

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer		: Astraprom d.o.o.	
Product line		: W22 IE4 Three-Phase	Product code : 13252549
Frame	: 180M	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	: 191 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.1183 kgm ²
Design	: N		
Output [kW]	22		22
Poles	2		2
Frequency [Hz]	50		60
Rated voltage [V]	400/690		460
Rated current [A]	40.2/23.3		35.8
L. R. Amperes [A]	342/198		340
LRC [A]	8.5		9.5
No load current [A]	17.0/9.86		15.5
Rated speed [RPM]	2960		3565
Slip [%]	1.33		0.97
Rated torque [kgfm]	7.24		6.01
Locked rotor torque [%]	340		400
Breakdown torque [%]	370		400
Service factor	1.00		1.00
Temperature rise	80 K		80 K
Locked rotor time	14s (cold) 8s (hot)		23s (cold) 13s (hot)
Noise level ²	67.0 dB(A)		72.0 dB(A)
Efficiency (%)	25%		
	50%	92.8	92.4
	75%	93.6	93.0
	100%	94.0	93.0
Power Factor	25%		
	50%	0.69	0.65
	75%	0.79	0.76
	100%	0.84	0.83
Losses at normative operating points (speed;torque), in percentage of rated output power			
Losses (%)	P1 (0,9;1,0)	6.1	7.1
	P2 (0,5;1,0)	4.7	5.5
	P3 (0,25;1,0)	4.3	5.0
	P4 (0,9;0,5)	3.5	4.1
	P5 (0,5;0,5)	2.1	2.5
	P6 (0,5;0,25)	1.6	1.8
	P7 (0,25;0,25)	1.0	1.2
Bearing type	: Drive end 6311 ZZ C3 Non drive end 6211 ZZ C3	Foundation loads	
Sealing	: Oil Seal Lip Seal	Max. traction	: 249 kgf
Lubrication interval	: - -	Max. compression	: 439 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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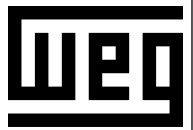


Customer : Astraprom d.o.o.

Notes

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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

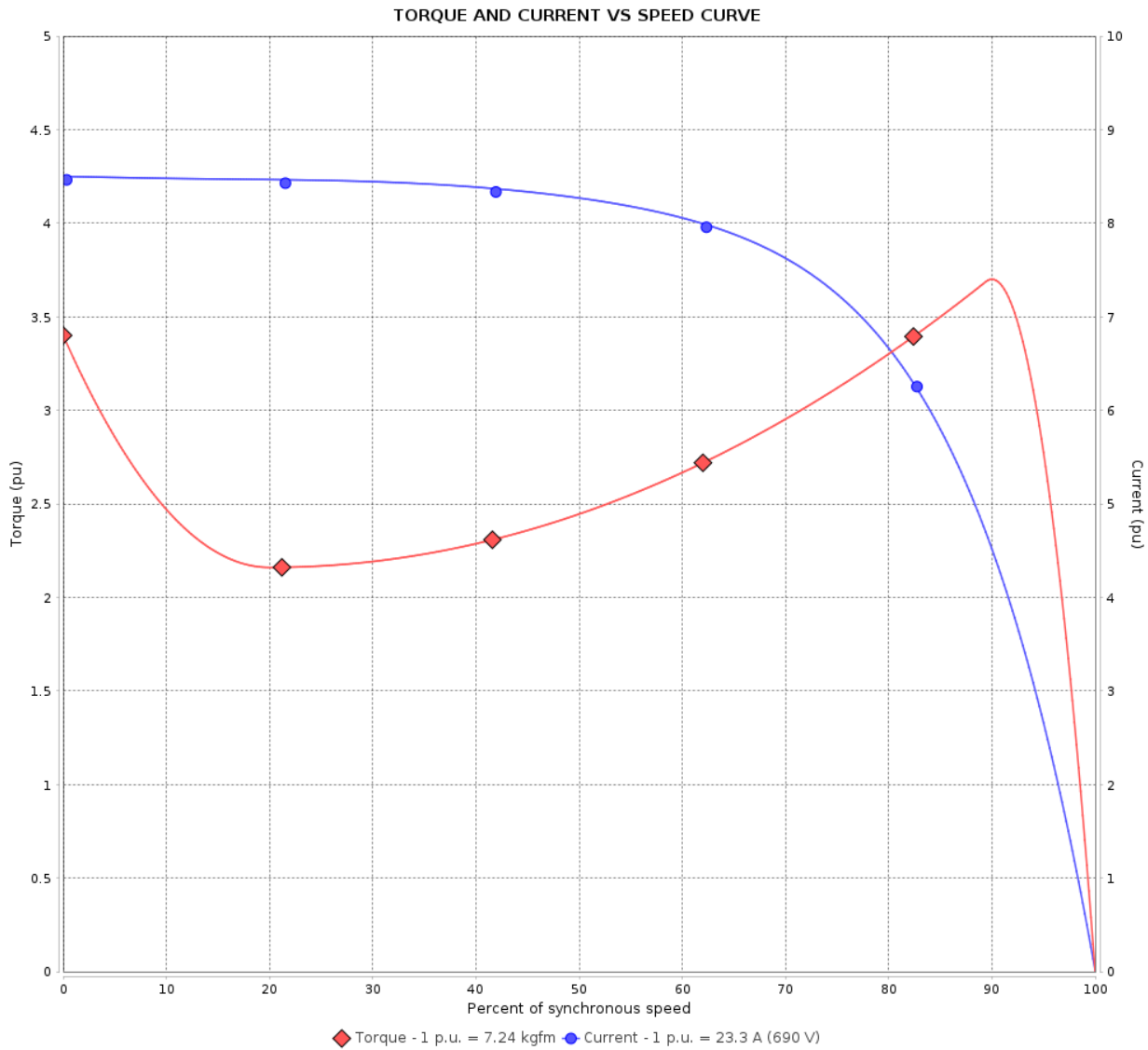
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Performance : 400/690 V 50 Hz 2P

