

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer		: Astraprom d.o.o.			
Product line		: W22 IE3 Three-Phase		Product code : 13408982	
Frame	: 200L	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 ²	: 251 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.4212 kgm ²		
Design	: N				
Output [kW]	22	22	22	22	22
Poles	6	6	6	6	6
Frequency [Hz]	50	50	50	50	60
Rated voltage [V]	380/660	400/690	415	460	460
Rated current [A]	44.2/25.4	43.6/25.3	43.1	38.1	38.1
L. R. Amperes [A]	265/153	279/162	293	274	274
LRC [A]	6.0	6.4	6.8	7.2	7.2
No load current [A]	20.0/11.5	22.0/12.8	24.0	21.0	21.0
Rated speed [RPM]	980	980	983	1185	1185
Slip [%]	2.00	2.00	1.70	1.25	1.25
Rated torque [kgfm]	21.9	21.9	21.8	18.1	18.1
Locked rotor torque [%]	200	229	250	270	270
Breakdown torque [%]	240	260	280	310	310
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	34s (cold) 19s (hot)	30s (cold) 17s (hot)	28s (cold) 16s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)
Noise level ²	60.0 dB(A)	60.0 dB(A)	60.0 dB(A)	62.0 dB(A)	62.0 dB(A)
Efficiency (%)	25%				
	50%	91.8	91.0	90.4	91.0
	75%	92.2	92.0	91.6	92.5
	100%	92.2	92.2	92.2	93.0
Power Factor	25%				
	50%	0.66	0.60	0.56	0.58
	75%	0.76	0.73	0.70	0.72
	100%	0.82	0.79	0.77	0.78
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	8.3	8.3	8.3	7.4
	P2 (0,5;1,0)	7.1	7.1	7.1	6.4
	P3 (0,25;1,0)	6.6	6.6	6.6	5.9
	P4 (0,9;0,5)	4.0	4.0	4.0	3.6
	P5 (0,5;0,5)	2.9	2.9	2.9	2.6
	P6 (0,5;0,25)	1.9	1.9	1.9	1.7
	P7 (0,25;0,25)	1.4	1.4	1.4	1.2
Bearing type	: Drive end 6312 ZZ C3 Non drive end 6212 ZZ C3	Foundation loads			
Sealing	: Oil Seal Lip Seal	Max. traction : 579 kgf			
Lubrication interval	: - -	Max. compression : 830 kgf			
Lubricant amount	: - -				
Lubricant type	: Mobil Polyrex EM				
This revision replaces and cancel the previous one, which must be eliminated.		These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in IEC 60034-1.			
(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.					
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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

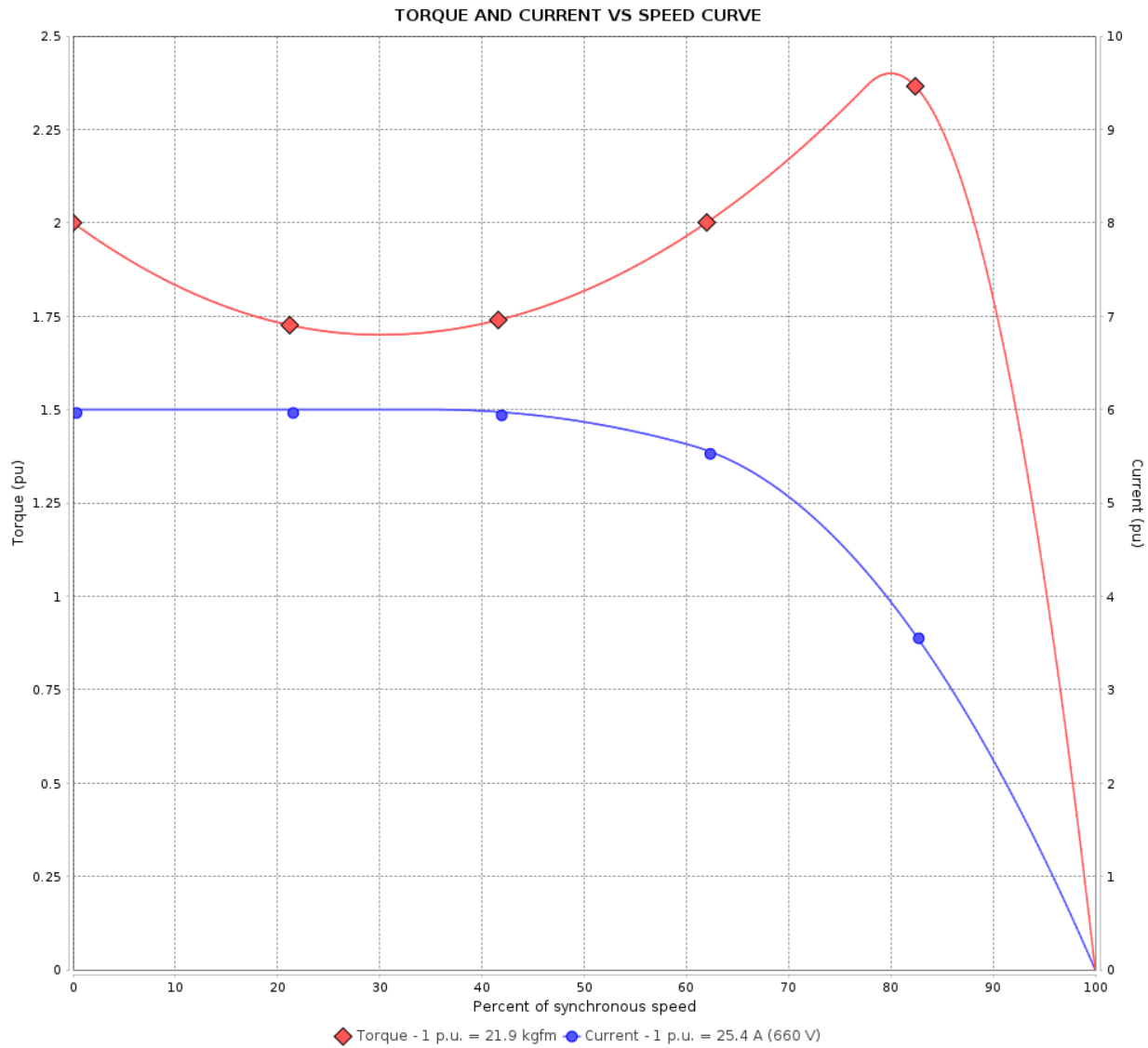
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 13408982



Performance : 380/660 V 50 Hz 6P

Rated current	: 44.2/25.4 A	Moment of inertia (J)	: 0.4212 kgm ²
LRC	: 6.0	Duty cycle	: S1
Rated torque	: 21.9 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: N

Locked rotor time : 34s (cold) 19s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



