

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15839426

Frame : 90S
Insulation class : F
Duty cycle : S1
Ambient temperature : -20°C to +40°C
Altitude : 1000 m.a.s.l.
Protection degree : IP55
Design : N

Cooling method : IC411 - TEFC
Mounting : B5T
Rotation¹ : Both (CW and CCW)
Starting method : Direct On Line
Approx. weight³ : 21.4 kg
Moment of inertia (J) : 0.0055 kgm²

Output [kW]	1.1	1.1	1.1	1.1
Poles	4	4	4	4
Frequency [Hz]	50	50	50	60
Rated voltage [V]	220/380	230/400	240/415	460
Rated current [A]	4.18/2.42	4.16/2.39	4.08/2.36	2.07
L. R. Amperes [A]	26.3/15.2	27.4/15.8	29.0/16.8	16.4
LRC [A]	6.3	6.6	7.1	7.9
No load current [A]	2.07/1.20	2.43/1.40	2.59/1.50	1.30
Rated speed [RPM]	1435	1445	1450	1755
Slip [%]	4.33	3.67	3.33	2.50
Rated torque [kgfm]	0.747	0.741	0.739	0.610
Locked rotor torque [%]	210	229	250	270
Breakdown torque [%]	240	270	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	30s (cold) 17s (hot)	28s (cold) 16s (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	80.0
	75%	84.1	84.1	84.0
	100%	84.1	84.1	86.5
Power Factor	25%			
	50%	0.64	0.59	0.57
	75%	0.76	0.72	0.70
	100%	0.82	0.79	0.77

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

Losses (%)	P1 (0,9;1,0)	19.1	19.1	19.1	15.8
	P2 (0,5;1,0)	18.5	18.5	18.5	15.3
	P3 (0,25;1,0)	17.2	17.2	17.2	14.2
	P4 (0,9;0,5)	8.8	8.8	8.8	7.3
	P5 (0,5;0,5)	6.9	6.9	6.9	5.7
	P6 (0,5;0,25)	4.7	4.7	4.7	3.9
	P7 (0,25;0,25)	3.7	3.7	3.7	3.0

Bearing type : Drive end 6205 ZZ Non drive end 6204 ZZ
Sealing : V'Ring V'Ring
Lubrication interval : - -
Lubricant amount : - -
Lubricant type : Mobil Polyrex EM

Foundation loads
Max. traction : 48 kgf
Max. compression : 70 kgf

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				
Date	17/09/2025			

Page 1 / 19
Revision

DATA SHEET

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Notes

Rev.	Changes Summary		Performed	Checked	Date
Performed by			Page		Revision
Checked by					
Date	17/09/2025				
			2 / 19		

DATA SHEET

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

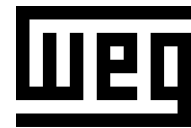
Space heater information

Voltage: 110 - 127 V

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page	Revision
Checked by				3 / 19	
Date	17/09/2025				

TORQUE AND CURRENT VS SPEED CURVE

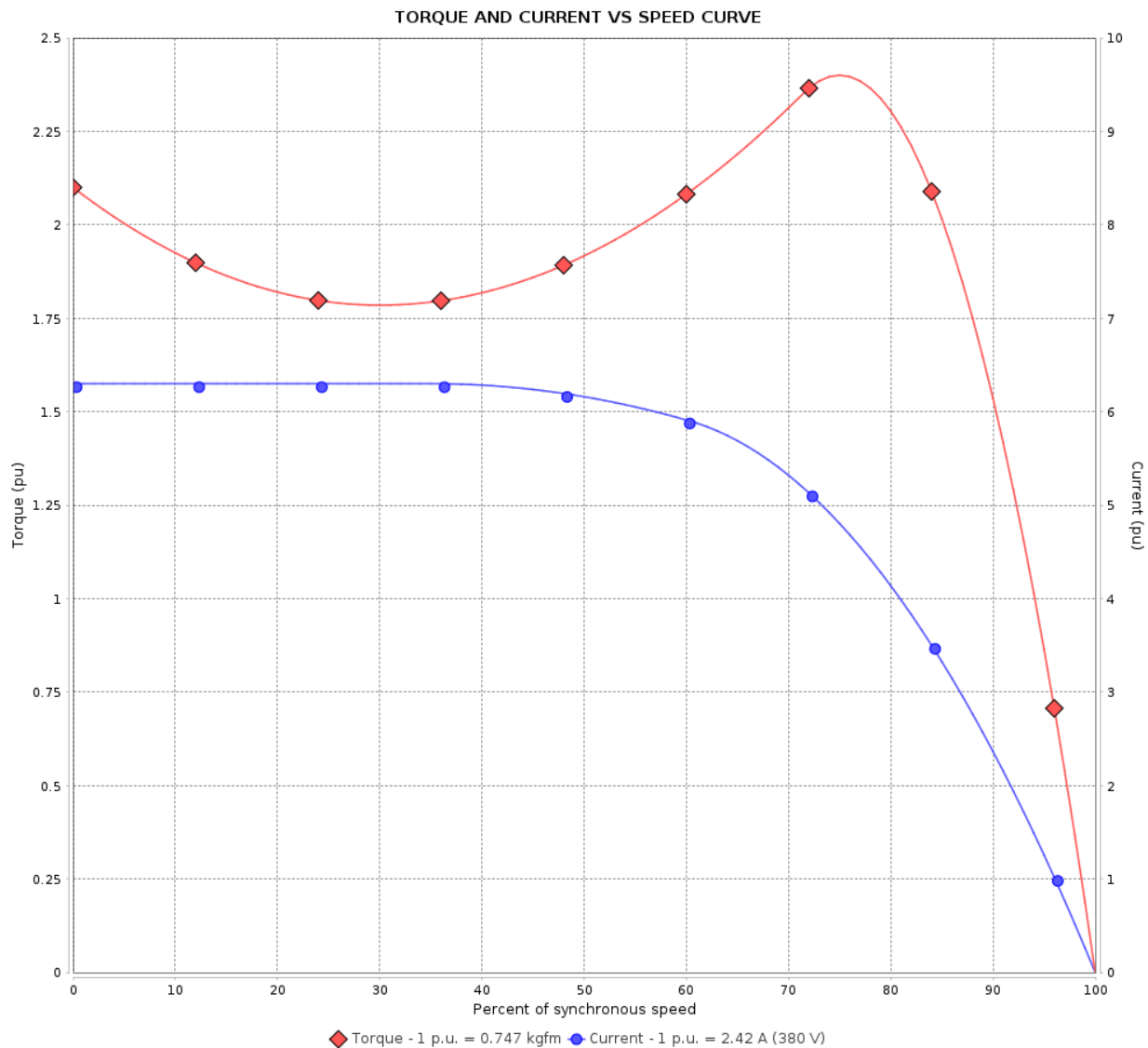
Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 220/380 V 50 Hz 4P

Rated current : 4.18/2.42 A
LRC : 6.3
Rated torque : 0.747 kgfm
Locked rotor torque : 210 %
Breakdown torque : 240 %
Rated speed : 1435 rpm

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

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 4 / 19Revision		
Checked by				
Date	17/09/2025			

