

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line : W40 NEMA Premium Efficiency Three-Phase		Product code : 14504017			
		Catalog # : 04036OT3E286TSC-W40G			
Frame : 284/6TSC		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 : 397 lb			
Protection degree : IP23		Moment of inertia (J) : 2.02 sq.ft.lb			
Design : B					
Output [HP]	40	30	30	30	
Poles	2	2	2	2	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	93.6/46.8	41.9	40.7	40.2	
L. R. Amperes [A]	608/304	302	309	310	
LRC [A]	6.5x(Code G)	7.2x(Code H)	7.6x(Code J)	7.7x(Code J)	
No load current [A]	29.8/14.9	14.3	15.8	17.0	
Rated speed [RPM]	3545	2950	2960	2960	
Slip [%]	1.53	1.67	1.33	1.33	
Rated torque [ft.lb]	59.3	53.4	53.2	53.2	
Locked rotor torque [%]	190	210	229	250	
Breakdown torque [%]	260	280	300	330	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	14s (cold) 8s (hot)	250s (cold) 139s (hot)	14s (cold) 8s (hot)	14s (cold) 8s (hot)	
Noise level ²	73.0 dB(A)				
Efficiency (%)	25%	91.5	88.6	88.7	
	50%	91.7	90.0	90.1	
	75%	92.4	91.4	91.4	
	100%	92.4	92.8	92.8	
Power Factor	25%	0.51	0.49	0.45	
	50%	0.76	0.73	0.70	
	75%	0.84	0.82	0.79	
	100%	0.87	0.86	0.84	
Bearing type : 6311 Z C3		Drive end Non drive end 6211 Z C3	Foundation loads		
Sealing : Without		Without	Max. traction		
Lubrication interval : 20000 h		Bearing Seal	Max. compression		
Lubricant amount : 18 g		Bearing Seal			
Lubricant type : Mobil Polyrex EM					
Notes USABLE @208V 104A SF 1.15 SFA 119A					
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



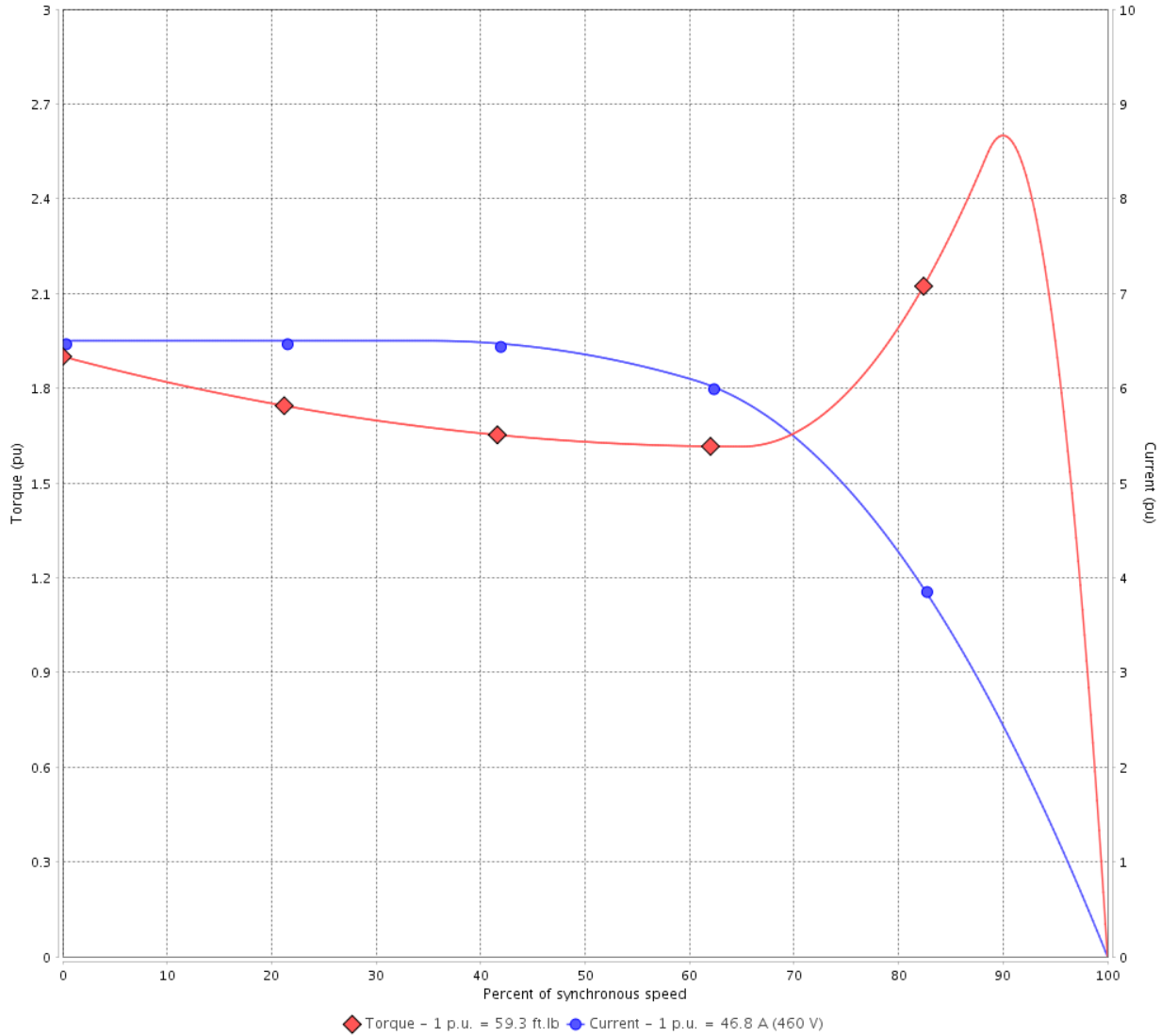
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14504017

Catalog # : 04036OT3E286TSC-
W40G

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 2P

Rated current	: 93.6/46.8 A	Moment of inertia (J)	: 2.02 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 59.3 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 3545 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



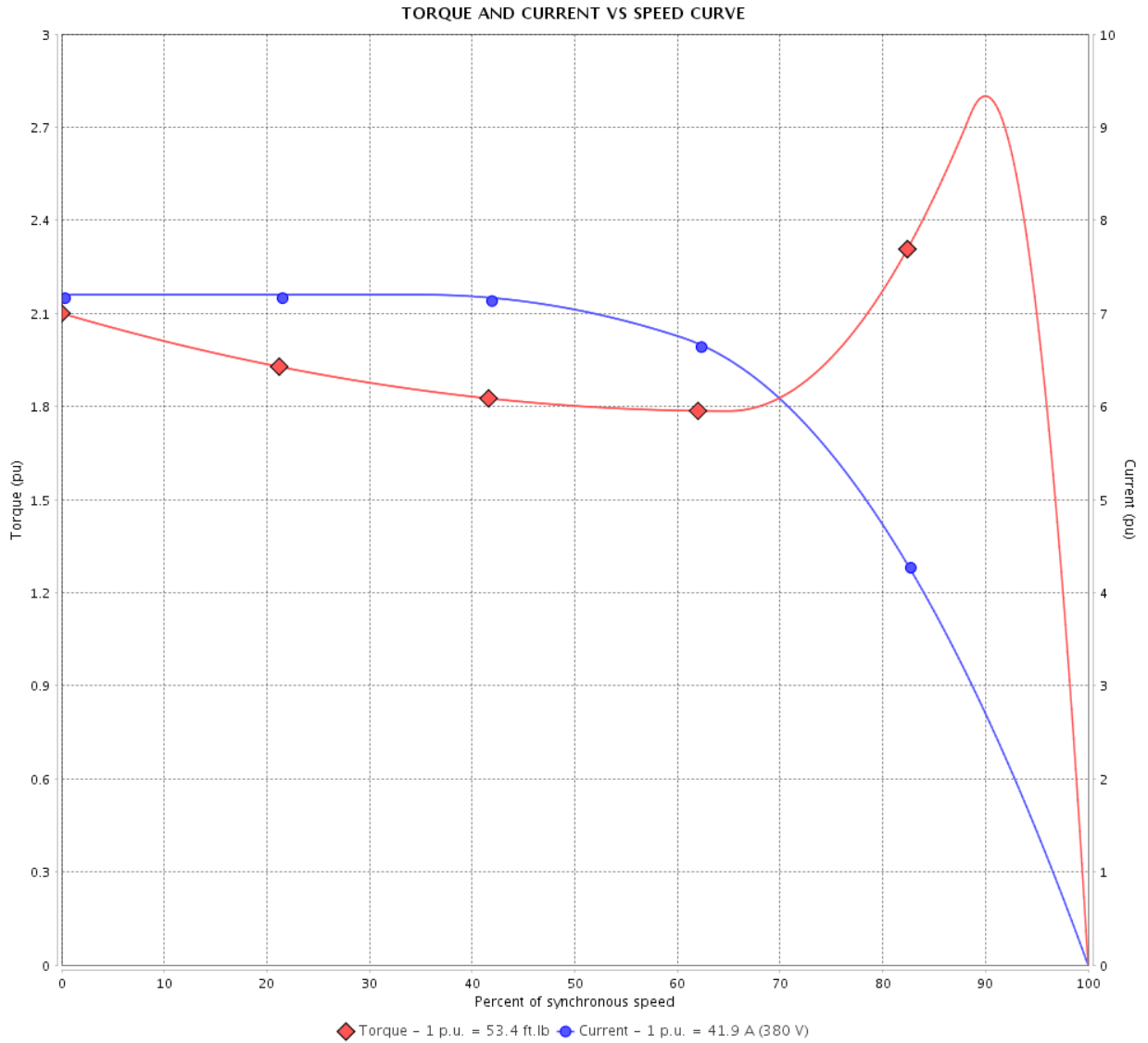
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14504017

