

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE4 Three-Phase

Product code : 16968855

Frame	: 280S/M	Cooling method	: IC411 - TEFC
Insulation class	: F	Mounting	: B3T
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	: 732 kg
Protection degree	: IP55	Moment of inertia (J)	: 2.78 kgm ²
Design	: NE		

Output [kW]	75	75
Poles	4	4
Frequency [Hz]	50	60
Rated voltage [V]	400/690	460
Rated current [A]	138/79.7	121
L. R. Amperes [A]	1128/654	1123
LRC [A]	8.2	9.3
No load current [A]	58.0/33.6	55.0
Rated speed [RPM]	1490	1791
Slip [%]	0.67	0.50
Rated torque [kgfm]	49.0	40.8
Locked rotor torque [%]	270	320
Breakdown torque [%]	300	350
Service factor	1.00	1.00
Temperature rise	80 K	80 K
Locked rotor time	28s (cold) 16s (hot)	57s (cold) 32s (hot)
Noise level ²	69.0 dB(A)	73.0 dB(A)
Efficiency (%)	25%	
	50%	95.0
	75%	95.4
	100%	96.2
Power Factor	25%	
	50%	0.68
	75%	0.76
	100%	0.81

Losses at normative operating points (speed;torque), in percentage of rated output power

Losses (%)	P1 (0,9;1,0)	4.0	3.8
	P2 (0,5;1,0)	3.0	2.9
	P3 (0,25;1,0)	2.7	2.5
	P4 (0,9;0,5)	2.3	2.2
	P5 (0,5;0,5)	1.4	1.4
	P6 (0,5;0,25)	1.1	1.0
	P7 (0,25;0,25)	0.7	0.6

	Drive end	Non drive end	Foundation loads
Bearing type	: 6316 C3	6316 C3	Max. traction : 883 kgf
Sealing	: WSeal	WSeal	Max. compression : 1615 kgf
Lubrication interval	: 13000 h	13000 h	
Lubricant amount	: 34 g	34 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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Three Phase Induction Motor - Squirrel Cage



Customer :

Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermistor - 2 wires	1 x Phase	155 °C

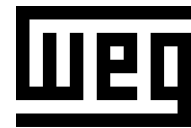
Space heater information

Voltage: 110-127/200-240 V

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TORQUE AND CURRENT VS SPEED CURVE

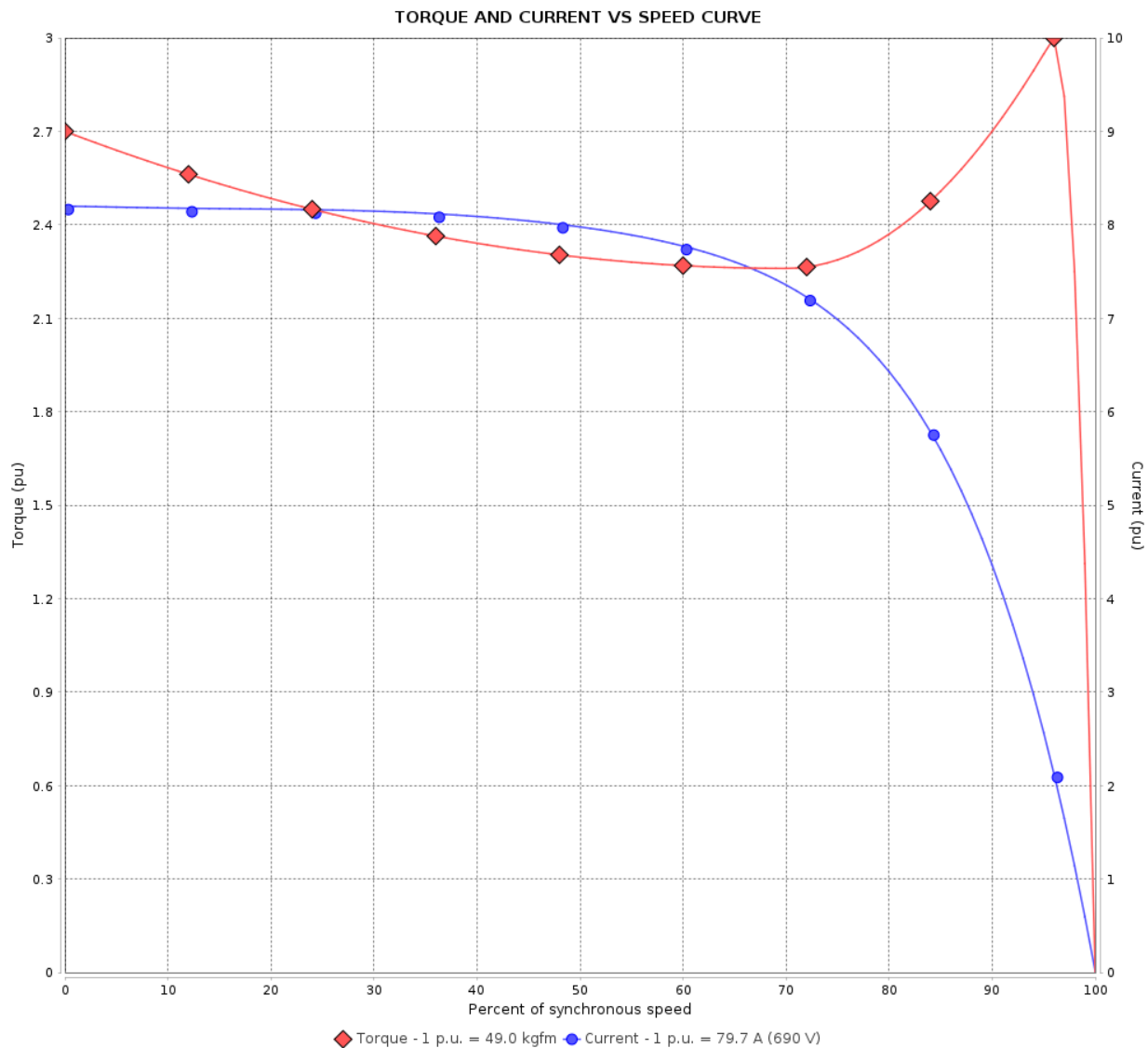
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE4 Three-Phase

