

DATA SHEET

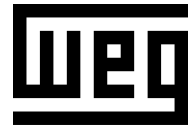
Three Phase Induction Motor - Squirrel Cage



Customer		: Astraprom d.o.o.			
Product line		: Multimounting IE3 Three-Phase		Product code : 13096276	
Frame	: 90S/L	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	: 18.6 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.0055 kgm ²		
Design	: N				
Output [kW]	1.1	1.1	1.1	1.1	1.1
Poles	4	4	4	4	4
Frequency [Hz]	50	50	50	50	60
Rated voltage [V]	220/380	230/400	240/415	460	
Rated current [A]	4.28/2.48	4.28/2.46	4.27/2.47	2.16	
L. R. Amperes [A]	31.7/18.4	32.5/18.7	34.2/19.8	18.4	
LRC [A]	7.4	7.6	8.0	8.5	
No load current [A]	2.45/1.42	2.78/1.60	3.03/1.75	1.45	
Rated speed [RPM]	1450	1455	1460	1760	
Slip [%]	3.33	3.00	2.67	2.22	
Rated torque [kgfm]	0.739	0.736	0.734	0.609	
Locked rotor torque [%]	250	280	300	310	
Breakdown torque [%]	290	330	360	390	
Service factor	1.00	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	28s (cold) 16s (hot)	
Noise level ²	49.0 dB(A)	49.0 dB(A)	49.0 dB(A)	51.0 dB(A)	
Efficiency (%)	25%				
	50%	84.0	83.0	81.0	80.0
	75%	84.7	84.5	84.1	84.0
	100%	84.3	84.8	84.8	86.5
Power Factor	25%				
	50%	0.61	0.56	0.53	0.54
	75%	0.72	0.68	0.65	0.66
	100%	0.80	0.76	0.73	0.74
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	18.2	17.5	17.5	15.2
	P2 (0,5;1,0)	16.2	15.6	15.6	13.6
	P3 (0,25;1,0)	15.4	14.8	14.8	12.9
	P4 (0,9;0,5)	9.6	9.2	9.2	8.0
	P5 (0,5;0,5)	7.1	6.9	6.9	6.0
	P6 (0,5;0,25)	5.4	5.2	5.2	4.5
	P7 (0,25;0,25)	4.1	3.9	3.9	3.4
Bearing type	: Drive end 6205 ZZ	Non drive end 6204 ZZ	Foundation loads		
Sealing	: Oil Seal	Oil Seal	Max. traction	: 58 kgf	
Lubrication interval	: -	-	Max. compression	: 77 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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Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

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Customer : Astraprom d.o.o.

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

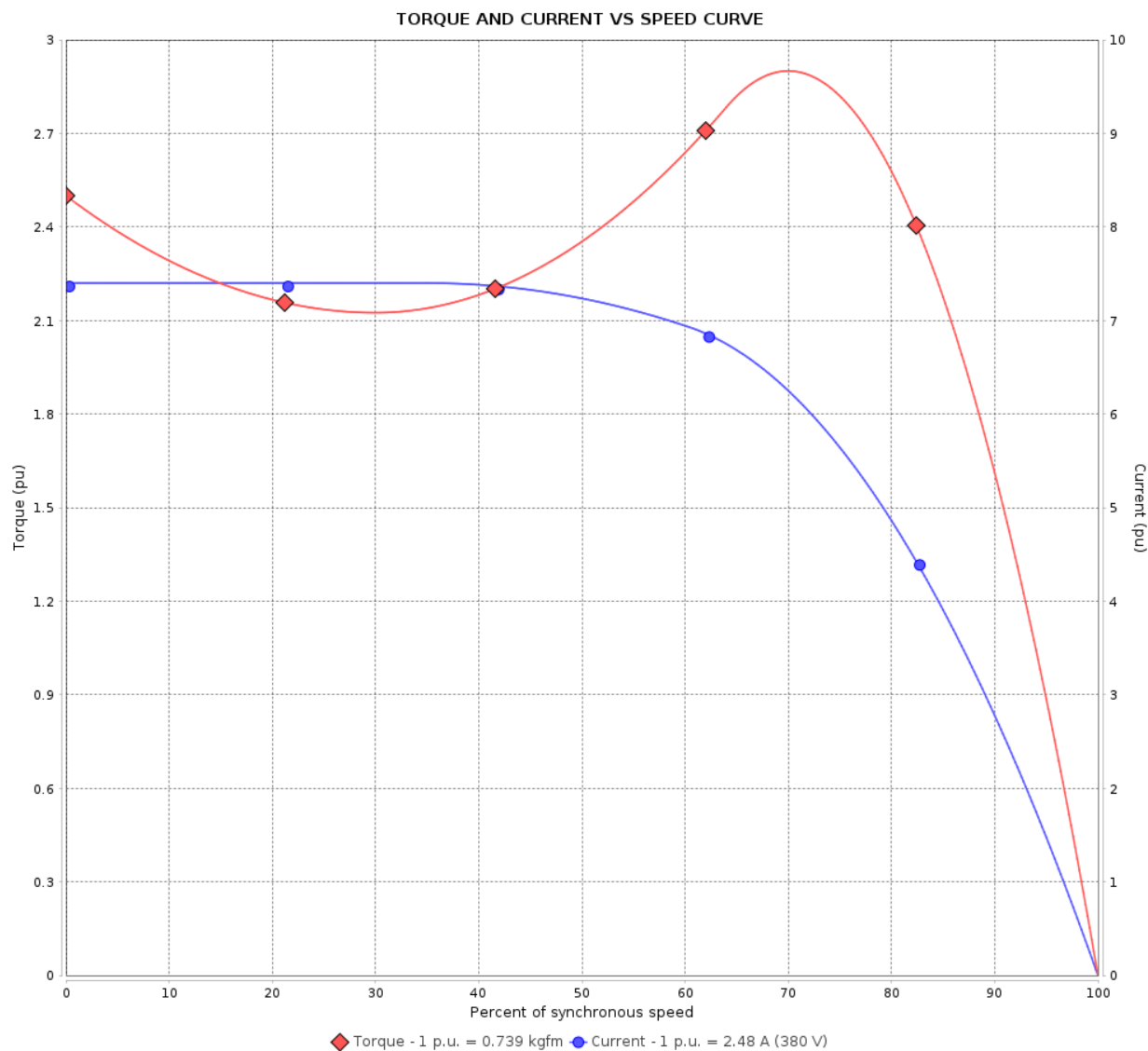
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code : 13096276



Performance : 220/380 V 50 Hz 4P

Rated current	: 4.28/2.48 A	Moment of inertia (J)	: 0.0055 kgm ²
LRC	: 7.4	Duty cycle	: S1
Rated torque	: 0.739 kgfm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1450 rpm	Design	: N

