

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: W40 NEMA Premium Efficiency Three-Phase		Product code : 14285009	
				Catalog # : 15018OT3G444TSC-W40	
Frame		: 444/5TSC		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 : 1381 lb	
Protection degree		: IP23		Moment of inertia (J) : 42.1 sq.ft.lb	
Design		: B			
Output [HP]	150	125	125	125	125
Poles	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	460	380	400	415	415
Rated current [A]	170	169	162	158	158
L. R. Amperes [A]	1105	1183	1199	1138	1138
LRC [A]	6.5x(Code G)	7.0x(Code G)	7.4x(Code H)	7.2x(Code H)	7.2x(Code H)
No load current [A]	58.0	57.7	62.5	66.5	66.5
Rated speed [RPM]	1784	1485	1485	1485	1485
Slip [%]	0.89	1.00	1.00	1.00	1.00
Rated torque [ft.lb]	442	442	442	442	442
Locked rotor torque [%]	200	190	220	240	240
Breakdown torque [%]	240	240	270	290	290
Service factor	1.25	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	39s (cold) 22s (hot)	37s (cold) 21s (hot)	36s (cold) 20s (hot)	39s (cold) 22s (hot)	39s (cold) 22s (hot)
Noise level ²	78.0 dB(A)				
Efficiency (%)	25%	95.3	94.8	94.8	95.0
	50%	95.4	94.9	94.9	95.1
	75%	95.8	95.3	95.3	95.3
	100%	95.8	95.3	95.3	95.3
Power Factor	25%	0.49	0.49	0.45	0.42
	50%	0.74	0.74	0.70	0.68
	75%	0.82	0.82	0.80	0.78
	100%	0.85	0.85	0.84	0.83
Bearing type	: Drive end : 6314 C3	: Non drive end : 6212 Z C3	Foundation loads		
Sealing	: Without	: Without	Max. traction	: 2727 lb	
	: Bearing Seal	: Bearing Seal	Max. compression	: 4107 lb	
Lubrication interval	: 20000 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



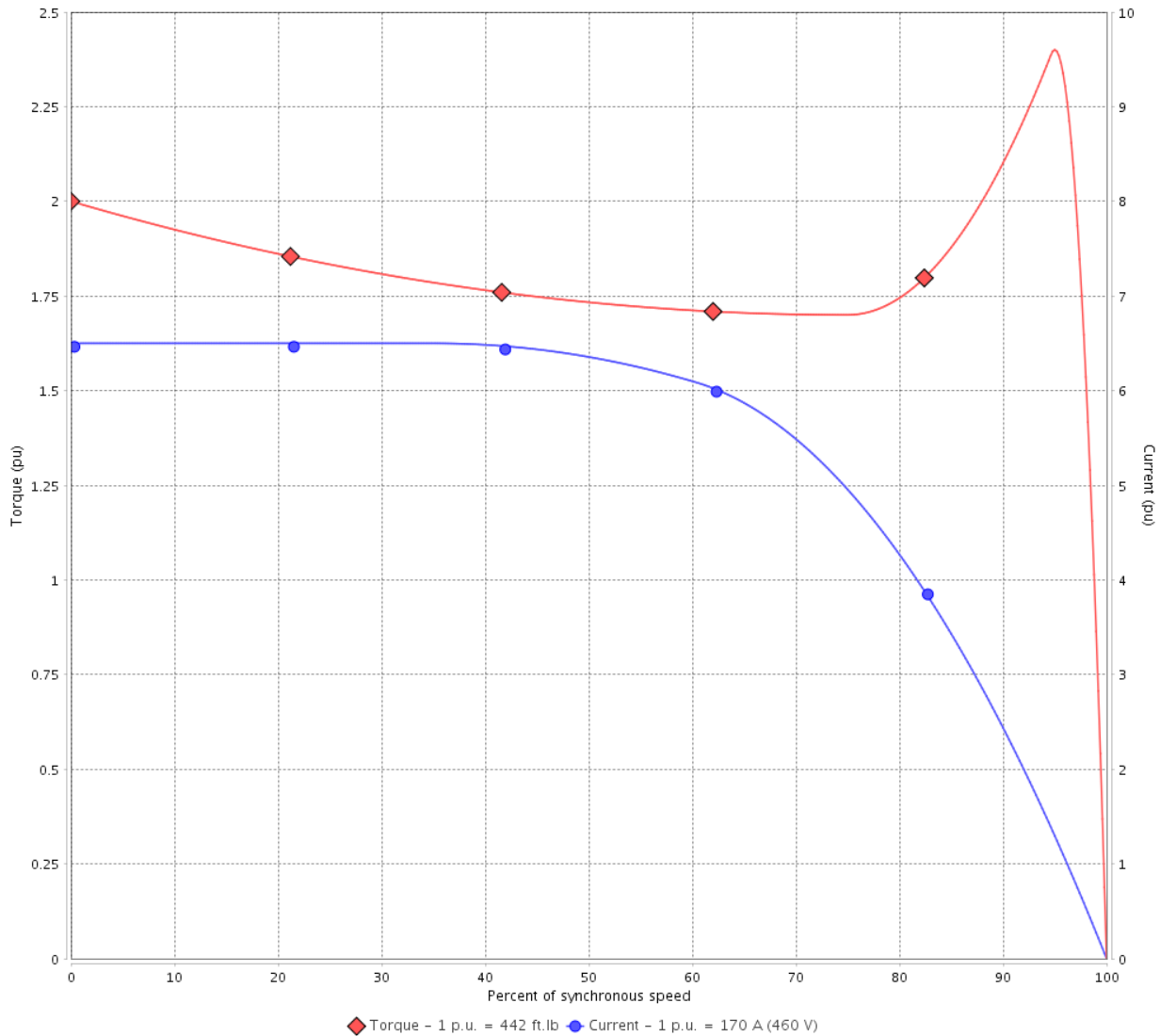
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14285009

Catalog # : 15018OT3G444TSC-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 170 A	Moment of inertia (J)	: 42.1 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 442 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1784 rpm	Design	: B

Locked rotor time : 39s (cold) 22s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



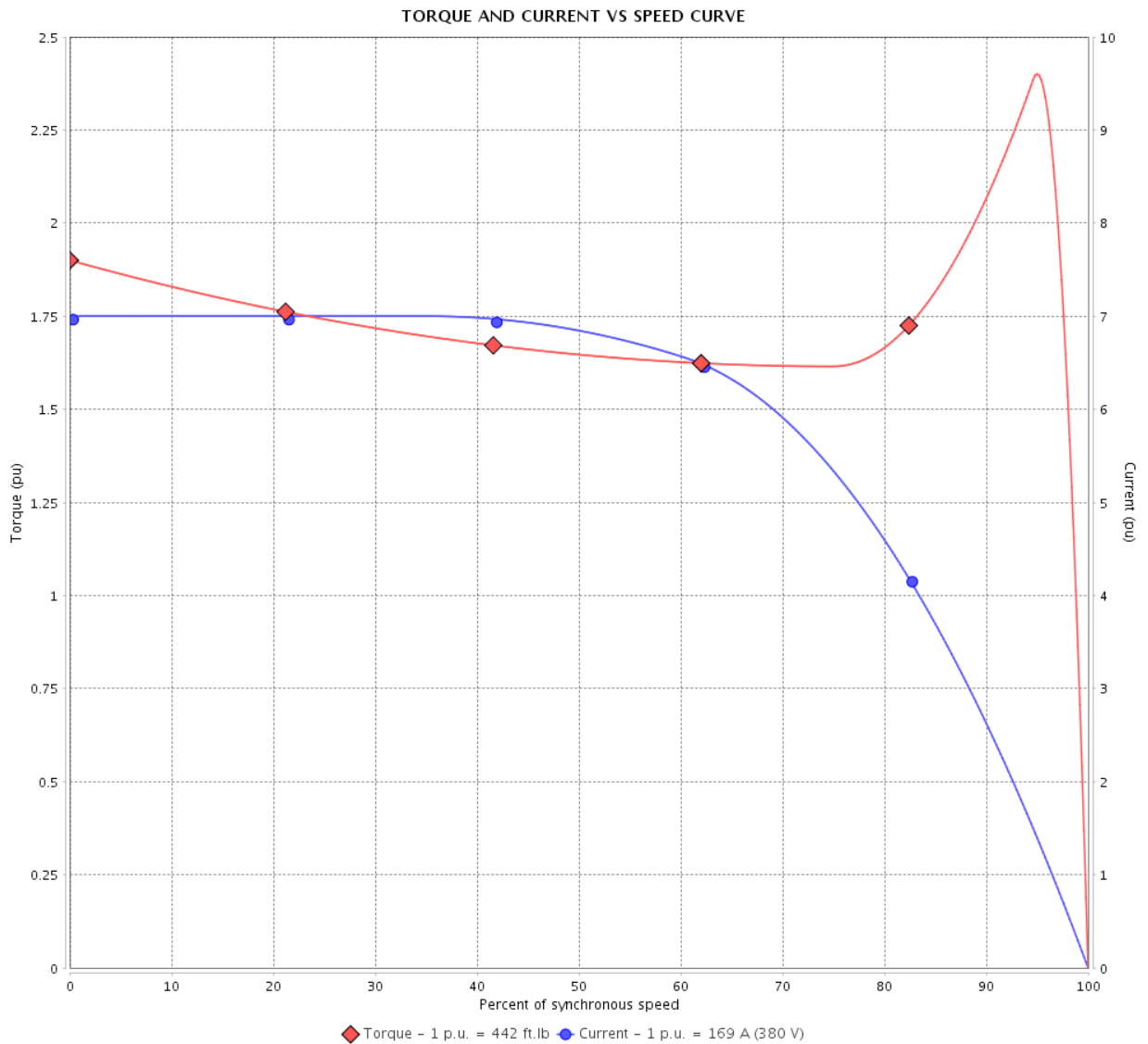
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14285009