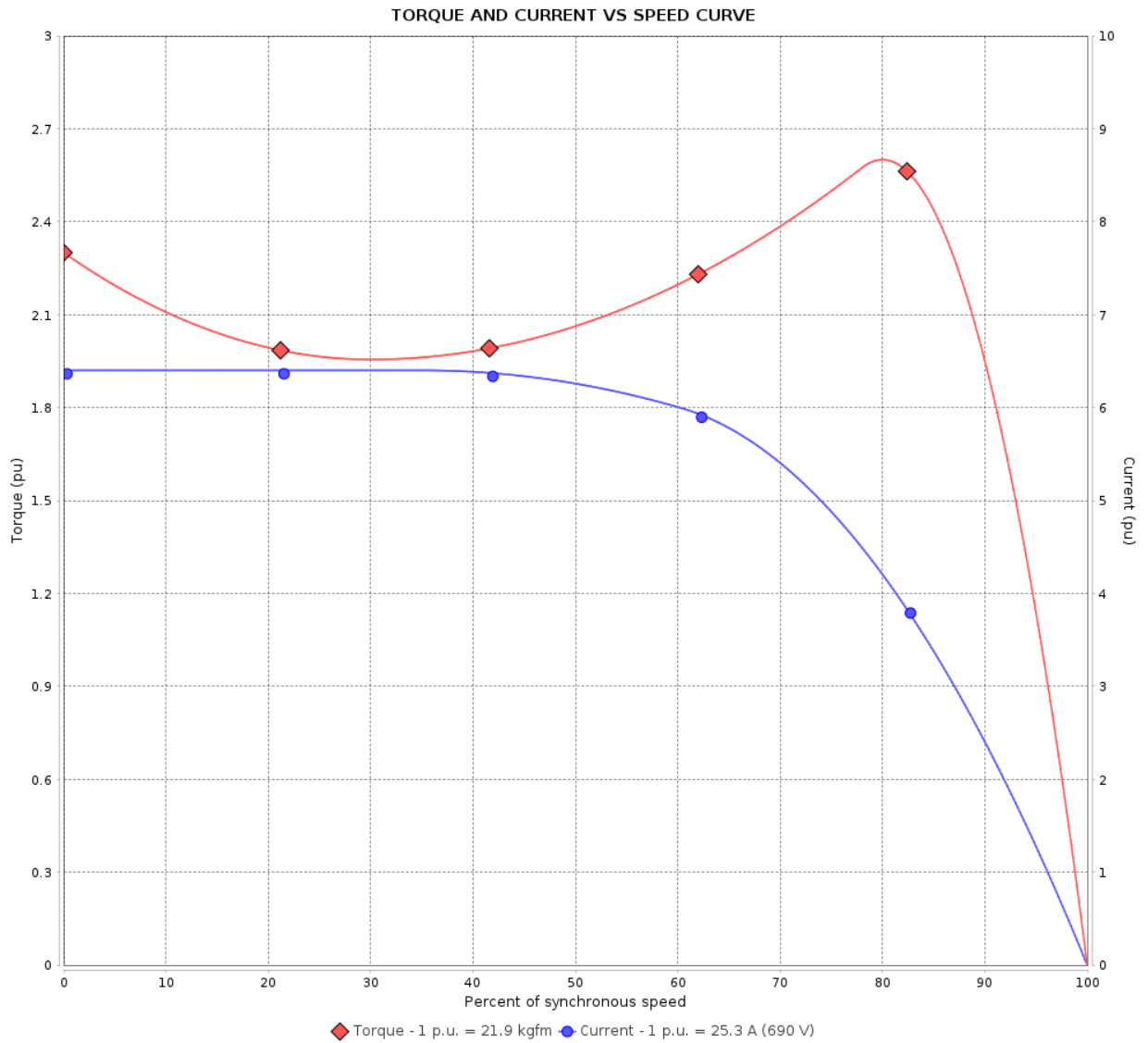
Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code :

13408982



Performance : 400/690 V 50 Hz 6P

Rated current : 43.6/25.3 A
 LRC : 6.4
 Rated torque : 21.9 kgfm
 Locked rotor torque : 229 %
 Breakdown torque : 260 %
 Rated speed : 980 rpm

Moment of inertia (J) : 0.4212 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Locked rotor time : 30s (cold) 17s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

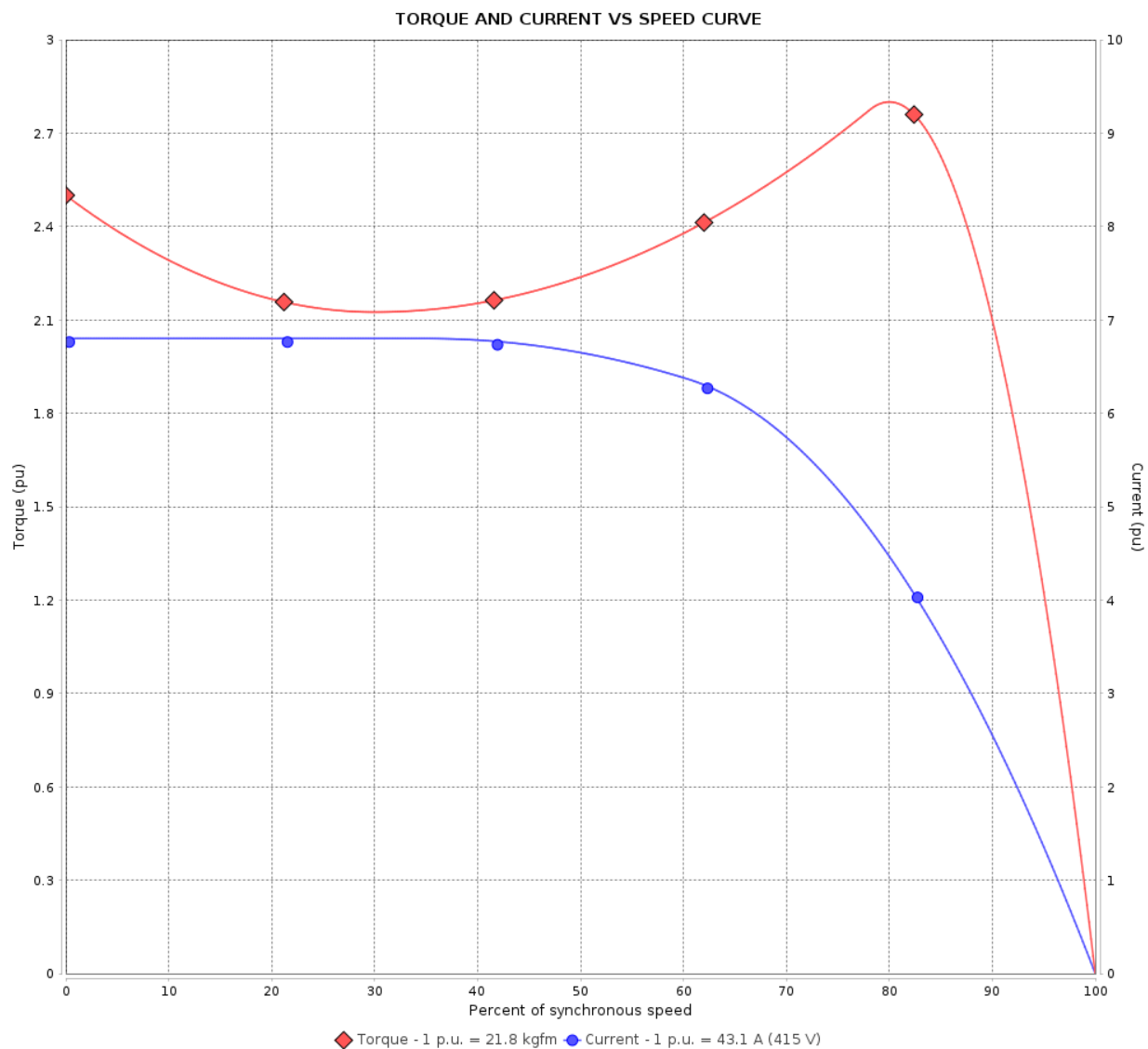
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 13408982



Performance : 415 V 50 Hz 6P

Rated current	: 43.1 A	Moment of inertia (J)	: 0.4212 kgm ²
LRC	: 6.8	Duty cycle	: S1
Rated torque	: 21.8 kgfm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 983 rpm	Design	: N

Locked rotor time : 28s (cold) 16s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

