

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer	:			
Product line	: Standard Efficiency Three-Phase	Product code :	14796991	
		Catalog # :	.5012ES3E56C-S	
Frame	: 56C	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 ³	: 26.8 lb	
Protection degree	: IP55	Moment of inertia (J)	: 0.1065 sq.ft.lb	
Output [HP]	0.5	0.5	0.5	
Poles	6	6	6	
Frequency [Hz]	60	50	50	
Rated voltage [V]	208-230/460	190/380	220/415	
Rated current [A]	2.19-1.98/0.992	2.14/1.07	2.02/1.07	
L. R. Amperes [A]	11.8-10.7/5.36	9.20/4.60	9.28/4.92	
LRC [A]	5.4x(Code K)	4.3x(Code G)	4.6x(Code H)	
No load current [A]	1.33-1.54/0.772	1.52/0.758	1.54/0.816	
Rated speed [RPM]	1160	945	950	
Slip [%]	3.33	5.50	5.00	
Rated torque [ft.lb]	2.26	2.78	2.76	
Locked rotor torque [%]	210	160	180	
Breakdown torque [%]	300	210	240	
Service factor		1.15	1.15	
Temperature rise	80 K	80 K	80 K	
Locked rotor time	39s (cold) 22s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)	
Noise level ²	50.0 dB(A)	48.0 dB(A)	48.0 dB(A)	
Efficiency (%)	25%	62.0	63.8	61.2
	50%	64.0	64.8	62.9
	75%	70.0	69.4	68.6
	100%	72.0	69.9	70.1
Power Factor	25%	0.24	0.29	0.27
	50%	0.44	0.52	0.49
	75%	0.56	0.65	0.62
	100%	0.65	0.75	0.71
Bearing type	: Drive end 6203 ZZ	Non drive end 6202 ZZ	Foundation loads	
Sealing	: V'Ring	Without Bearing Seal	Max. traction : 51 lb	
			Max. compression : 78 lb	
Lubrication interval	: -	-		
Lubricant amount	: -	-		
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V SF 1.00				
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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Performed by				
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TORQUE AND CURRENT VS SPEED CURVE

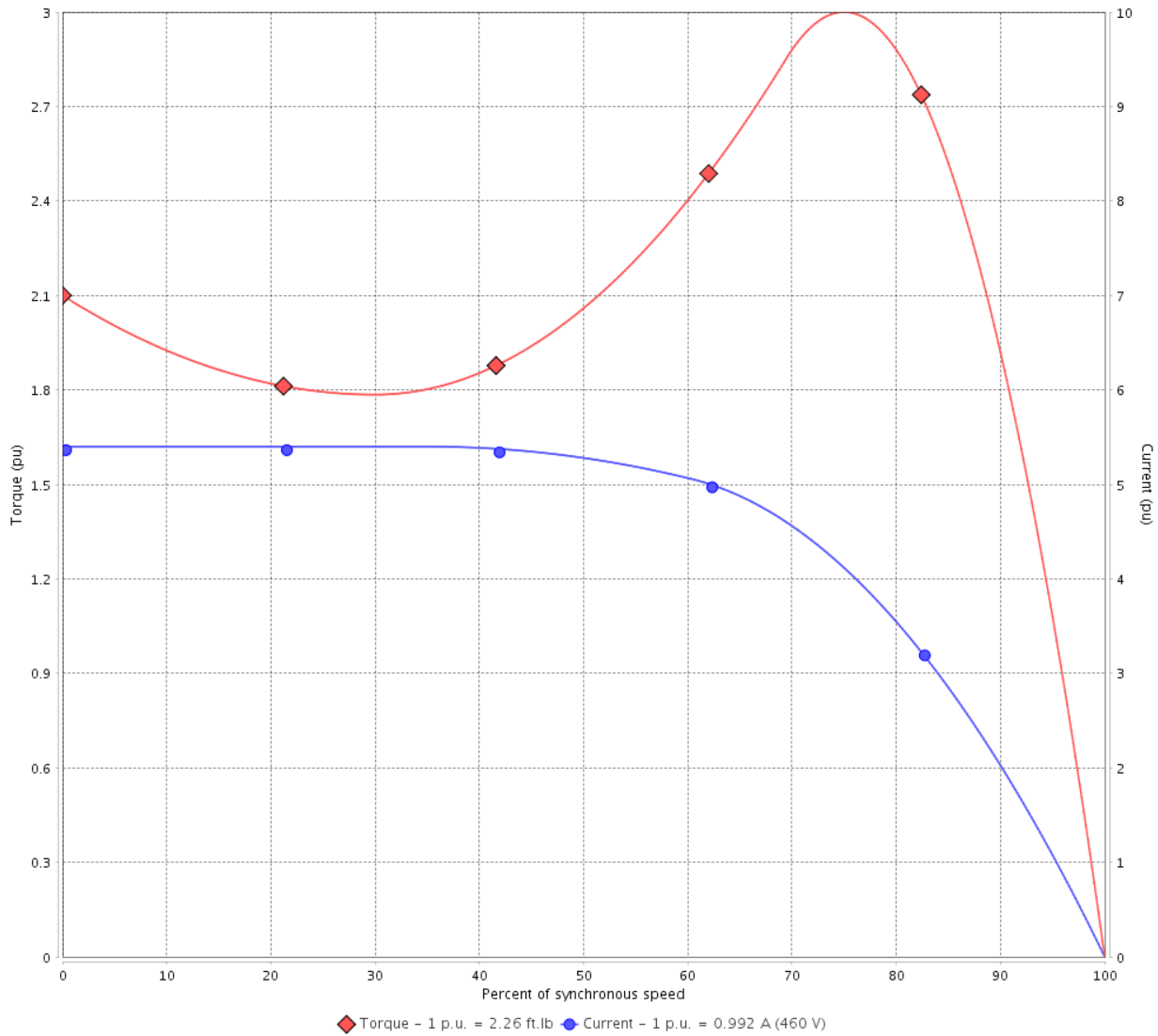
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Standard Efficiency Three-Phase Product code : 14796991
 Catalog # : .5012ES3E56C-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 208-230/460 V 60 Hz 6P