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

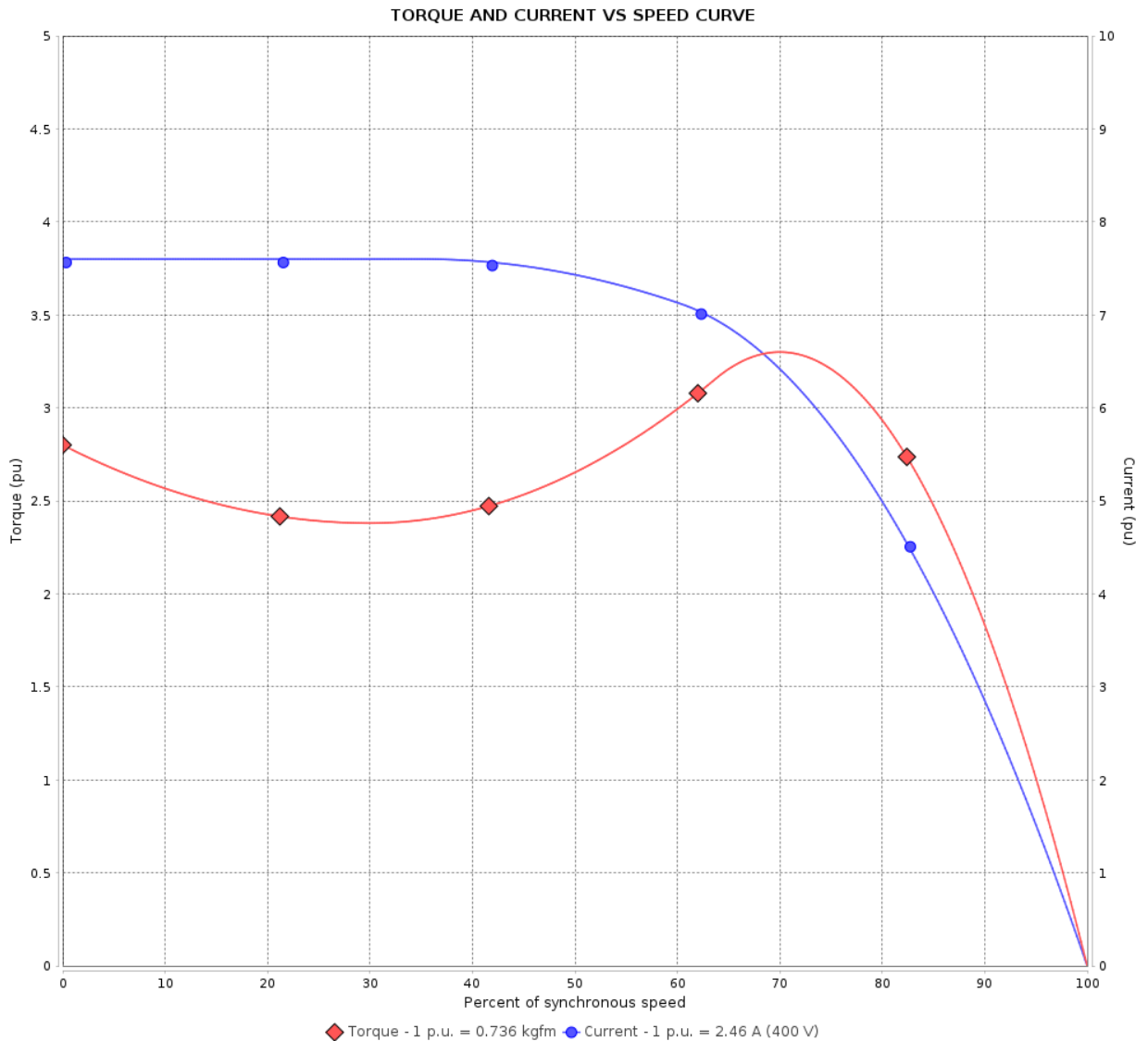


Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code :

13096276



Performance : 230/400 V 50 Hz 4P

Rated current	: 4.28/2.46 A	Moment of inertia (J)	: 0.0055 kgm ²
LRC	: 7.6	Duty cycle	: S1
Rated torque	: 0.736 kgfm	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1455 rpm	Design	: N

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

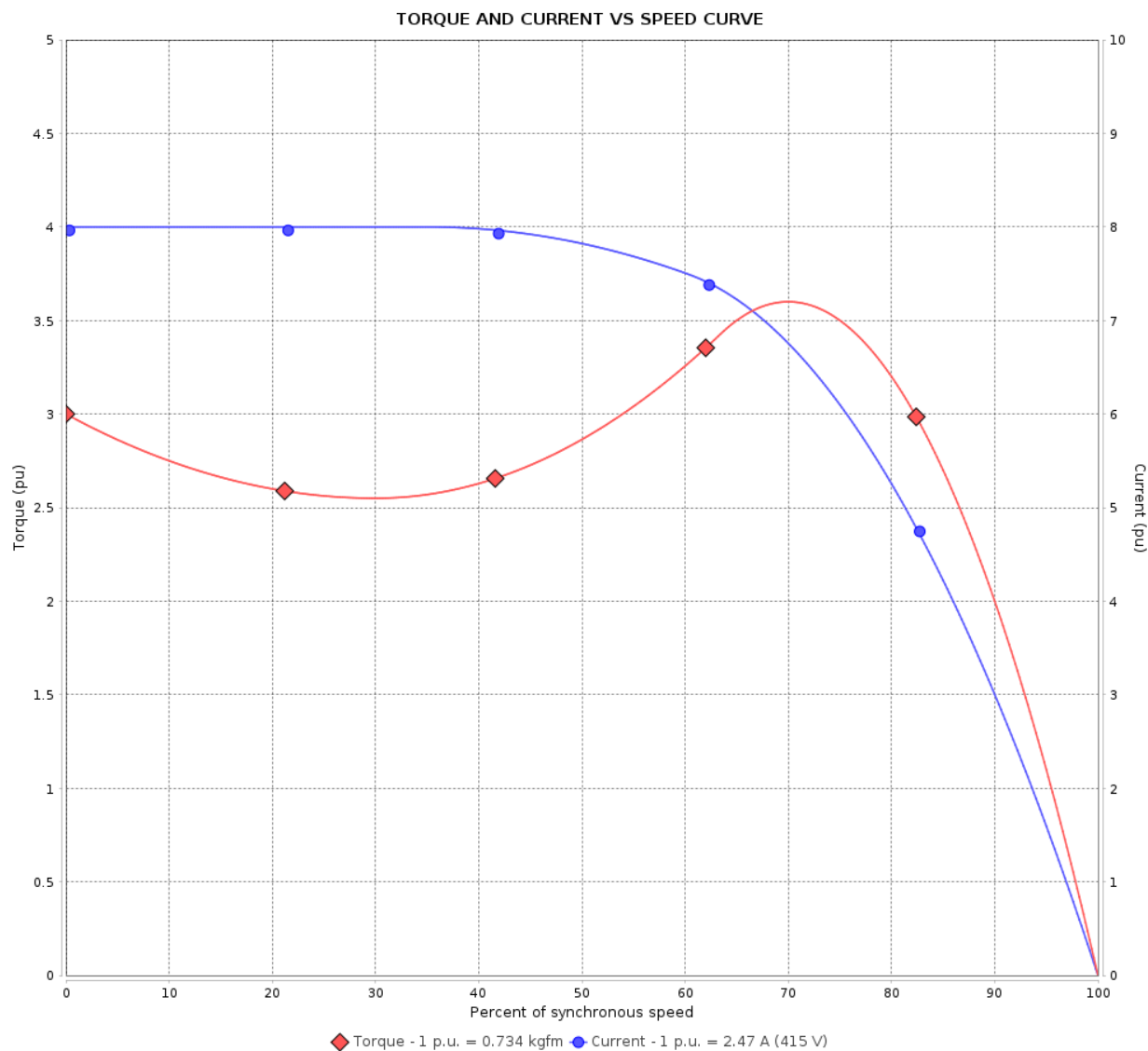
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code : 13096276



Performance : 240/415 V 50 Hz 4P

Rated current	: 4.27/2.47 A	Moment of inertia (J)	: 0.0055 kgm ²
LRC	: 8.0	Duty cycle	: S1
Rated torque	: 0.734 kgfm	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 360 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: N