TORQUE AND CURRENT VS SPEED CURVE

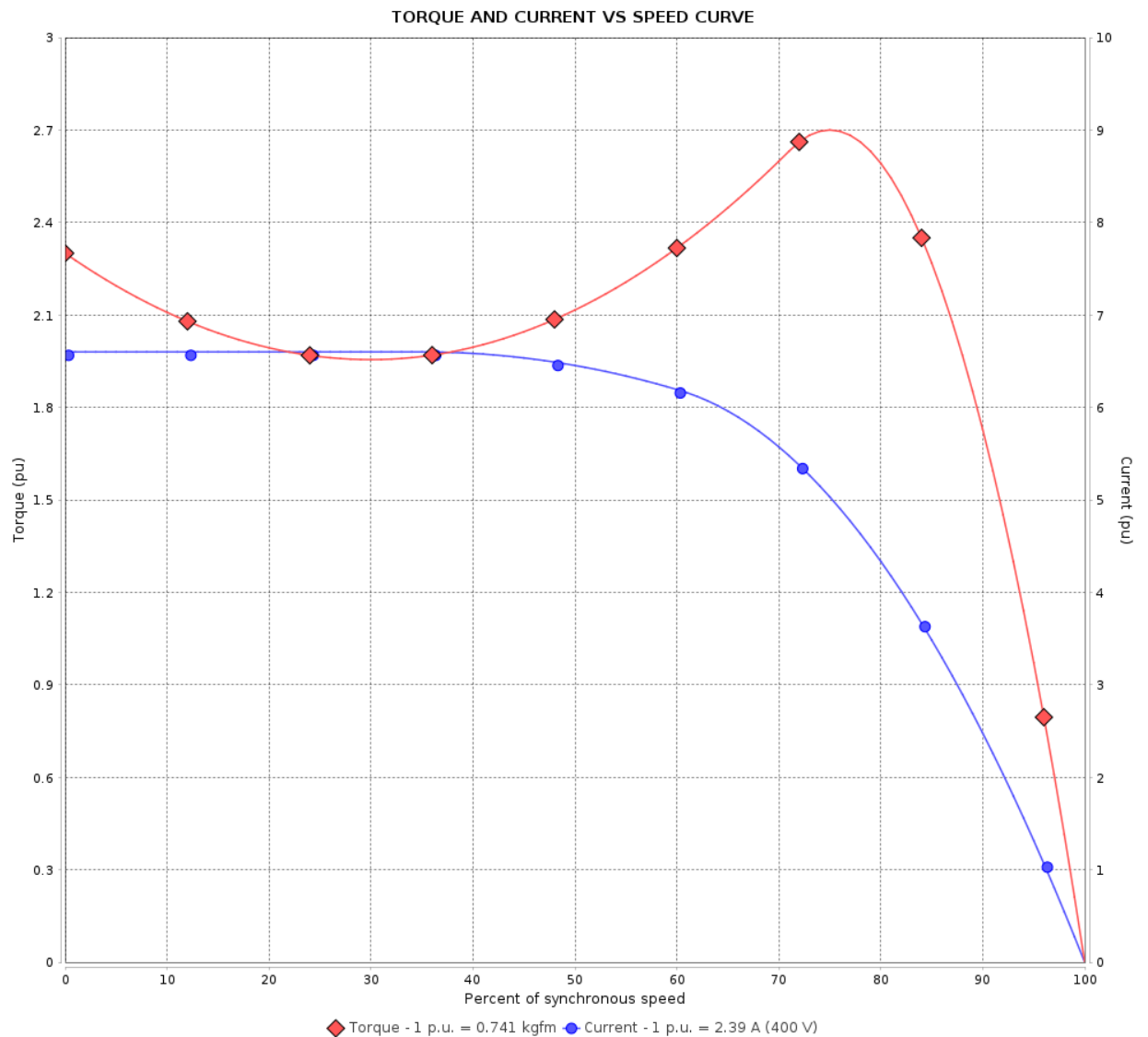
Three Phase Induction Motor - Squirrel Cage



Customer :

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Product code : 15839426



Performance : 230/400 V 50 Hz 4P

Rated current : 4.16/2.39 A
LRC : 6.6
Rated torque : 0.741 kgfm
Locked rotor torque : 229 %
Breakdown torque : 270 %
Rated speed : 1445 rpm

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

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 5 / 19Revision		
Checked by				
Date	17/09/2025			

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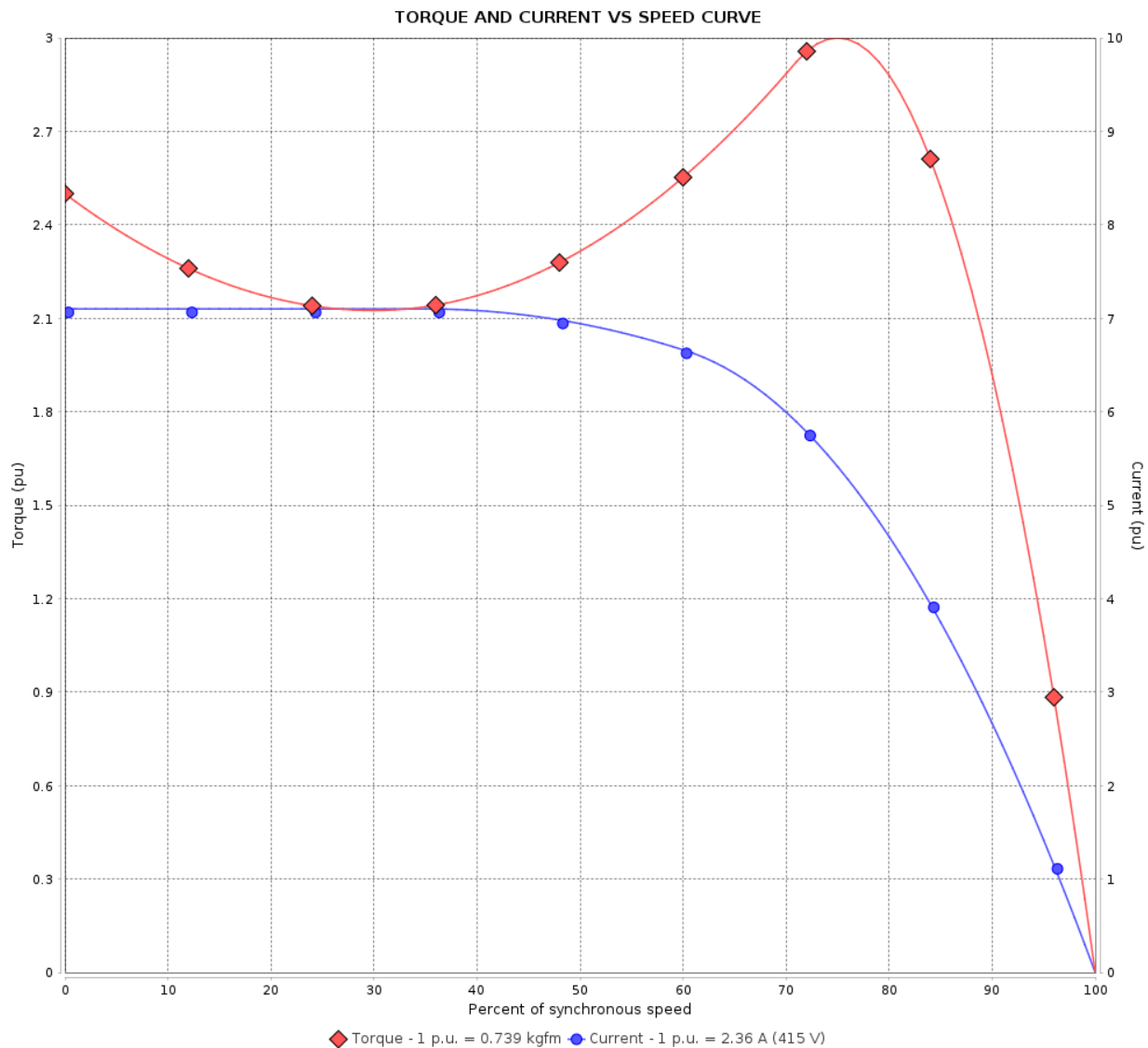
Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 240/415 V 50 Hz 4P

Rated current : 4.08/2.36 A
LRC : 7.1
Rated torque : 0.739 kgfm
Locked rotor torque : 250 %
Breakdown torque : 300 %
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

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 6 / 19Revision		
Checked by				
Date	17/09/2025			