Rated current	: 2.19-1.98/0.992 A	Moment of inertia (J)	: 0.1065 sq.ft.lb
LRC	: 5.4	Duty cycle	: Cont.(S1)
Rated torque	: 2.26 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	:
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1160 rpm		

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

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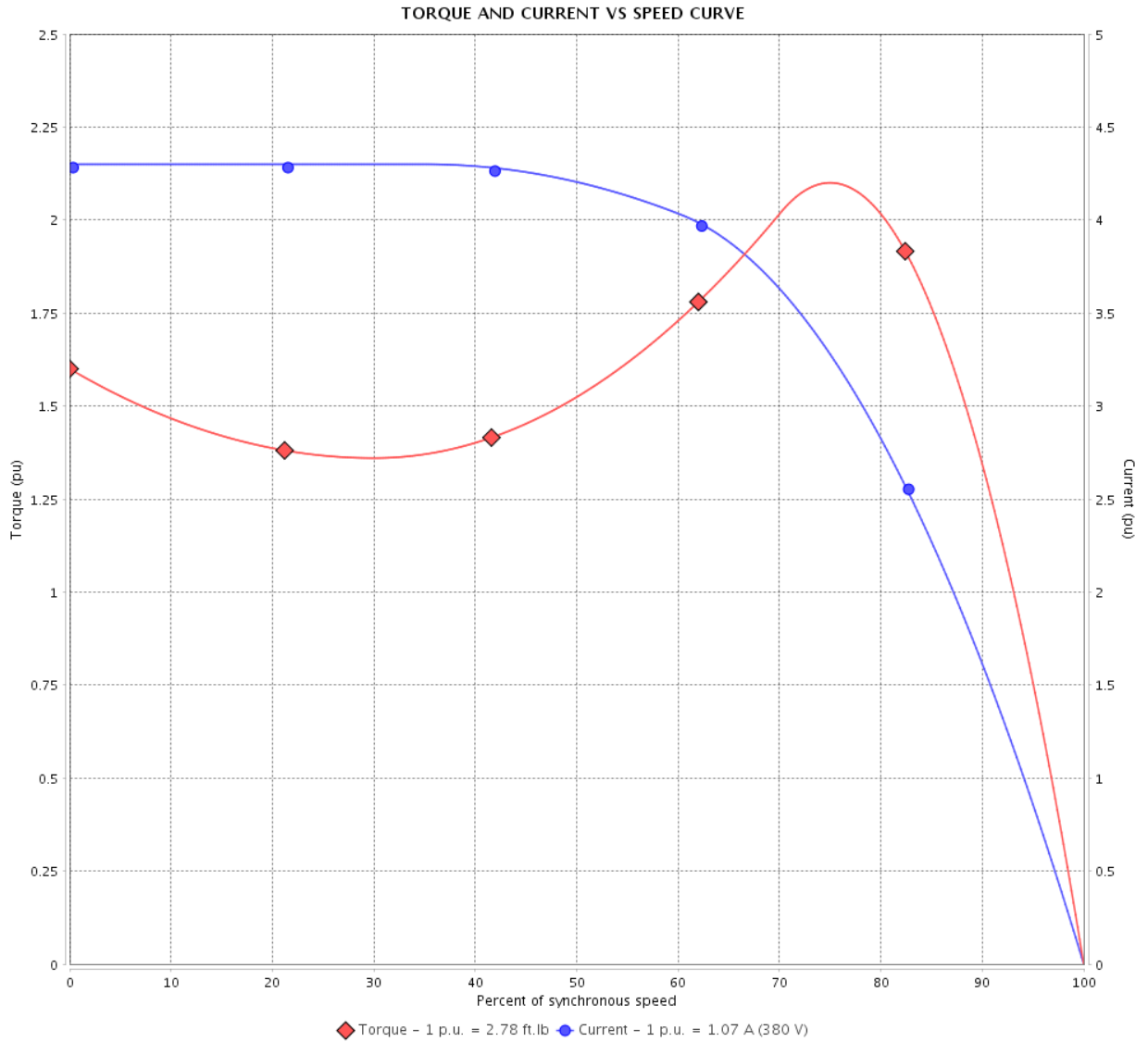
TORQUE AND CURRENT VS SPEED CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Standard Efficiency Three-Phase Product code : 14796991
 Catalog # : .5012ES3E56C-S



Performance : 190/380 V 50 Hz 6P

Rated current : 2.14/1.07 A	Moment of inertia (J) : 0.1065 sq.ft.lb
LRC : 4.3	Duty cycle : Cont.(S1)
Rated torque : 2.78 ft.lb	Insulation class : F
Locked rotor torque : 160 %	Service factor : 1.15
Breakdown torque : 210 %	Temperature rise : 80 K
Rated speed : 945 rpm	

