

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line : IE3 Three-Phase	Product code : 12862436				
Frame : 160M 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 Rotation ¹ : Both (CW and CCW) Starting method : Direct On Line Approx. weight ² : 280 lb Moment of inertia (J) : 1.14 sq.ft.lb				
Output [kW]	11	11	11	11	
Poles	2	2	2	2	
Frequency [Hz]	50	50	50	60	
Rated voltage [V]	380/660	400/690	415	460	
Rated current [A]	21.3/12.3	21.0/12.2	20.7	18.5	
L. R. Amperes [A]	168/96.9	179/103	188	179	
LRC [A]	7.9	8.5	9.1	9.7	
No load current [A]	9.10/5.24	10.1/5.86	11.0	9.50	
Rated speed [RPM]	2955	2960	2960	3565	
Slip [%]	1.50	1.33	1.33	0.97	
Rated torque [ft.lb]	26.2	26.2	26.2	21.7	
Locked rotor torque [%]	270	310	330	380	
Breakdown torque [%]	350	300	420	470	
Service factor	1.00	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	19s (cold) 11s (hot)	18s (cold) 10s (hot)	16s (cold) 9s (hot)	21s (cold) 12s (hot)	
Noise level ²	67.0 dB(A)	67.0 dB(A)	67.0 dB(A)	72.0 dB(A)	
Efficiency (%)	25%				
	50%	90.0	89.0	88.0	89.0
	75%	91.2	91.0	90.0	91.0
	100%	91.2	91.2	91.2	91.0
Power Factor	25%				
	50%	0.69	0.65	0.60	0.62
	75%	0.80	0.77	0.73	0.75
	100%	0.86	0.83	0.81	0.82
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	9.3	9.3	9.3	9.5
	P2 (0,5;1,0)	7.6	7.6	7.6	7.8
	P3 (0,25;1,0)	7.1	7.1	7.1	7.3
	P4 (0,9;0,5)	5.1	5.1	5.1	5.2
	P5 (0,5;0,5)	3.4	3.4	3.4	3.4
	P6 (0,5;0,25)	2.4	2.4	2.4	2.5
	P7 (0,25;0,25)	1.7	1.7	1.7	1.7
Bearing type : Drive end 6309 ZZ C3 Non drive end 6209 ZZ C3 Sealing : Oil Seal Lip Seal Lubrication interval : - - Lubricant amount : - - Lubricant type : Mobil Polyrex EM	Foundation loads Max. traction : 350 lb Max. compression : 630 lb				
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



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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

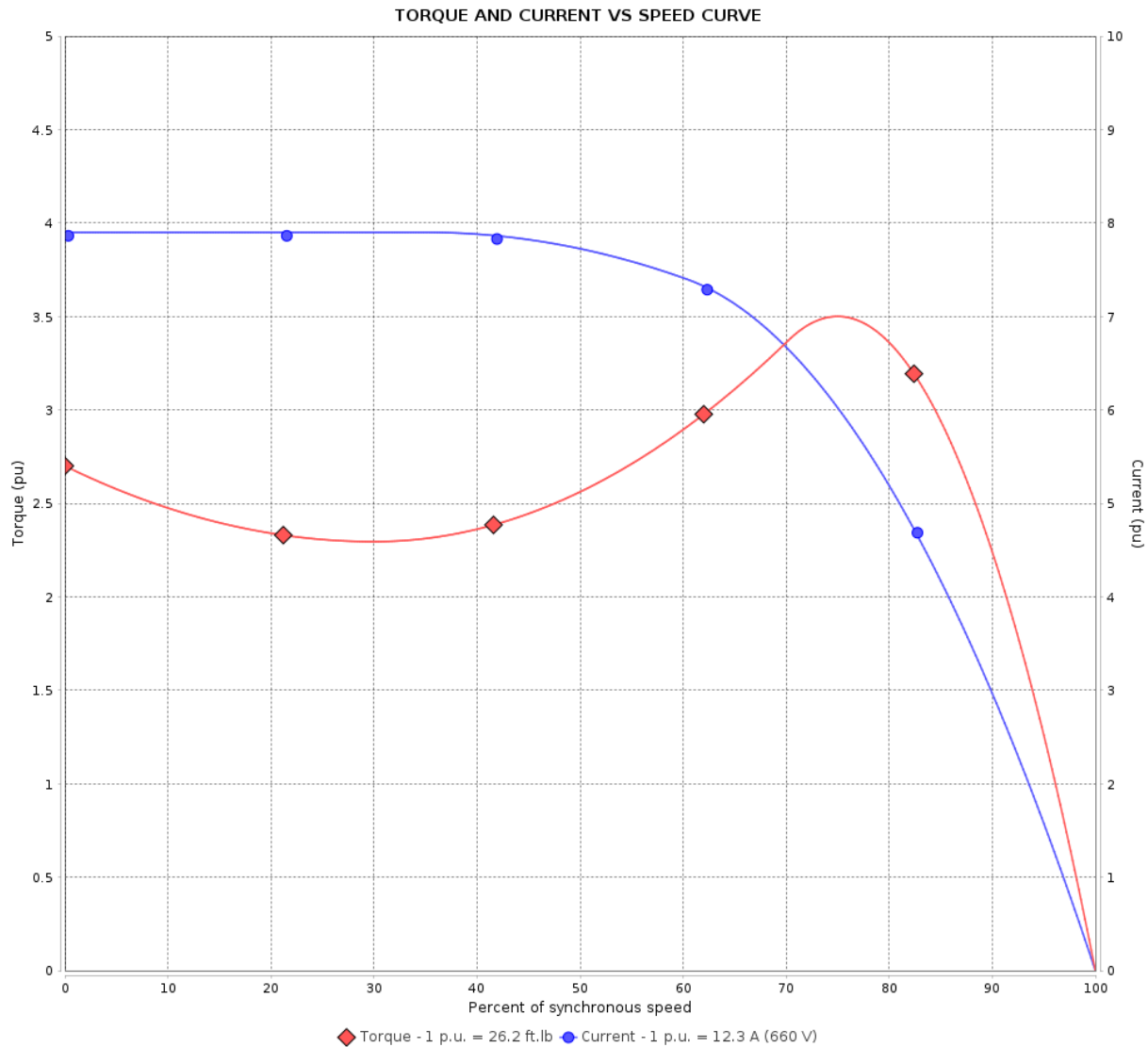
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12862436



Performance : 380/660 V 50 Hz 2P

Rated current	: 21.3/12.3 A	Moment of inertia (J)	: 1.14 sq.ft.lb
LRC	: 7.9	Duty cycle	: S1
Rated torque	: 26.2 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 2955 rpm	Design	: N

Locked rotor time : 19s (cold) 11s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