Rated current	: 40.2/23.3 A	Moment of inertia (J)	: 0.1183 kgm ²
LRC	: 8.5	Duty cycle	: S1
Rated torque	: 7.24 kgfm	Insulation class	: F
Locked rotor torque	: 340 %	Service factor	: 1.00
Breakdown torque	: 370 %	Temperature rise	: 80 K
Rated speed	: 2960 rpm	Design	: N

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

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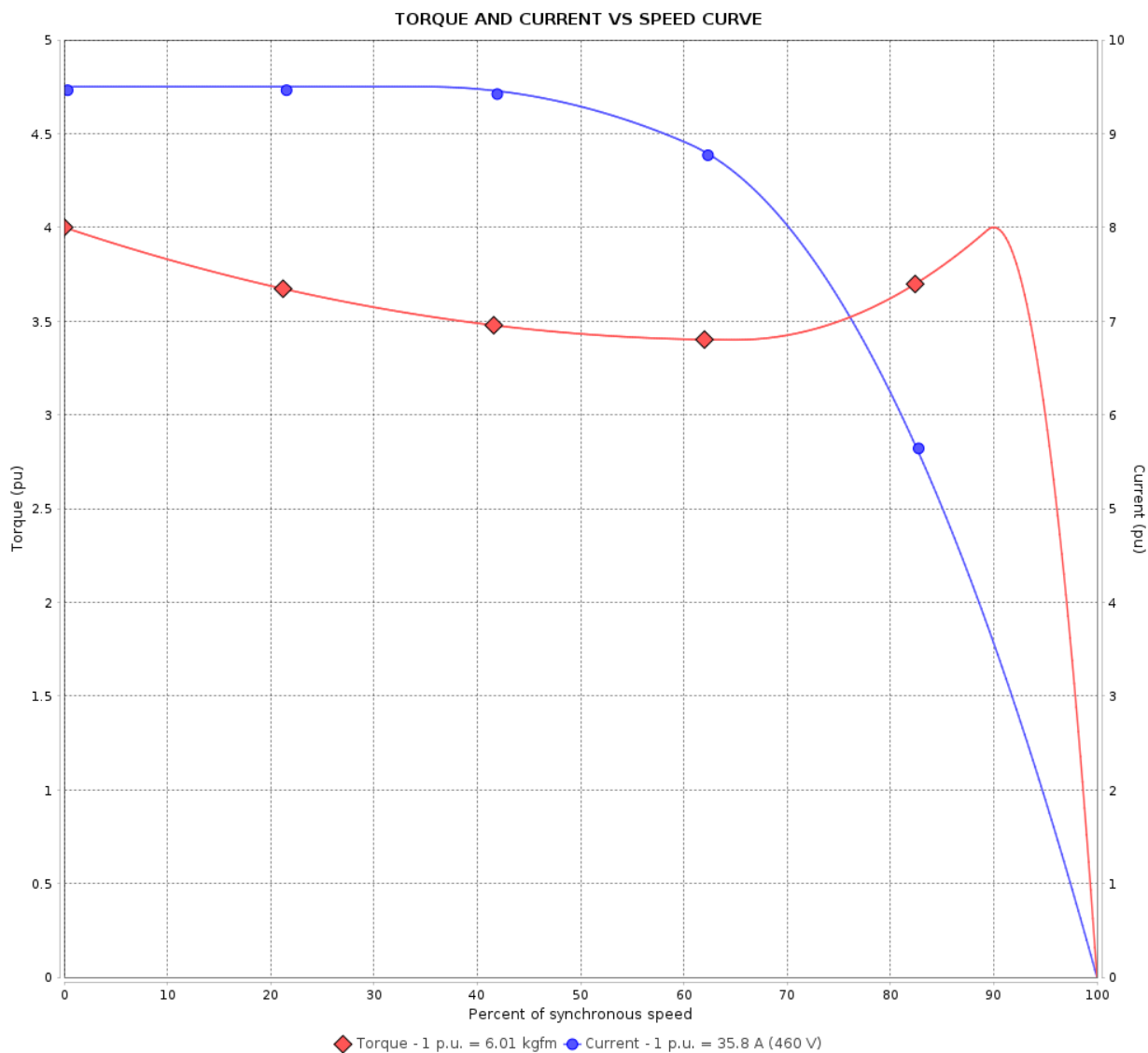


Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

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Product code : 13252549



Performance : 460 V 60 Hz 2P

Rated current	: 35.8 A	Moment of inertia (J)	: 0.1183 kgm ²
LRC	: 9.5	Duty cycle	: S1
Rated torque	: 6.01 kgfm	Insulation class	: F
Locked rotor torque	: 400 %	Service factor	: 1.00
Breakdown torque	: 400 %	Temperature rise	: 80 K
Rated speed	: 3565 rpm	Design	: N

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

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LOAD PERFORMANCE CURVE

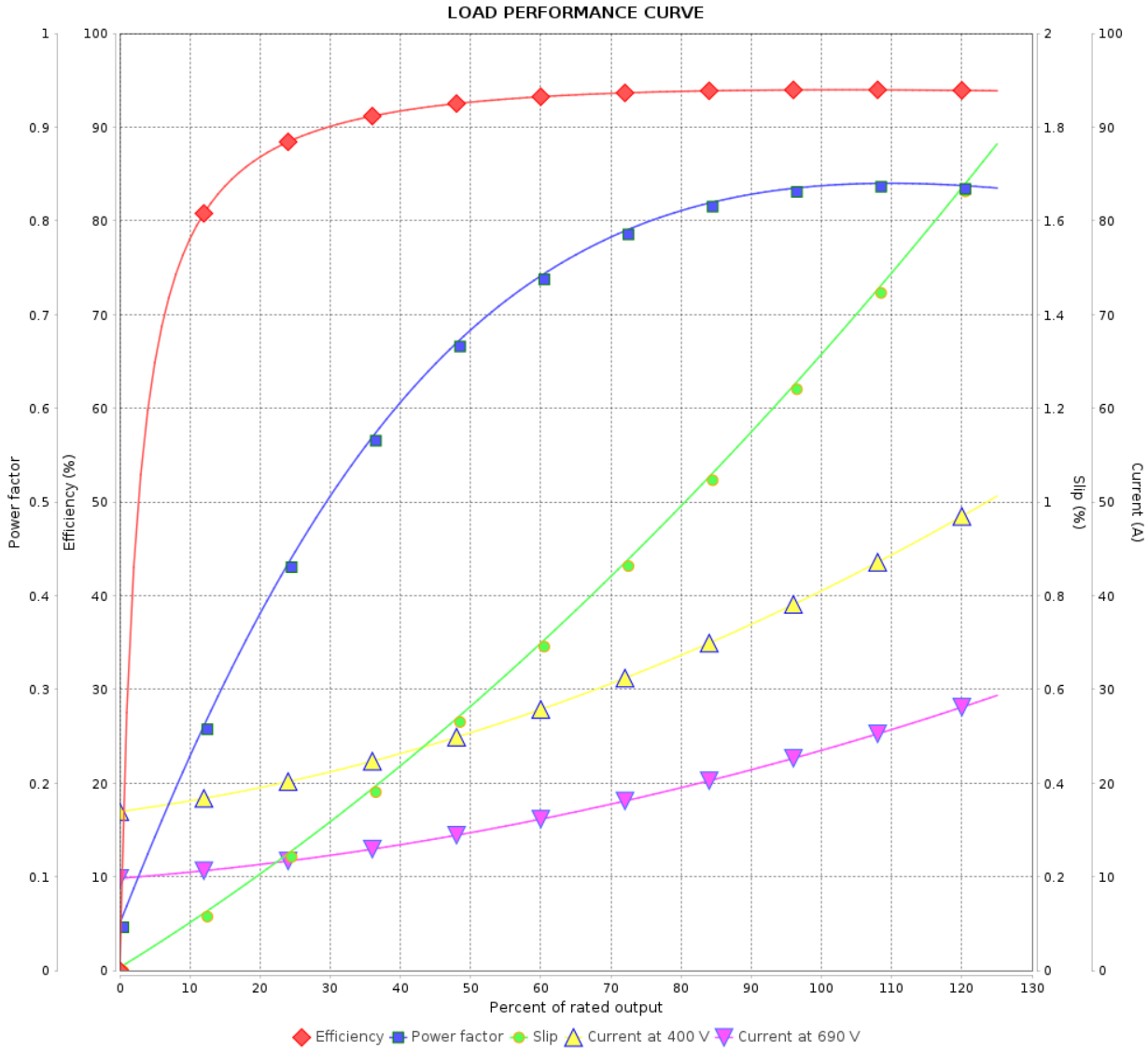
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 Insulation class : F
 Service factor : 1.00
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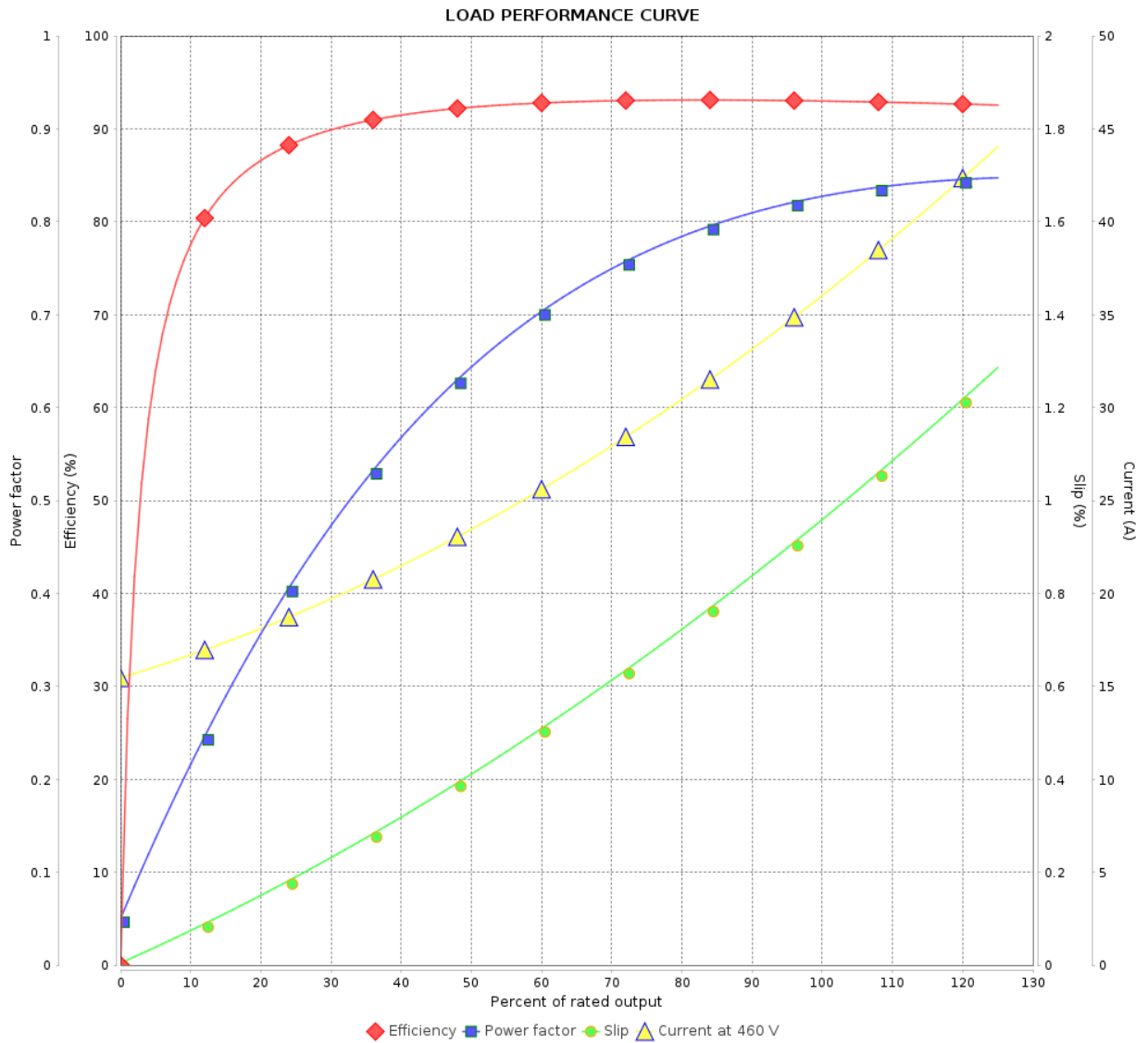
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THERMAL LIMIT CURVE

