

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer		: Astraprom d.o.o.			
Product line		: W22 IE3 Three-Phase		Product code : 12868196	
Frame	: 132M	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	: 82.9 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.0838 kgm ²		
Design	: N				
Output [kW]	3	3	3	3	
Poles	8	8	8	8	
Frequency [Hz]	50	50	50	60	
Rated voltage [V]	380/660	400/690	415	460	
Rated current [A]	7.28/4.19	7.20/4.17	7.12	6.22	
L. R. Amperes [A]	43.7/25.1	46.8/27.1	49.8	46.6	
LRC [A]	6.0	6.5	7.0	7.5	
No load current [A]	4.00/2.30	4.50/2.61	4.80	4.20	
Rated speed [RPM]	710	715	720	870	
Slip [%]	5.33	4.67	4.00	3.33	
Rated torque [kgfm]	4.12	4.09	4.06	3.36	
Locked rotor torque [%]	200	240	270	290	
Breakdown torque [%]	220	260	300	340	
Service factor	1.00	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	37s (cold) 21s (hot)	37s (cold) 21s (hot)	37s (cold) 21s (hot)	37s (cold) 21s (hot)	
Noise level ²	48.0 dB(A)	48.0 dB(A)	48.0 dB(A)	52.0 dB(A)	
Efficiency (%)	25%				
	50%	83.4	82.5	81.5	80.0
	75%	83.5	83.5	83.2	82.5
	100%	83.5	83.5	83.7	86.5
Power Factor	25%				
	50%	0.56	0.51	0.48	0.49
	75%	0.68	0.64	0.61	0.62
	100%	0.75	0.72	0.70	0.70
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	19.9	19.9	19.6	15.7
	P2 (0,5;1,0)	19.4	19.4	19.1	15.3
	P3 (0,25;1,0)	18.5	18.5	18.2	14.6
	P4 (0,9;0,5)	8.6	8.6	8.5	6.8
	P5 (0,5;0,5)	7.0	7.0	6.9	5.5
	P6 (0,5;0,25)	4.7	4.7	4.6	3.7
	P7 (0,25;0,25)	3.8	3.8	3.7	3.0
Bearing type	: Drive end 6308 ZZ	Non drive end 6207 ZZ	Foundation loads		
Sealing	: Oil Seal	Lip Seal	Max. traction	: 169 kgf	
Lubrication interval	: -	-	Max. compression	: 252 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.		
Rev.	Changes Summary		Performed	Checked	Date
Performed by					
Checked by				Page	Revision
Date	13/10/2023			1 / 19	

DATA SHEET

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Notes

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/10/2023		2 / 19	

DATA SHEET



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Thermal protection

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by				Page 3 / 19
Checked by				
Date	13/10/2023			
			Revision	

TORQUE AND CURRENT VS SPEED CURVE

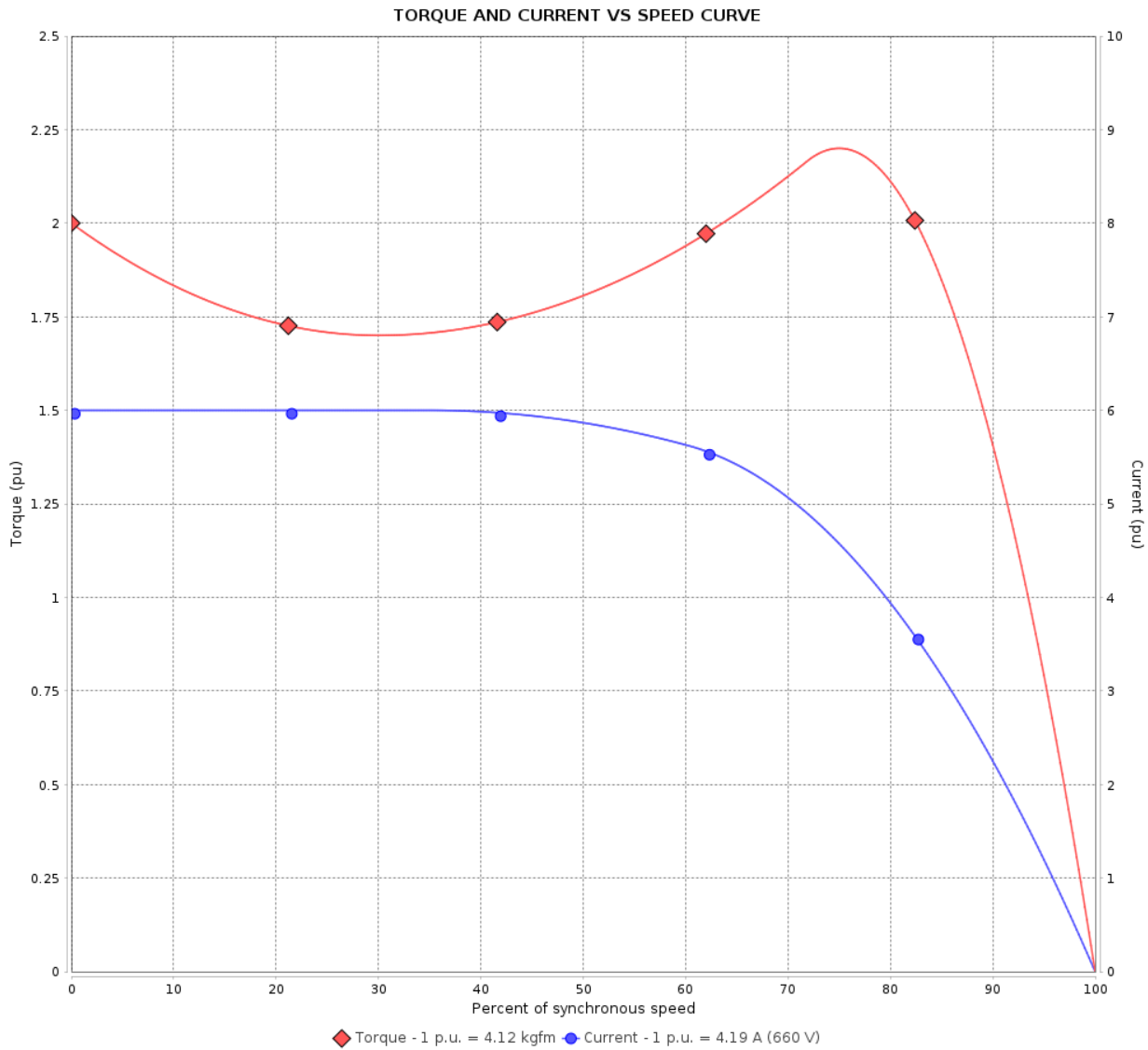
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12868196



Performance : 380/660 V 50 Hz 8P

Rated current	: 7.28/4.19 A	Moment of inertia (J)	: 0.0838 kgm ²
LRC	: 6.0	Duty cycle	: S1
Rated torque	: 4.12 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 710 rpm	Design	: N

Locked rotor time : 37s (cold) 21s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 19	Revision
Checked by				
Date	13/10/2023			