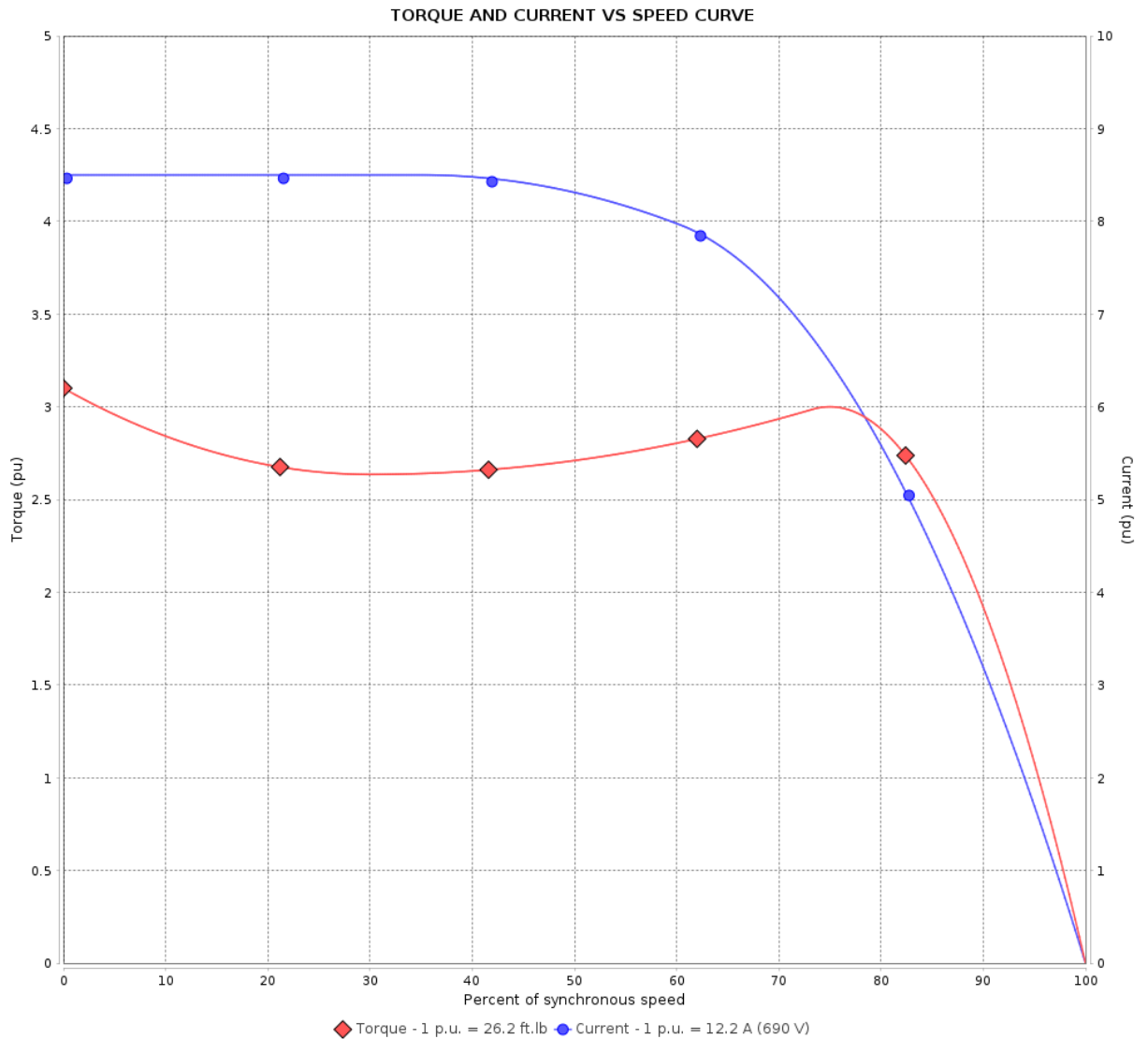


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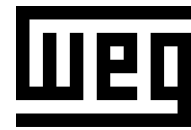
Performance : 400/690 V 50 Hz 2P

Rated current	: 21.0/12.2 A	Moment of inertia (J)	: 1.14 sq.ft.lb
LRC	: 8.5	Duty cycle	: S1
Rated torque	: 26.2 ft.lb	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 2960 rpm	Design	: N

Locked rotor time : 18s (cold) 10s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

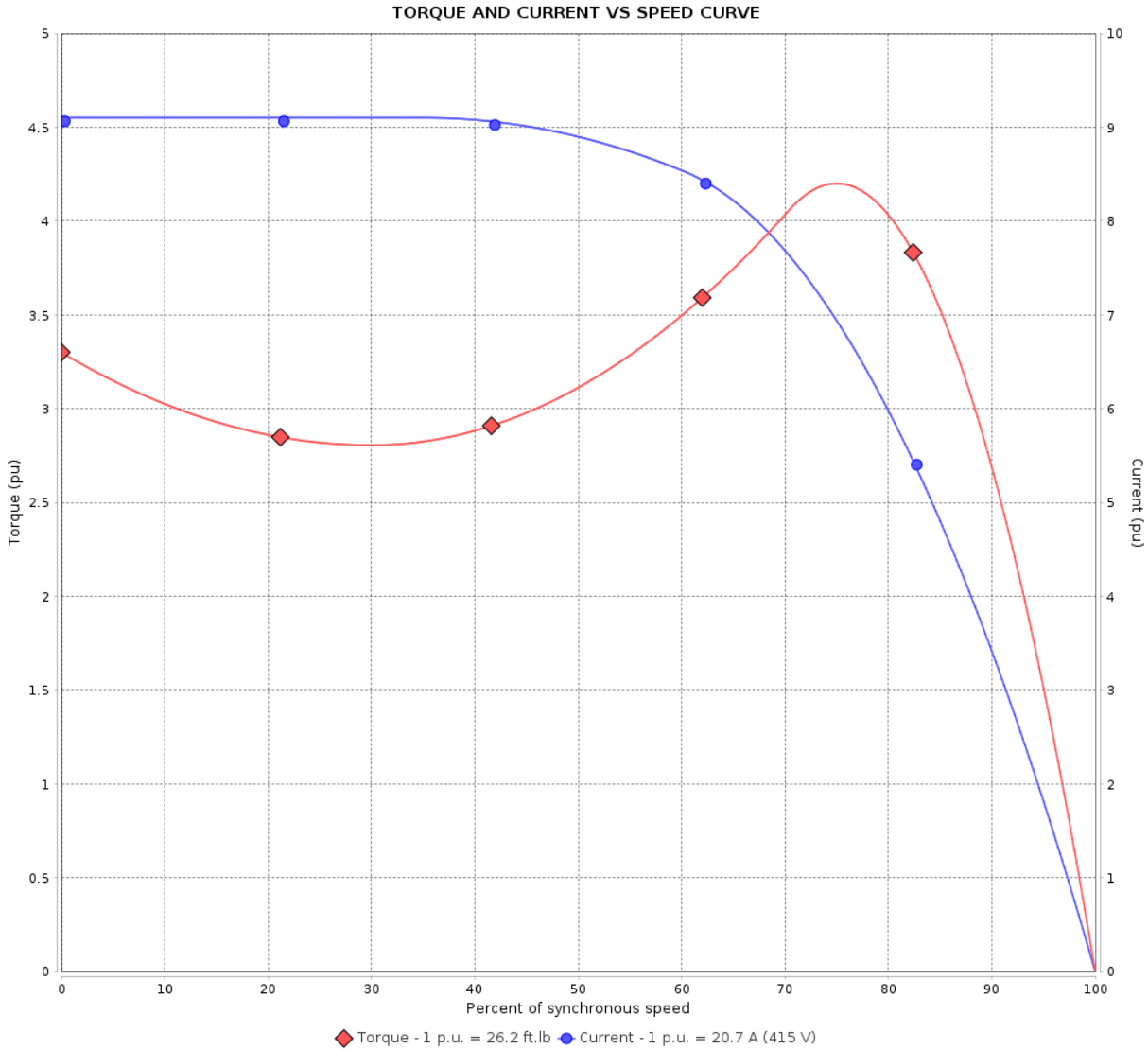


Three Phase Induction Motor - Squirrel Cage

Customer :

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Performance : 415 V 50 Hz 2P

Rated current	: 20.7 A	Moment of inertia (J)	: 1.14 sq.ft.lb
LRC	: 9.1	Duty cycle	: S1
Rated torque	: 26.2 ft.lb	Insulation class	: F
Locked rotor torque	: 330 %	Service factor	: 1.00
Breakdown torque	: 420 %	Temperature rise	: 80 K
Rated speed	: 2960 rpm	Design	: N

Locked rotor time : 16s (cold) 9s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

