

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer		: Astraprom d.o.o.			
Product line		: W22 IE3 Three-Phase		Product code : 12862902	
Frame	: 180L	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 ²	: 182 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.2969 kgm ²		
Design	: N				
Output [kW]	15	15	15	15	
Poles	6	6	6	6	
Frequency [Hz]	50	50	50	60	
Rated voltage [V]	380/660	400/690	415	460	
Rated current [A]	30.1/17.3	29.3/17.0	29.0	25.7	
L. R. Amperes [A]	232/133	246/143	258	249	
LRC [A]	7.7	8.4	8.9	9.7	
No load current [A]	14.0/8.06	16.0/9.28	17.0	15.0	
Rated speed [RPM]	975	980	980	1183	
Slip [%]	2.50	2.00	2.00	1.42	
Rated torque [kgfm]	15.0	14.9	14.9	12.3	
Locked rotor torque [%]	290	310	330	360	
Breakdown torque [%]	320	370	400	440	
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)	14s (cold) 8s (hot)	14s (cold) 8s (hot)	
Noise level ²	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	59.0 dB(A)	
Efficiency (%)	25%				
	50%	90.7	90.0	89.0	90.5
	75%	91.0	91.2	91.0	91.7
	100%	91.2	91.2	91.2	91.7
Power Factor	25%				
	50%	0.65	0.61	0.57	0.60
	75%	0.76	0.74	0.71	0.72
	100%	0.83	0.81	0.79	0.80
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	9.4	9.4	9.4	8.8
	P2 (0,5;1,0)	8.3	8.3	8.3	7.7
	P3 (0,25;1,0)	7.9	7.9	7.9	7.4
	P4 (0,9;0,5)	4.5	4.5	4.5	4.2
	P5 (0,5;0,5)	3.3	3.3	3.3	3.1
	P6 (0,5;0,25)	2.2	2.2	2.2	2.1
	P7 (0,25;0,25)	1.6	1.6	1.6	1.5
Bearing type	: Drive end : 6311 ZZ C3 Non drive end : 6211 ZZ C3	Foundation loads			
Sealing	: Oil Seal Lip Seal	Max. traction : 687 kgf			
Lubrication interval	: - -	Max. compression : 870 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

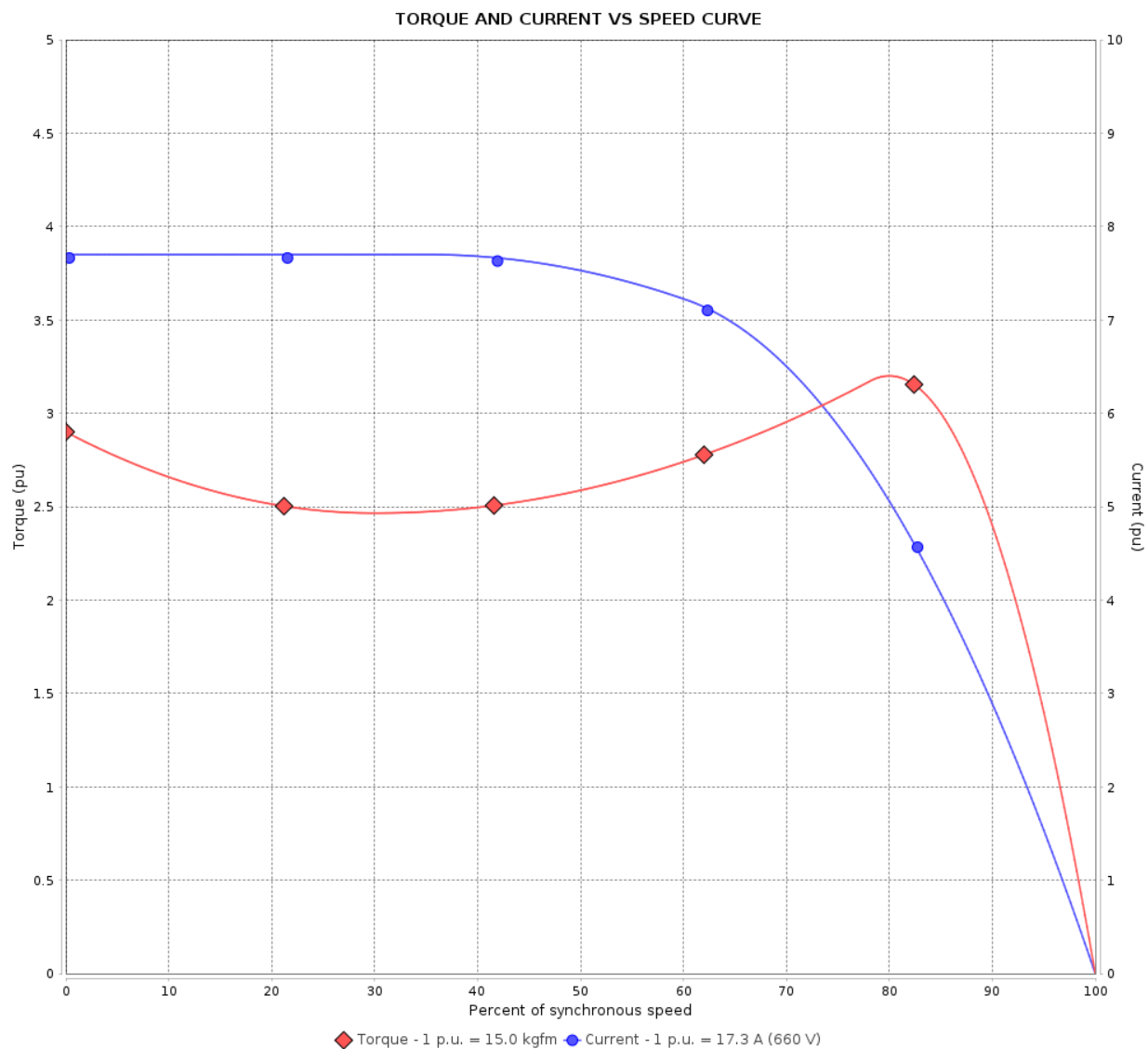
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12862902



Performance : 380/660 V 50 Hz 6P

Rated current	: 30.1/17.3 A	Moment of inertia (J)	: 0.2969 kgm ²
LRC	: 7.7	Duty cycle	: S1
Rated torque	: 15.0 kgfm	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: N

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

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TORQUE AND CURRENT VS SPEED CURVE