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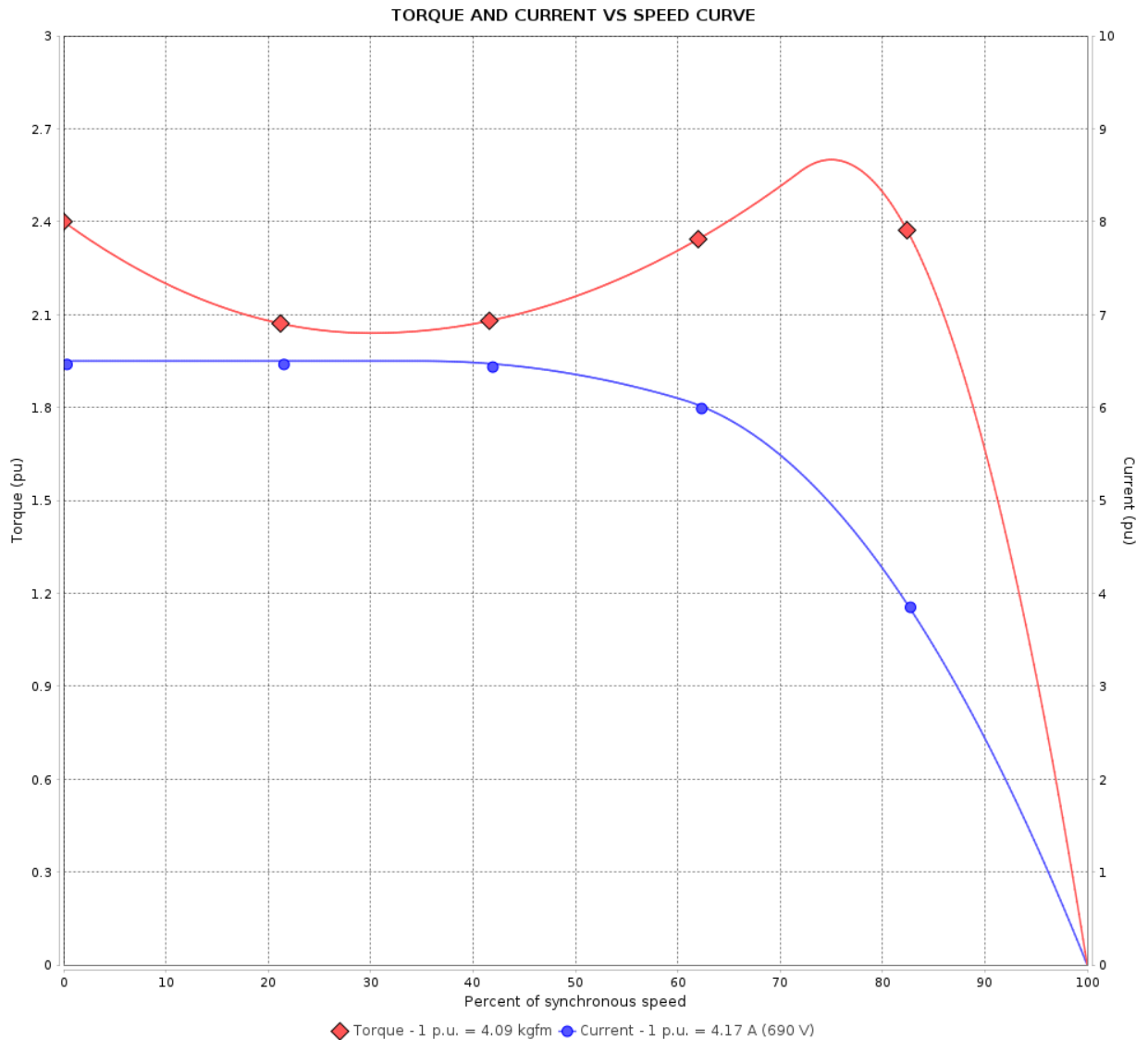
Three Phase Induction Motor - Squirrel Cage

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Performance : 400/690 V 50 Hz 8P

Rated current : 7.20/4.17 A
 LRC : 6.5
 Rated torque : 4.09 kgfm
 Locked rotor torque : 240 %
 Breakdown torque : 260 %
 Rated speed : 715 rpm

Moment of inertia (J) : 0.0838 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
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Locked rotor time : 37s (cold) 21s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date	13/10/2023			

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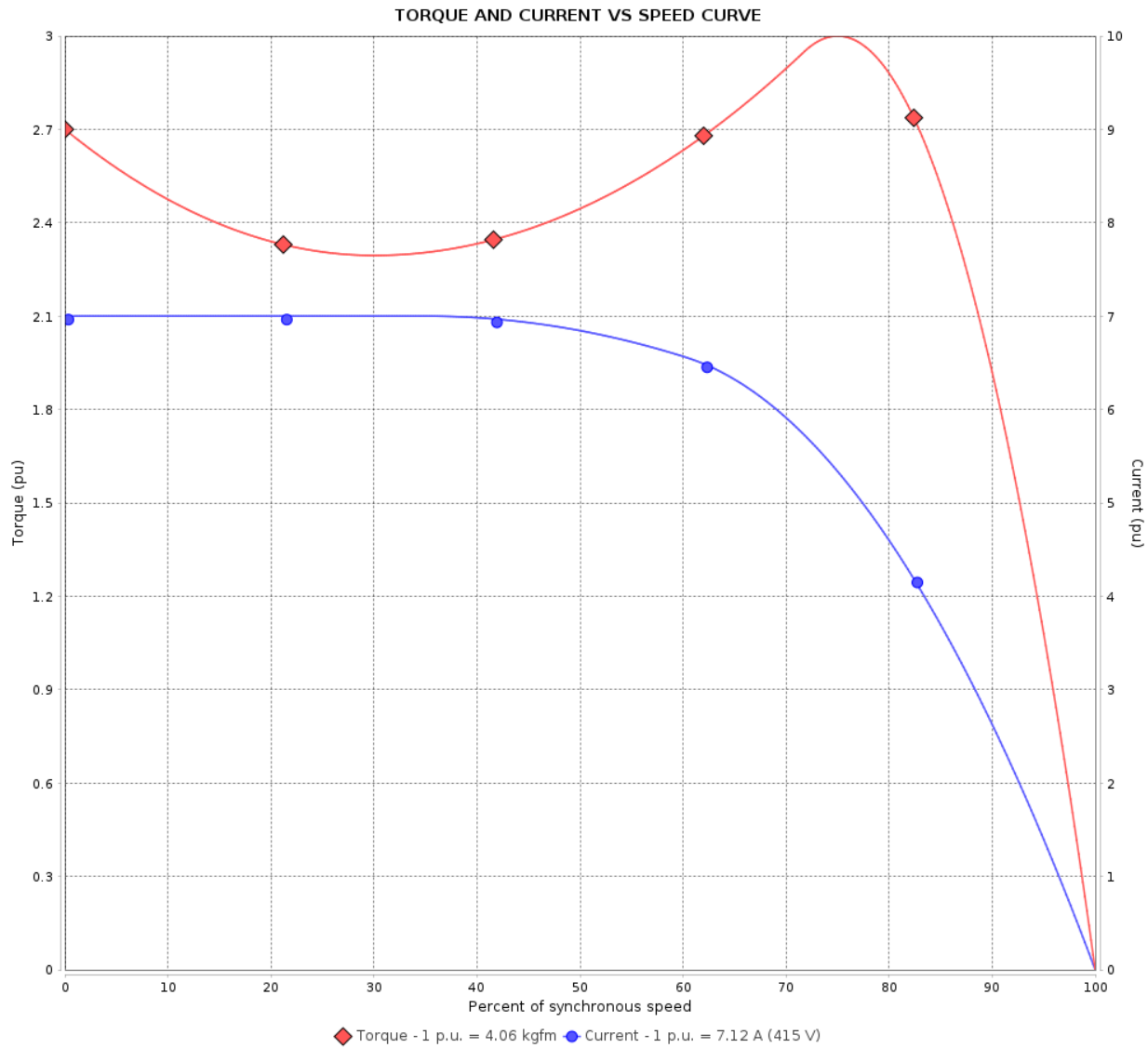
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Rated torque	: 4.06 kgfm	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 720 rpm	Design	: N

Locked rotor time : 37s (cold) 21s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 19	Revision
Checked by				
Date	13/10/2023			