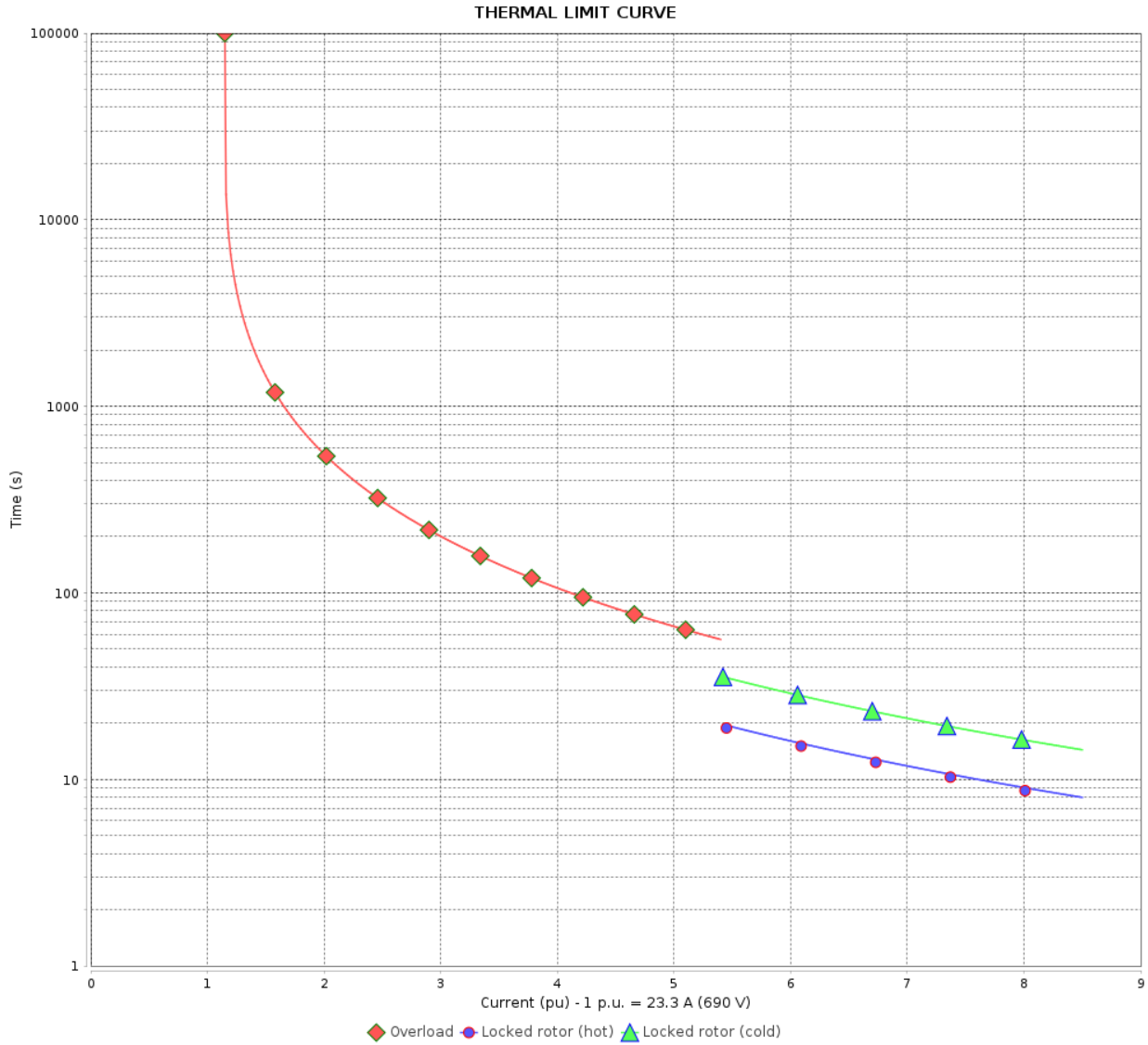
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Heating constant

