

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line		: W40 NEMA Premium Efficiency Three-Phase	Product code :	14504109	
			Catalog # :	05018OT3E326TC-W40G	
Frame	: 324/6TC	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	: 527 lb		
Protection degree	: IP23	Moment of inertia (J)	: 7.08 sq.ft.lb		
Design	: B				
Output [HP]	50	40	40	40	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	117/58.5	58.0	56.4	55.7	
L. R. Amperes [A]	737/369	383	389	401	
LRC [A]	6.3x(Code G)	6.6x(Code G)	6.9x(Code H)	7.2x(Code J)	
No load current [A]	46.4/23.2	22.8	25.2	27.0	
Rated speed [RPM]	1775	1475	1475	1480	
Slip [%]	1.39	1.67	1.67	1.33	
Rated torque [ft.lb]	148	142	142	142	
Locked rotor torque [%]	240	220	250	270	
Breakdown torque [%]	240	240	270	300	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	19s (cold) 11s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	
Noise level ²	66.0 dB(A)				
Efficiency (%)	25%	94.0	92.9	92.9	
	50%	94.1	93.1	93.1	
	75%	94.5	93.5	93.5	
	100%	94.5	93.6	93.6	
Power Factor	25%	0.44	0.44	0.40	
	50%	0.70	0.70	0.66	
	75%	0.80	0.80	0.77	
	100%	0.84	0.84	0.82	
Bearing type	: <u>Drive end</u> 6312 Z C3	<u>Non drive end</u> 6211 Z C3	Foundation loads		
Sealing	: Without	Without	Max. traction		
	Bearing Seal	Bearing Seal	Max. compression		
Lubrication interval	: 20000 h	20000 h			
Lubricant amount	: 21 g	11 g			
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 129A SF 1.15 SFA 149A					
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



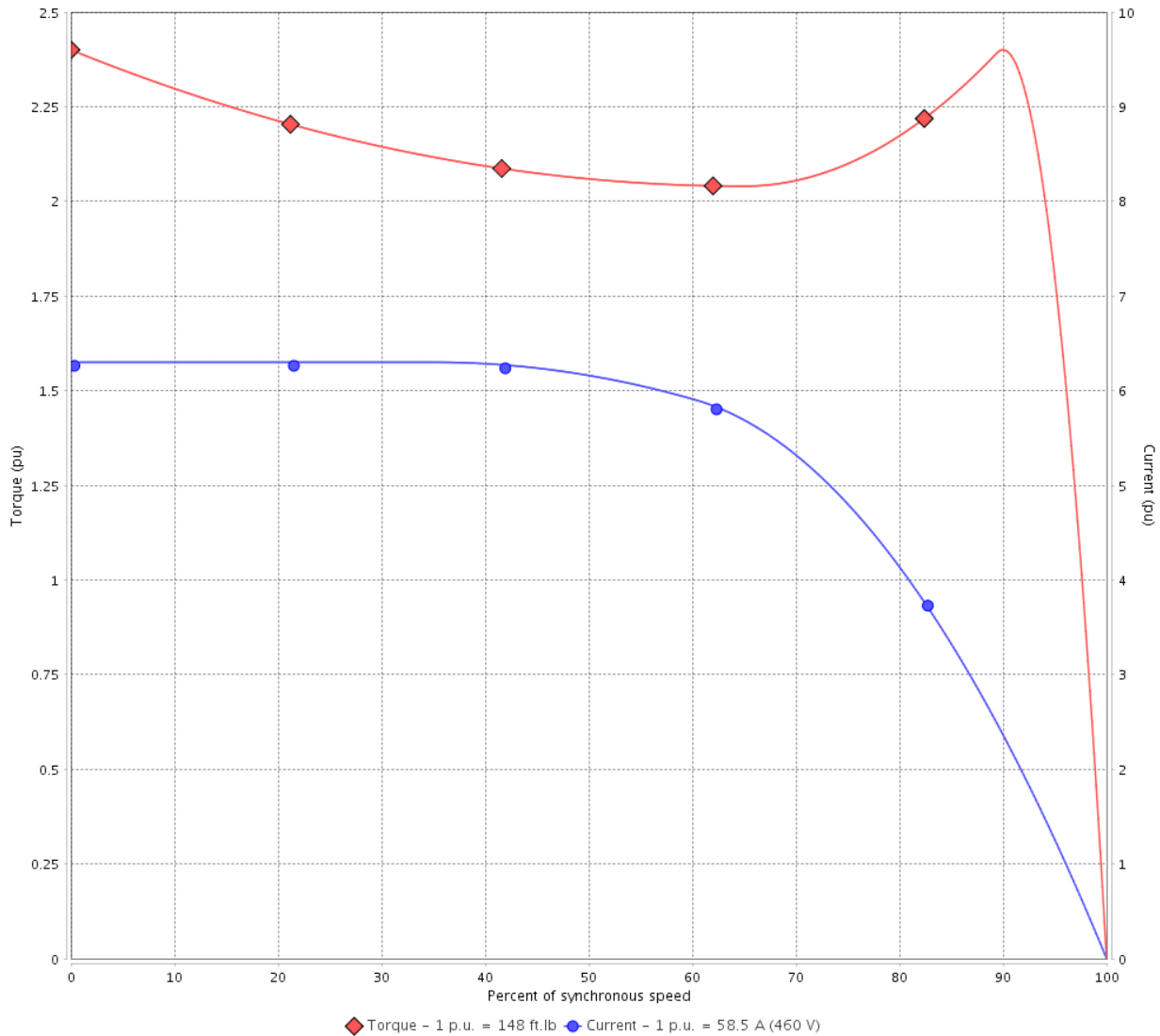
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14504109

Catalog # : 05018OT3E326TC-W40G

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 117/58.5 A
LRC : 6.3
Rated torque : 148 ft.lb
Locked rotor torque : 240 %
Breakdown torque : 240 %
Rated speed : 1775 rpm

Moment of inertia (J) : 7.08 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

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

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TORQUE AND CURRENT VS SPEED CURVE



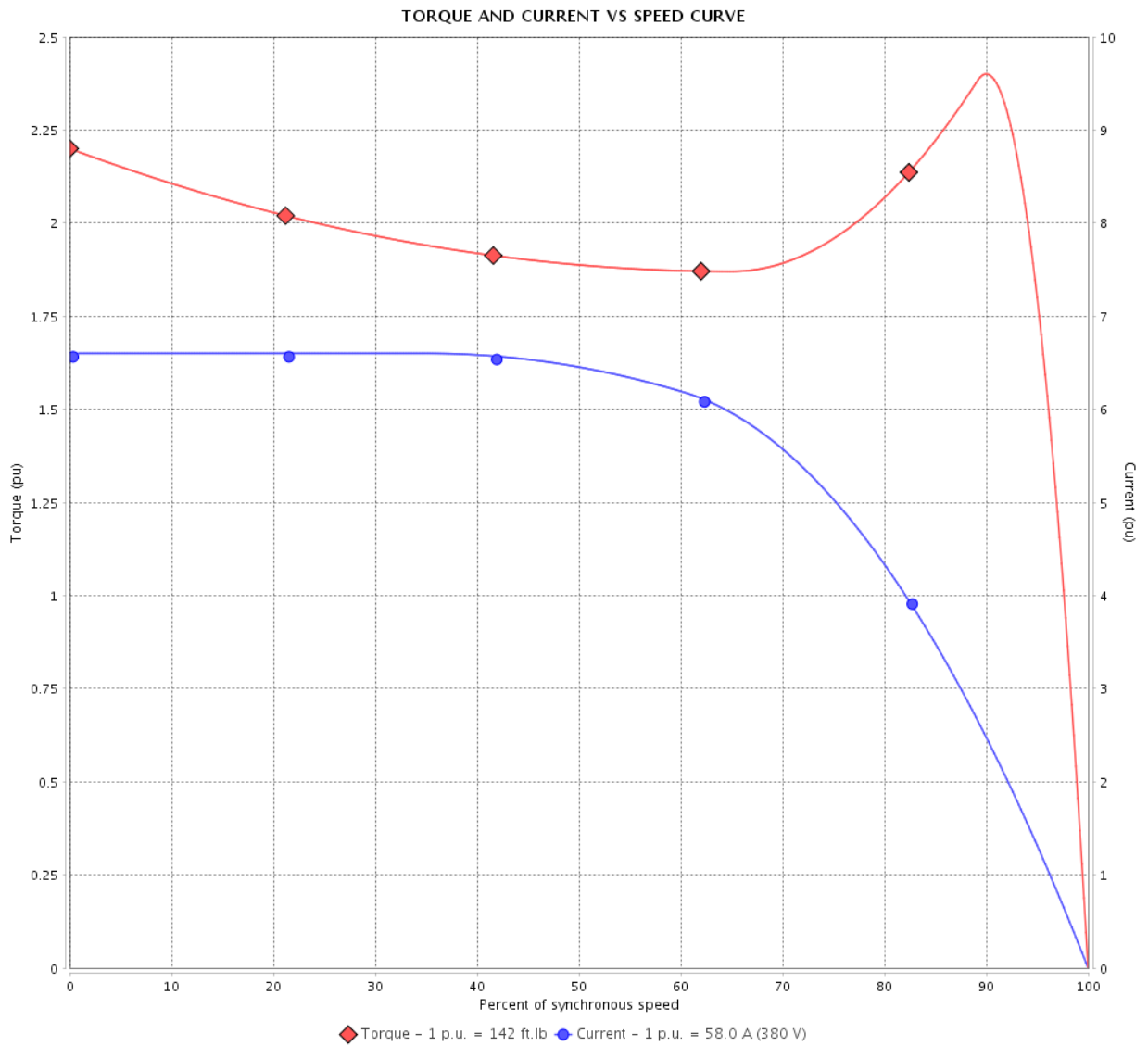
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14504109