Catalog # : 04036OT3E286TSC-W40G



Performance : 380 V 50 Hz 2P IE3

Rated current	: 41.9 A	Moment of inertia (J)	: 2.02 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 53.4 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 2950 rpm	Design	: B

Locked rotor time : 250s (cold) 139s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

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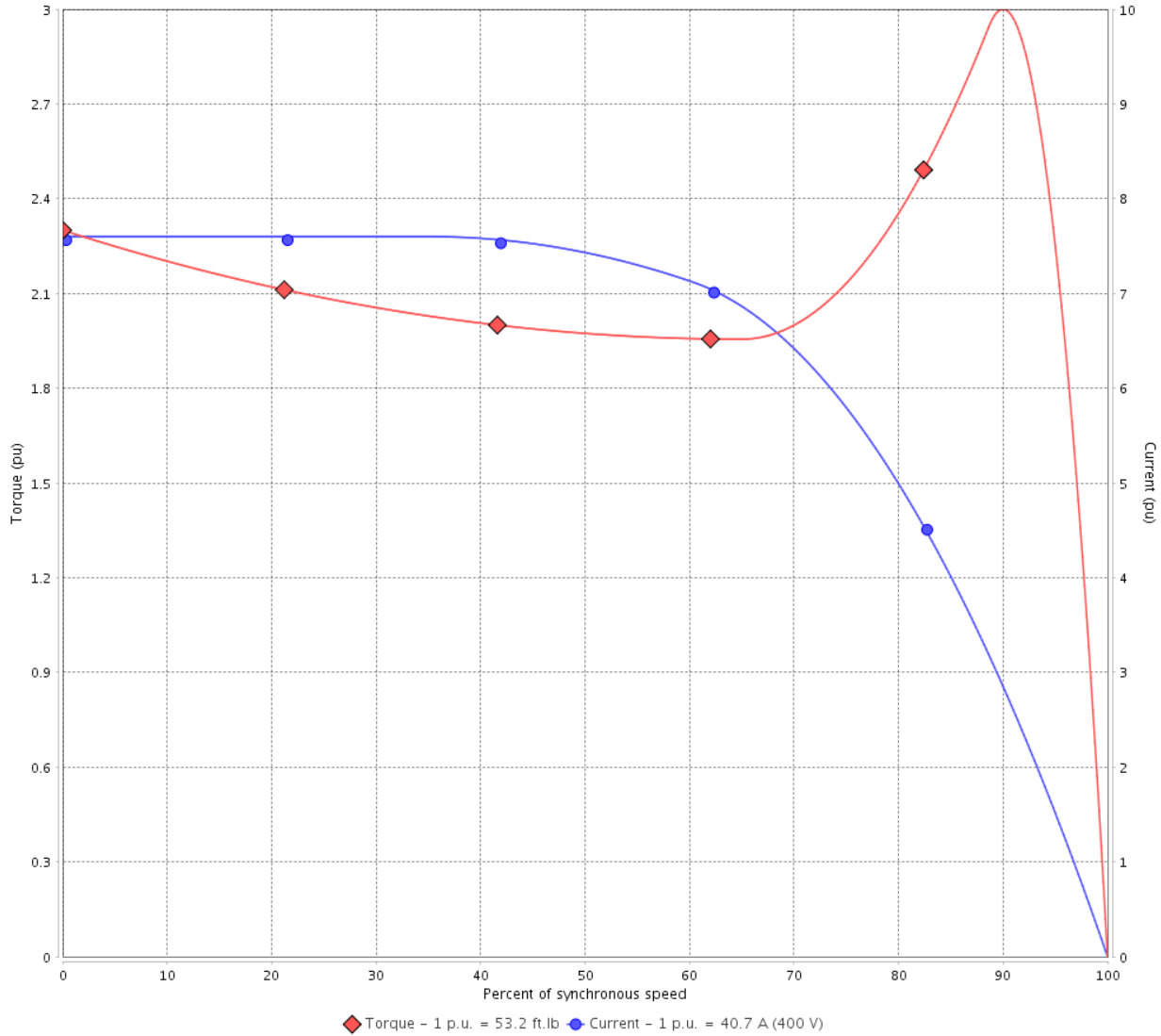
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14504017

Catalog # : 04036OT3E286TSC-W40G

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 2P IE3

Rated current	: 40.7 A	Moment of inertia (J)	: 2.02 sq.ft.lb
LRC	: 7.6	Duty cycle	: Cont.(S1)
Rated torque	: 53.2 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 2960 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



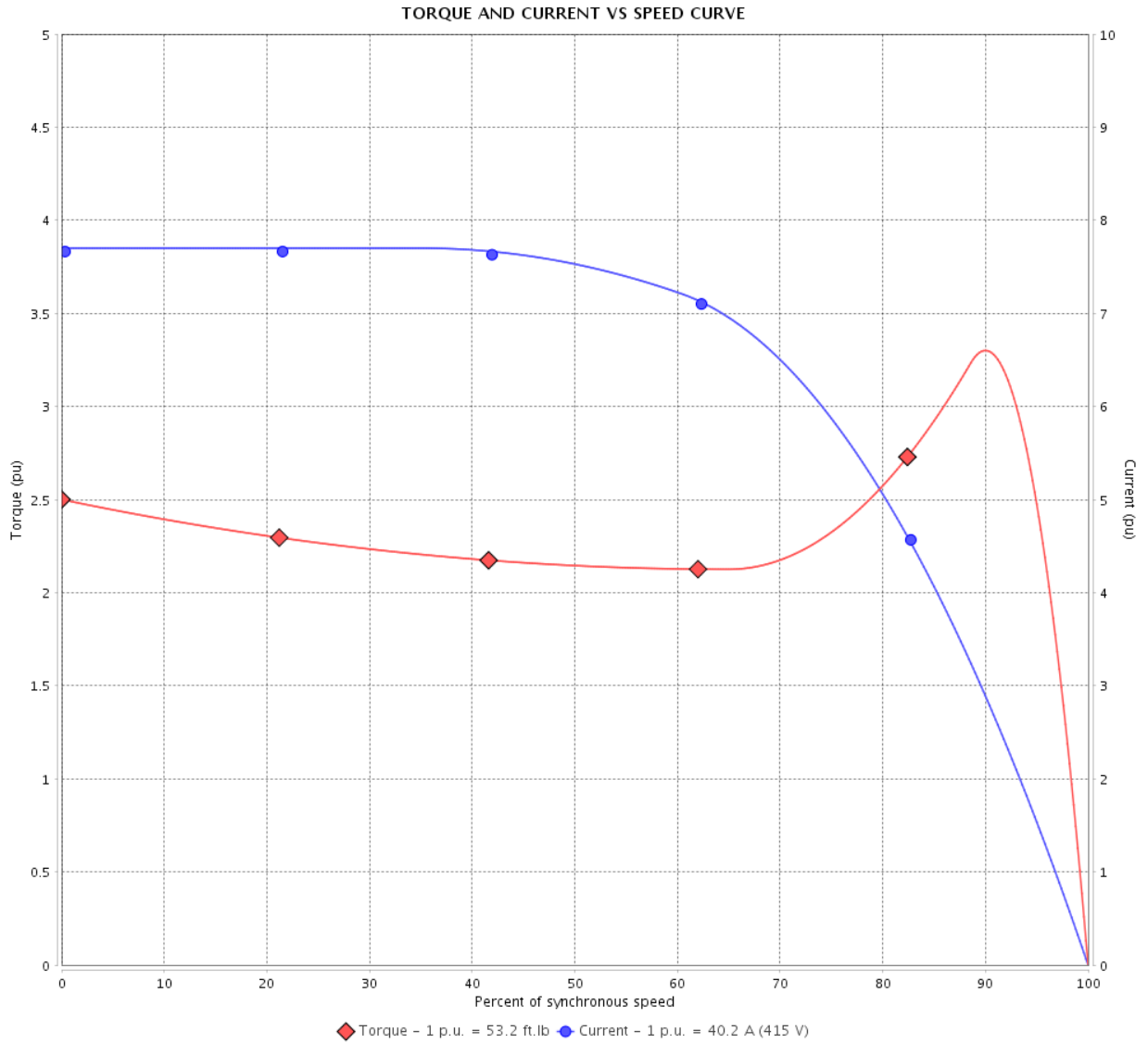
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Locked rotor torque : 250 %
Breakdown torque : 330 %
Rated speed : 2960 rpm