Cooling constant

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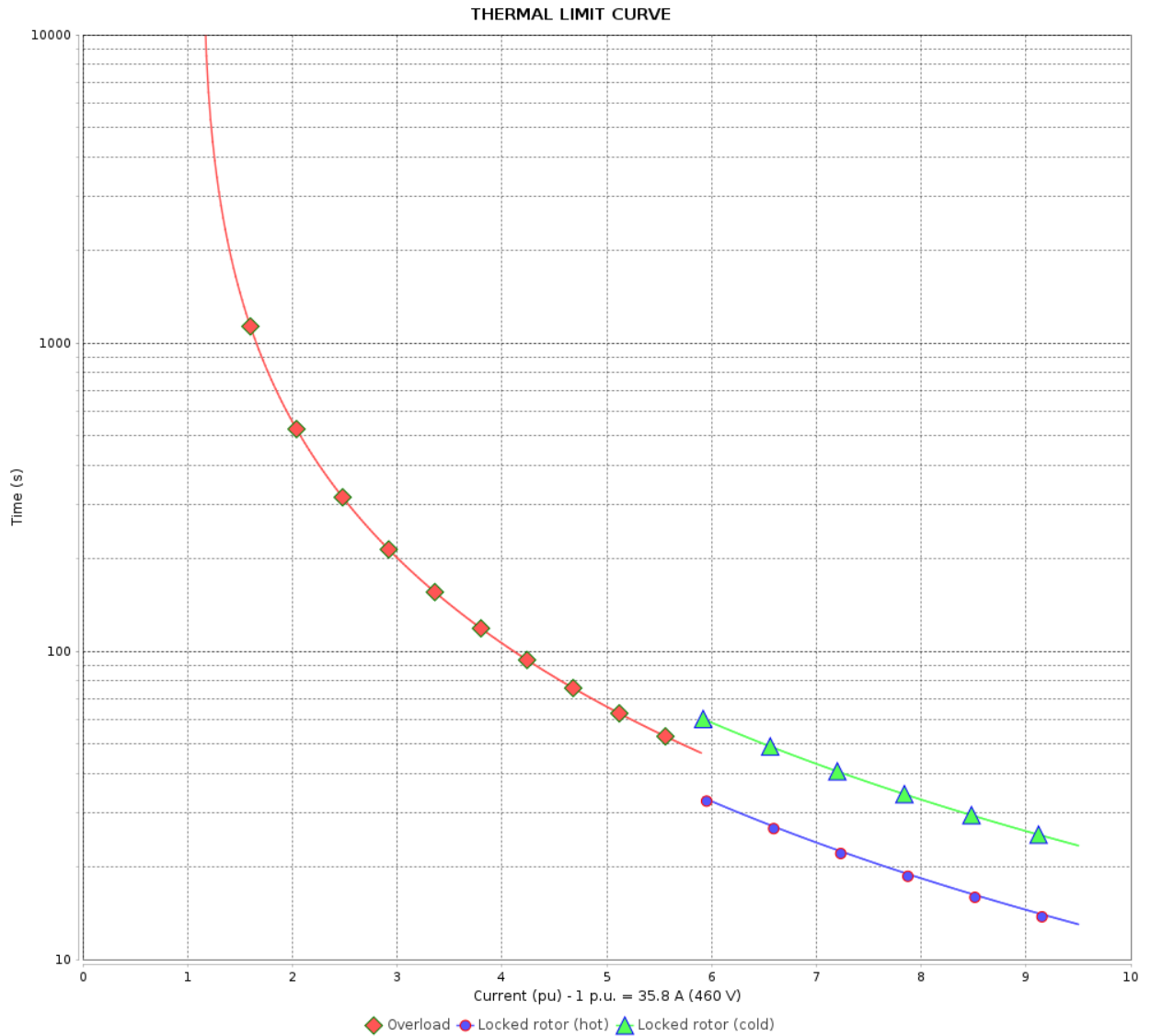
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VFD OPERATION CURVE