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Performance : 400/690 V 50 Hz 4P

Rated current : 138/79.7 A
LRC : 8.2
Rated torque : 49.0 kgfm
Locked rotor torque : 270 %
Breakdown torque : 300 %
Rated speed : 1490 rpm

Moment of inertia (J) : 2.78 kgm²
Duty cycle : S1
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : NE

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

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TORQUE AND CURRENT VS SPEED CURVE

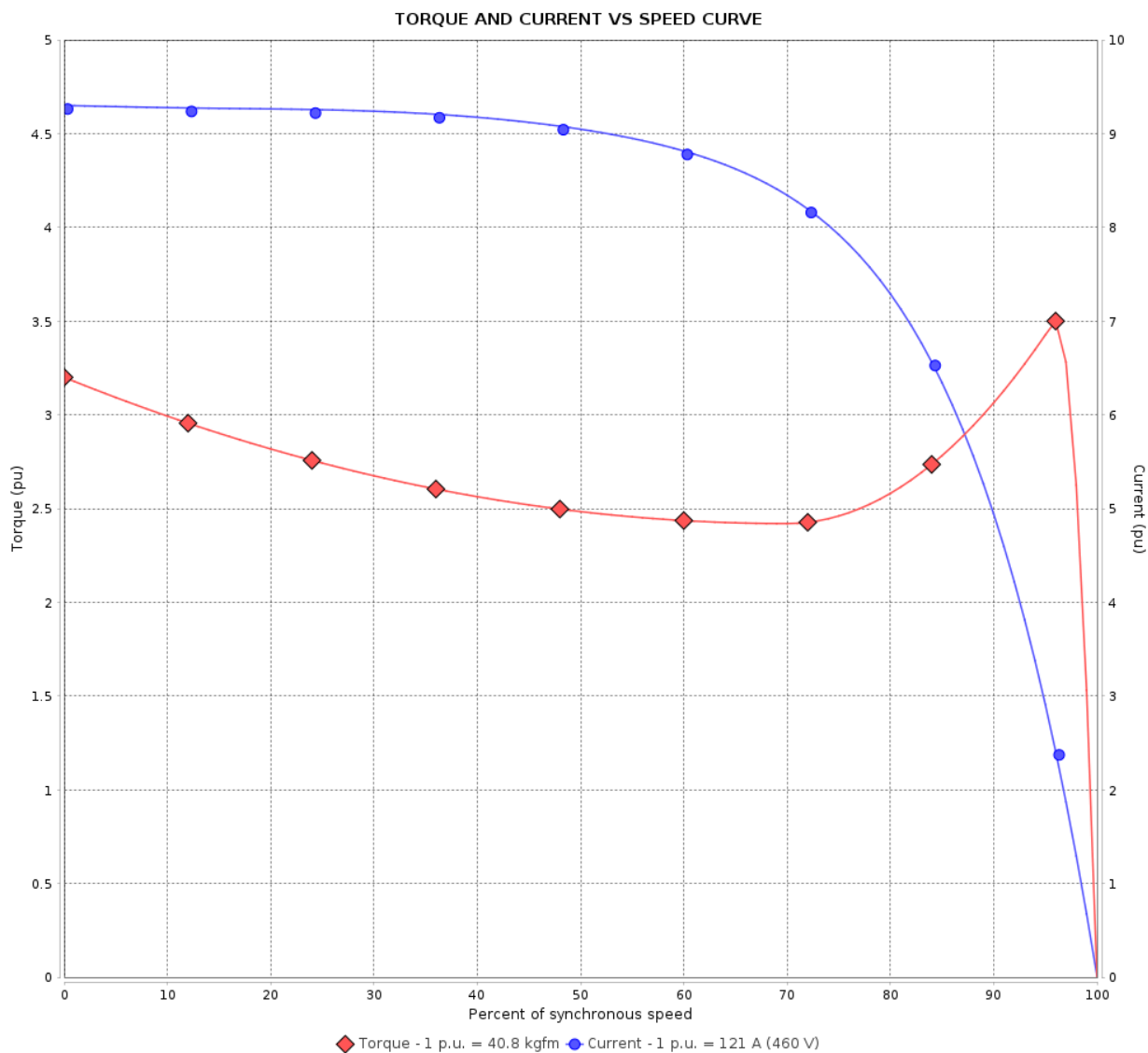
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE4 Three-Phase