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

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TORQUE AND CURRENT VS SPEED CURVE

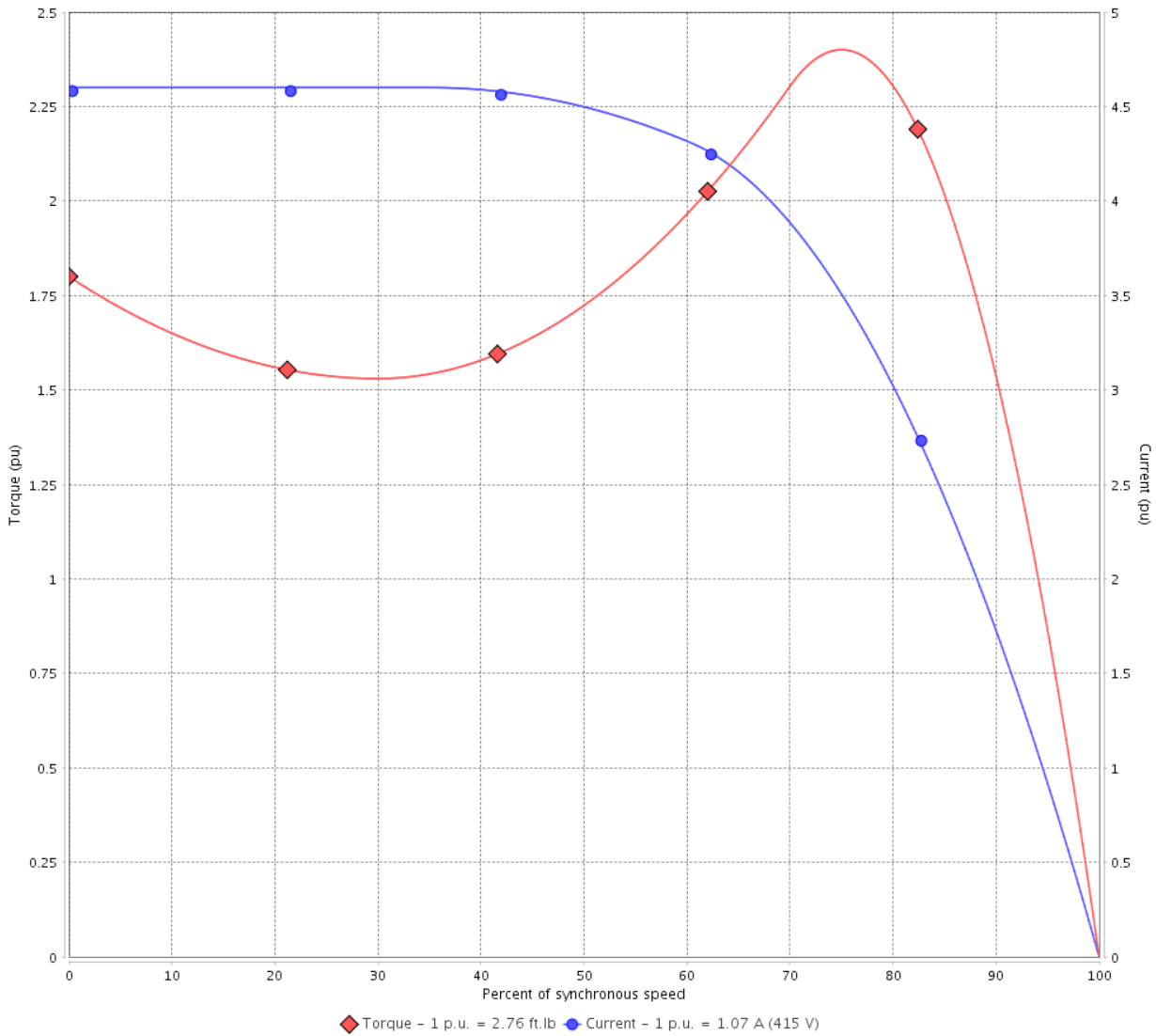
Three Phase Induction Motor - Squirrel Cage



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TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 6P

Rated current	: 2.02/1.07 A	Moment of inertia (J)	: 0.1065 sq.ft.lb
LRC	: 4.6	Duty cycle	: Cont.(S1)
Rated torque	: 2.76 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 950 rpm		