TORQUE AND CURRENT VS SPEED CURVE

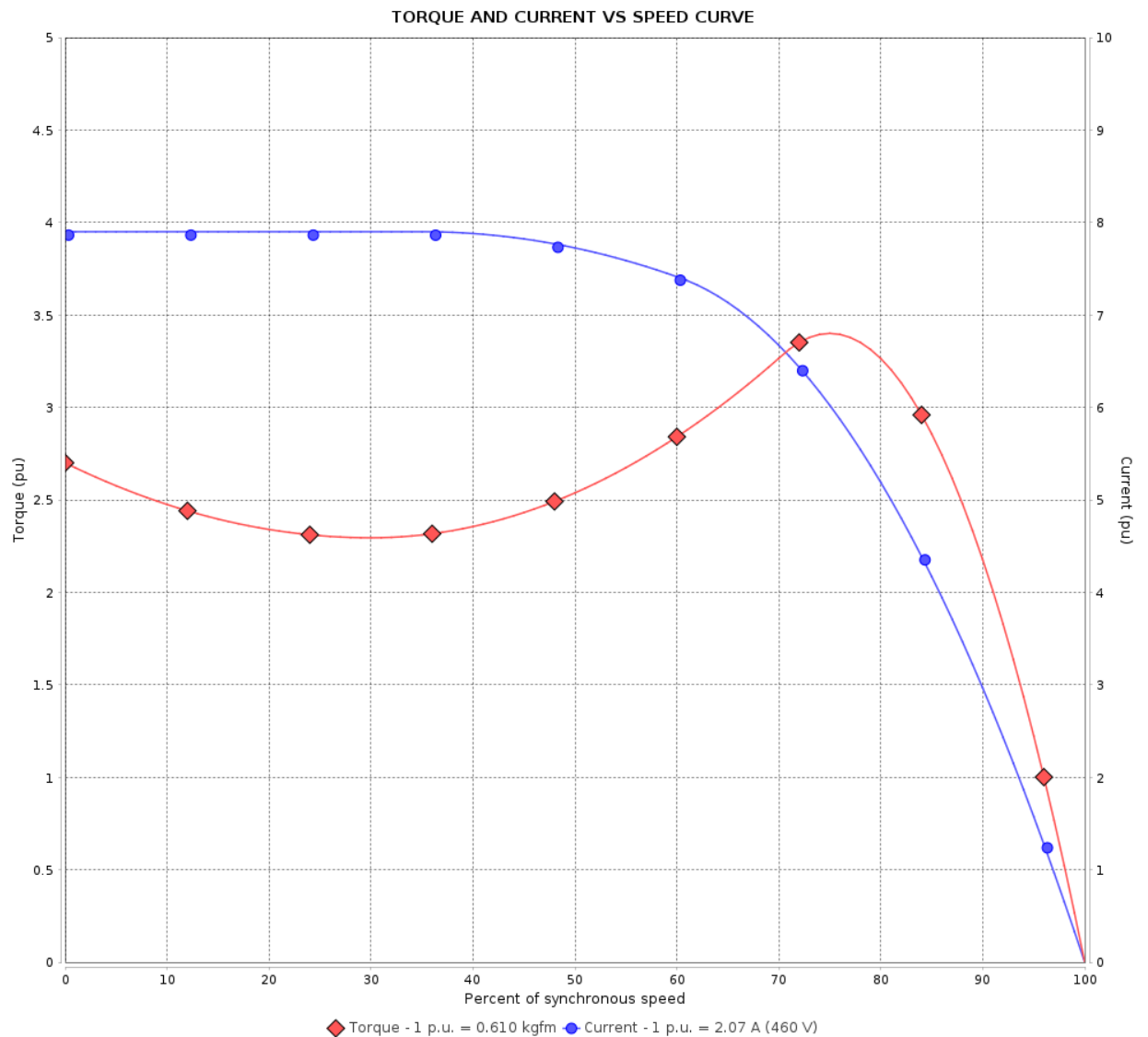
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 15839426



Performance : 460 V 60 Hz 4P

Rated current	: 2.07 A	Moment of inertia (J)	: 0.0055 kgm ²
LRC	: 7.9	Duty cycle	: S1
Rated torque	: 0.610 kgfm	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 340 %	Temperature rise	: 80 K
Rated speed	: 1755 rpm	Design	: N

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 7 / 19Revision		
Checked by				
Date	17/09/2025			

LOAD PERFORMANCE CURVE

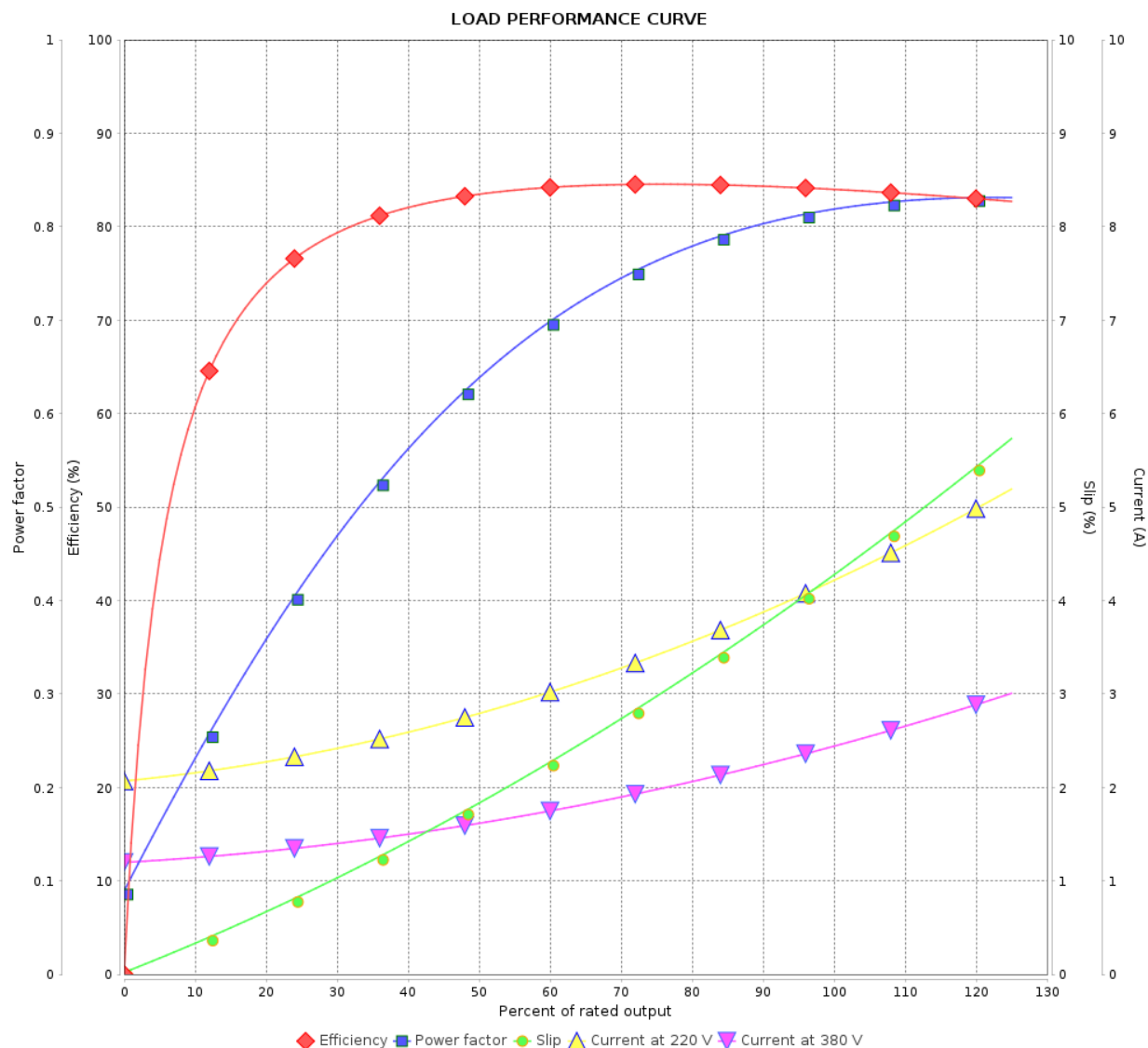
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Service factor : 1.00
Temperature rise : 80 K
Design : N

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page	Revision
Checked by				8 / 19	
Date					
	17/09/2025				