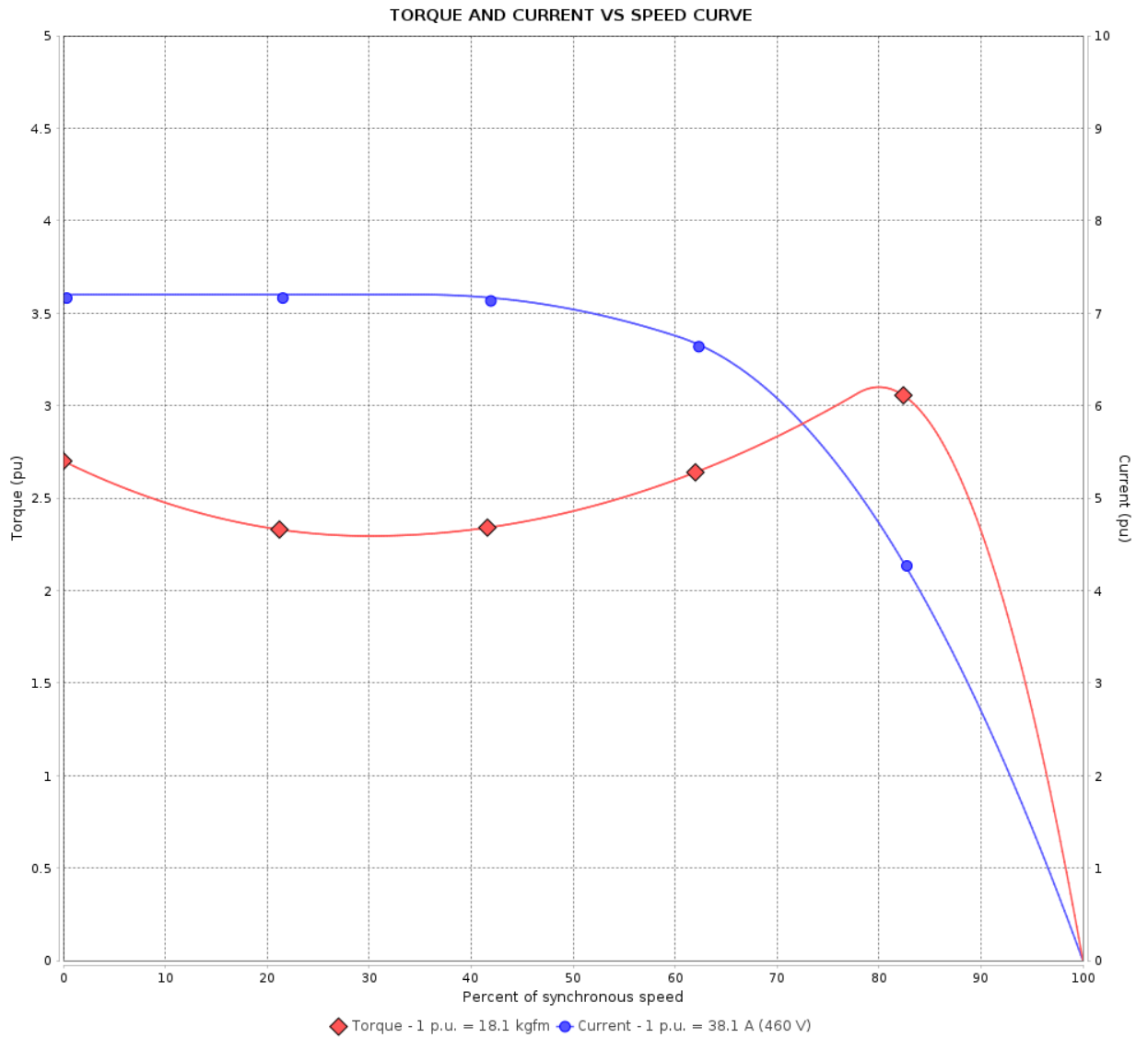


Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 13408982



Performance : 460 V 60 Hz 6P

Rated current	: 38.1 A	Moment of inertia (J)	: 0.4212 kgm ²
LRC	: 7.2	Duty cycle	: S1
Rated torque	: 18.1 kgfm	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 1185 rpm	Design	: N

Locked rotor time : 36s (cold) 20s (hot)

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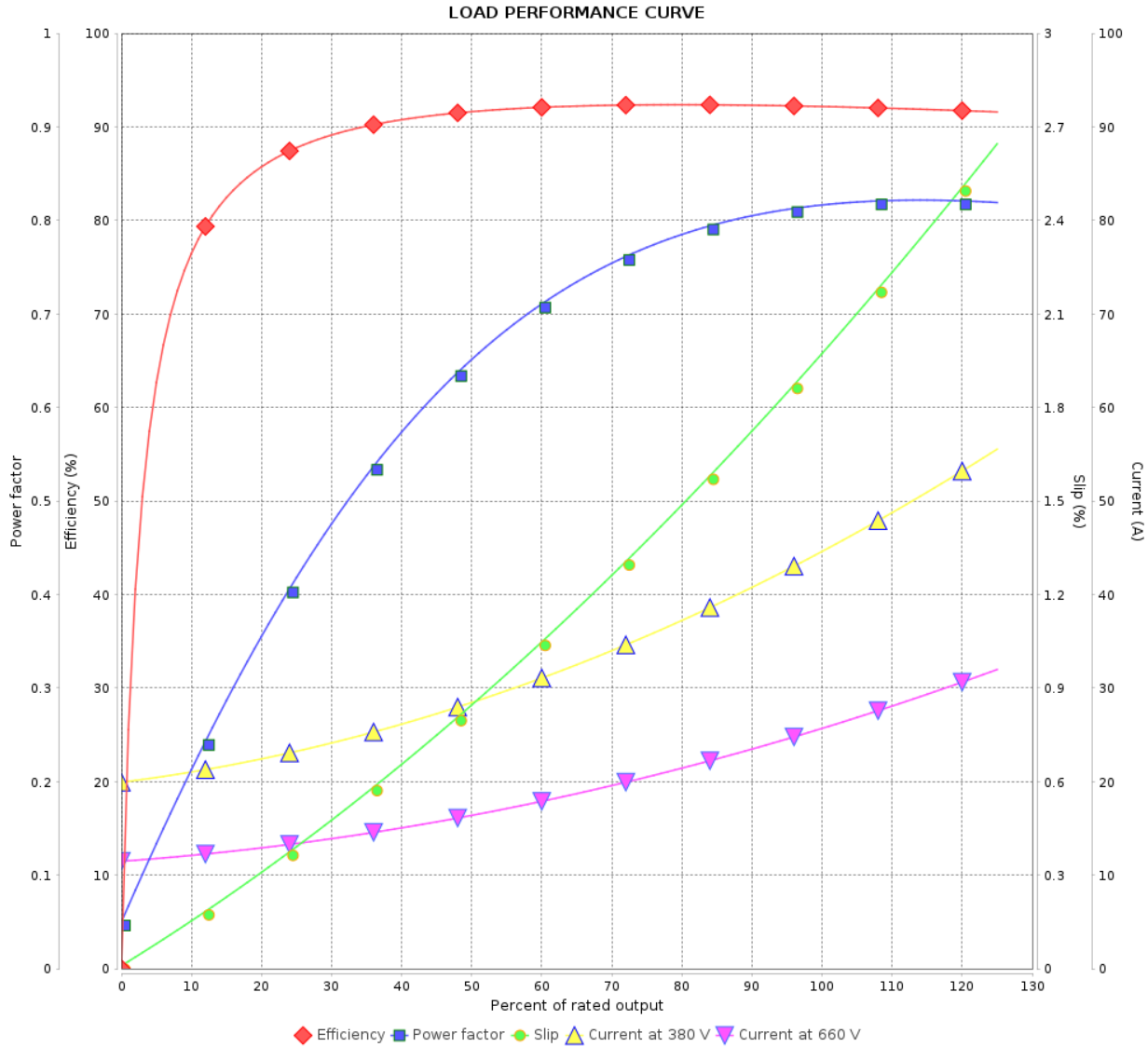
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Performance : 380/660 V 50 Hz 6P

Rated current : 44.2/25.4 A
 LRC : 6.0
 Rated torque : 21.9 kgfm
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 980 rpm

