

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :				
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	12730574	
		Catalog # :	01518ET3ER254TC-S	
Frame	: 254/6TC	Cooling method	: IC411 - TEFC	
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	: 225 lb	
Protection degree	: IP55	Moment of inertia (J)	: 2.15 sq.ft.lb	
Design	: B			
Output [HP]	15	15	15	
Poles	4	4	4	
Frequency [Hz]	60	50	50	
Rated voltage [V]	230/460	190/380	220/415	
Rated current [A]	36.4/18.2	43.8/21.9	39.4/20.9	
L. R. Amperes [A]	237/118	241/120	240/127	
LRC [A]	6.5x(Code G)	5.5x(Code F)	6.1x(Code G)	
No load current [A]	17.3/8.65	17.1/8.53	17.5/9.28	
Rated speed [RPM]	1770	1455	1460	
Slip [%]	1.67	3.00	2.67	
Rated torque [ft.lb]	44.5	54.1	54.0	
Locked rotor torque [%]	250	190	210	
Breakdown torque [%]	300	229	260	
Service factor	1.15	1.00	1.00	
Temperature rise	80 K	105 K	105 K	
Locked rotor time	34s (cold) 19s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)	
Noise level ²	68.0 dB(A)	65.0 dB(A)	65.0 dB(A)	
Efficiency (%)	25%	90.8	92.5	91.9
	50%	91.0	91.5	91.2
	75%	92.4	91.2	91.4
	100%	92.4	89.9	90.4
Power Factor	25%	0.39	0.45	0.41
	50%	0.64	0.71	0.67
	75%	0.76	0.81	0.78
	100%	0.82	0.85	0.84
Bearing type	: <u>Drive end</u> 6309 Z C3 <u>Non drive end</u> 6208 Z C3	Foundation loads		
Sealing	: V'Ring Without Bearing Seal	Max. traction	: 560 lb	
		Max. compression	: 785 lb	
Lubrication interval	: 20000 h 20000 h			
Lubricant amount	: 13 g 8 g			
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V 40.2A SF 1.00 SFA 40.2A				
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



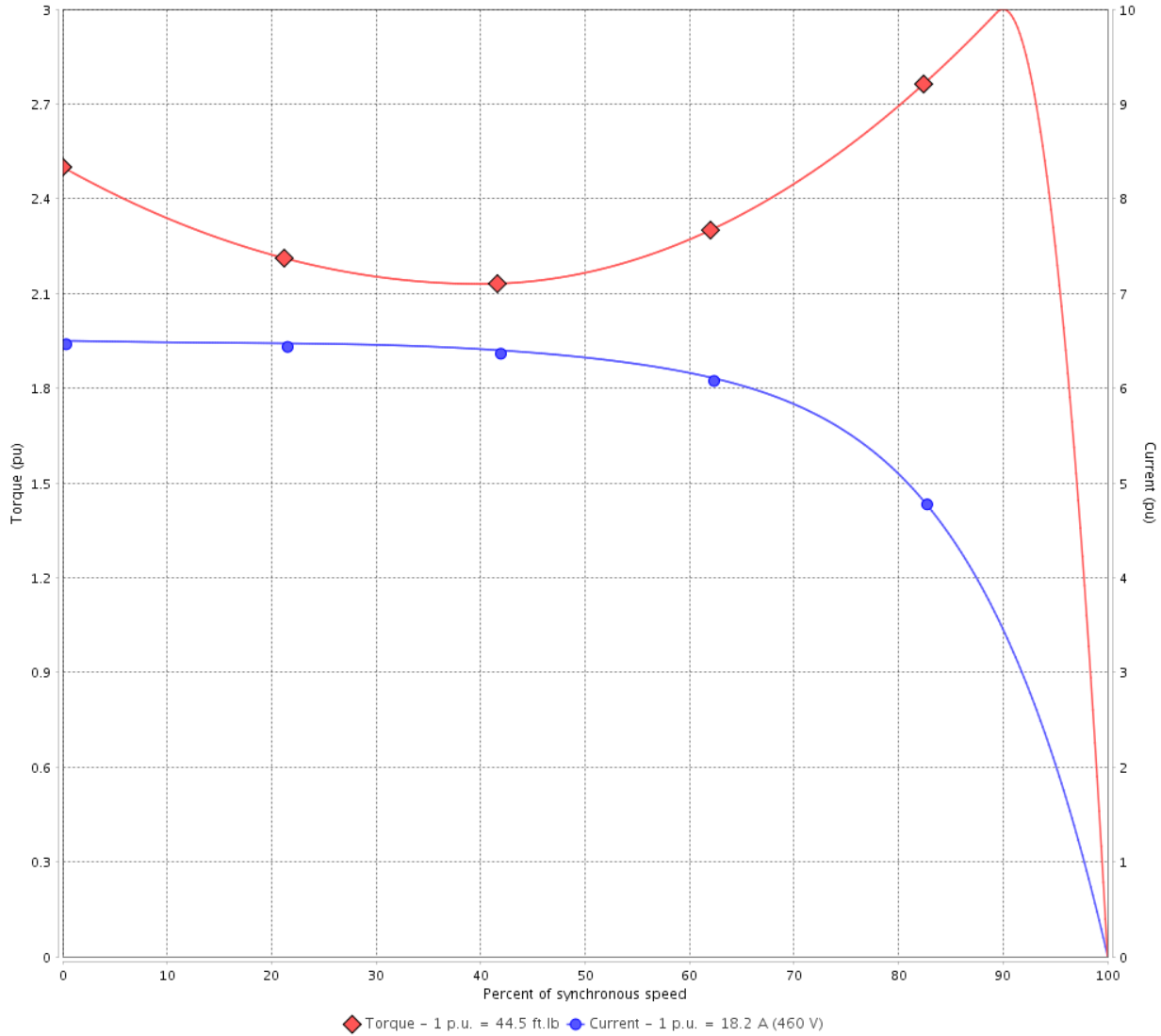
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12730574

Catalog # : 01518ET3ER254TC-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current	: 36.4/18.2 A	Moment of inertia (J)	: 2.15 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 44.5 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.15
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: B

Locked rotor time : 34s (cold) 19s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