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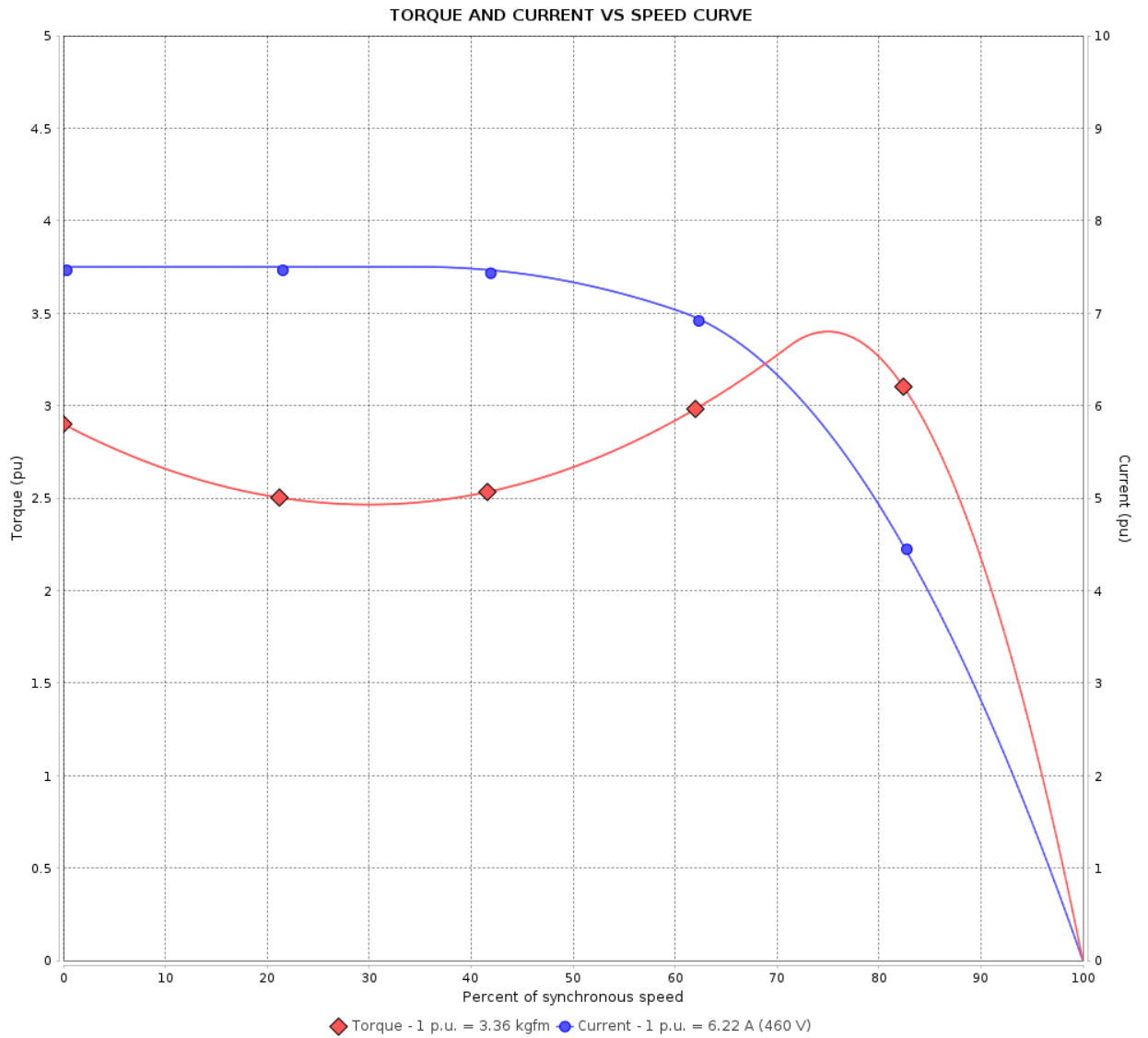
Three Phase Induction Motor - Squirrel Cage



Customer : Astraprom d.o.o.

Product line : W22 IE3 Three-Phase

Product code : 12868196



Performance : 460 V 60 Hz 8P

Rated current	: 6.22 A	Moment of inertia (J)	: 0.0838 kgm ²
LRC	: 7.5	Duty cycle	: S1
Rated torque	: 3.36 kgfm	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 340 %	Temperature rise	: 80 K
Rated speed	: 870 rpm	Design	: N

Locked rotor time : 37s (cold) 21s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		7 / 19		
Date	13/10/2023			

LOAD PERFORMANCE CURVE

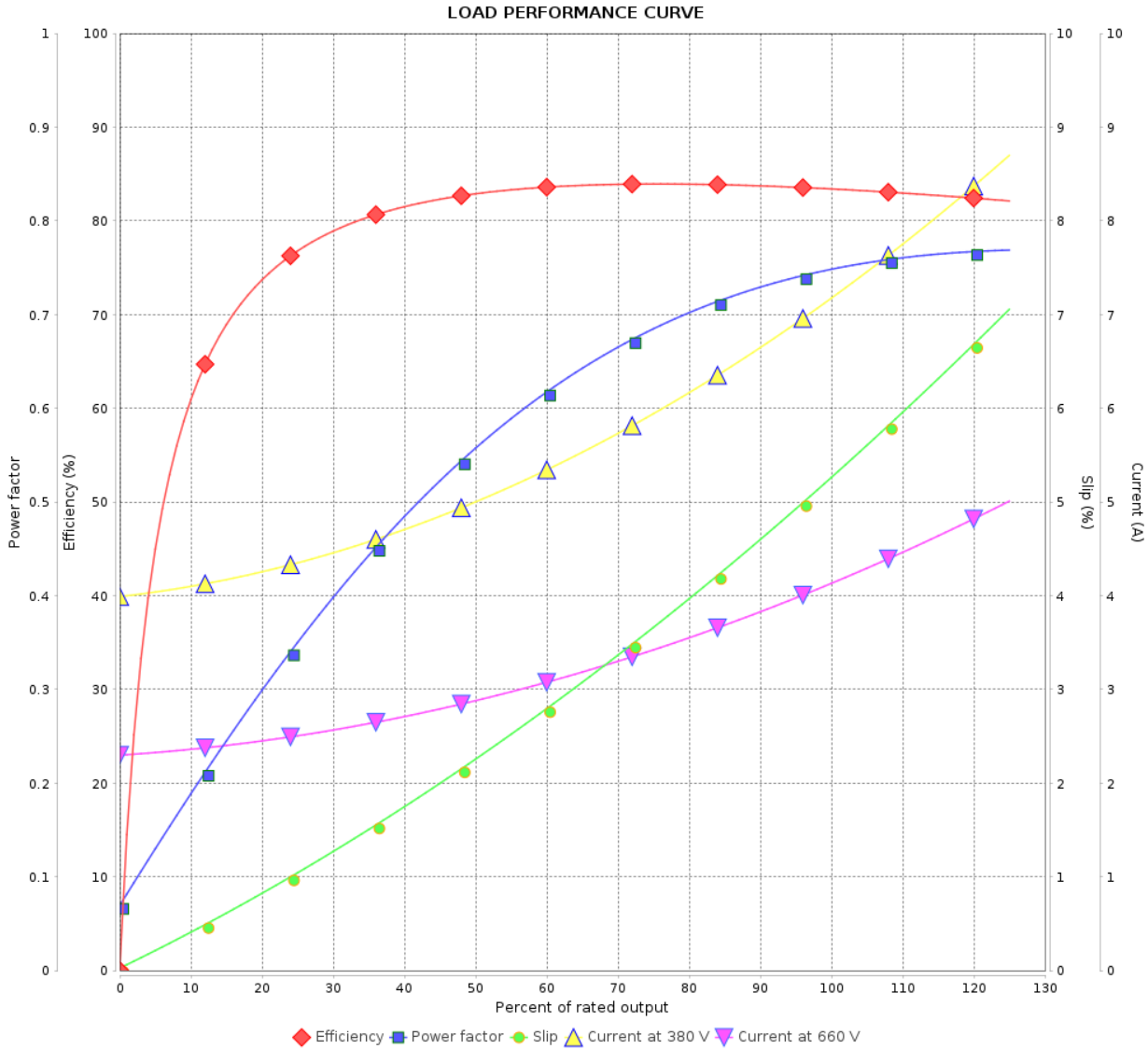
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 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 8 / 19	Revision
Checked by				
Date	13/10/2023			

