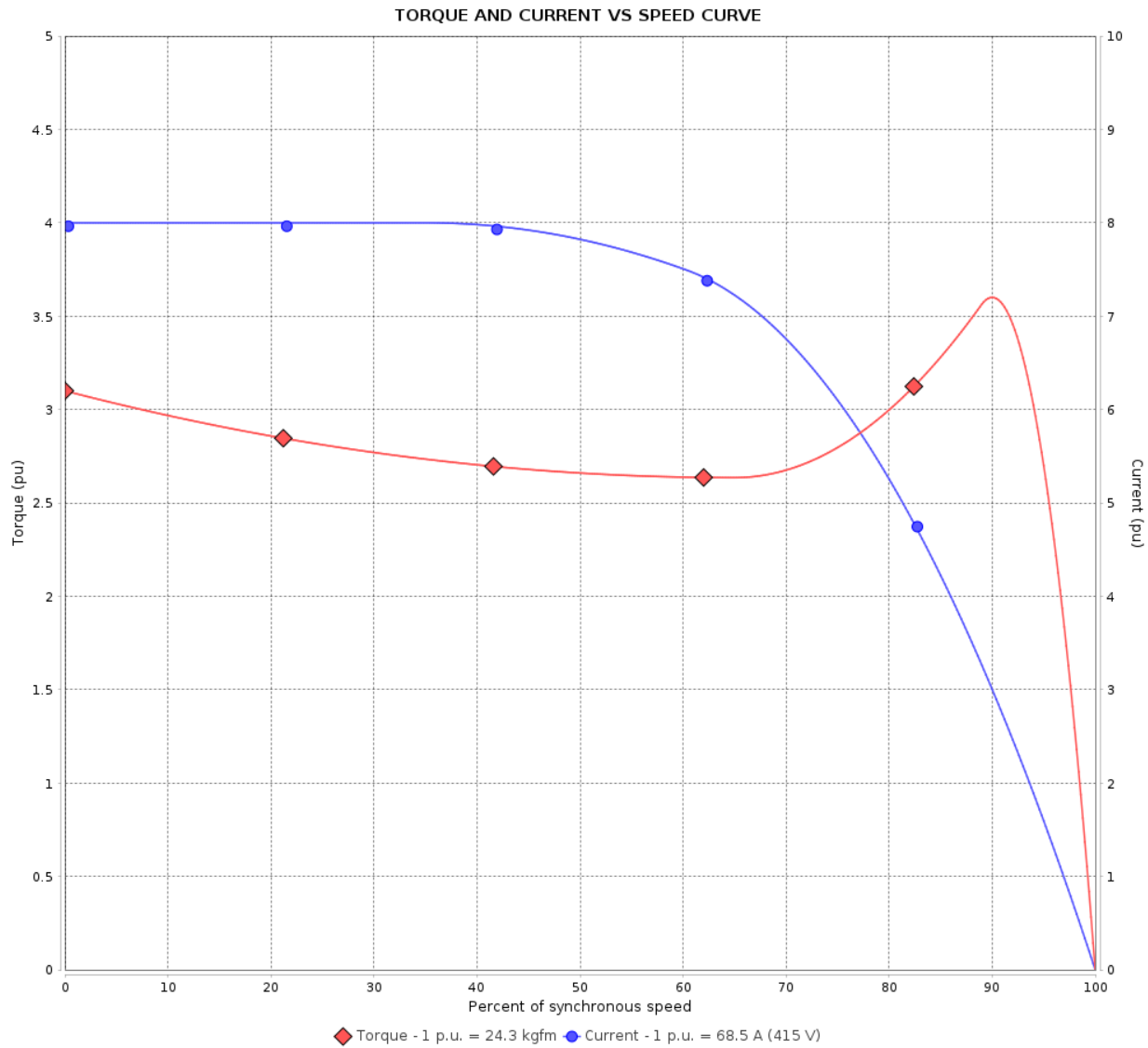
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 13000262



Performance : 415 V 50 Hz 4P

Rated current	: 68.5 A	Moment of inertia (J)	: 0.5177 kgm ²
LRC	: 8.0	Duty cycle	: S1
Rated torque	: 24.3 kgfm	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 360 %	Temperature rise	: 80 K
Rated speed	: 1486 rpm	Design	: N

Locked rotor time : 16s (cold) 0s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