Catalog # : 05018OT3E326TC-W40G



Performance : 380 V 50 Hz 4P IE3

Rated current : 58.0 A
 LRC : 6.6
 Rated torque : 142 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 240 %
 Rated speed : 1475 rpm

Moment of inertia (J) : 7.08 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 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



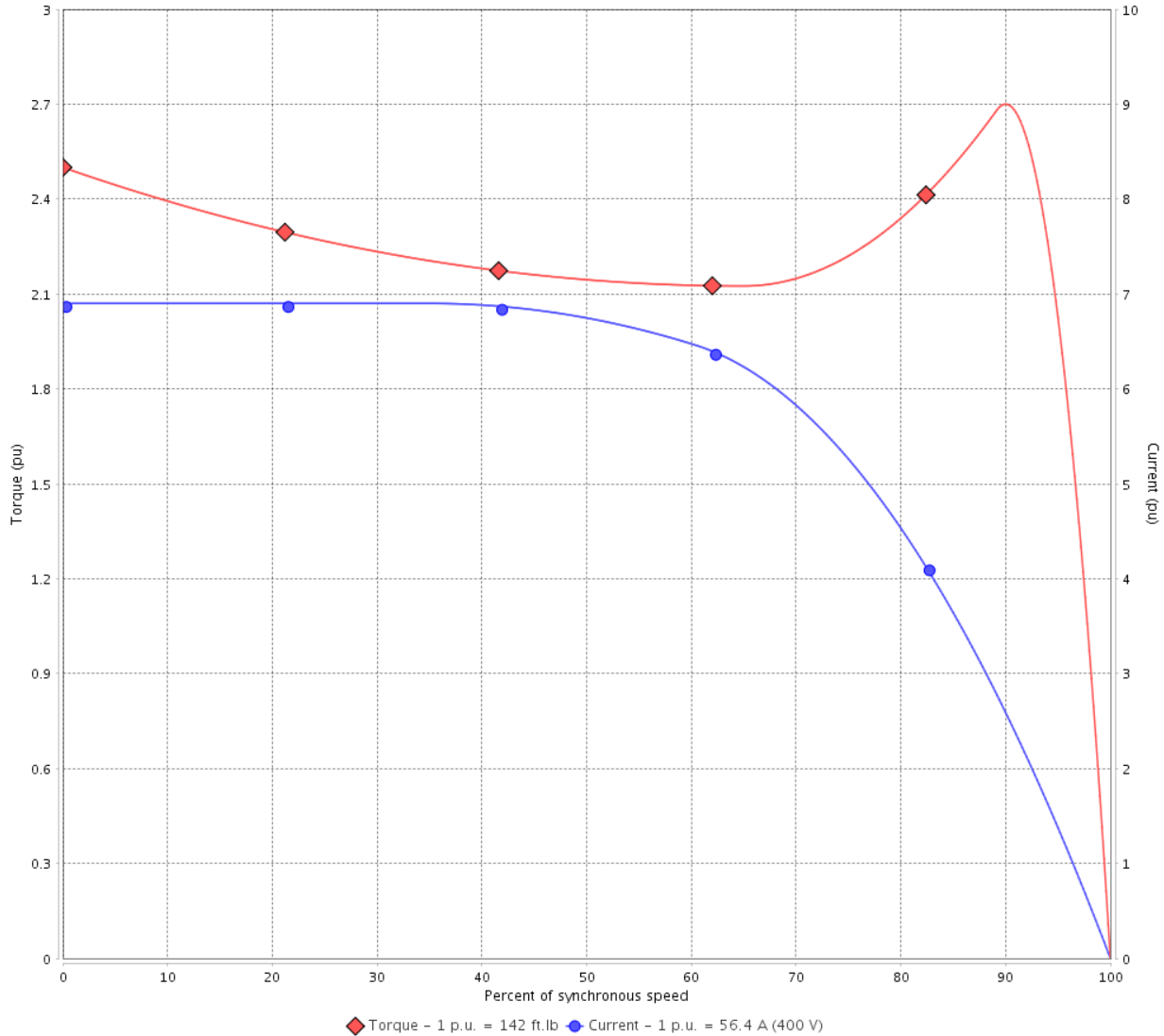
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14504109

Catalog # : 05018OT3E326TC-W40G

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 56.4 A	Moment of inertia (J)	: 7.08 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 142 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1475 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



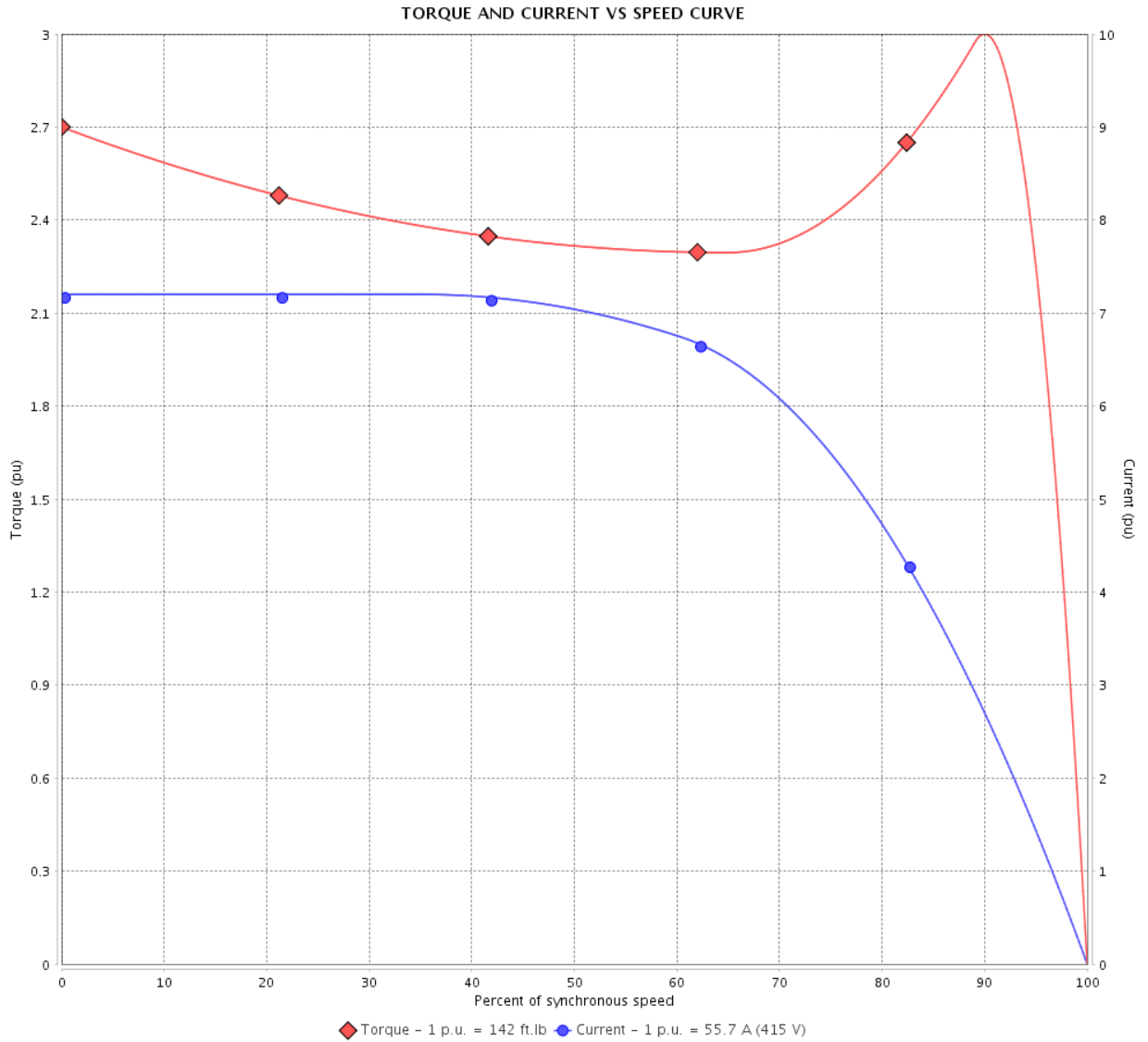
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Rated torque	: 142 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