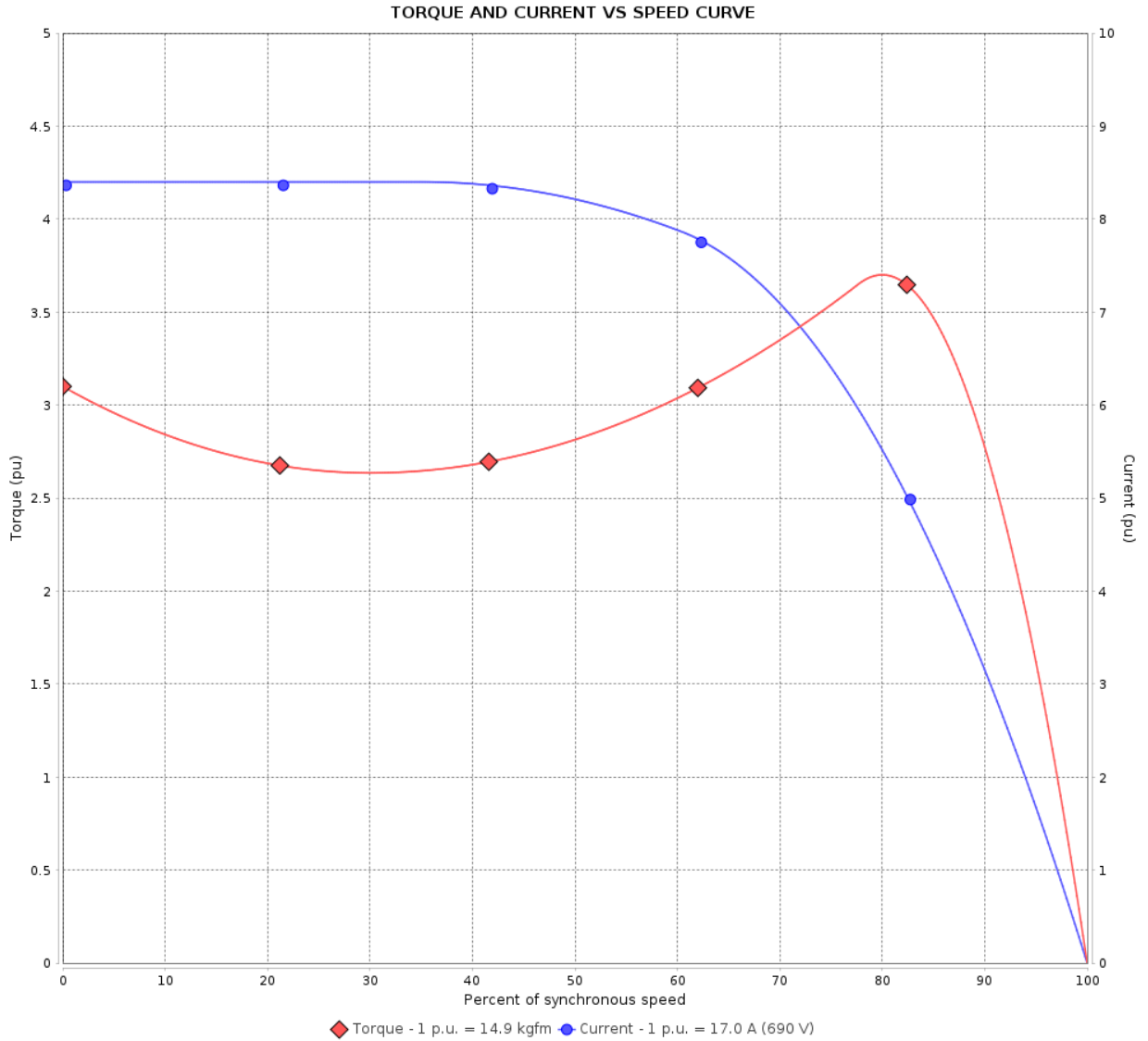


Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12862902



Performance : 400/690 V 50 Hz 6P

Rated current	: 29.3/17.0 A	Moment of inertia (J)	: 0.2969 kgm ²
LRC	: 8.4	Duty cycle	: S1
Rated torque	: 14.9 kgfm	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 370 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: N

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

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TORQUE AND CURRENT VS SPEED CURVE

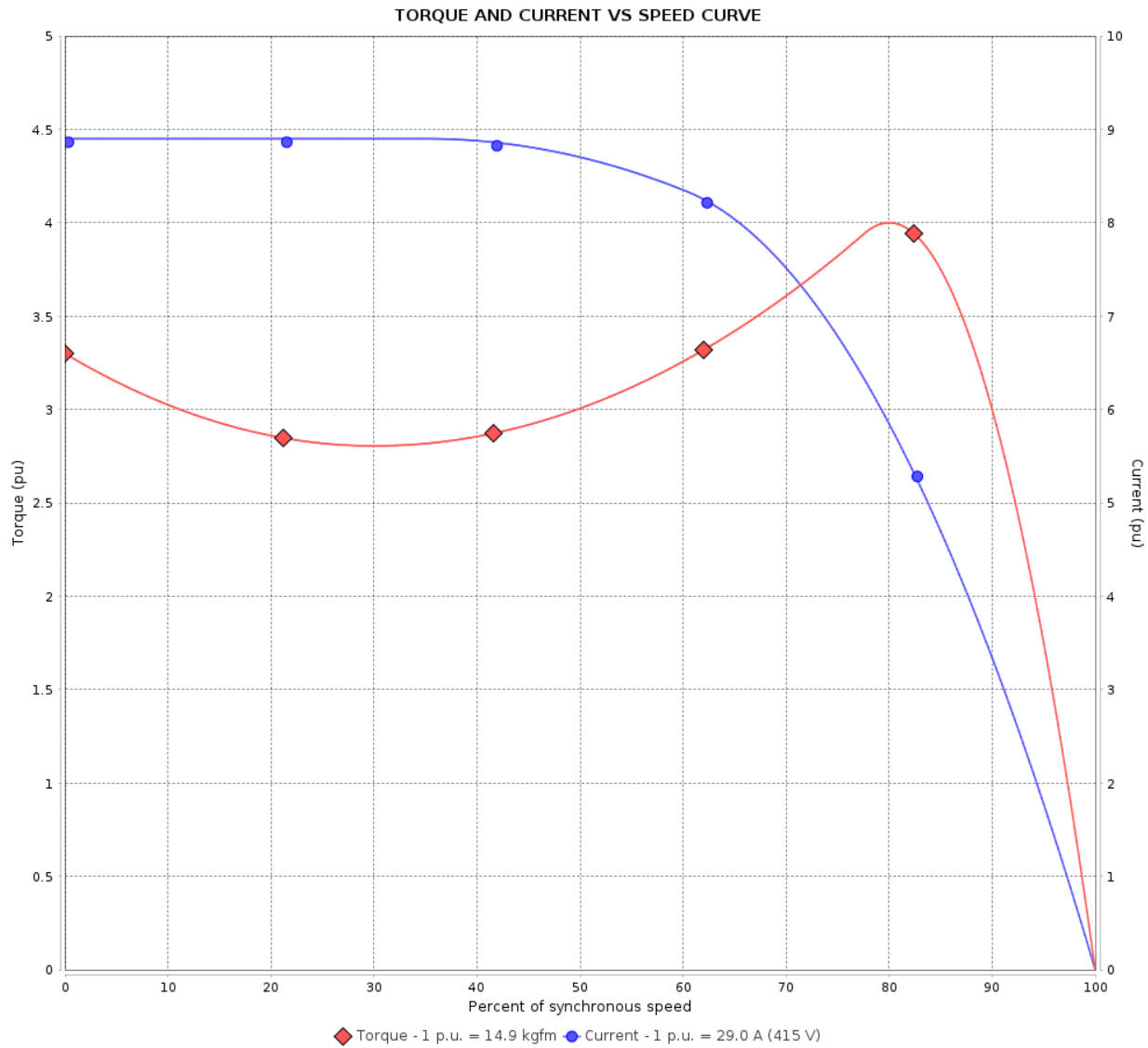
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Rated torque	: 14.9 kgfm	Insulation class	: F
Locked rotor torque	: 330 %	Service factor	: 1.00
Breakdown torque	: 400 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: N

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

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TORQUE AND CURRENT VS SPEED CURVE