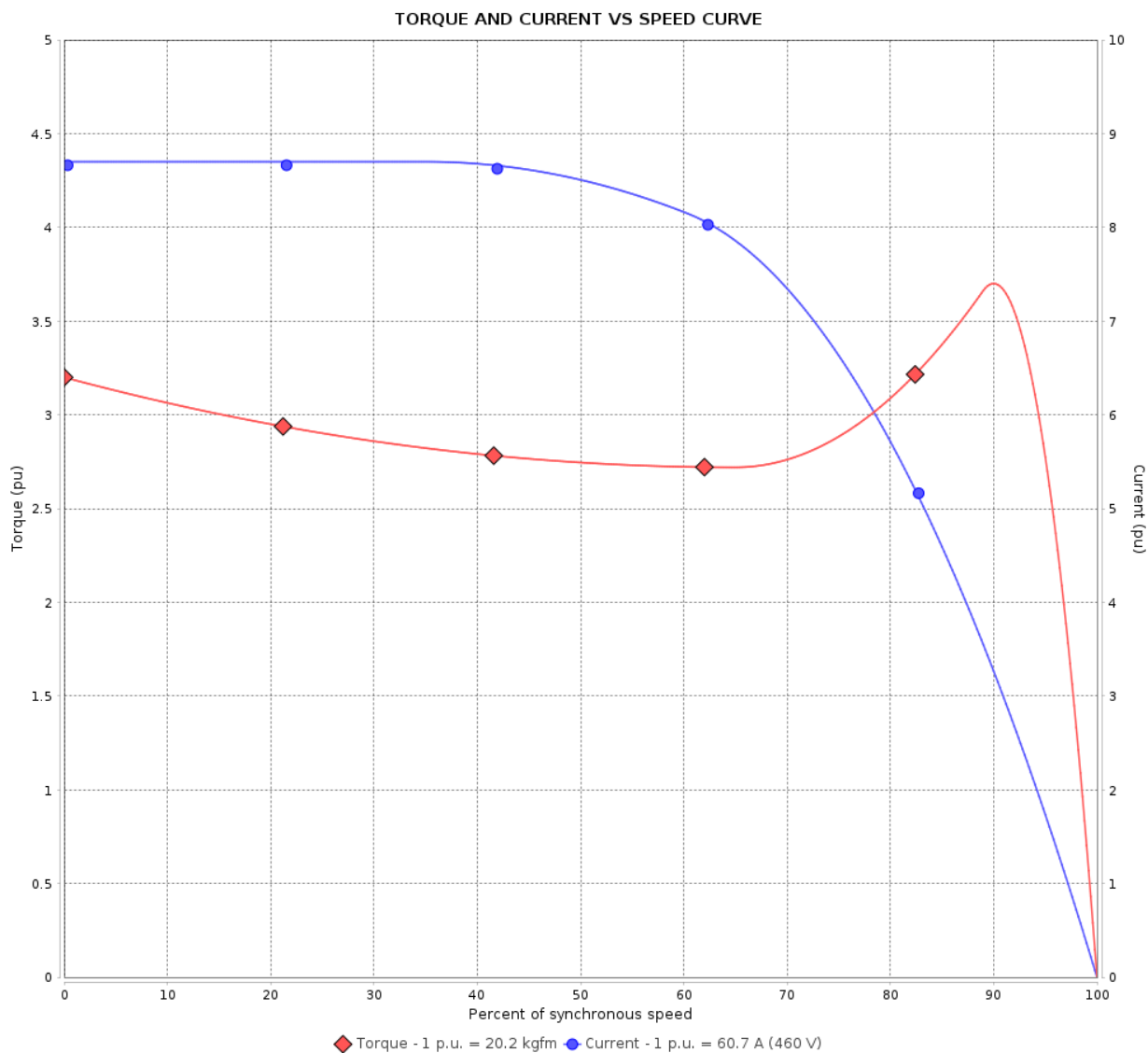


Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 13000262



Performance : 460 V 60 Hz 4P

Rated current	: 60.7 A	Moment of inertia (J)	: 0.5177 kgm ²
LRC	: 8.7	Duty cycle	: S1
Rated torque	: 20.2 kgfm	Insulation class	: F
Locked rotor torque	: 320 %	Service factor	: 1.00
Breakdown torque	: 370 %	Temperature rise	: 80 K
Rated speed	: 1787 rpm	Design	: N

Locked rotor time : 18s (cold) 0s (hot)

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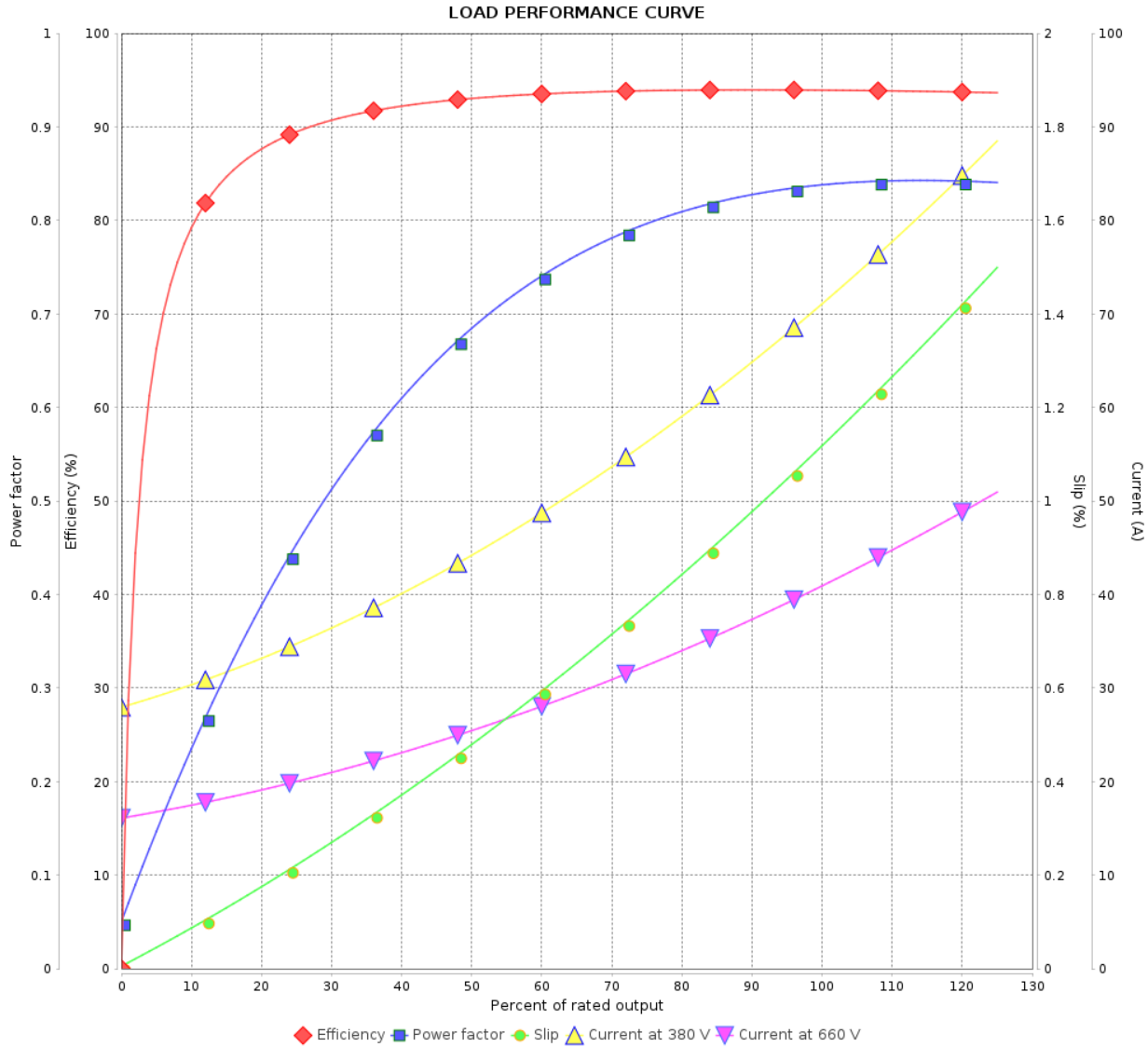
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Customer : Astraprom d.o.o.

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Performance : 380/660 V 50 Hz 4P

Rated current : 71.3/41.1 A
 LRC : 7.4
 Rated torque : 24.3 kgfm
 Locked rotor torque : 250 %
 Breakdown torque : 290 %
 Rated speed : 1483 rpm