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

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



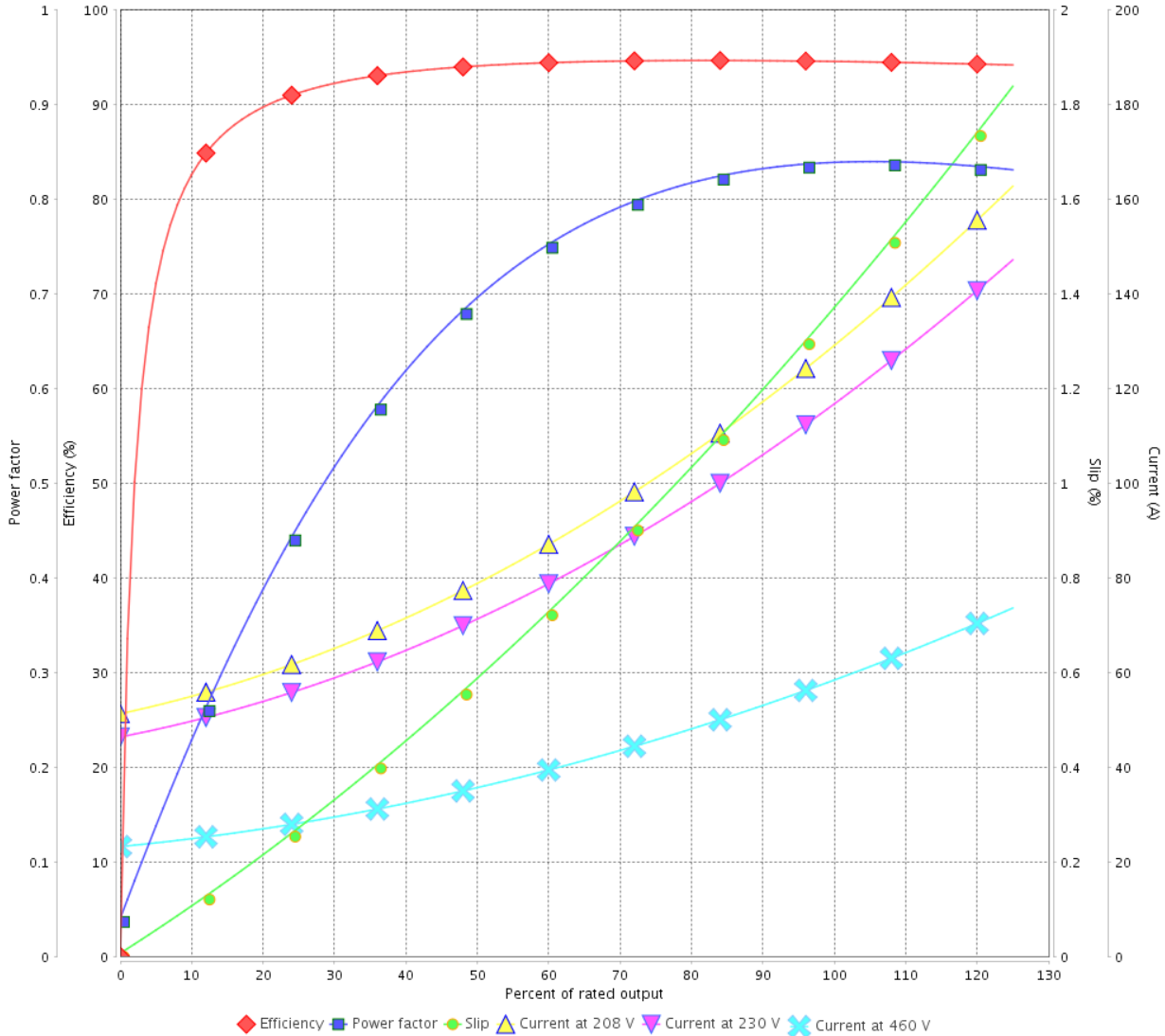
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LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 117/58.5 A
 LRC : 6.3
 Rated torque : 148 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 240 %
 Rated speed : 1775 rpm

Moment of inertia (J) : 7.08 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
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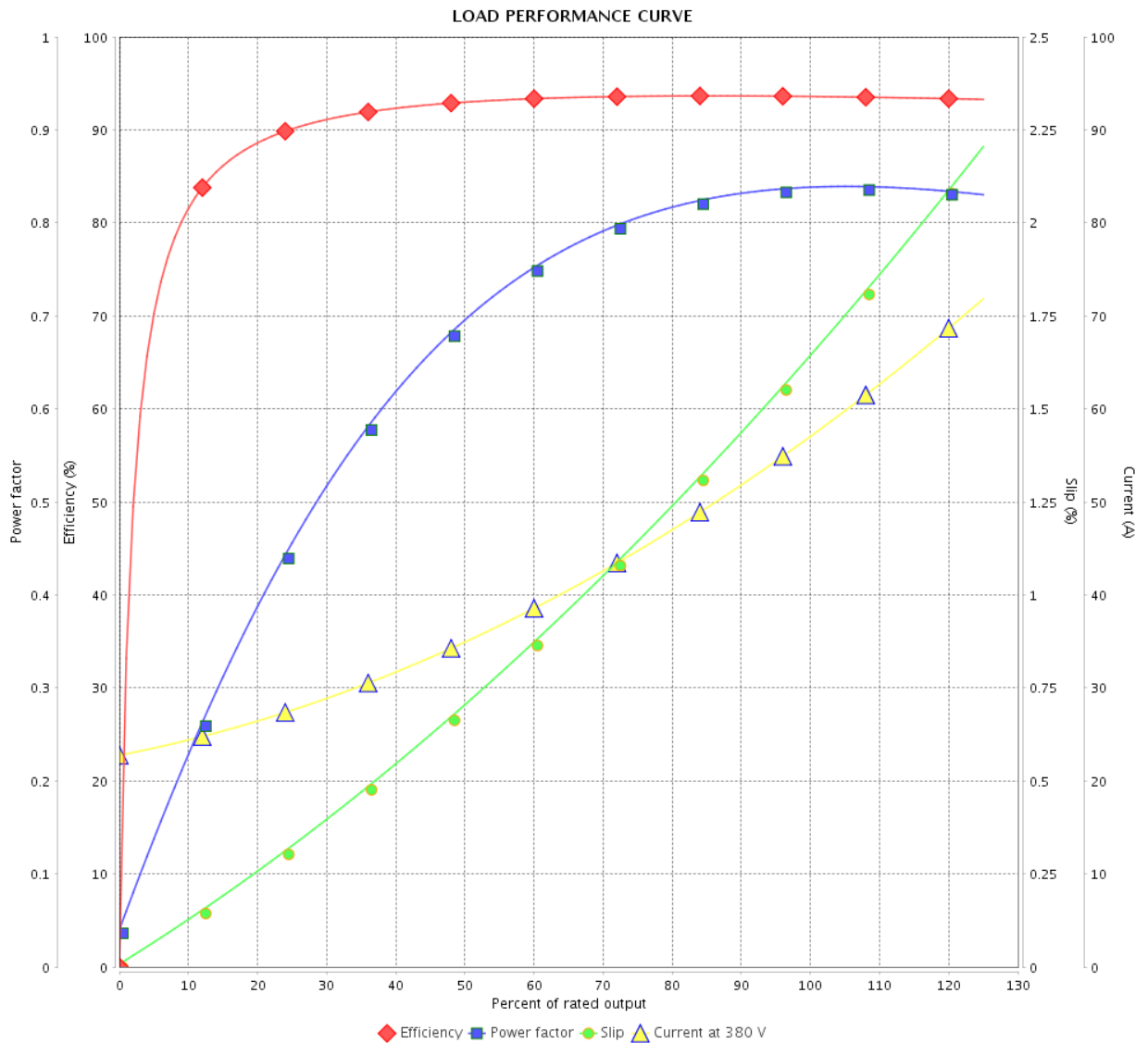


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Performance : 380 V 50 Hz 4P IE3