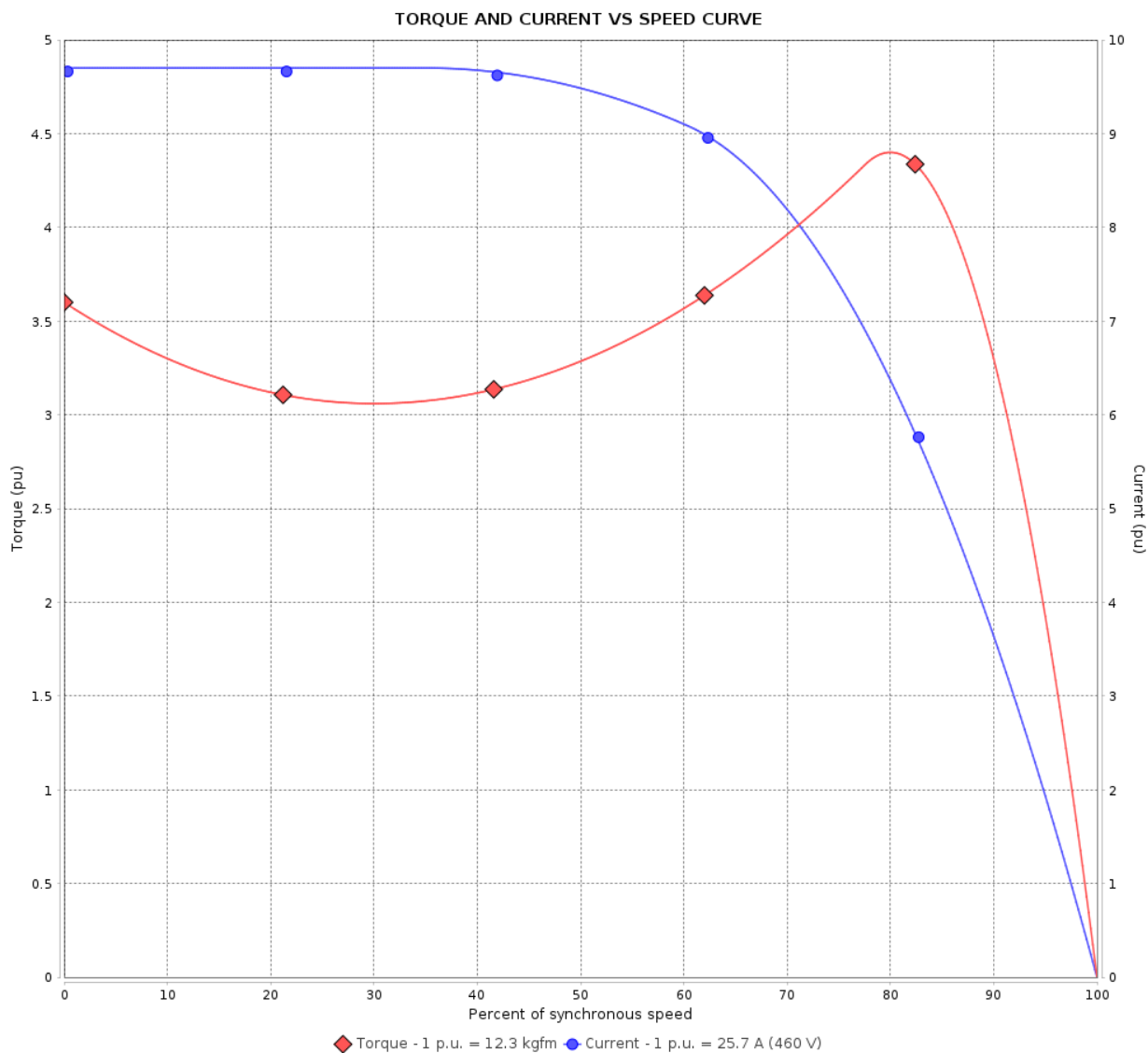


Three Phase Induction Motor - Squirrel Cage

Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12862902



Performance : 460 V 60 Hz 6P

Rated current	: 25.7 A	Moment of inertia (J)	: 0.2969 kgm ²
LRC	: 9.7	Duty cycle	: S1
Rated torque	: 12.3 kgfm	Insulation class	: F
Locked rotor torque	: 360 %	Service factor	: 1.00
Breakdown torque	: 440 %	Temperature rise	: 80 K
Rated speed	: 1183 rpm	Design	: N

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

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LOAD PERFORMANCE CURVE

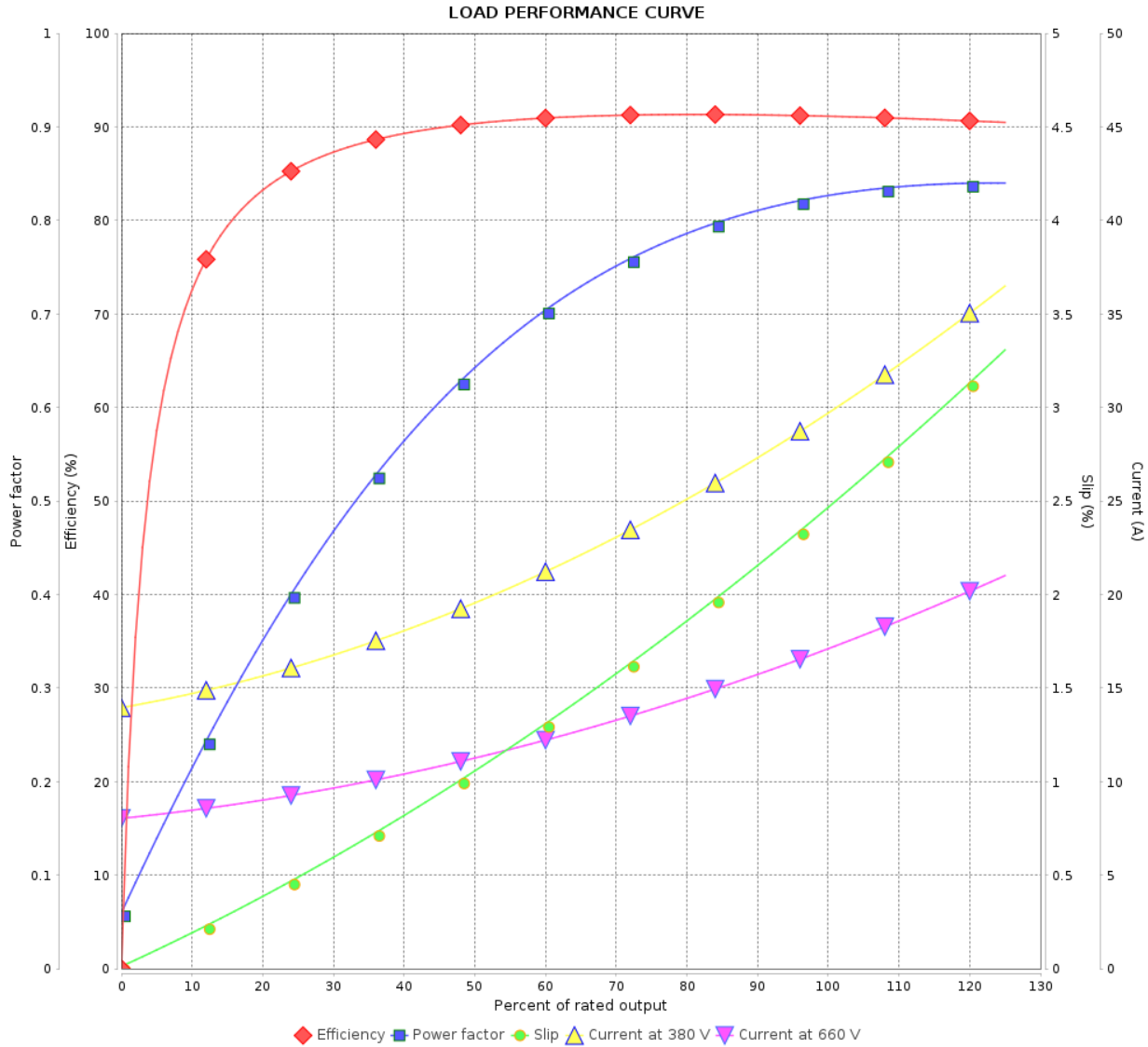
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Performance : 380/660 V 50 Hz 6P

Rated current : 30.1/17.3 A
 LRC : 7.7
 Rated torque : 15.0 kgfm
 Locked rotor torque : 290 %
 Breakdown torque : 320 %
 Rated speed : 975 rpm