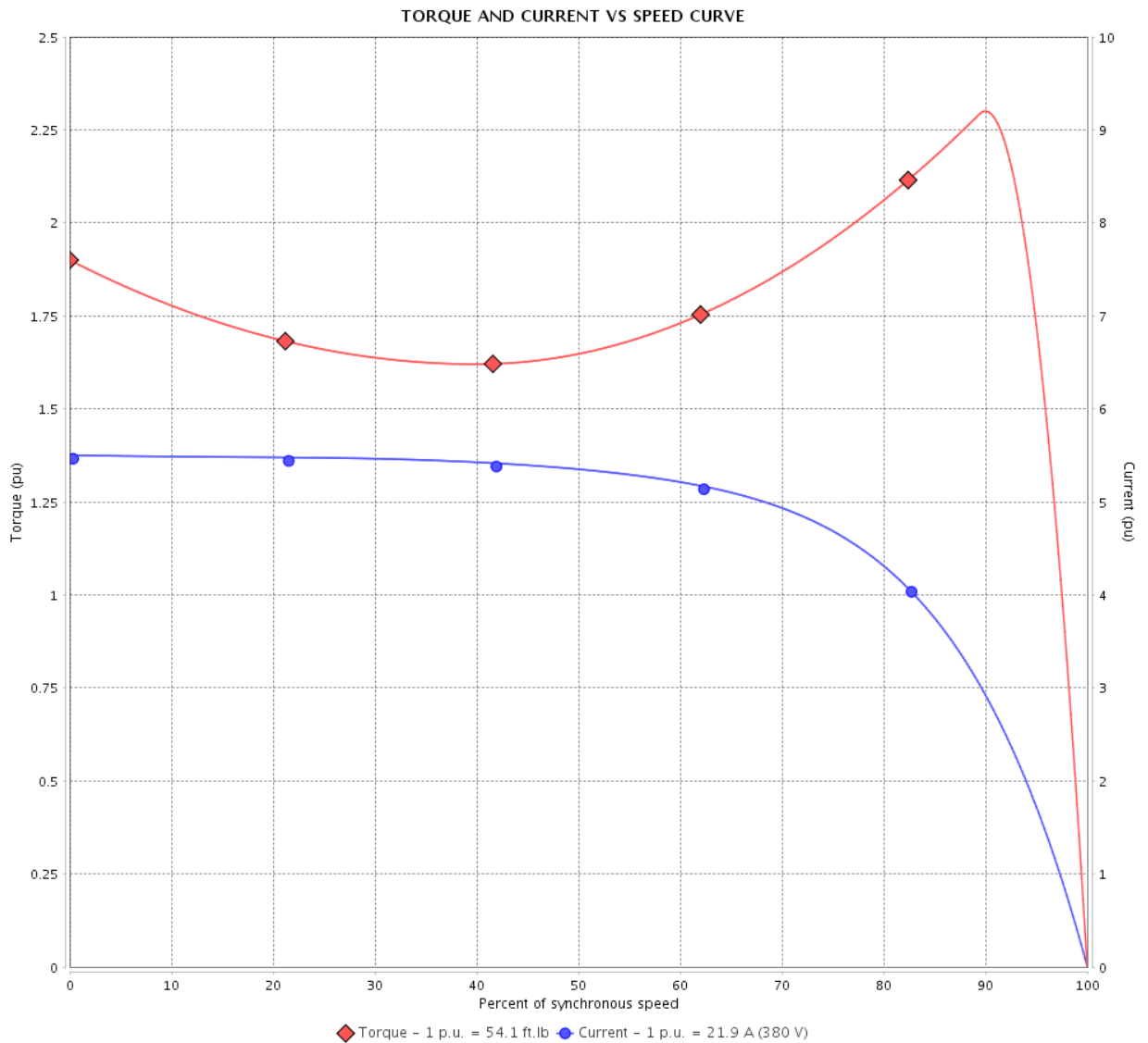
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12730574

Catalog # : 01518ET3ER254TC-S



Performance : 190/380 V 50 Hz 4P

Rated current : 43.8/21.9 A
 LRC : 5.5
 Rated torque : 54.1 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 229 %
 Rated speed : 1455 rpm

Moment of inertia (J) : 2.15 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

Locked rotor time : 0s (cold) 0s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

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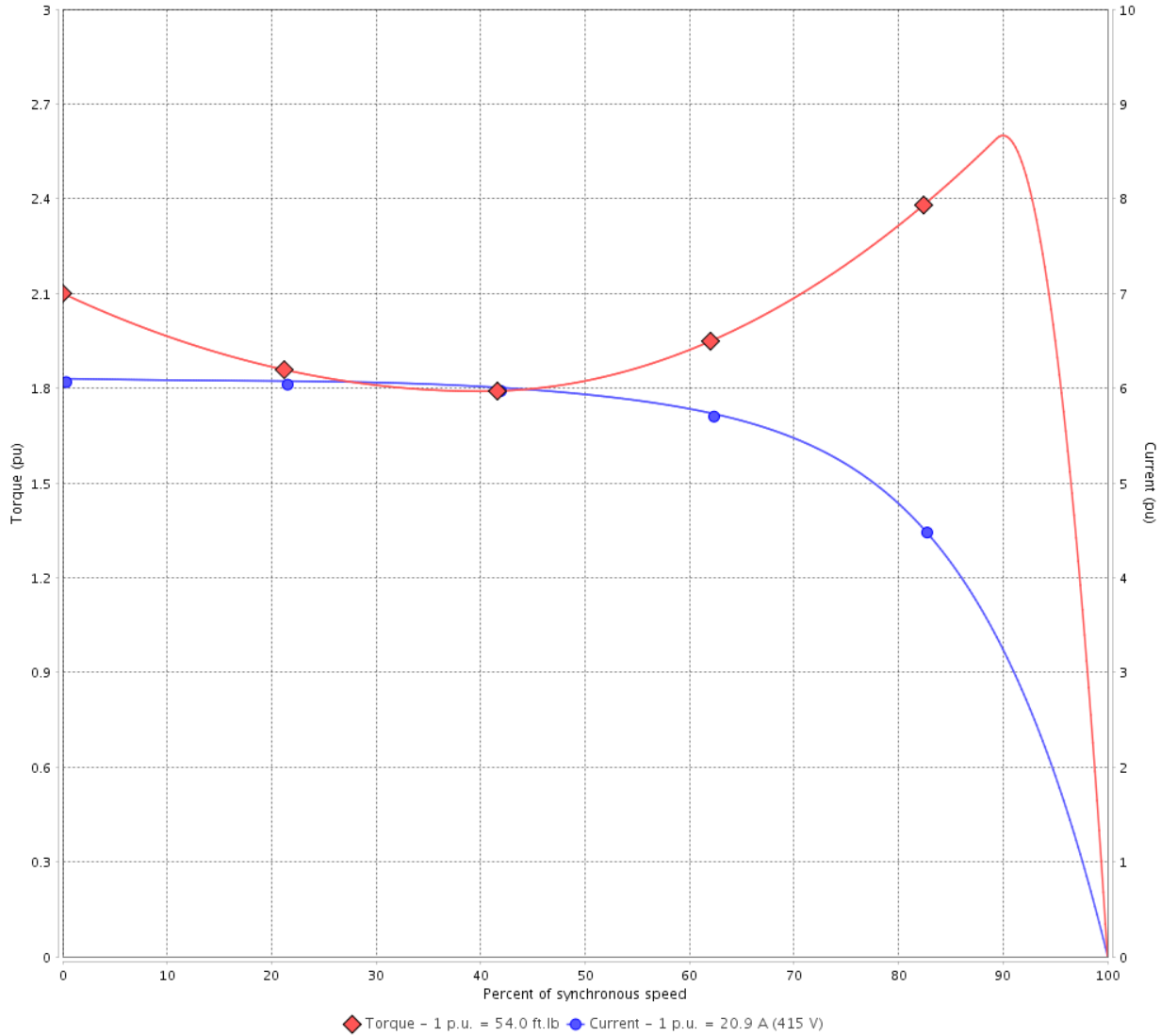
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 4P

Rated current	: 39.4/20.9 A	Moment of inertia (J)	: 2.15 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 54.0 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 105 K
Rated speed	: 1460 rpm	Design	: B

Locked rotor time : 0s (cold) 0s (hot)