Rated current : 58.0 A
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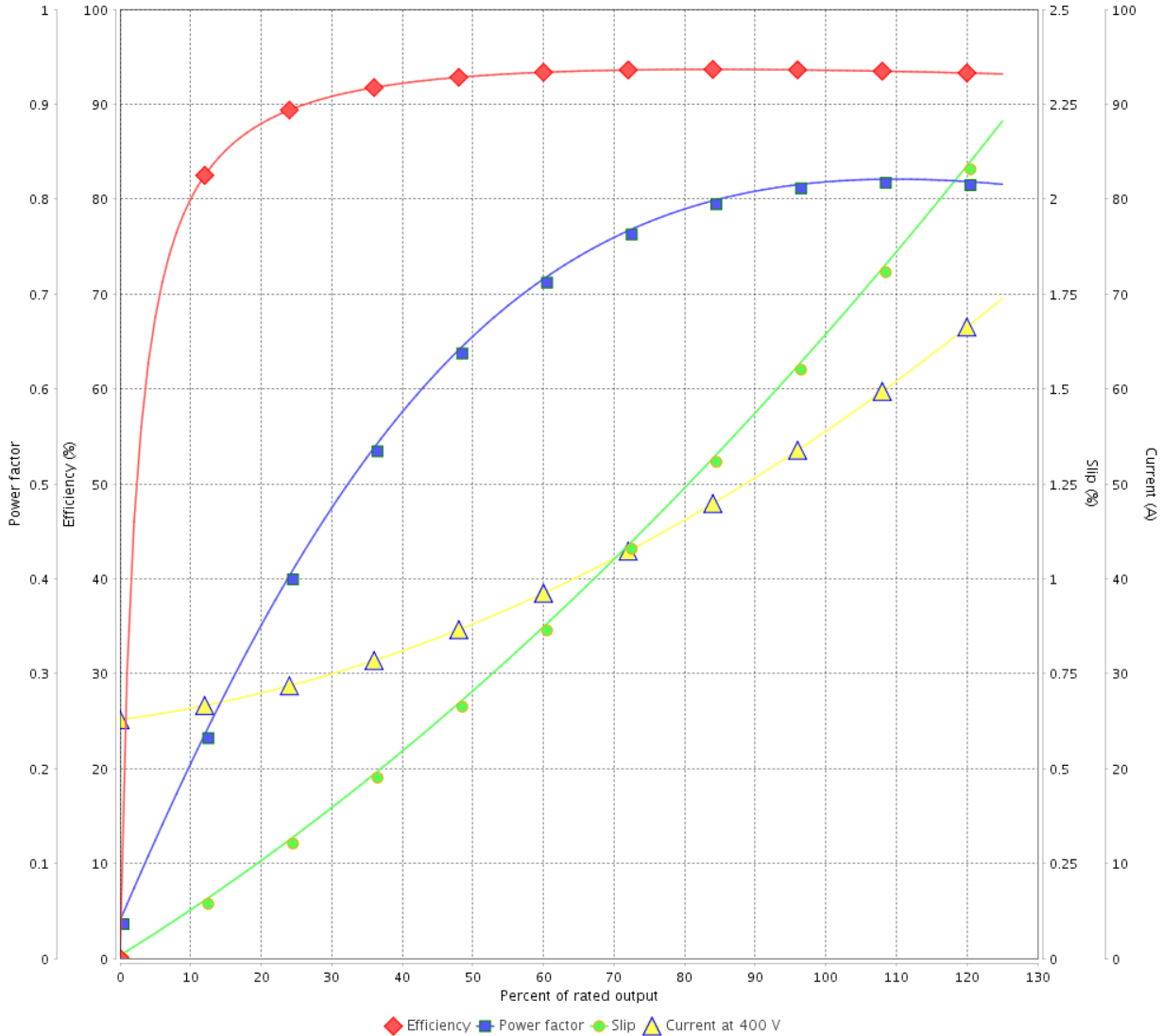
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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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Three Phase Induction Motor - Squirrel Cage