Catalog # : 15018OT3G444TSC-W40



Performance : 380 V 50 Hz 4P IE3

Rated current	: 169 A	Moment of inertia (J)	: 42.1 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 442 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



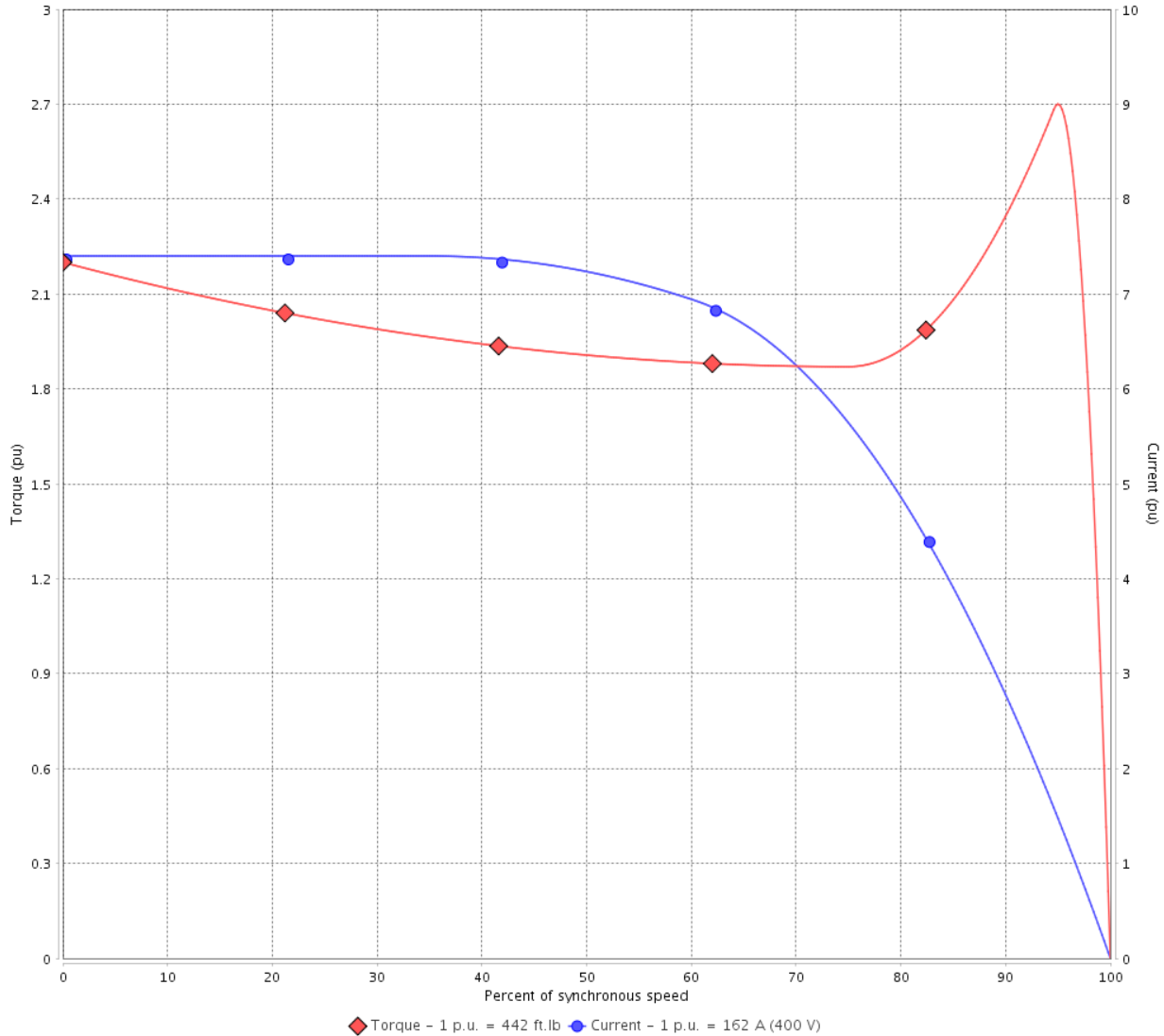
Customer :

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Product code : 14285009

Catalog # : 15018OT3G444TSC-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 162 A	Moment of inertia (J)	: 42.1 sq.ft.lb
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 442 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Locked rotor time : 36s (cold) 20s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



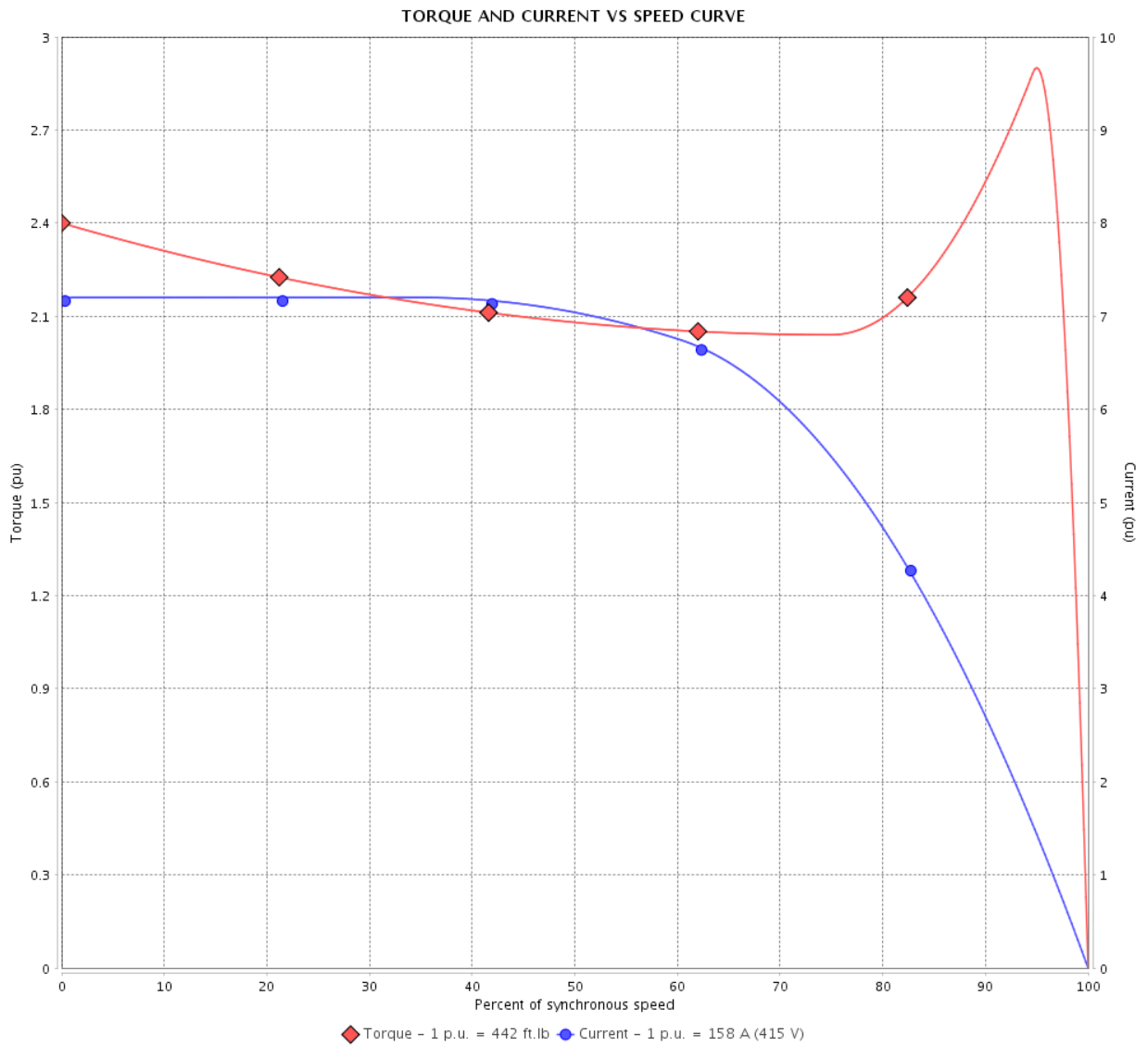
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Performance : 415 V 50 Hz 4P IE3