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LOAD PERFORMANCE CURVE

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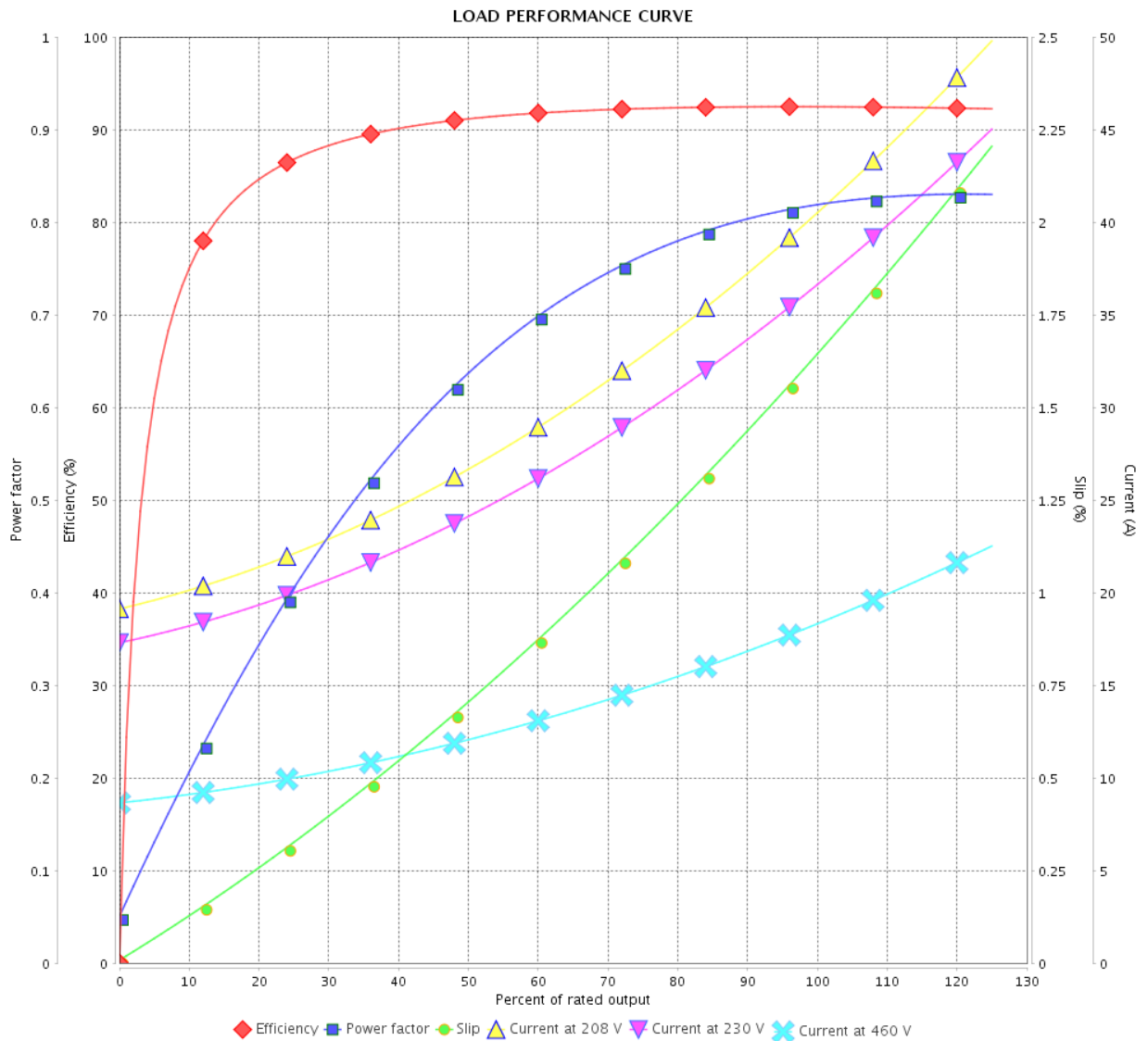


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Performance : 230/460 V 60 Hz 4P

Rated current : 36.4/18.2 A
 LRC : 6.5
 Rated torque : 44.5 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 300 %
 Rated speed : 1770 rpm

Moment of inertia (J) : 2.15 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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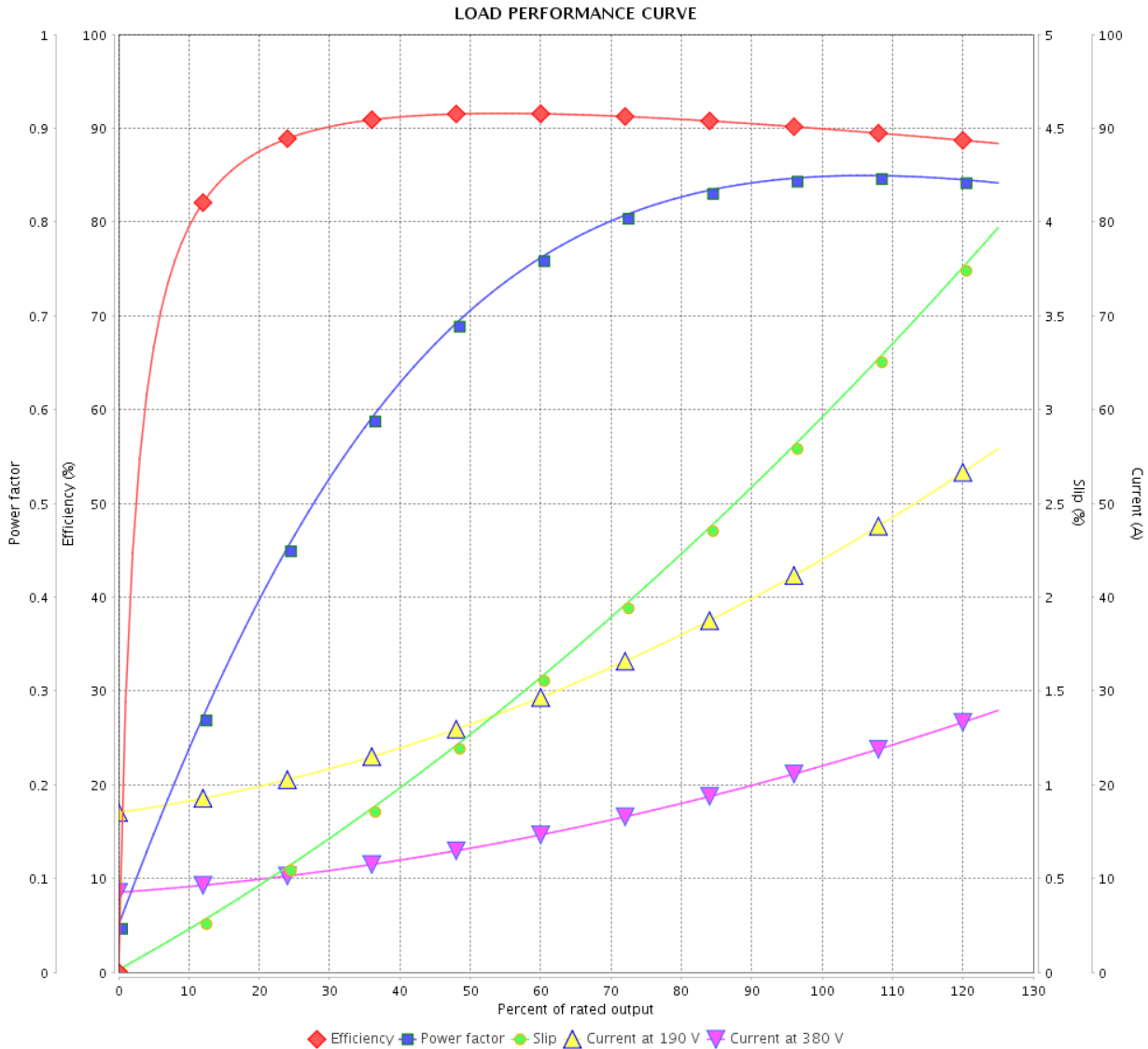