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

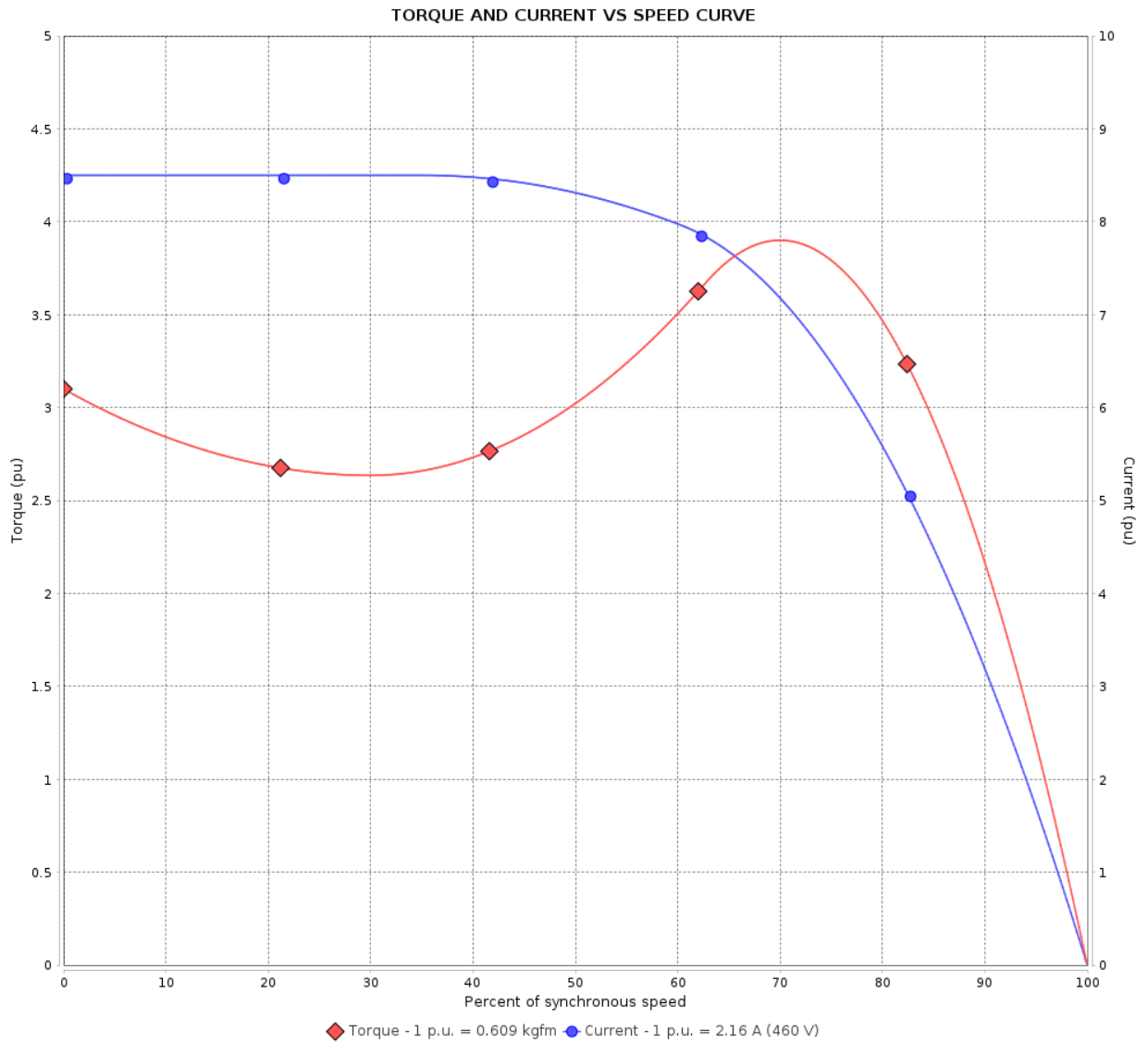


Customer : Astraprom d.o.o.

Product line : Multimounting IE3 Three-Phase

Product code :

13096276



Performance : 460 V 60 Hz 4P

Rated current	: 2.16 A	Moment of inertia (J)	: 0.0055 kgm ²
LRC	: 8.5	Duty cycle	: S1
Rated torque	: 0.609 kgfm	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 390 %	Temperature rise	: 80 K
Rated speed	: 1760 rpm	Design	: N

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

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LOAD PERFORMANCE CURVE

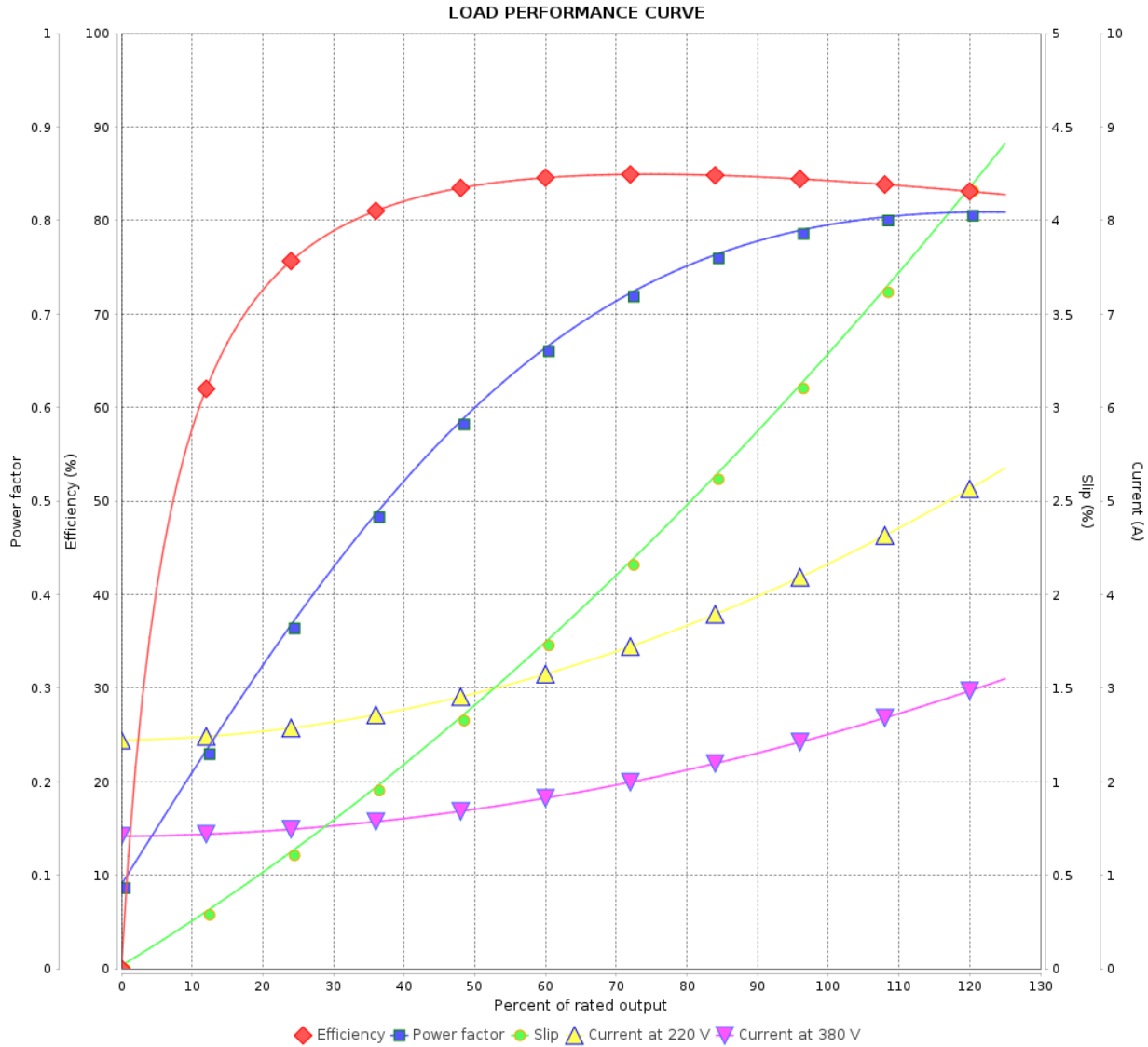
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Performance : 220/380 V 50 Hz 4P