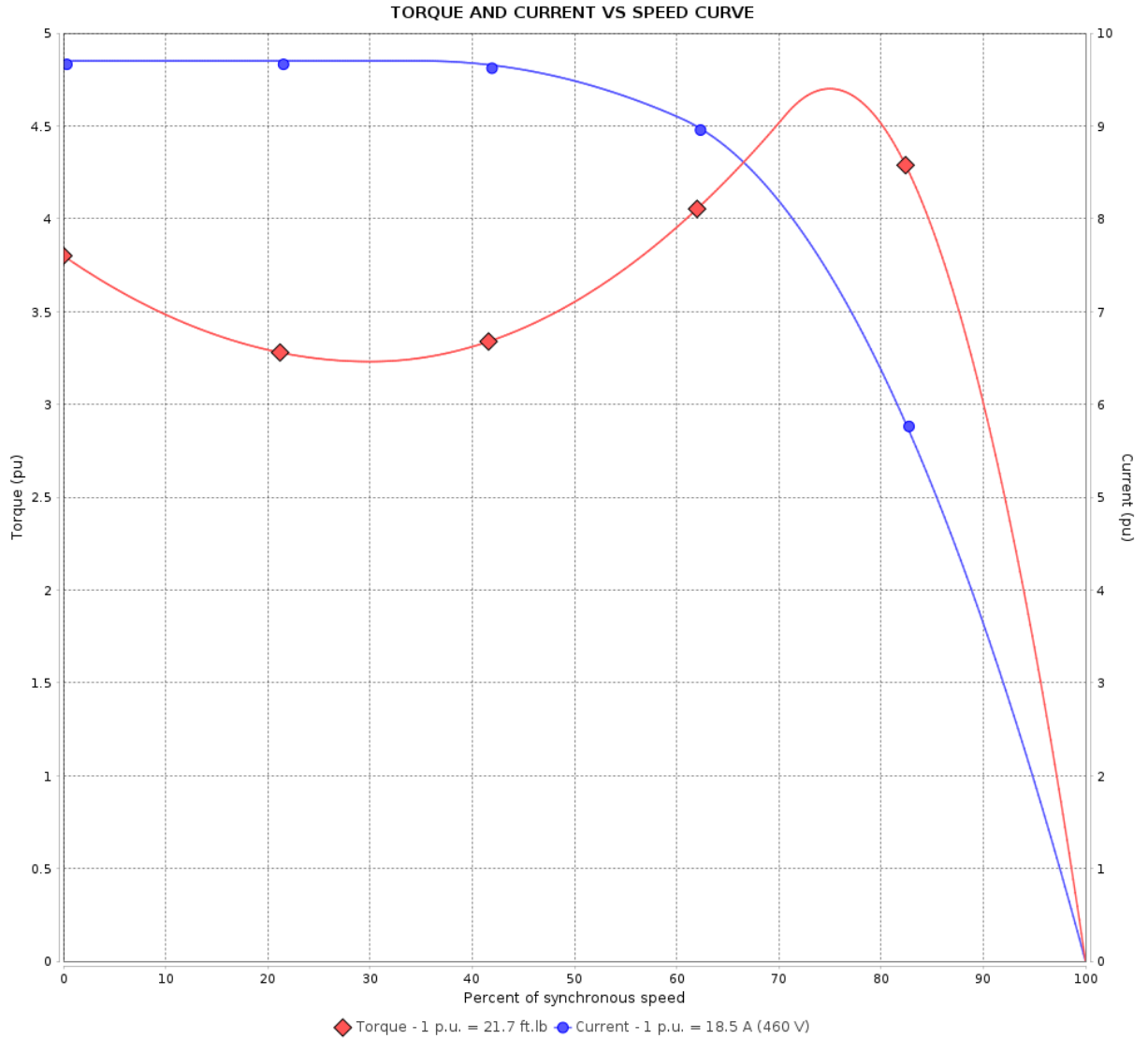


Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : IE3 Three-Phase

Product code : 12862436



Performance : 460 V 60 Hz 2P

Rated current	: 18.5 A	Moment of inertia (J)	: 1.14 sq.ft.lb
LRC	: 9.7	Duty cycle	: S1
Rated torque	: 21.7 ft.lb	Insulation class	: F
Locked rotor torque	: 380 %	Service factor	: 1.00
Breakdown torque	: 470 %	Temperature rise	: 80 K
Rated speed	: 3565 rpm	Design	: N

Locked rotor time : 21s (cold) 12s (hot)

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LOAD PERFORMANCE CURVE

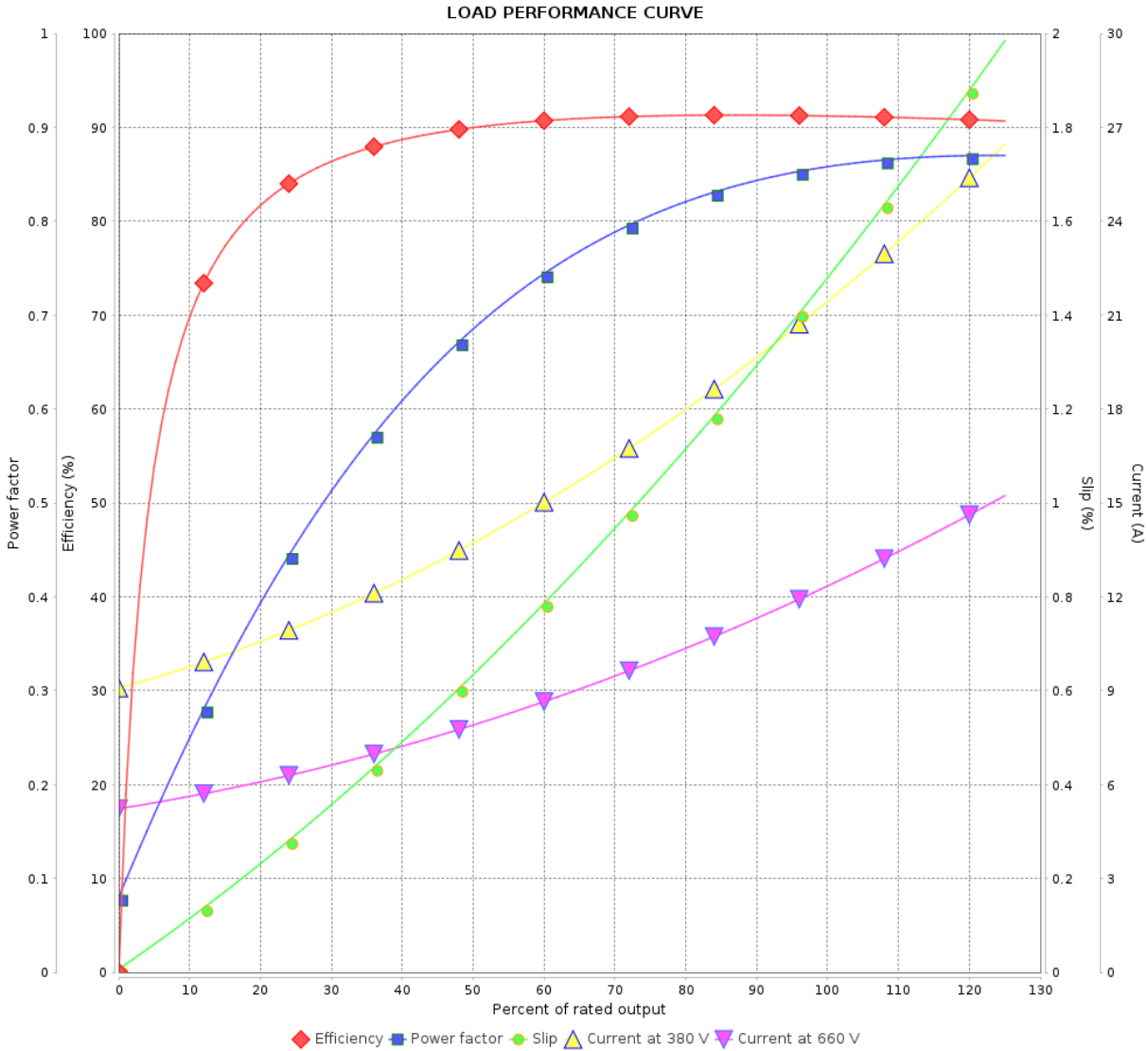
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12862436



Performance : 380/660 V 50 Hz 2P

Rated current : 21.3/12.3 A
 LRC : 7.9
 Rated torque : 26.2 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 350 %
 Rated speed : 2955 rpm

Moment of inertia (J) : 1.14 sq.ft.lb
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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LOAD PERFORMANCE CURVE

