

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: W40 NEMA Premium Efficiency Three-Phase	Product code :	14272877		
		Catalog # :	30036OT3G445TS-W40		
Frame	: 444/5TS	Cooling method	: IC01 - ODP		
Insulation class	: F	Mounting	: F-1		
Duty cycle	: Cont.(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	: 1448 lb		
Protection degree	: IP23	Moment of inertia (J)	: 28.6 sq.ft.lb		
Design	: B				
Output [HP]	300	250	250	250	
Poles	2	2	2	2	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	329	333	320	312	
L. R. Amperes [A]	2139	2131	2272	2309	
LRC [A]	6.5x(Code G)	6.4x(Code G)	7.1x(Code G)	7.4x(Code H)	
No load current [A]	85.0	83.0	94.0	105	
Rated speed [RPM]	3570	2965	2970	2975	
Slip [%]	0.83	1.17	1.00	0.83	
Rated torque [ft.lb]	441	443	442	441	
Locked rotor torque [%]	150	140	170	180	
Breakdown torque [%]	240	229	240	270	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	21s (cold) 12s (hot)	16s (cold) 9s (hot)	14s (cold) 8s (hot)	14s (cold) 8s (hot)	
Noise level ²	85.0 dB(A)				
Efficiency (%)	25%	94.9	92.6	92.6	92.6
	50%	95.0	93.9	93.9	93.8
	75%	95.4	94.4	94.4	94.5
	100%	95.4	95.8	95.8	95.8
Power Factor	25%	0.57	0.59	0.54	0.50
	50%	0.80	0.81	0.77	0.75
	75%	0.86	0.87	0.85	0.83
	100%	0.88	0.88	0.87	0.86
Bearing type	: <u>Drive end</u> 6314 C3 <u>Non drive end</u> 6212 Z C3	Foundation loads			
Sealing	: Without Without	Max. traction	: 2452 lb		
	: Bearing Seal Bearing Seal	Max. compression	: 3900 lb		
Lubrication interval	: 14418 h 20000 h				
Lubricant amount	: 27 g 13 g				
Lubricant type	: Mobil Polyrex EM				
Notes					
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 NEMA MG-1.		
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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



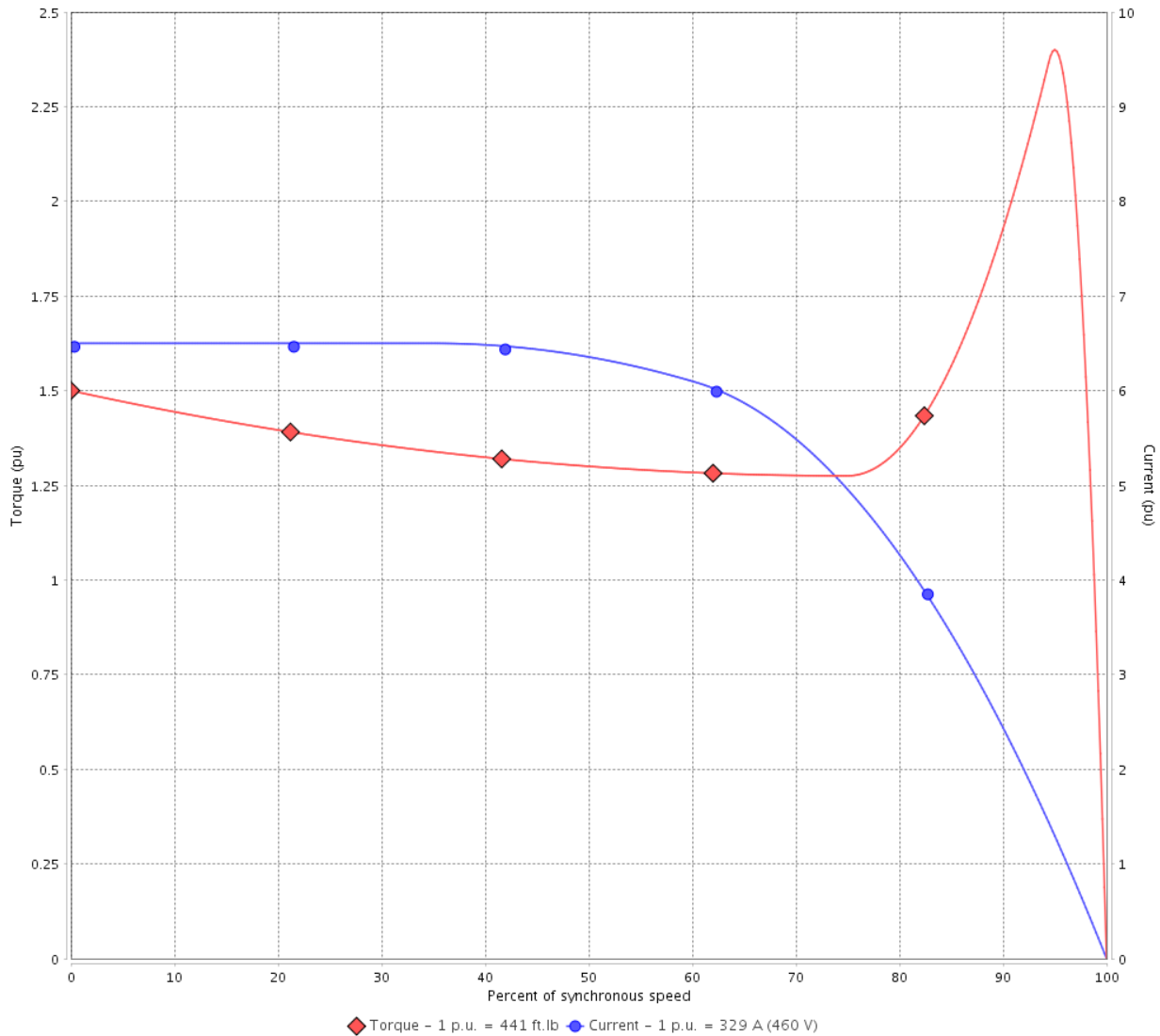
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14272877

Catalog # : 30036OT3G445TS-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 2P

Rated current	: 329 A	Moment of inertia (J)	: 28.6 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 441 ft.lb	Insulation class	: F
Locked rotor torque	: 150 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 3570 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



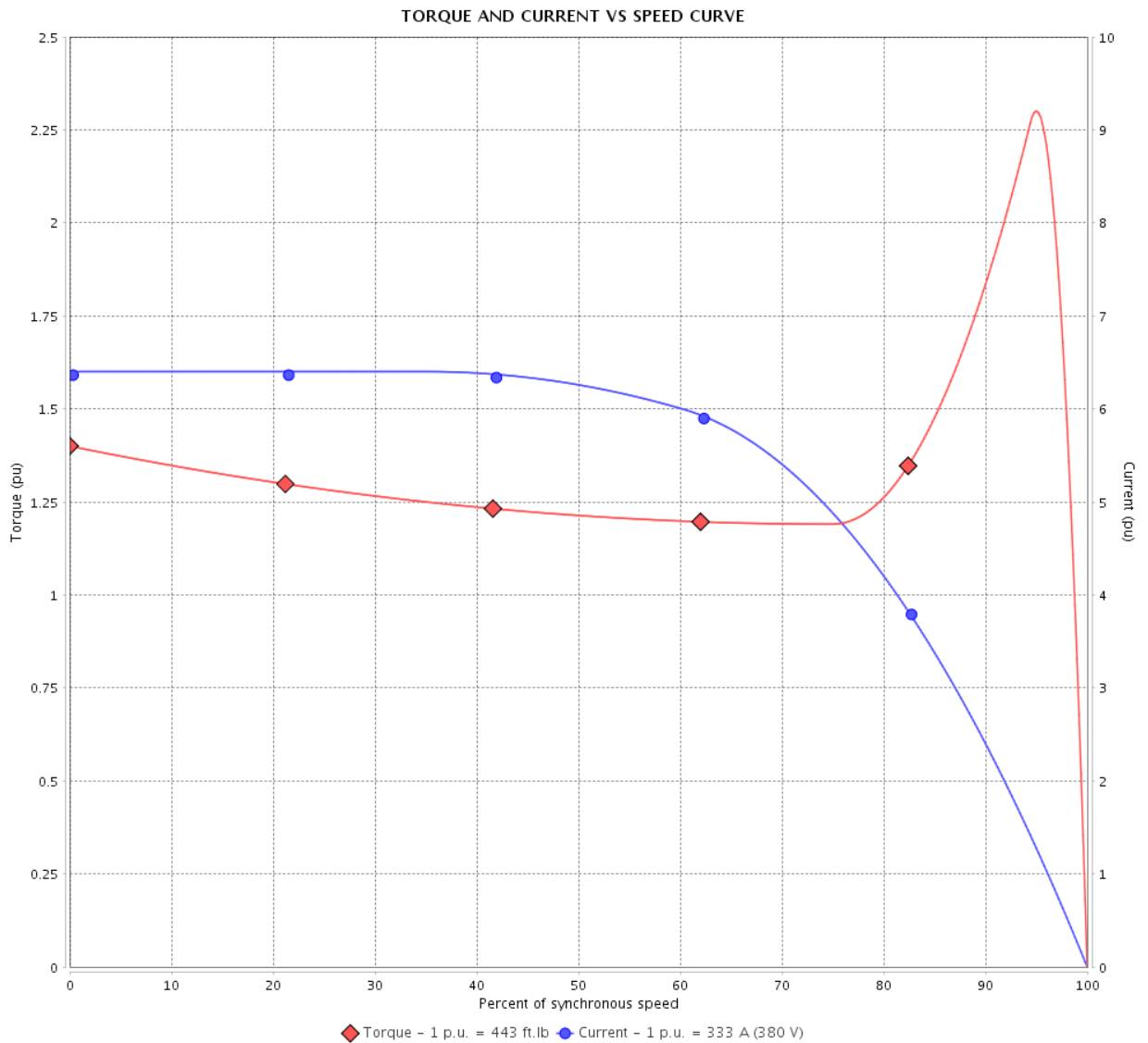
Three Phase Induction Motor - Squirrel Cage