Rated current	: 158 A	Moment of inertia (J)	: 42.1 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 442 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Locked rotor time : 39s (cold) 22s (hot)

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LOAD PERFORMANCE CURVE

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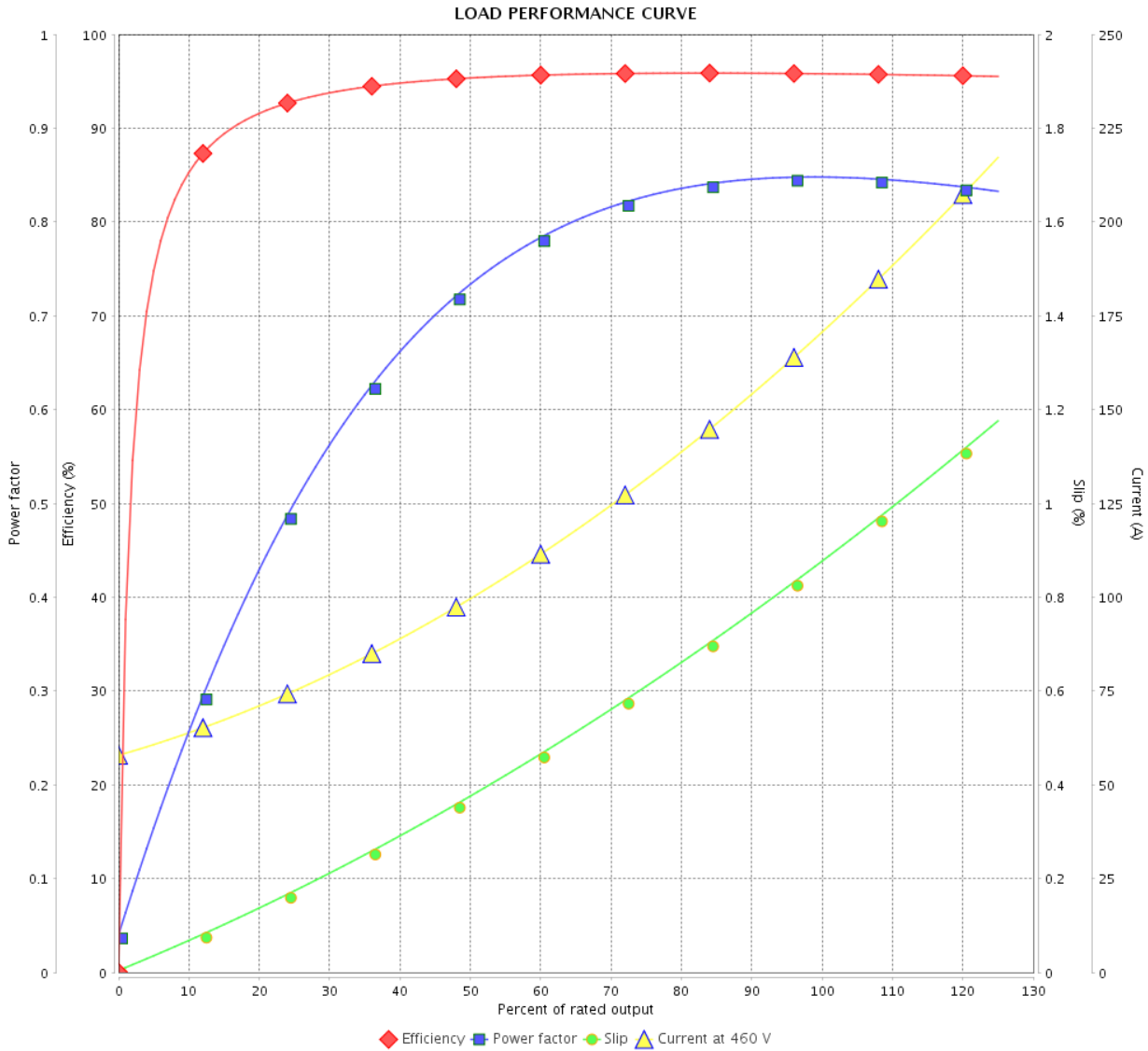


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Three-Phase

Product code : 14285009

Catalog # : 15018OT3G444TSC-W40



Performance : 460 V 60 Hz 4P

Rated current : 170 A	Moment of inertia (J) : 42.1 sq.ft.lb
LRC : 6.5	Duty cycle : Cont.(S1)
Rated torque : 442 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.25
Breakdown torque : 240 %	Temperature rise : 80 K
Rated speed : 1784 rpm	Design : B

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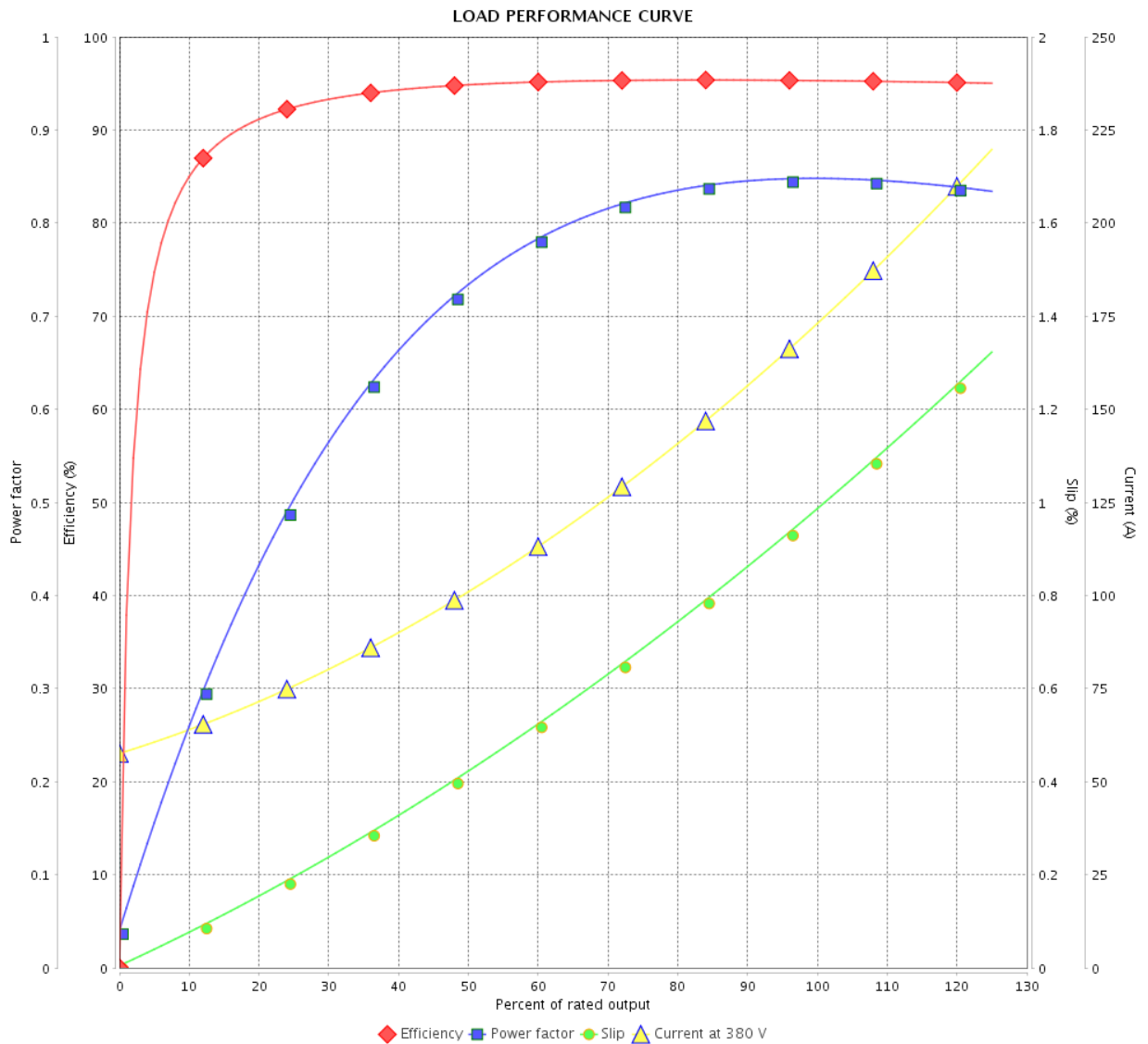


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Performance : 380 V 50 Hz 4P IE3