Moment of inertia (J) : 2.02 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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

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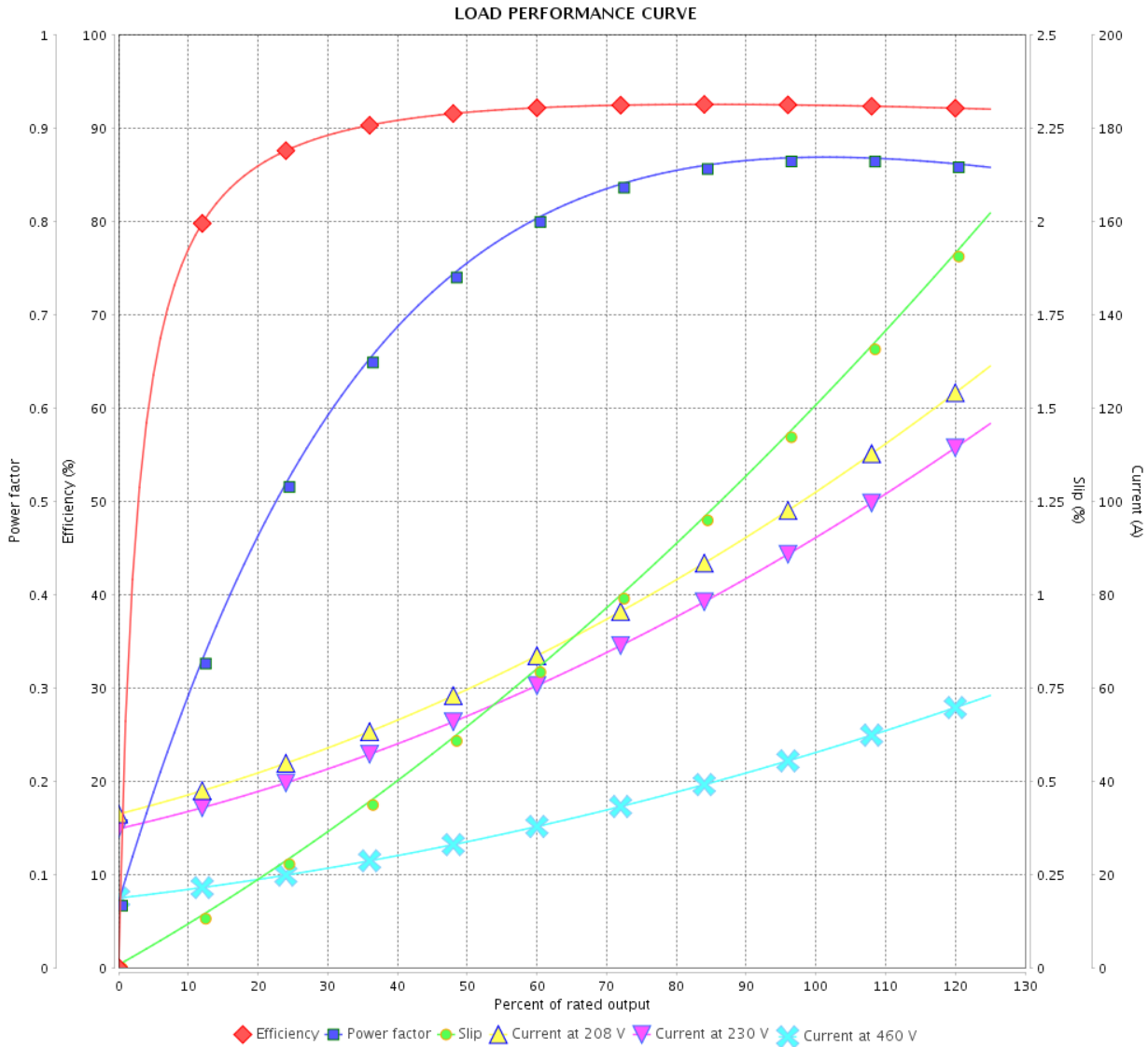


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Performance : 230/460 V 60 Hz 2P

Rated current : 93.6/46.8 A
 LRC : 6.5
 Rated torque : 59.3 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 260 %
 Rated speed : 3545 rpm

Moment of inertia (J) : 2.02 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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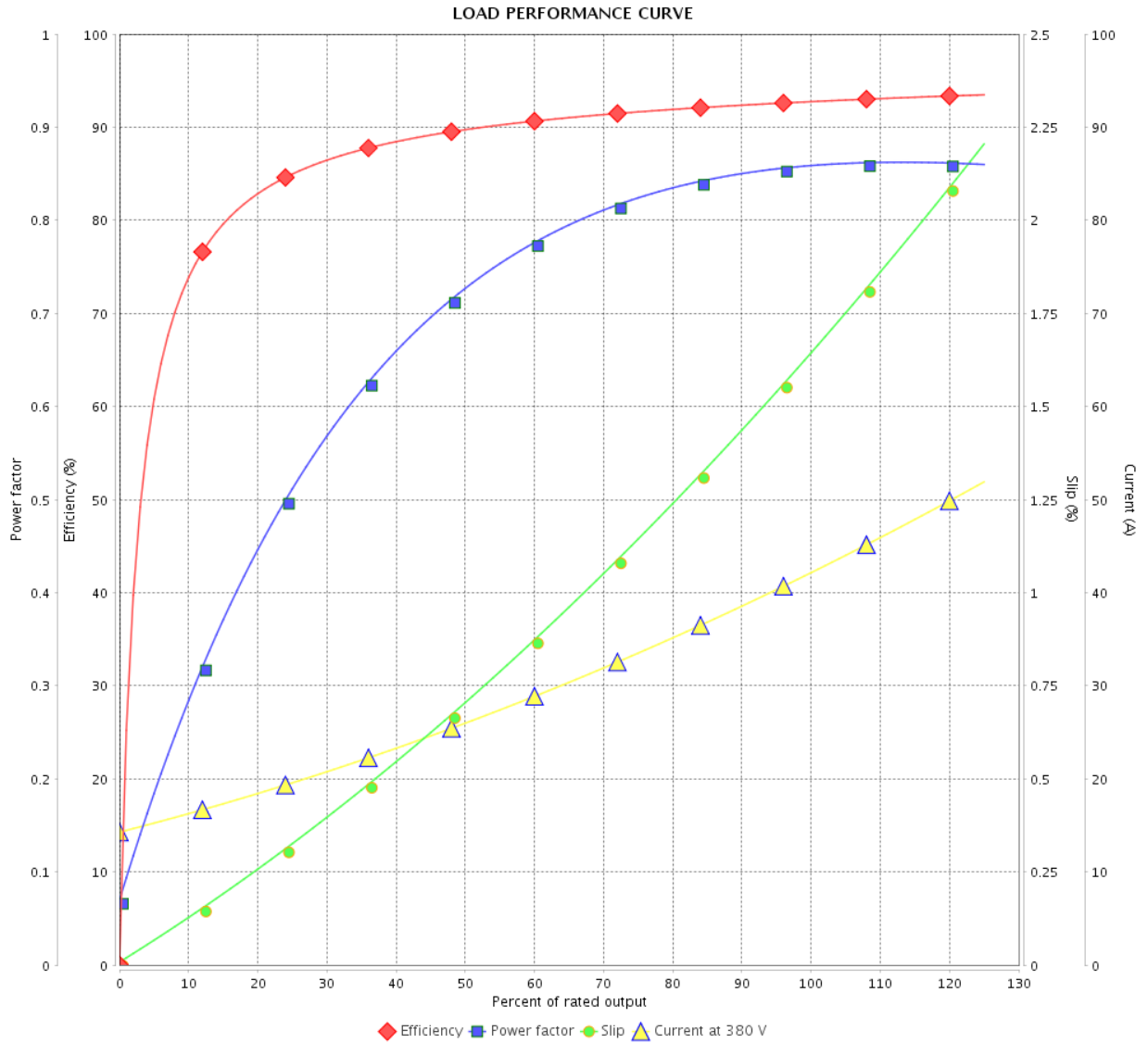


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Performance : 380 V 50 Hz 2P IE3

Rated current : 41.9 A
 LRC : 7.2
 Rated torque : 53.4 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 280 %
 Rated speed : 2950 rpm