Rated current : 4.28/2.48 A
 LRC : 7.4
 Rated torque : 0.739 kgfm
 Locked rotor torque : 250 %
 Breakdown torque : 290 %
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.0055 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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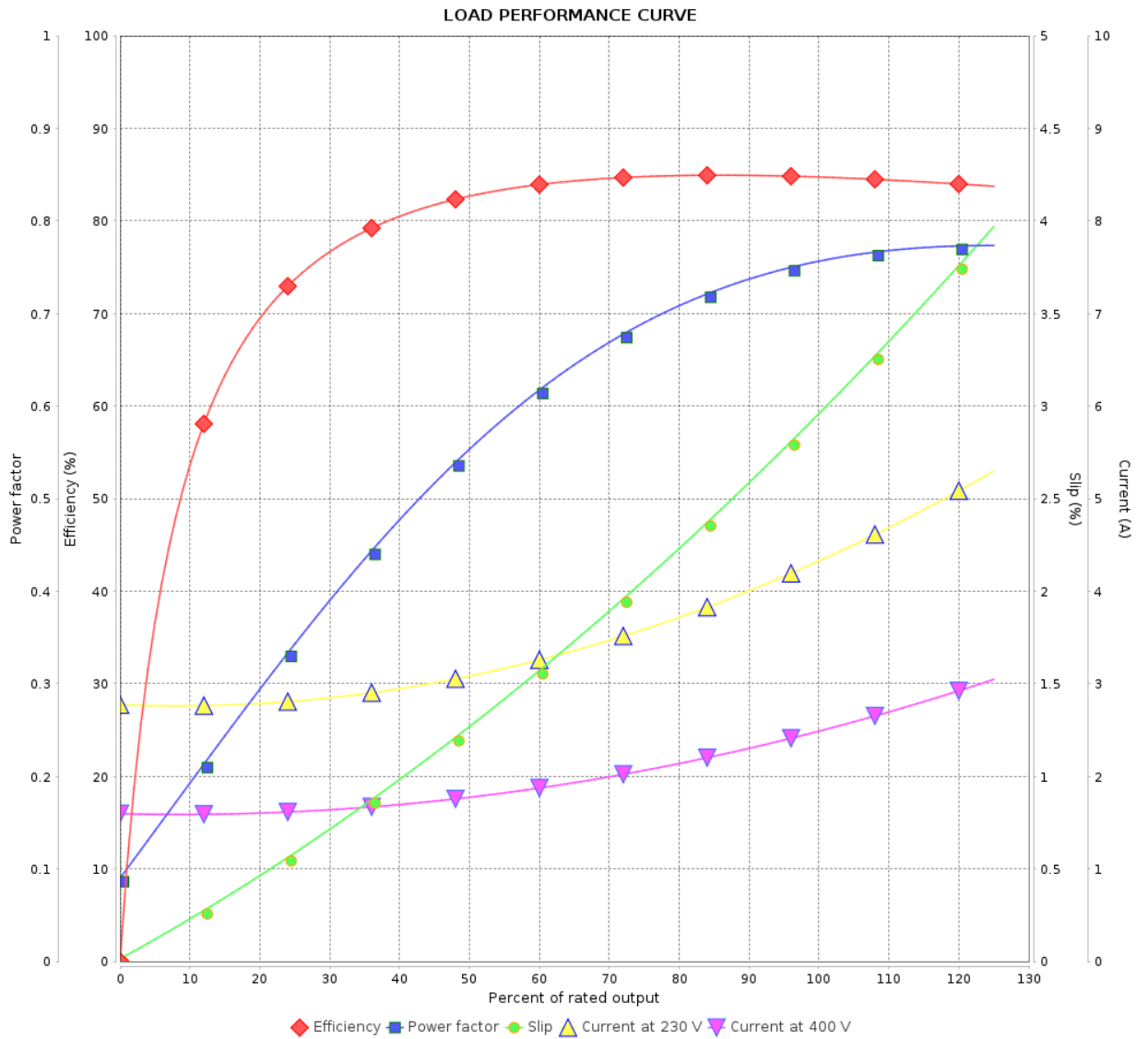


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Performance : 230/400 V 50 Hz 4P

Rated current : 4.28/2.46 A
 LRC : 7.6
 Rated torque : 0.736 kgfm
 Locked rotor torque : 280 %
 Breakdown torque : 330 %
 Rated speed : 1455 rpm

Moment of inertia (J) : 0.0055 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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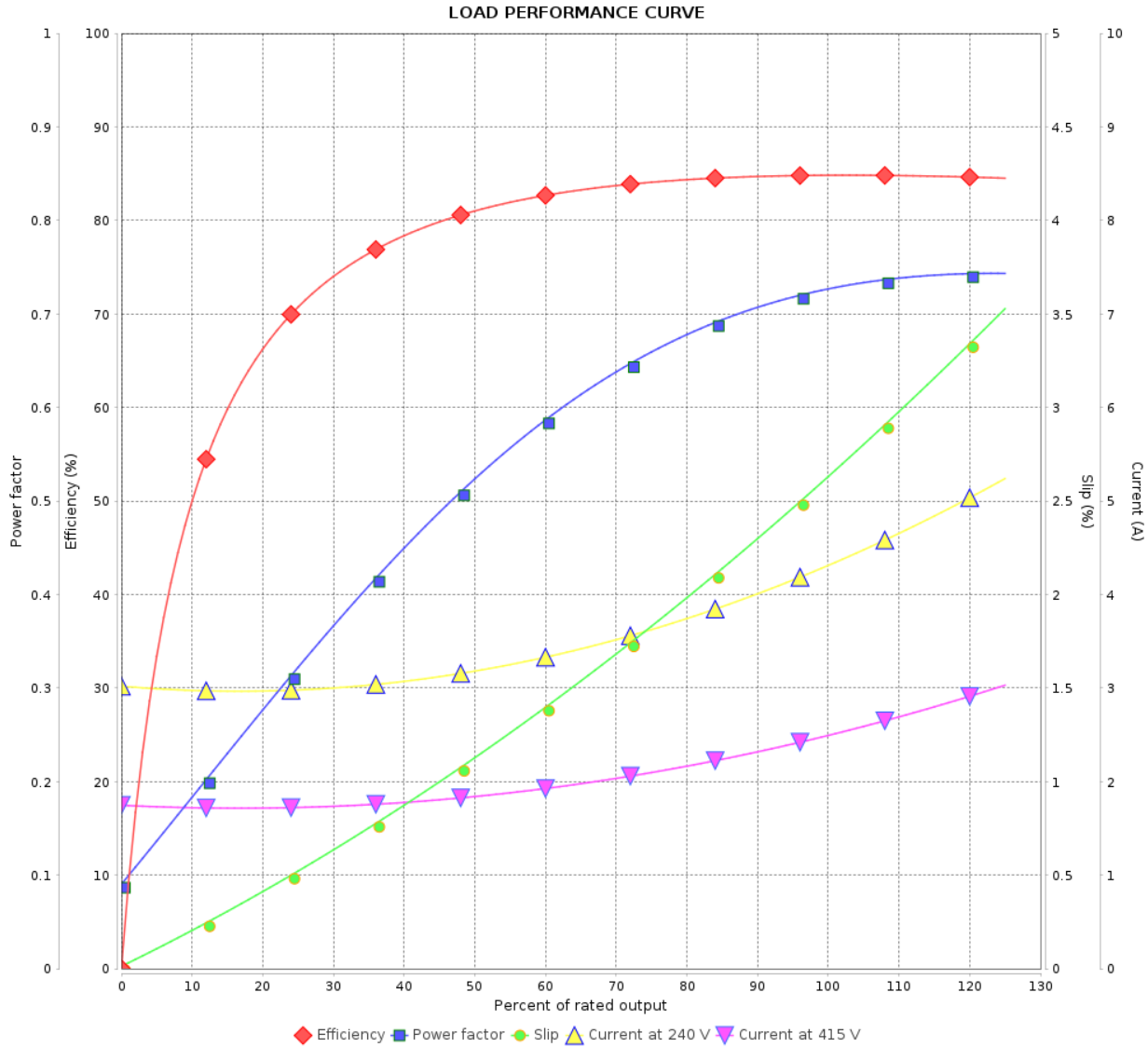
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 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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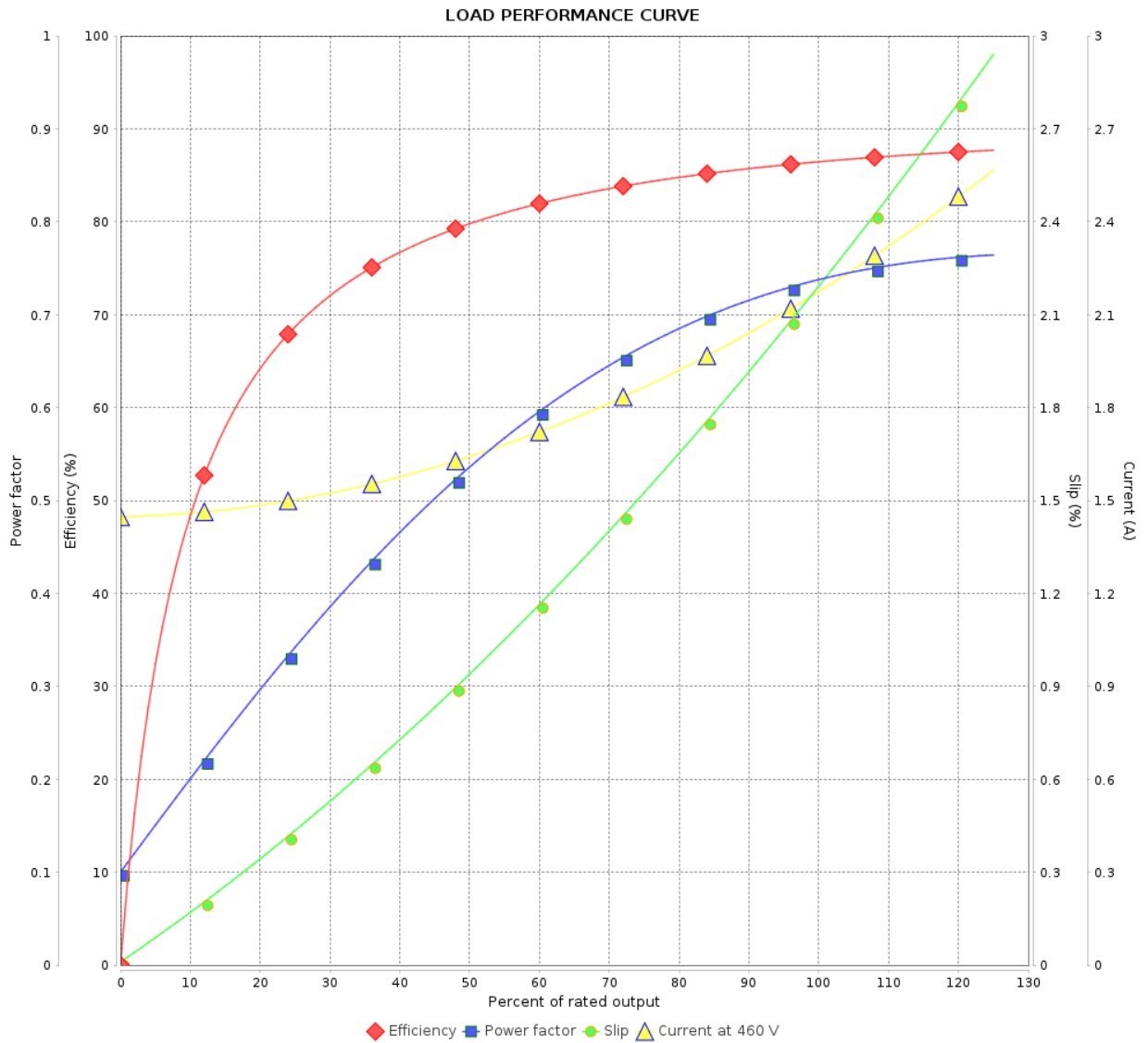
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THERMAL LIMIT CURVE