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 Temperature rise : 105 K
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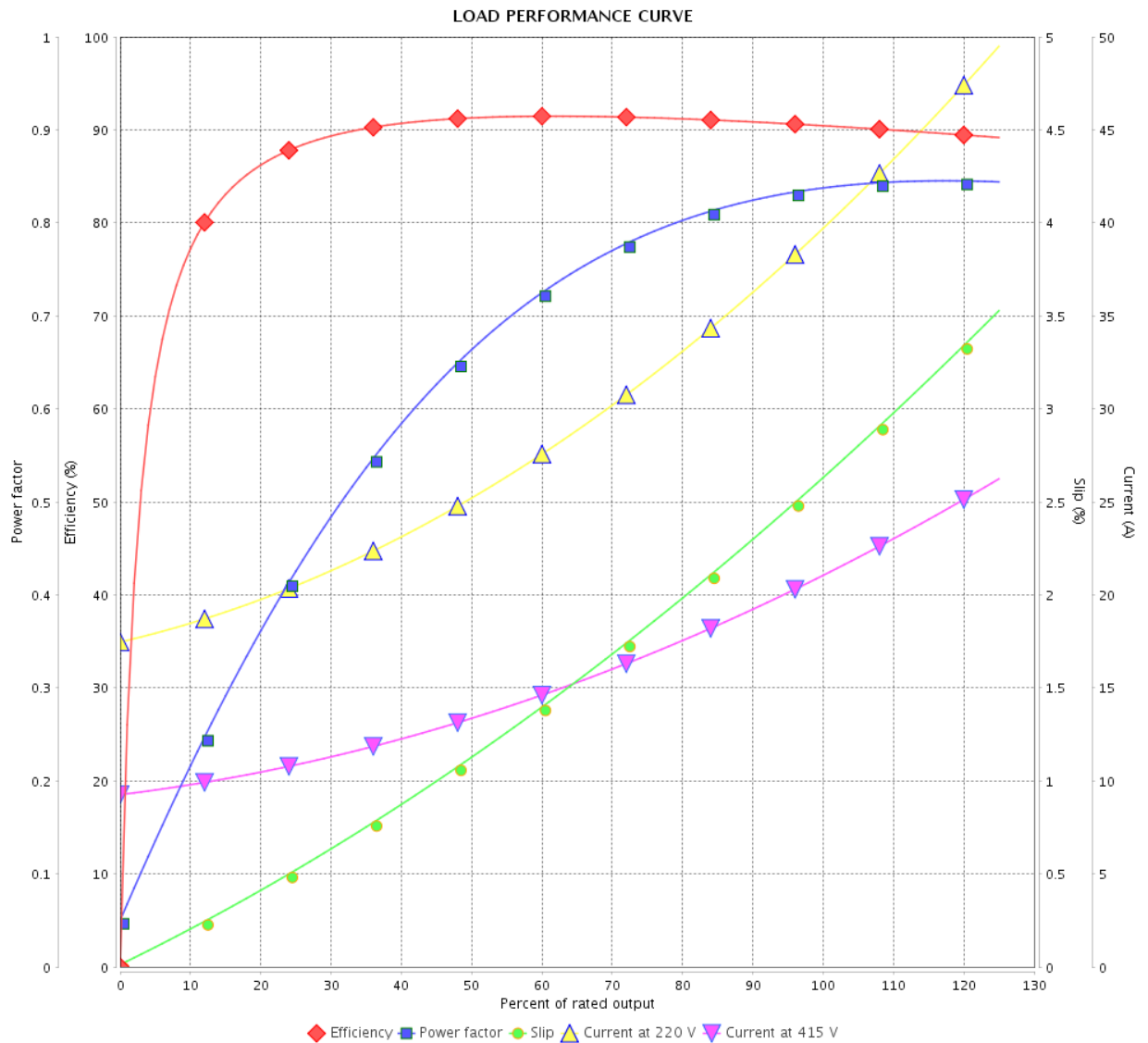


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THERMAL LIMIT CURVE



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Rated speed	: 1770 rpm	Design	: B