Moment of inertia (J) : 0.5177 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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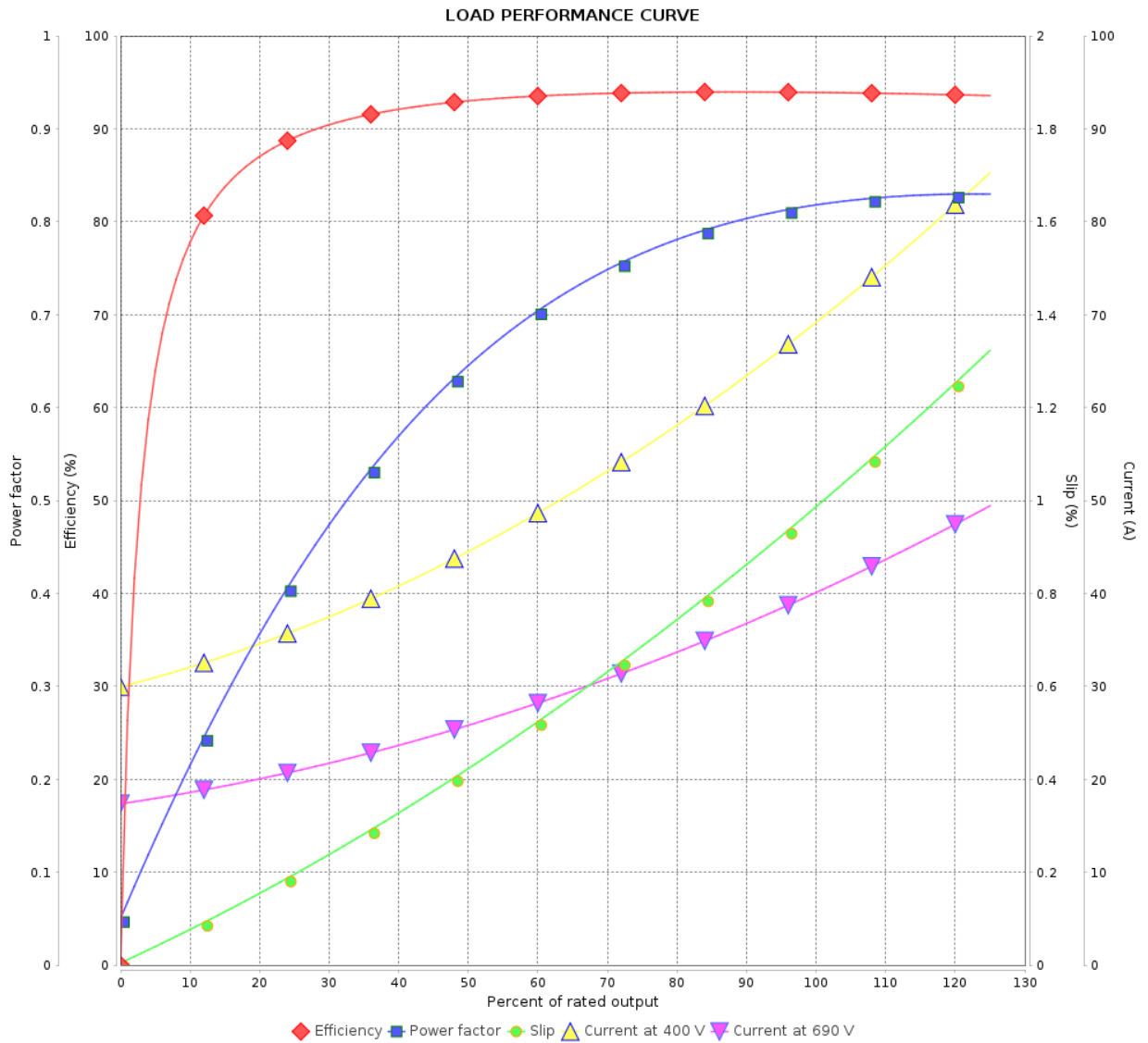
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Performance : 400/690 V 50 Hz 4P

Rated current : 69.4/40.2 A
 LRC : 7.7
 Rated torque : 24.3 kgfm
 Locked rotor torque : 280 %
 Breakdown torque : 330 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 0.5177 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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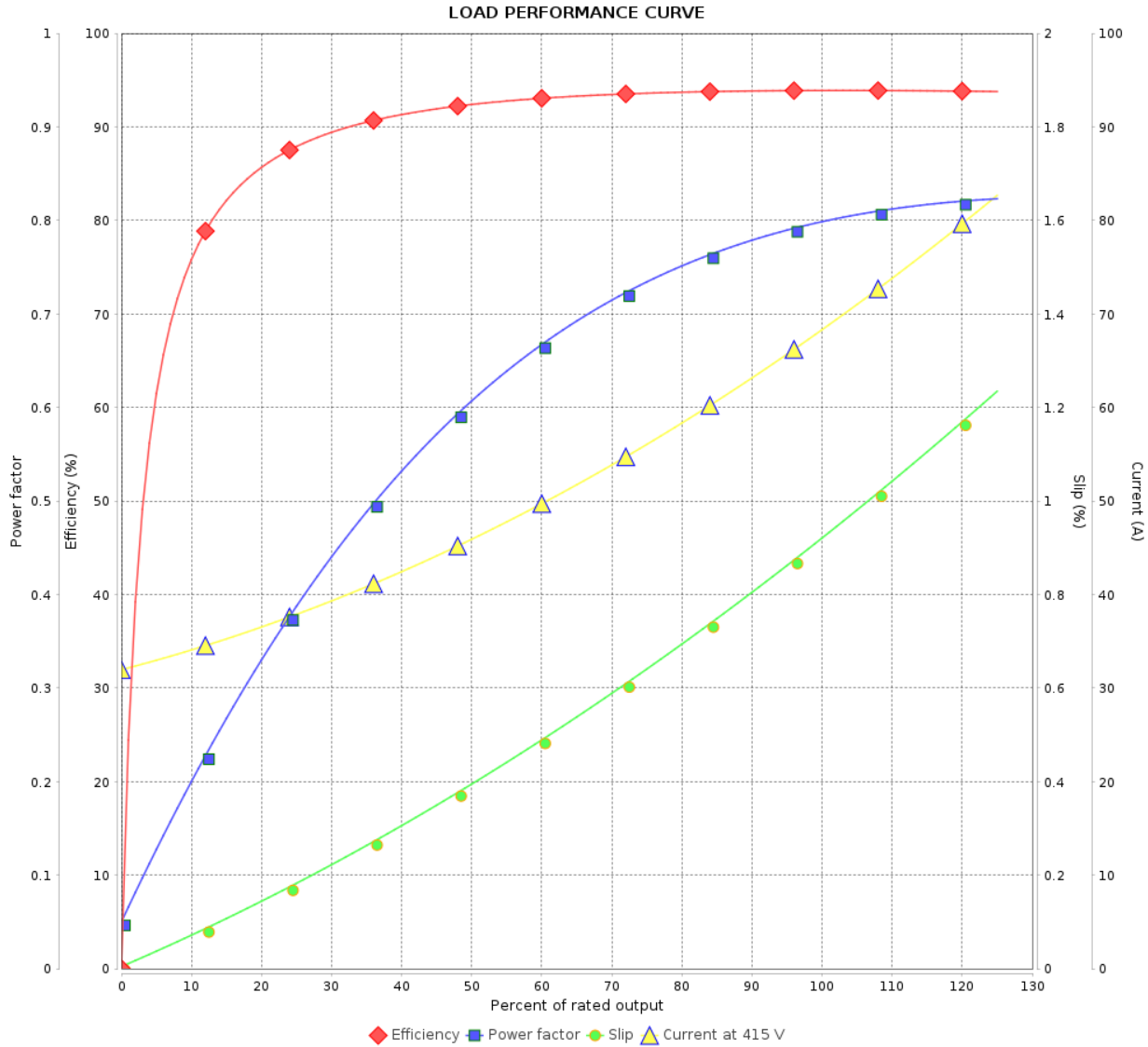
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Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 360 %	Temperature rise	: 80 K
Rated speed	: 1486 rpm	Design	: N