Moment of inertia (J) : 0.2969 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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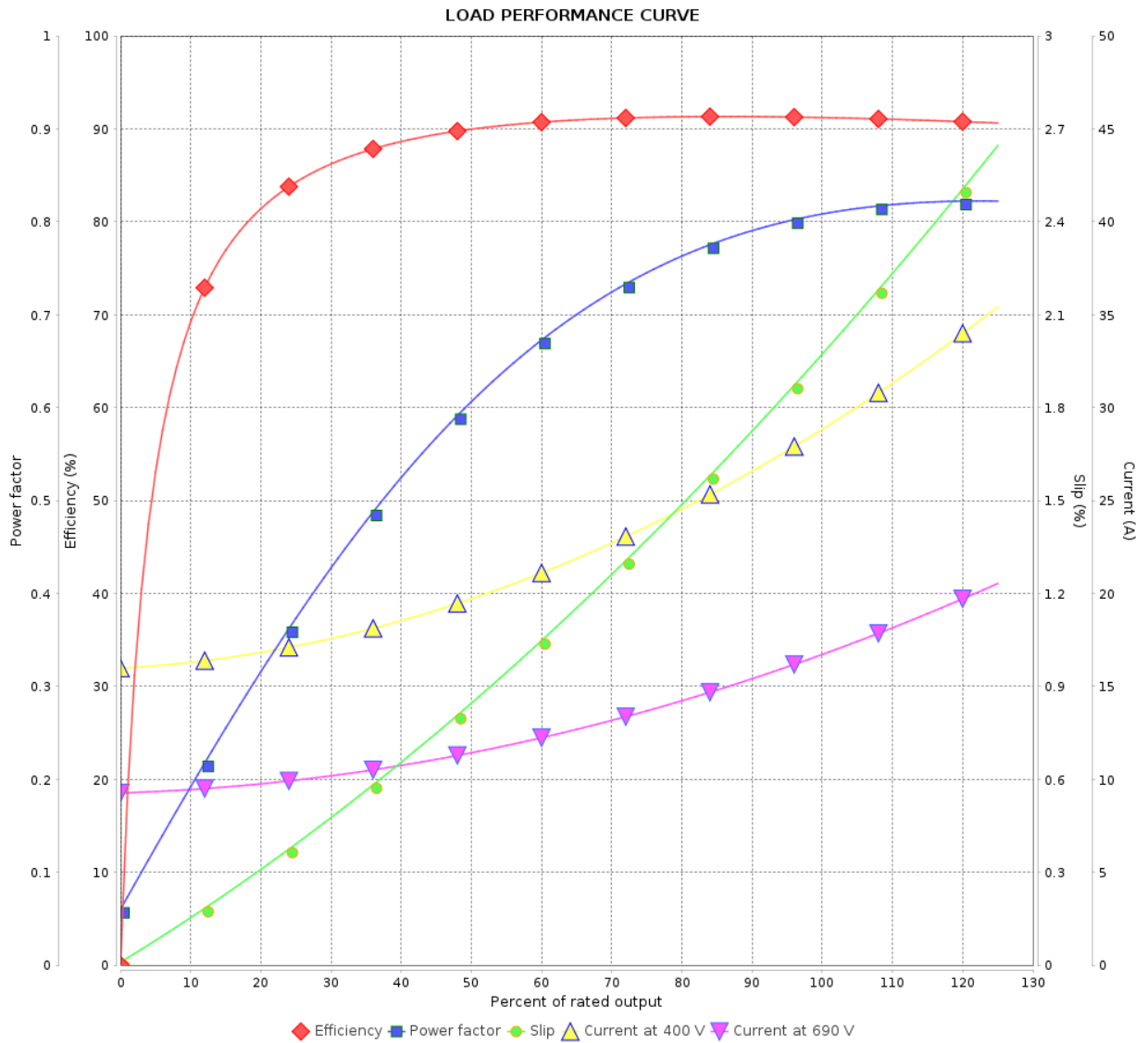
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 Duty cycle : S1
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 Service factor : 1.00
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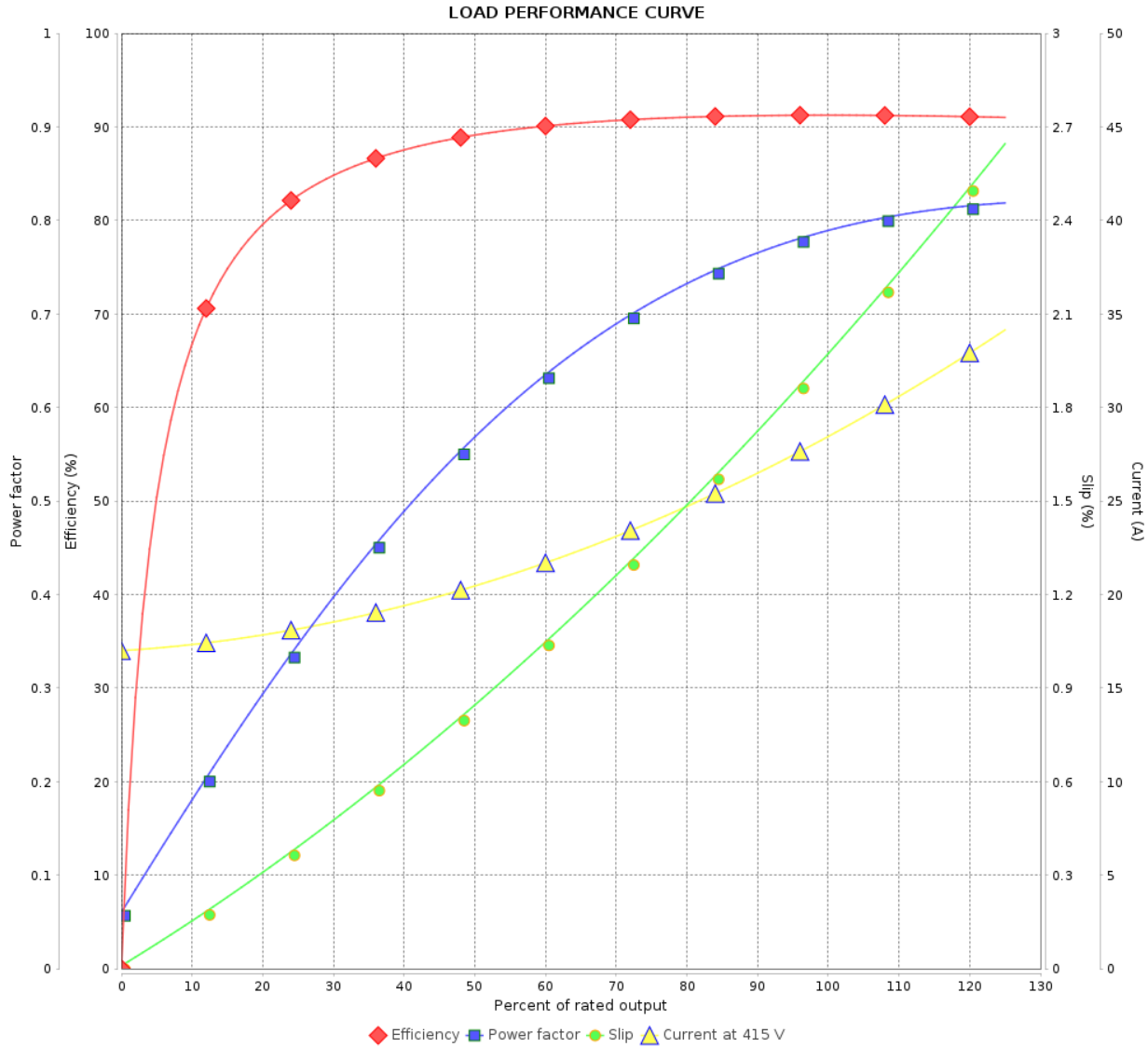
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Locked rotor torque	: 330 %	Service factor	: 1.00
Breakdown torque	: 400 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: N

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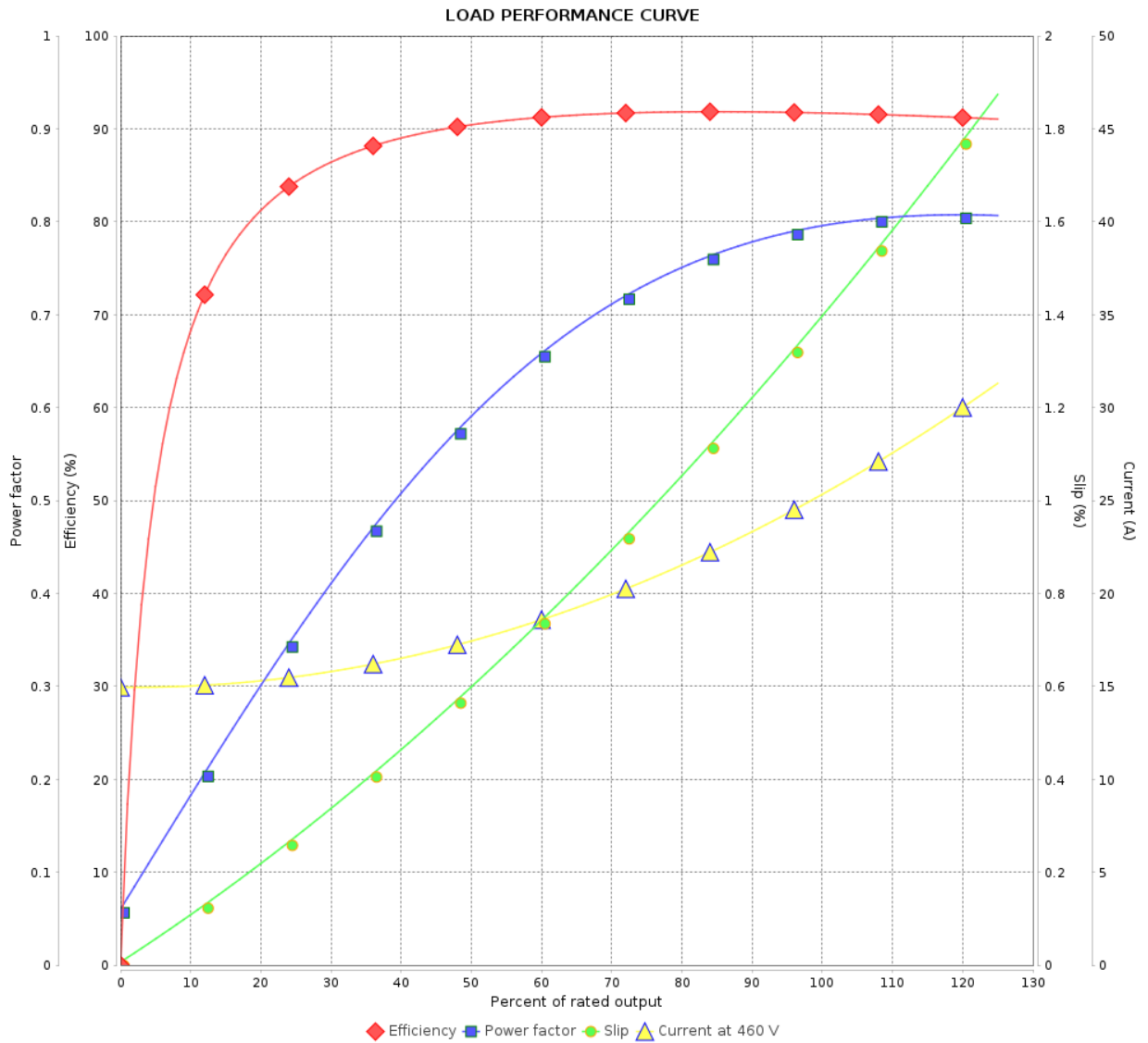
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Performance : 460 V 60 Hz 6P