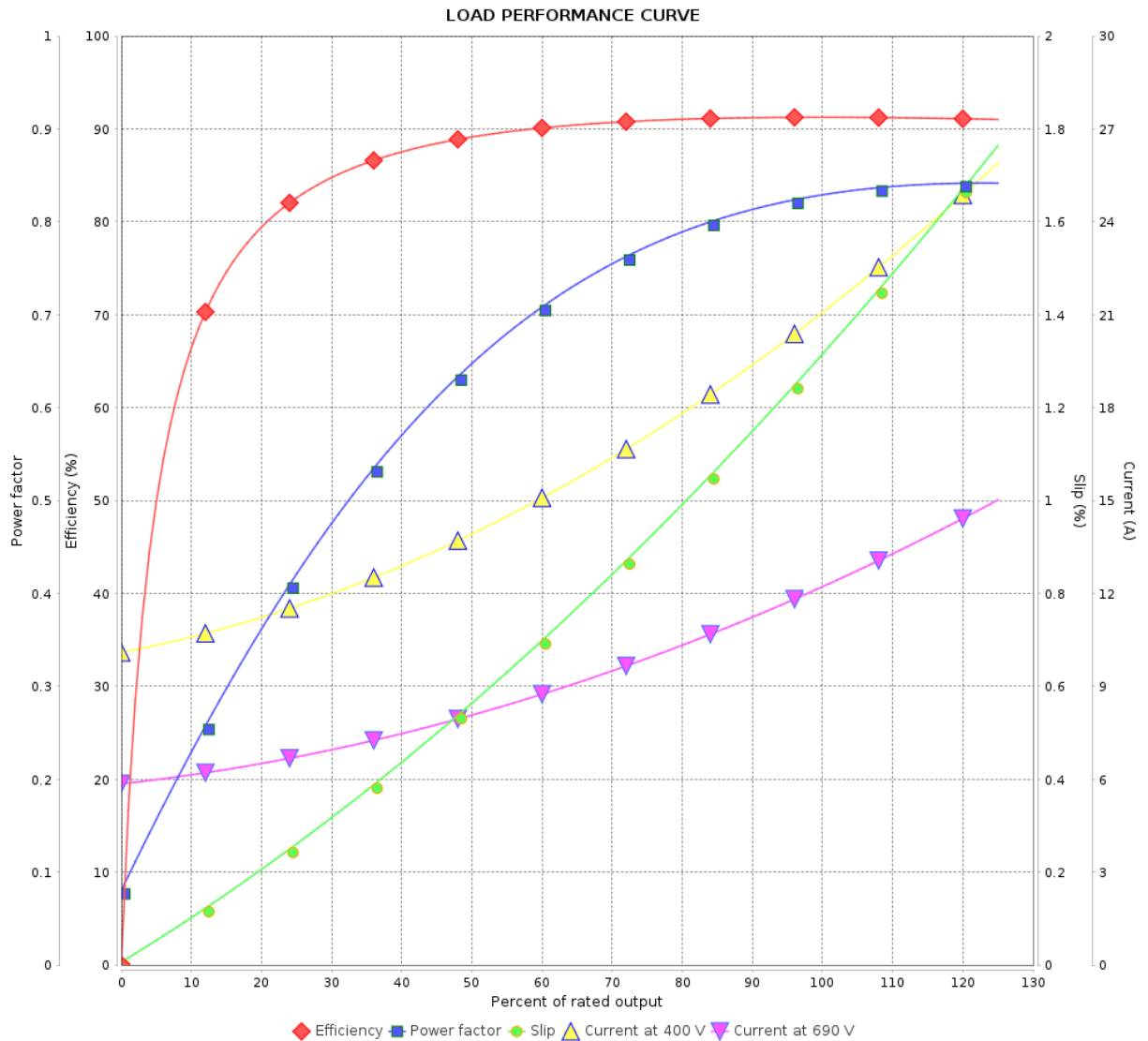
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 Locked rotor torque : 310 %
 Breakdown torque : 300 %
 Rated speed : 2960 rpm

Moment of inertia (J) : 1.14 sq.ft.lb
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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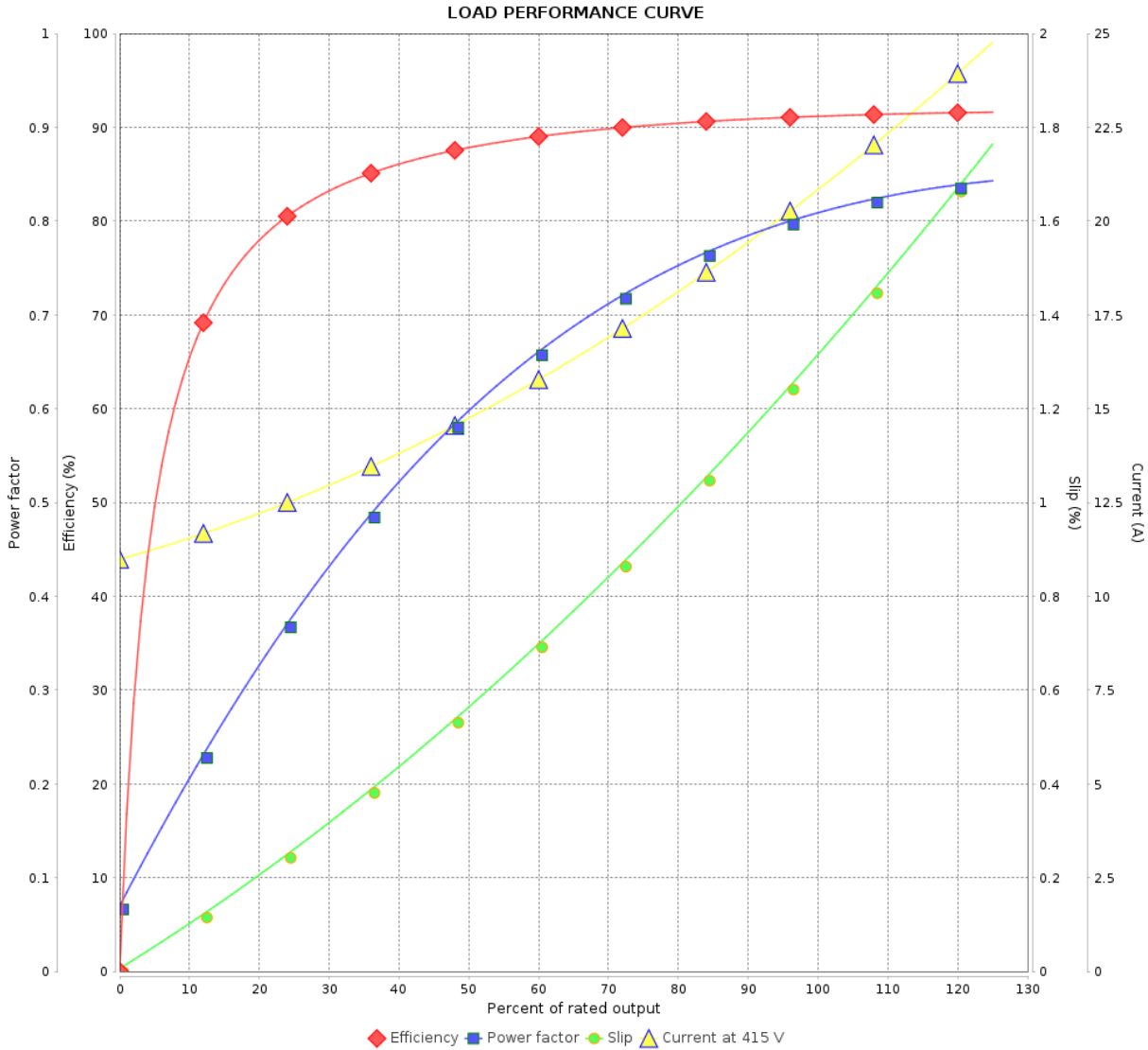
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Rated speed	: 2960 rpm	Design	: N