Moment of inertia (J) : 0.4212 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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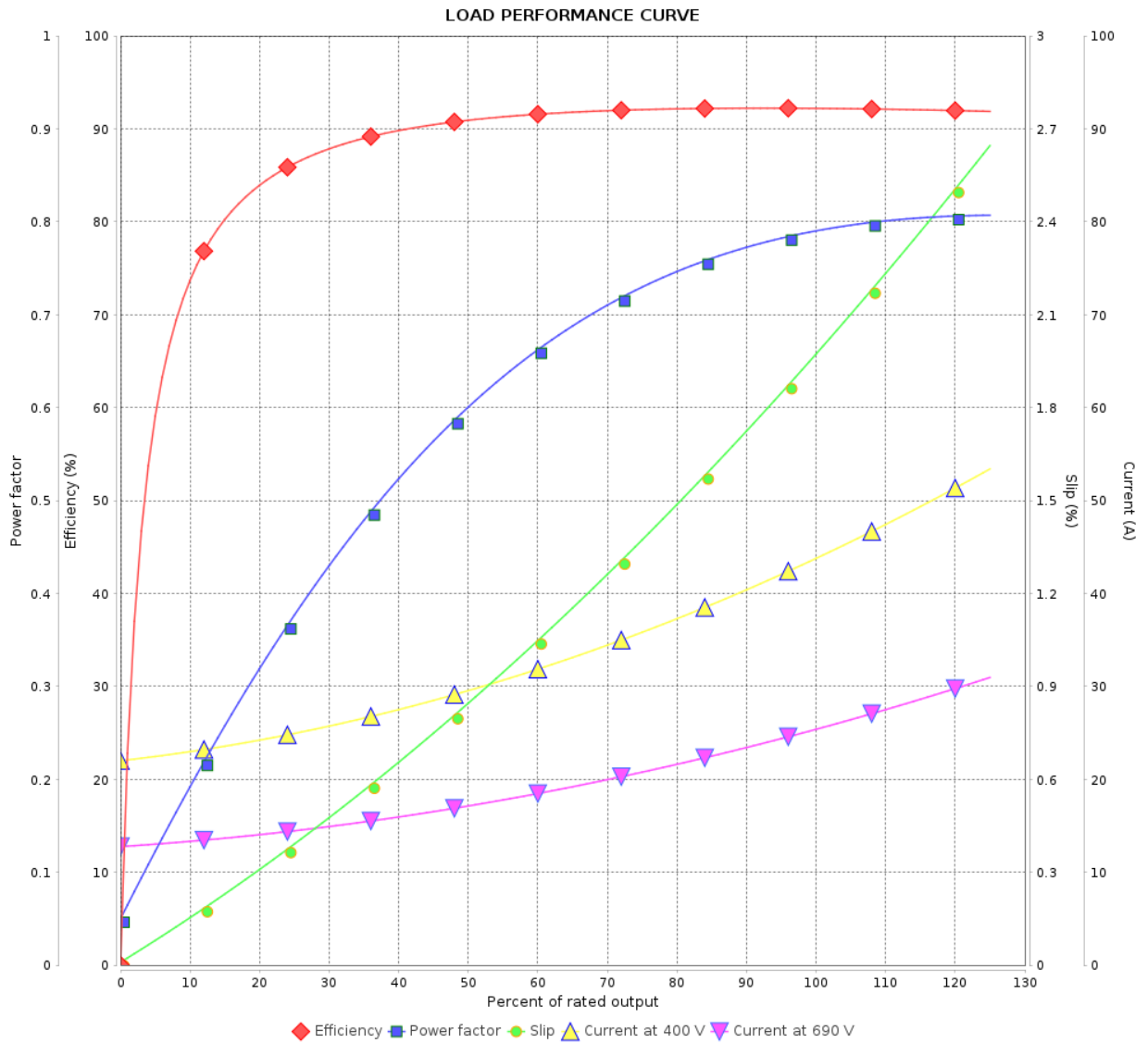
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 Duty cycle : S1
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 Service factor : 1.00
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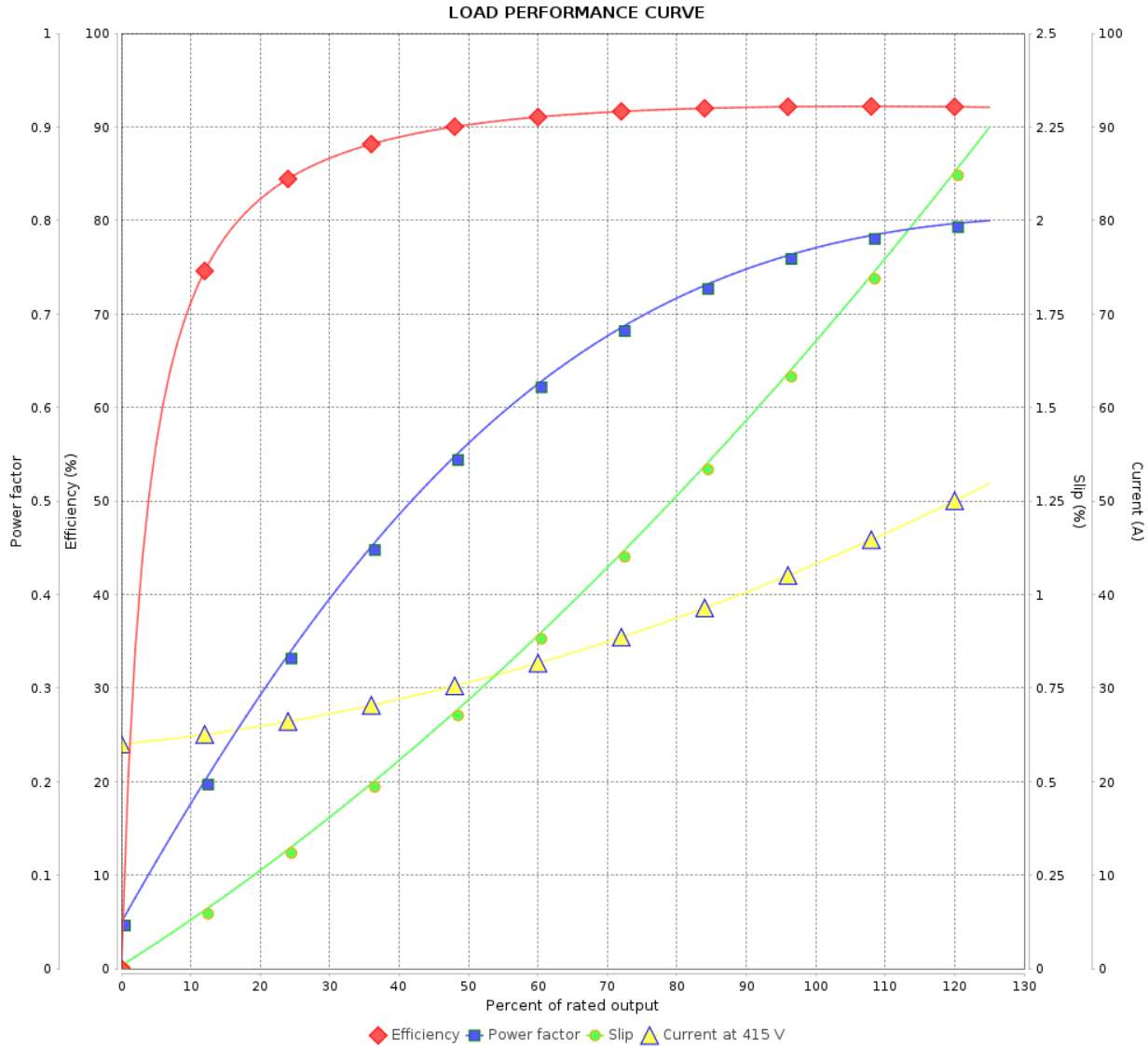
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LRC	: 6.8	Duty cycle	: S1
Rated torque	: 21.8 kgfm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 983 rpm	Design	: N

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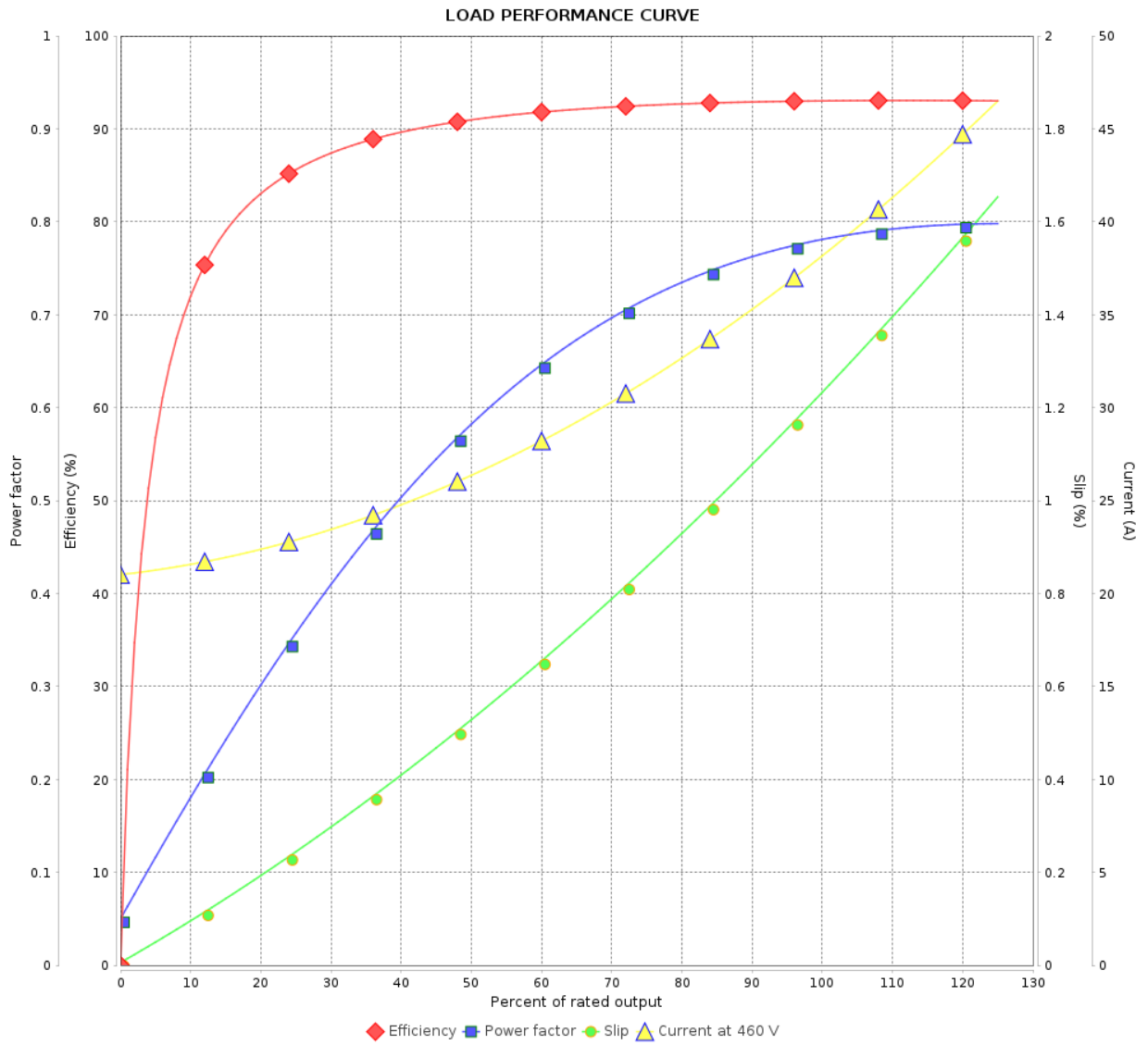