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 Rated speed : 1183 rpm

Moment of inertia (J) : 0.2969 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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THERMAL LIMIT CURVE

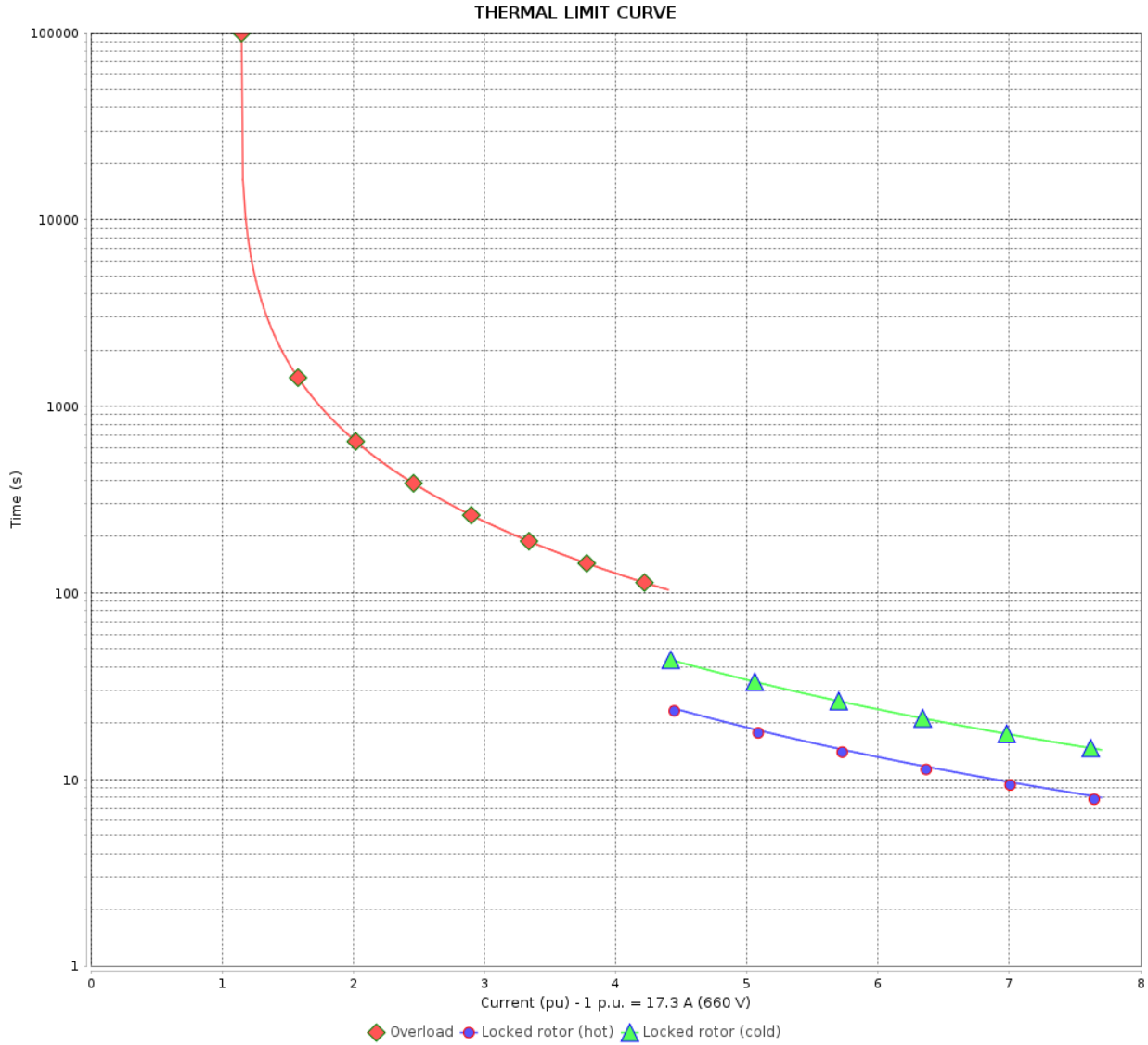
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 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Heating constant