Product code : 16968855



Performance : 460 V 60 Hz 4P

Rated current	: 121 A	Moment of inertia (J)	: 2.78 kgm ²
LRC	: 9.3	Duty cycle	: S1
Rated torque	: 40.8 kgfm	Insulation class	: F
Locked rotor torque	: 320 %	Service factor	: 1.00
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 1791 rpm	Design	: NE

Locked rotor time : 57s (cold) 32s (hot)

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LOAD PERFORMANCE CURVE

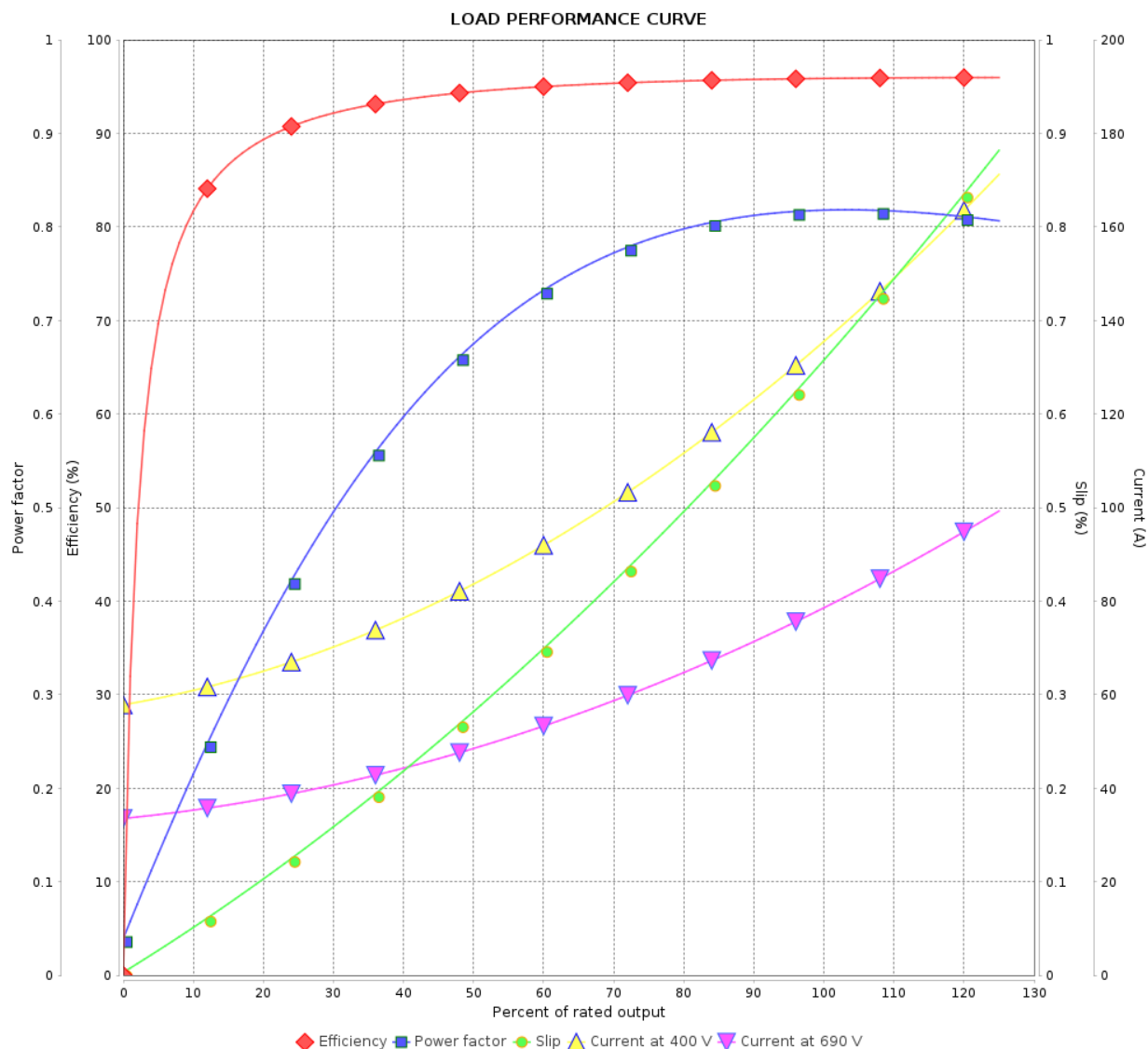
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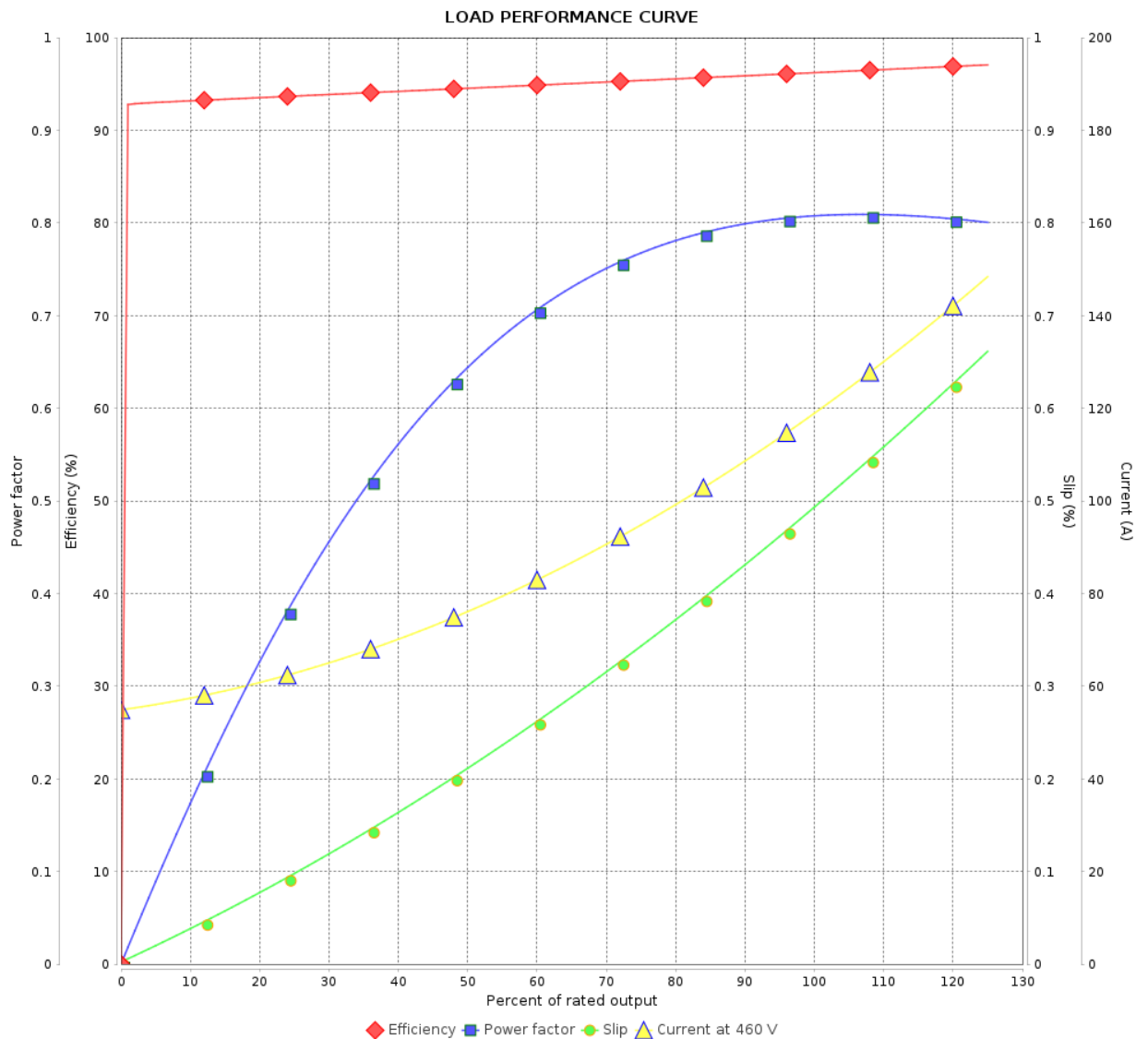
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THERMAL LIMIT CURVE