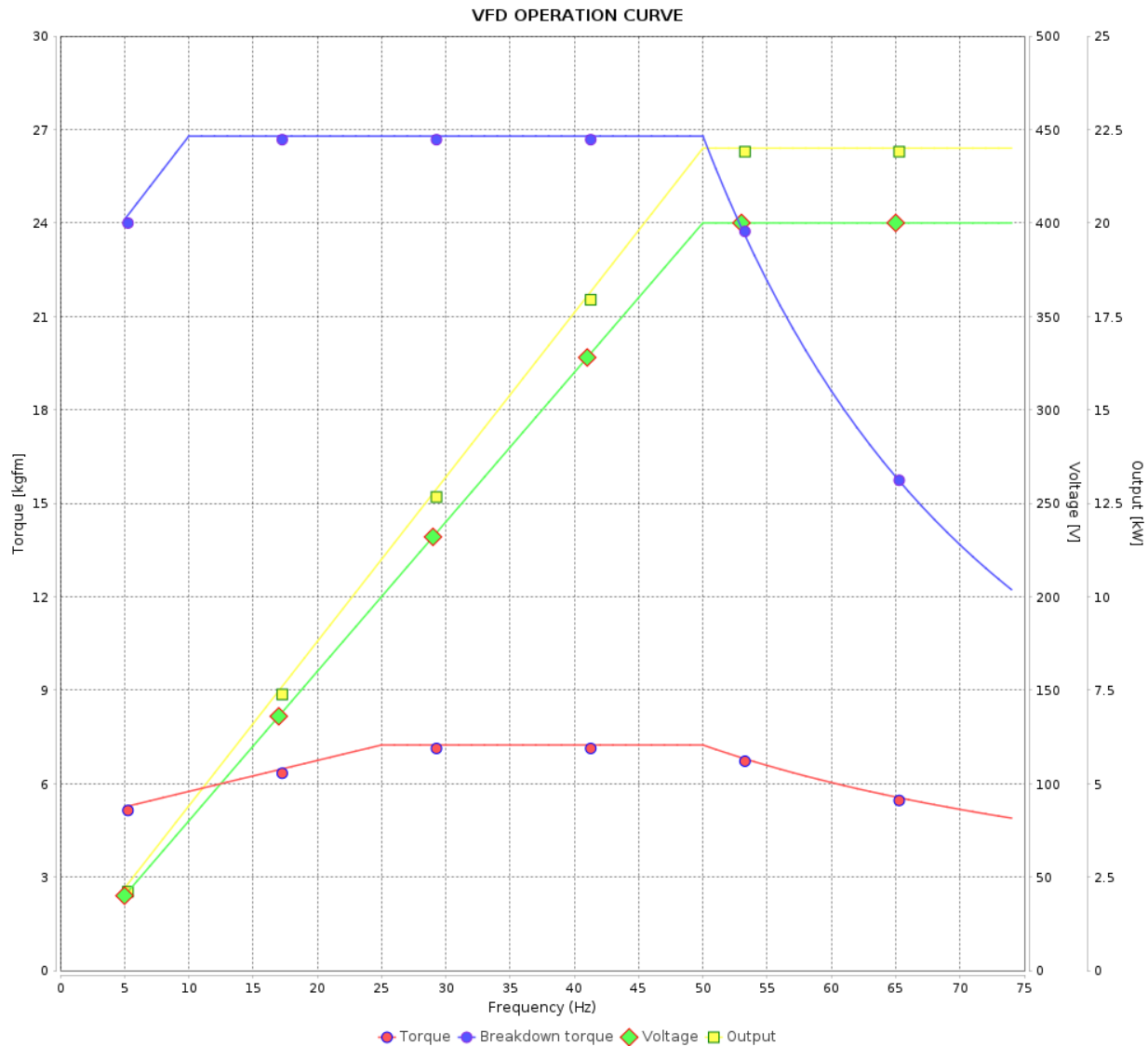
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