Cooling constant

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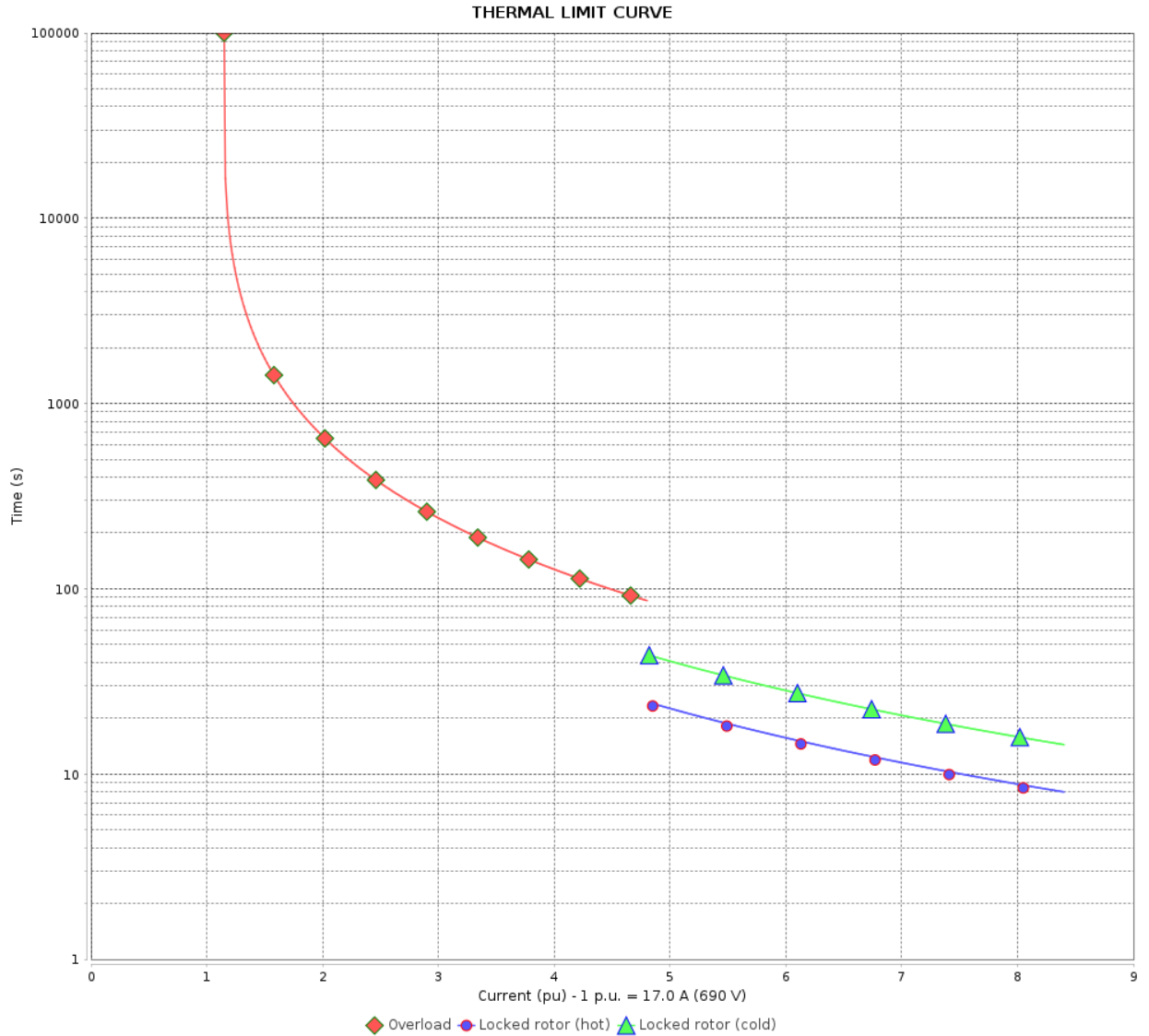
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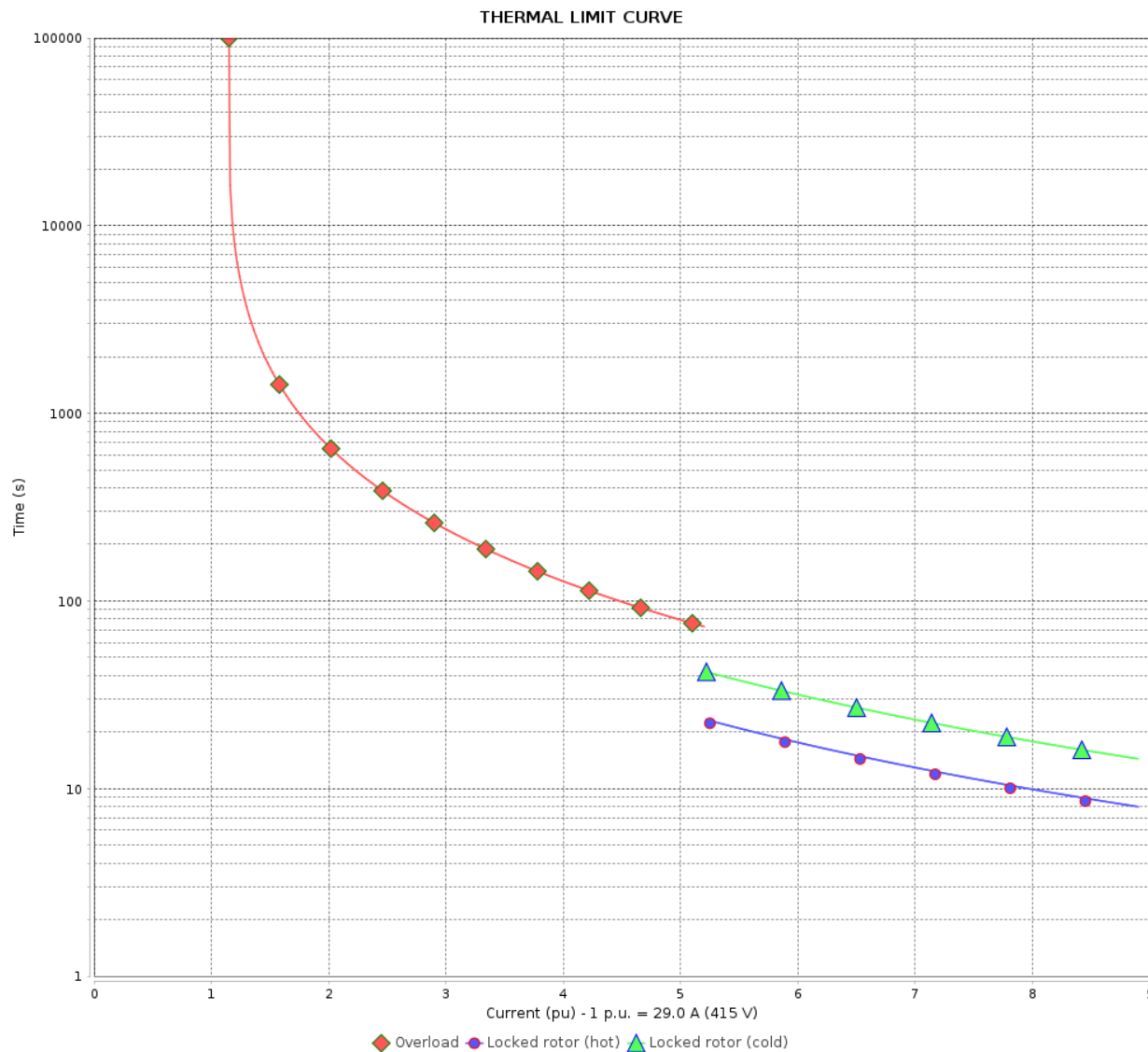
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Breakdown torque	: 400 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: N

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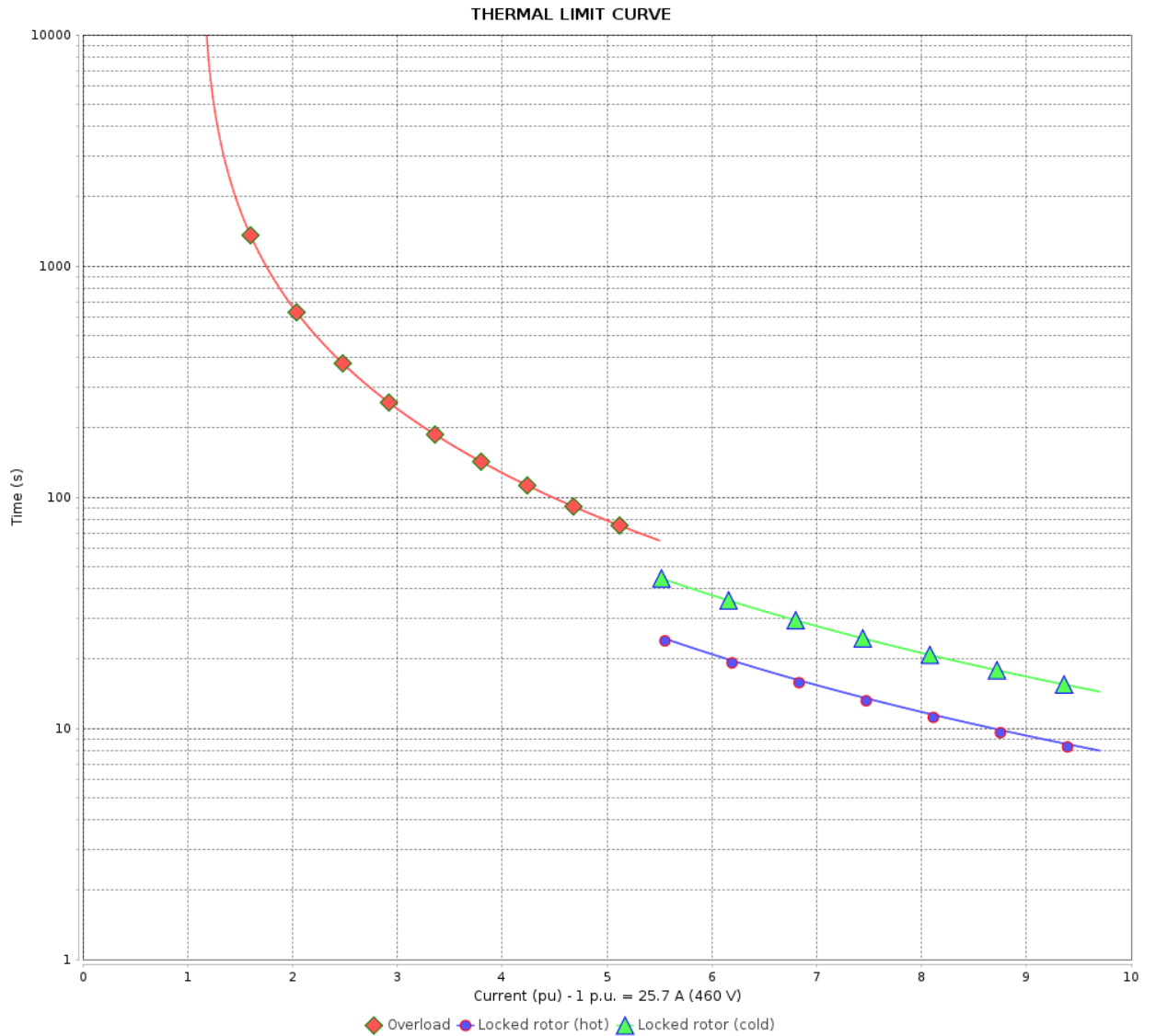
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Performance : 460 V 60 Hz 6P