Heating constant

Cooling constant

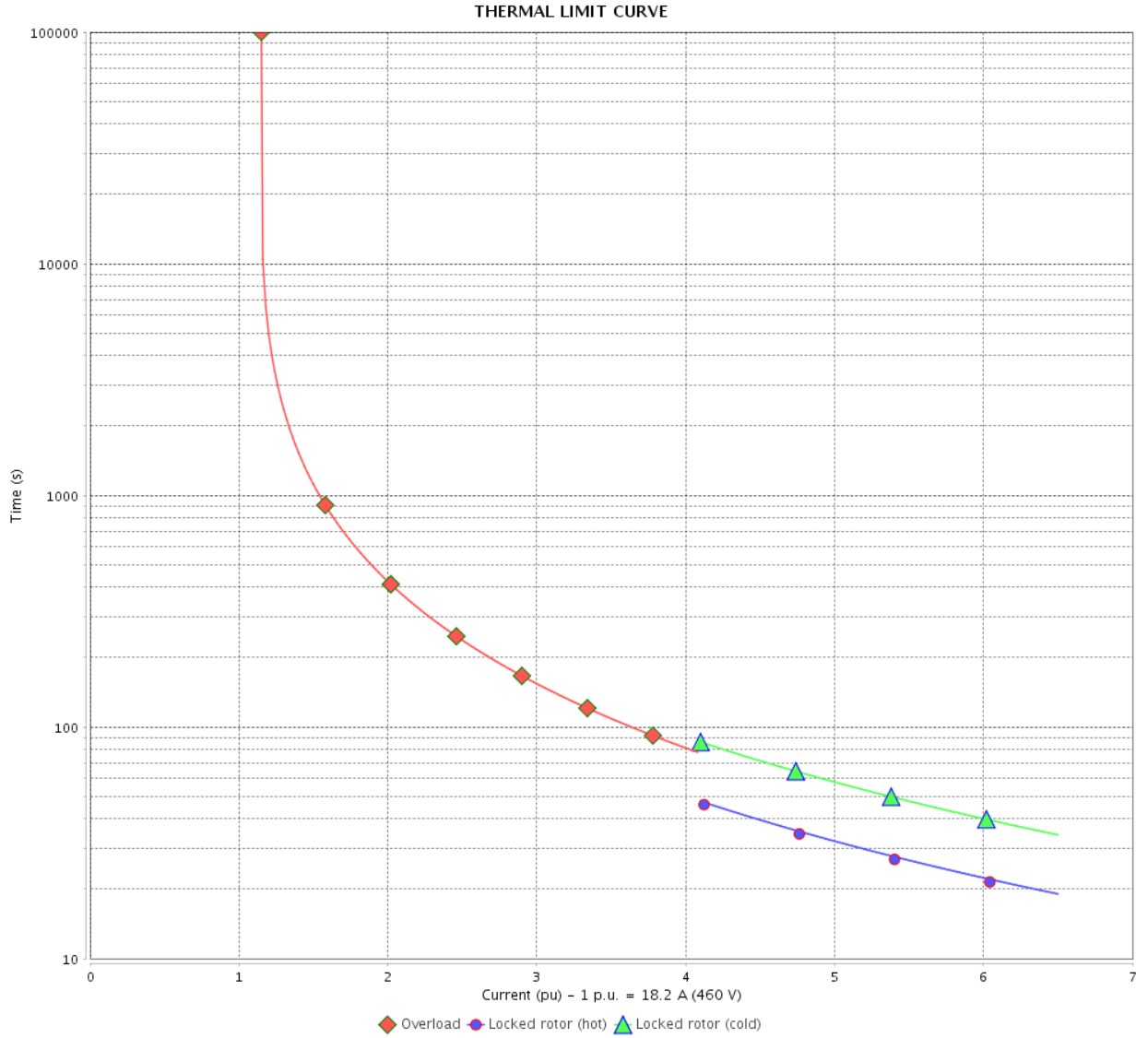
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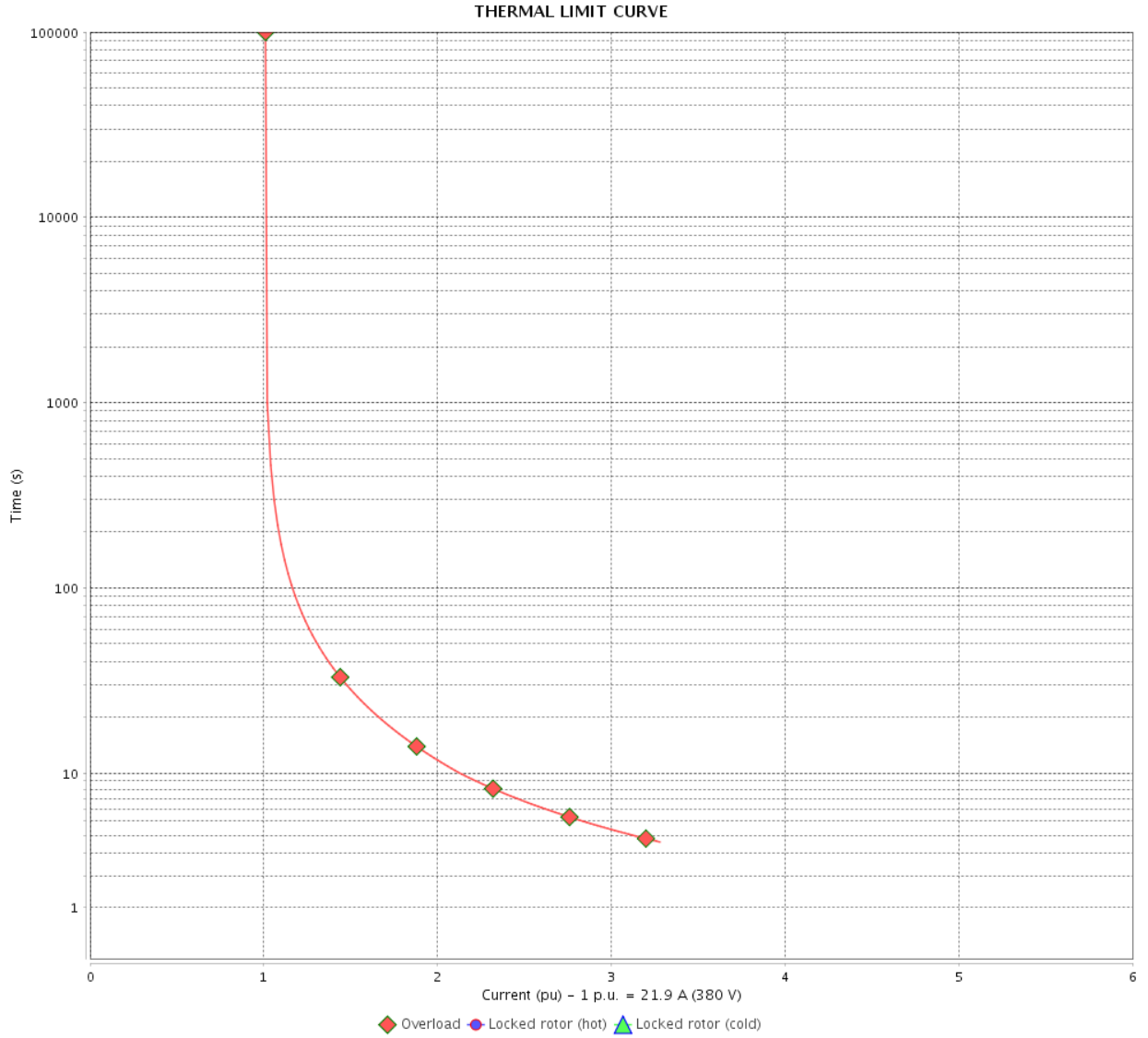
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Cooling constant

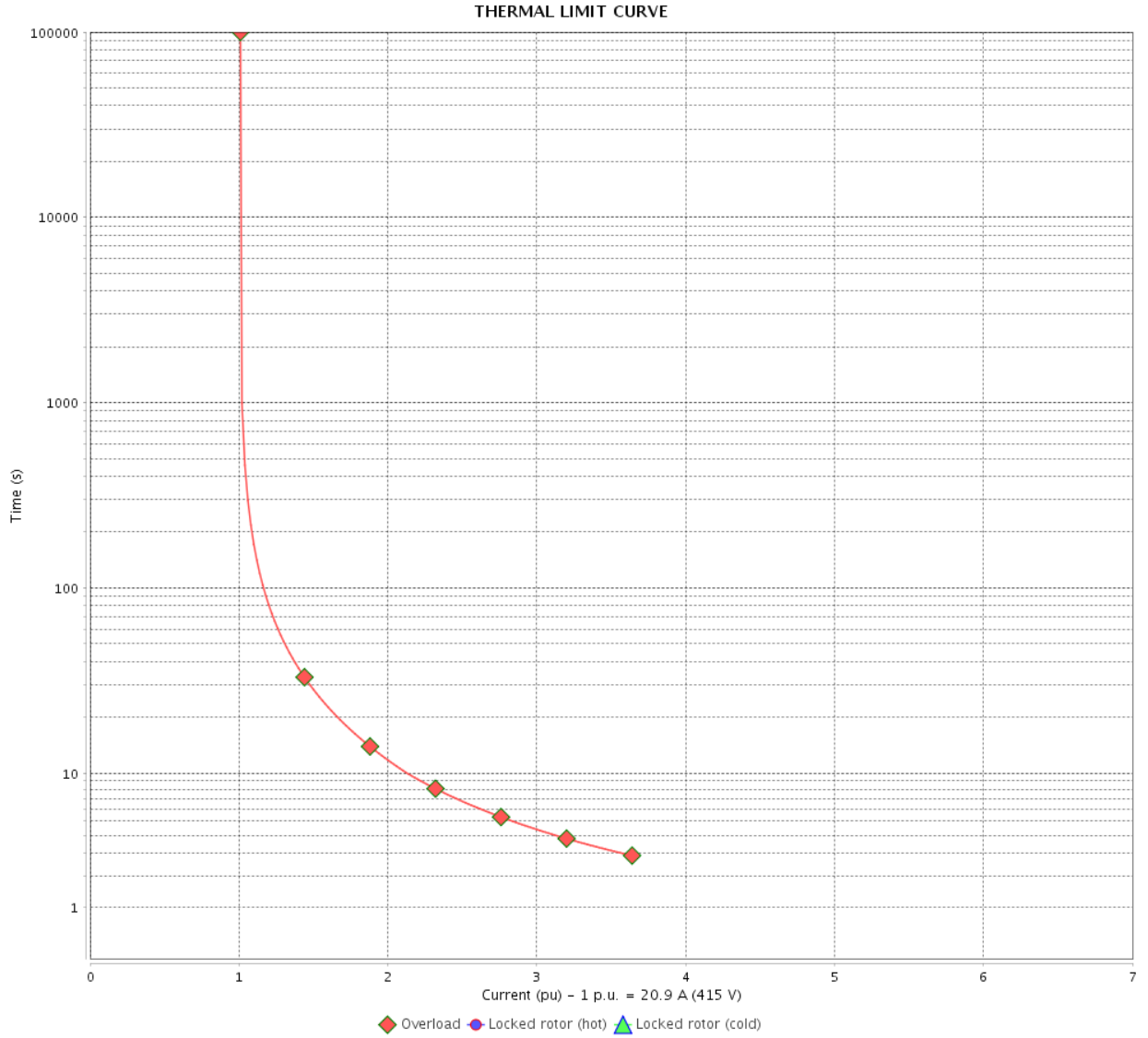
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VFD OPERATION CURVE