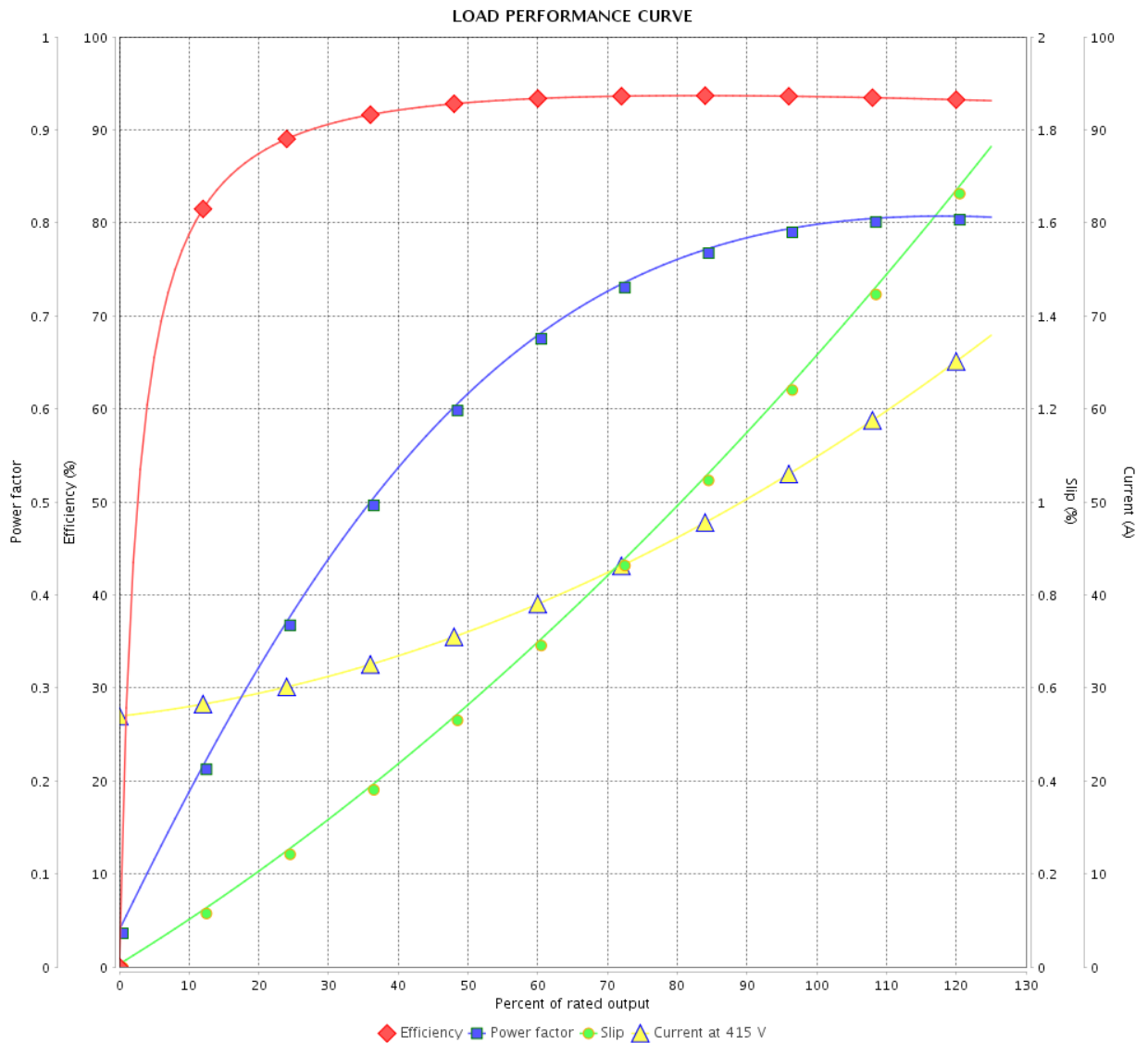


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THERMAL LIMIT CURVE



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Heating constant

Cooling constant

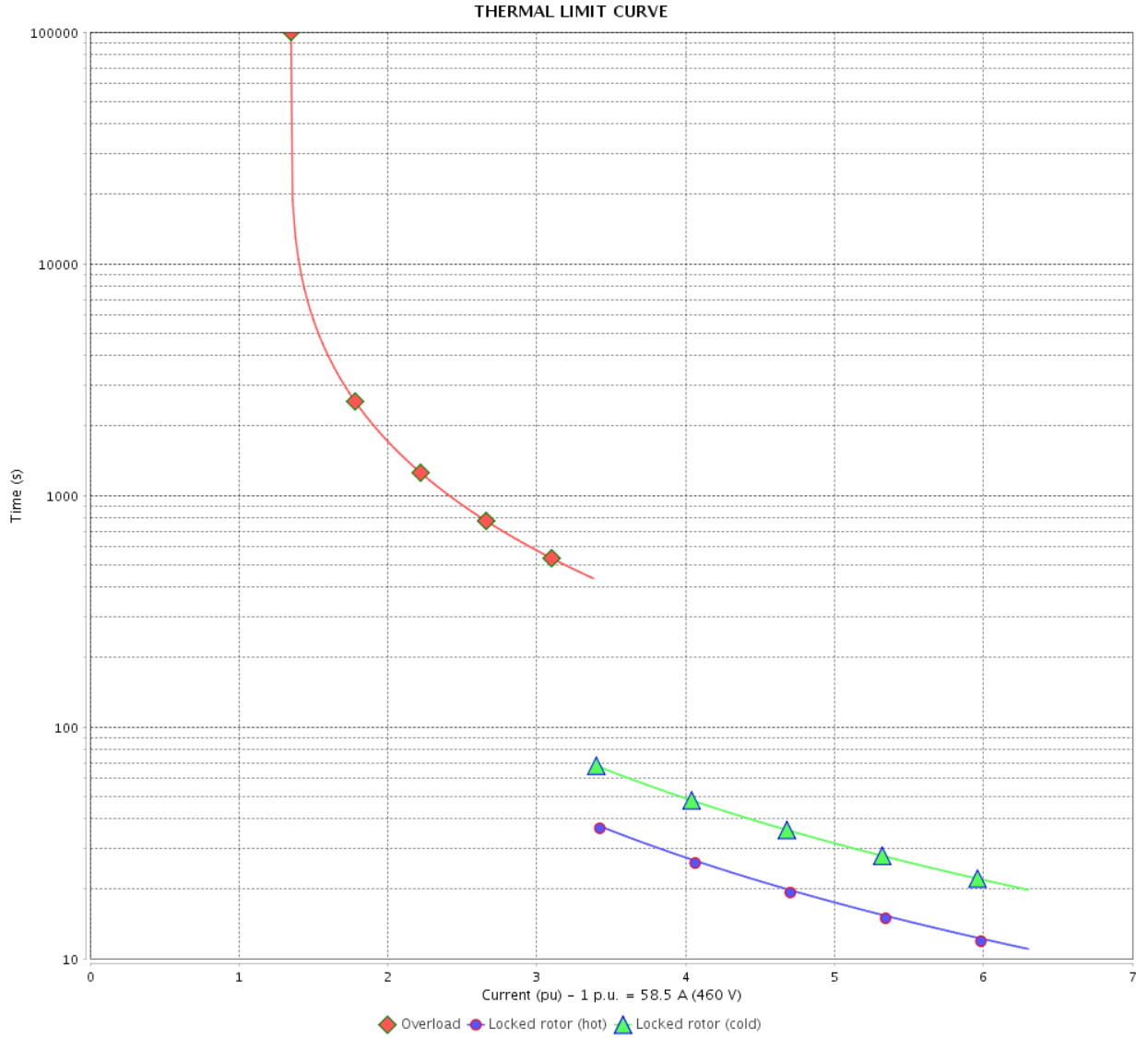
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Heating constant

Cooling constant

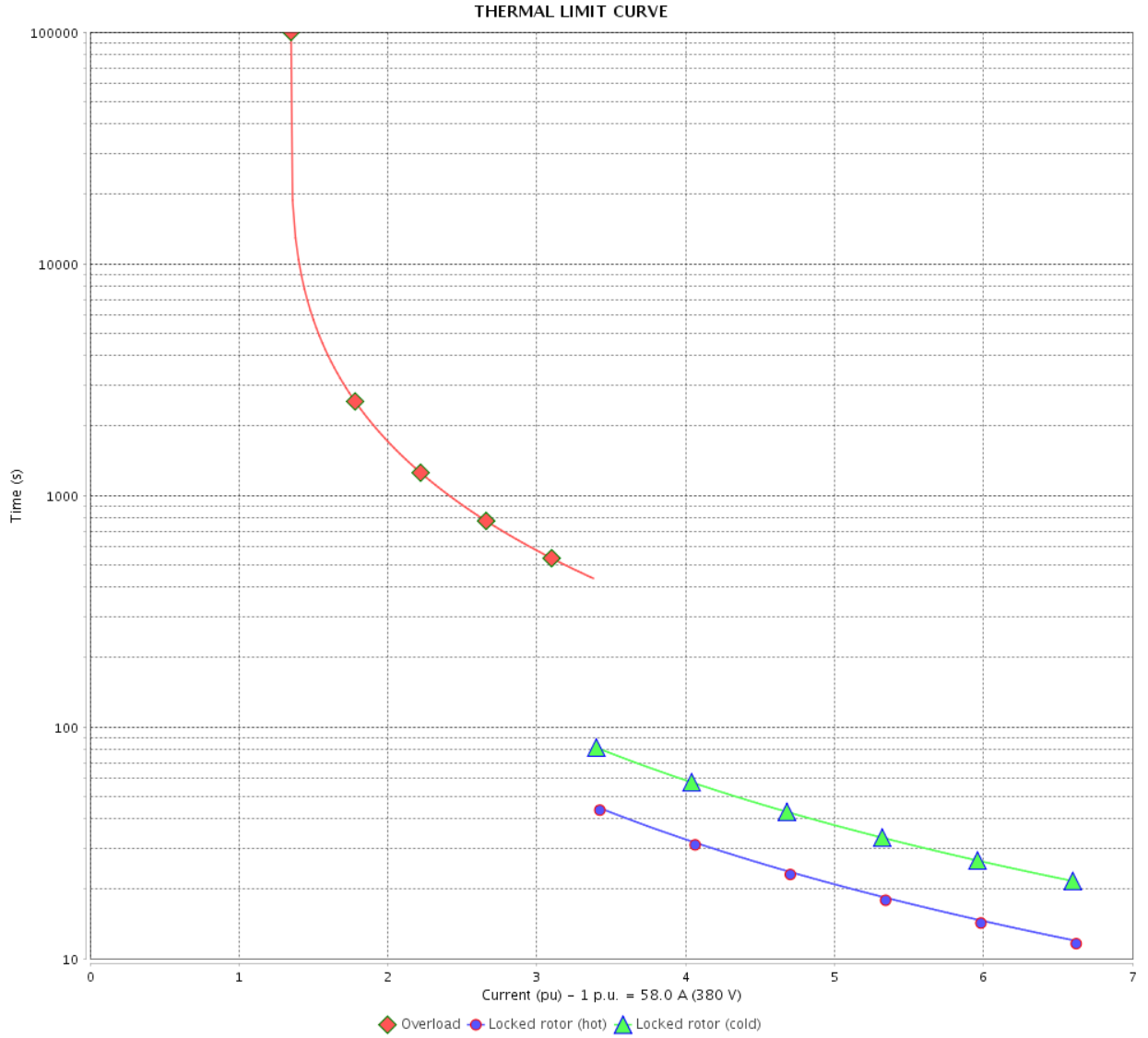
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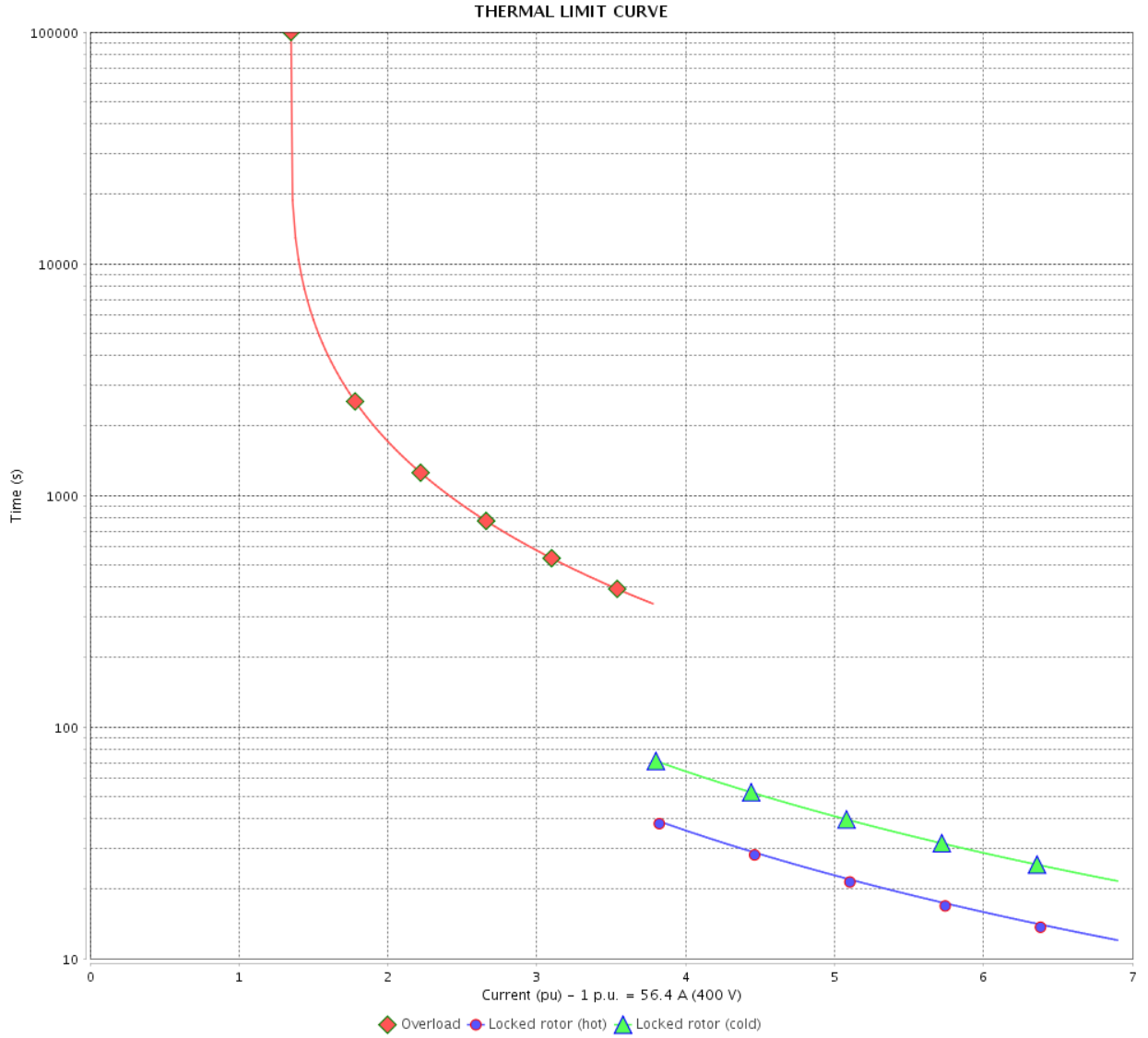
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THERMAL LIMIT CURVE