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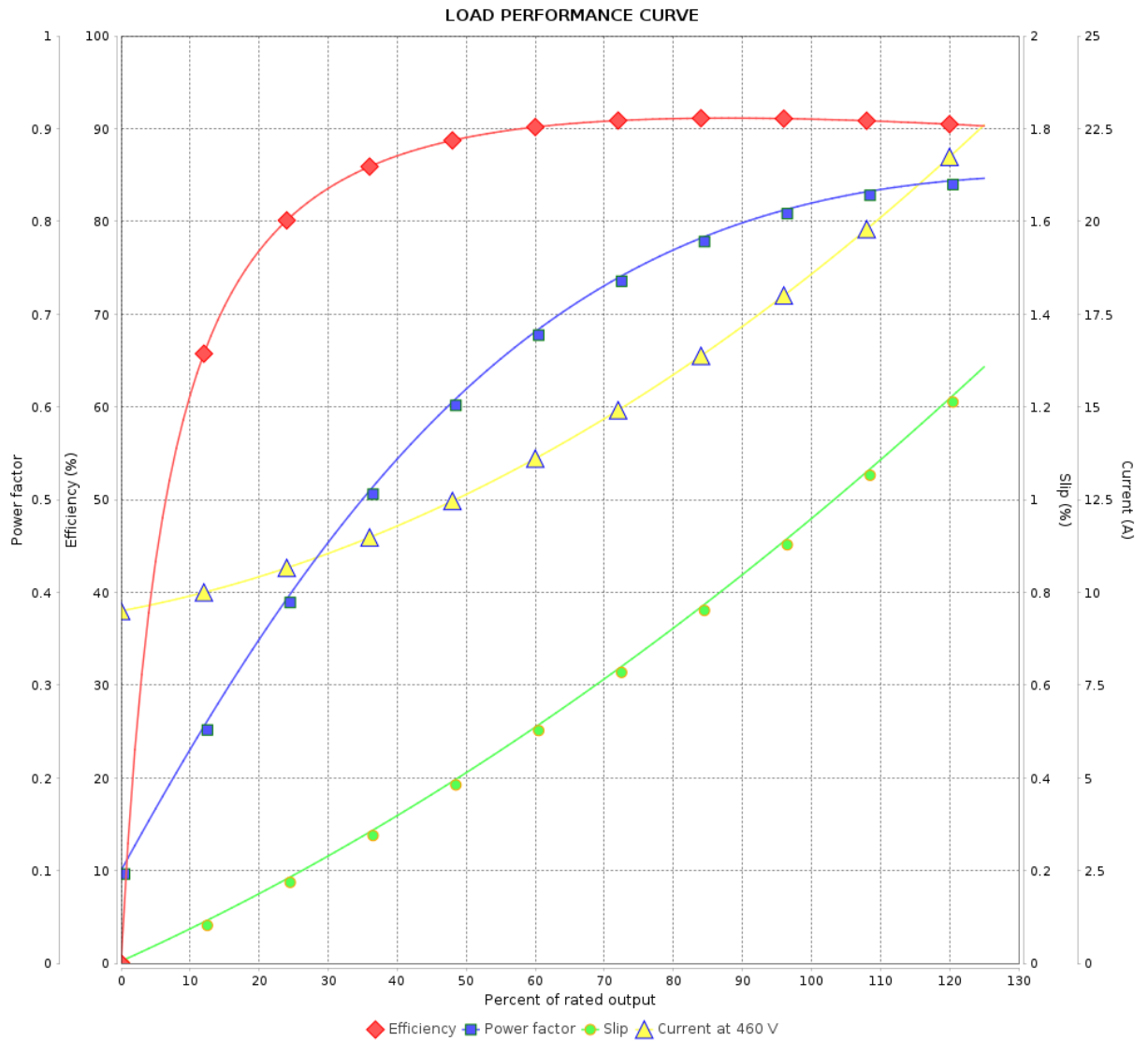
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 Insulation class : F
 Service factor : 1.00
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THERMAL LIMIT CURVE

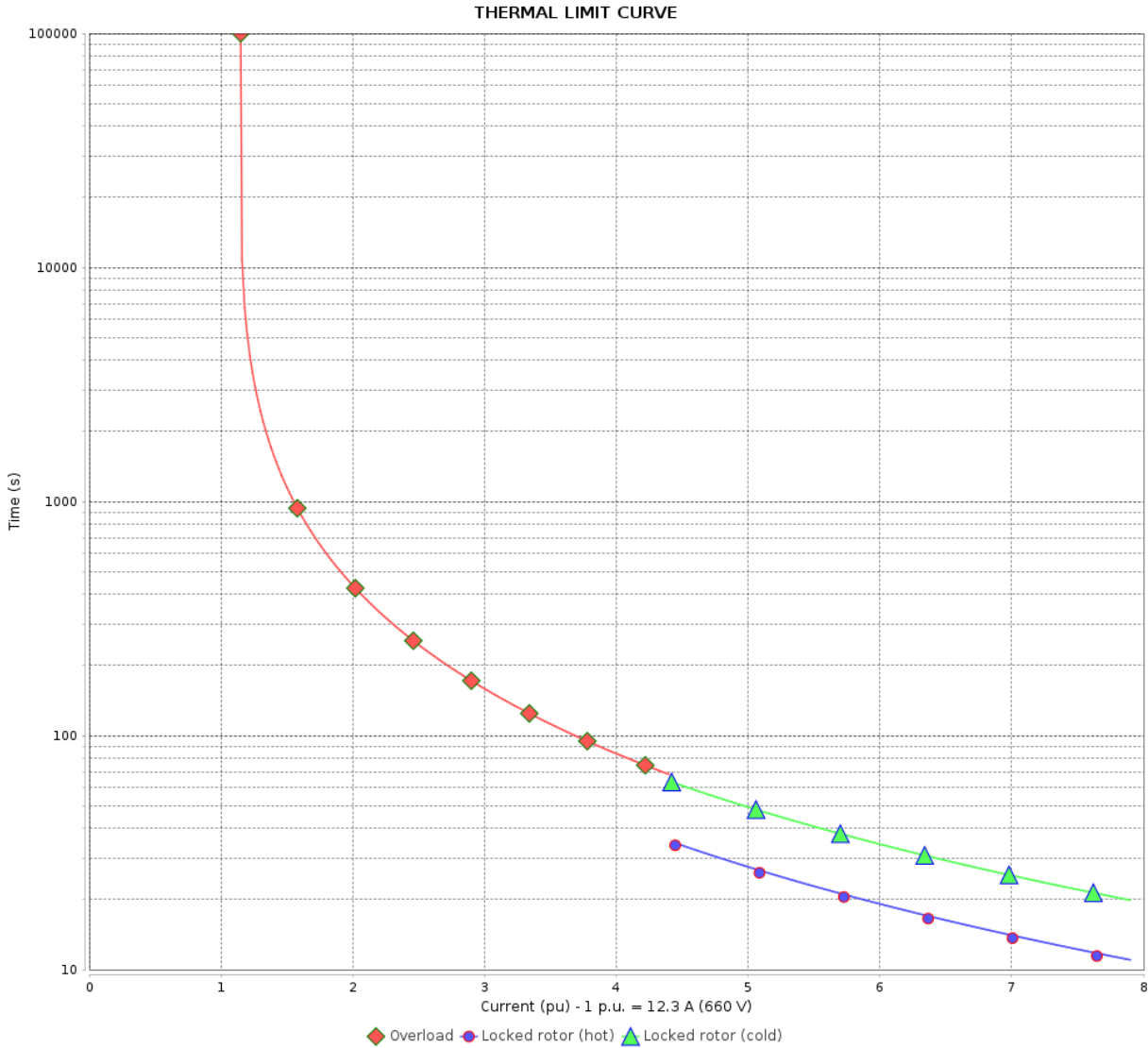
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 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Heating constant