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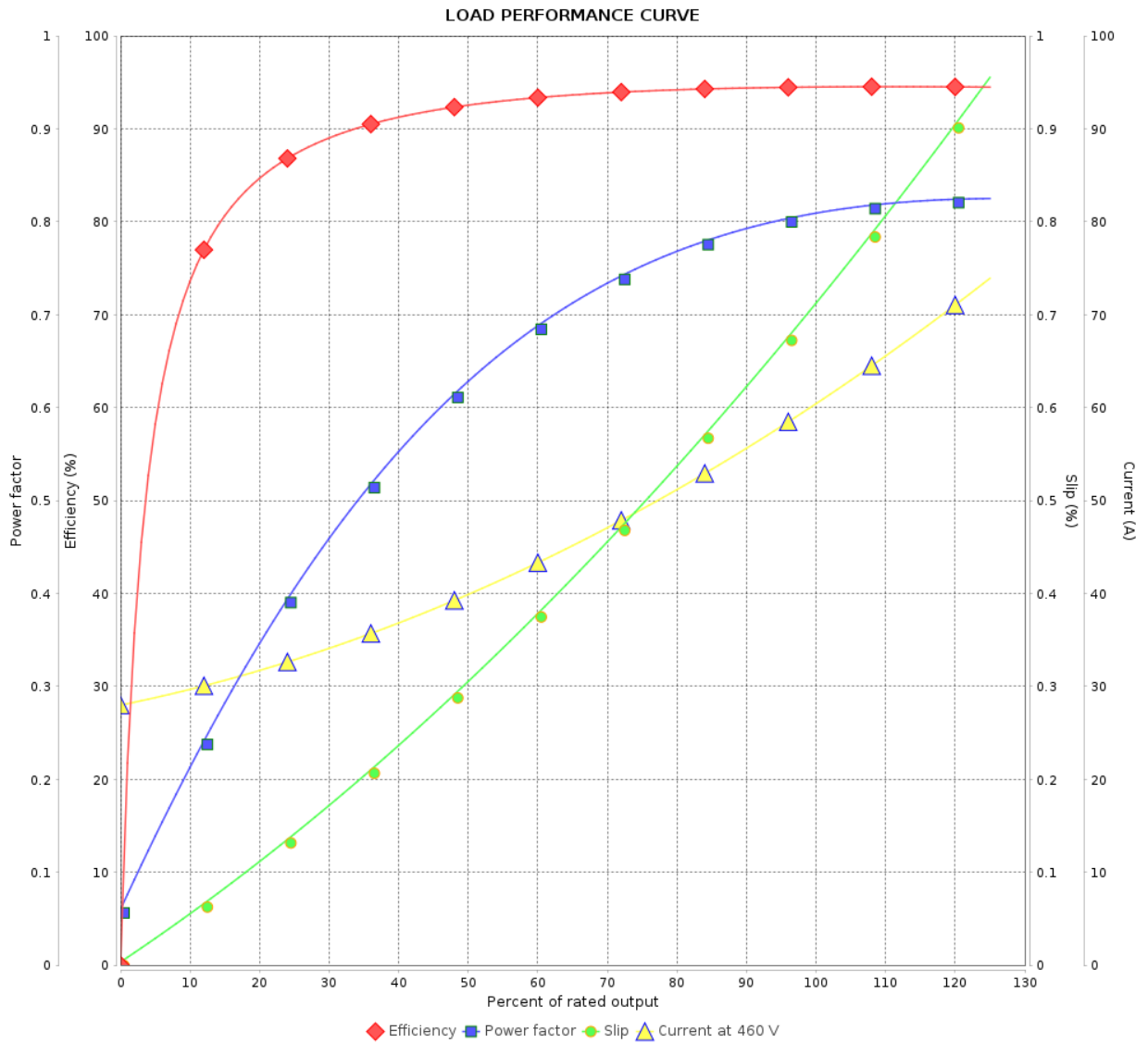
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THERMAL LIMIT CURVE

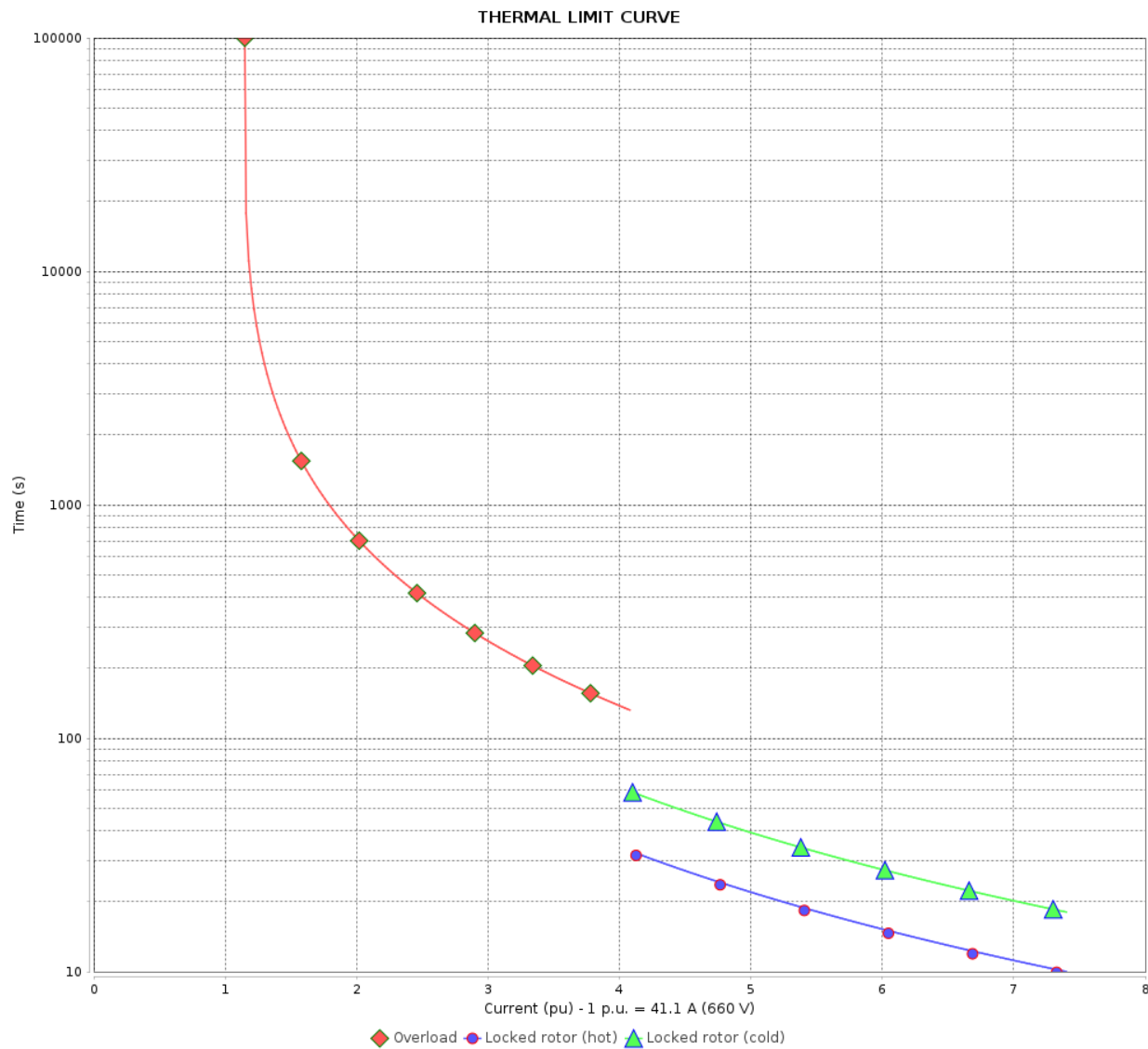
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Moment of inertia (J) : 0.5177 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Heating constant
 Cooling constant