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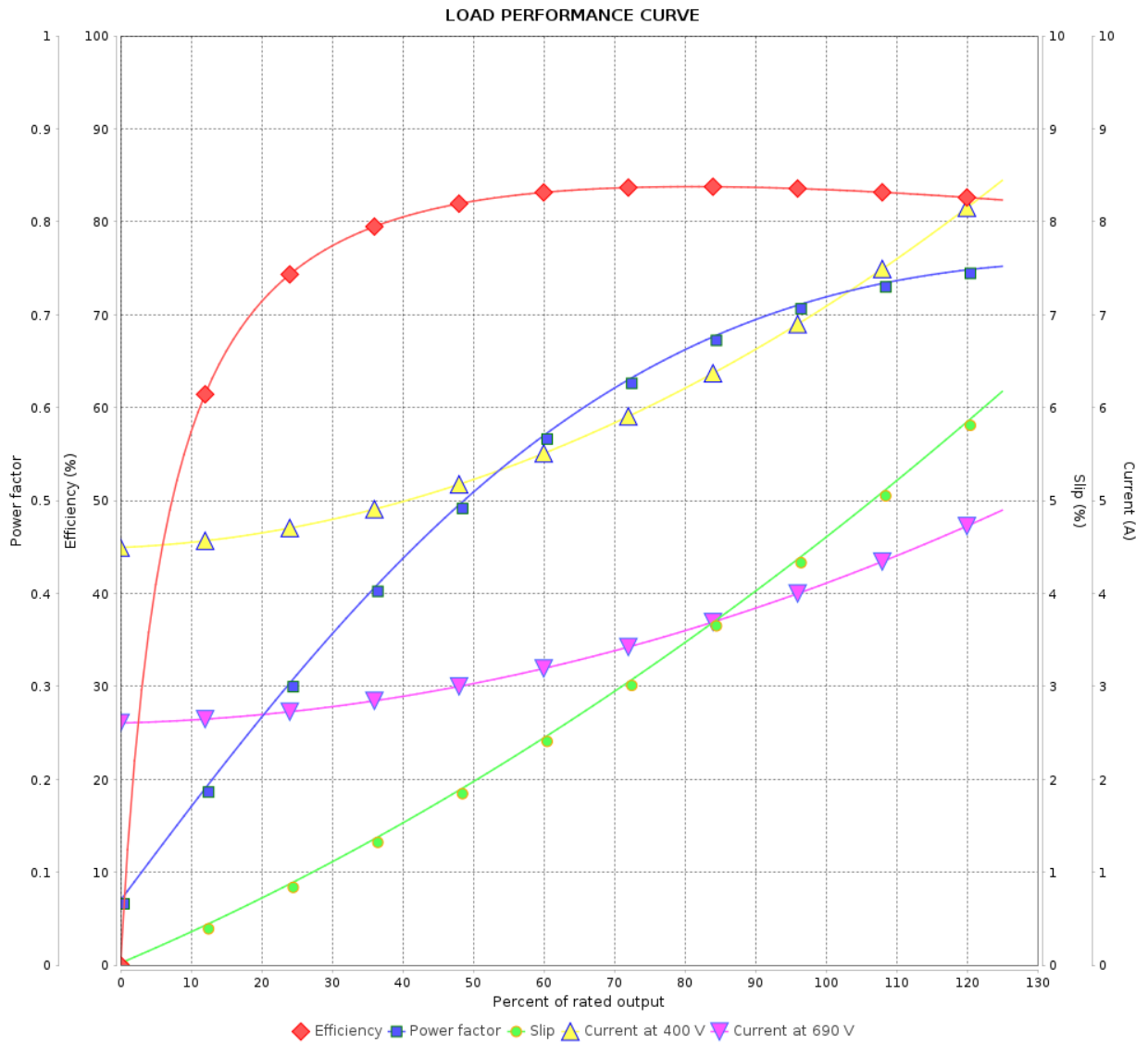
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Performed by			Page	Revision
Checked by				
Date				

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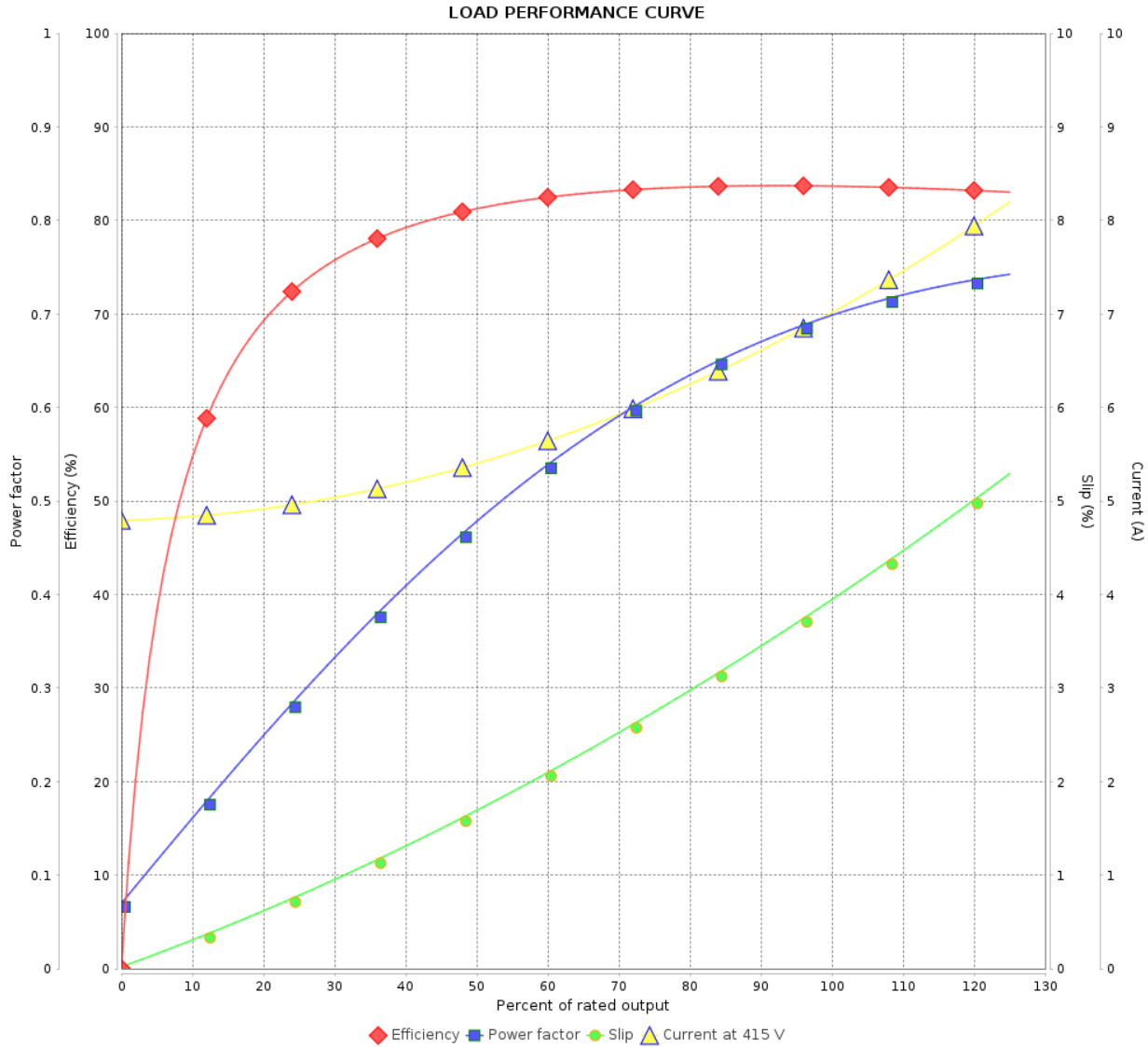
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Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 720 rpm	Design	: N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 10 / 19	Revision
Checked by				
Date	13/10/2023			