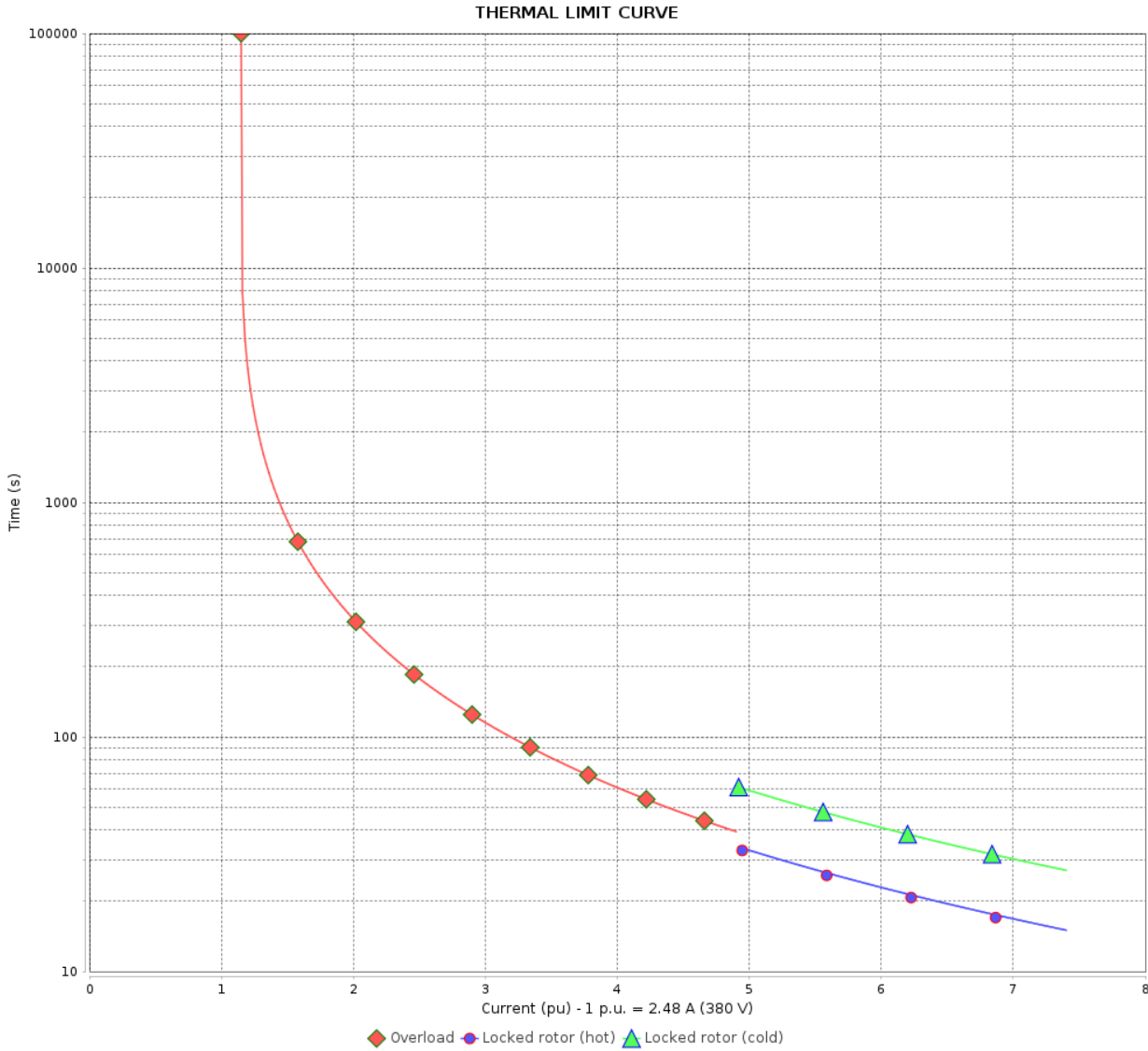
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 Duty cycle : S1
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 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Heating constant

Cooling constant

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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage

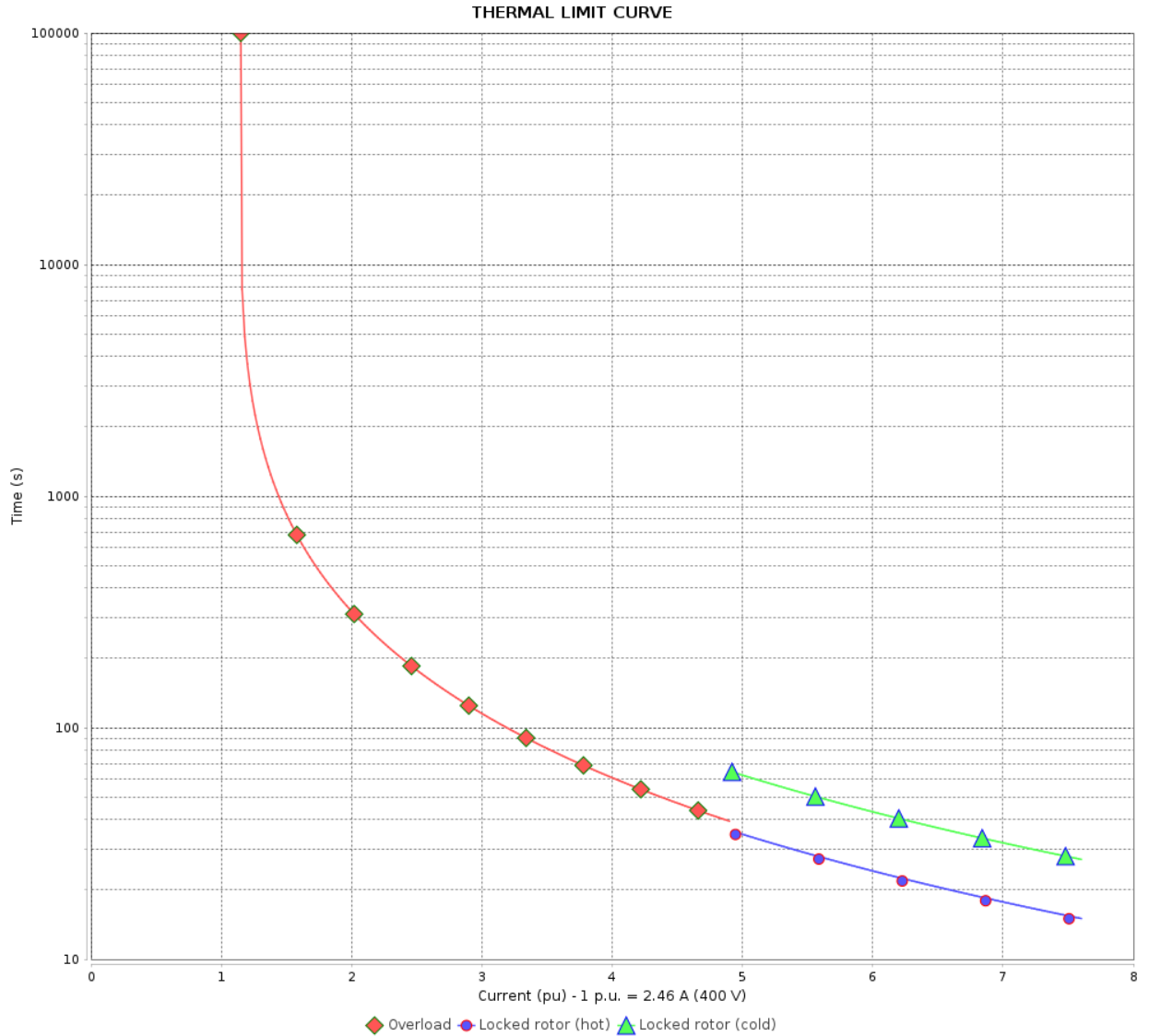


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 Service factor : 1.00
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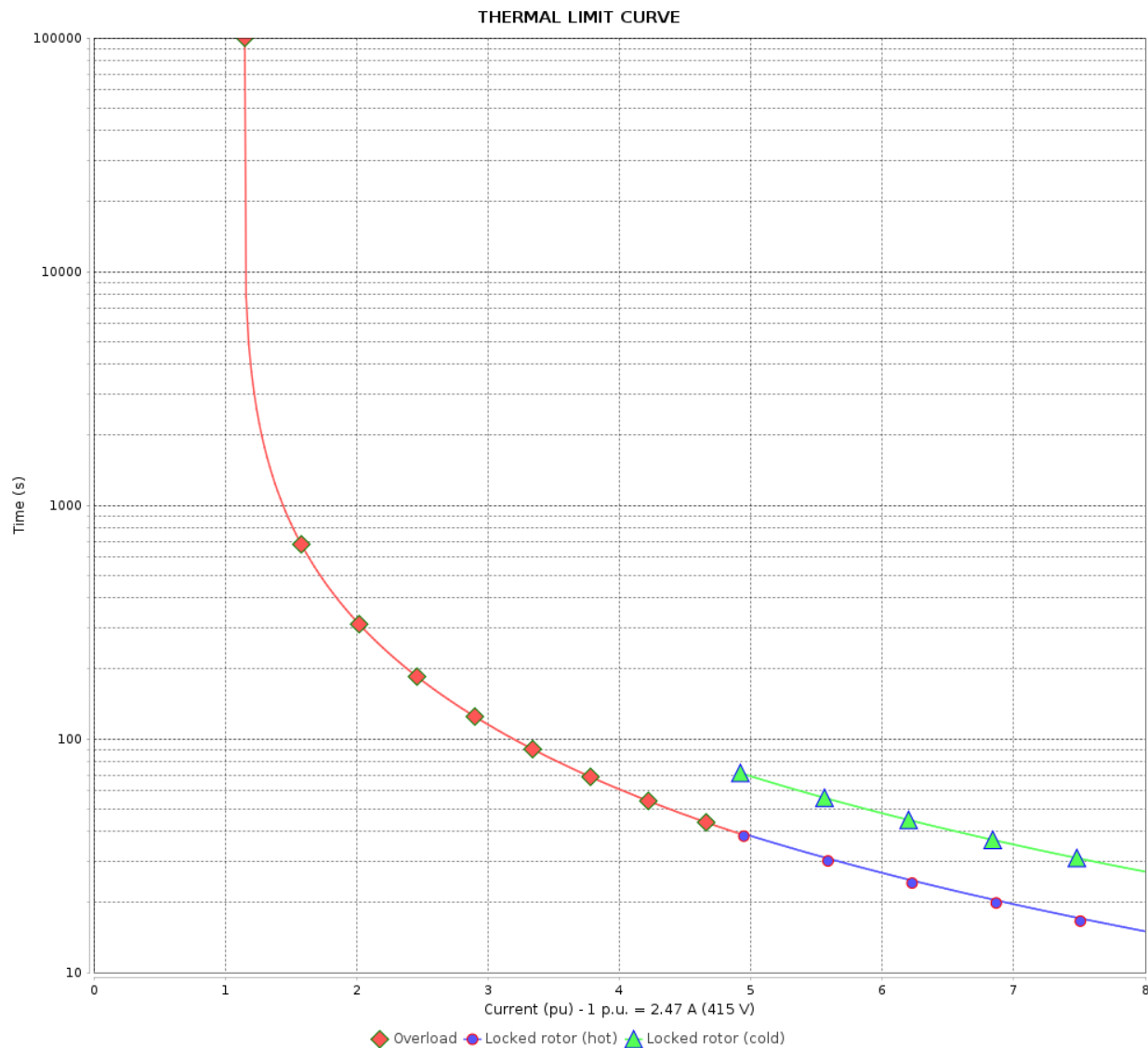
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 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Heating constant
 Cooling constant

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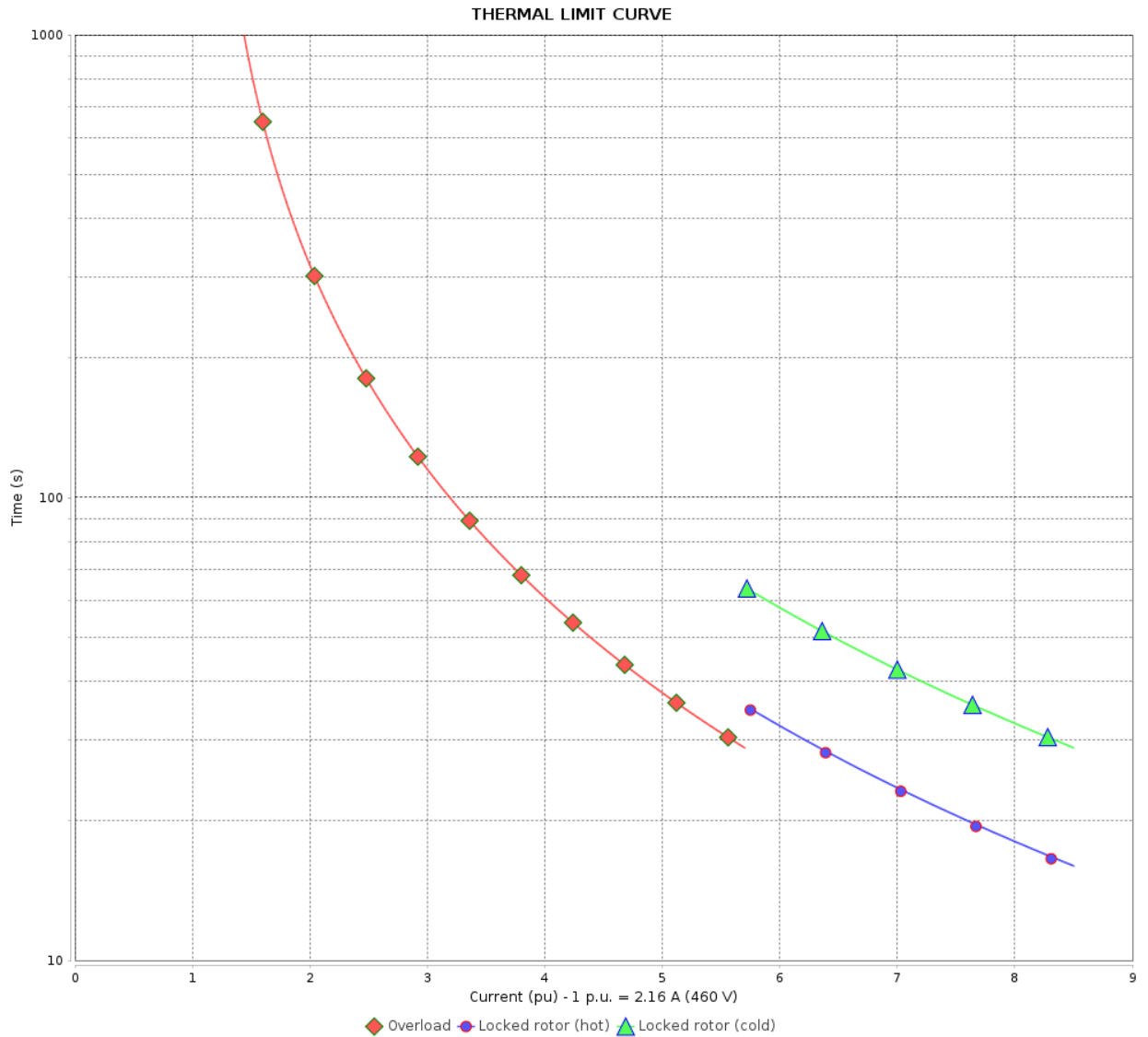
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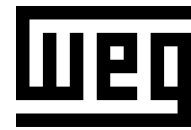
Heating constant