Customer :

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Three-Phase

Product code : 14272877

Catalog # : 30036OT3G445TS-W40



Performance : 380 V 50 Hz 2P IE3

Rated current	: 333 A	Moment of inertia (J)	: 28.6 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 443 ft.lb	Insulation class	: F
Locked rotor torque	: 140 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 2965 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



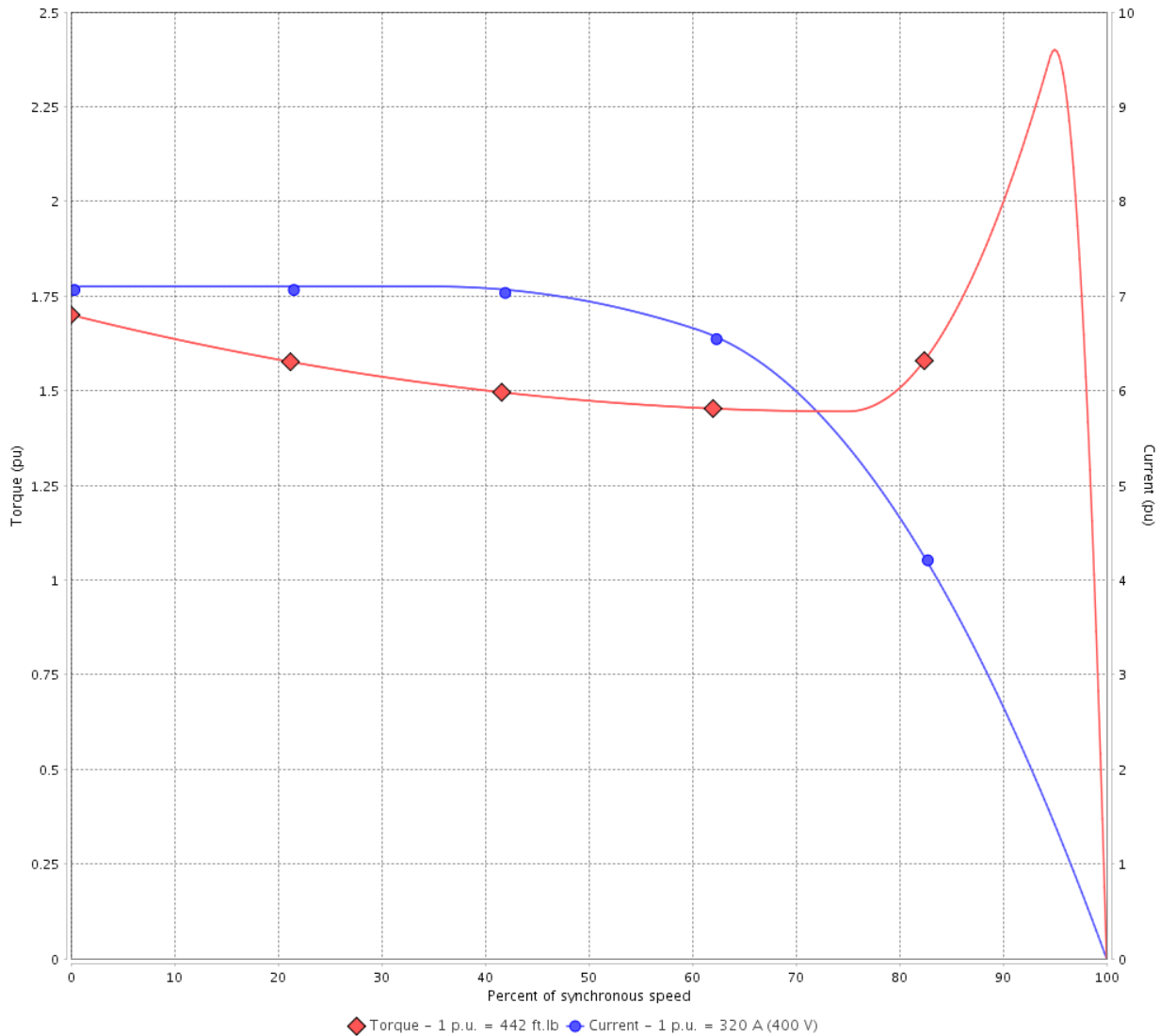
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Catalog # : 30036OT3G445TS-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 2P IE3

Rated current	: 320 A	Moment of inertia (J)	: 28.6 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 442 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 2970 rpm	Design	: B

Locked rotor time : 14s (cold) 8s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



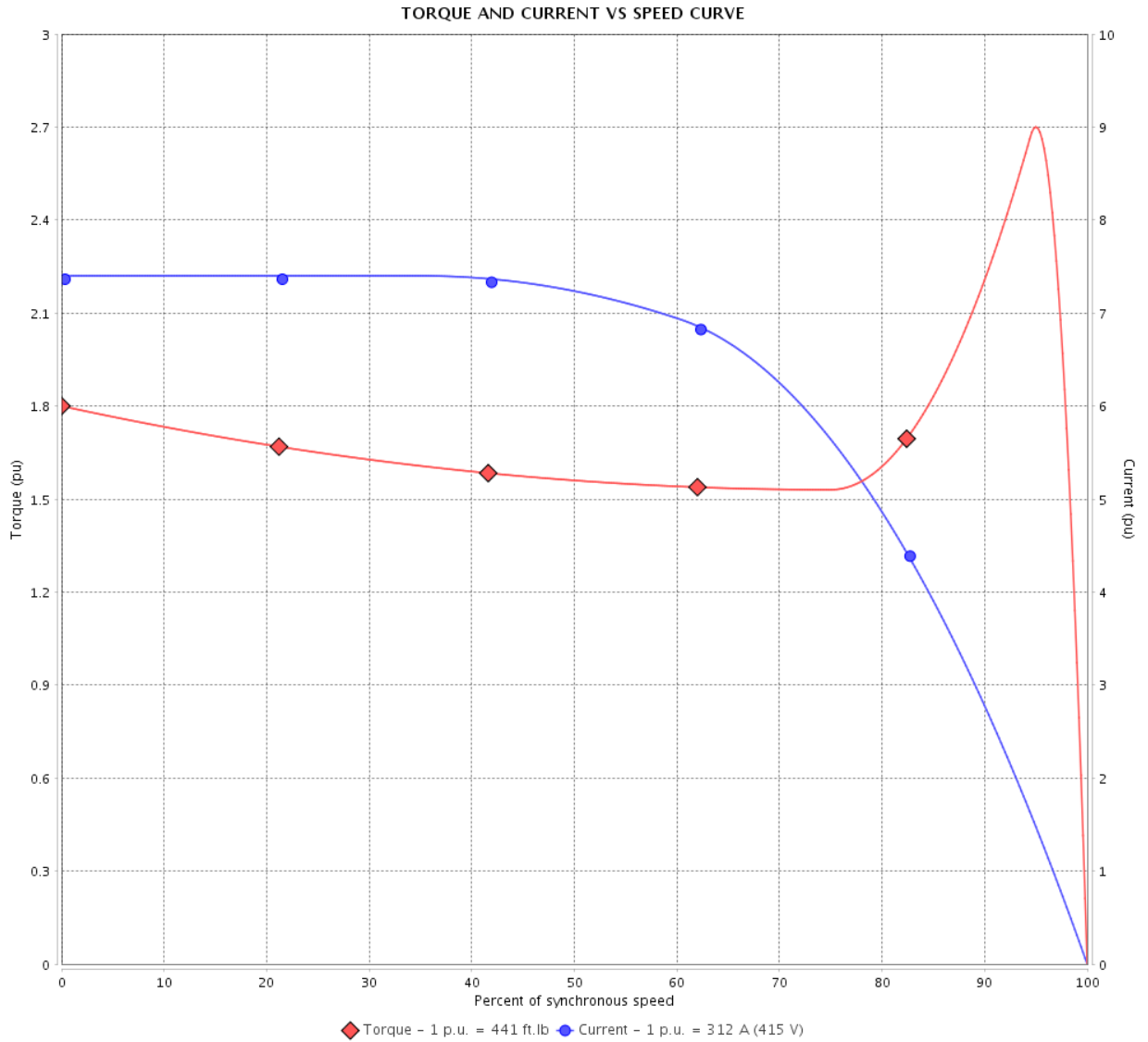
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LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 441 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 2975 rpm	Design	: B