Rated current : 169 A
 LRC : 7.0
 Rated torque : 442 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 240 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 42.1 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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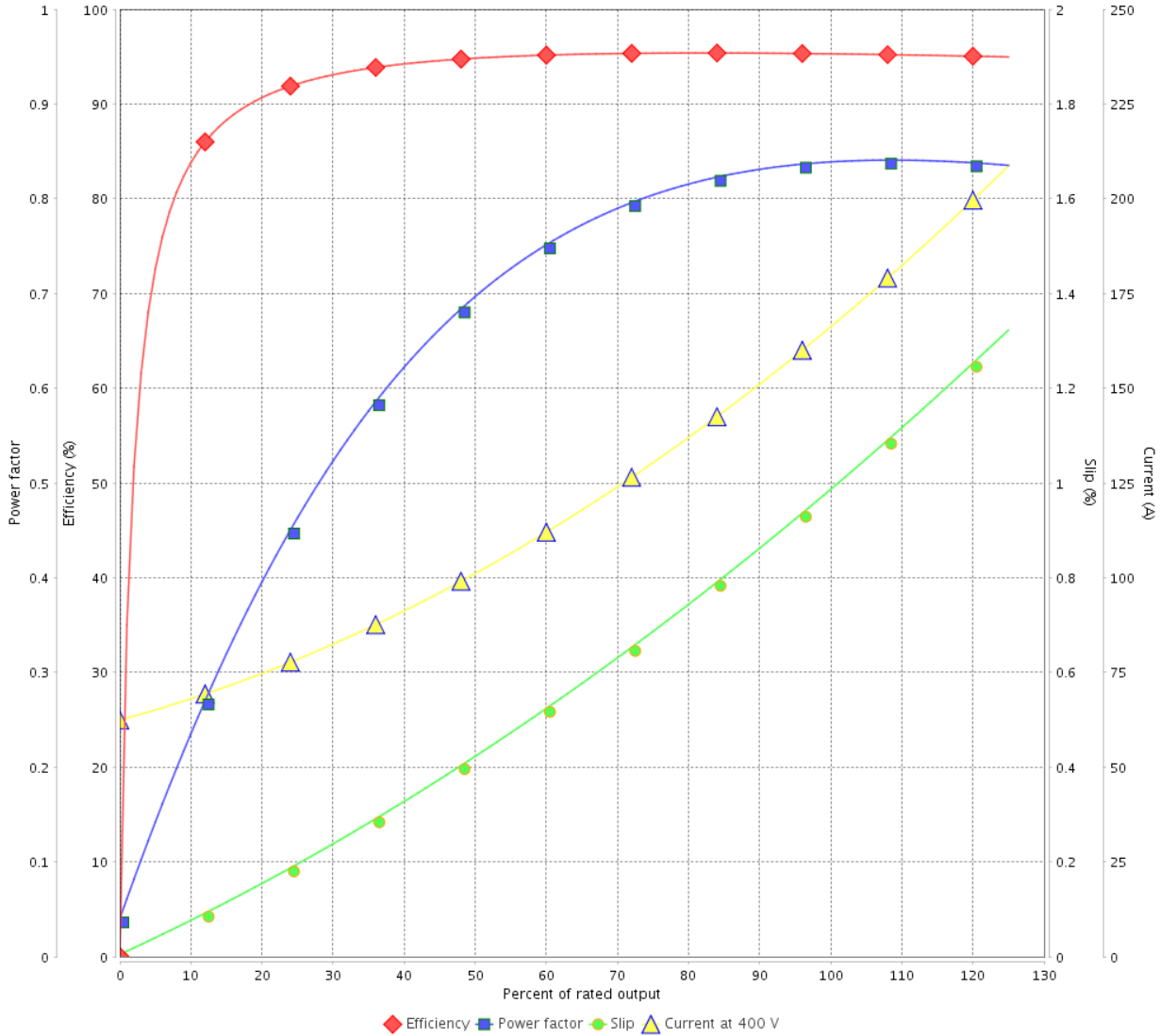
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Performance : 400 V 50 Hz 4P IE3

Rated current : 162 A
 LRC : 7.4
 Rated torque : 442 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 270 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 42.1 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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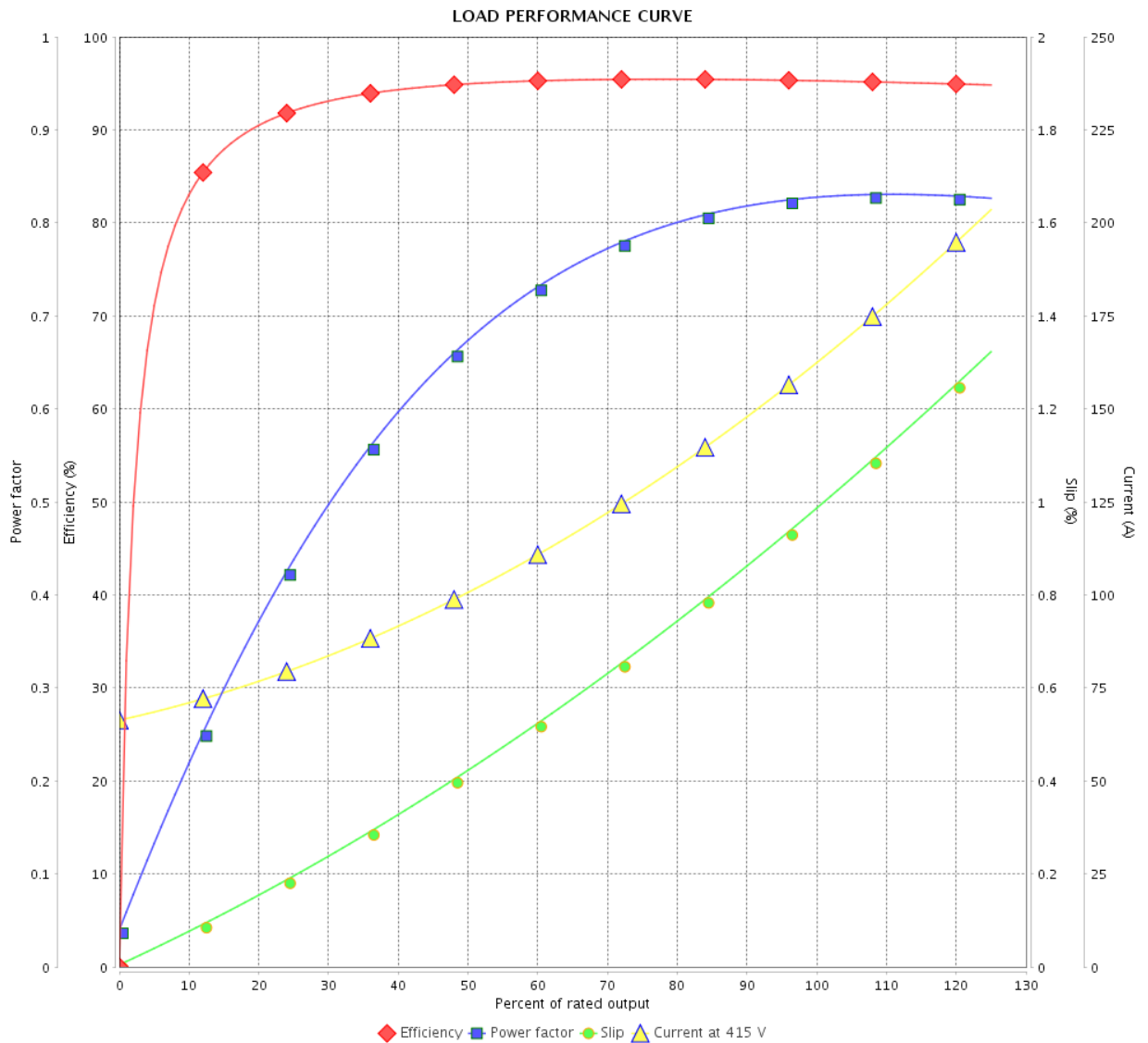


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Performance : 415 V 50 Hz 4P IE3

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 LRC : 7.2
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 Locked rotor torque : 240 %
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Moment of inertia (J) : 42.1 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