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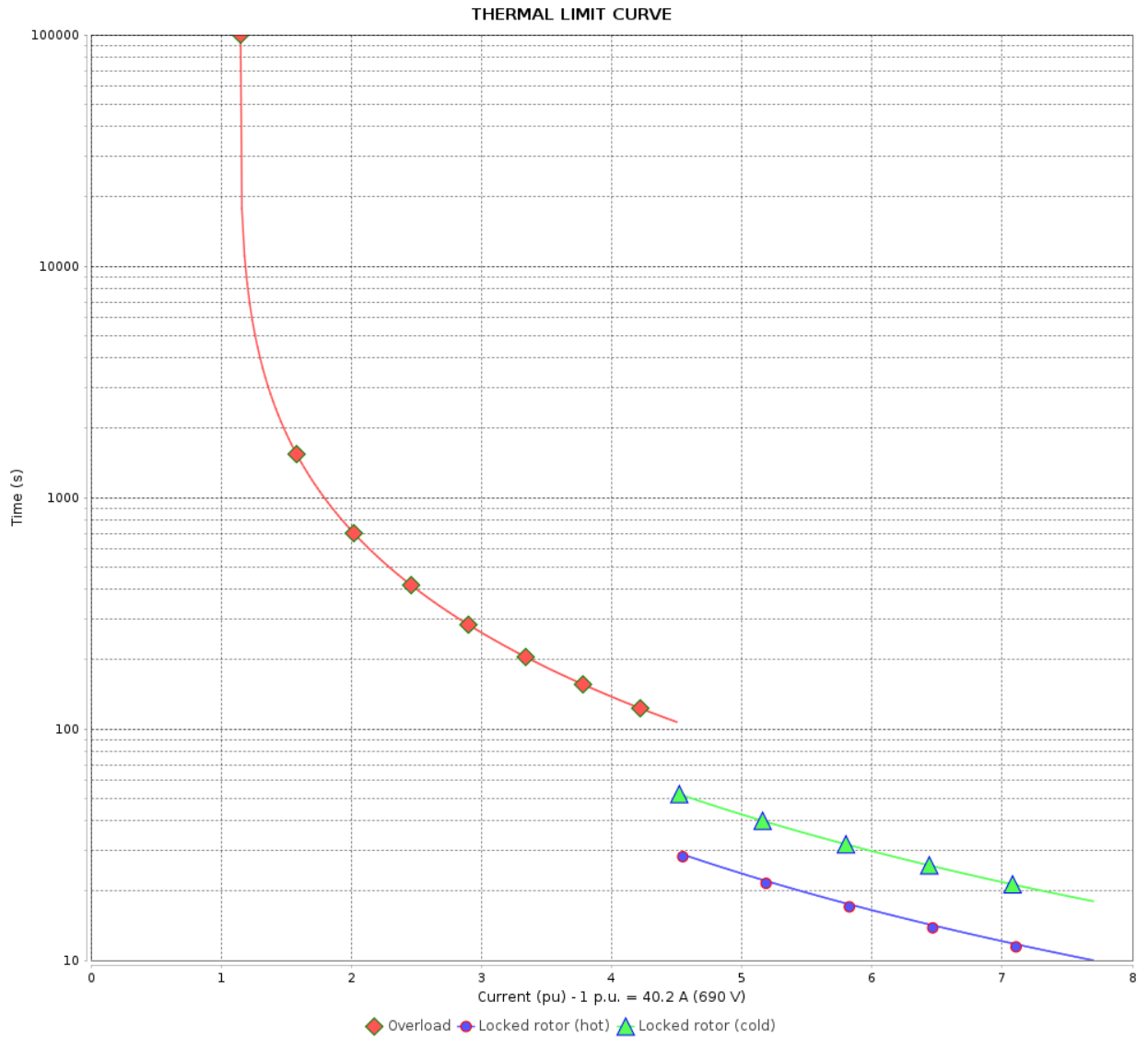


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Heating constant

Cooling constant

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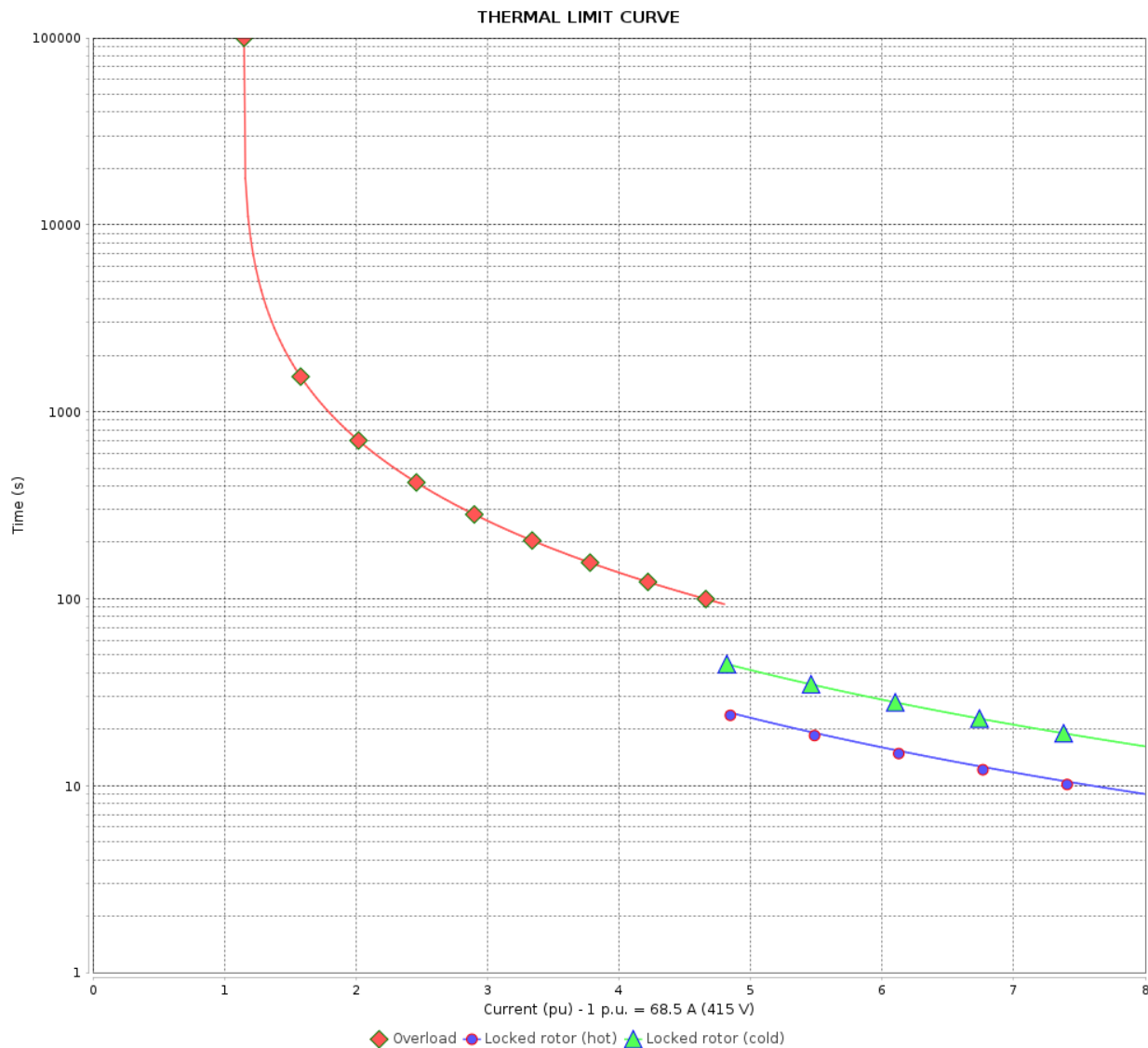
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Rated torque	: 24.3 kgfm	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 360 %	Temperature rise	: 80 K
Rated speed	: 1486 rpm	Design	: N