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

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

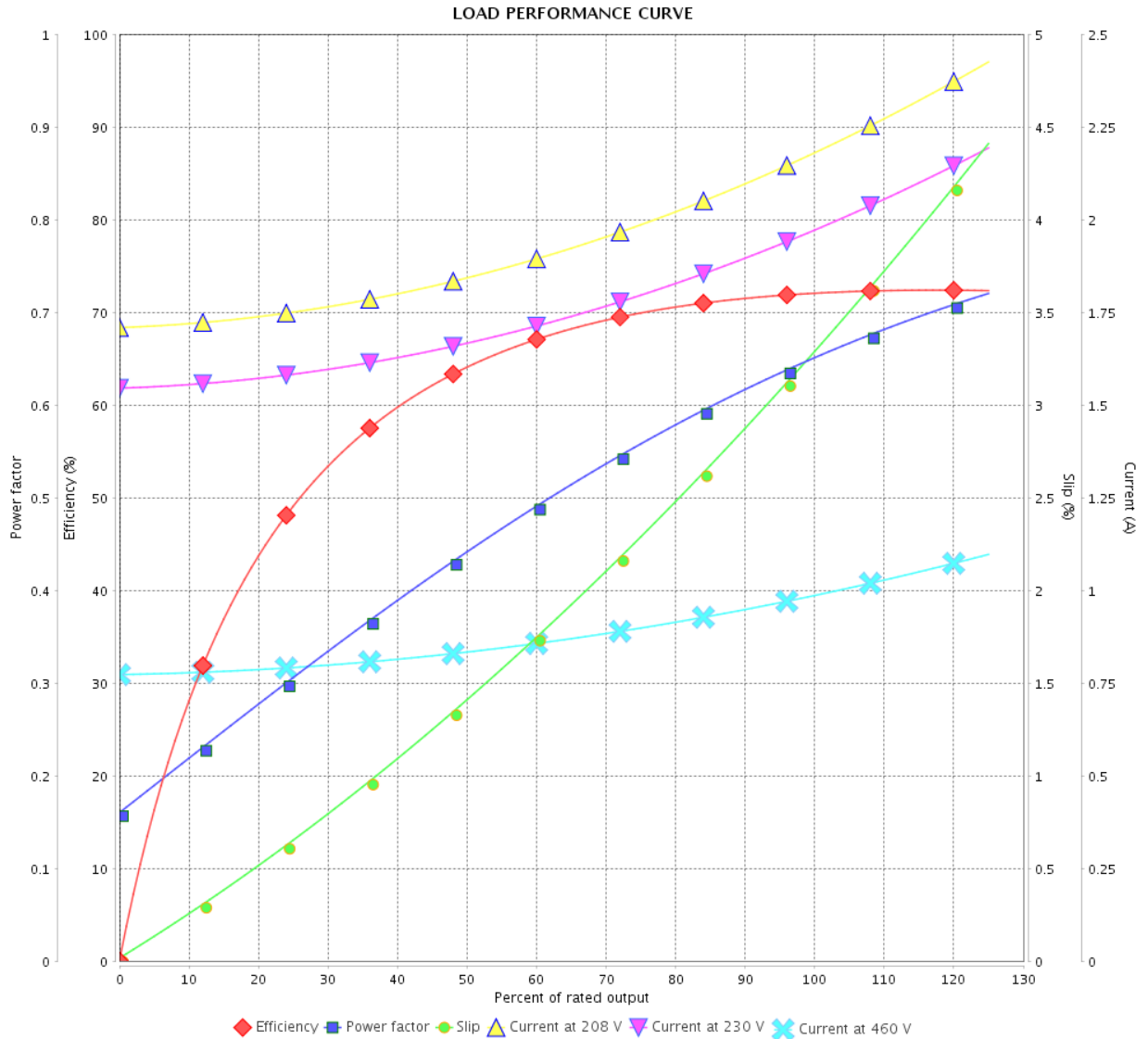
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Catalog # :

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Rated current : 2.19-1.98/0.992 A
 LRC : 5.4
 Rated torque : 2.26 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 300 %
 Rated speed : 1160 rpm

Moment of inertia (J) : 0.1065 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor :
 Temperature rise : 80 K

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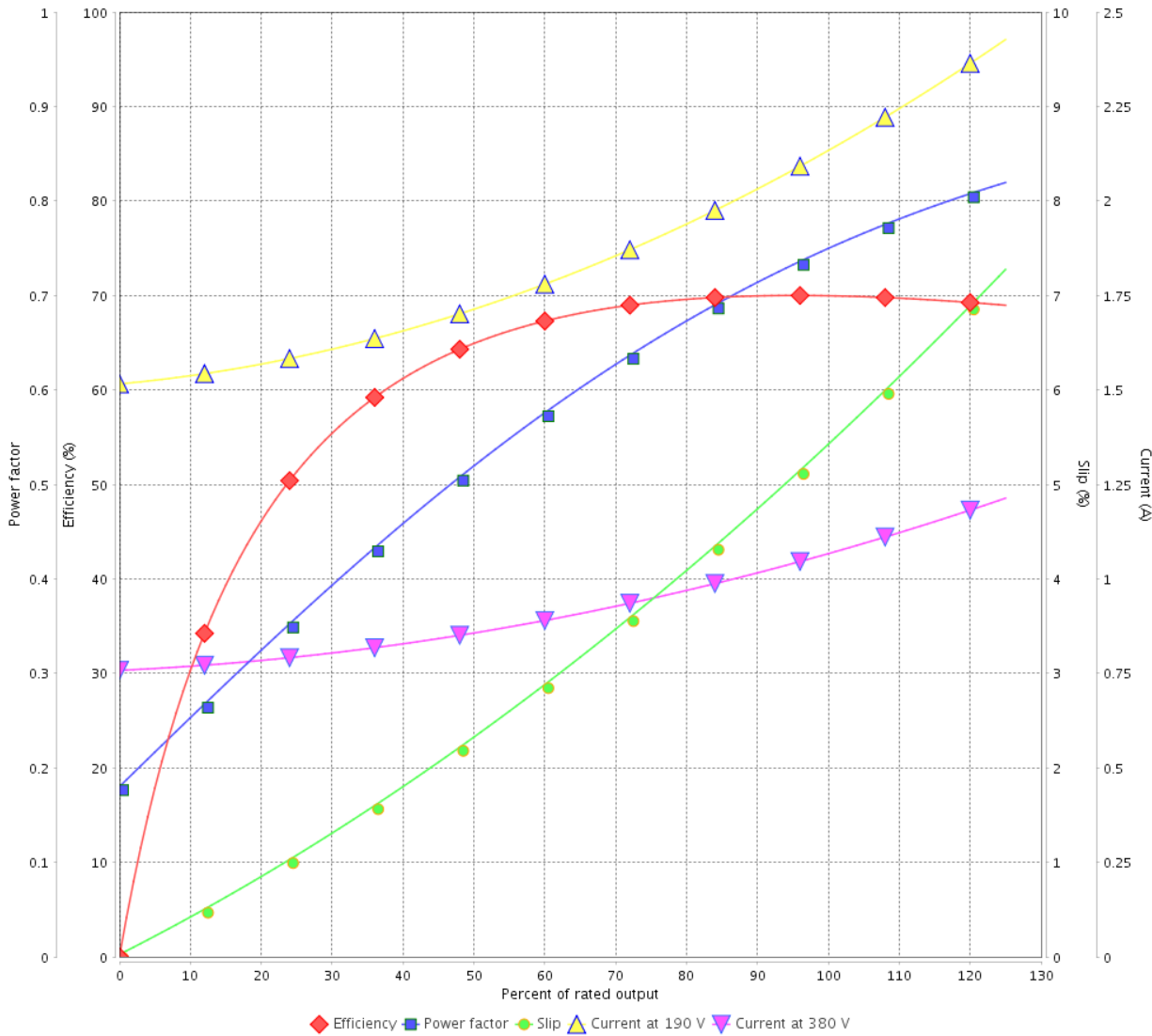
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LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 6P