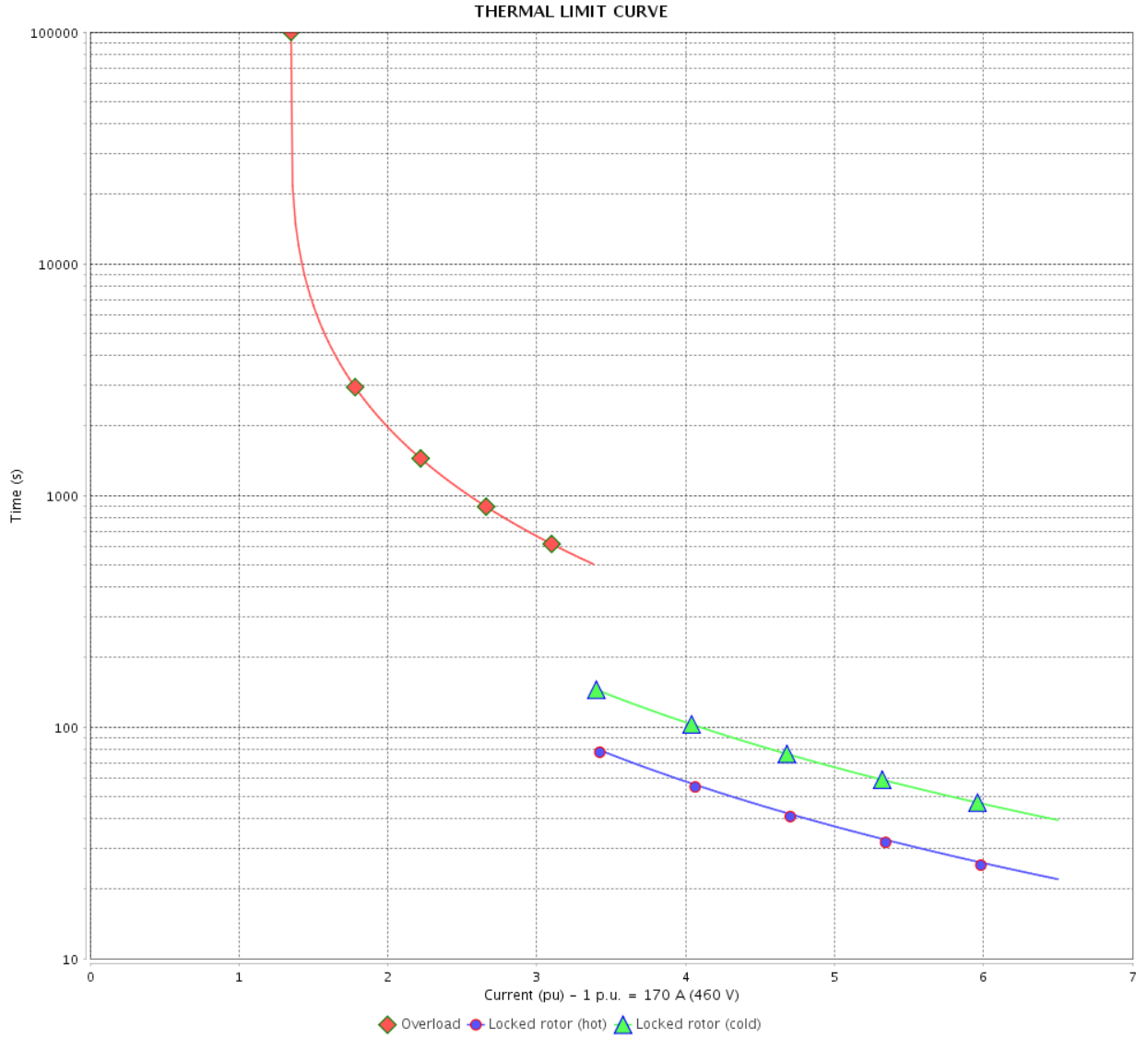
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Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Heating constant

Cooling constant

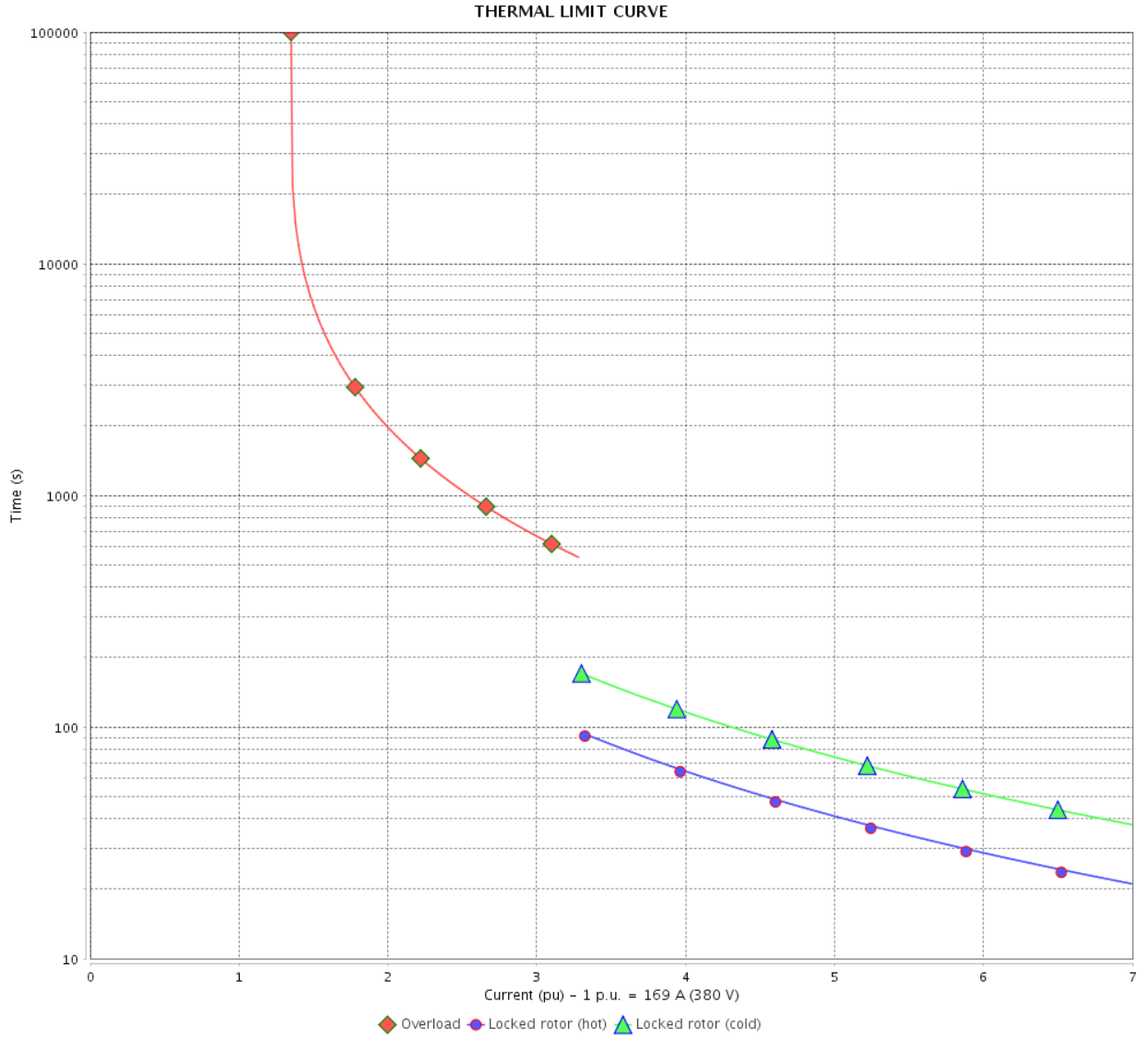
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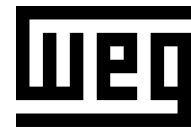


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LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 442 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

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Cooling constant

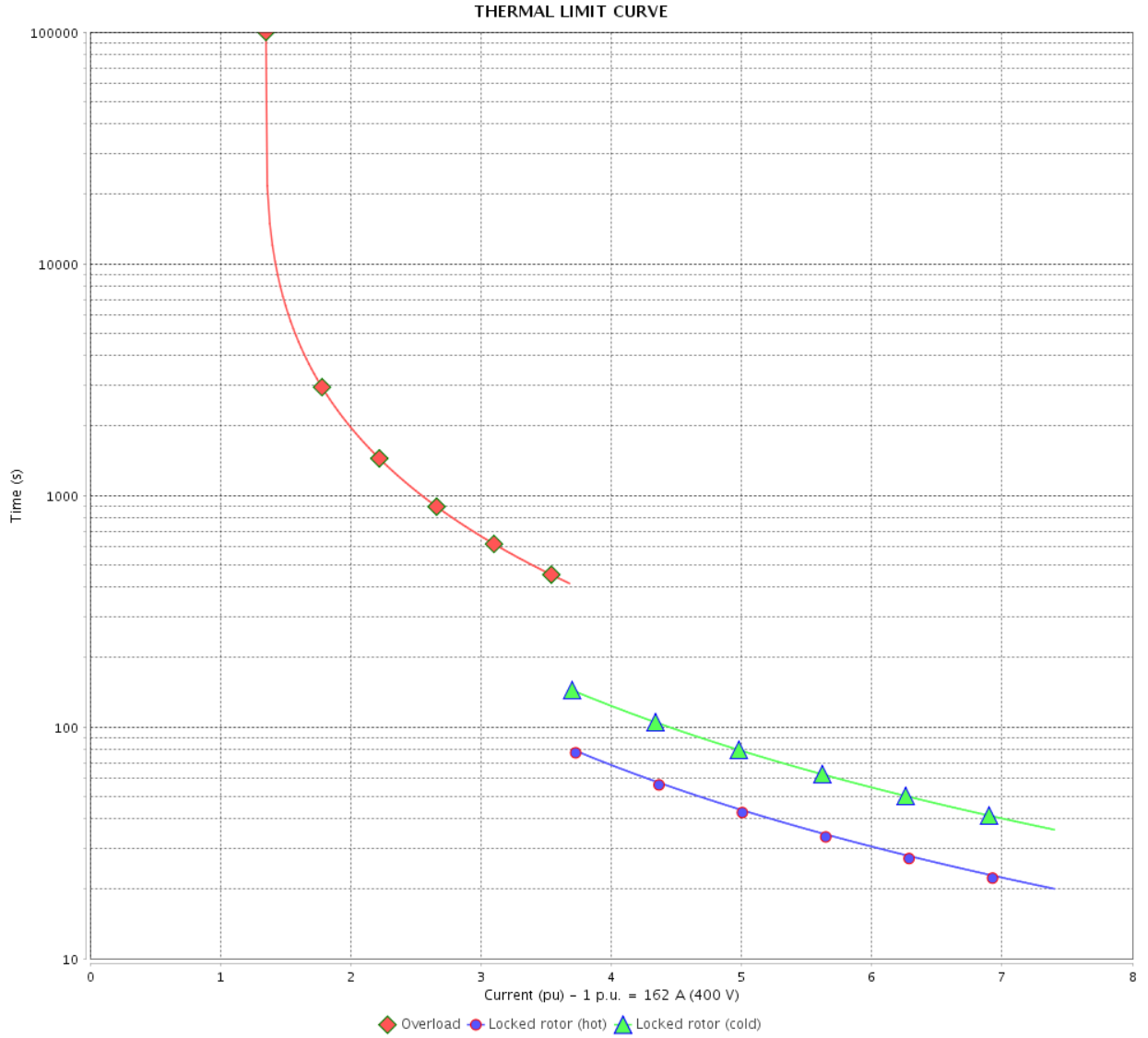
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Performance : 415 V 50 Hz 4P IE3