Moment of inertia (J) : 2.02 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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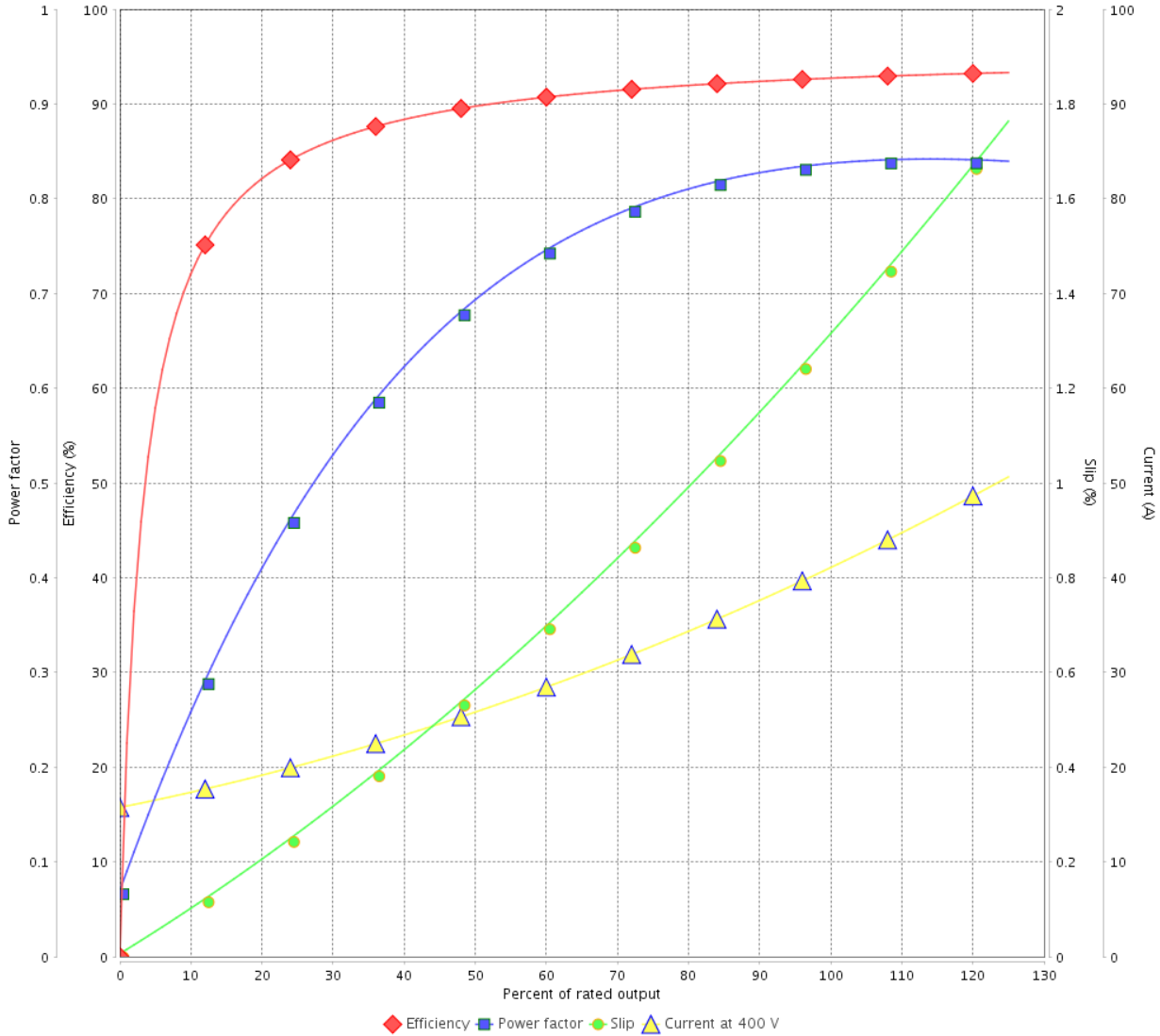
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Performance : 400 V 50 Hz 2P IE3

Rated current : 40.7 A
 LRC : 7.6
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 Locked rotor torque : 229 %
 Breakdown torque : 300 %
 Rated speed : 2960 rpm

Moment of inertia (J) : 2.02 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

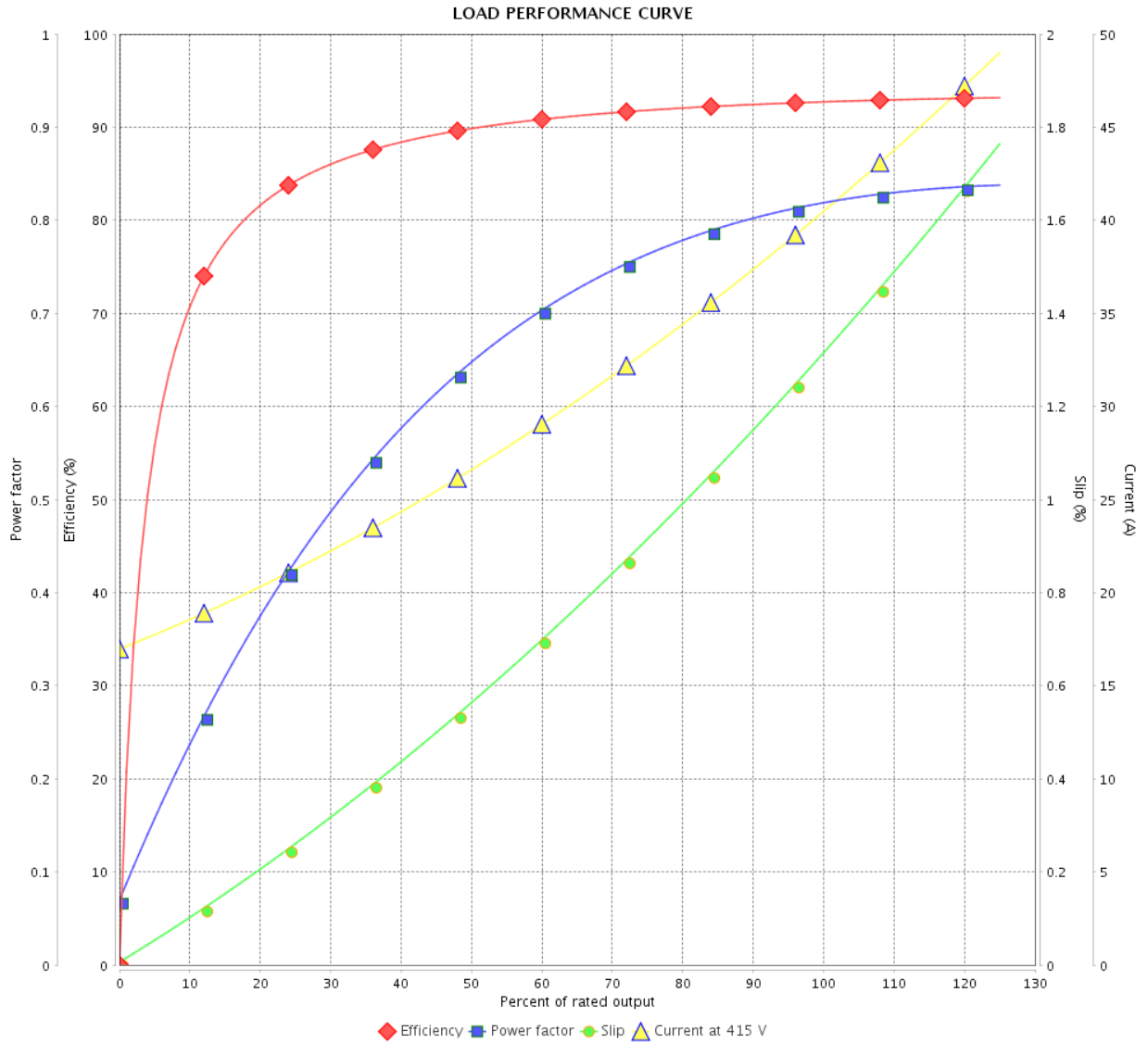


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Performance : 415 V 50 Hz 2P IE3

Rated current : 40.2 A
 LRC : 7.7
 Rated torque : 53.2 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 330 %
 Rated speed : 2960 rpm

Moment of inertia (J) : 2.02 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE



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Heating constant

Cooling constant

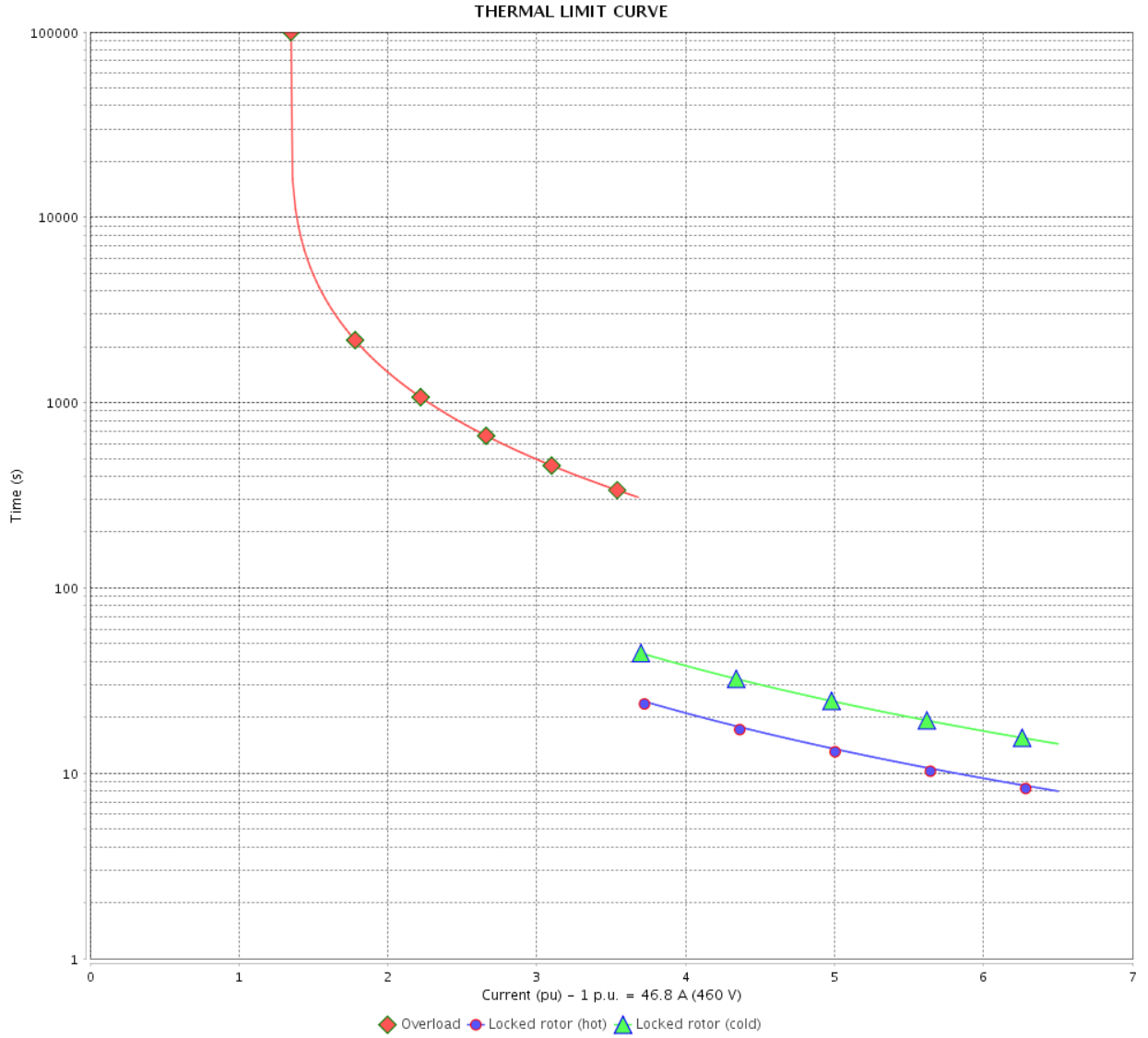
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Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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Cooling constant

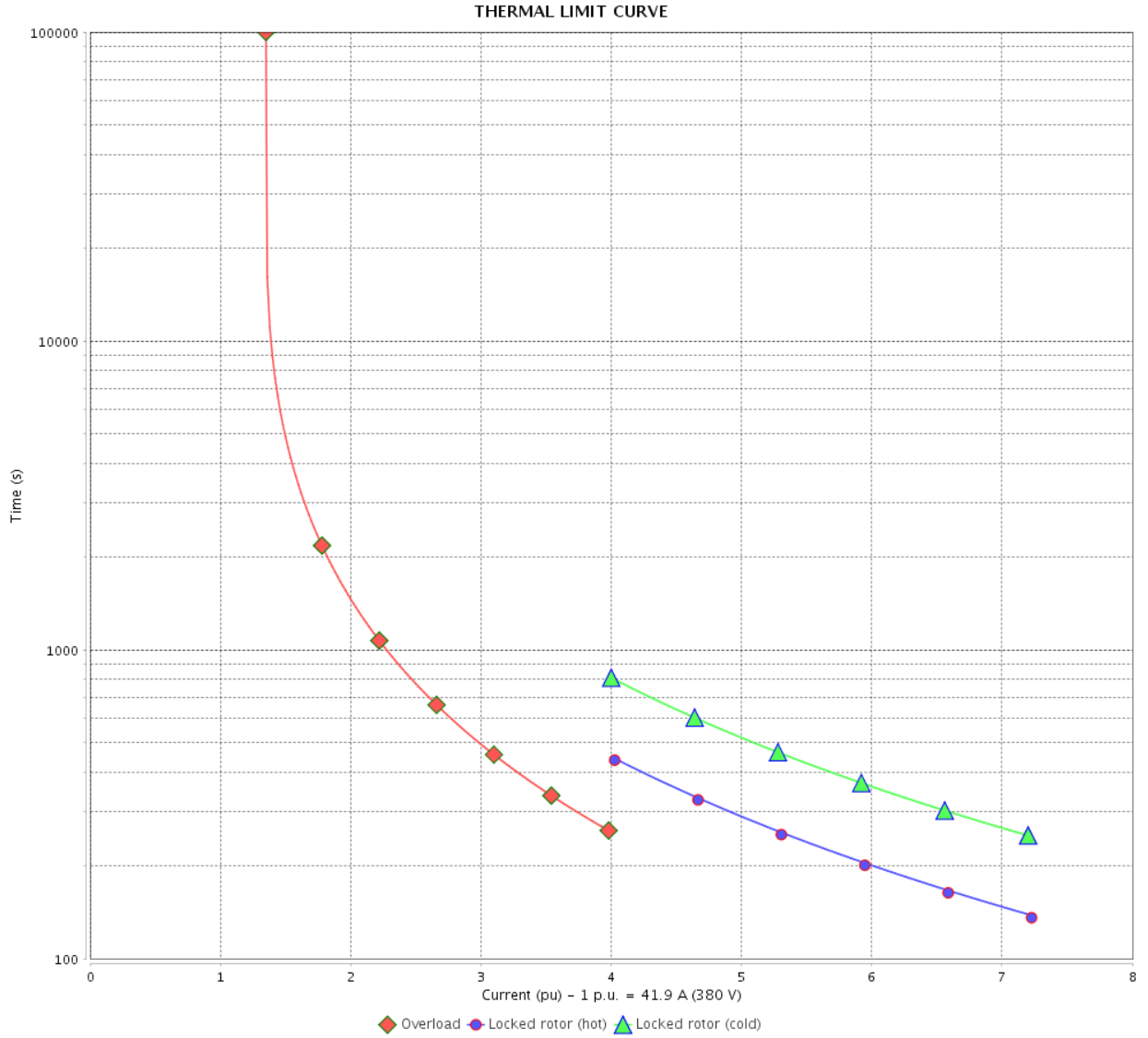
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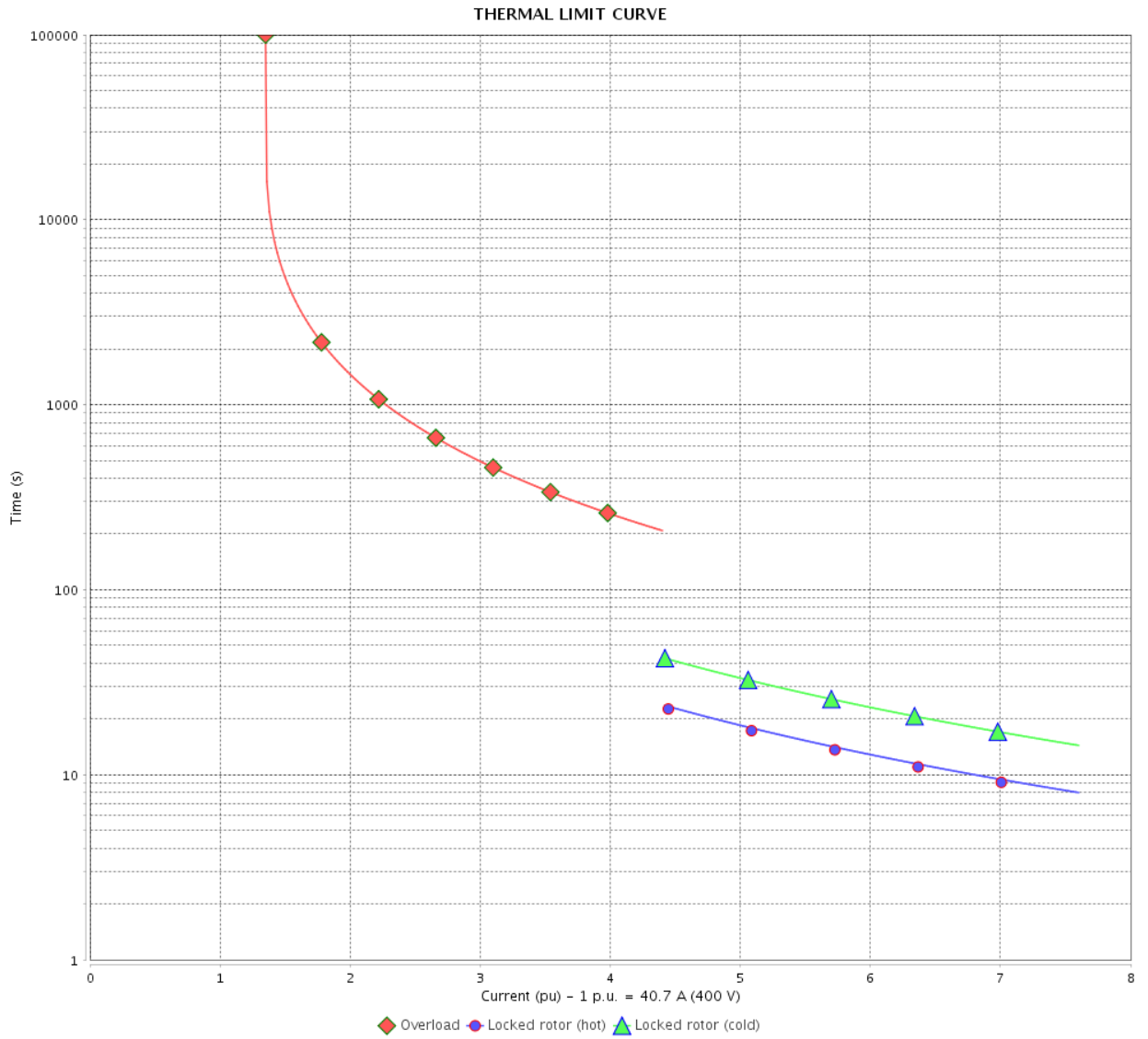
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Breakdown torque : 330 %
Rated speed : 2960 rpm