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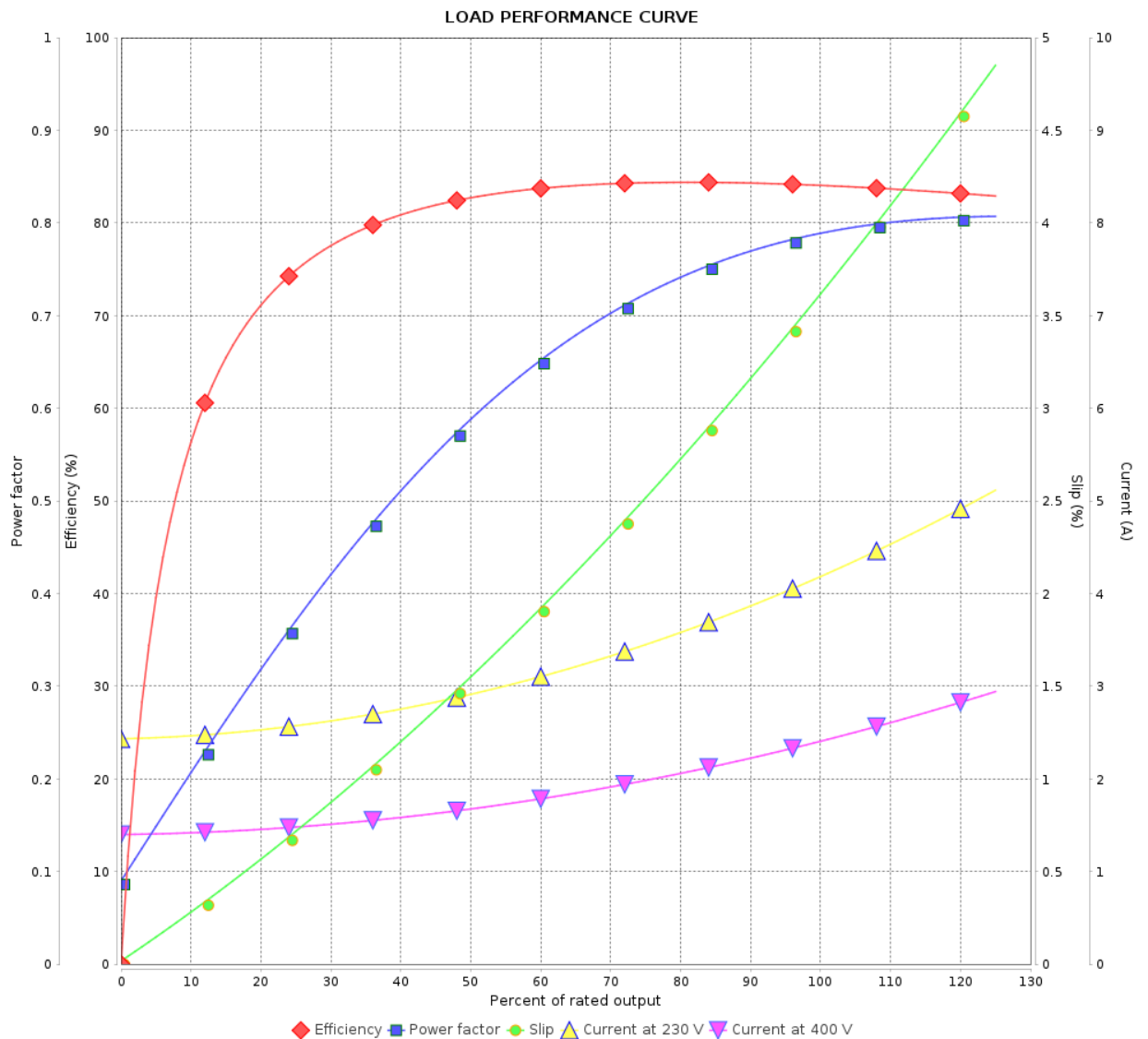
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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 9 / 19Revision		
Checked by				
Date	17/09/2025			

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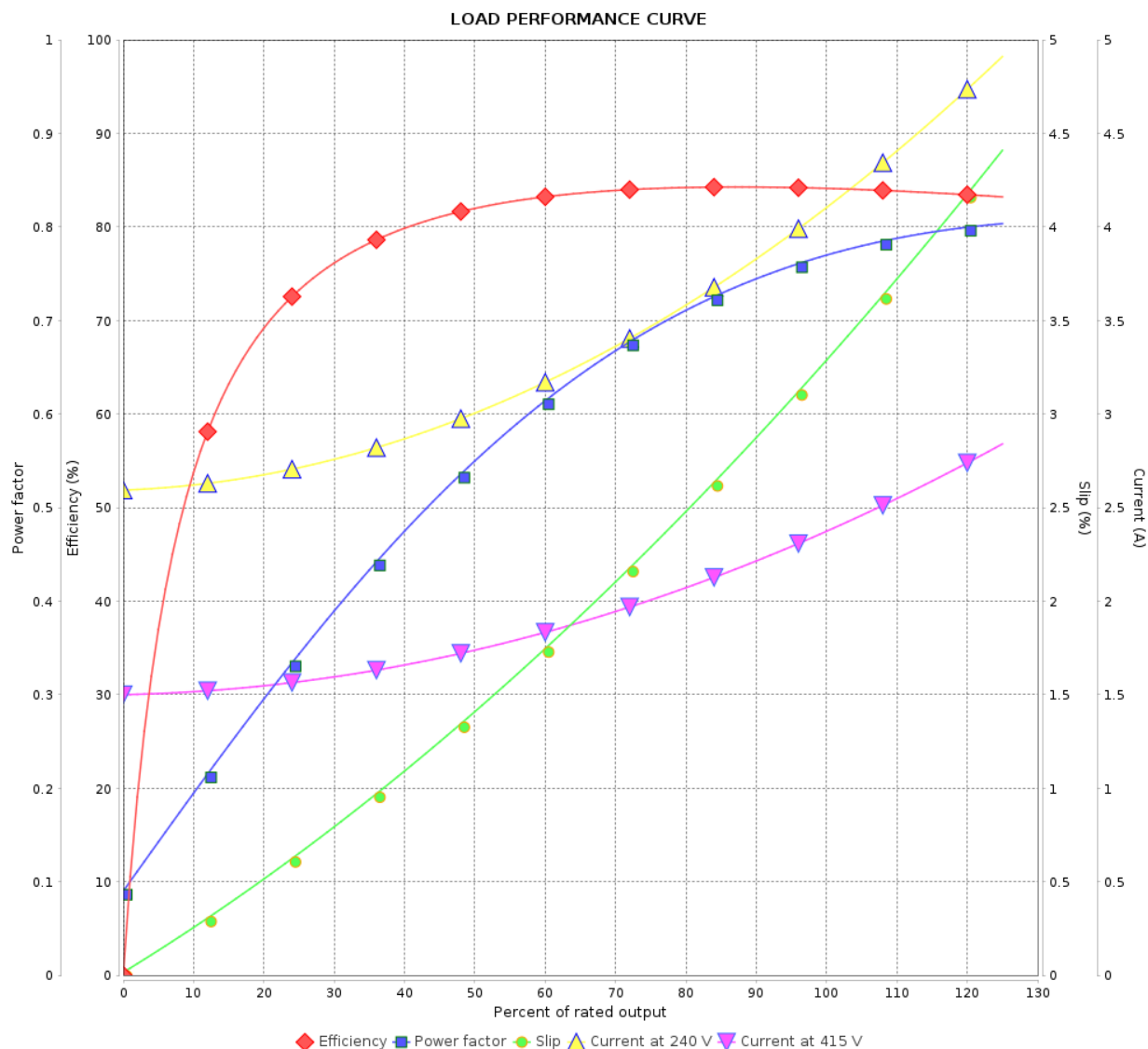
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Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 10 / 19	Revision
Checked by					
Date	17/09/2025				