Locked rotor time : 14s (cold) 8s (hot)

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LOAD PERFORMANCE CURVE

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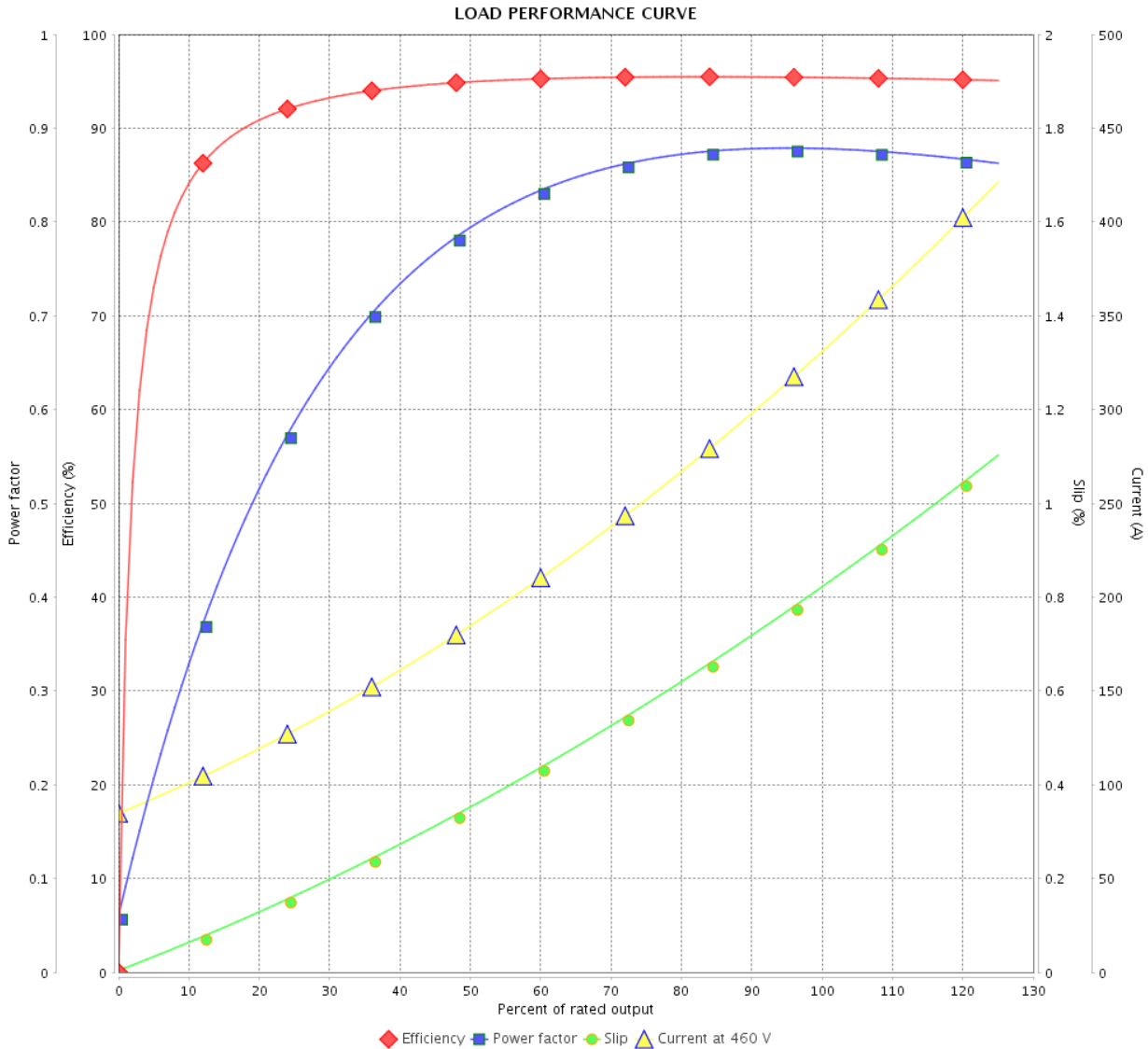


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Catalog # : 30036OT3G445TS-W40



Performance : 460 V 60 Hz 2P

Rated current : 329 A
 LRC : 6.5
 Rated torque : 441 ft.lb
 Locked rotor torque : 150 %
 Breakdown torque : 240 %
 Rated speed : 3570 rpm

Moment of inertia (J) : 28.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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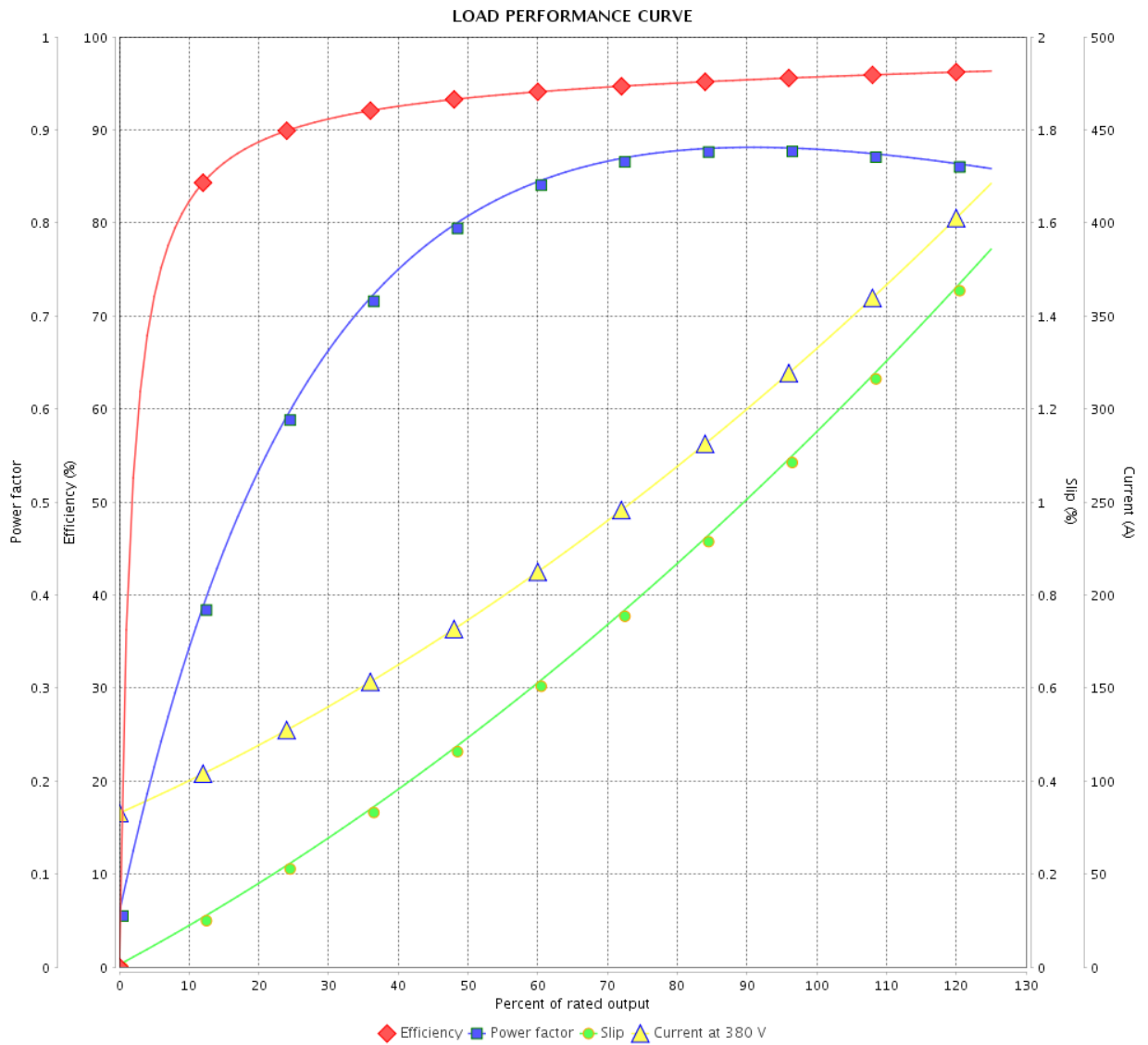