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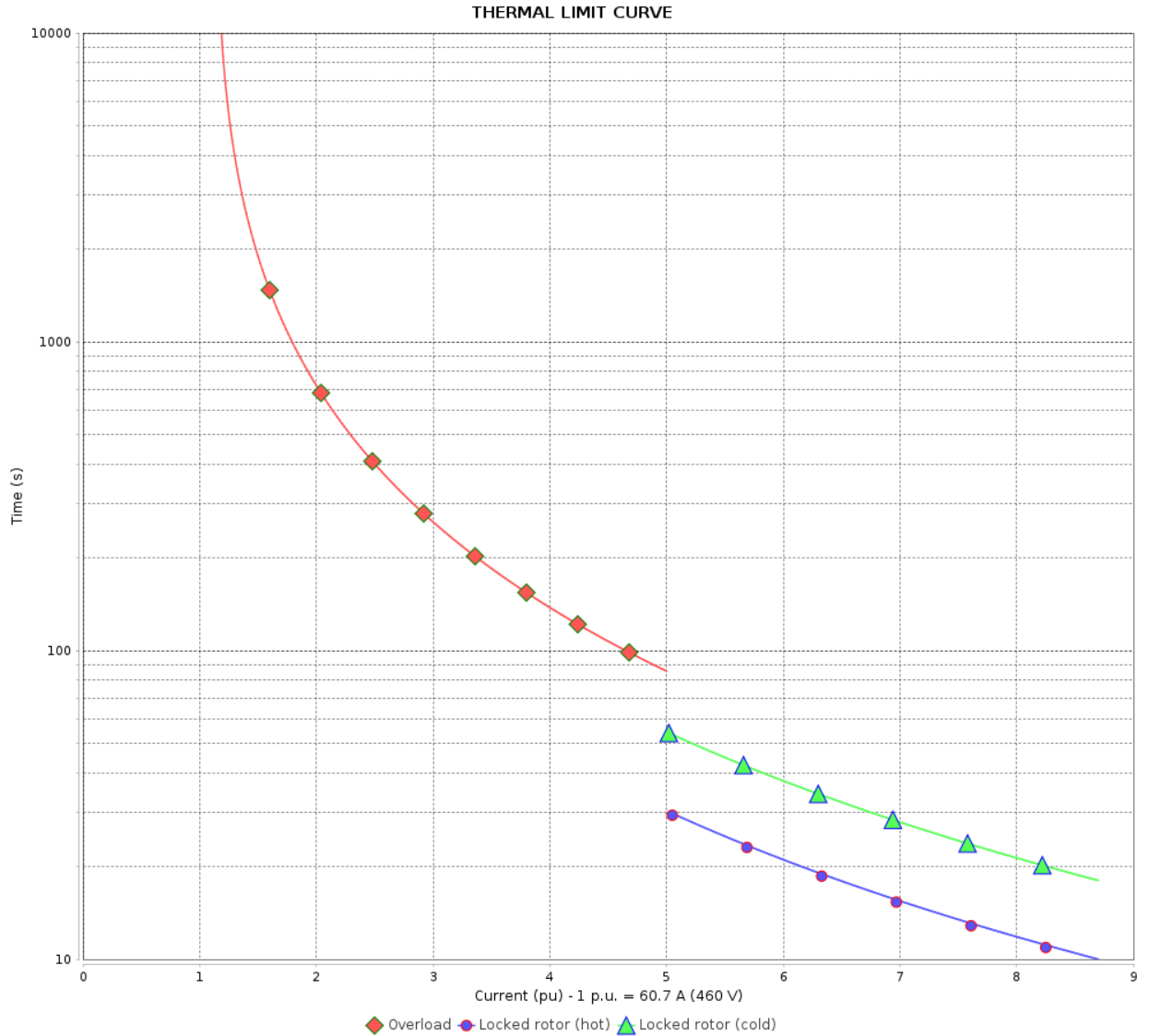
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Customer : Astraprom d.o.o.

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Performance : 460 V 60 Hz 4P

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 Breakdown torque : 370 %
 Rated speed : 1787 rpm

Moment of inertia (J) : 0.5177 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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Cooling constant