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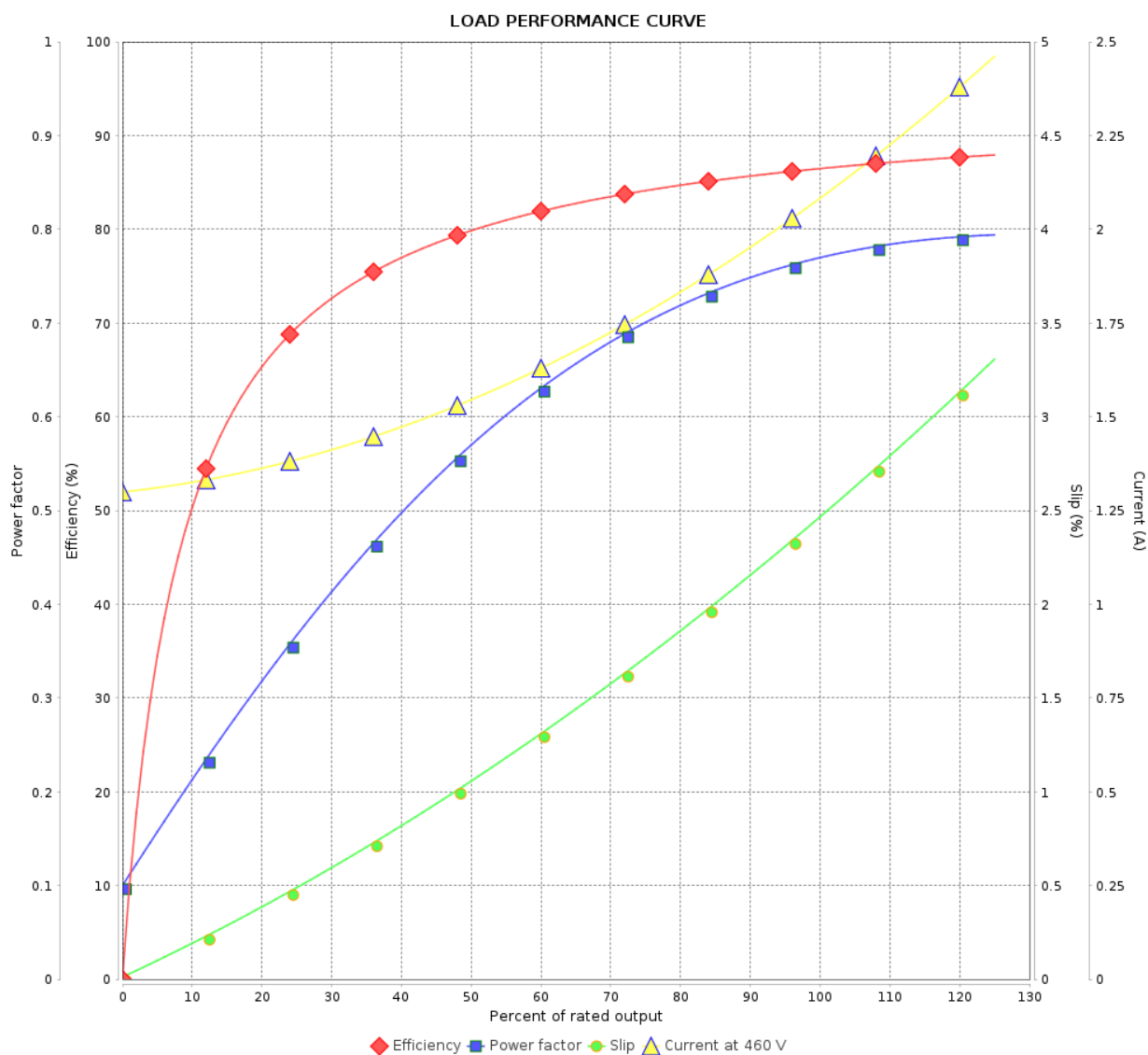
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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 11 / 19Revision		
Checked by				
Date	17/09/2025			

THERMAL LIMIT CURVE

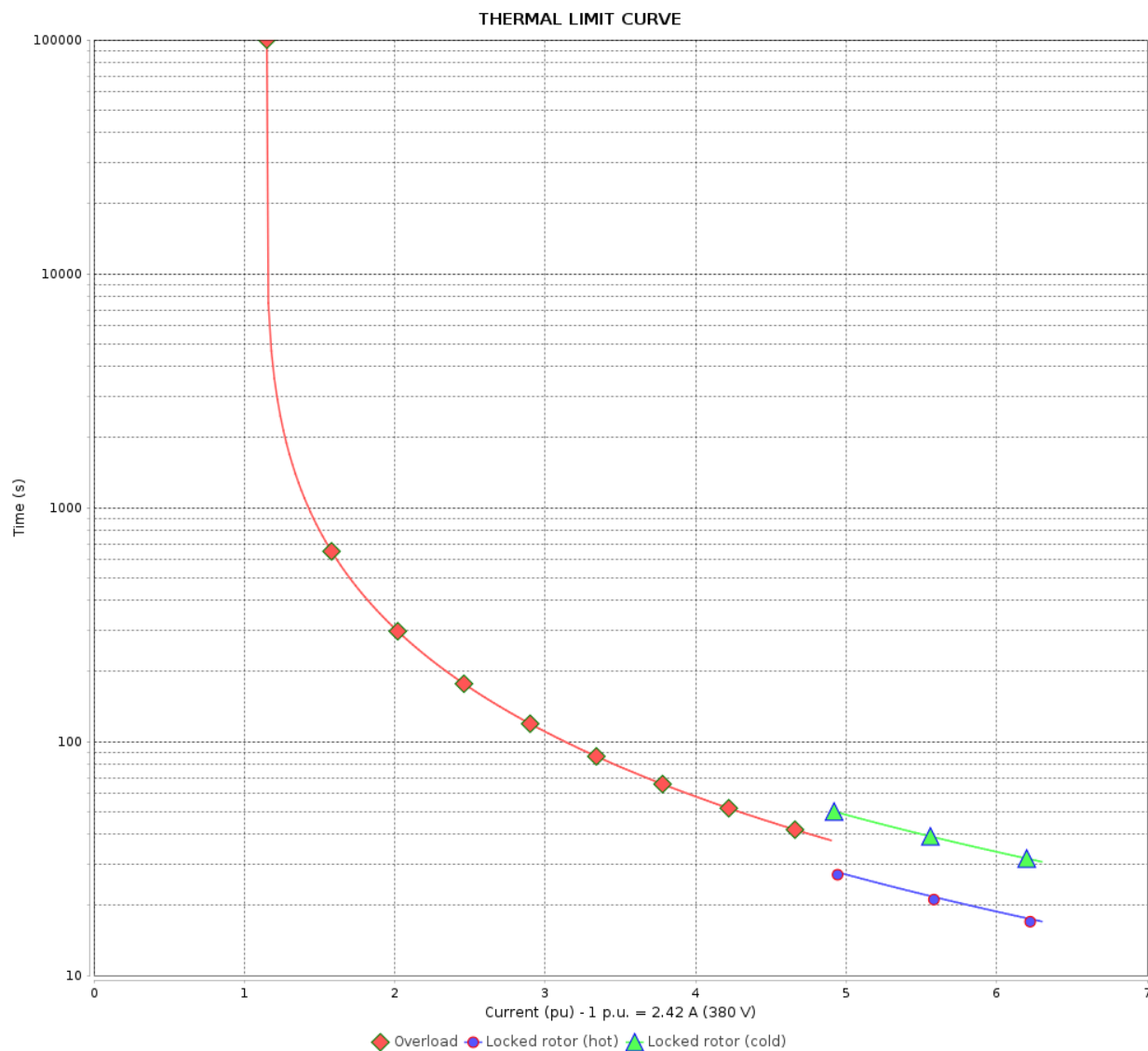
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Heating constant

Cooling constant

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

THERMAL LIMIT CURVE

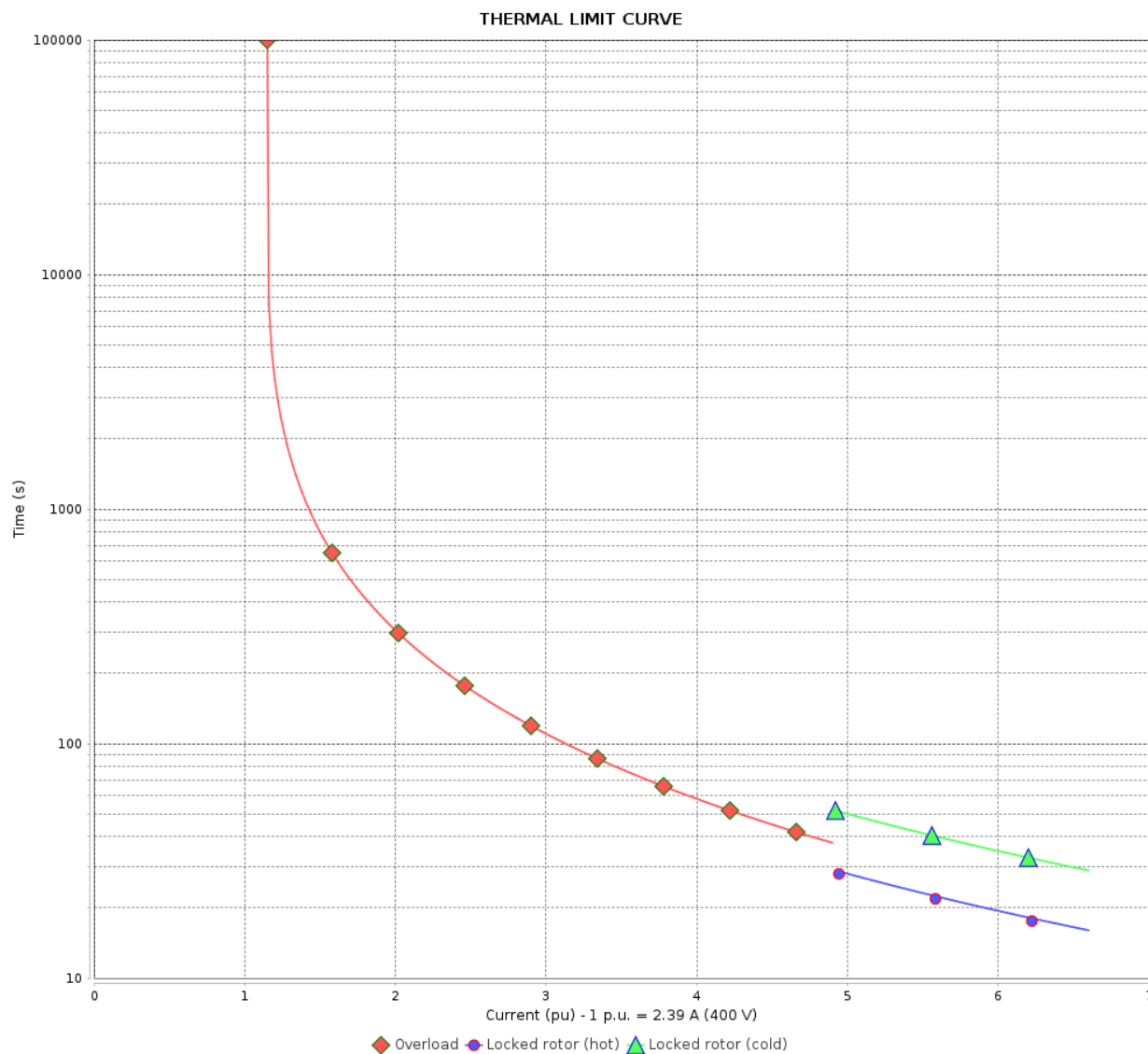
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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 13 / 19		
Checked by				
Date	17/09/2025			
		Revision		