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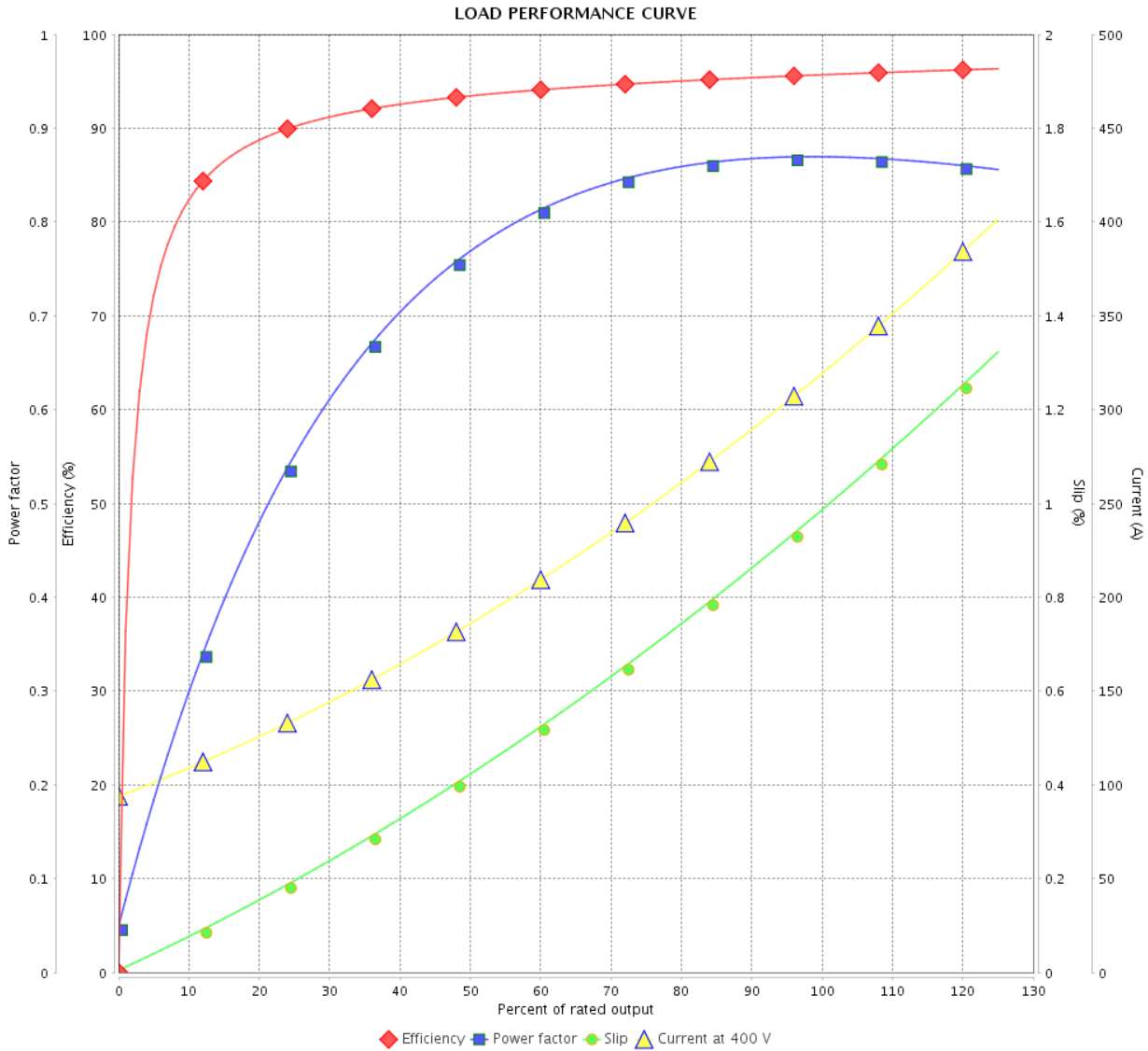


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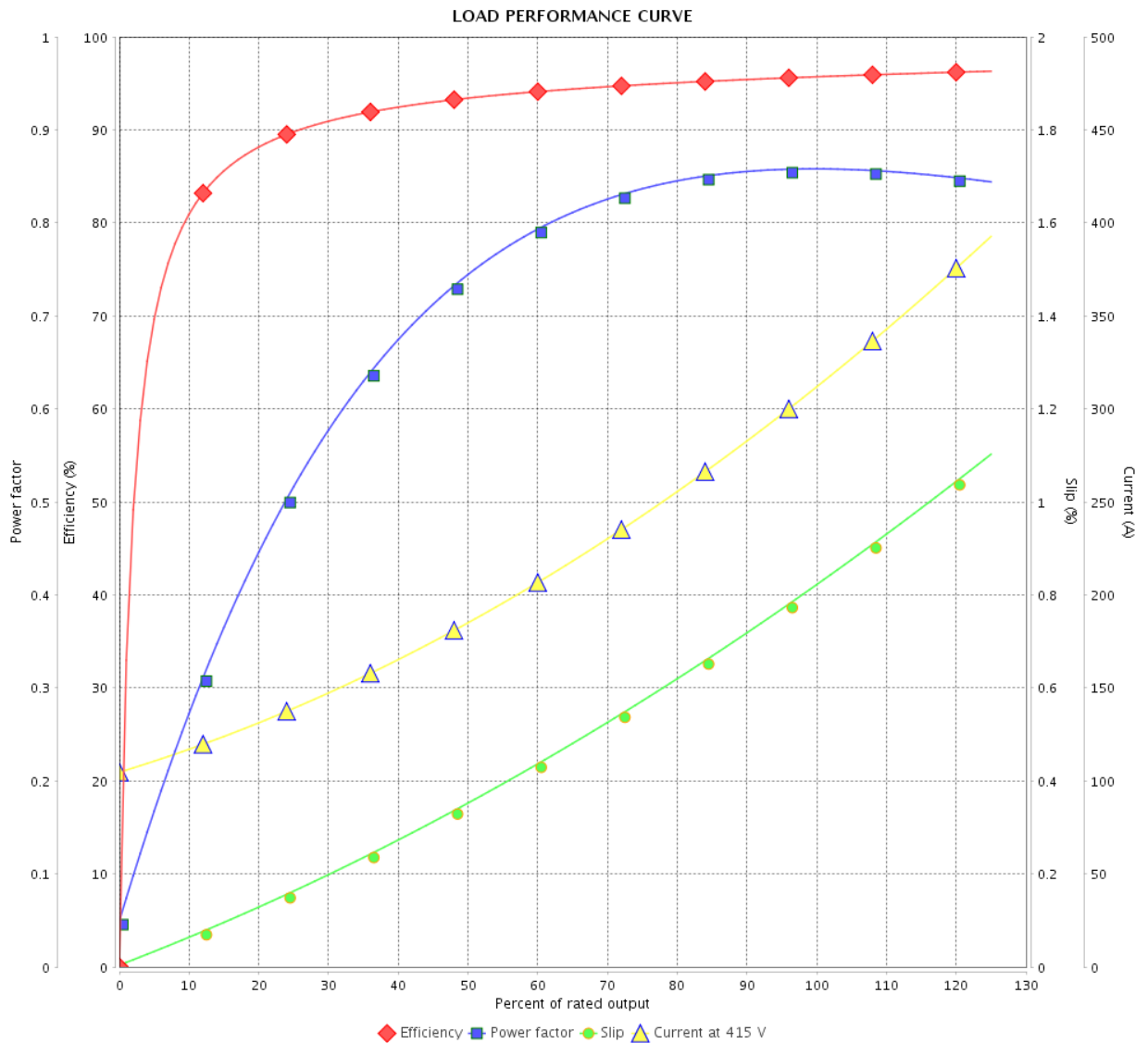


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 Service factor : 1.00
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THERMAL LIMIT CURVE