Cooling constant

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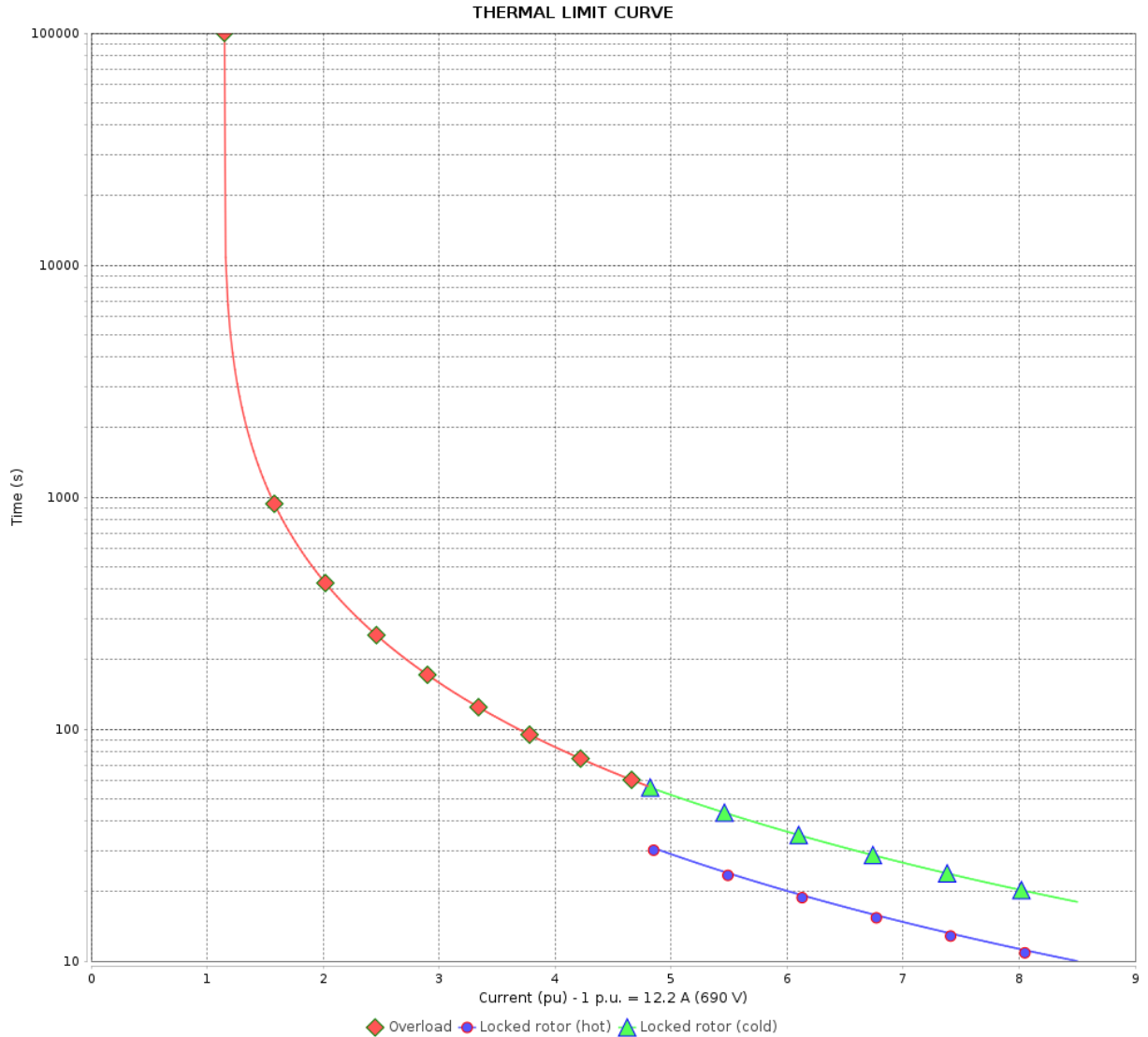
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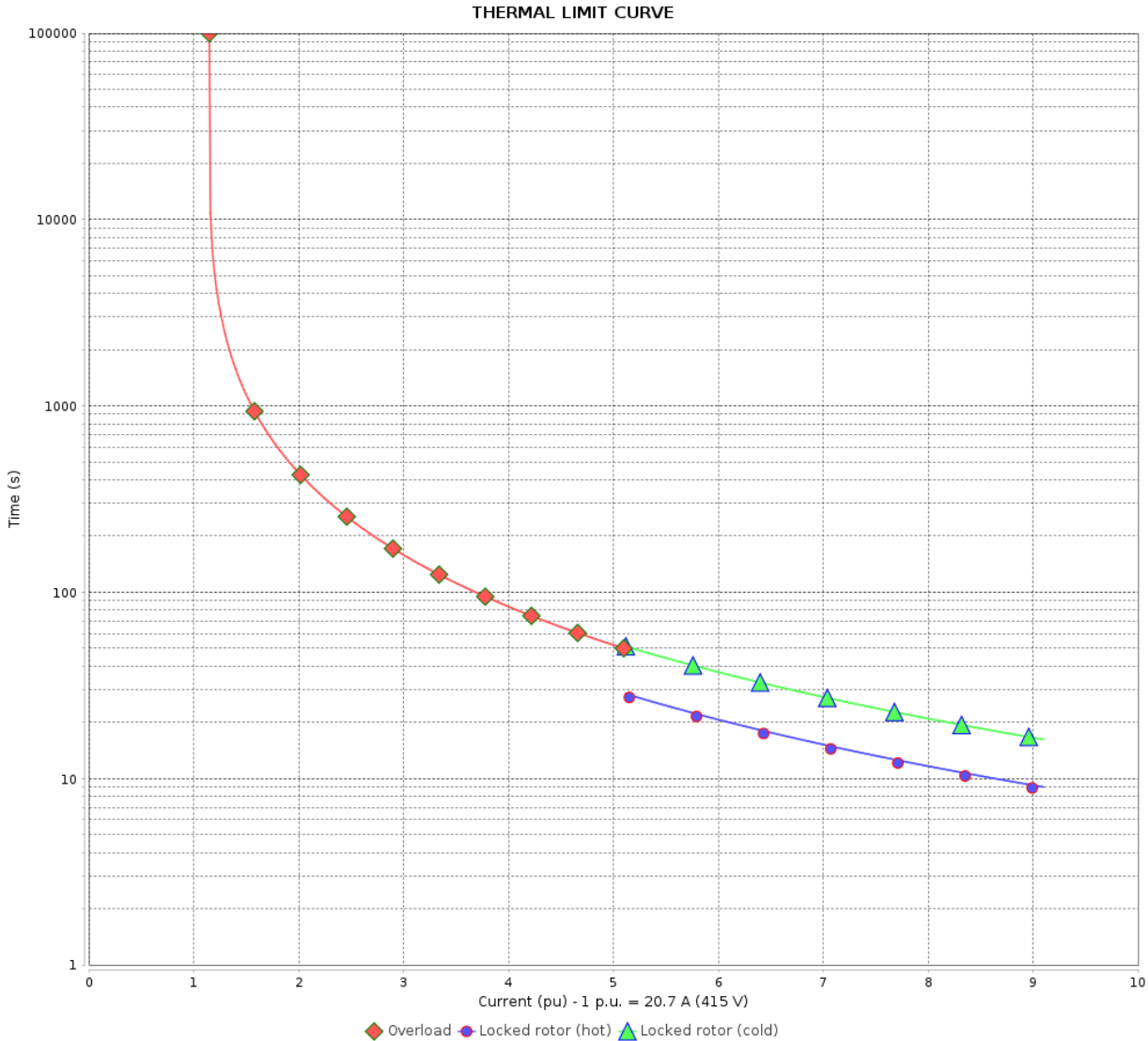
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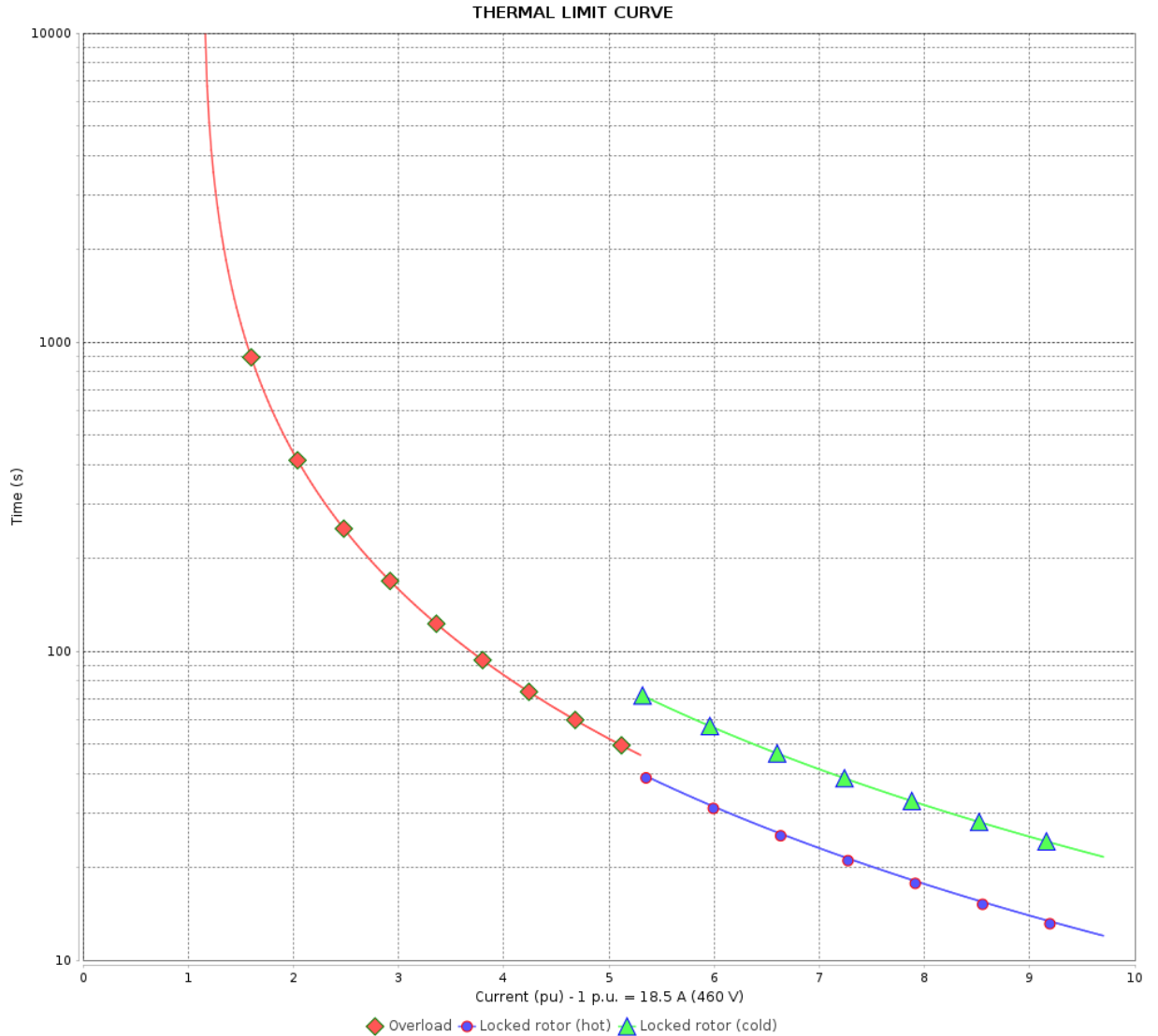
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Cooling constant