Rated current	: 158 A	Moment of inertia (J)	: 42.1 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 442 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Heating constant

Cooling constant

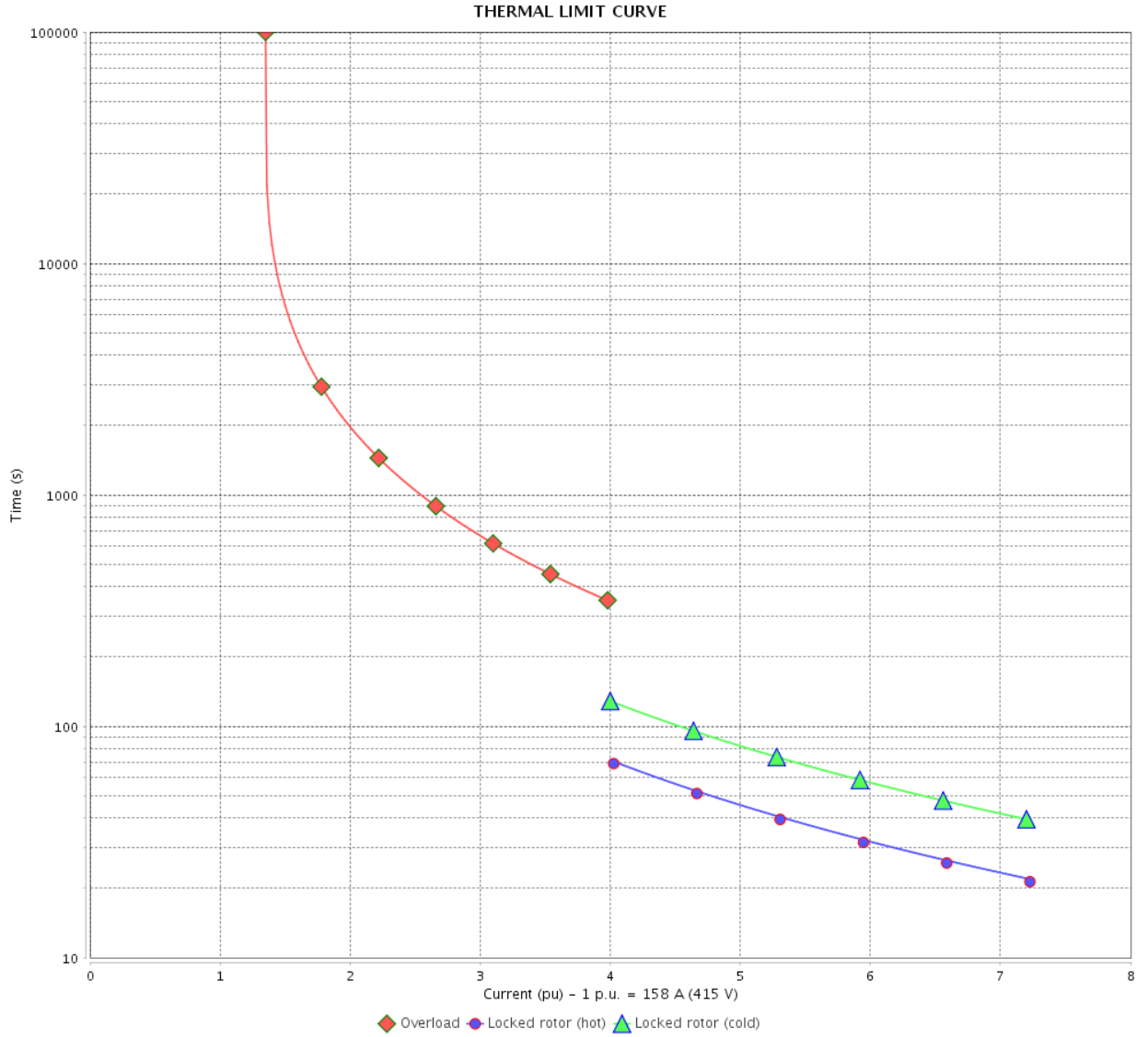
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Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



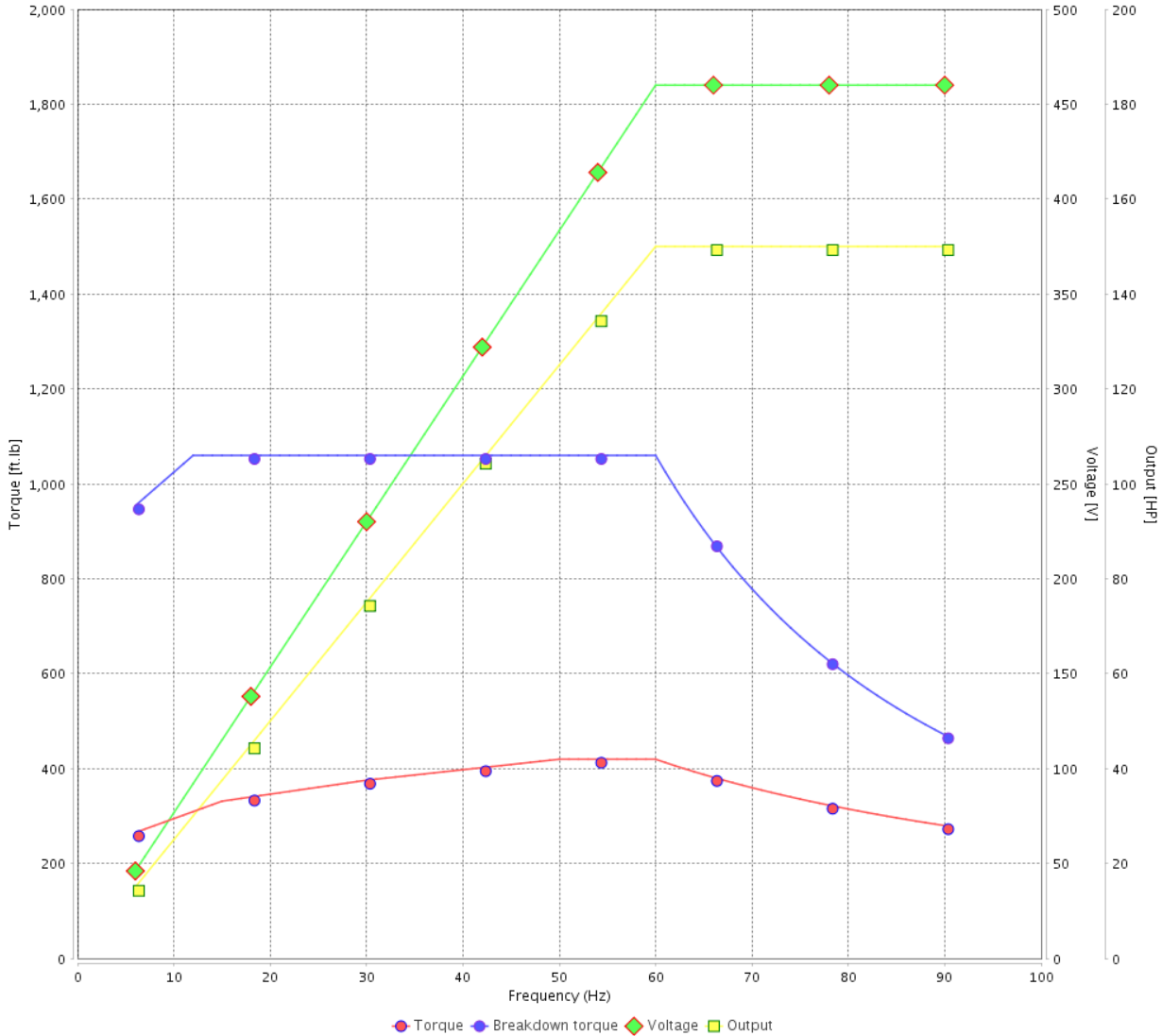
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 Rated speed : 1784 rpm