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Heating constant

Cooling constant

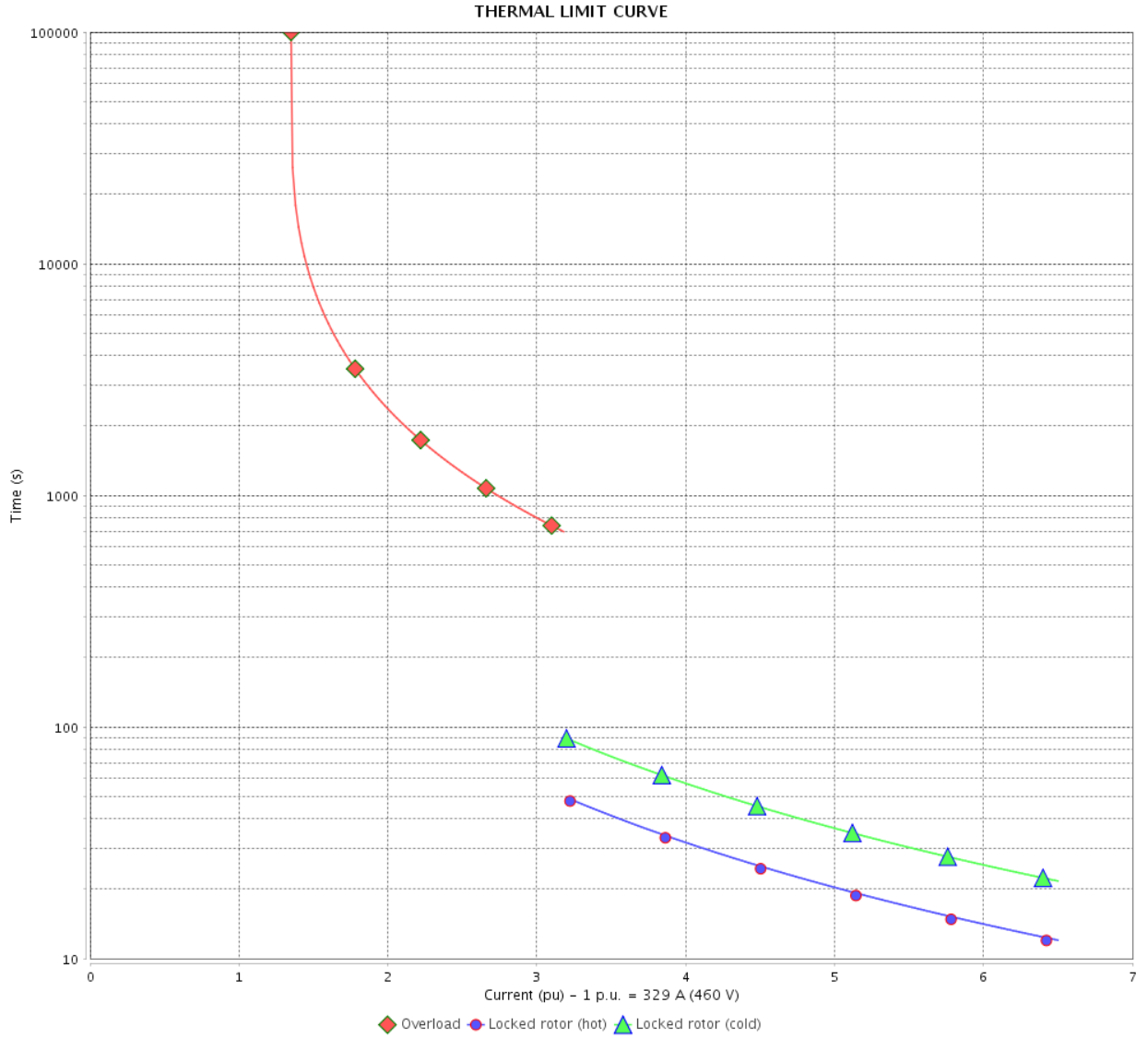
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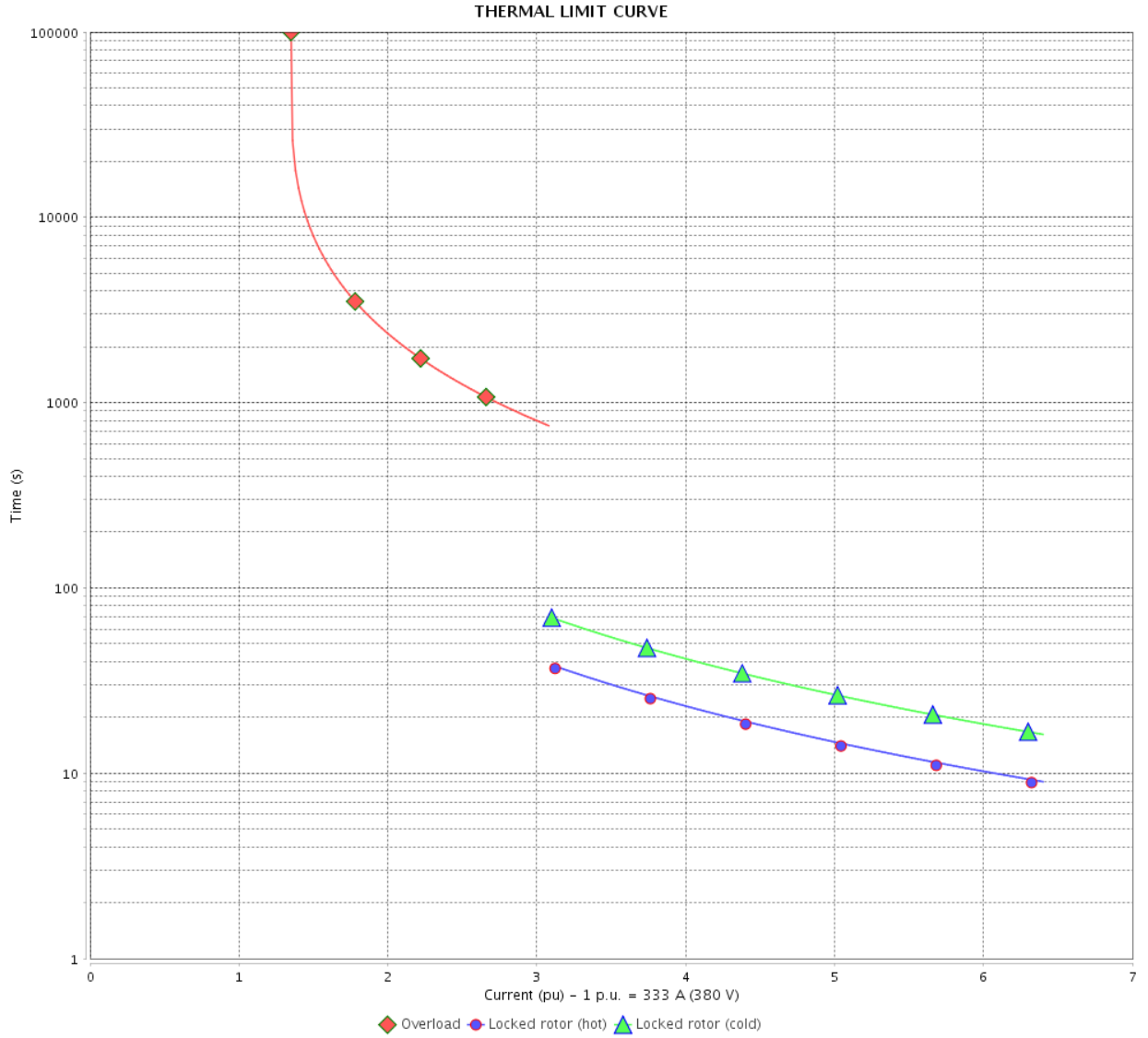
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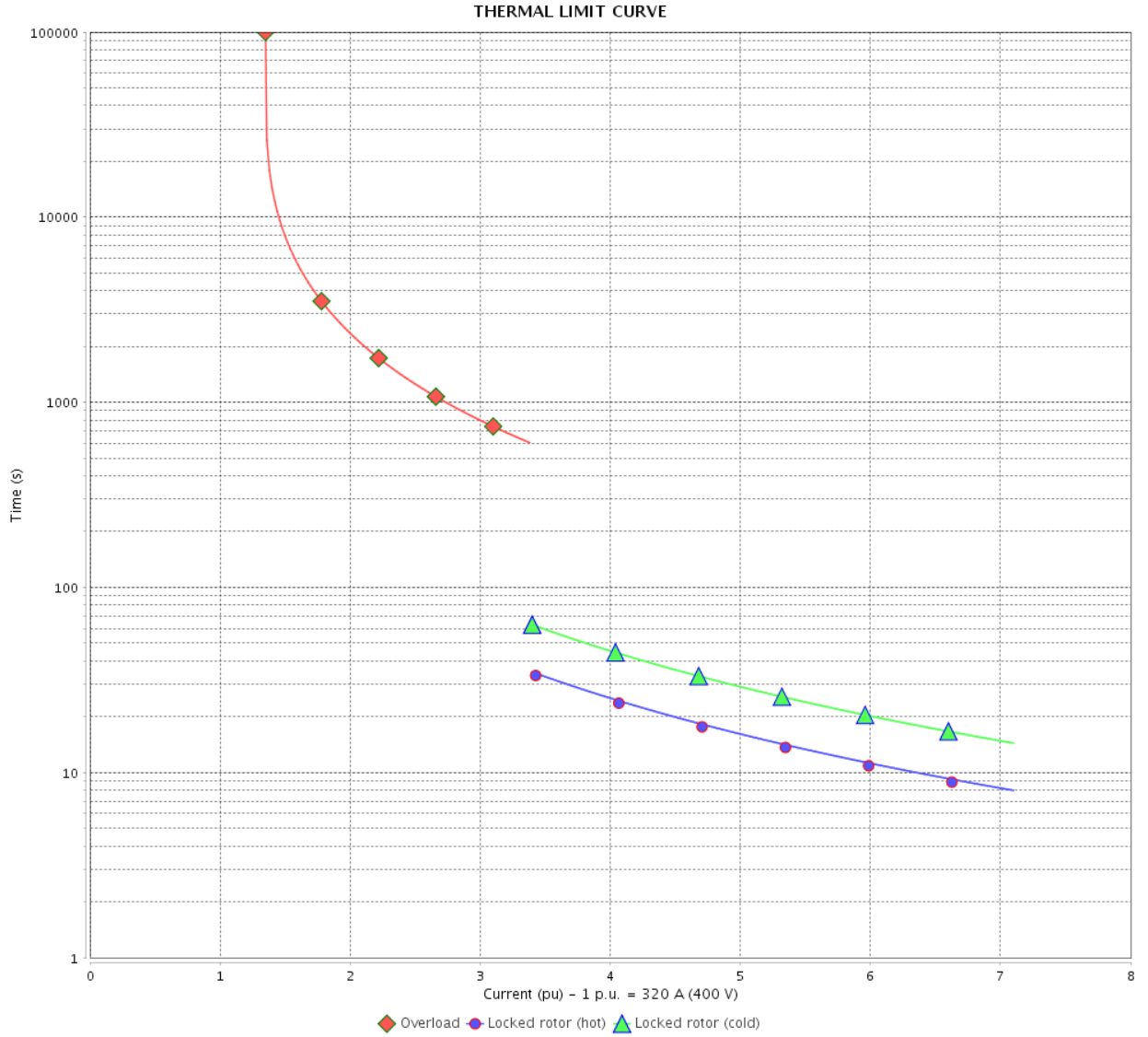
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Cooling constant