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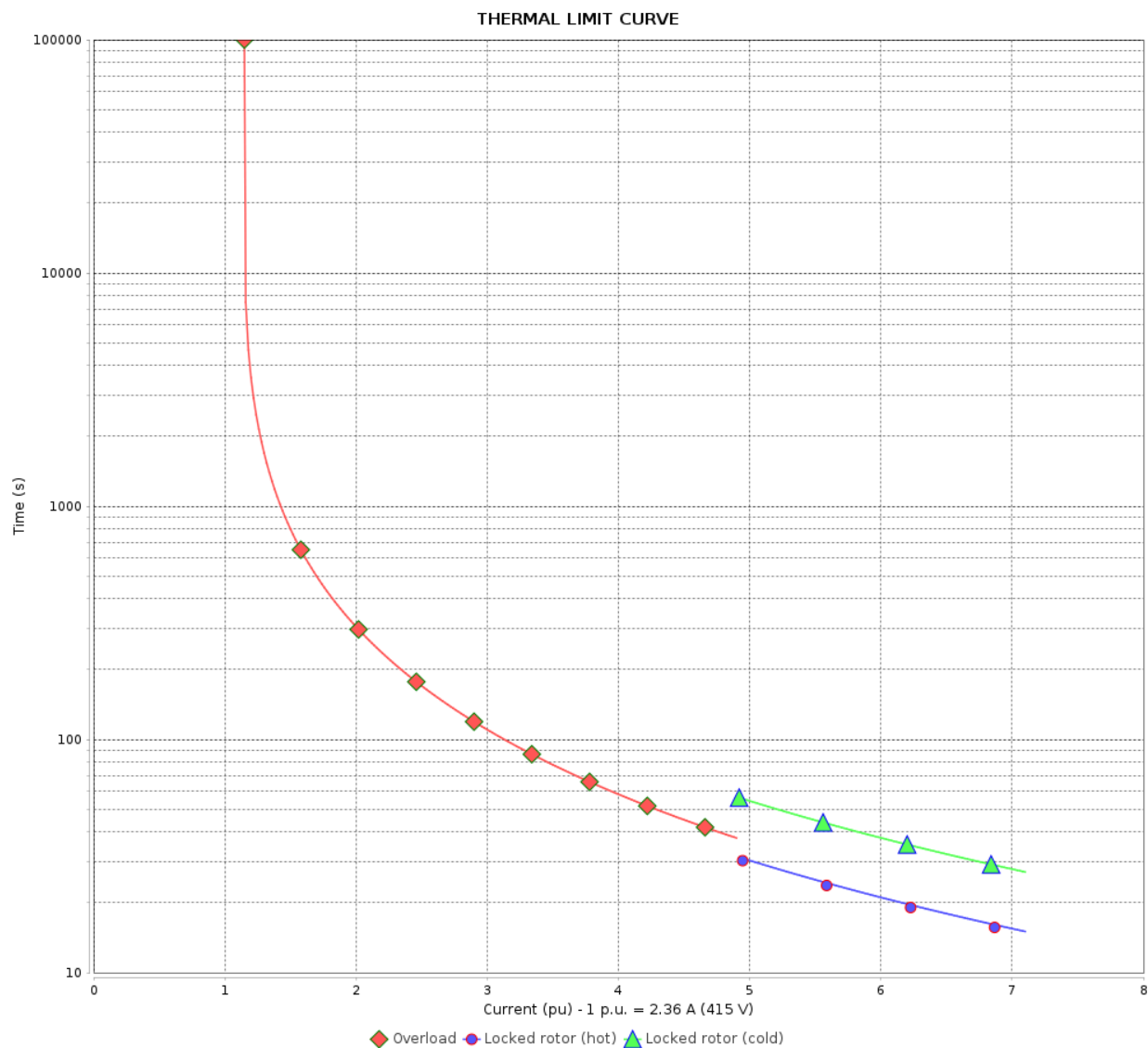
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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 14 / 19Revision		
Checked by				
Date	17/09/2025			

THERMAL LIMIT CURVE

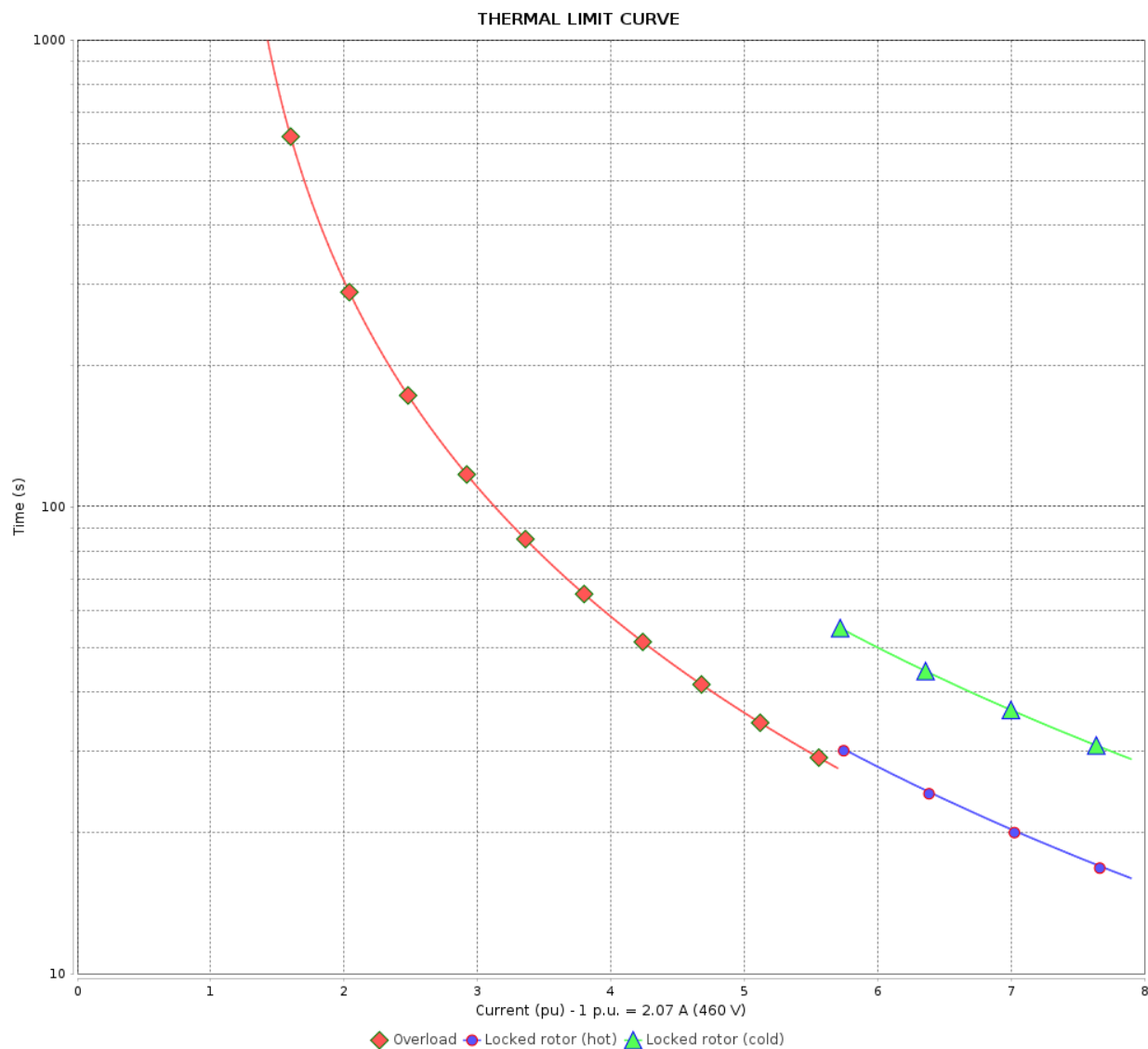
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Rev.	Changes Summary		Performed	Checked	Date
Performed by		Page 15 / 19Revision			
Checked by					
Date	17/09/2025				