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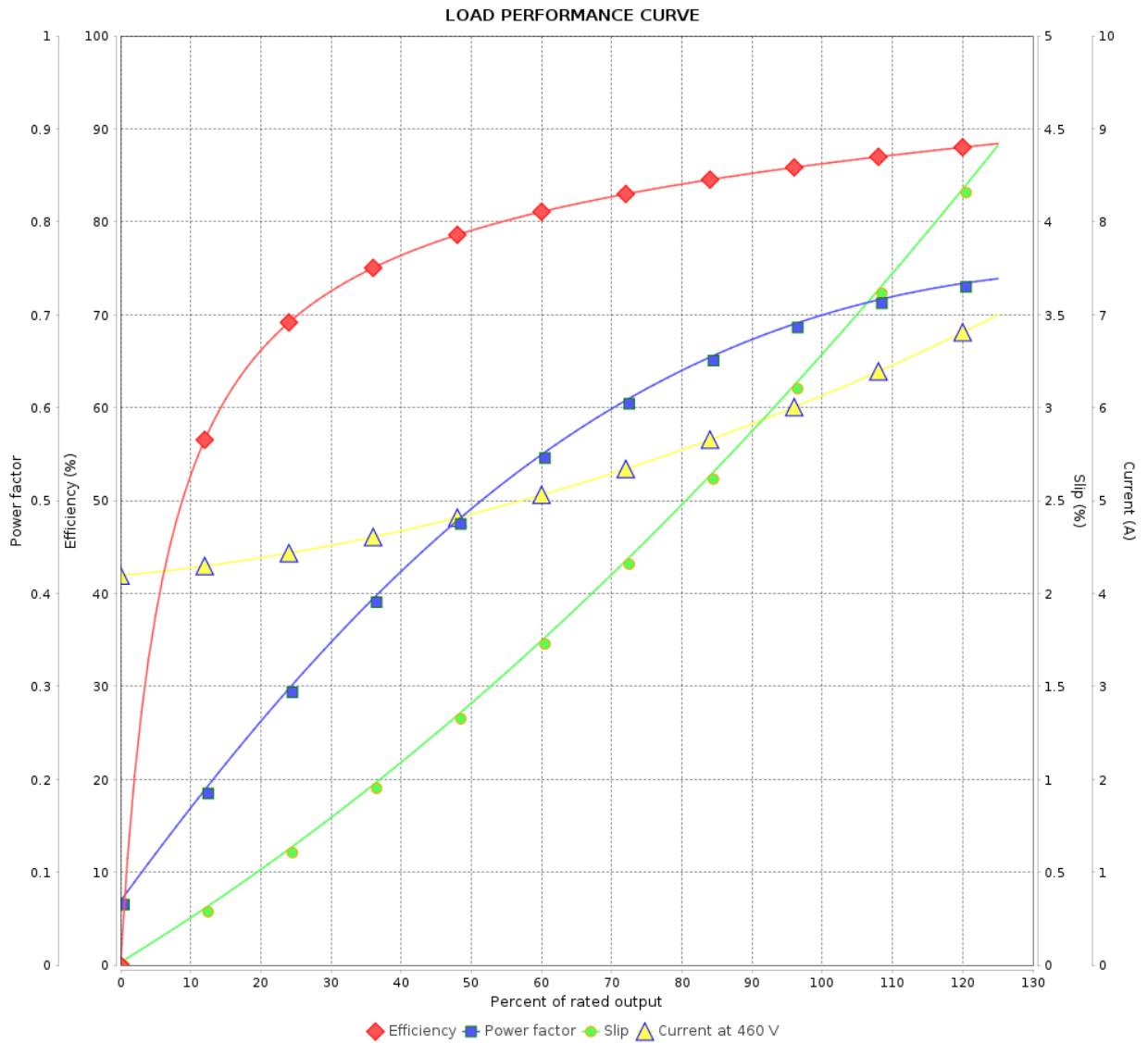


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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 11 / 19	Revision
Checked by				
Date	13/10/2023			

THERMAL LIMIT CURVE

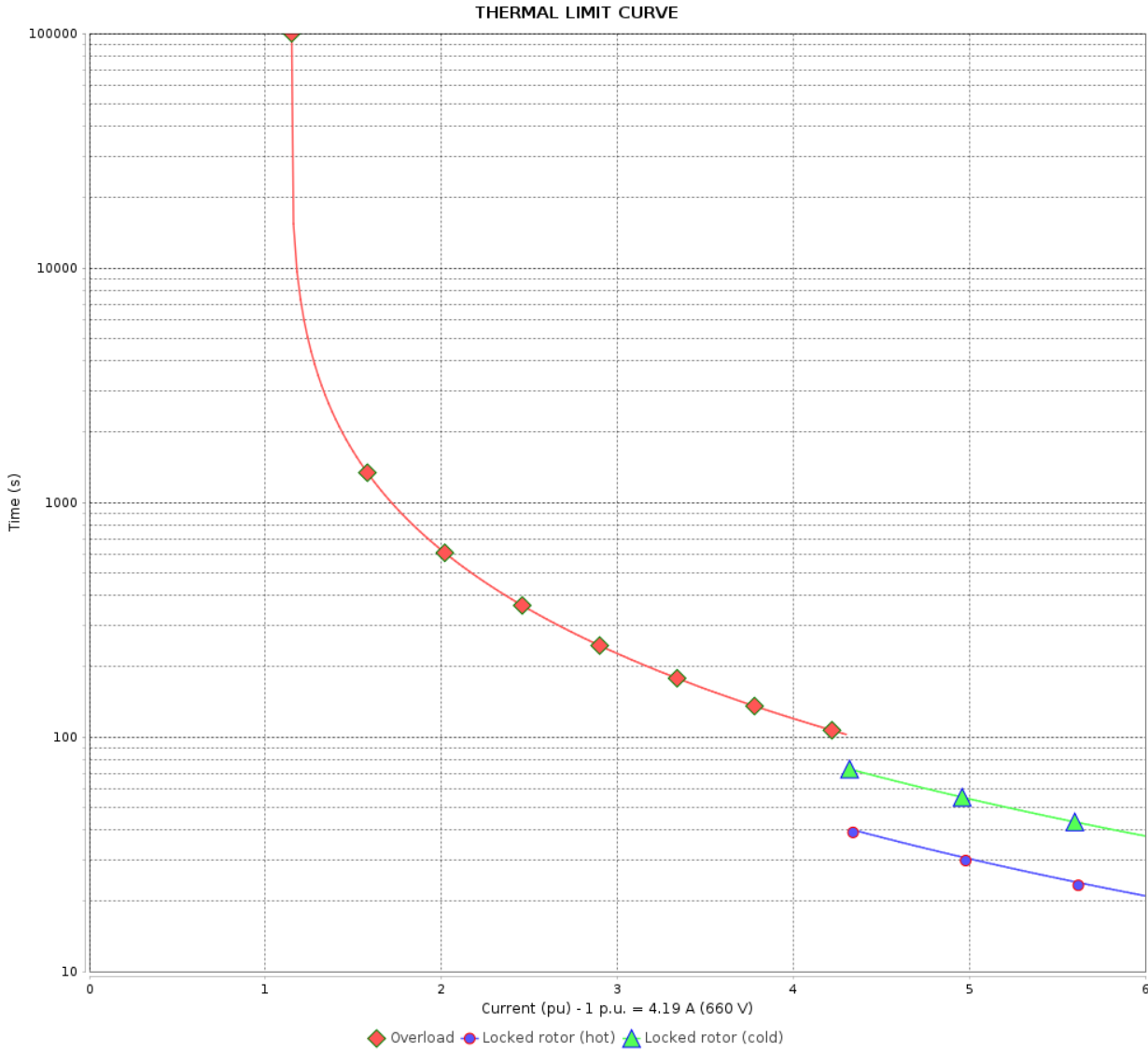
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 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 12 / 19	Revision
Checked by				
Date	13/10/2023			

THERMAL LIMIT CURVE

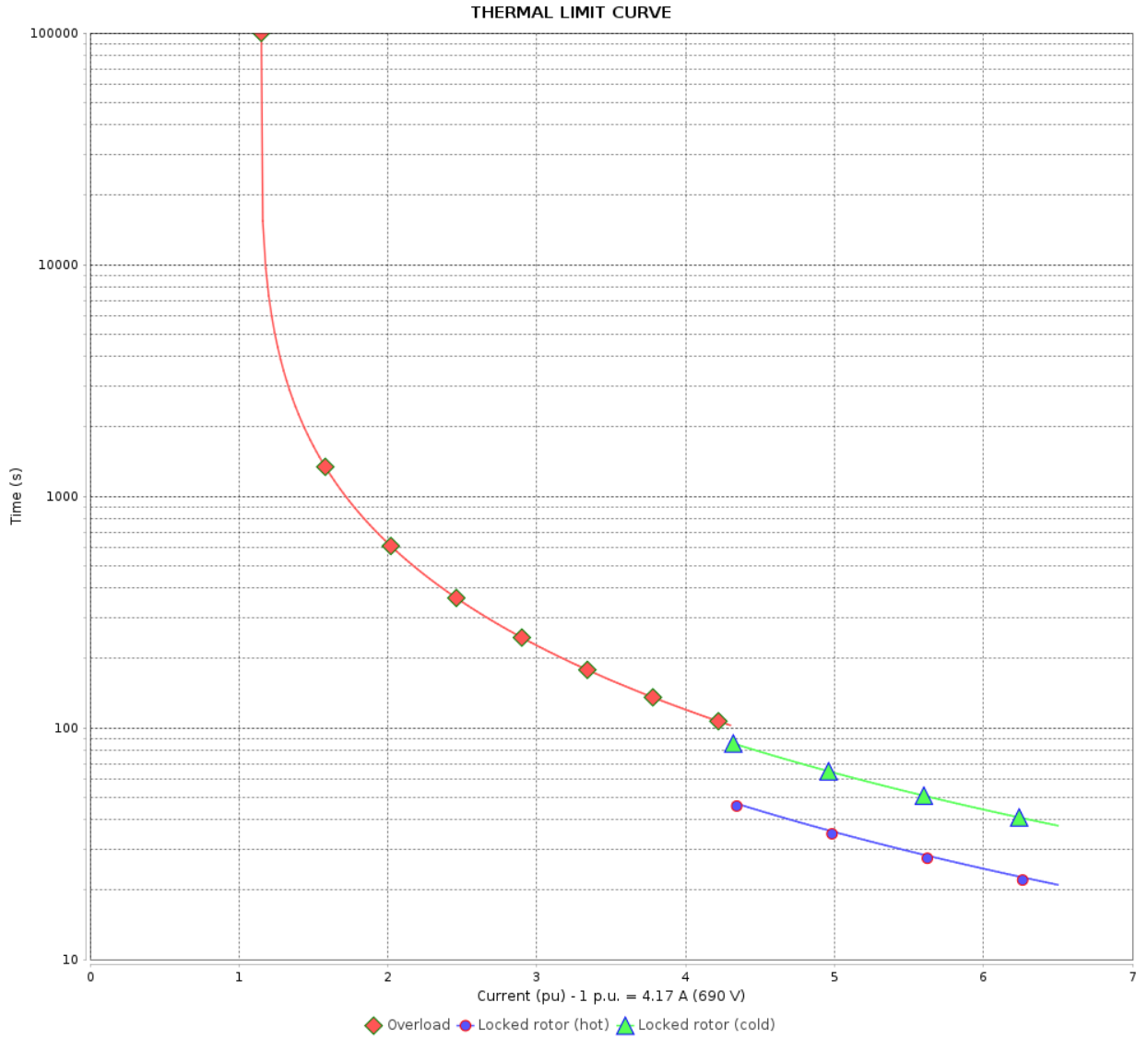
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Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
		Page	Revision	
		13 / 19		