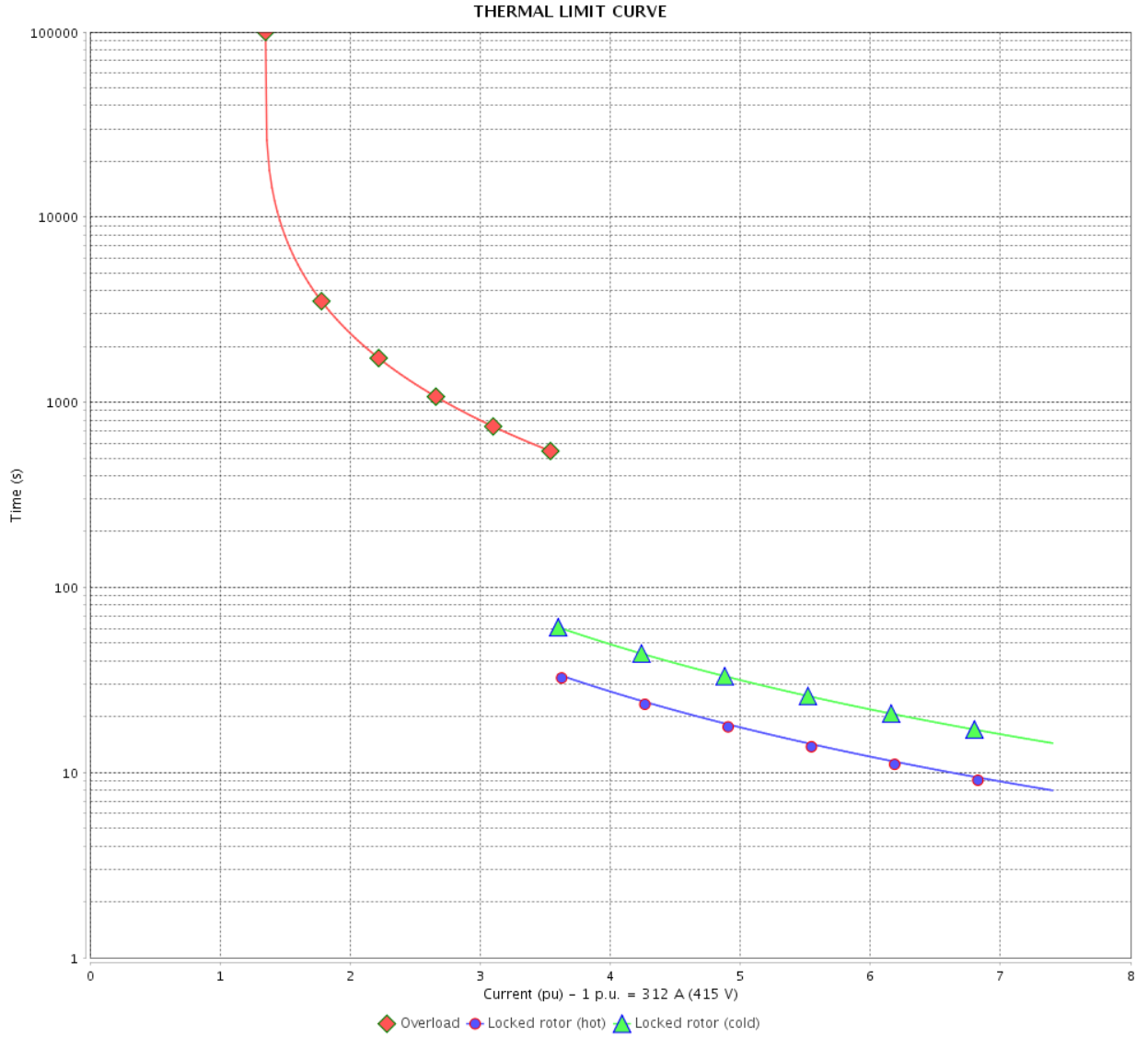
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



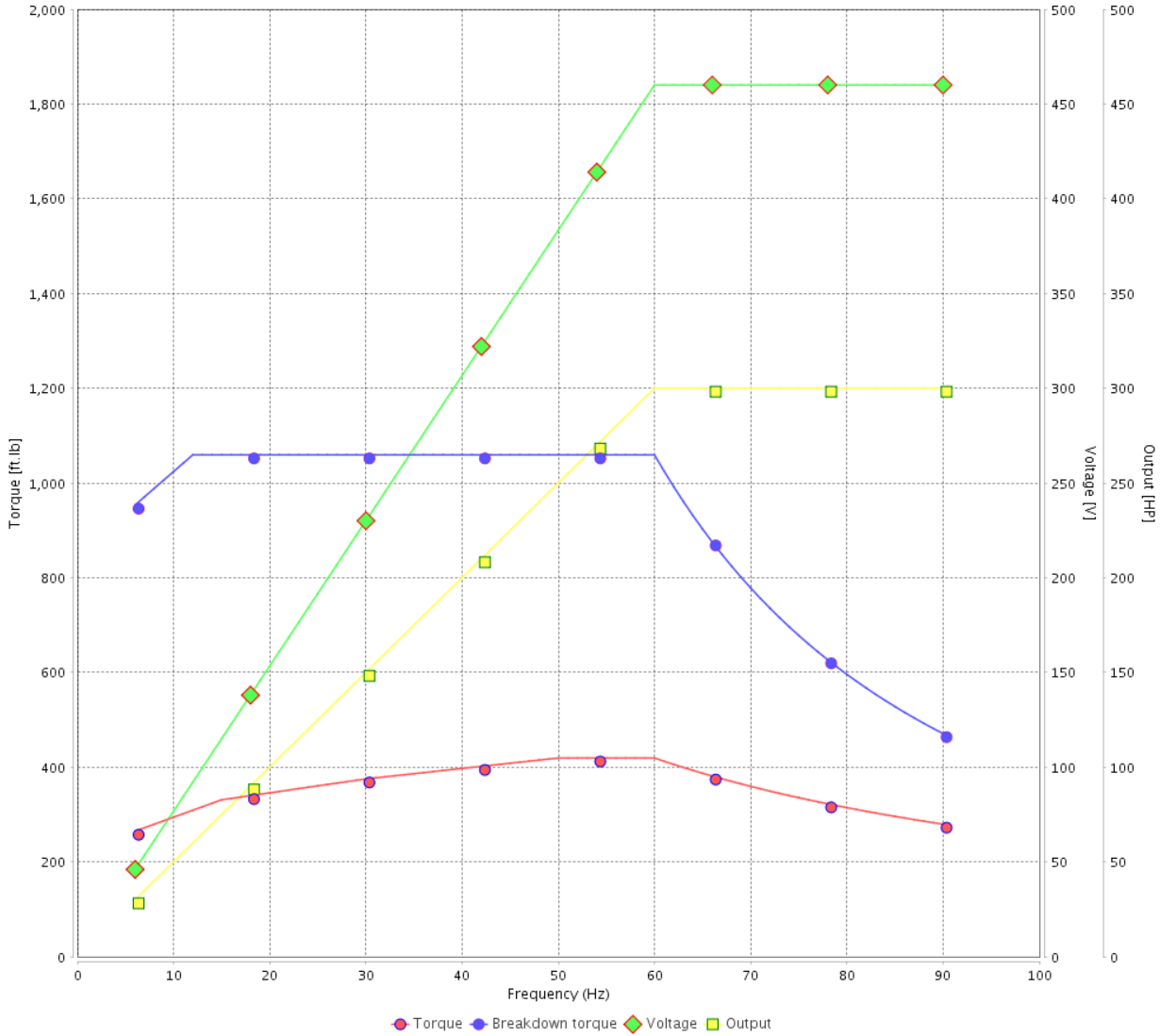
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Service factor : 1.15
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Design : B