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 Rated speed : 1185 rpm

Moment of inertia (J) : 0.4212 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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THERMAL LIMIT CURVE

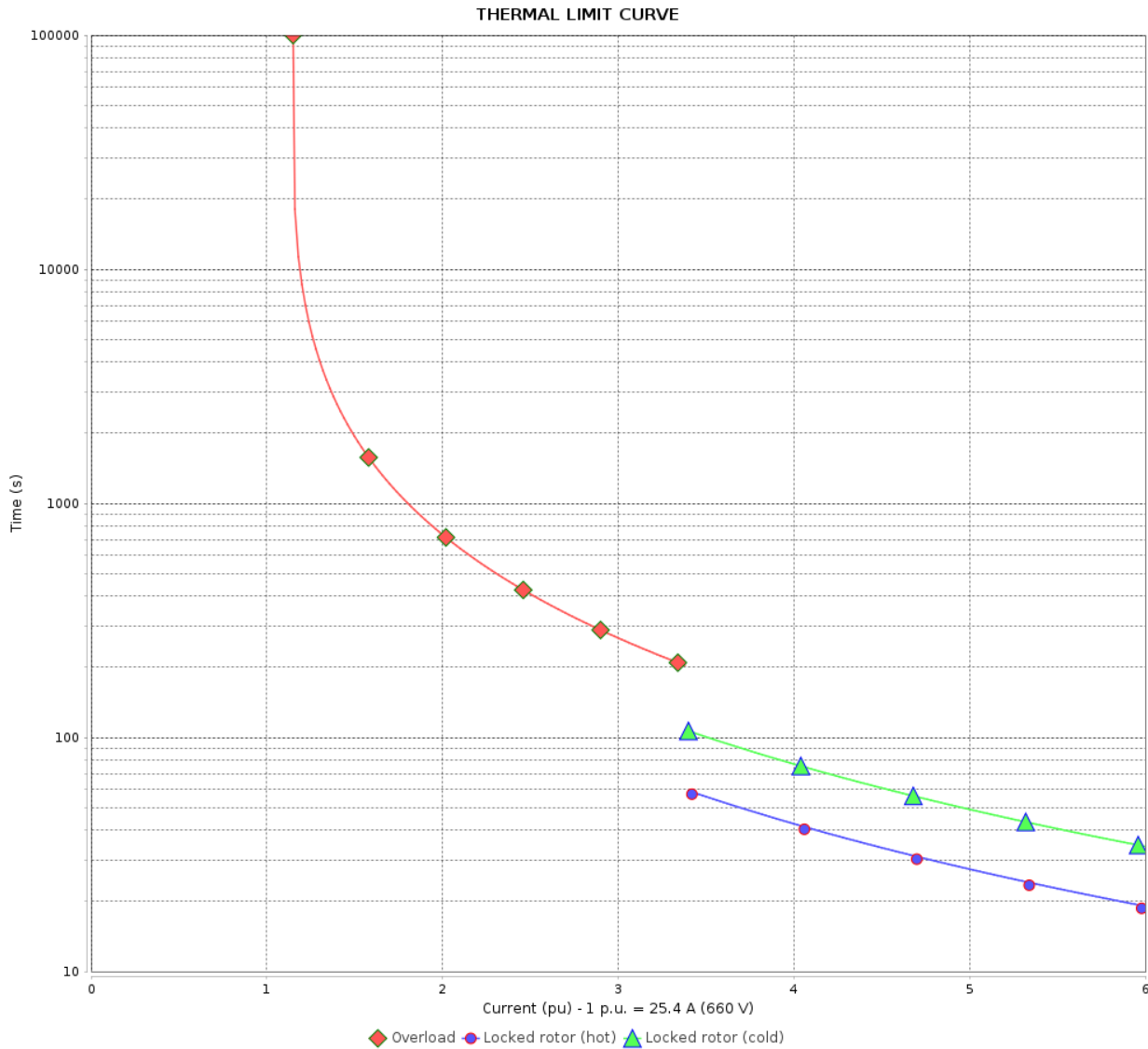
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Moment of inertia (J) : 0.4212 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Heating constant

Cooling constant

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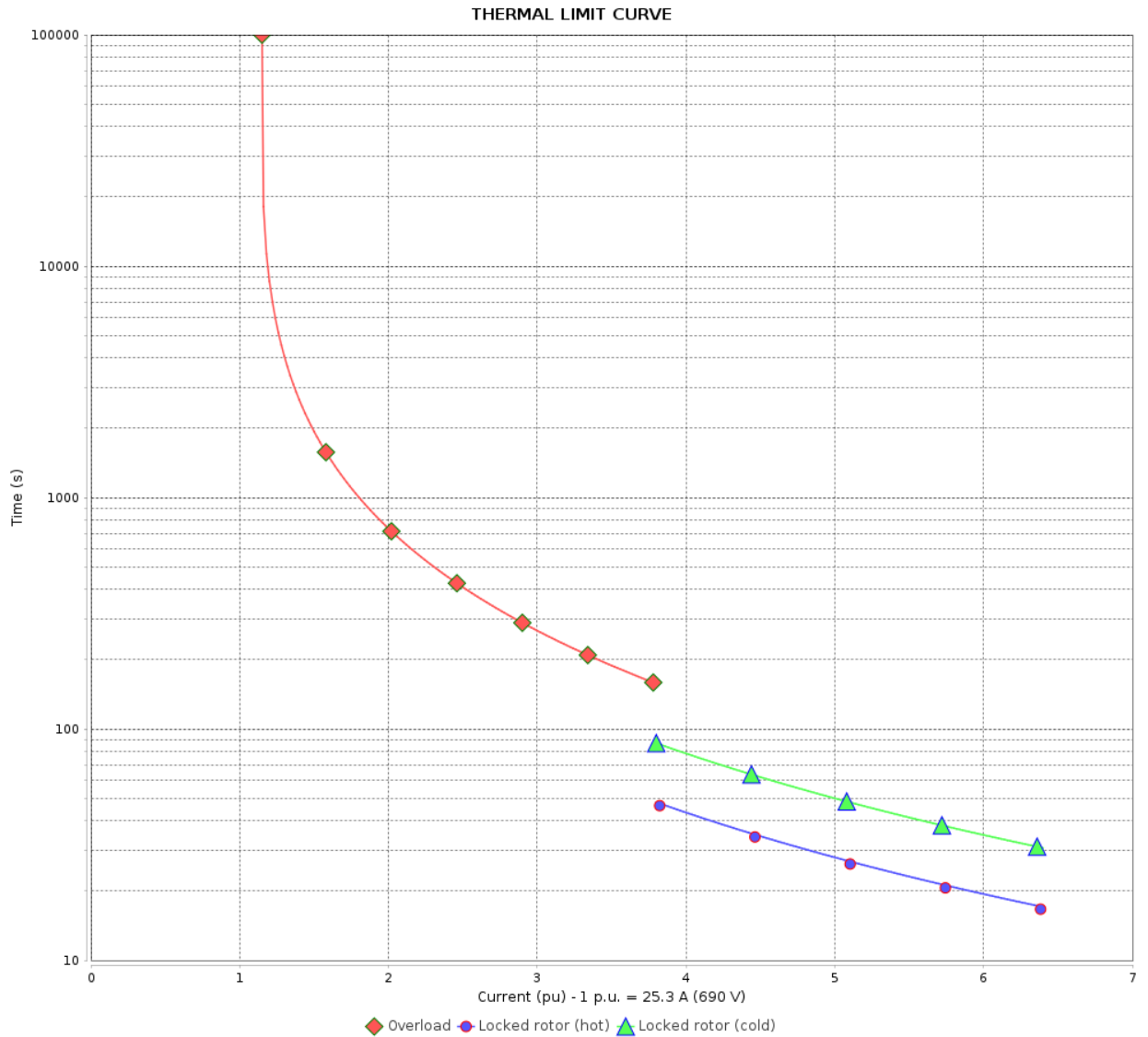
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Heating constant
 Cooling constant