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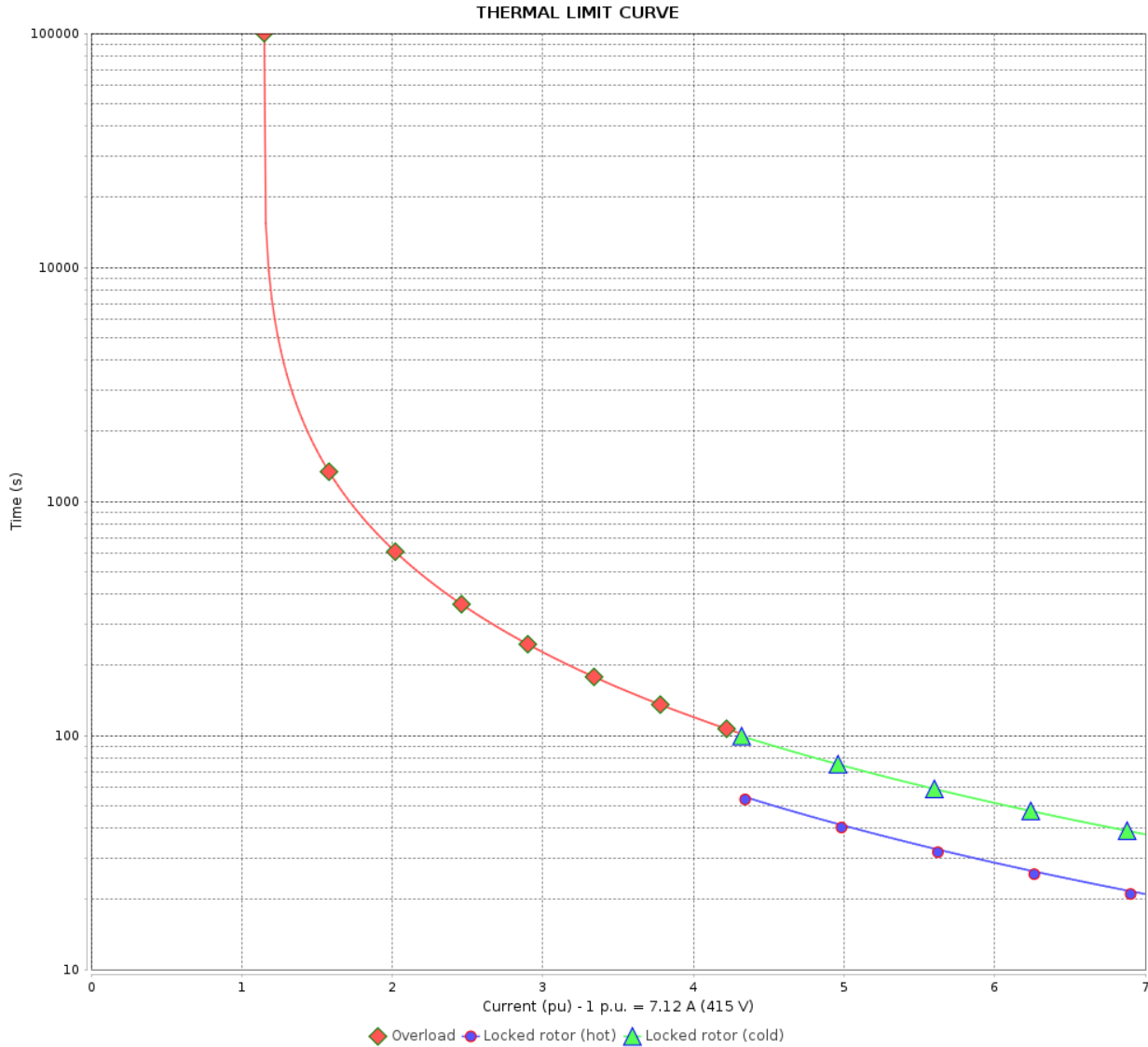
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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 14 / 19	Revision
Checked by				
Date	13/10/2023			

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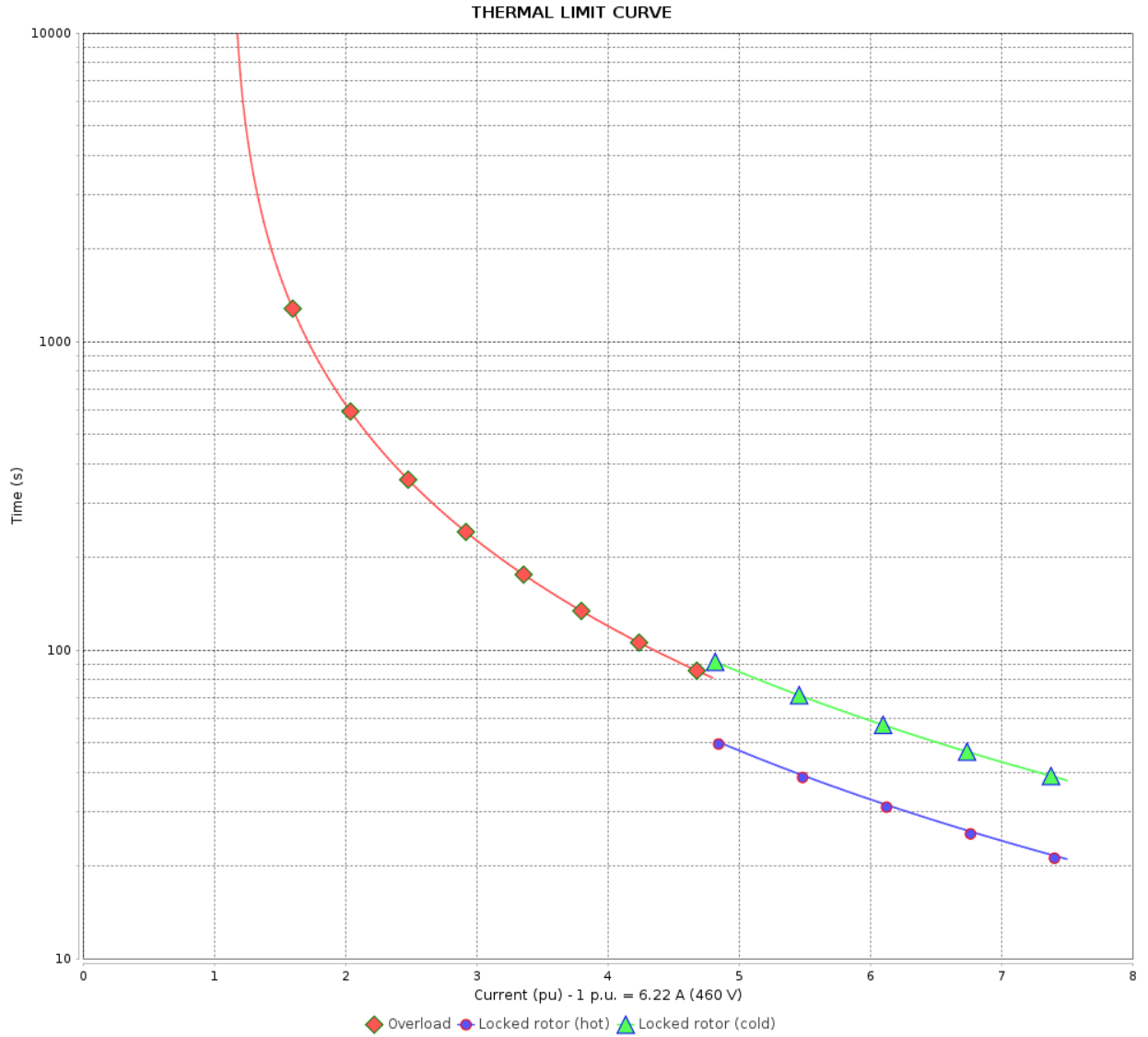