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Performance : 415 V 50 Hz 4P IE3

Rated current	: 55.7 A	Moment of inertia (J)	: 7.08 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 142 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Heating constant

Cooling constant

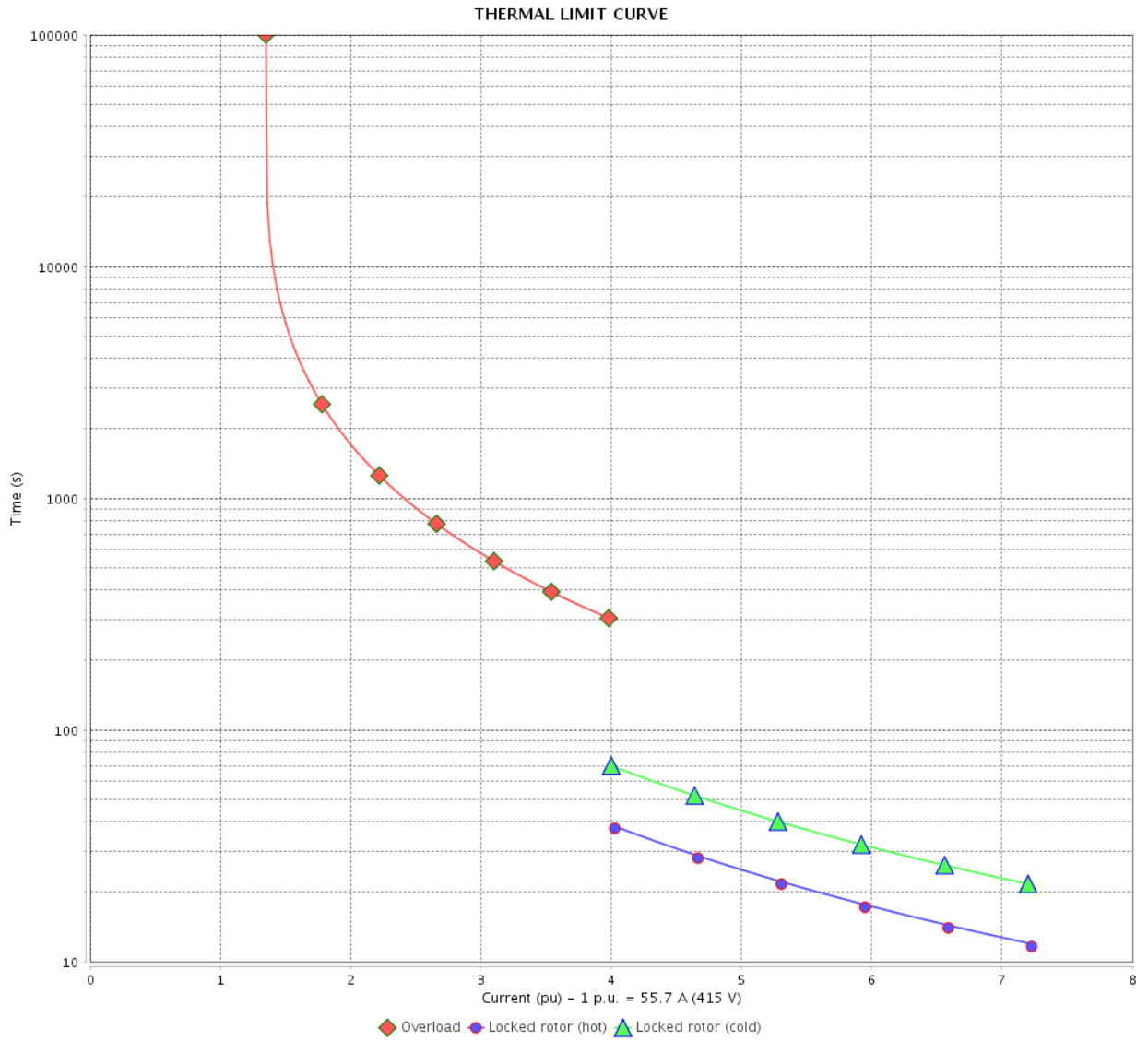
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Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



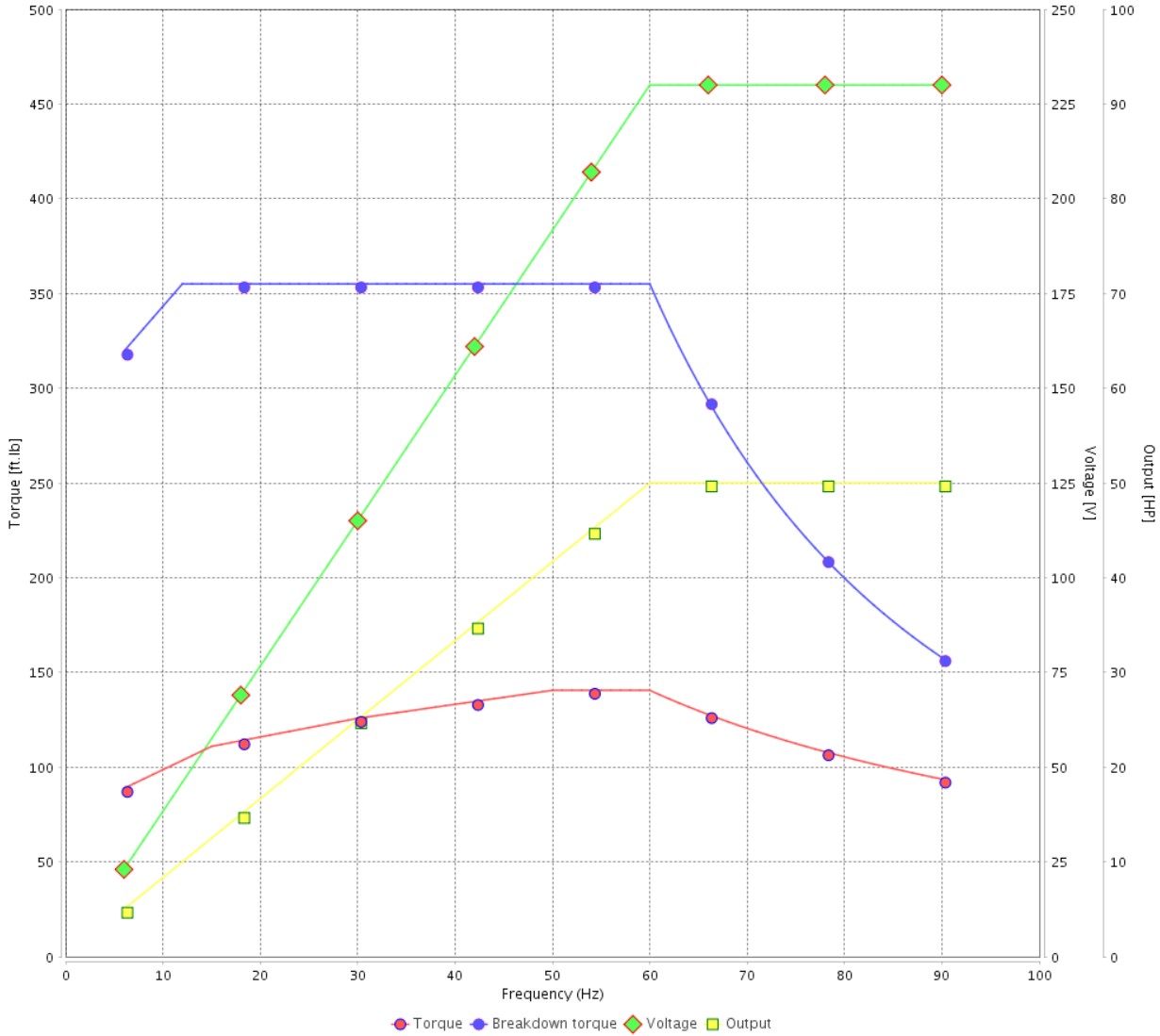
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 Insulation class : F
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