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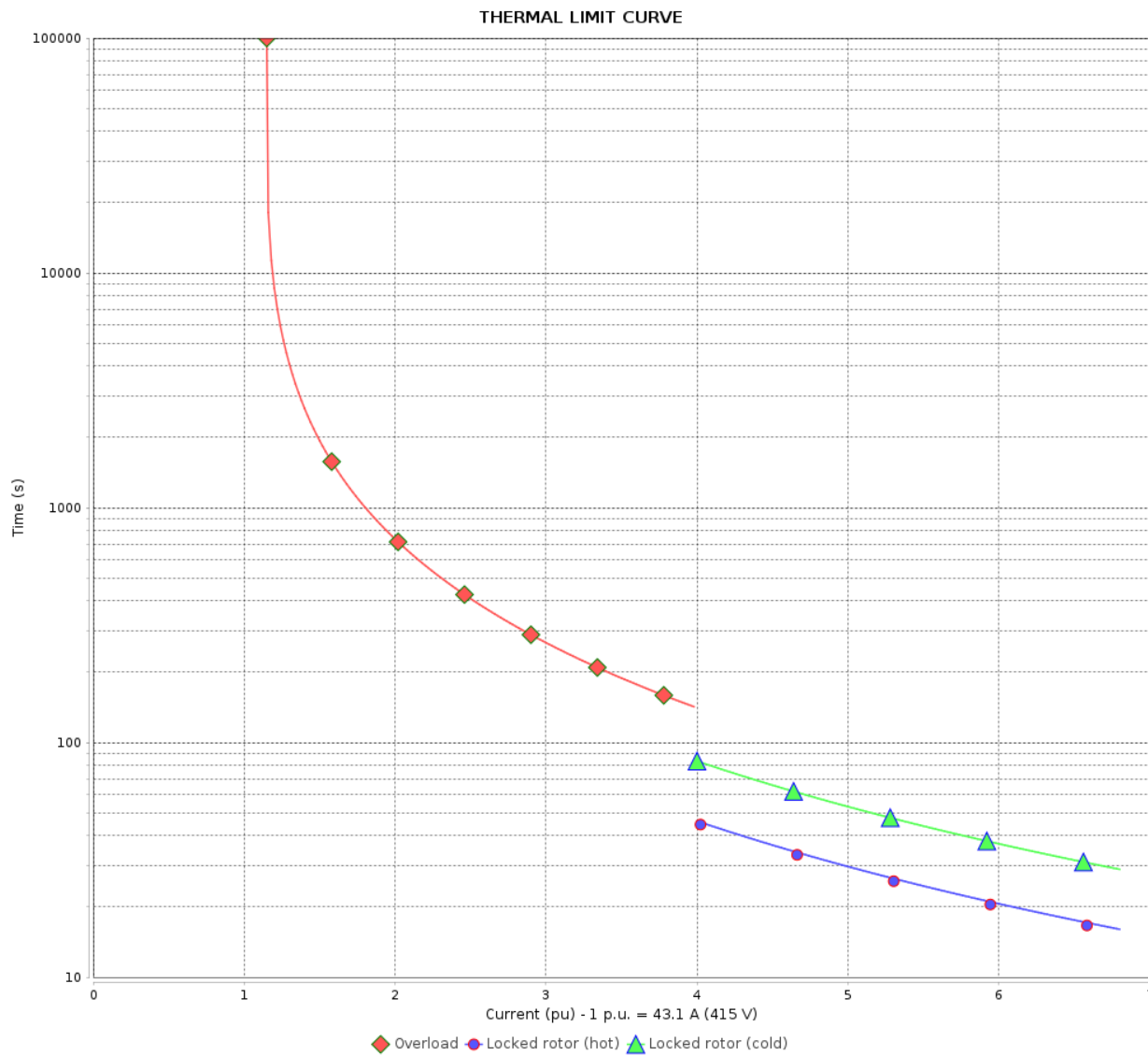
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Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 983 rpm	Design	: N

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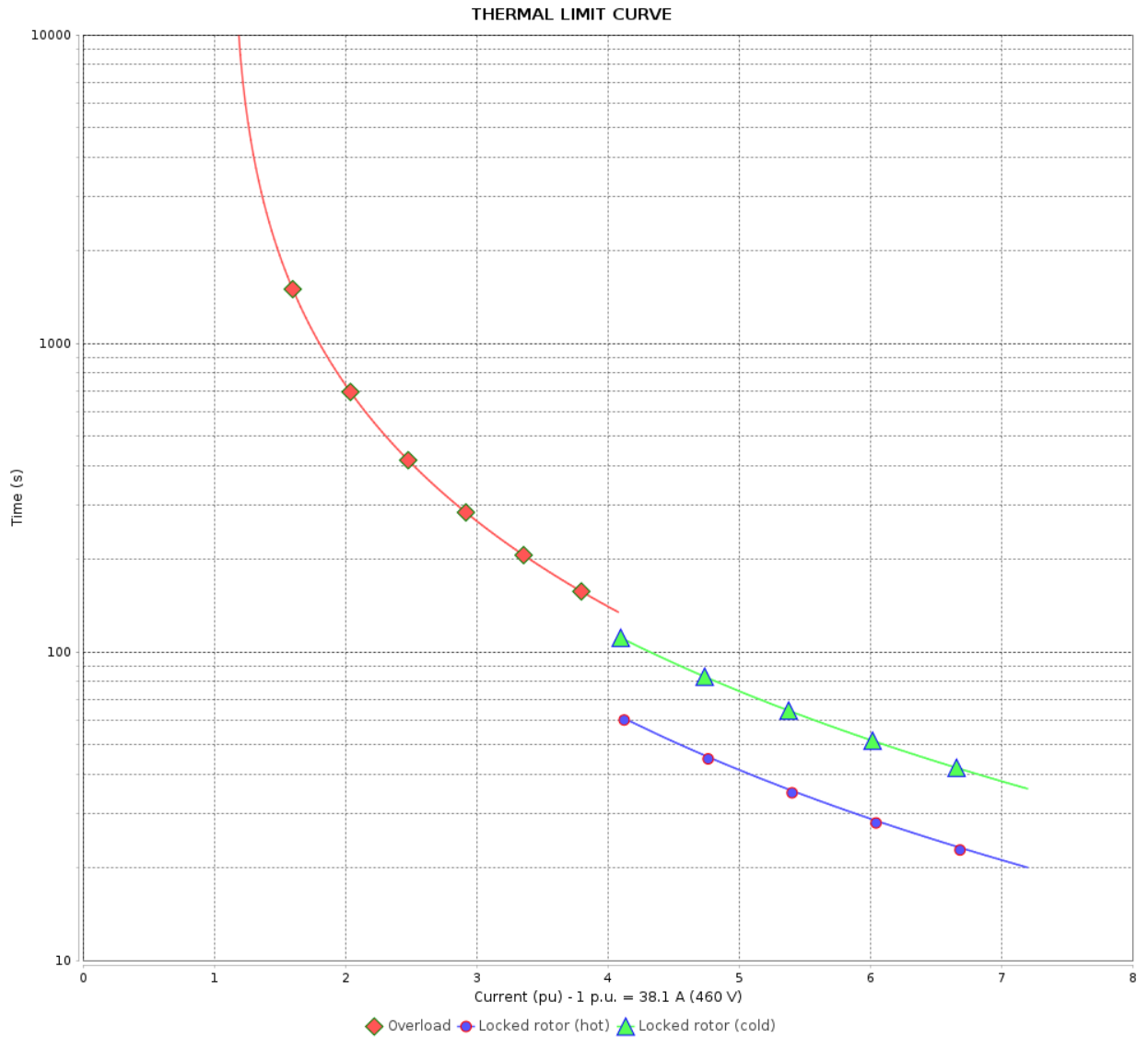