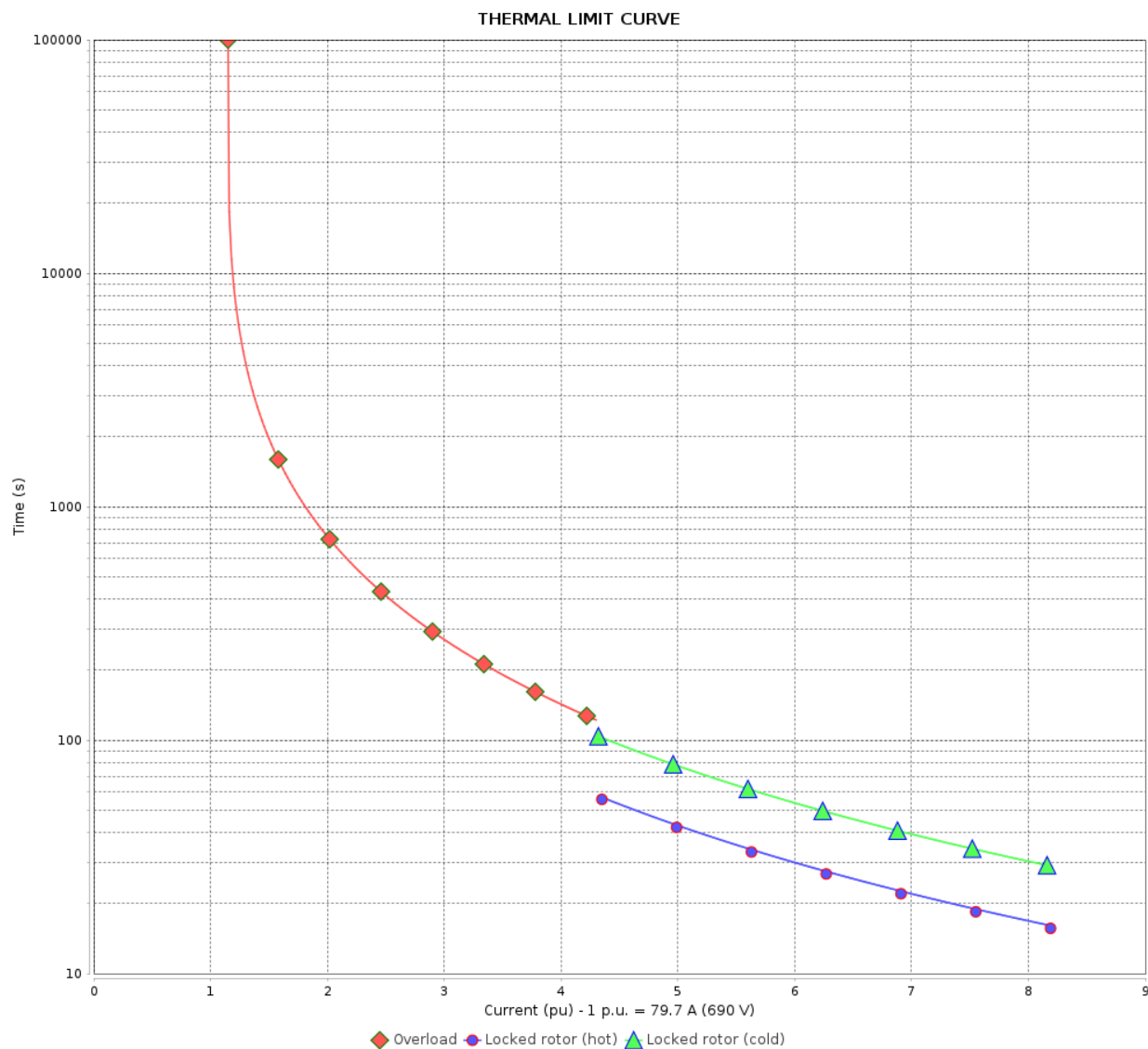
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Duty cycle : S1
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Service factor : 1.00
Temperature rise : 80 K
Design : NE