VFD OPERATION CURVE

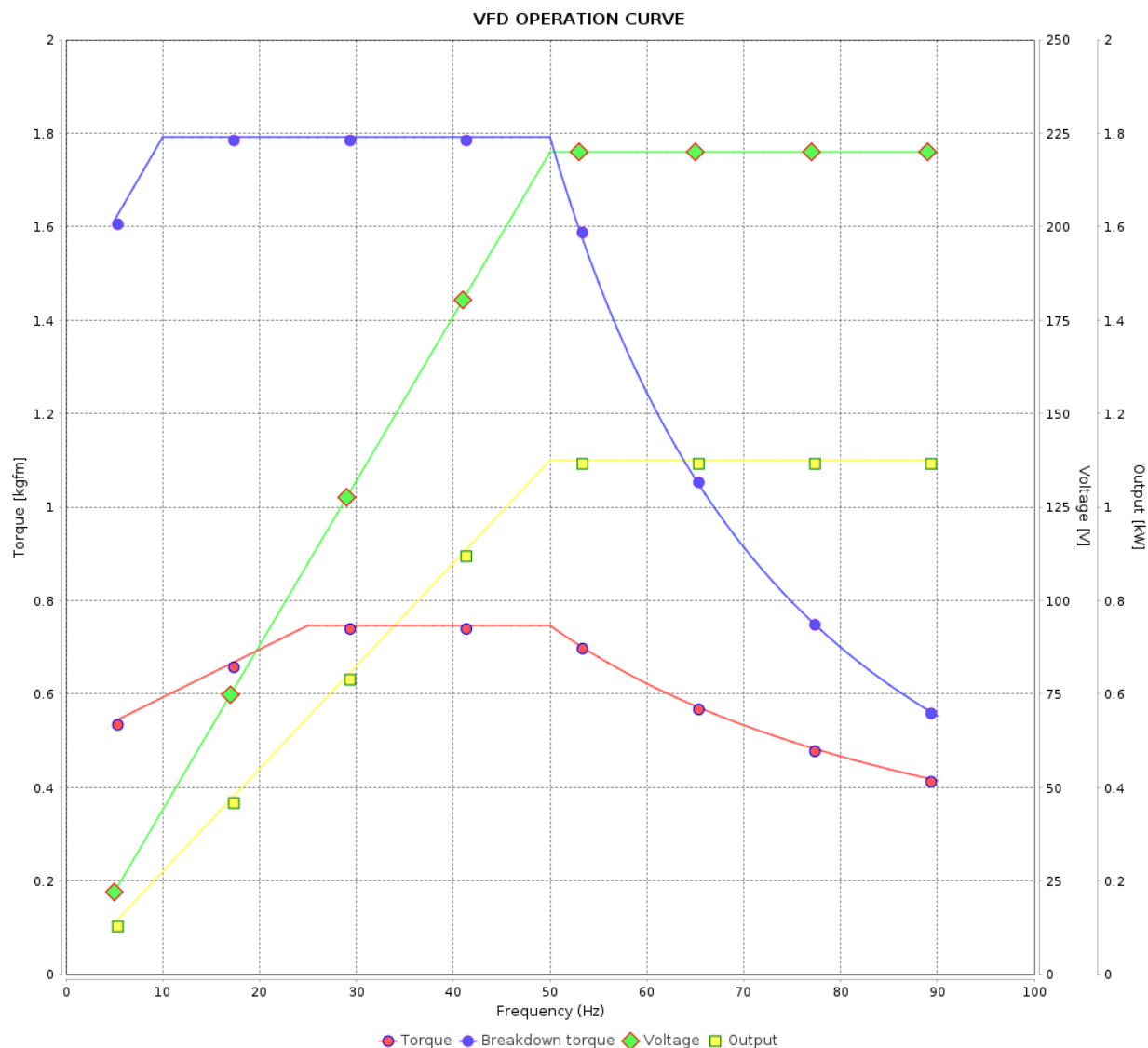
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Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page	Revision
Checked by				16 / 19	
Date					

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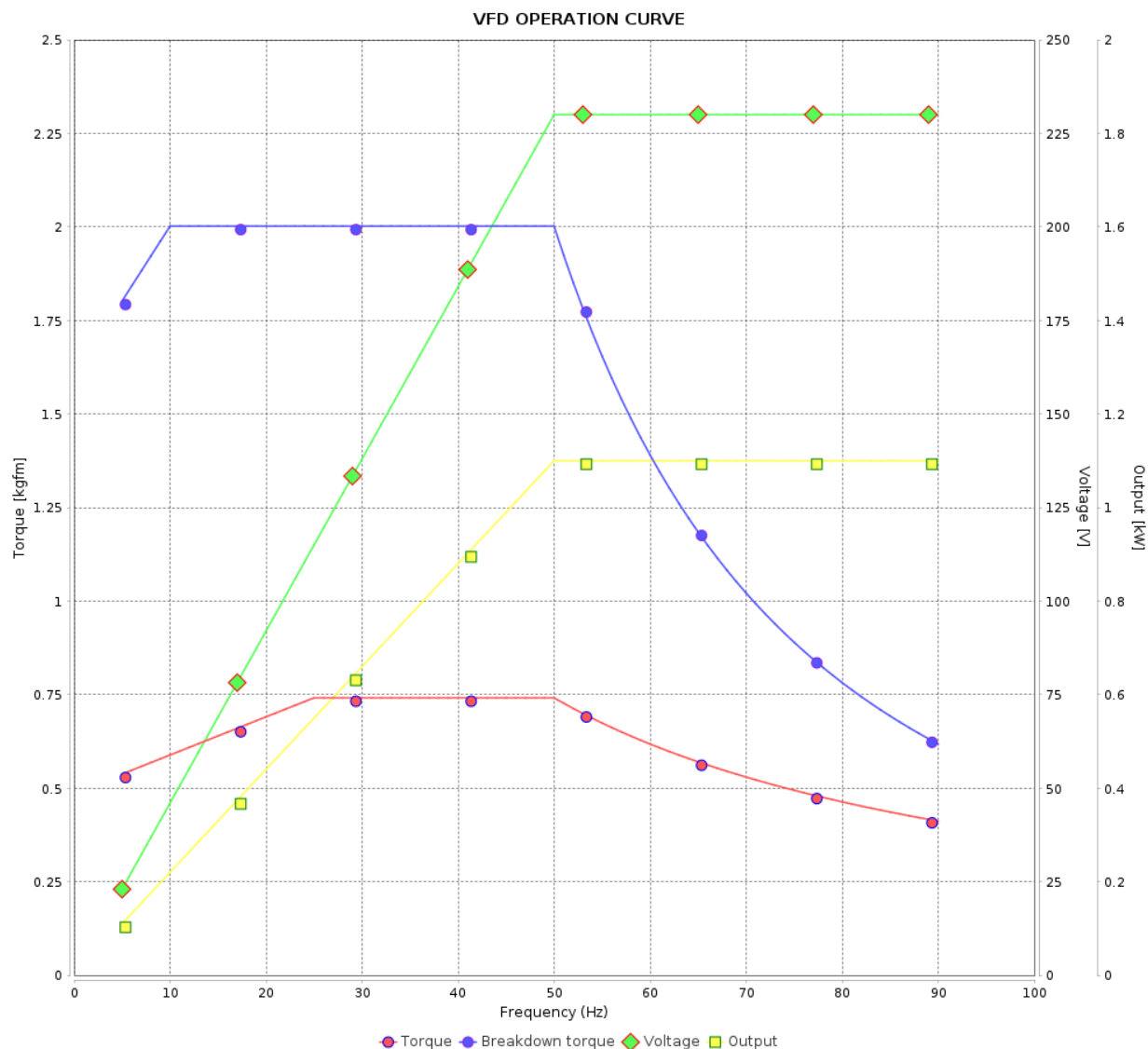
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Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date	17/09/2025			