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Performance : 460 V 60 Hz 6P

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 LRC : 7.2
 Rated torque : 18.1 kgfm
 Locked rotor torque : 270 %
 Breakdown torque : 310 %
 Rated speed : 1185 rpm

Moment of inertia (J) : 0.4212 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

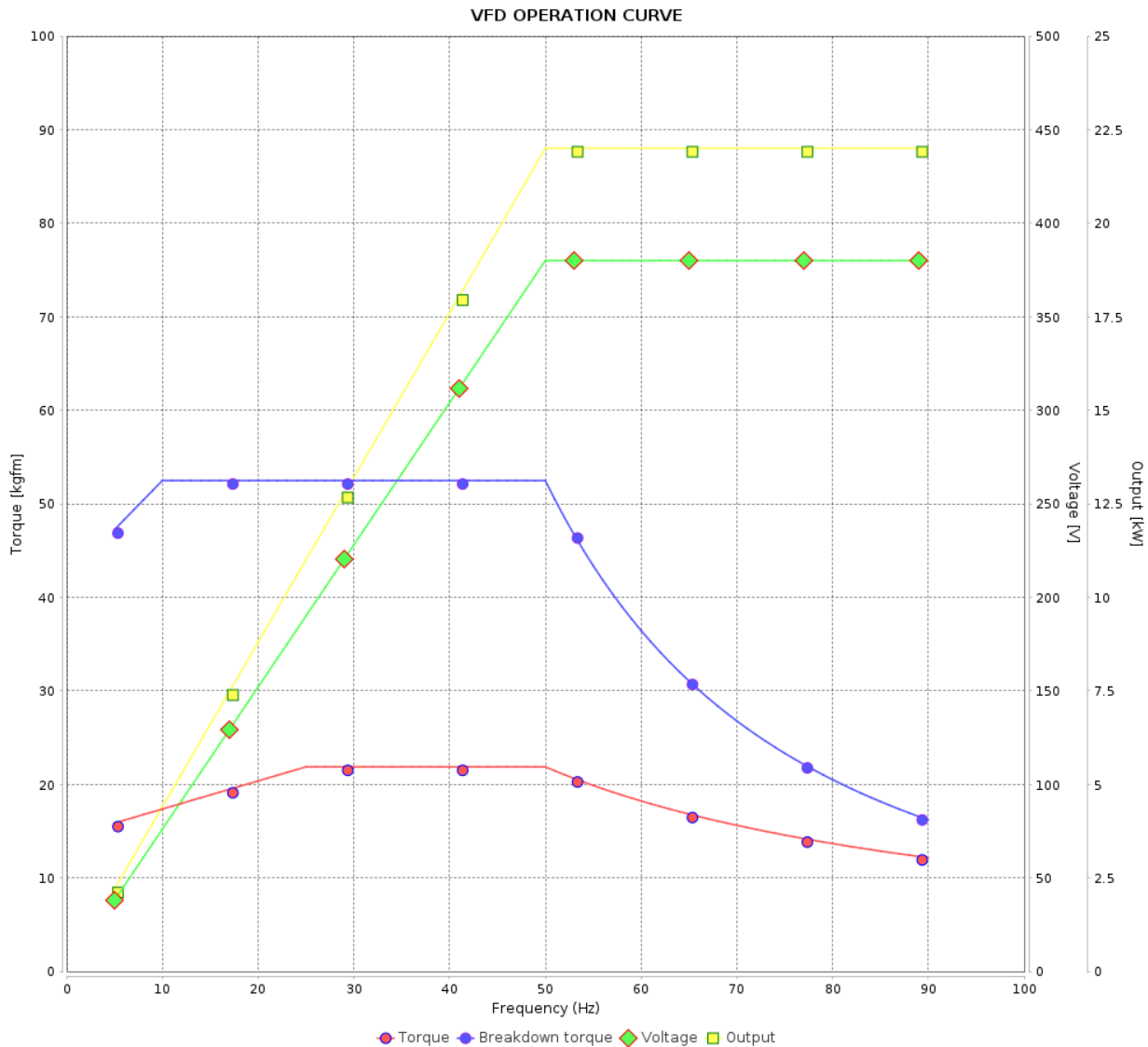