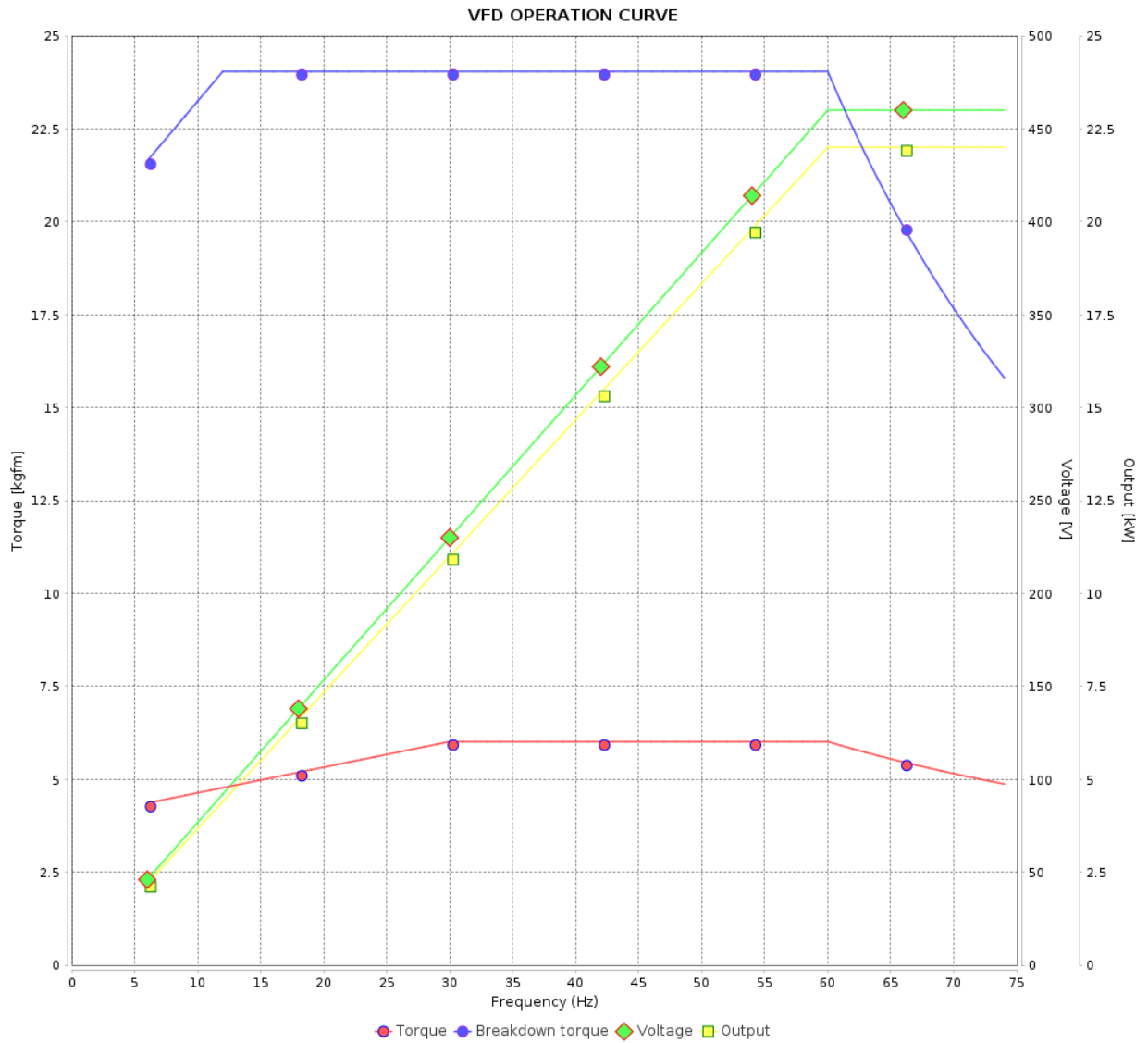
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