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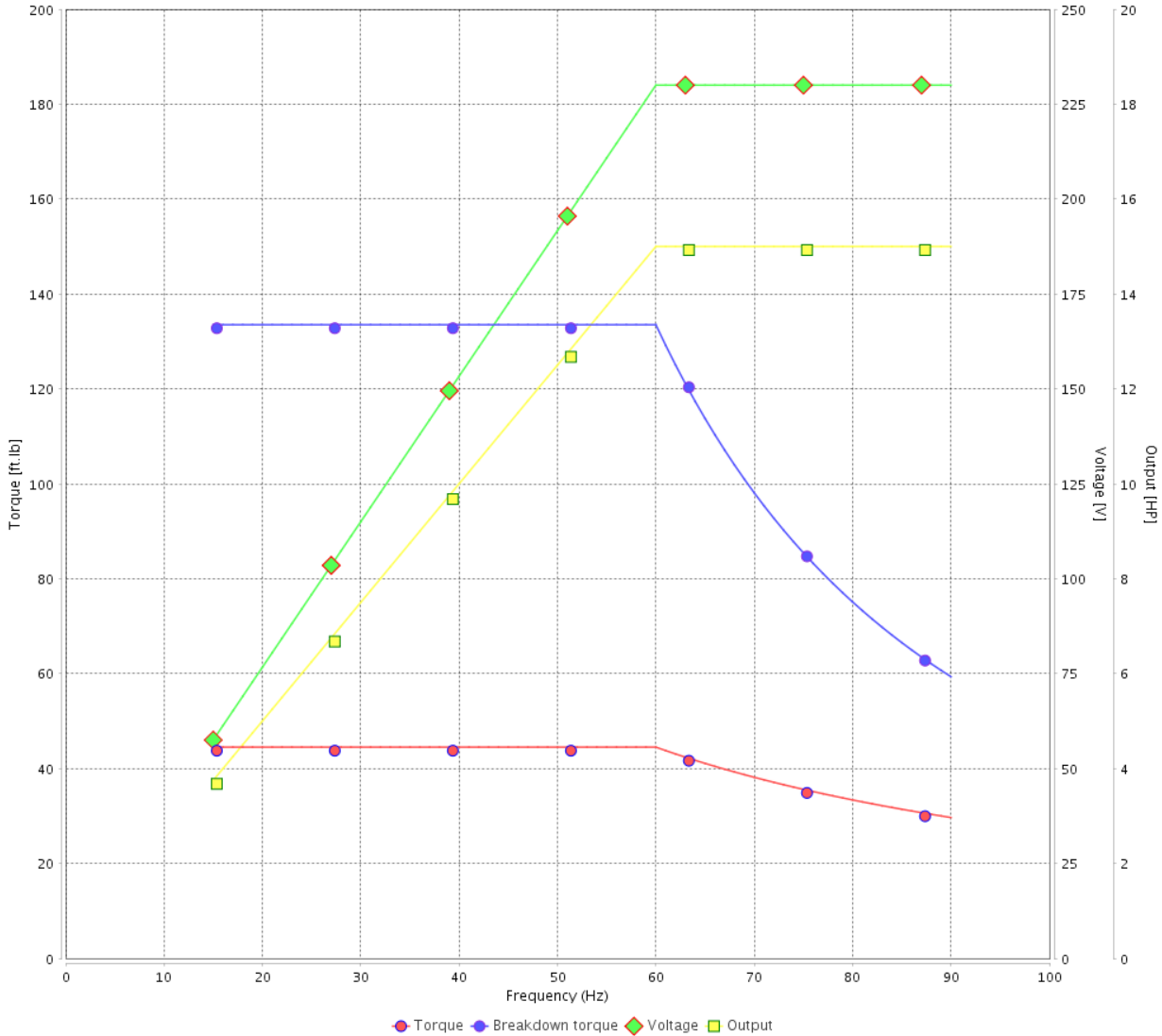
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Moment of inertia (J) : 2.15 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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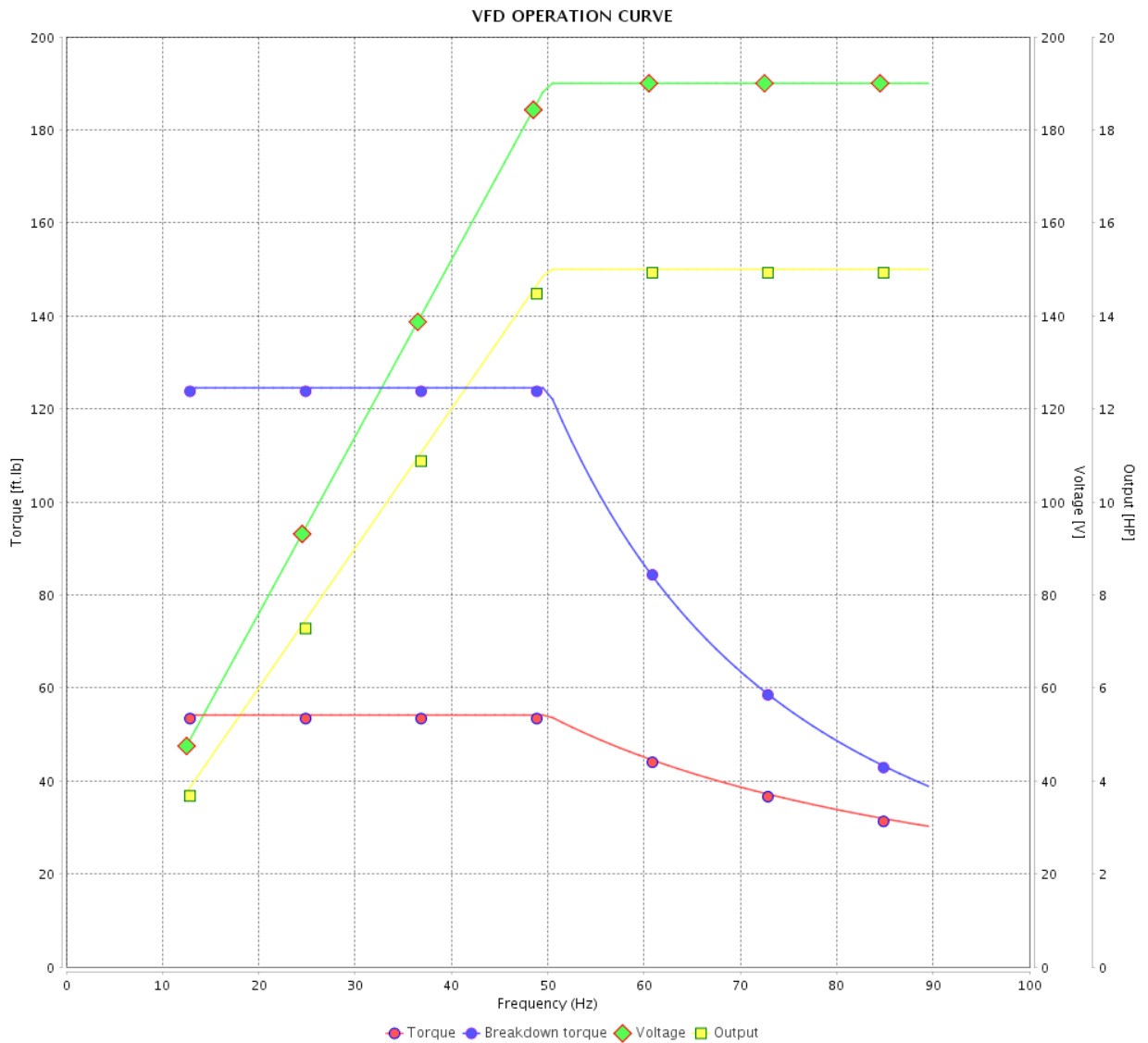
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LRC : 5.5	Duty cycle : Cont.(S1)
Rated torque : 54.1 ft.lb	Insulation class : F
Locked rotor torque : 190 %	Service factor : 1.00
Breakdown torque : 229 %	Temperature rise : 105 K
Rated speed : 1455 rpm	Design : B