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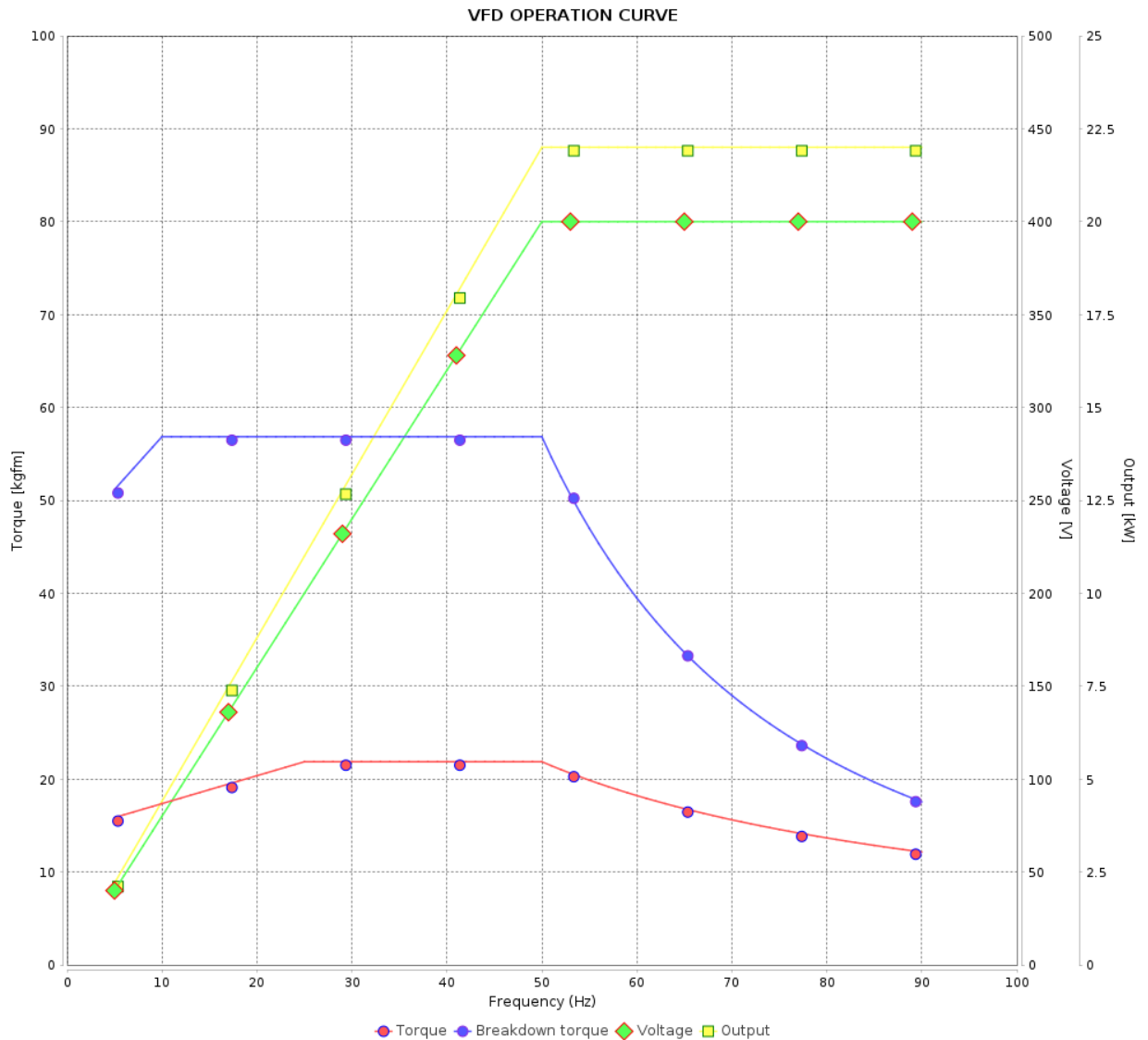
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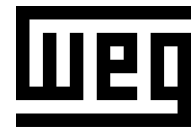
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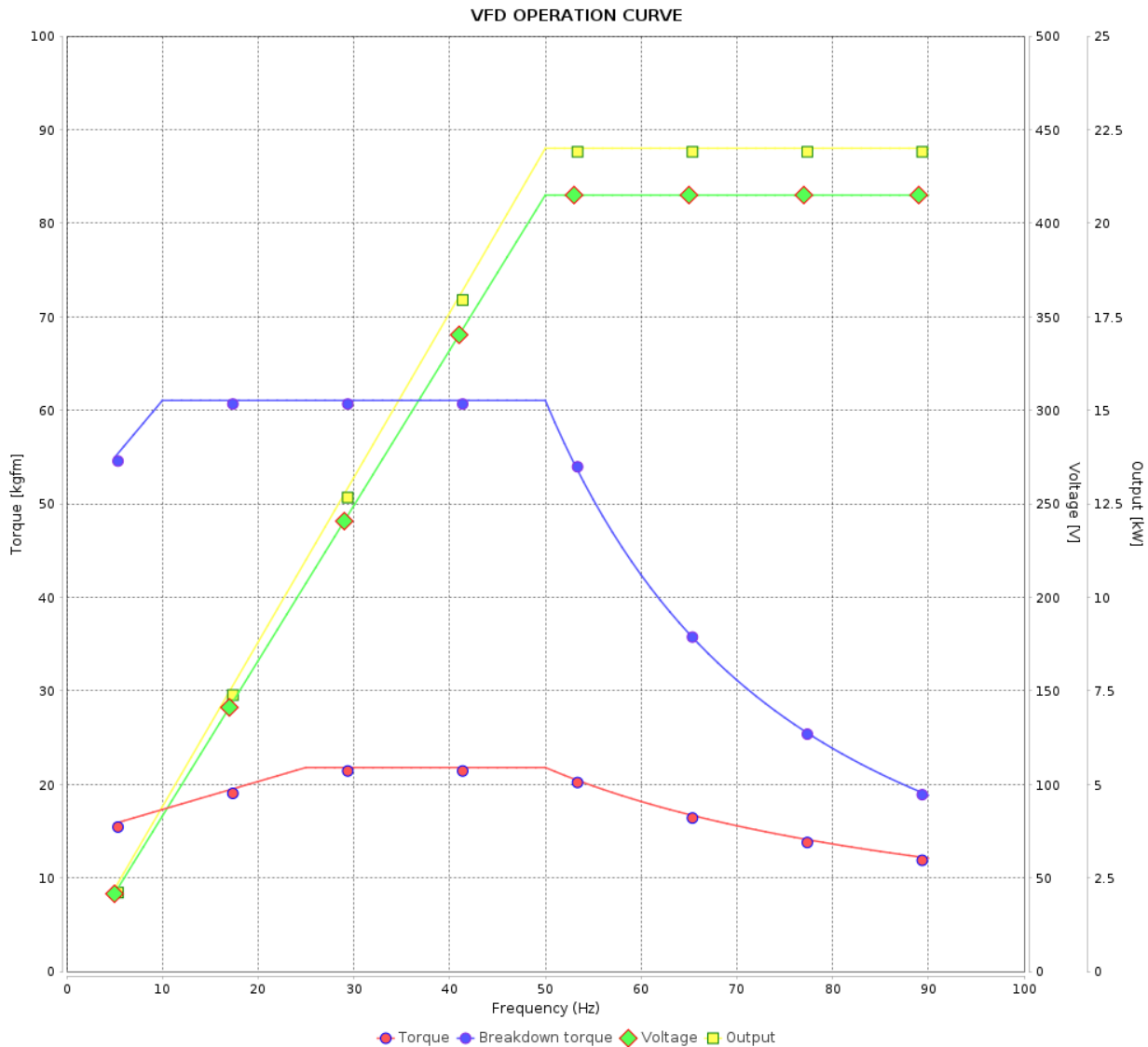
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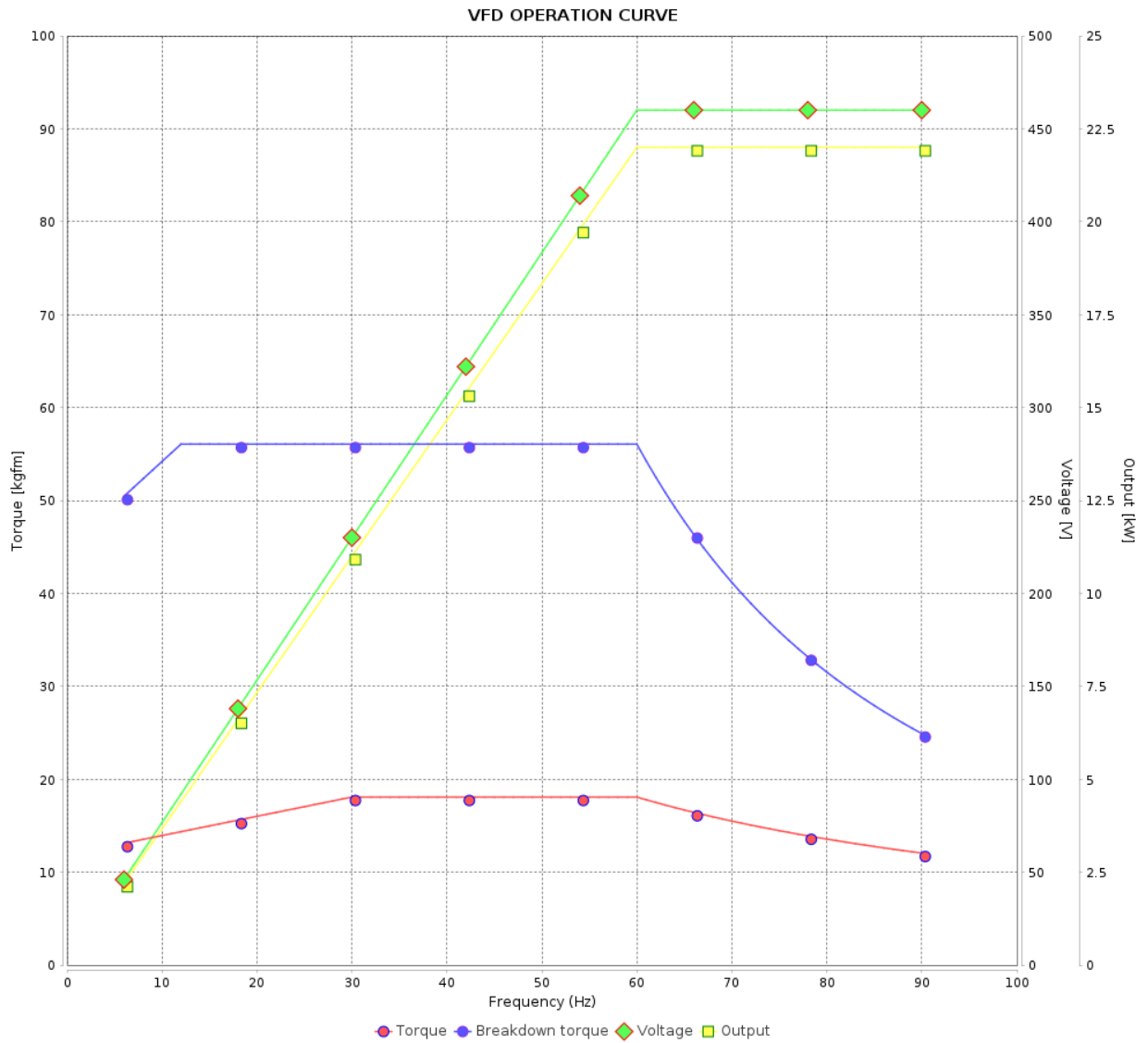
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