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 Breakdown torque : 440 %
 Rated speed : 1183 rpm

Moment of inertia (J) : 0.2969 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
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VFD OPERATION CURVE

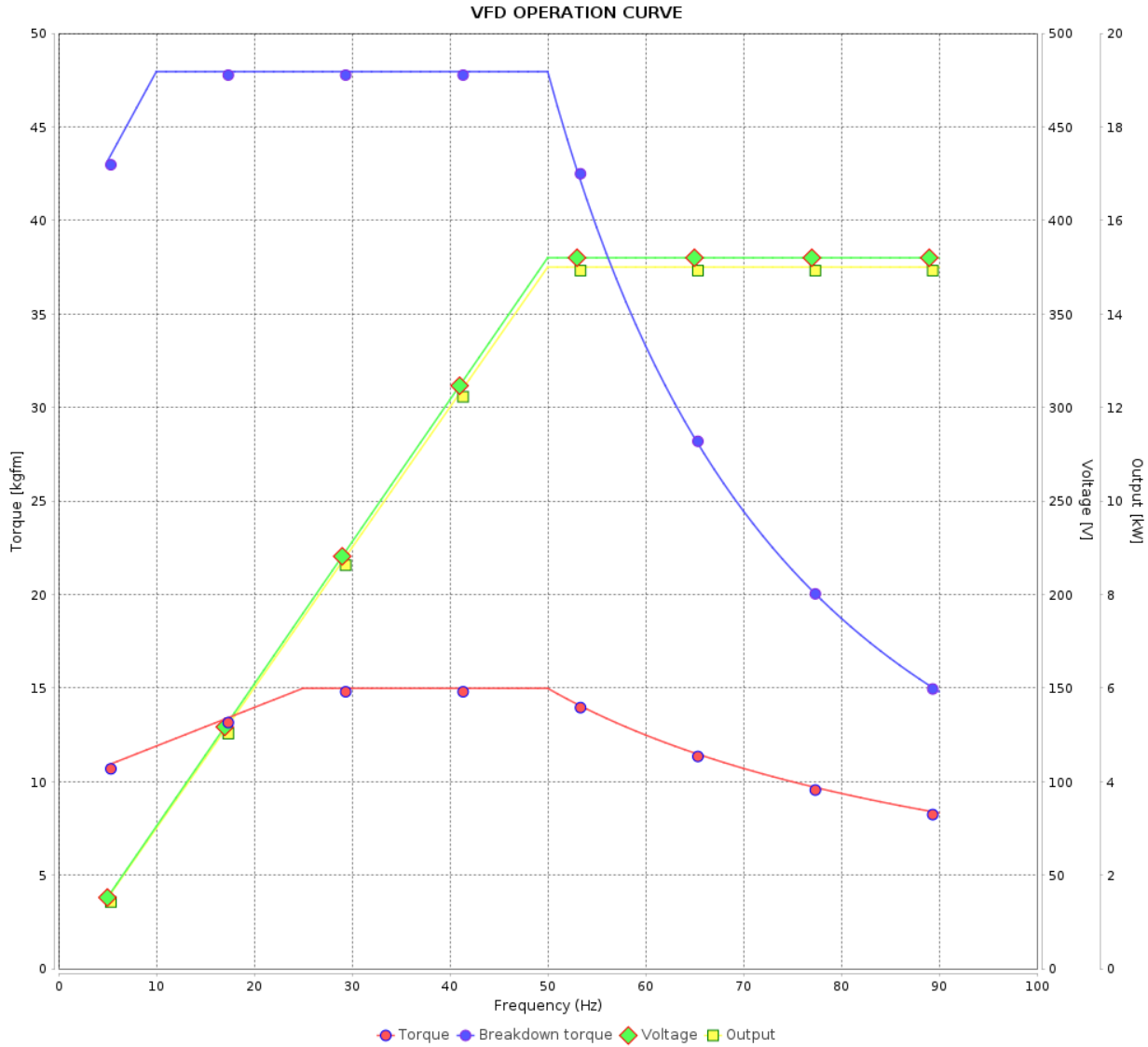