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Cooling constant

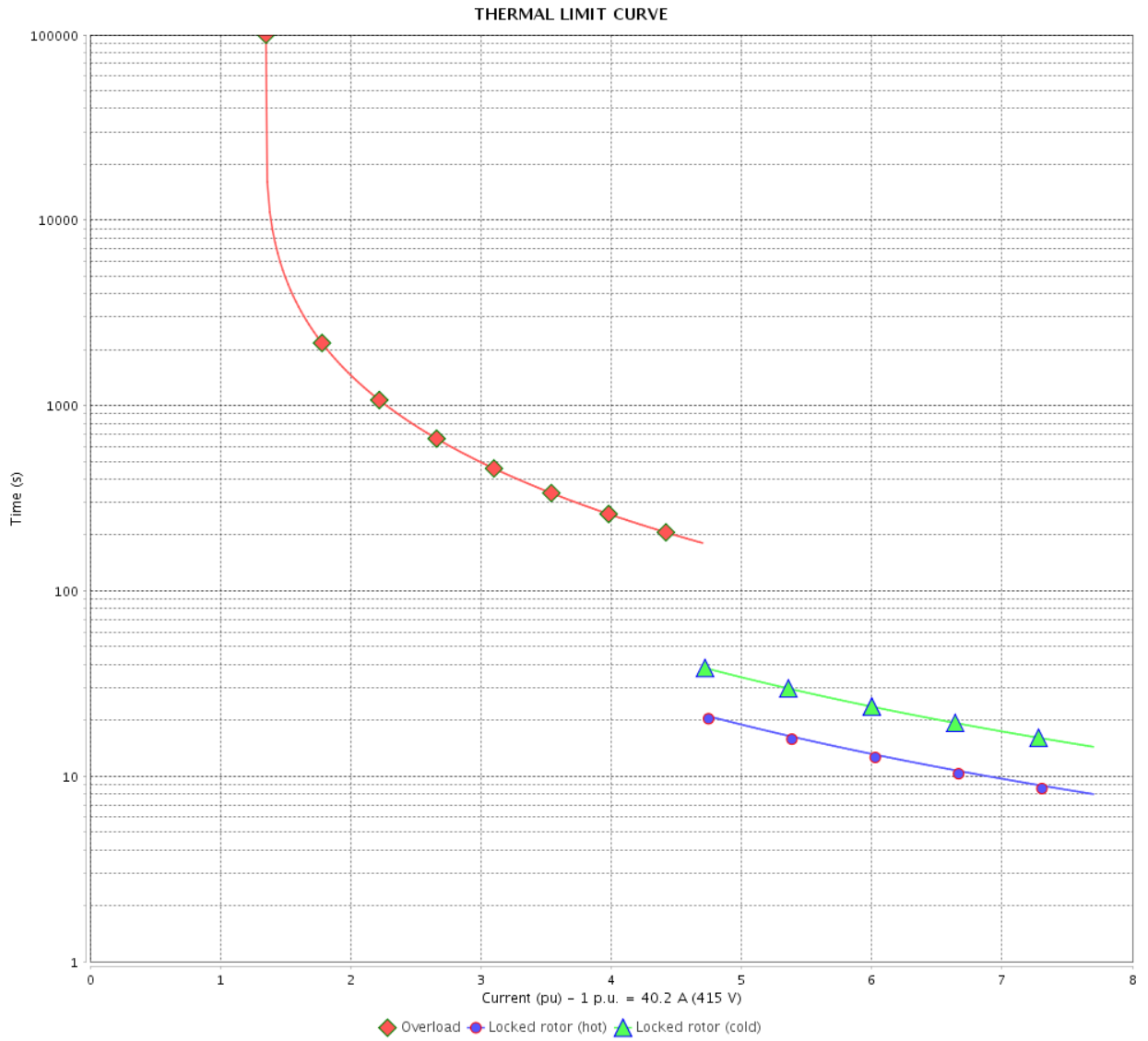
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