Cooling constant

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VFD OPERATION CURVE

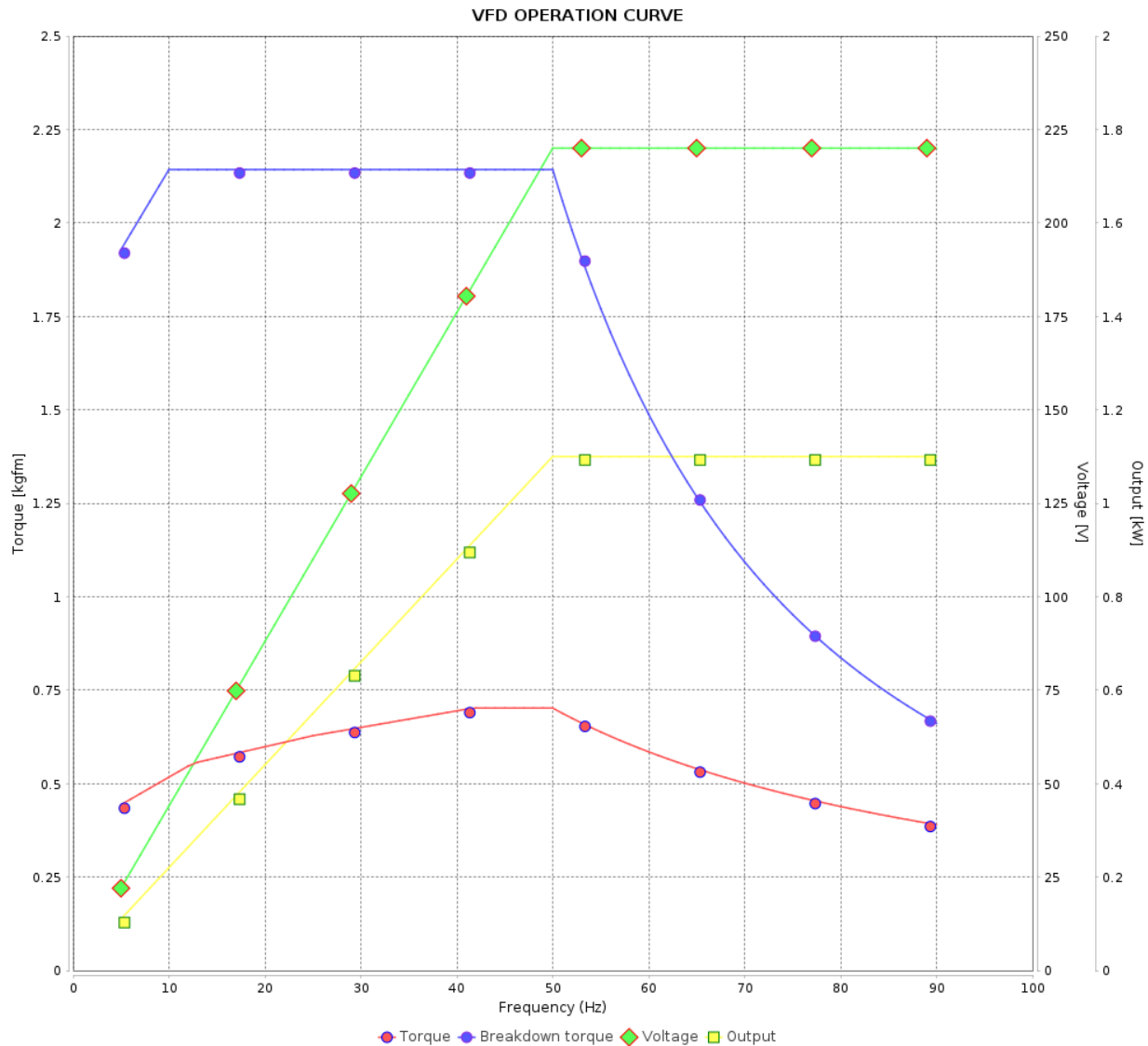
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Performance : 220/380 V 50 Hz 4P

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 Locked rotor torque : 250 %
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VFD OPERATION CURVE

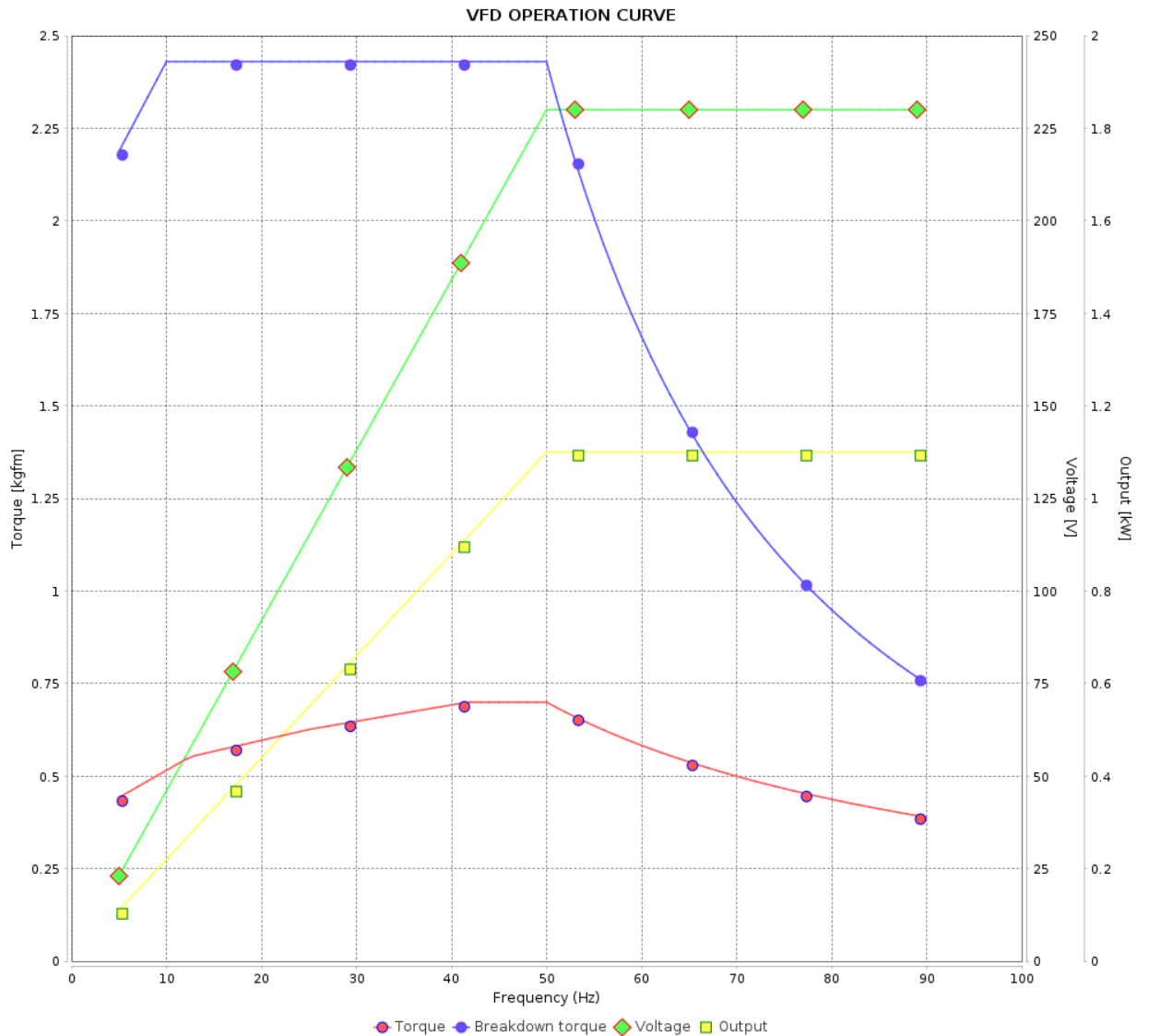
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VFD OPERATION CURVE