Moment of inertia (J) : 42.1 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

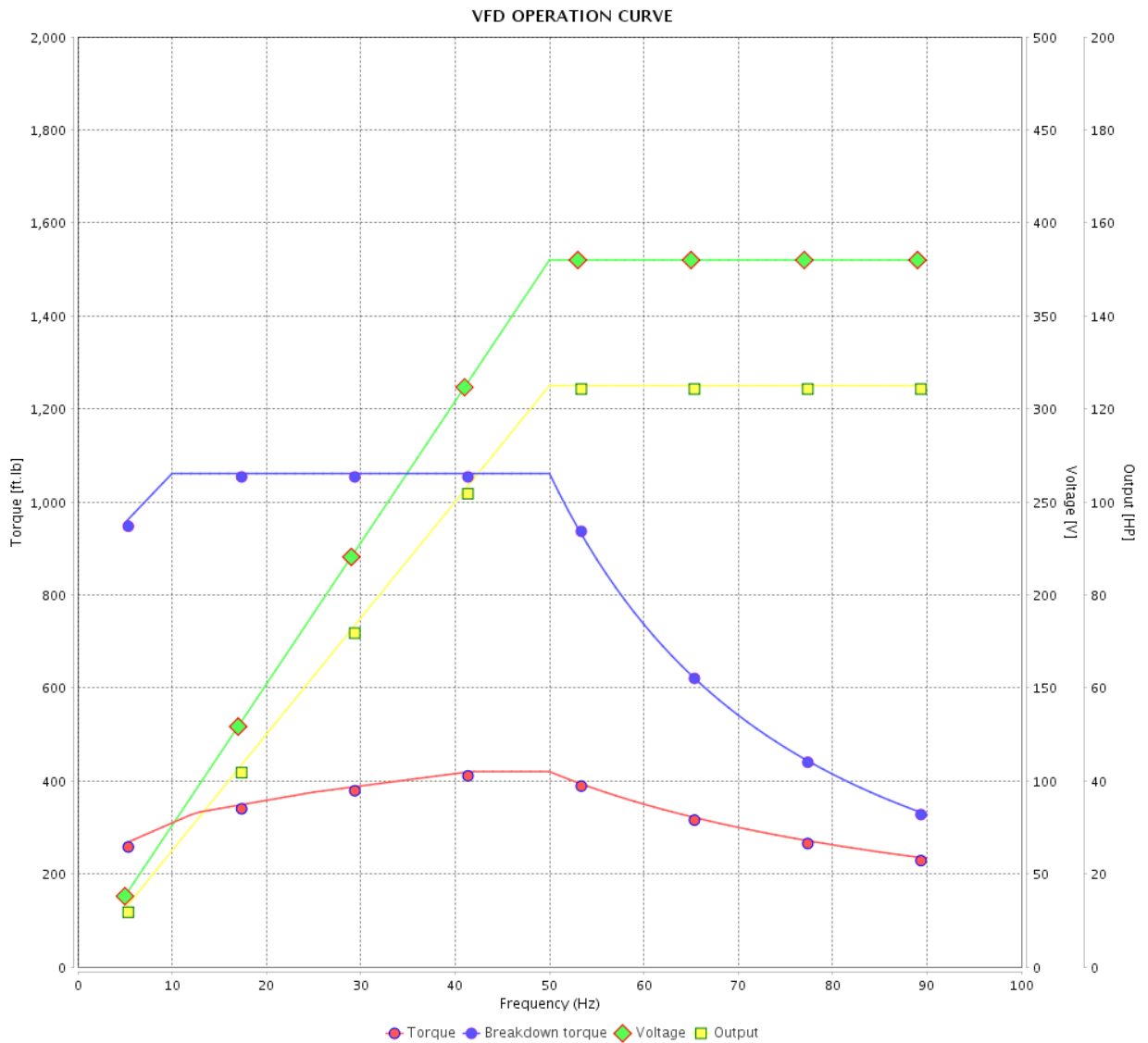


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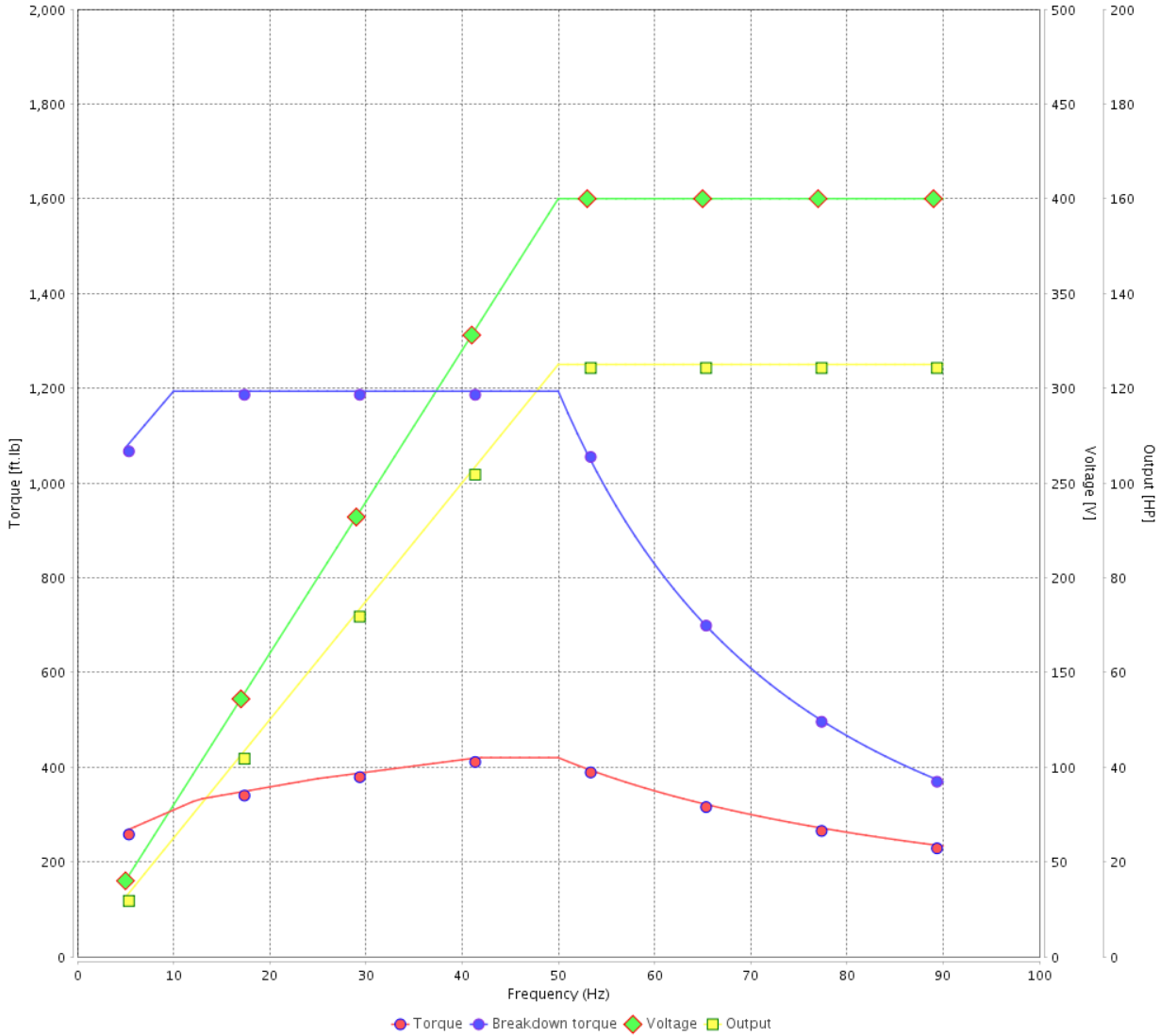
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VFD OPERATION CURVE