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VFD OPERATION CURVE

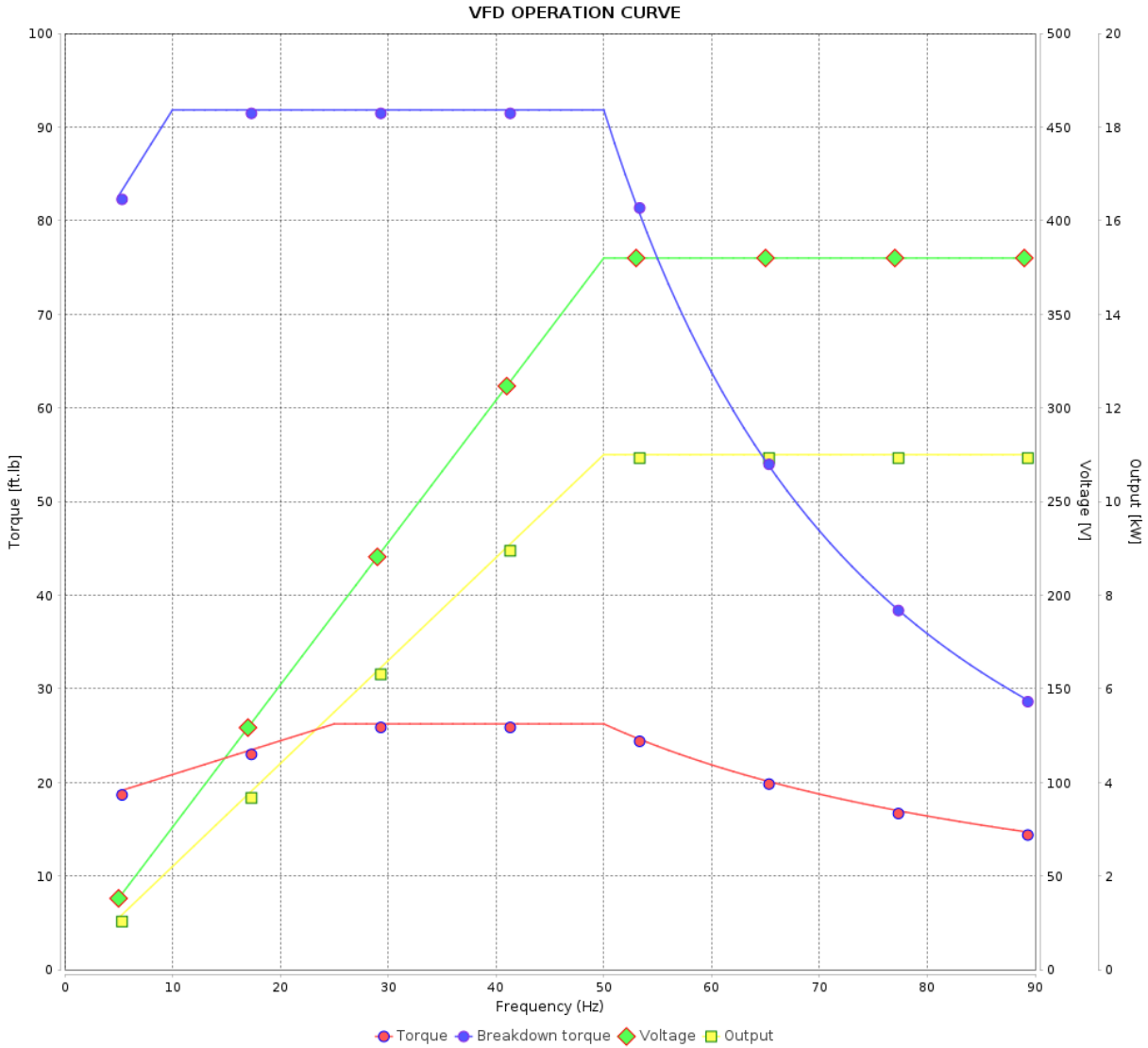
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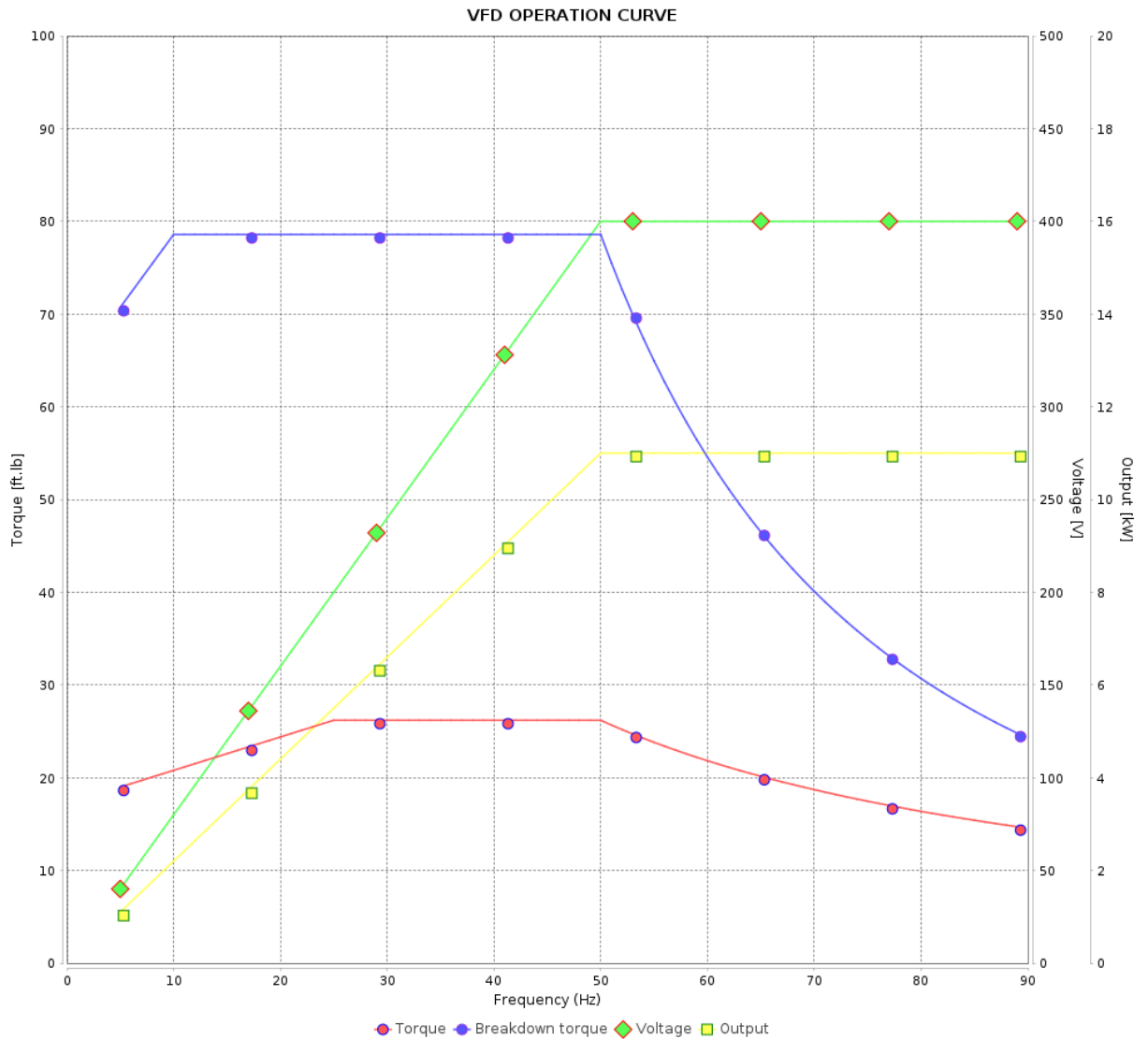