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VFD OPERATION CURVE

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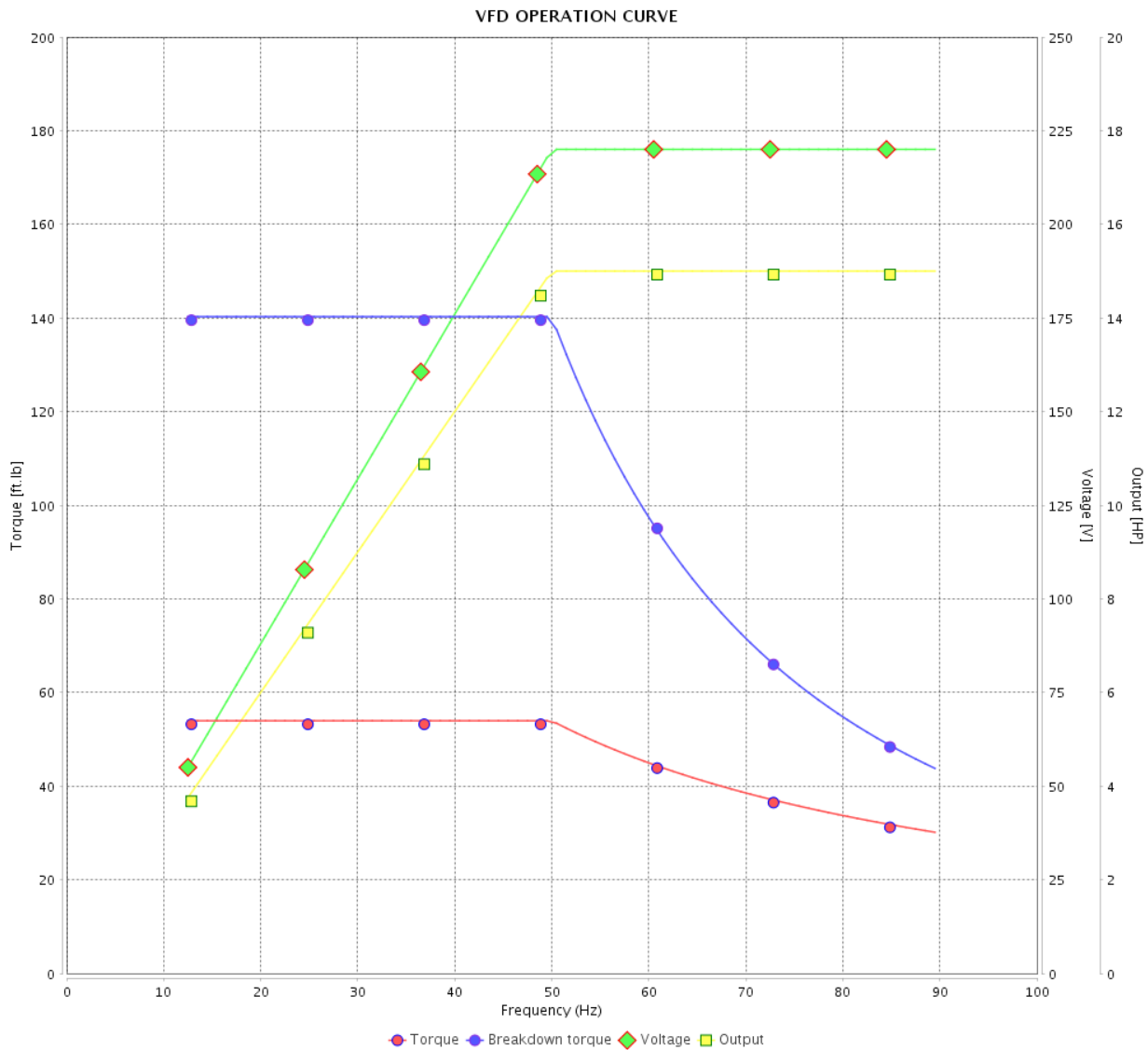