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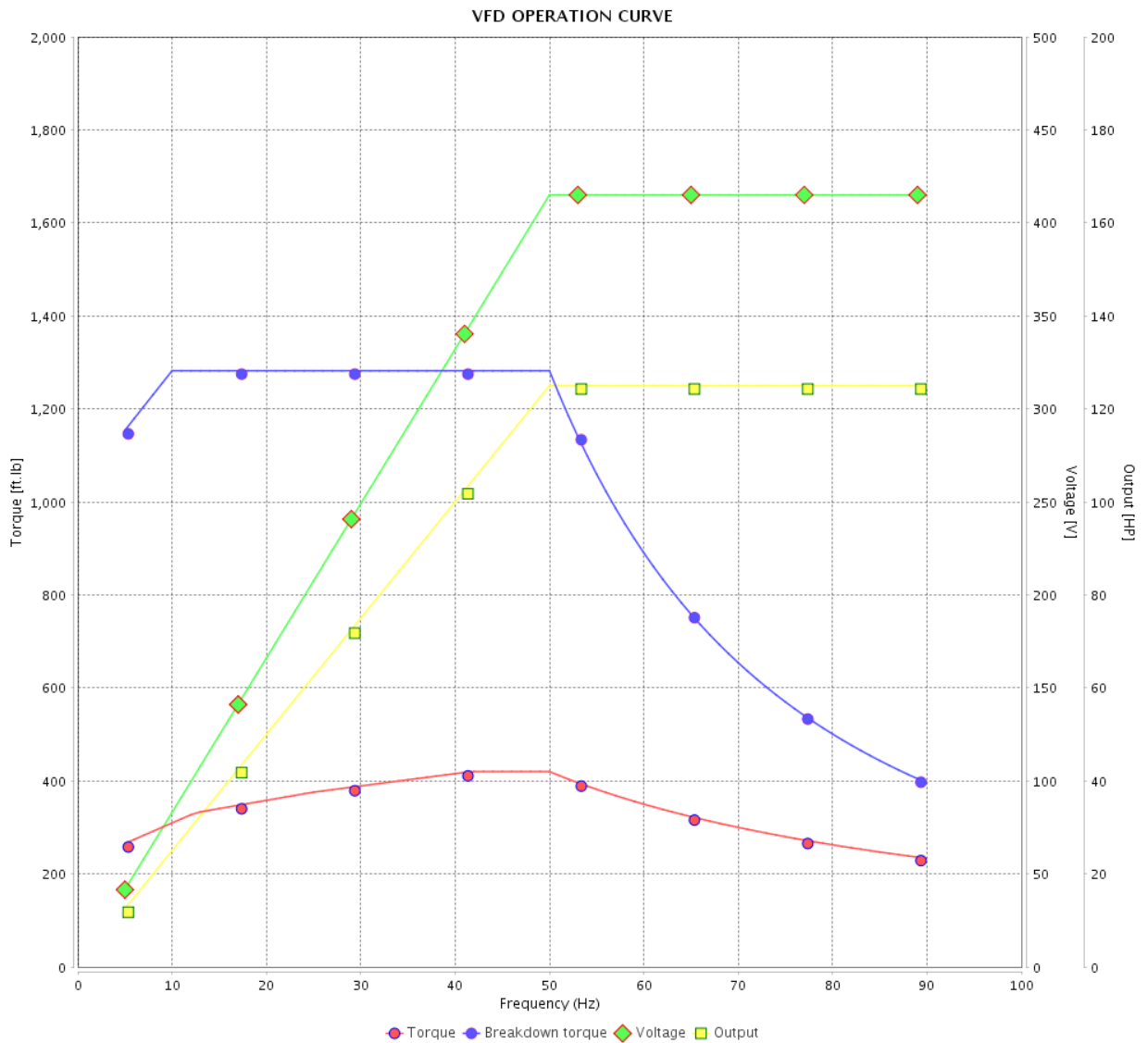


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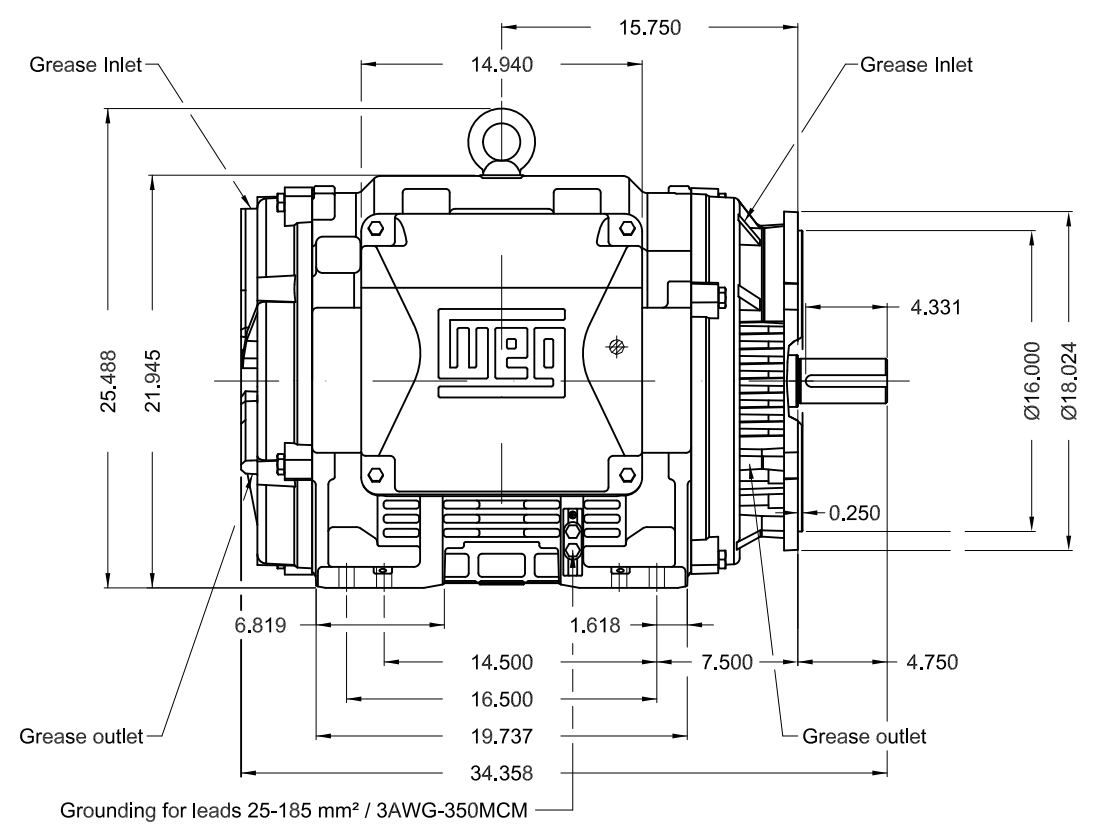
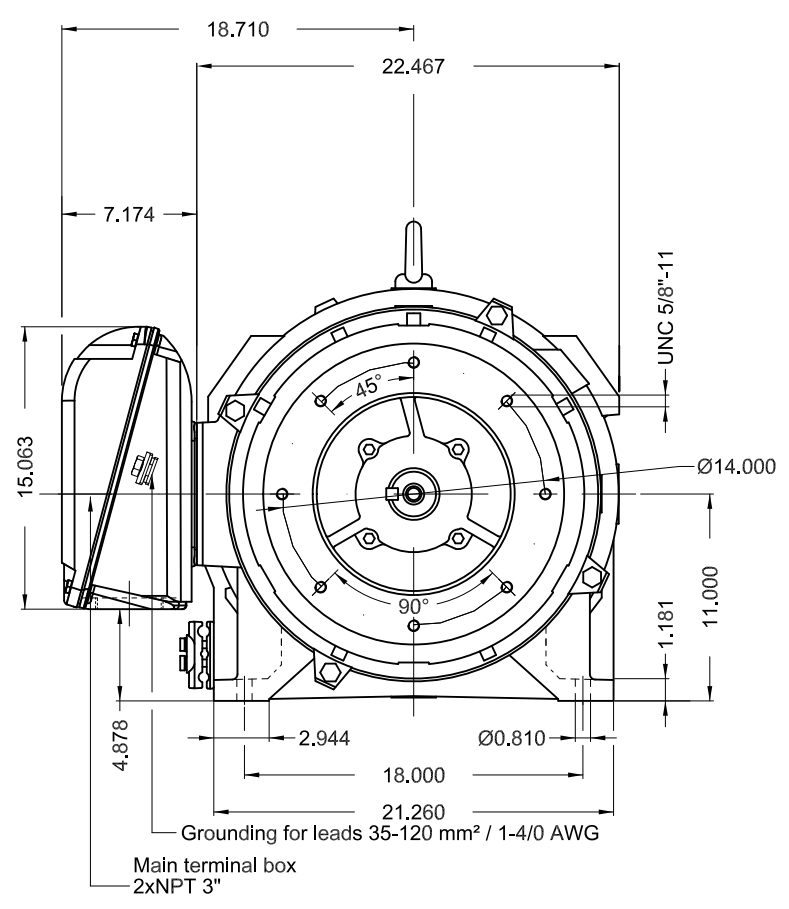


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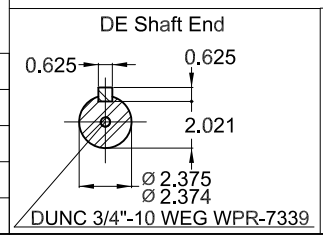
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TS shaft end
 Color RAL 5009
 Painting plan 203A
 Mounting NEMA F-1
 Mounting B34R(D)



150 HP 04 Poles 60 Hz A

1:10

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

PREVIEW
WDD