Rated current : 2.14/1.07 A
 LRC : 4.3
 Rated torque : 2.78 ft.lb
 Locked rotor torque : 160 %
 Breakdown torque : 210 %
 Rated speed : 945 rpm

Moment of inertia (J) : 0.1065 sq.ft.lb
 Duty cycle : Cont.(S1)
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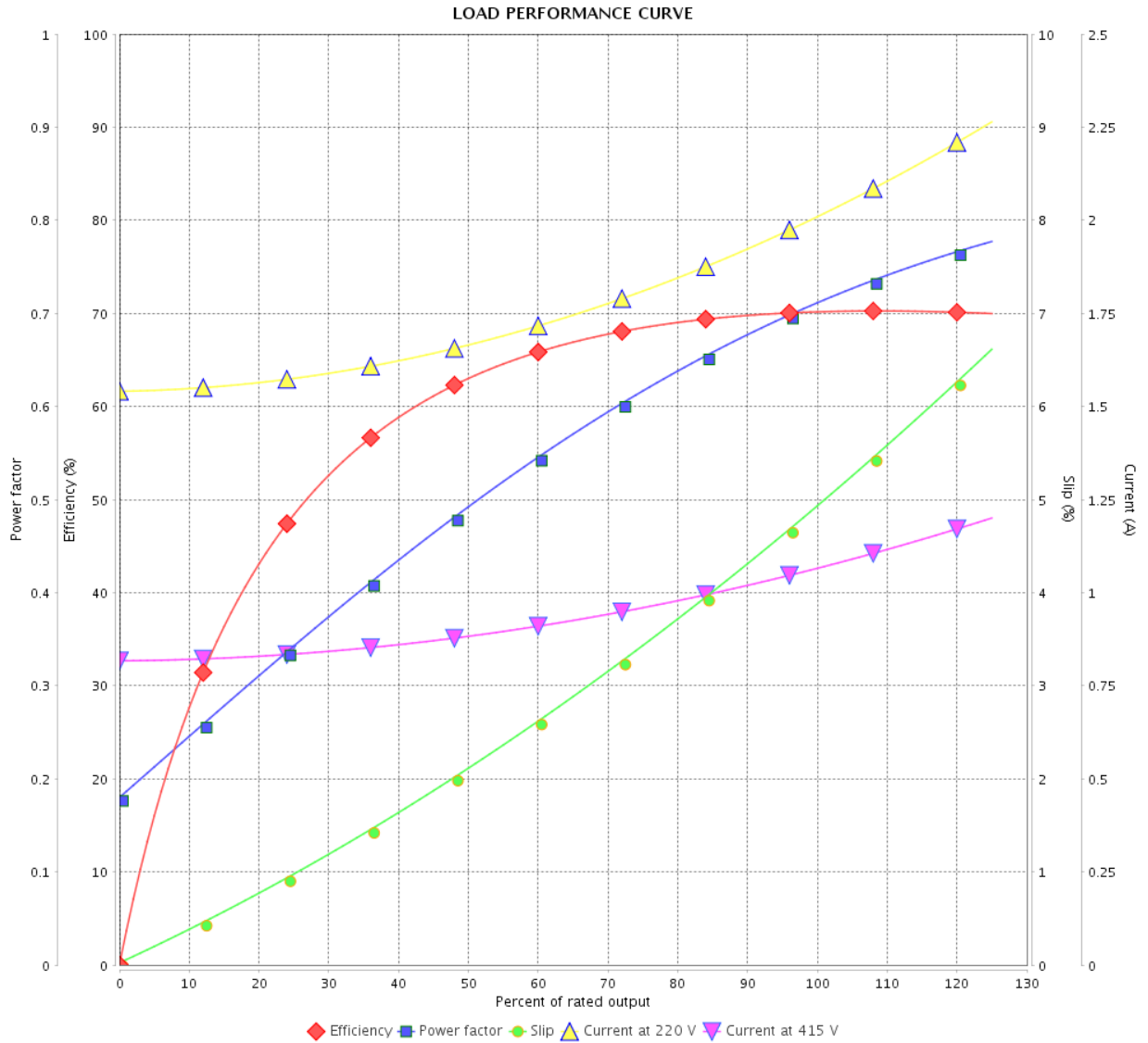
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THERMAL LIMIT CURVE