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VFD OPERATION CURVE

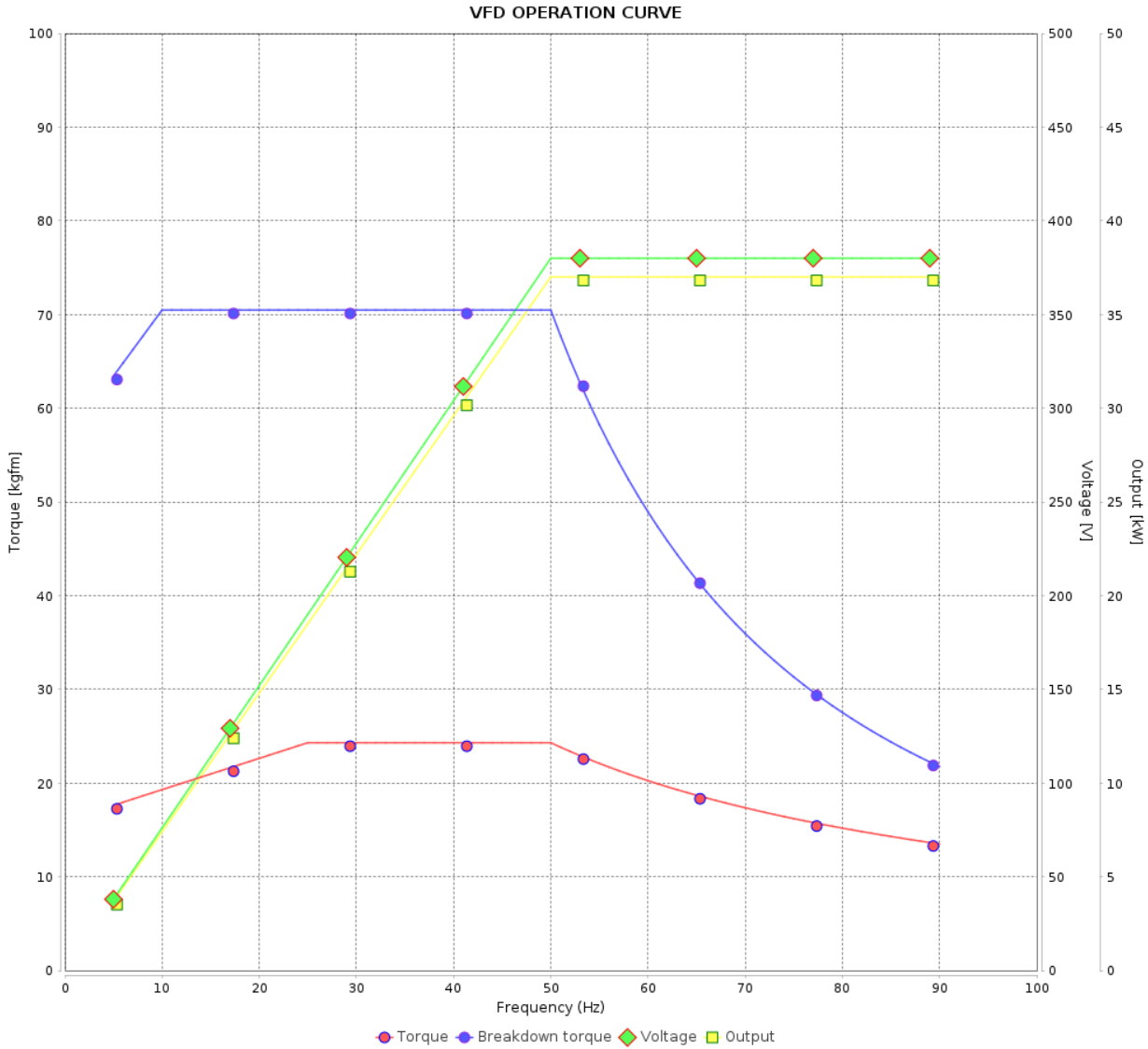
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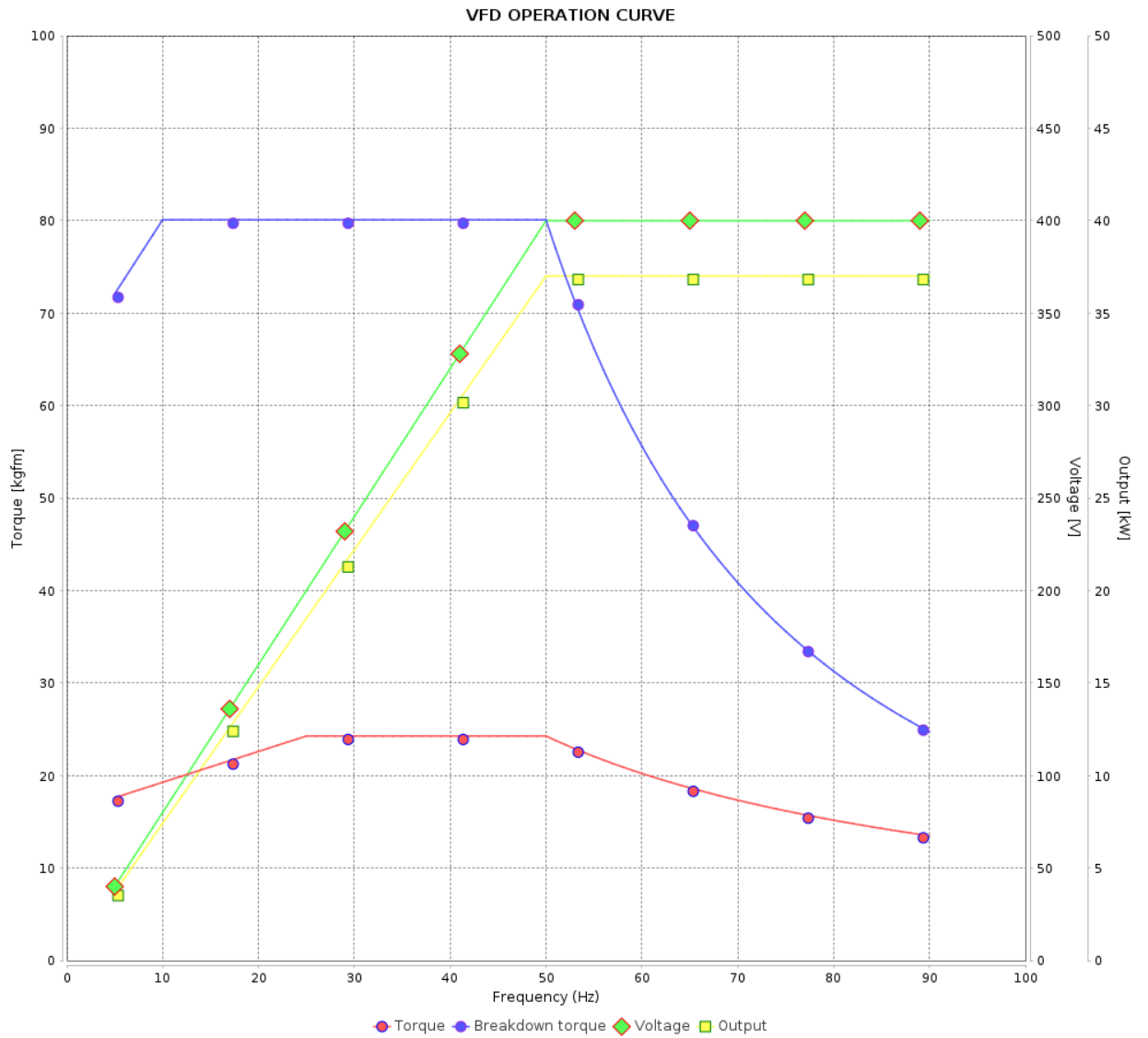