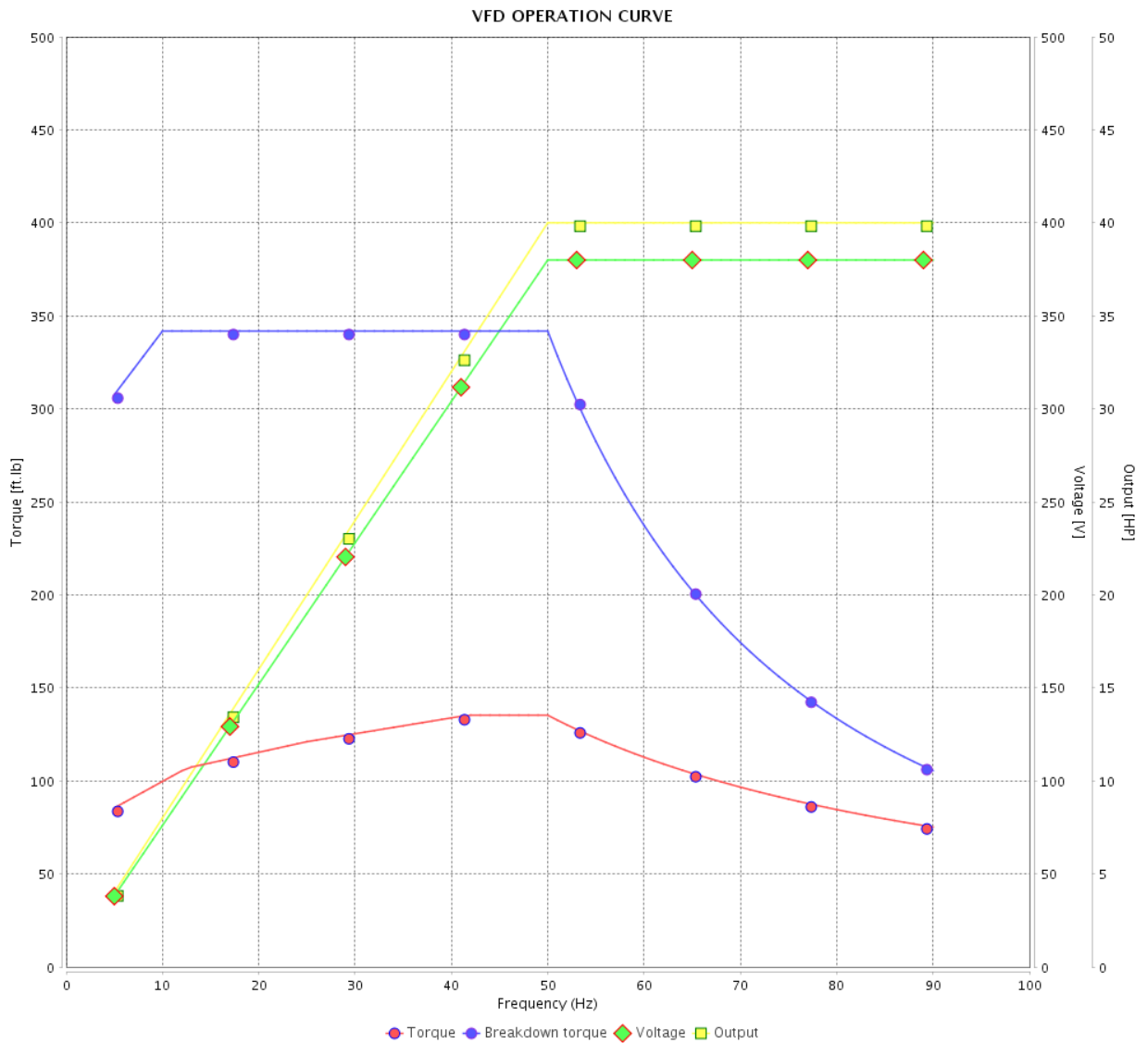


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Performance : 380 V 50 Hz 4P IE3

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Service factor : 1.00
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Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

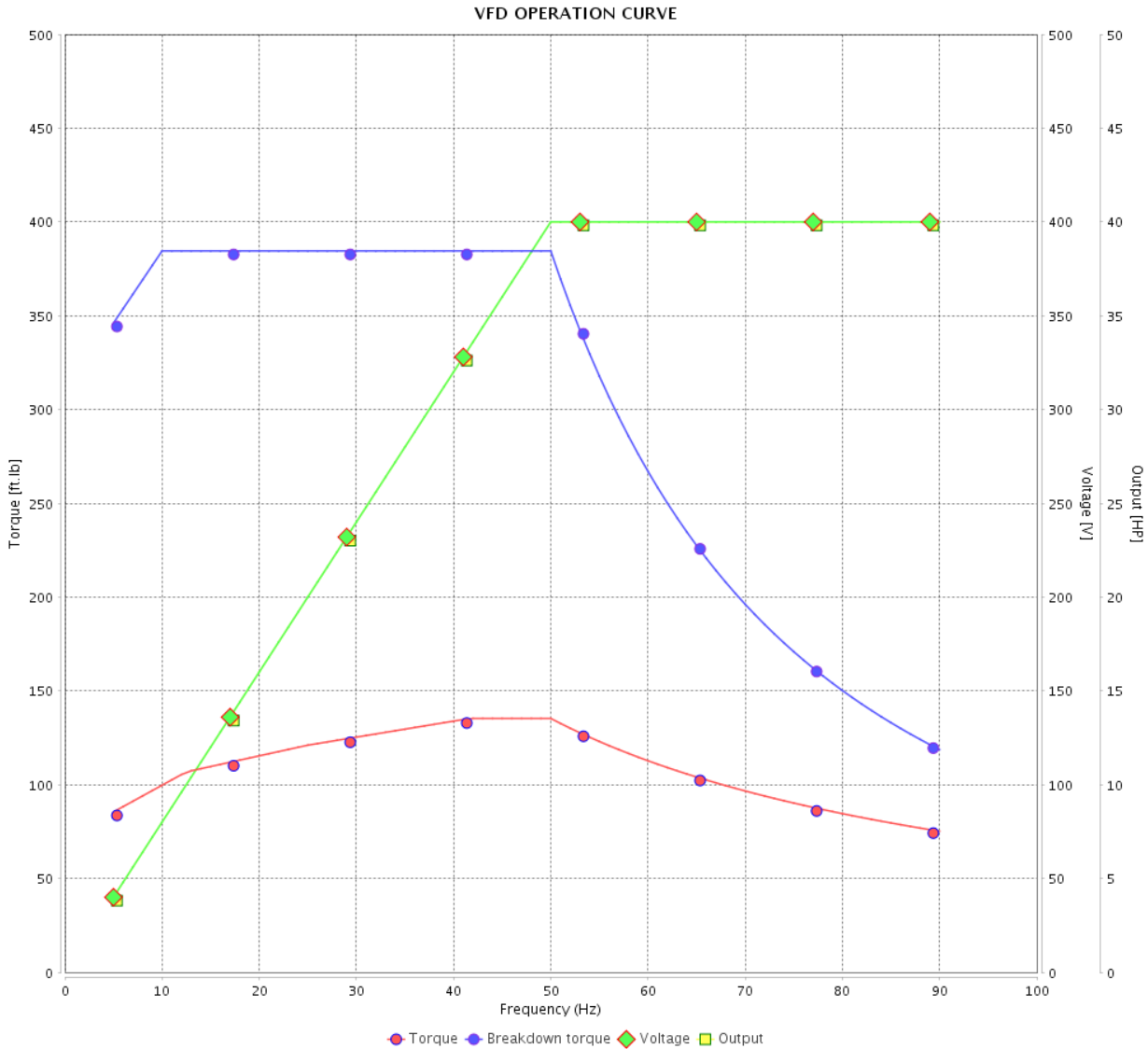


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Date	12/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