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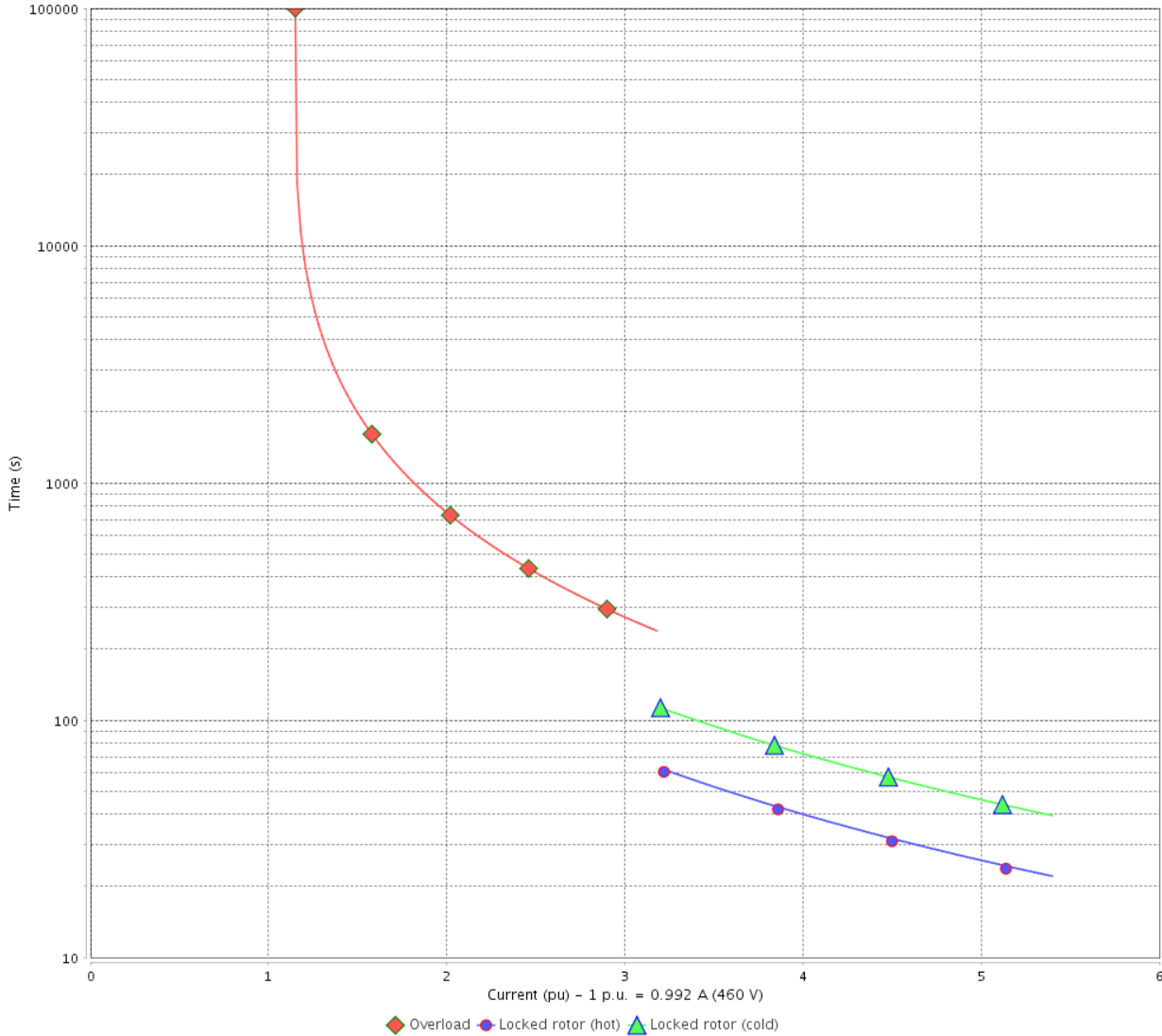
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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor :
 Temperature rise : 80 K