Page
17 / 19

Revision

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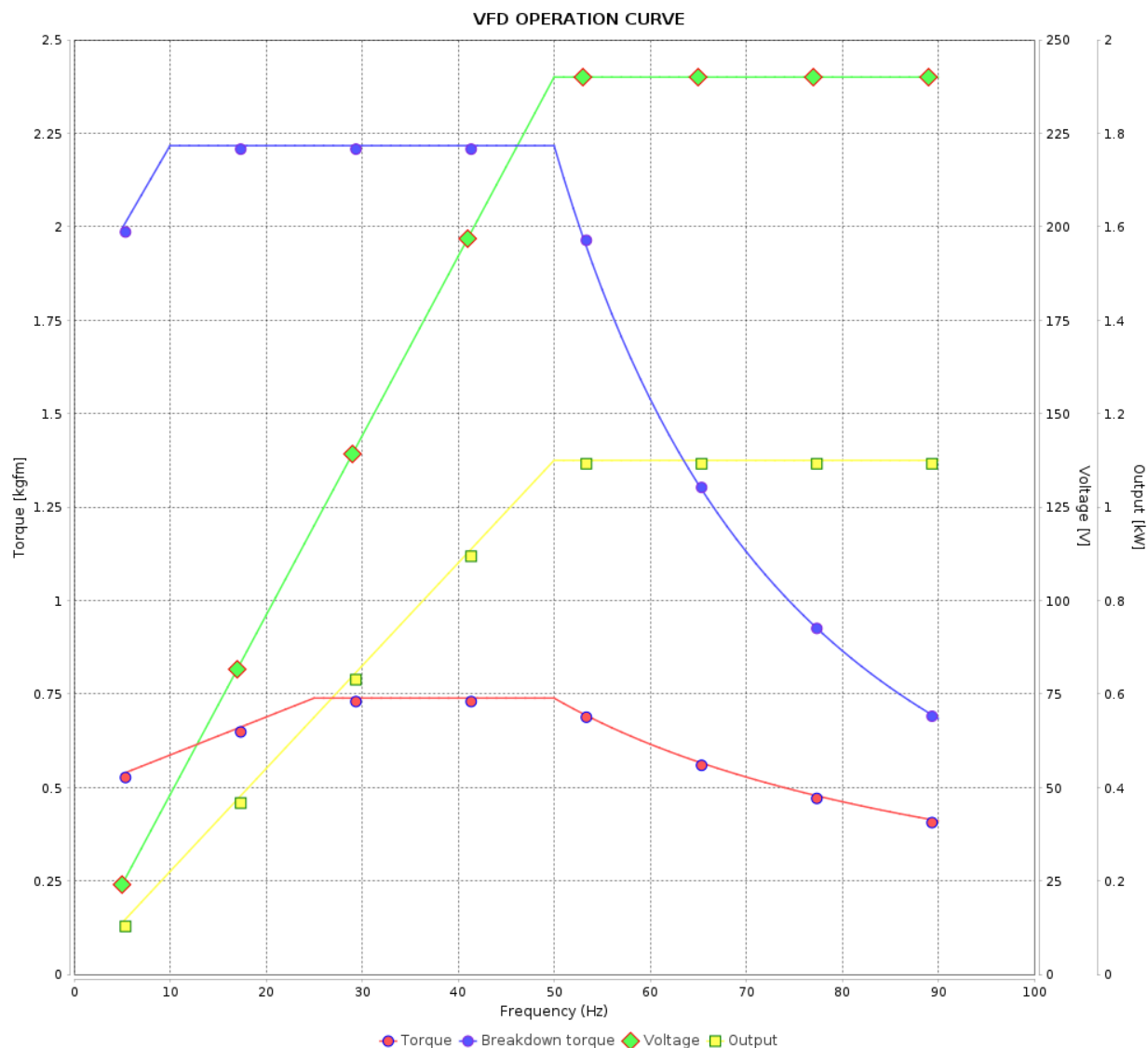
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Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page	Revision
Checked by				18 / 19	
Date					

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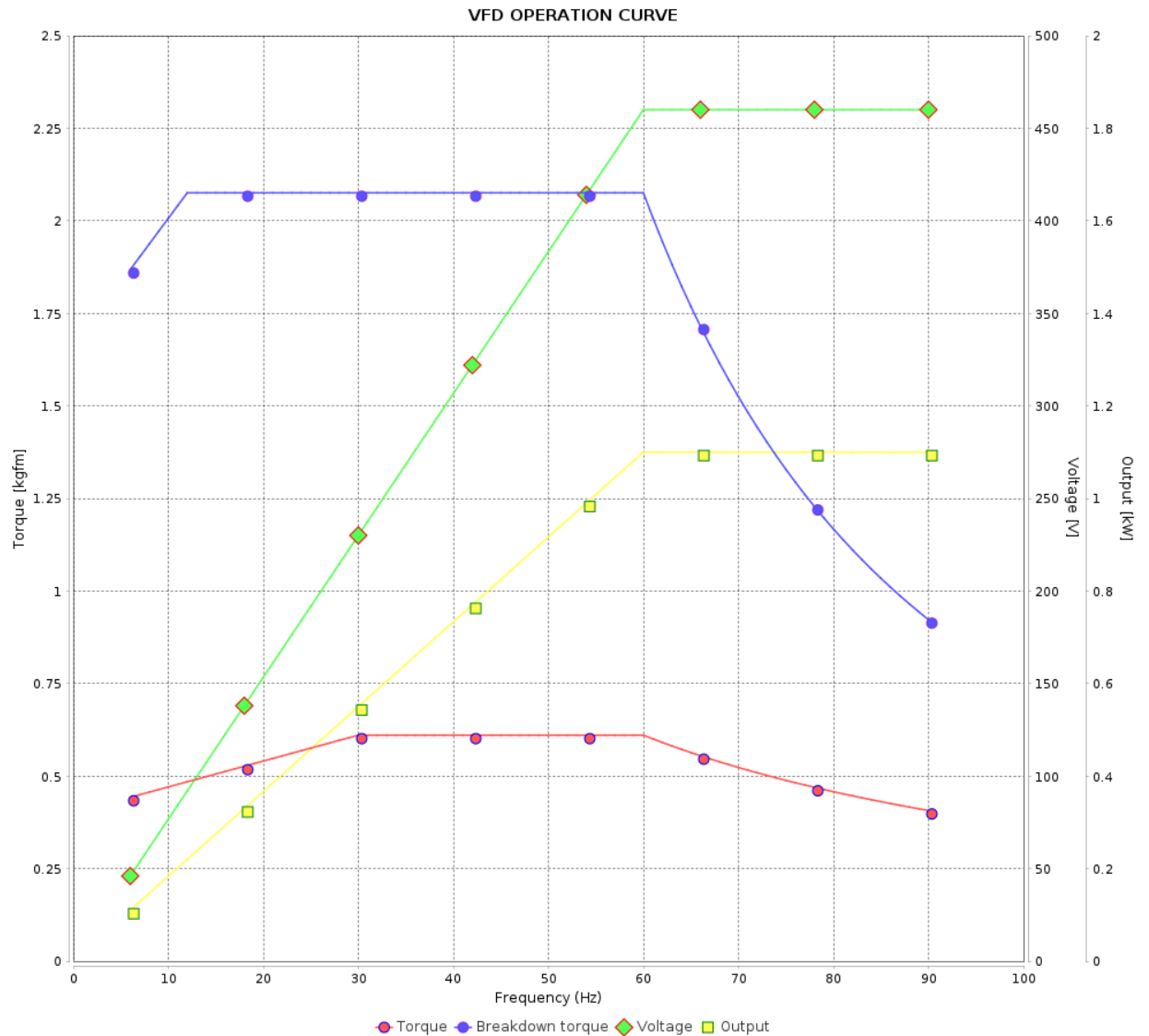
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Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 19 / 19	Revision
Checked by					
Date	17/09/2025				