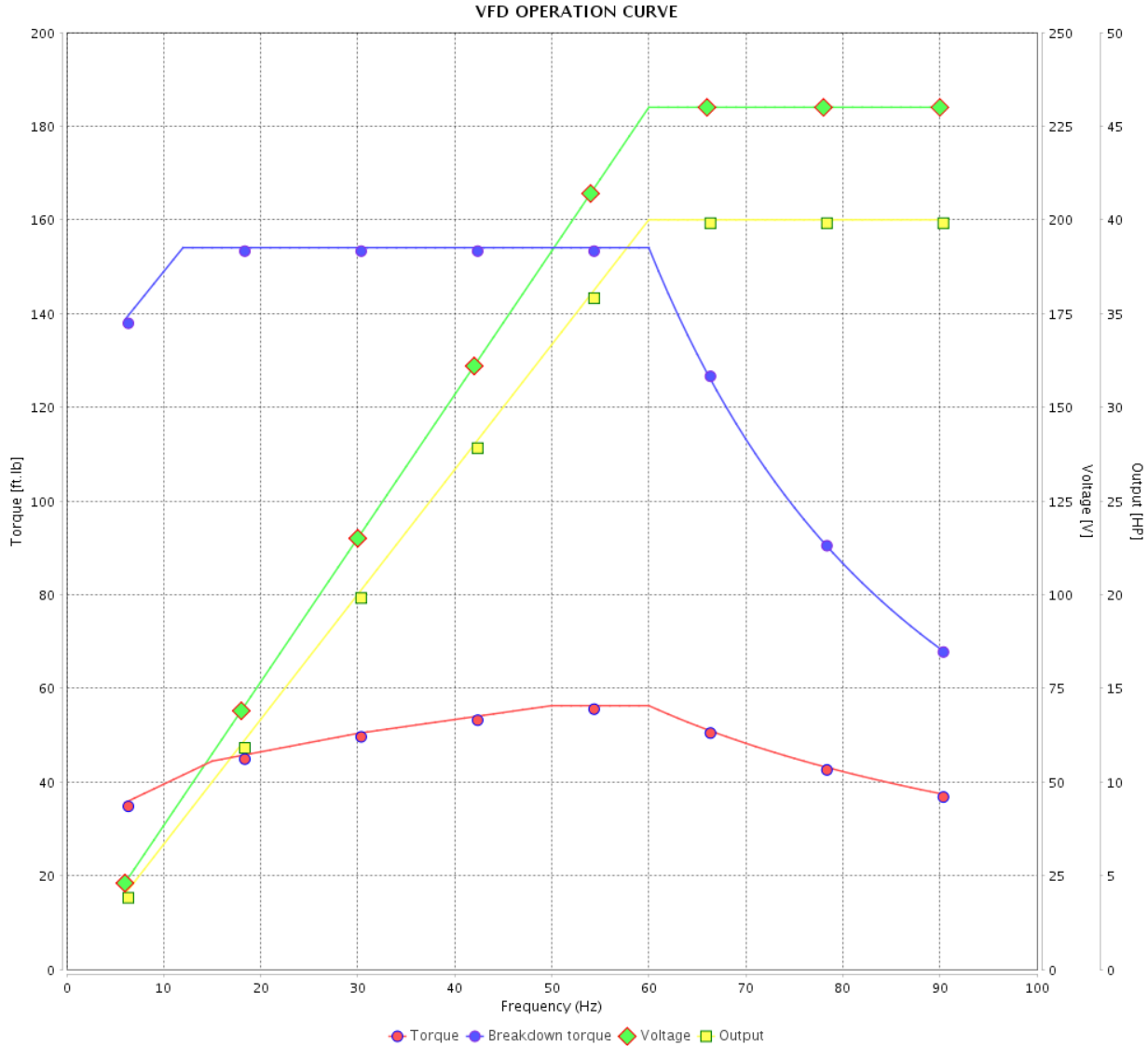


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VFD OPERATION CURVE

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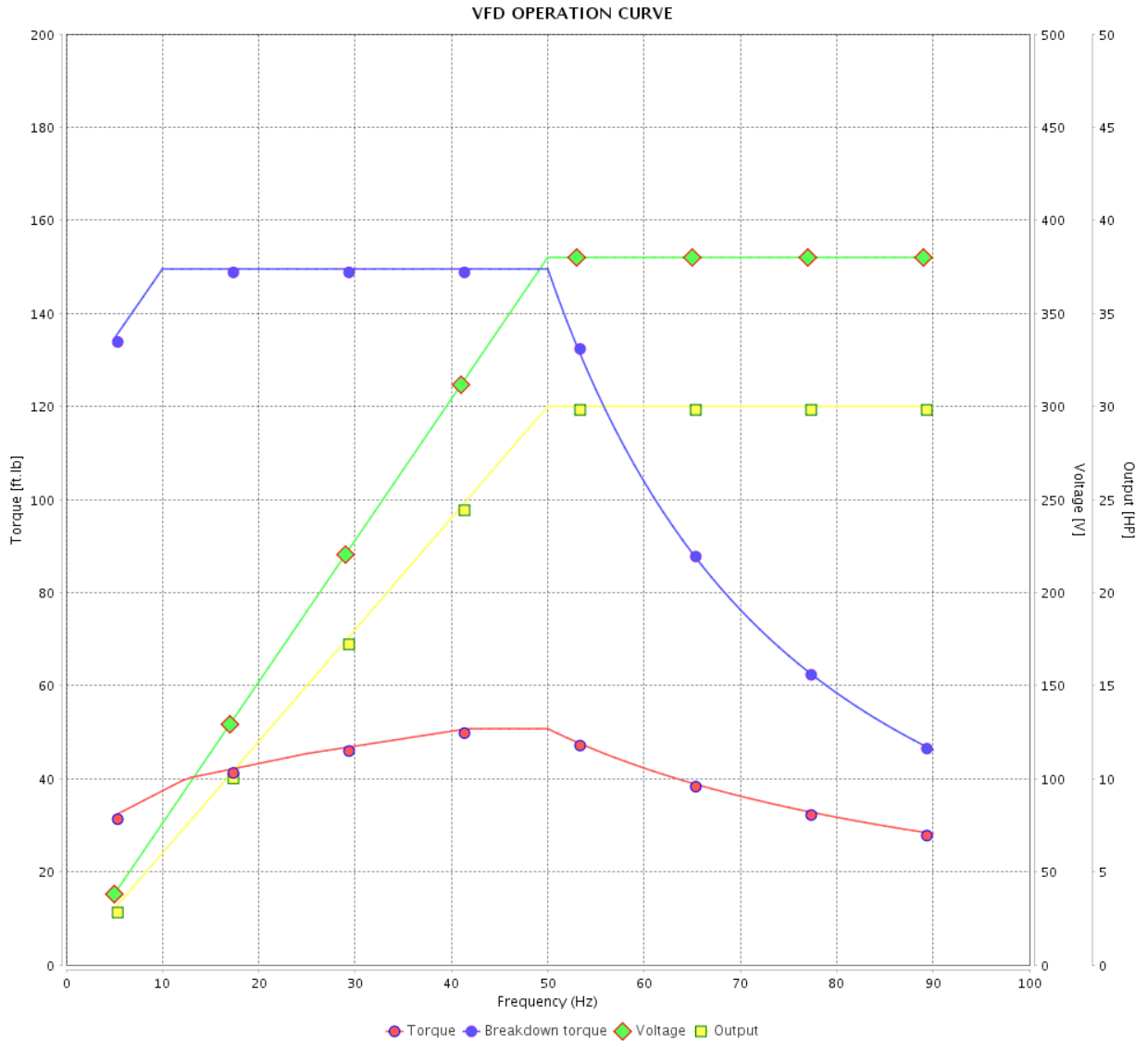


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Performance : 380 V 50 Hz 2P IE3

Rated current : 41.9 A
LRC : 7.2
Rated torque : 53.4 ft.lb
Locked rotor torque : 210 %
Breakdown torque : 280 %
Rated speed : 2950 rpm

Moment of inertia (J) : 2.02 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
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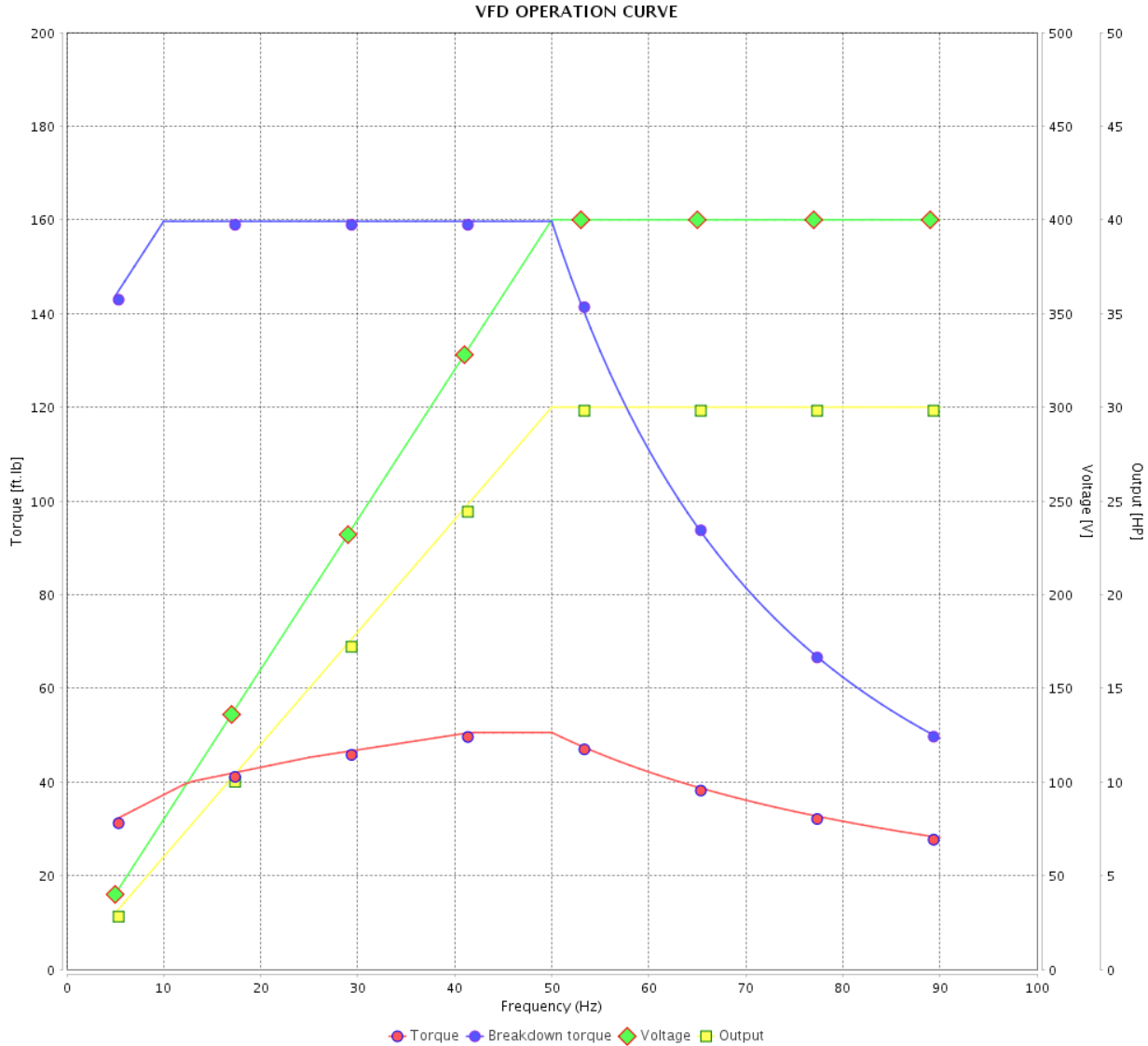