Heating constant

Cooling constant

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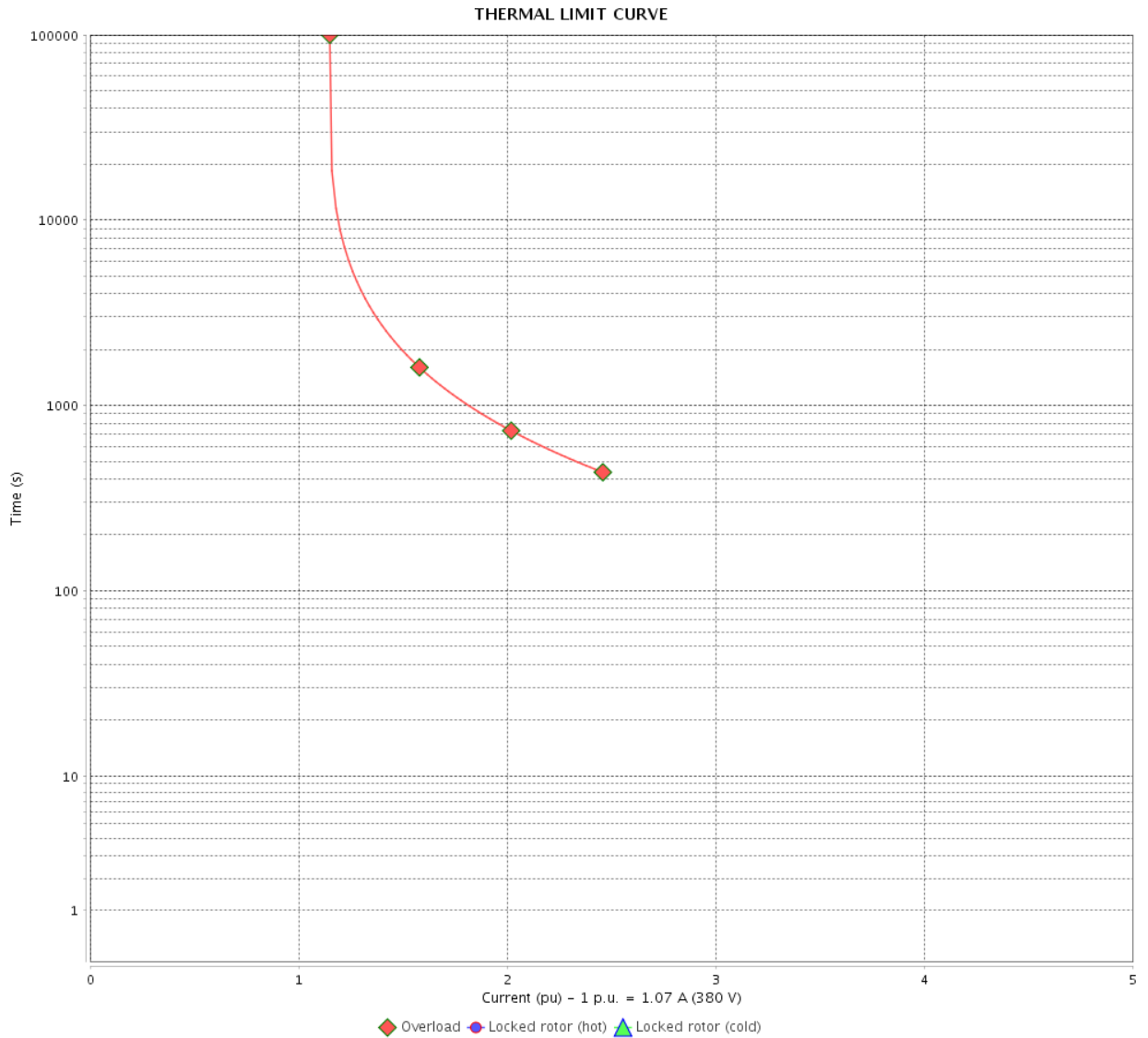
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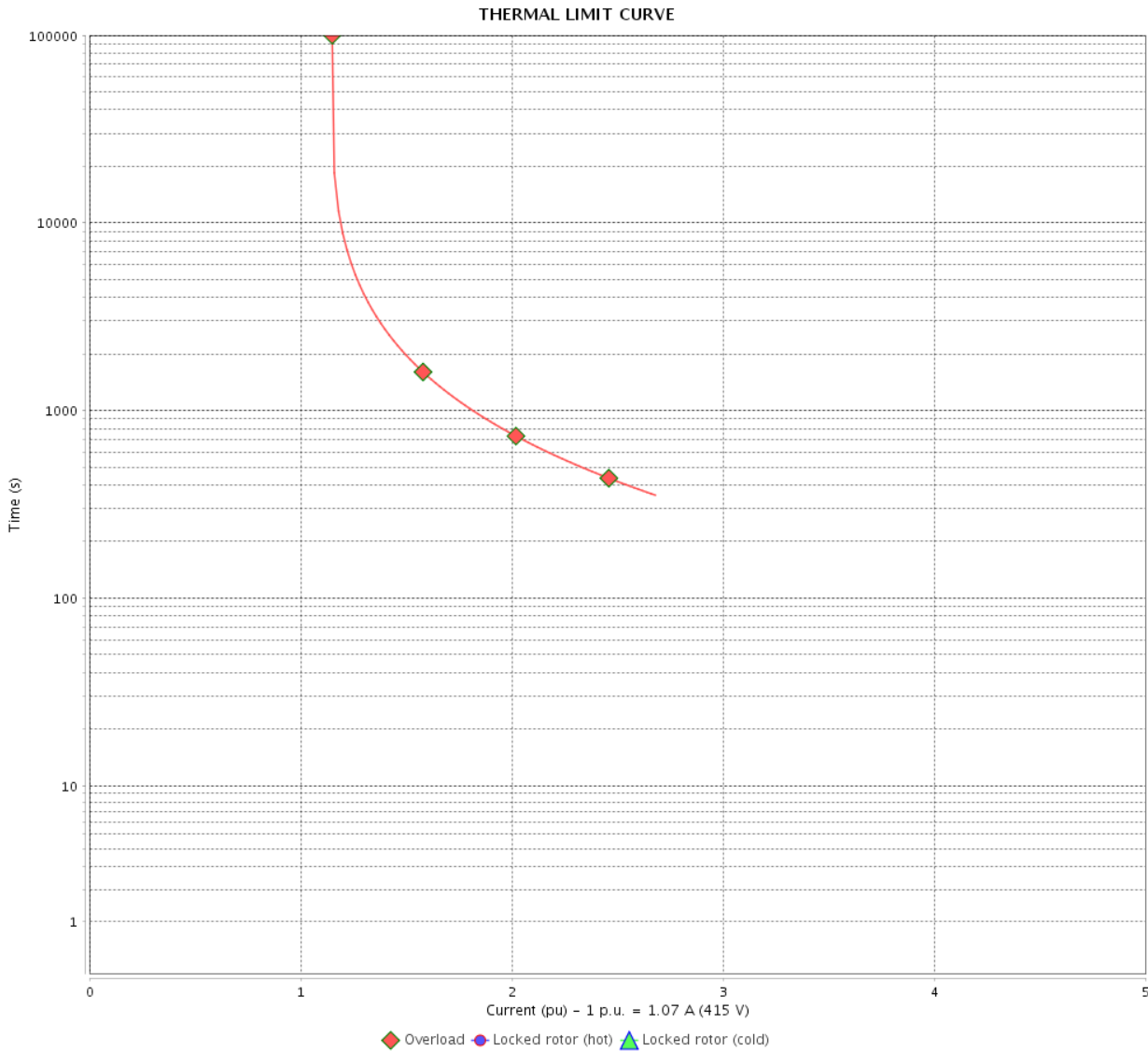