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

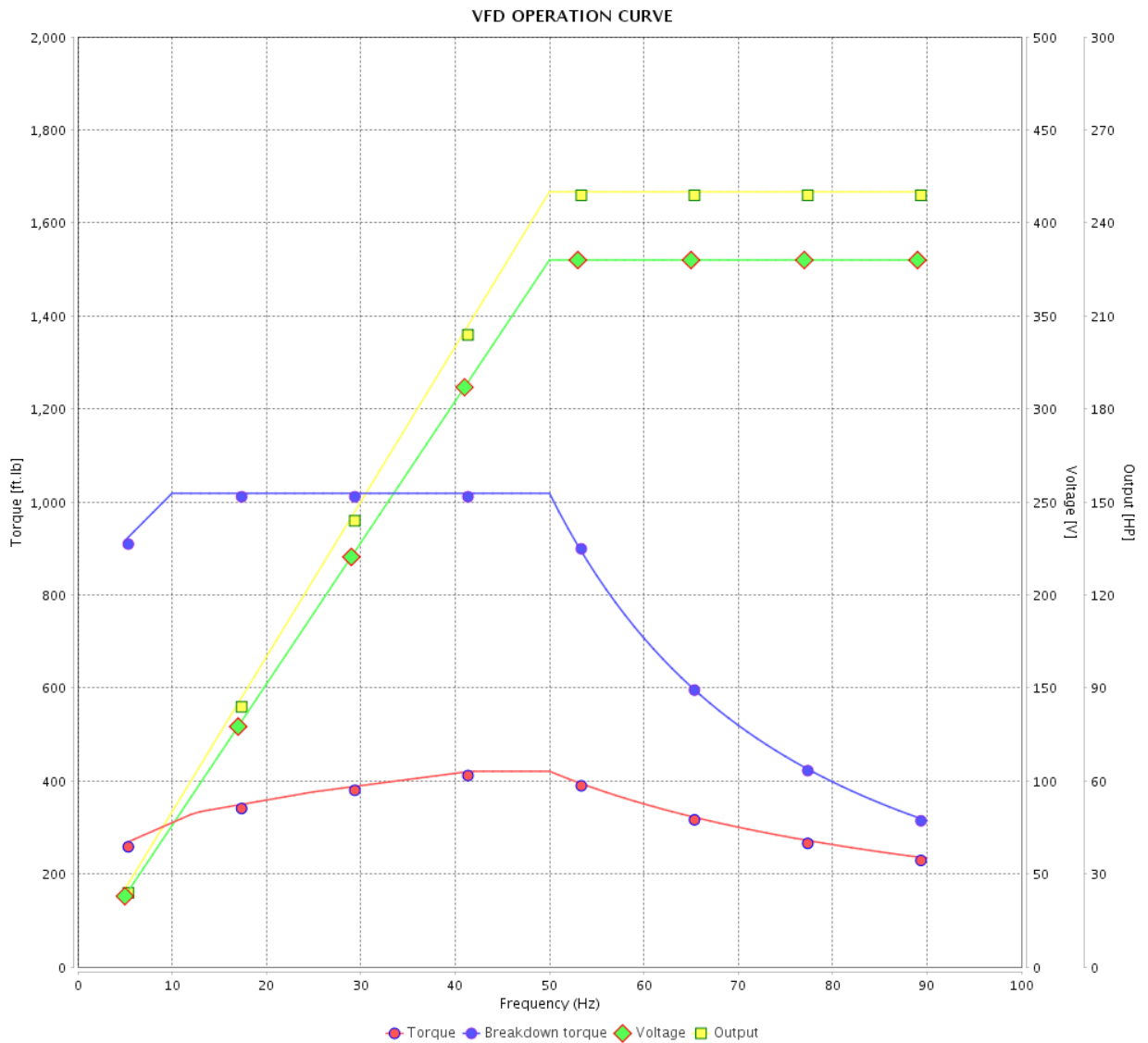


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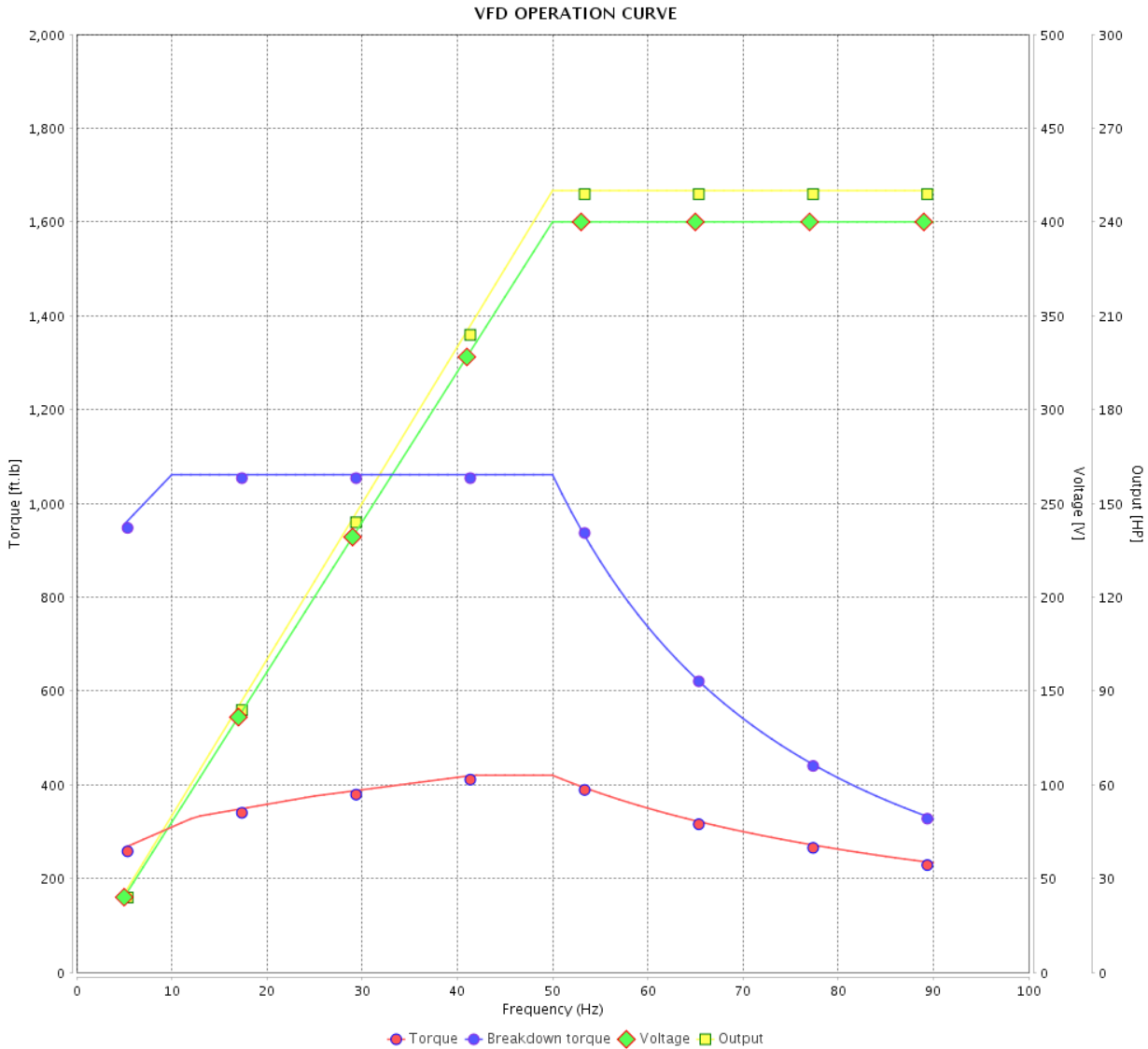


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Three Phase Induction Motor - Squirrel Cage