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Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
		Page	Revision	
		15 / 19		

VFD OPERATION CURVE

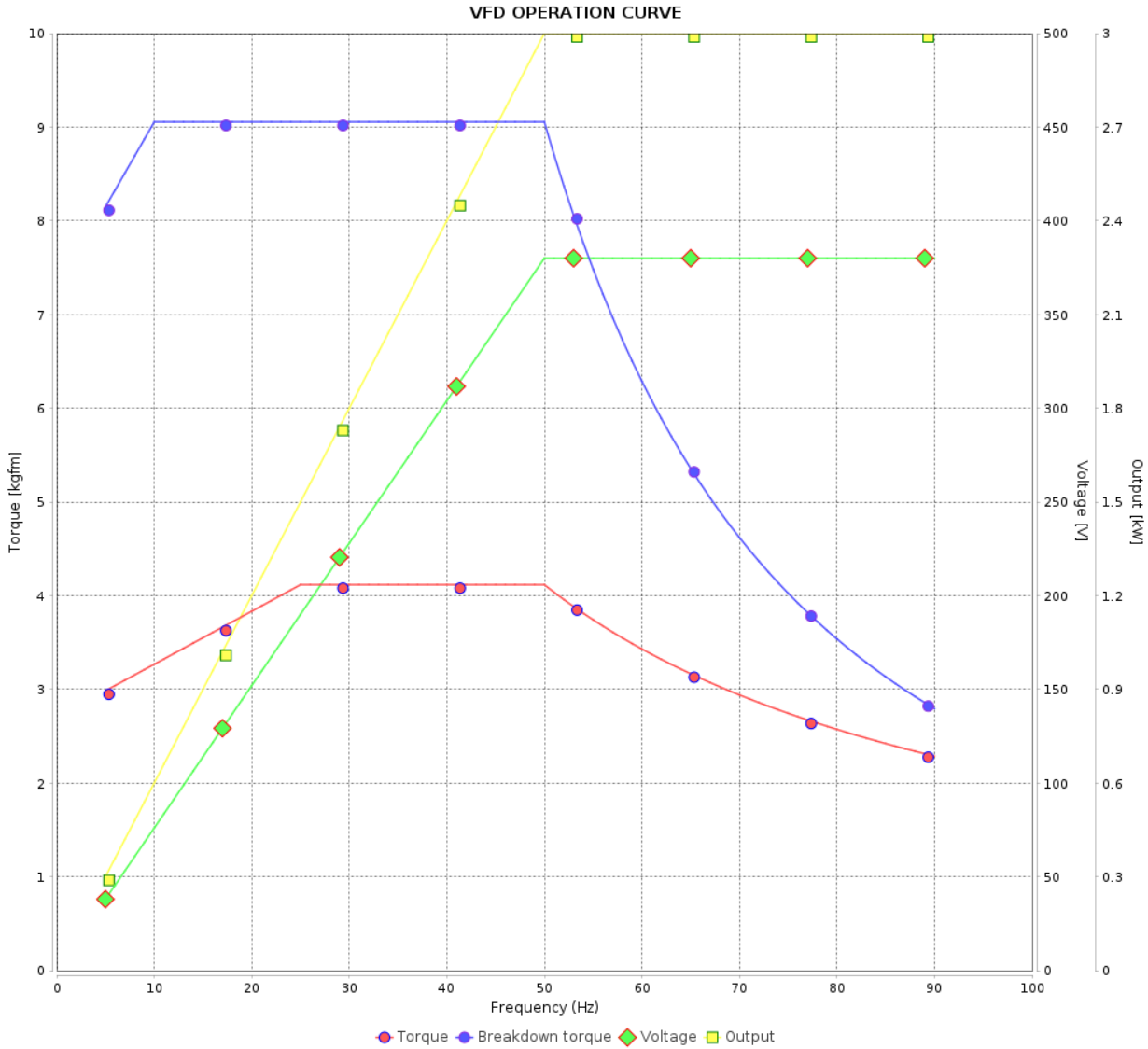
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Performed by			Page	Revision
Checked by				
Date				

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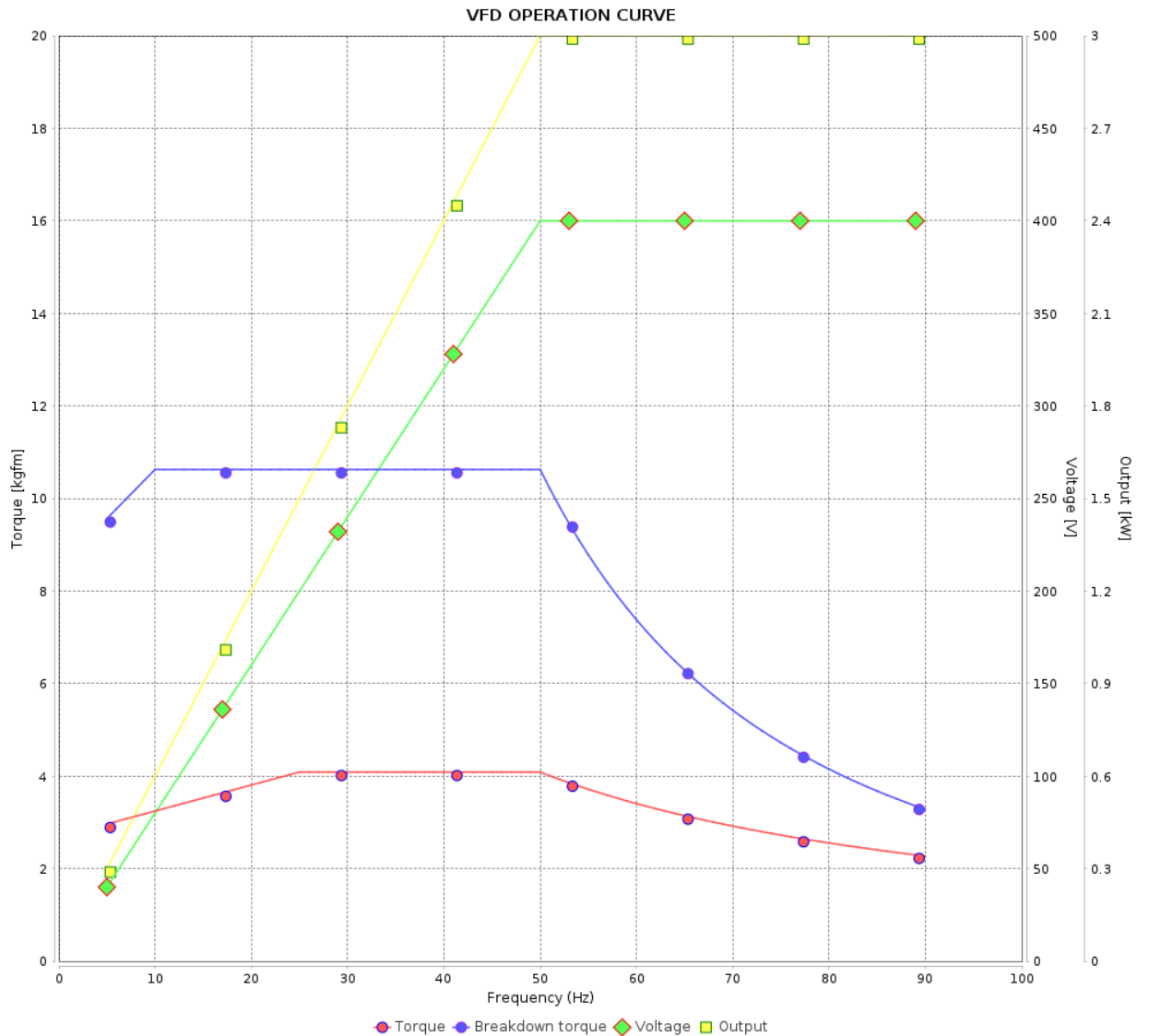
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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 17 / 19	Revision
Checked by				
Date	13/10/2023			