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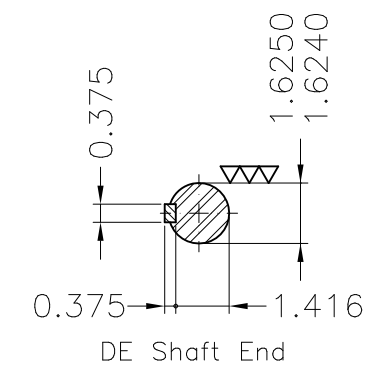
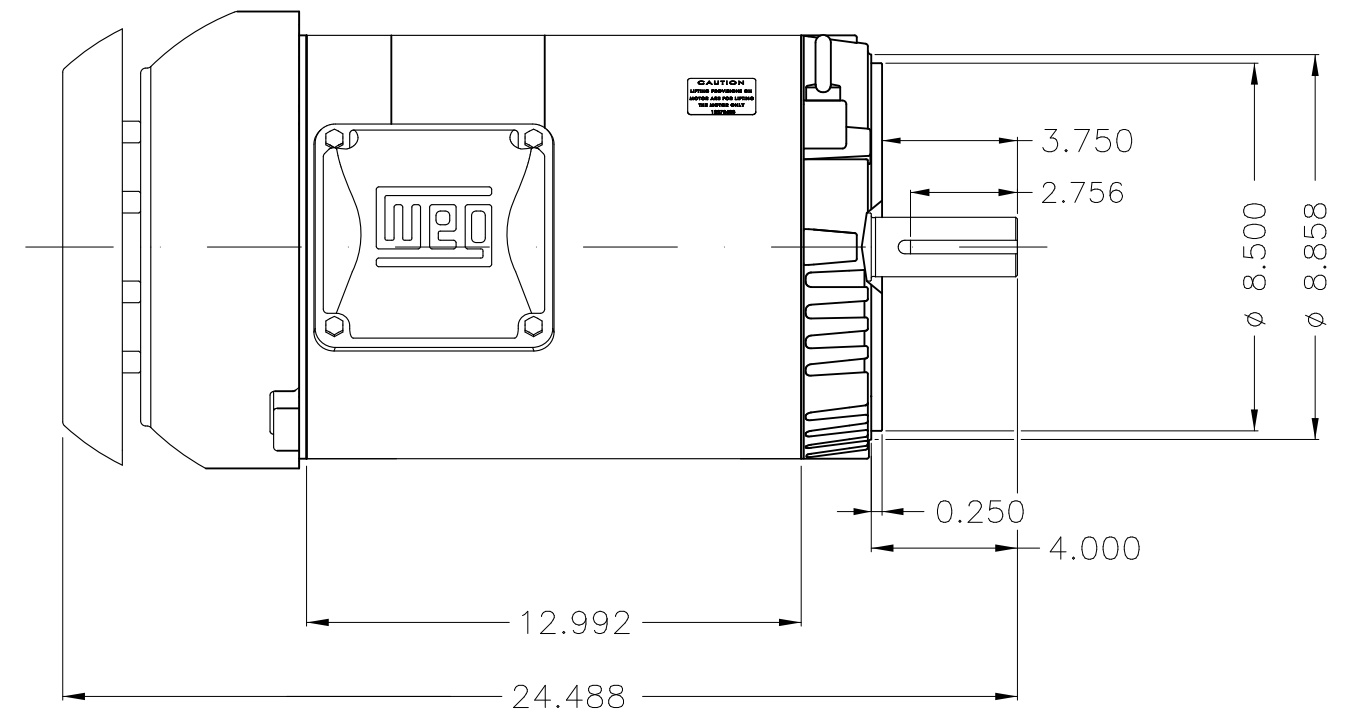
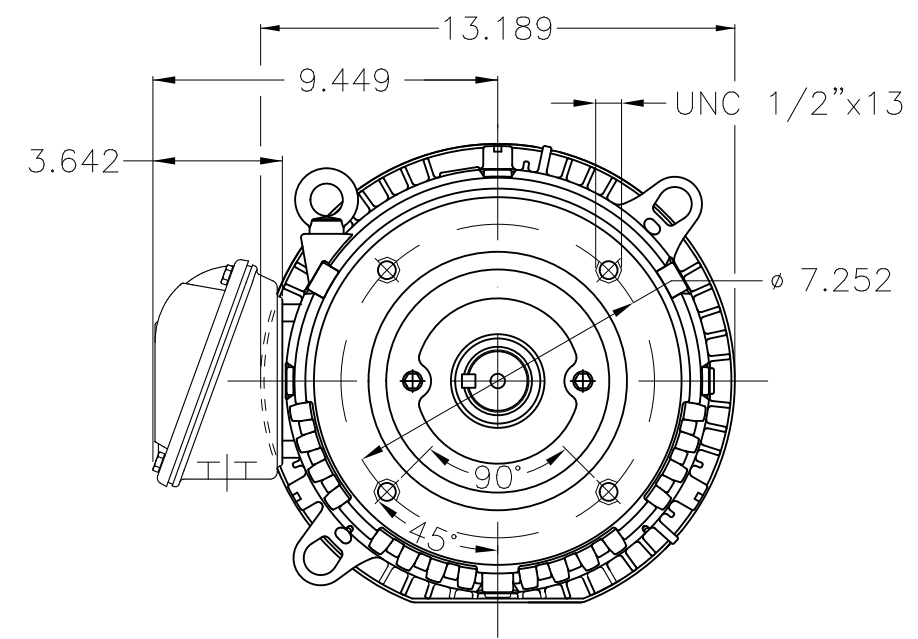
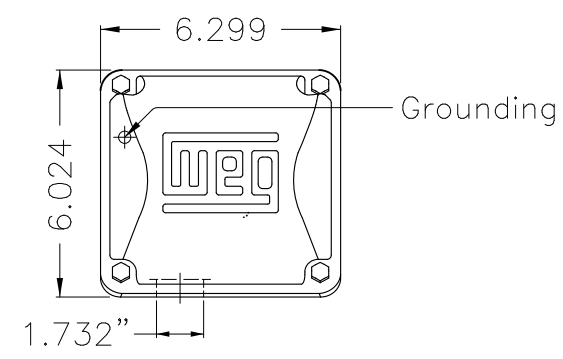
A

B

C

D

E



Dimensions in inches

Color Munsell N 1 matte black										
Painting plan 207N										
Mounting F-1/B14R(D)										
ECM	LOC	SUMMARY OF MODIFICATIONS				EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR ROLLED STEEL PREM. EFF.				PREVIEW	WDD	SHEET	1 / 1	
CHECKED		FRAME 254/6TC IP55 TEFC								
RELEASED										
REL DT.		WMO	Jaragua do Sul	Product Engineering						

15 HP 04 Poles 60 Hz



NEMA
Premium



MADE IN MEXICO

MAT: 12730574 CC029A

W01.TE0IC0X0N

MODEL 01518ET3ER254TC-S

17DEC2021 S/N:

For 60Hz: Class I, Zone 2, IIC
Class I, Div.2, Gr. A,B,C,D - T3
Div 2 Inverter Duty (SF1.00)

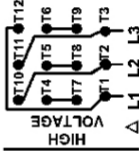
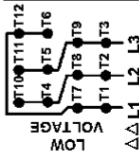
CT 2:1/VT 1000:1

PH 3	Hz 60	HP 15
FR 254/6TC		KW 11
DUTY CONT.		V 230/460
ALT 1000 m.a.s.l.		A 36.4/18.2
INS CL F AT 80K	IP55	SFA 41.9/20.9
AMB 40°C	DES B	SF 1.15
ENCL TEFC	CODE G	PF 0.82
USABLE @ 208V 40.3A		RPM 1770
SF1.00		NEMA NOM. EFF 92.4%

ALTERNATE RATING: 15HP	50Hz	190-220/380-415V	SF1.00
43.8-38.9/21.9-20.6A	1455RPM	EFF 89.9% (IE2)	IEC 60034-1

For safe area-inverter duty motor For 60Hz use on VPWM 1000:1 VT, 4:1 CT

DE 6309-Z-C3	ODE 6208-Z-C3	MOBIL POLYREX EM	200000h
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T1-BLU T2-WHT
 T3-ORG T4-YEL
 T5-BLK T6-GRY
 T7-PNK T8-RED
 T9-BRK RED
 T10-CURRY
 T11-GRN T12-VLT

INTERCHANGE ANY TWO LINE WIRES TO REVERSE THE ROTATION



WARNING: Motor must be grounded in accordance with local and national electrical codes to prevent serious electrical shocks. Disconnect power source before servicing unit.



AVERTISSEMENT: Le moteur doit être mis à la terre conformément aux codes électriques locaux et nationaux afin d'éviter tout choc électrique grave. Déconnectez l'alimentation avant l'entretien de la machine.