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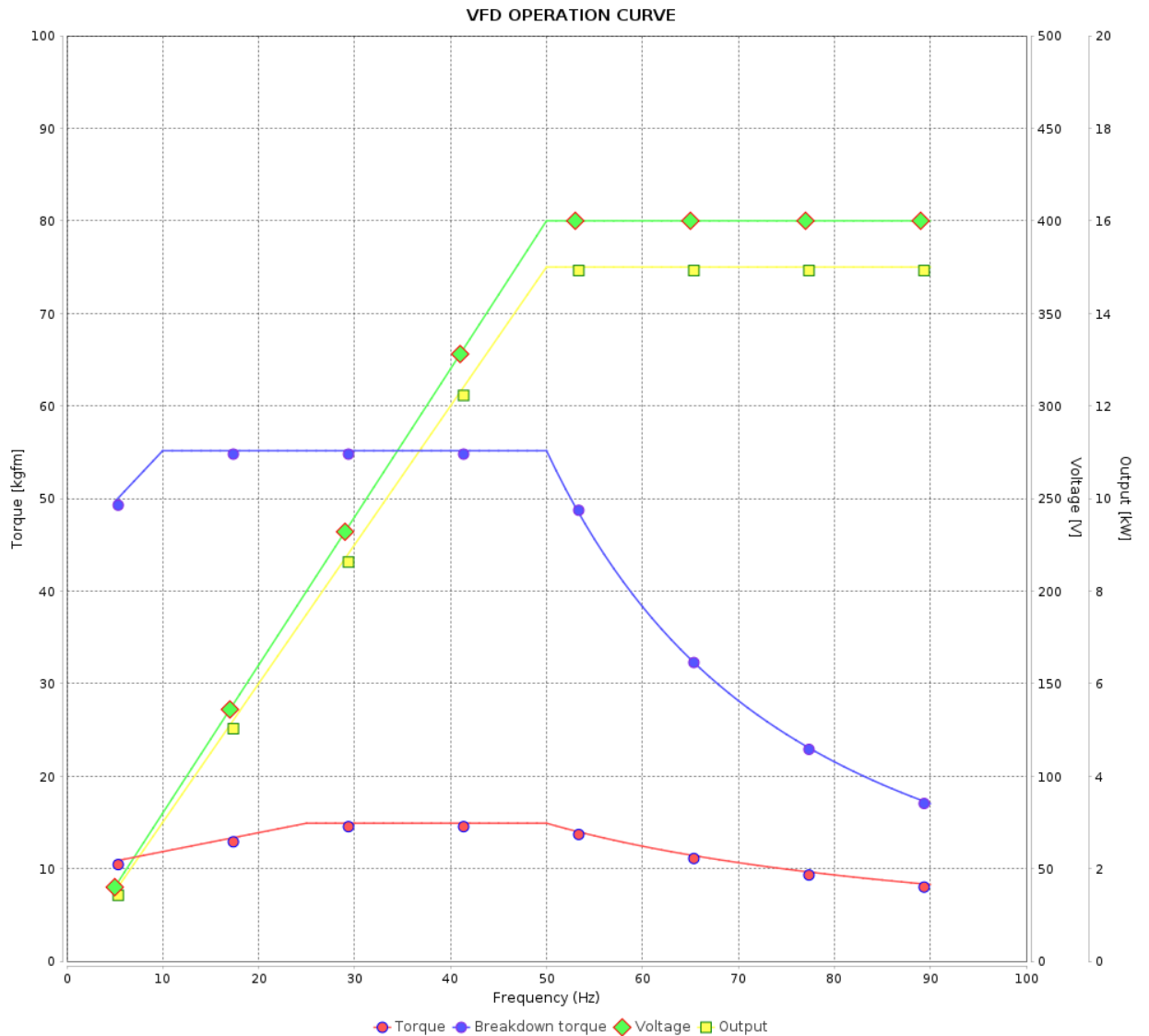
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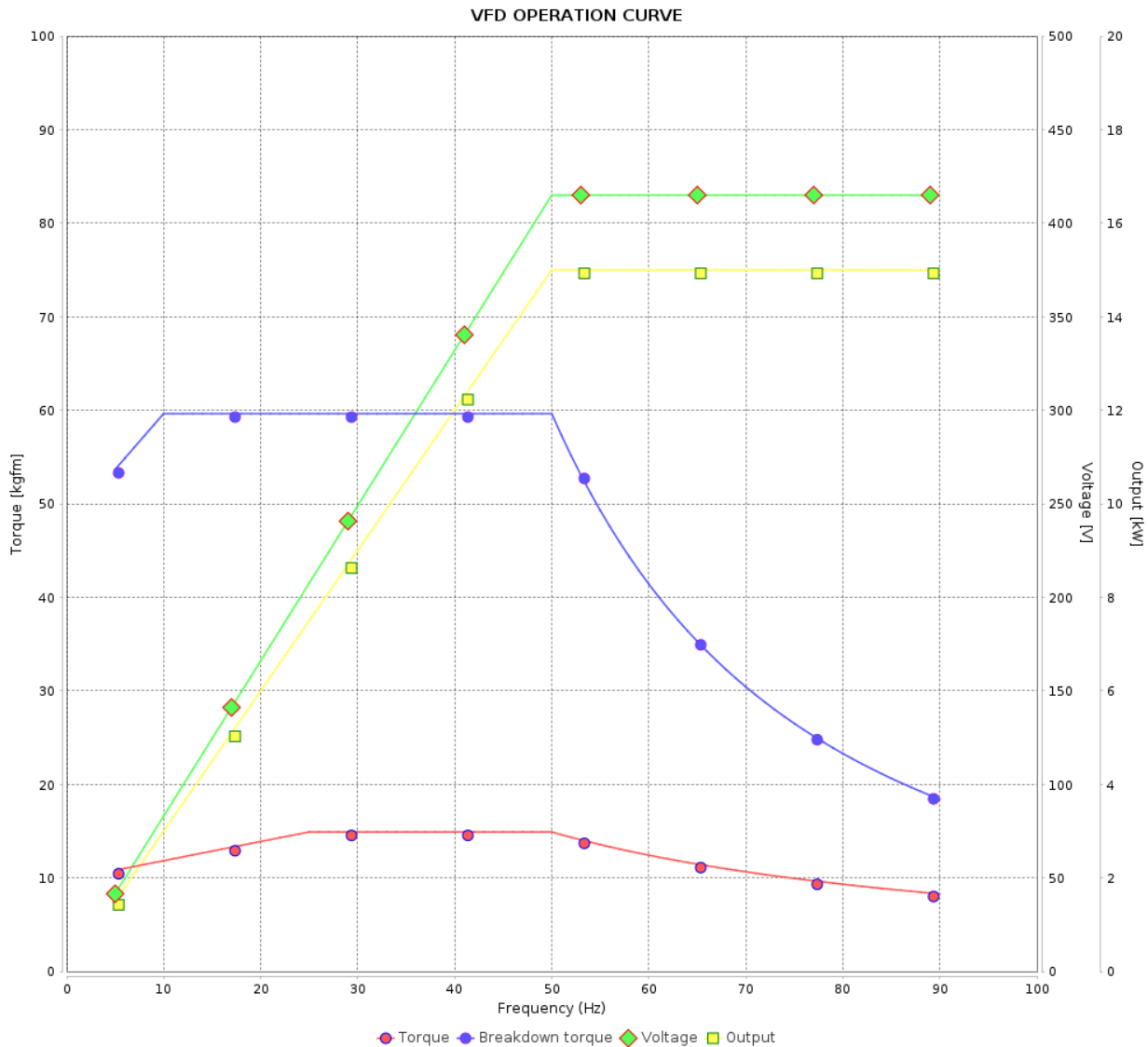
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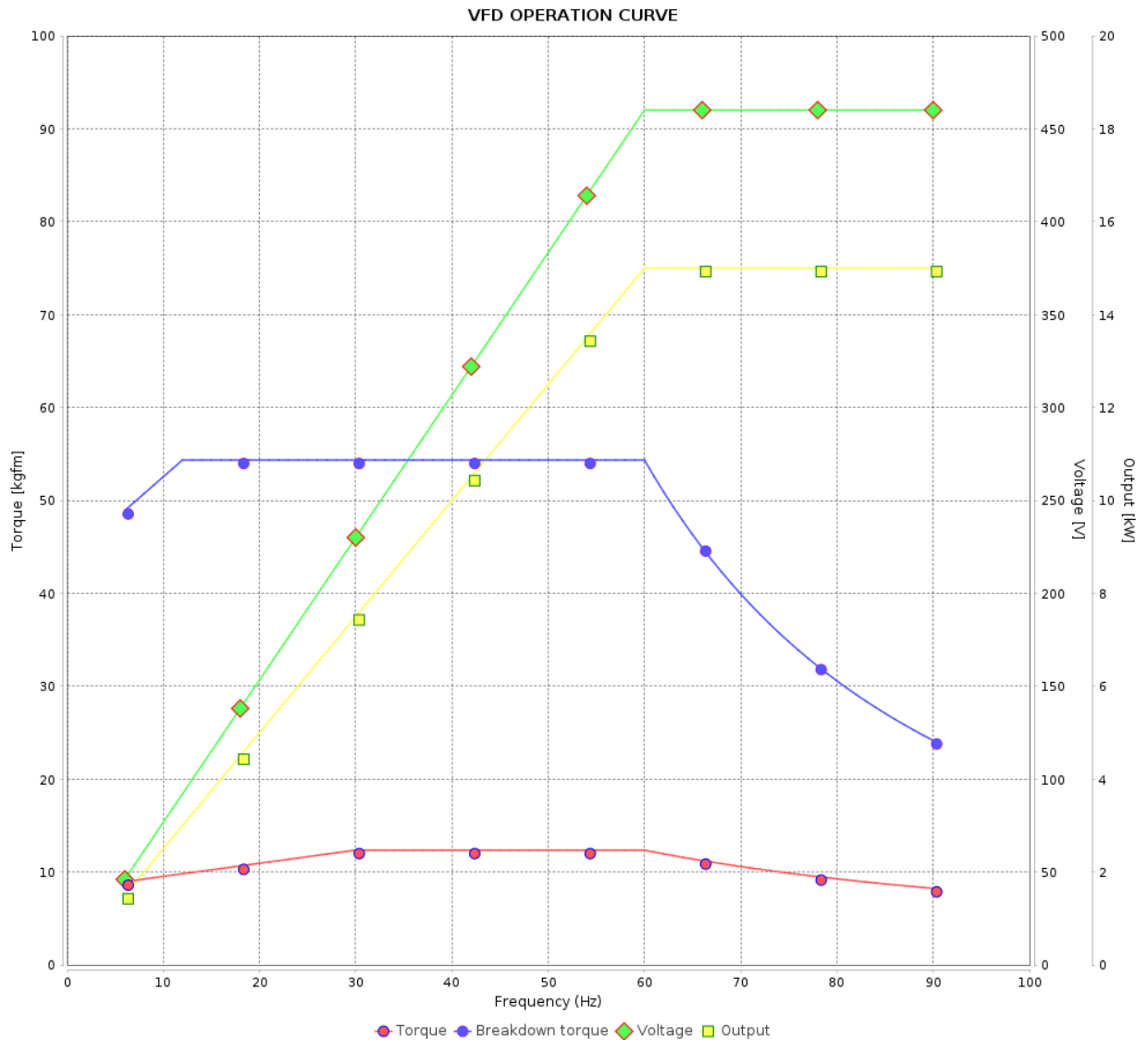
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