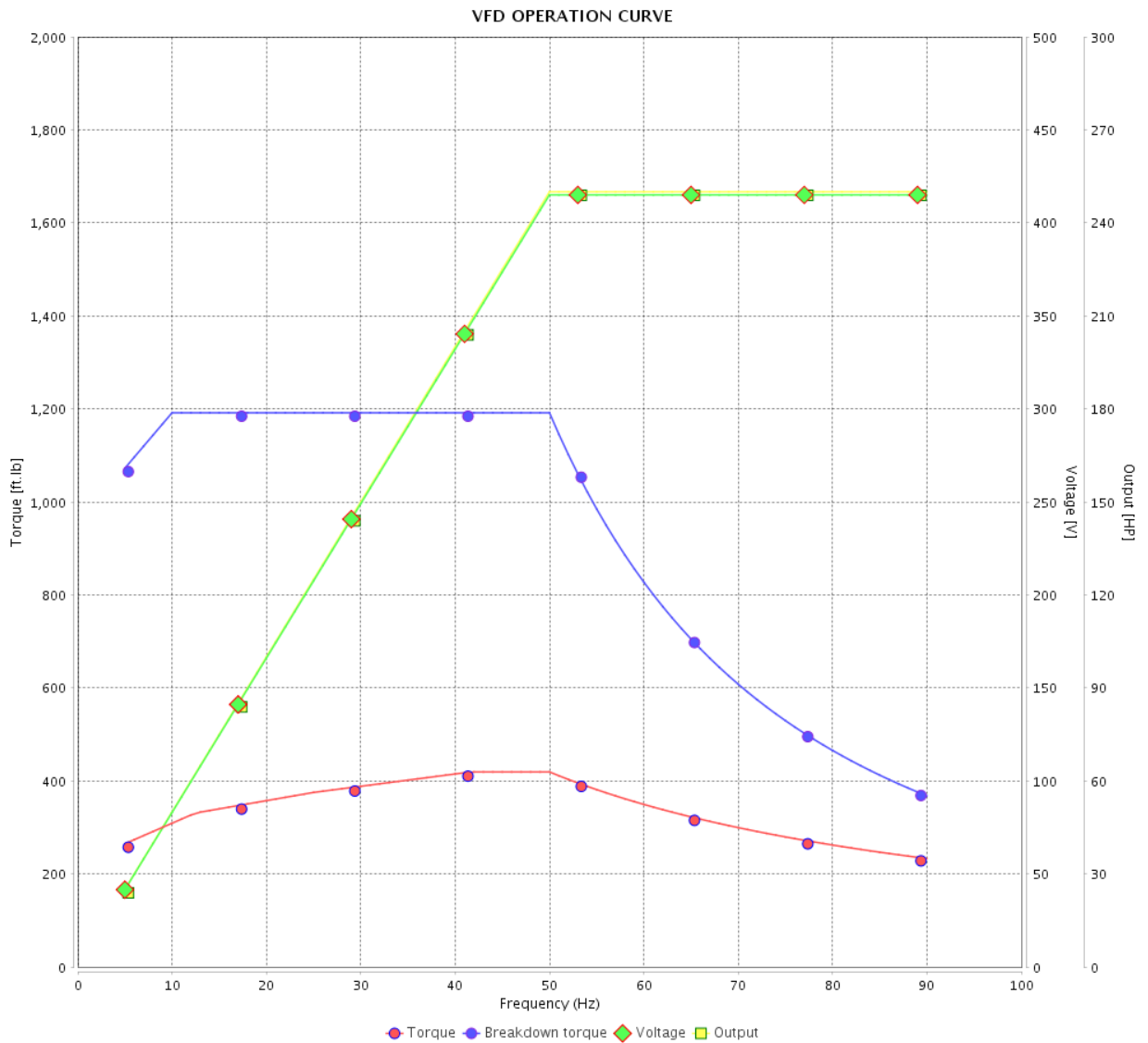


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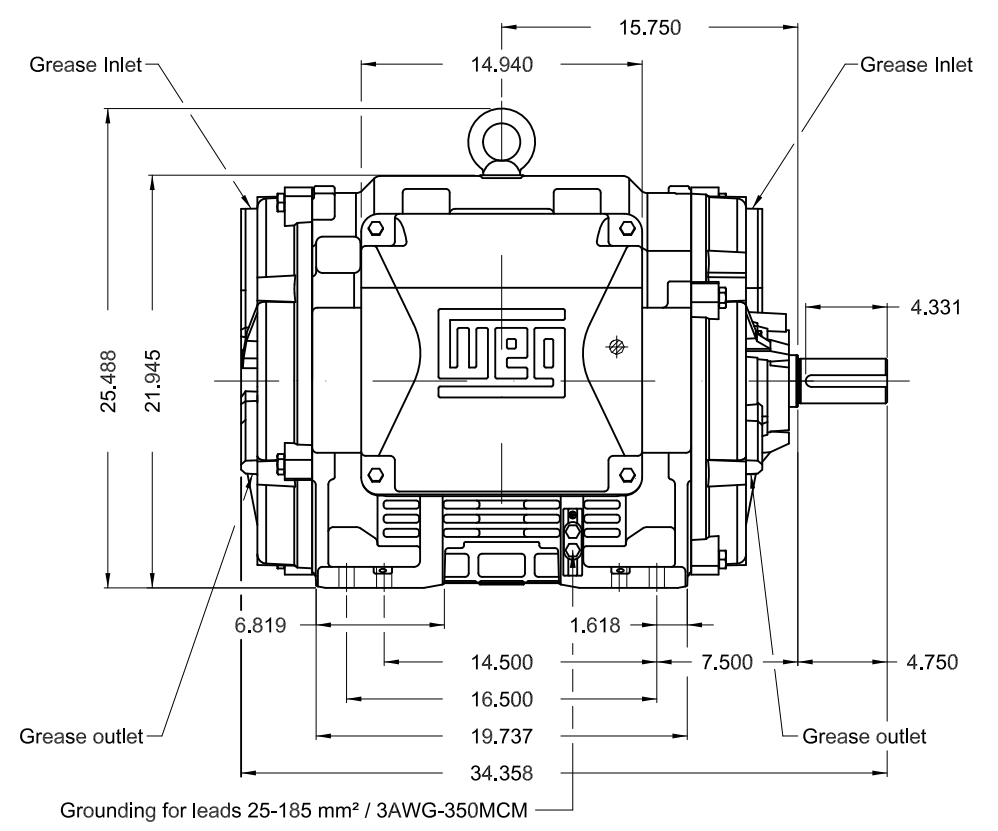
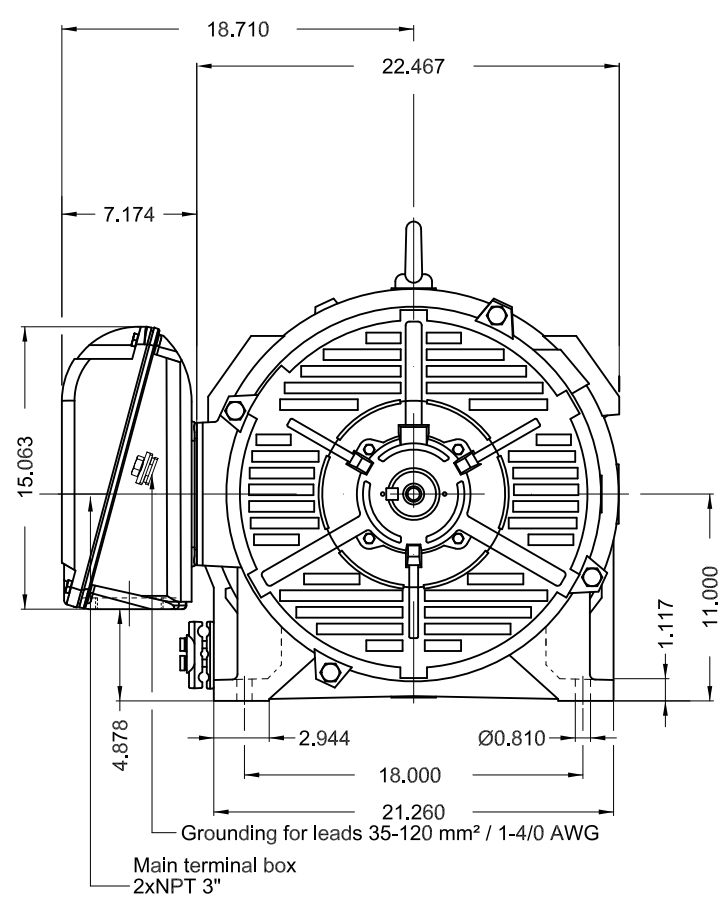


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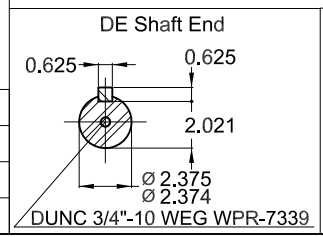
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Color RAL 5009
 Painting plan 203A
 Mounting NEMA F-1
 Mounting B3R(D)



300 HP 02 Poles 60 Hz A

1:10

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 PREM. EFF.					
CHECKED		FRAME 444/5TS IP23 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD