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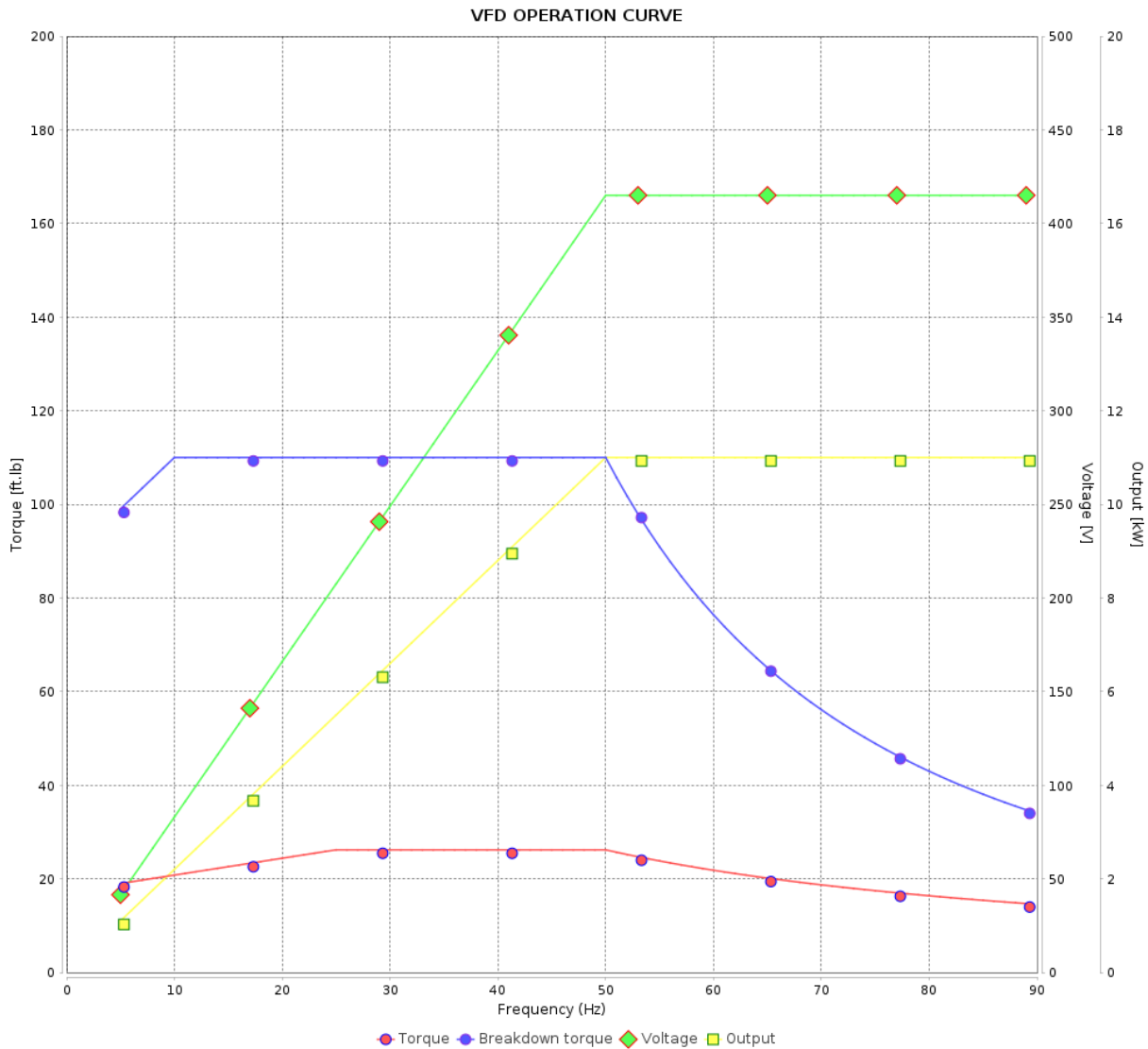
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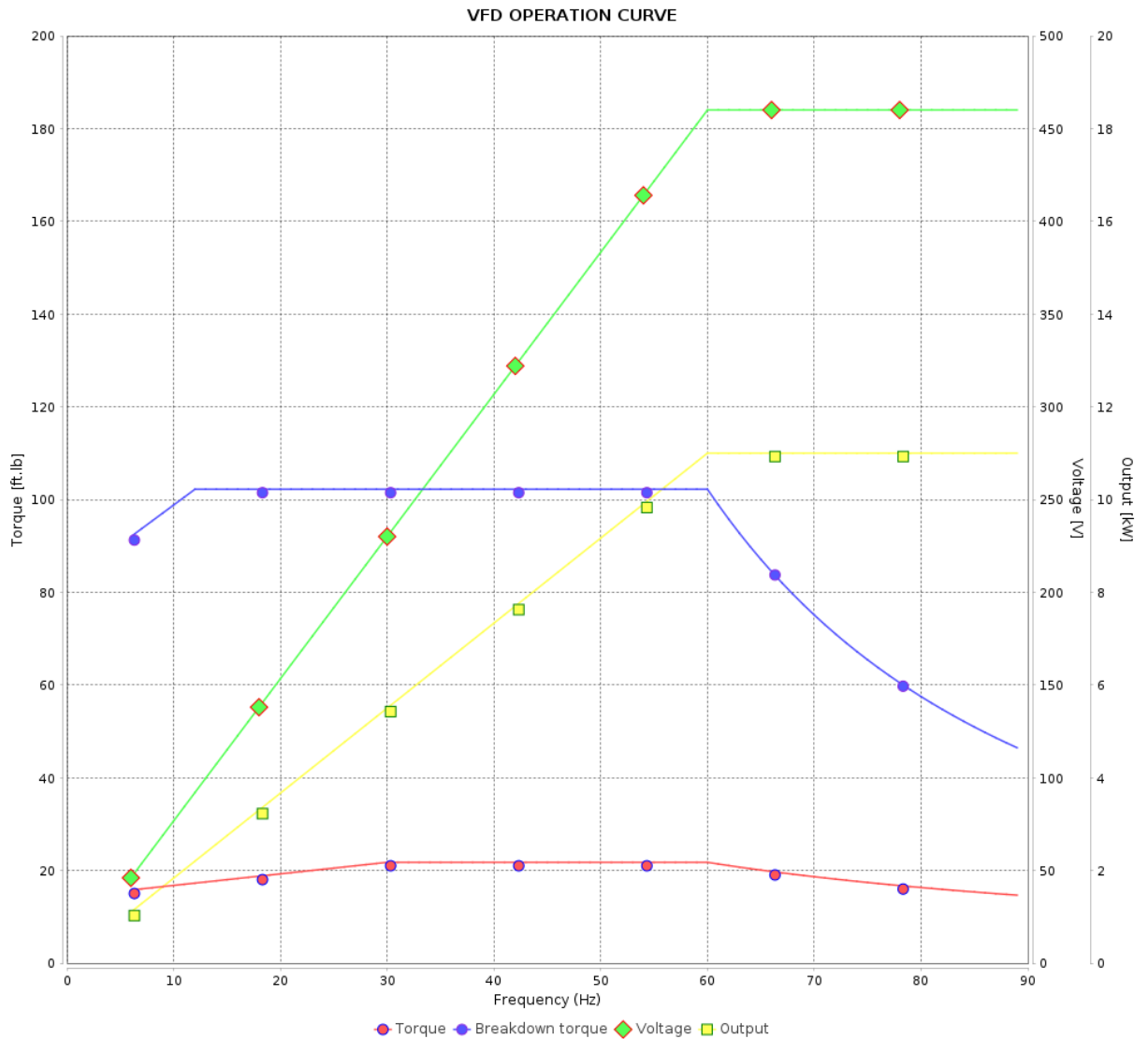
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