Heating constant

Cooling constant

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THERMAL LIMIT CURVE

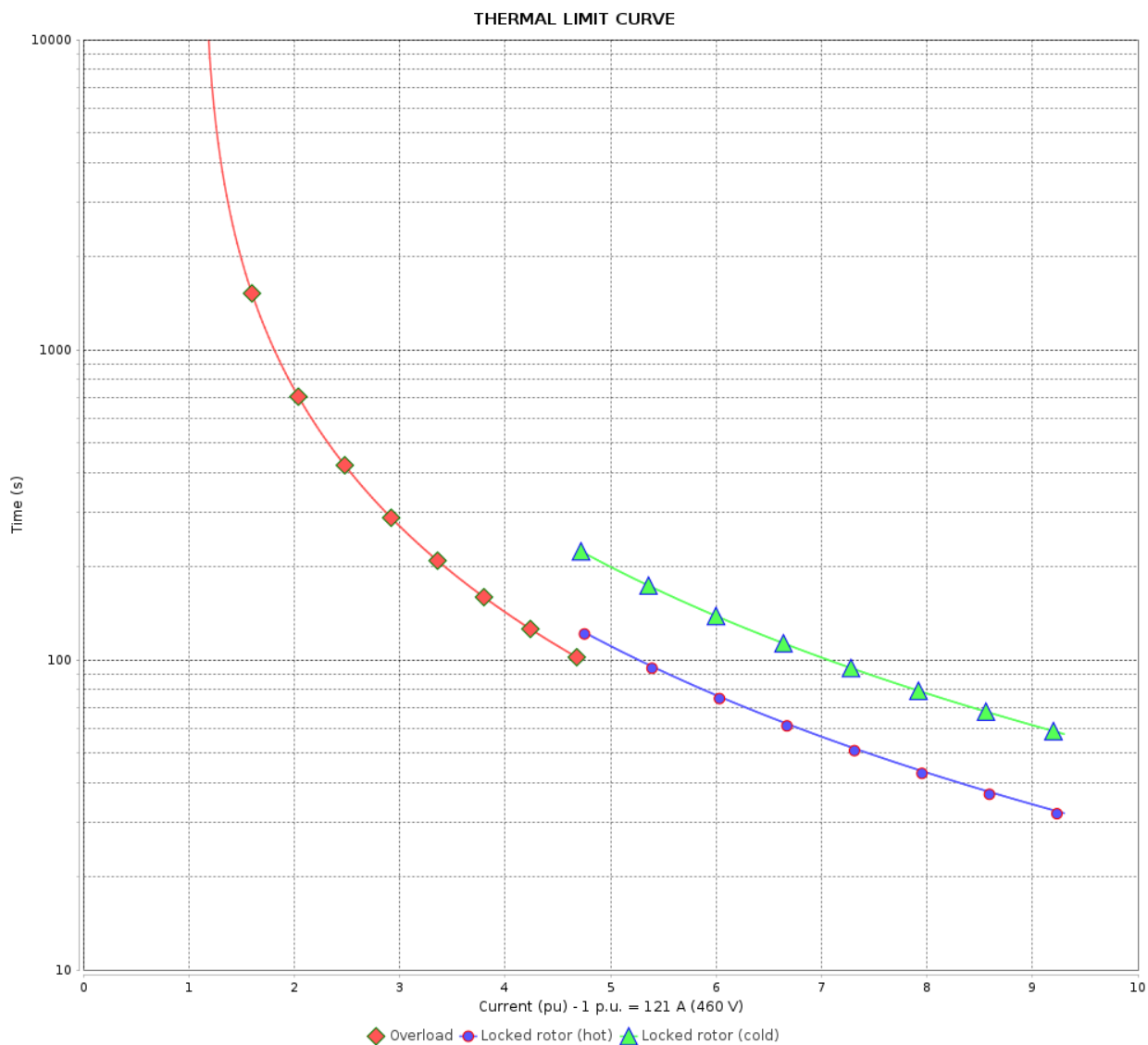
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VFD OPERATION CURVE