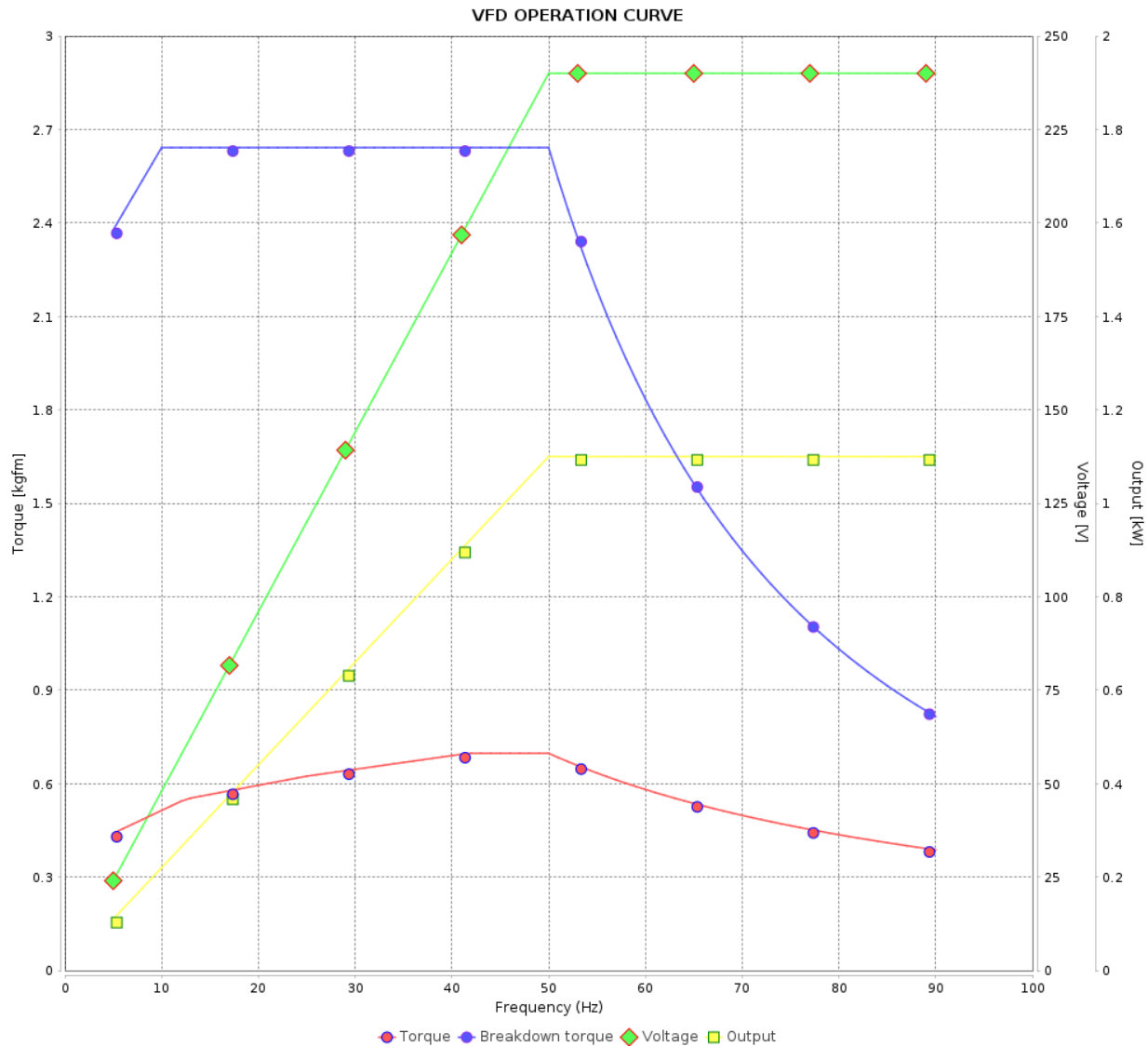
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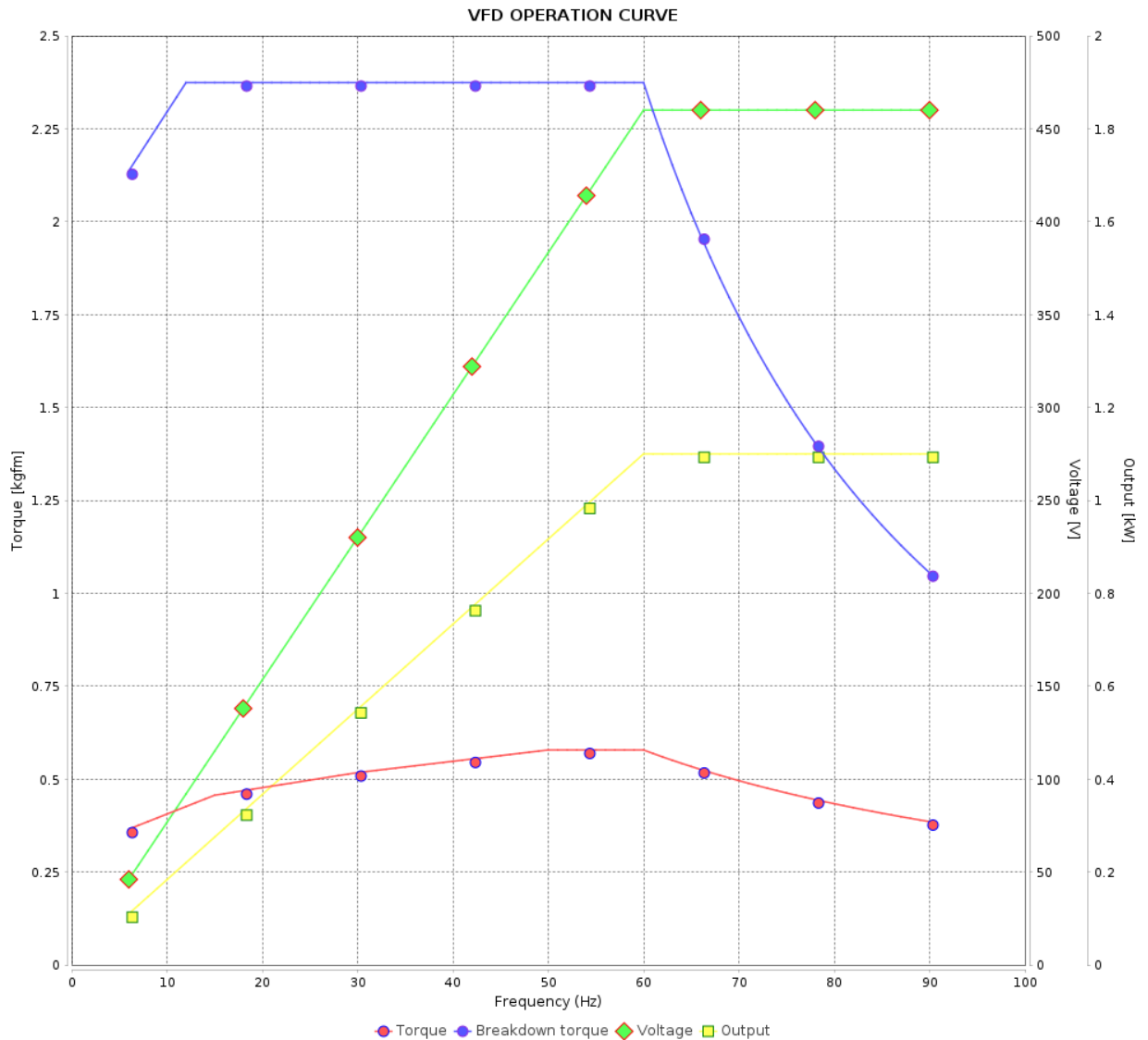
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