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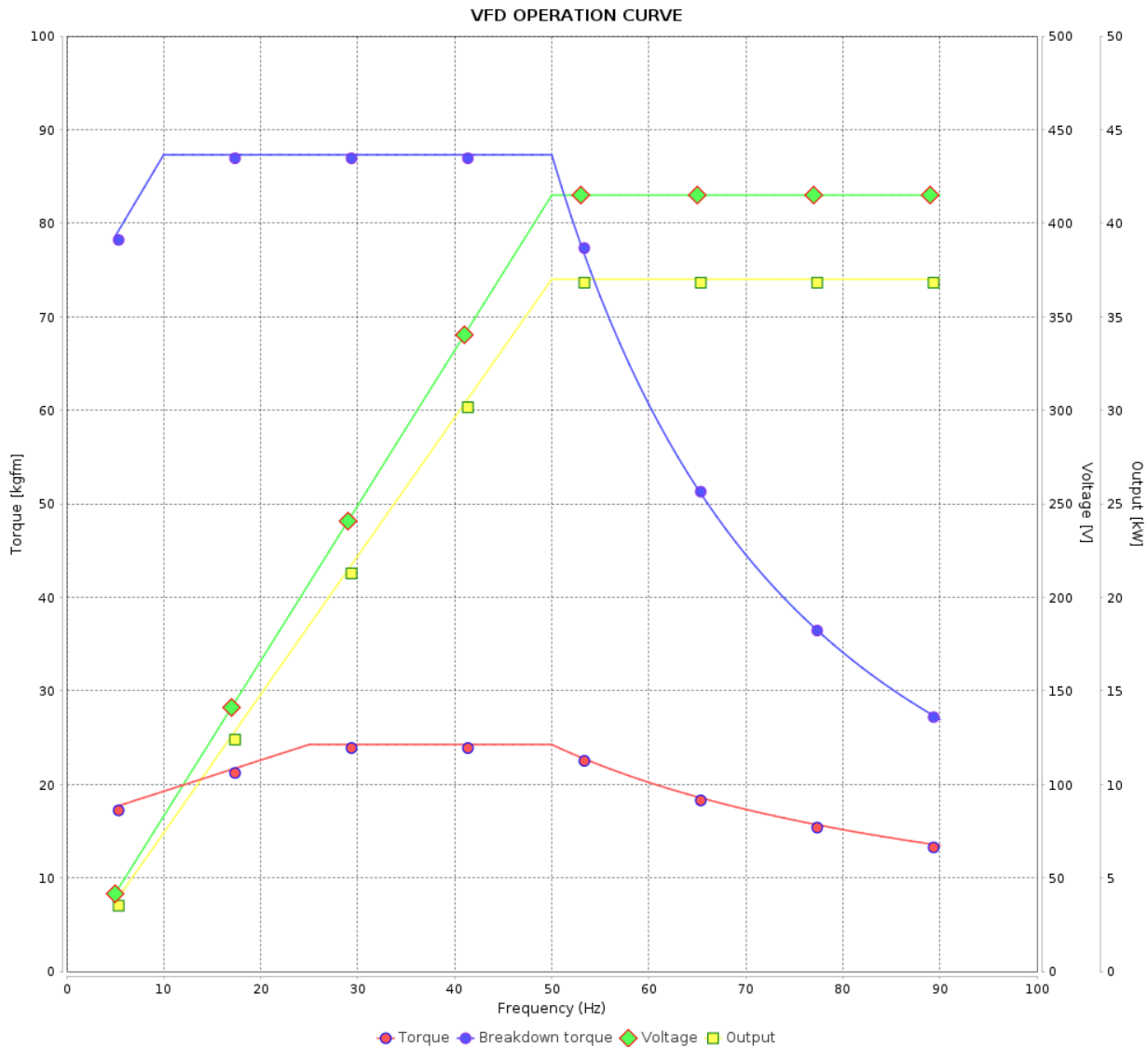
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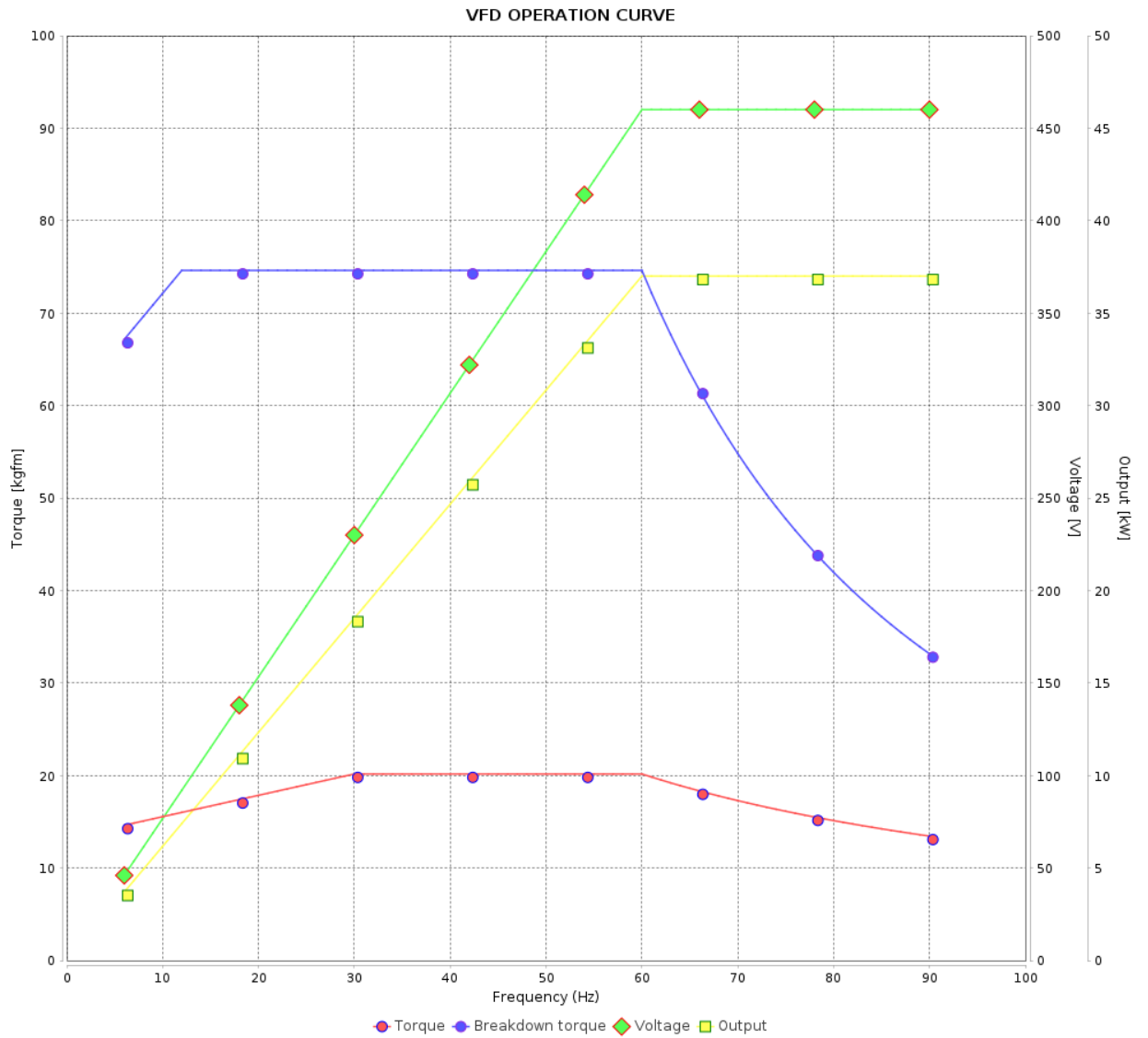
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