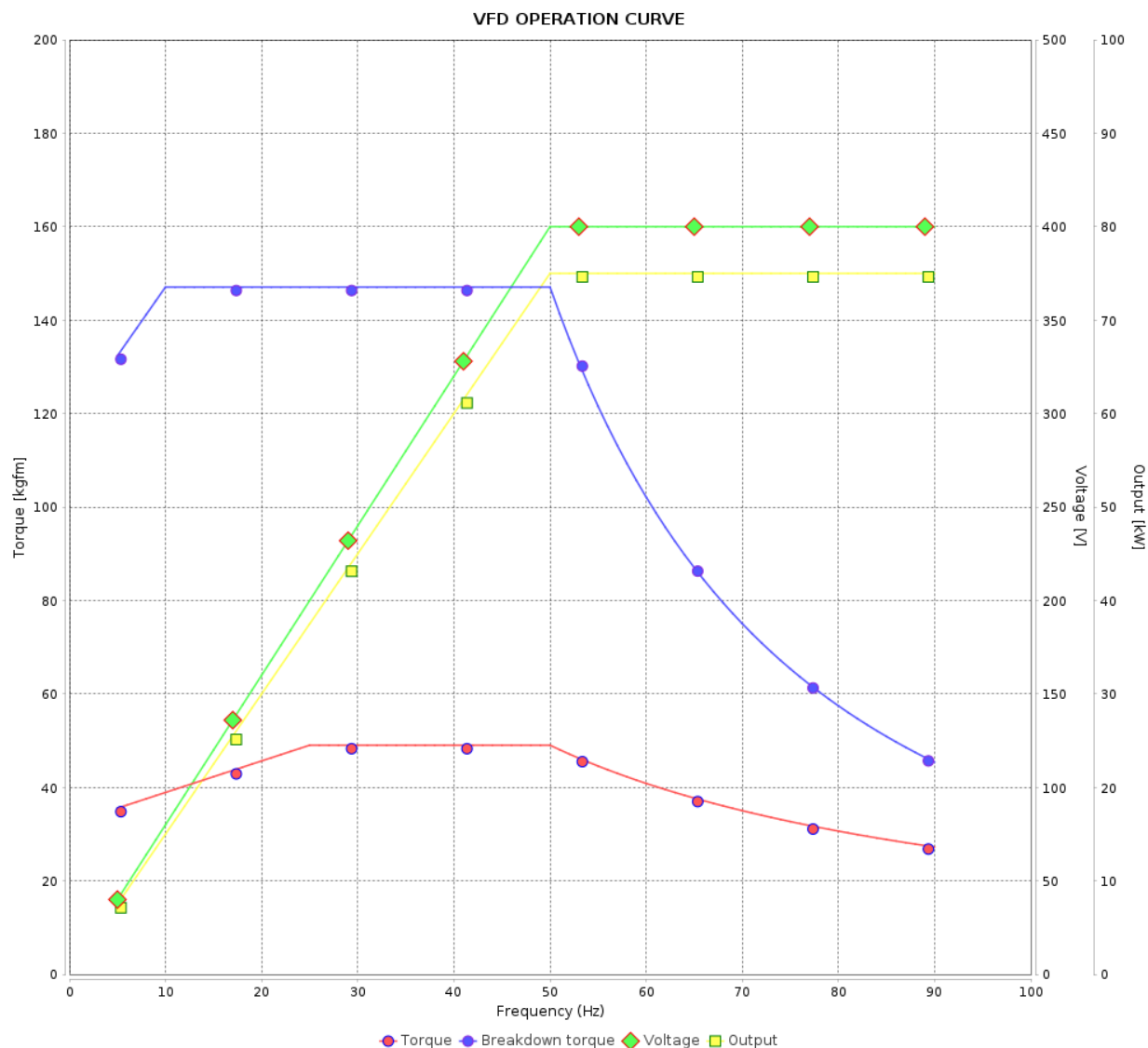
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VFD OPERATION CURVE