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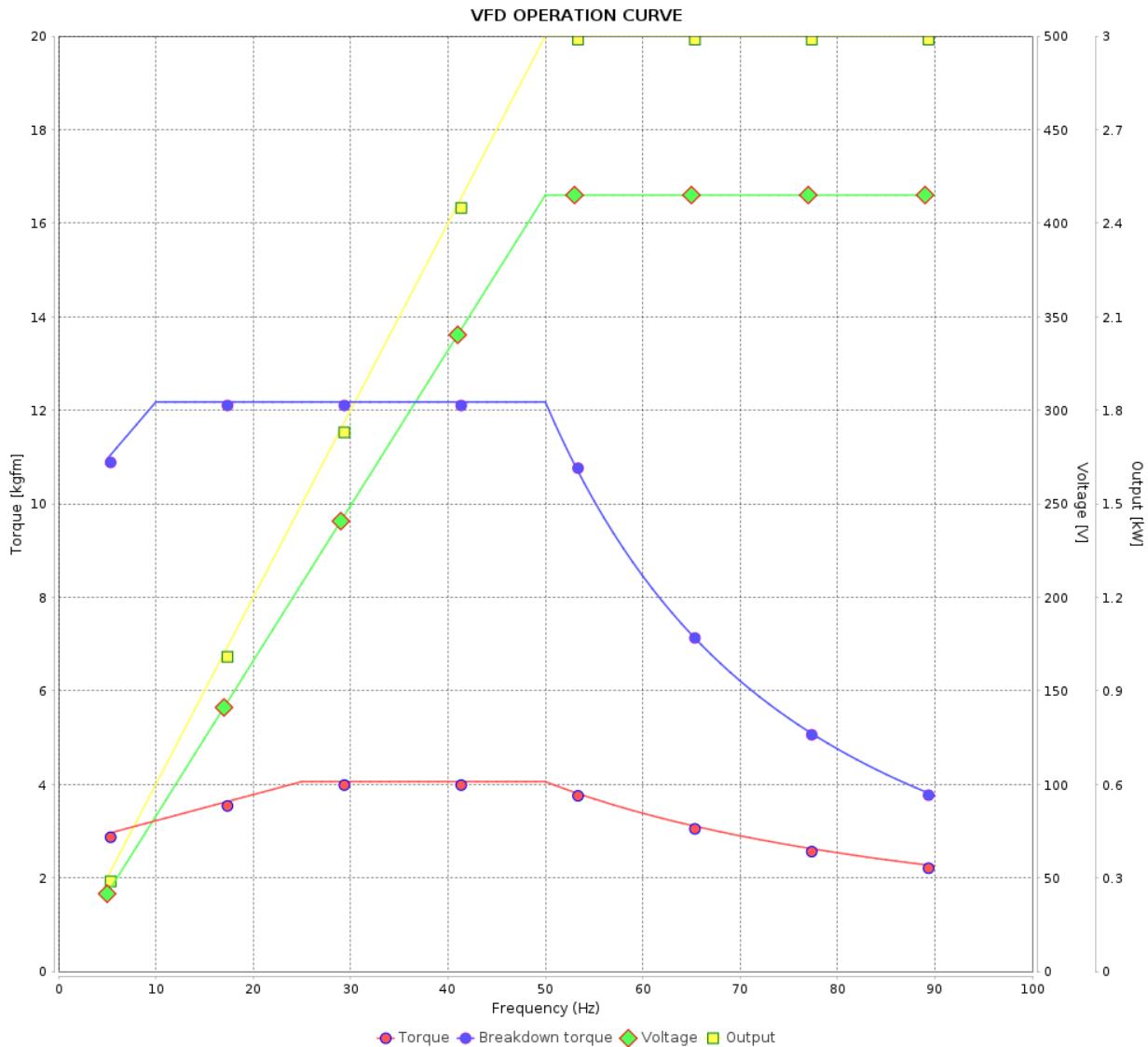
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Performed by			Page	Revision
Checked by				
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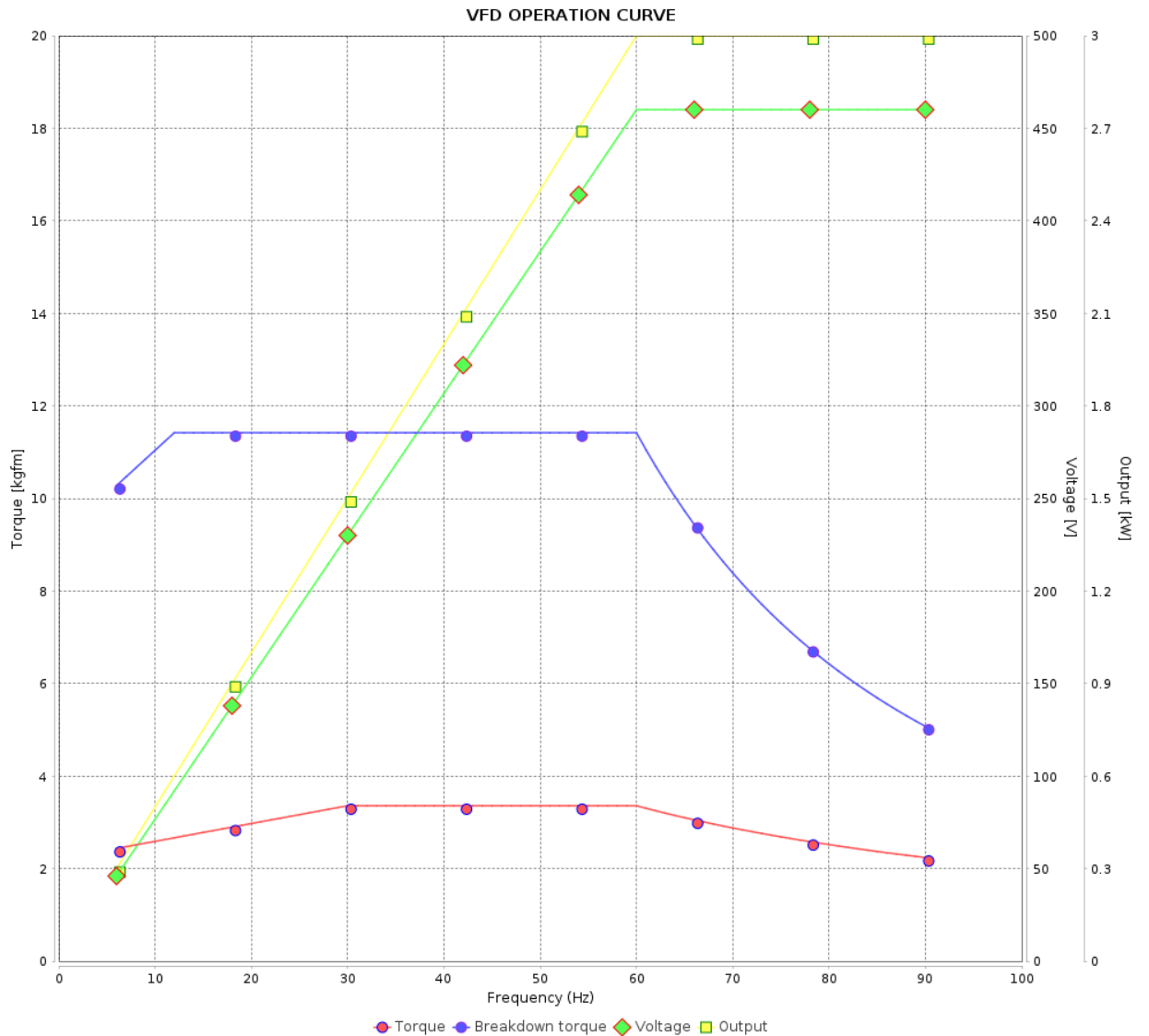
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Performed by			Page	Revision
Checked by			19 / 19	
Date	13/10/2023			