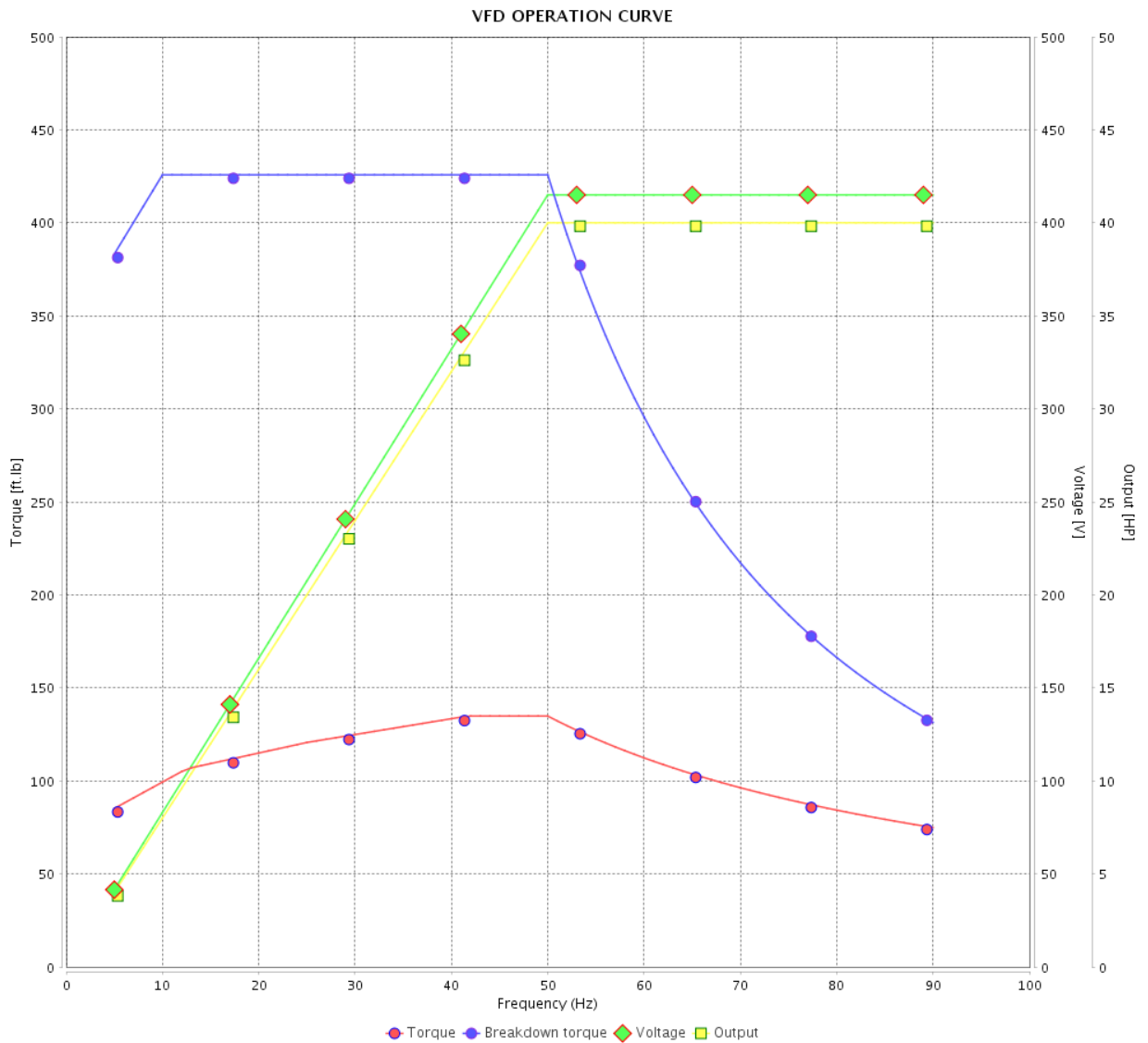


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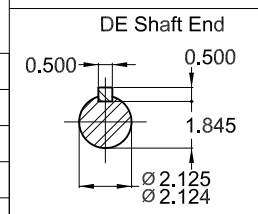
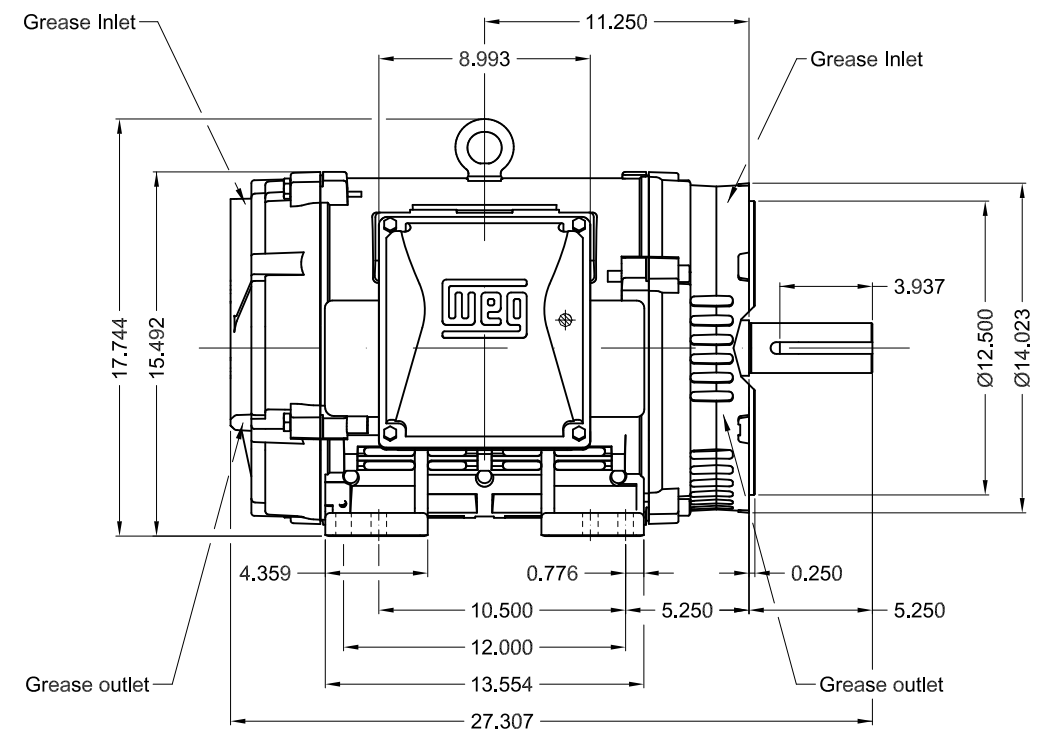
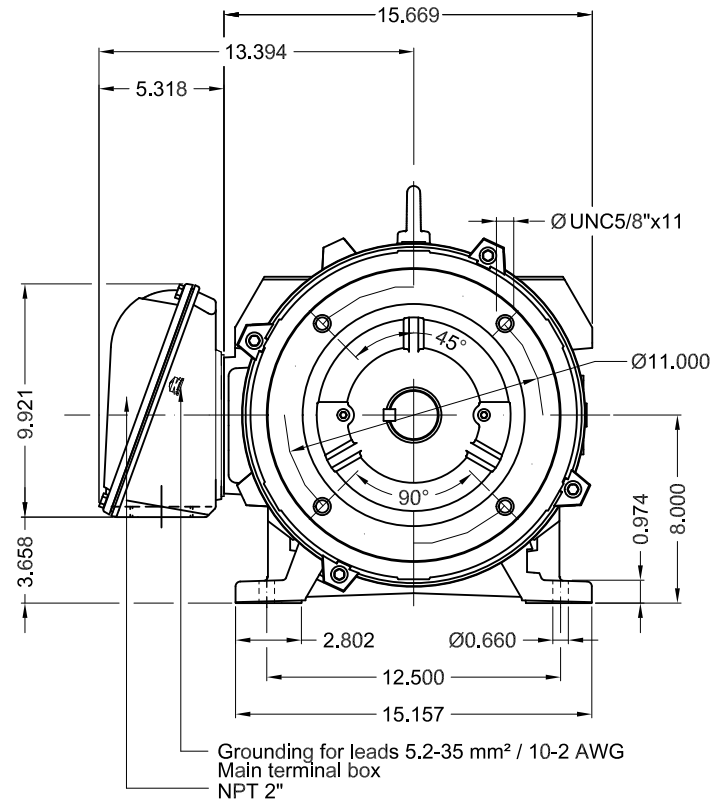


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Rated speed : 1480 rpm

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

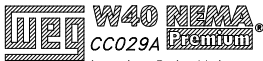
50 HP 04 Poles 60 Hz A

1:8

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 PREM. EFF.					
CHECKED		FRAME 324/6TC IP23 ODP					
RELEASED							
REL DT.		WMO Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD





W40 NEMA
CC029A Premium

Inverter Duty Motor



3PT9
LISTED

IEC 60034-1

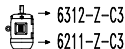
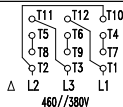
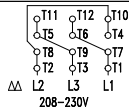
MOD.T01#FOXON



For 60Hz use on PWM, VT 1000:1, CT 3:1, 1.0SF

MODEL 050180T3E326TC-W40G
MADE IN BRAZIL
14504109

PH 3	FR 324/6TC	HP(kW) 50.0(37.0)	Hz 60
V 230/460	A 117/58.5	RPM 1775	DES B
NEMA NOM EFF 94.5 %	INS. CL. F Δ T 80 K	IP23	
ENCL ODP	DUTY CONT.	AMB. 40°C	
CODE G	PF 0.84	SF 1.25	SFA 146/73.1
USABLE @208V	129 A	SF 1.15	SFA 148
40HP 30kW 50Hz 380V 58.0A 1475RPM SF1.00 EFF 93.6% (IE3)	ALT 1000 m.a.s.l.		



MOBIL POLYREX EM
21 g 20000 h

ALT 1000 m.a.s.l. 527 Lbs