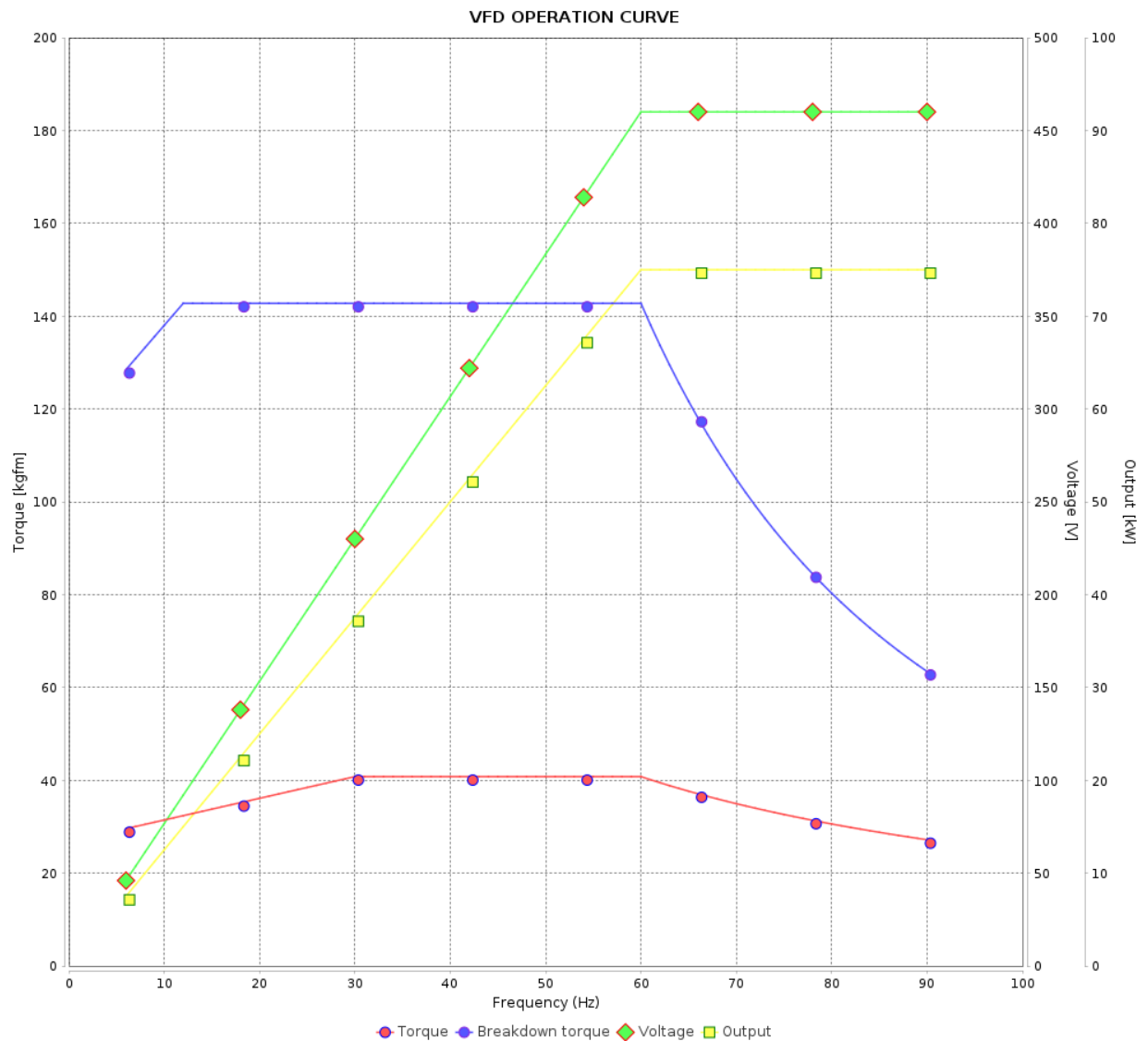
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