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VFD OPERATION CURVE

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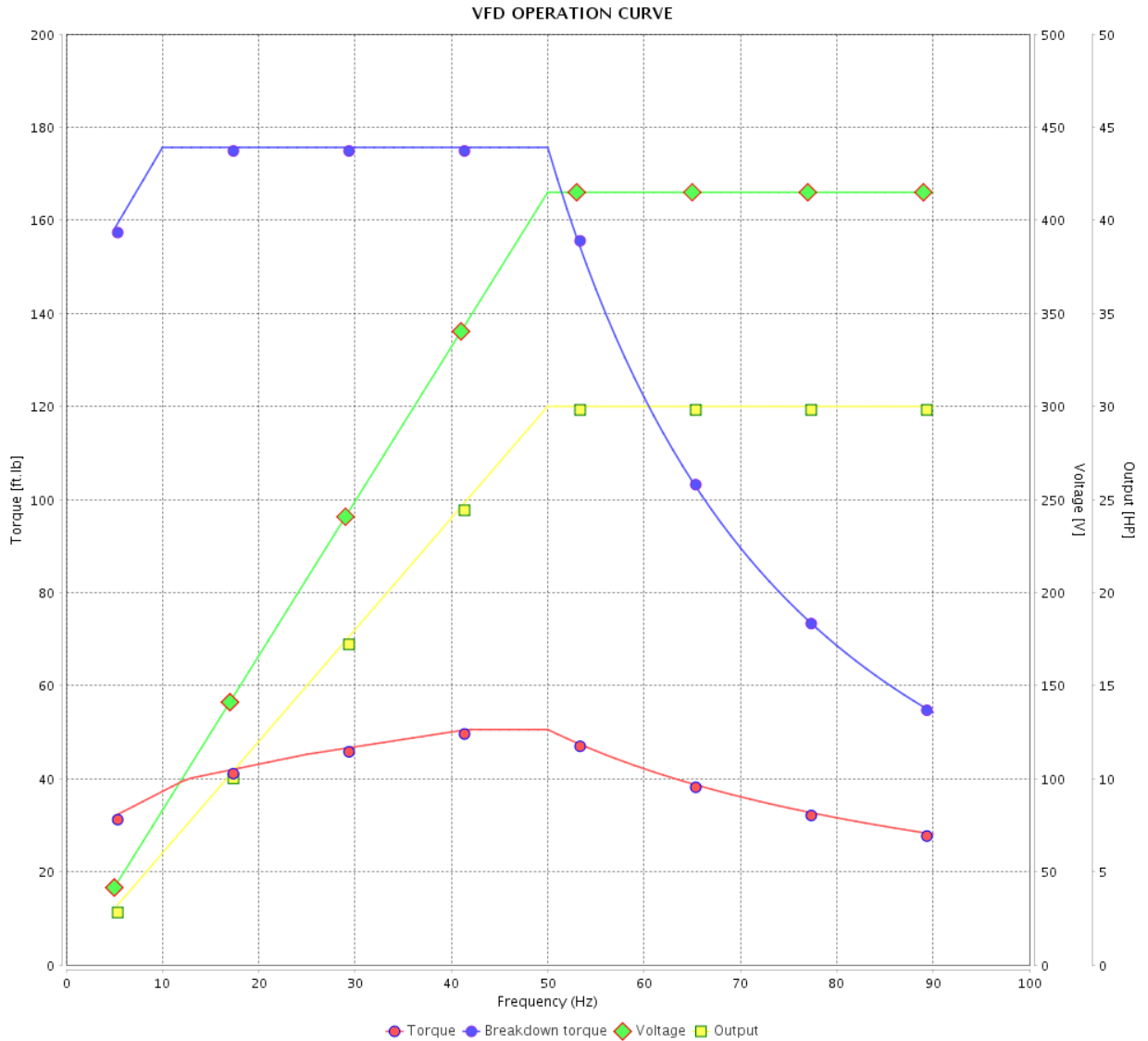


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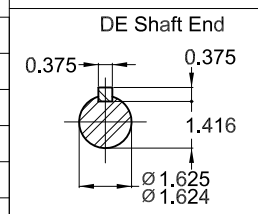
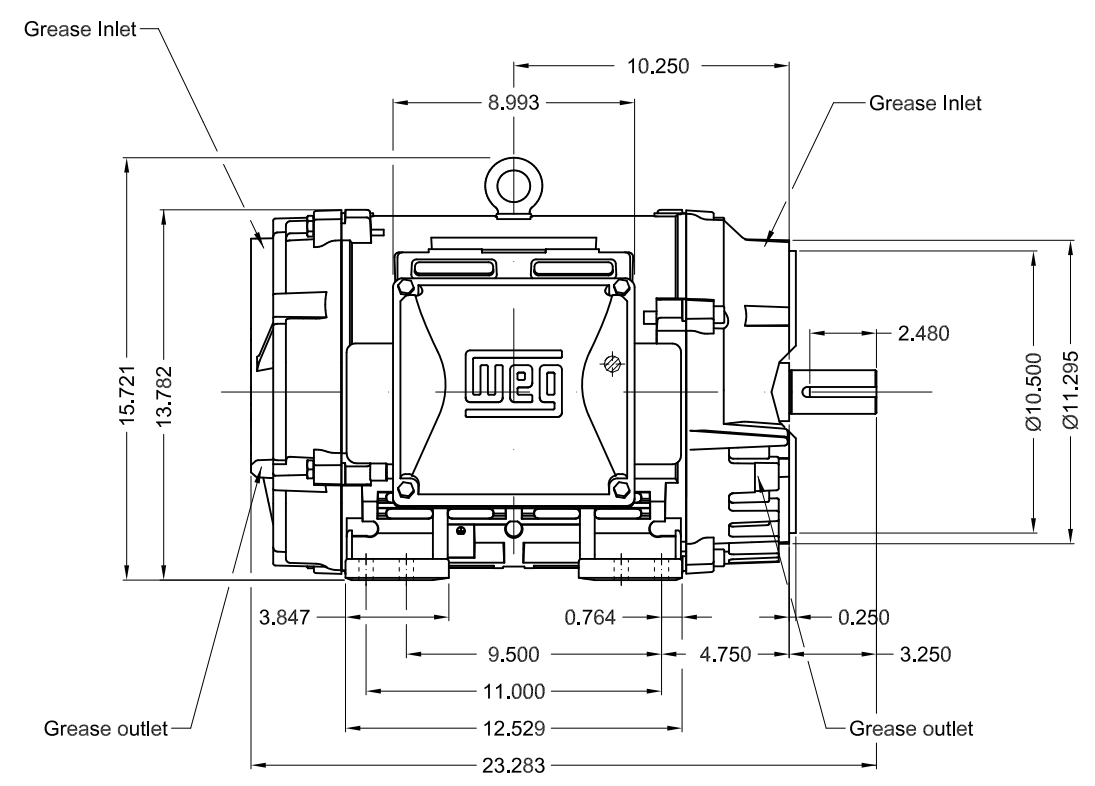
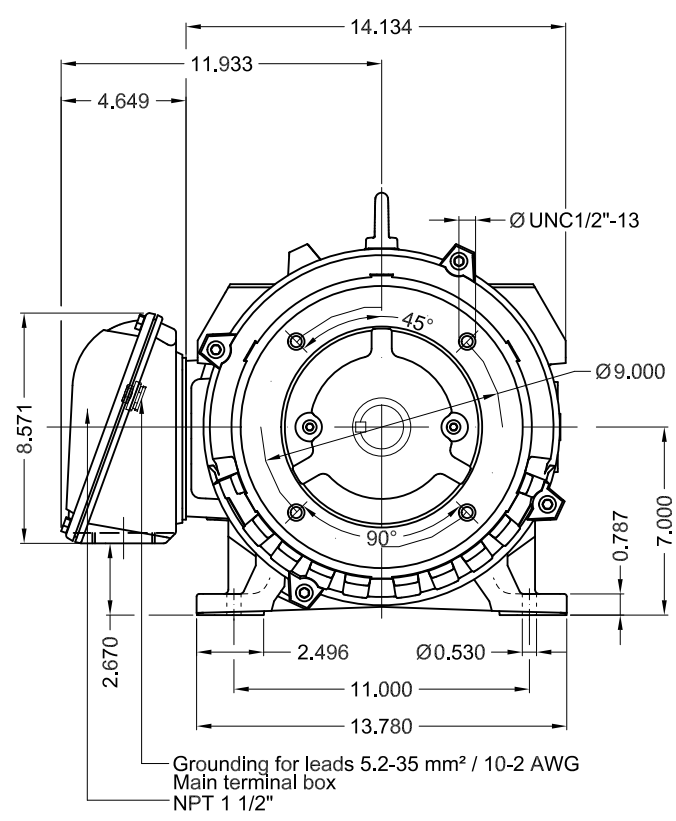


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40 HP 02 Poles 60 Hz A

1:7

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR W40 PREM. EFF.					
CHECKED		FRAME 284/6TSC IP23 ODP					
RELEASED							
REL DT.		WMO Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD



- Bearing cap
- Internal AEGIS ground ring on the DE
- Color RAL 5009
- Painting plan 203A
- Mounting NEMA F-1
- Mounting B34R(D)