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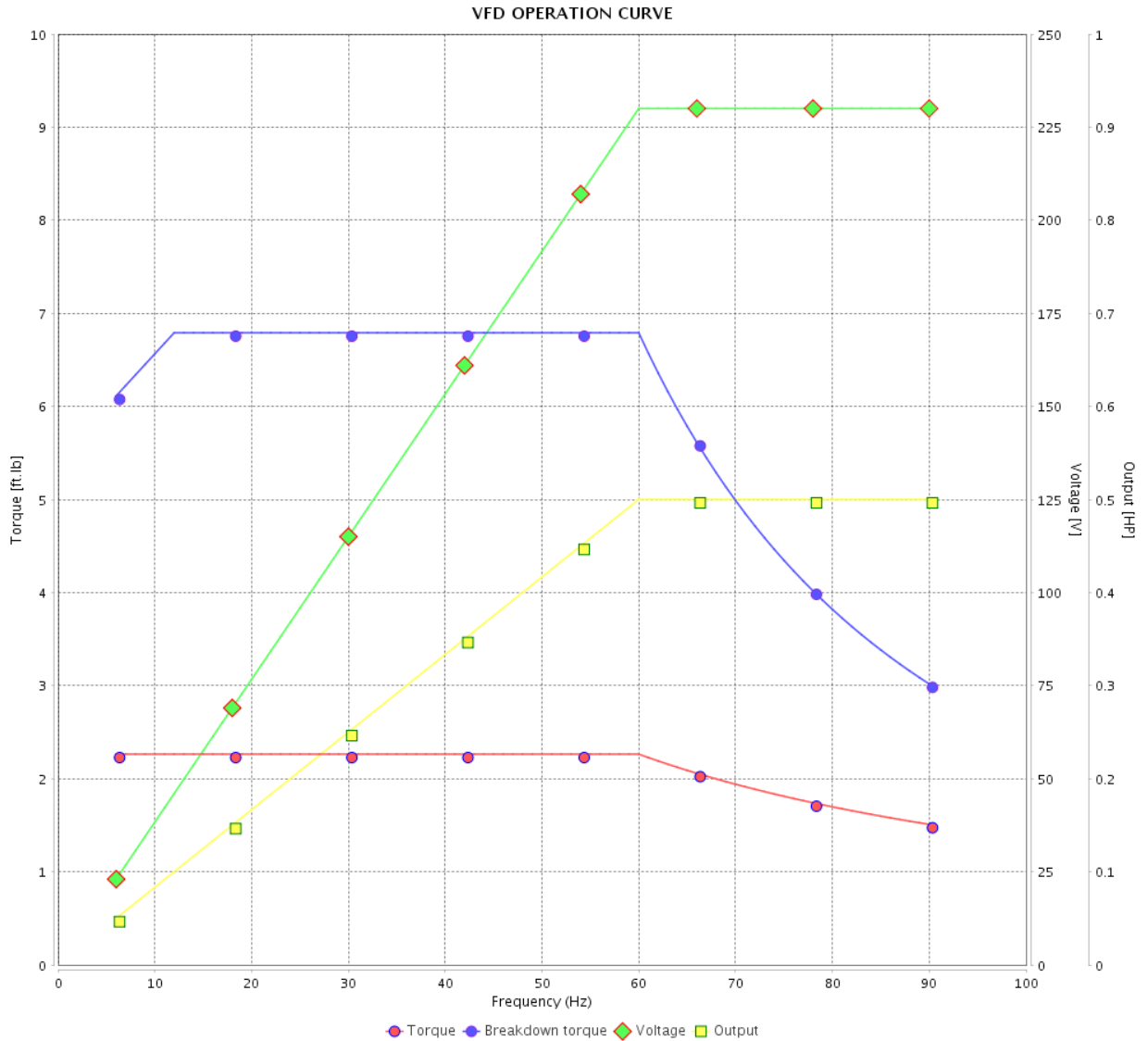
VFD OPERATION CURVE

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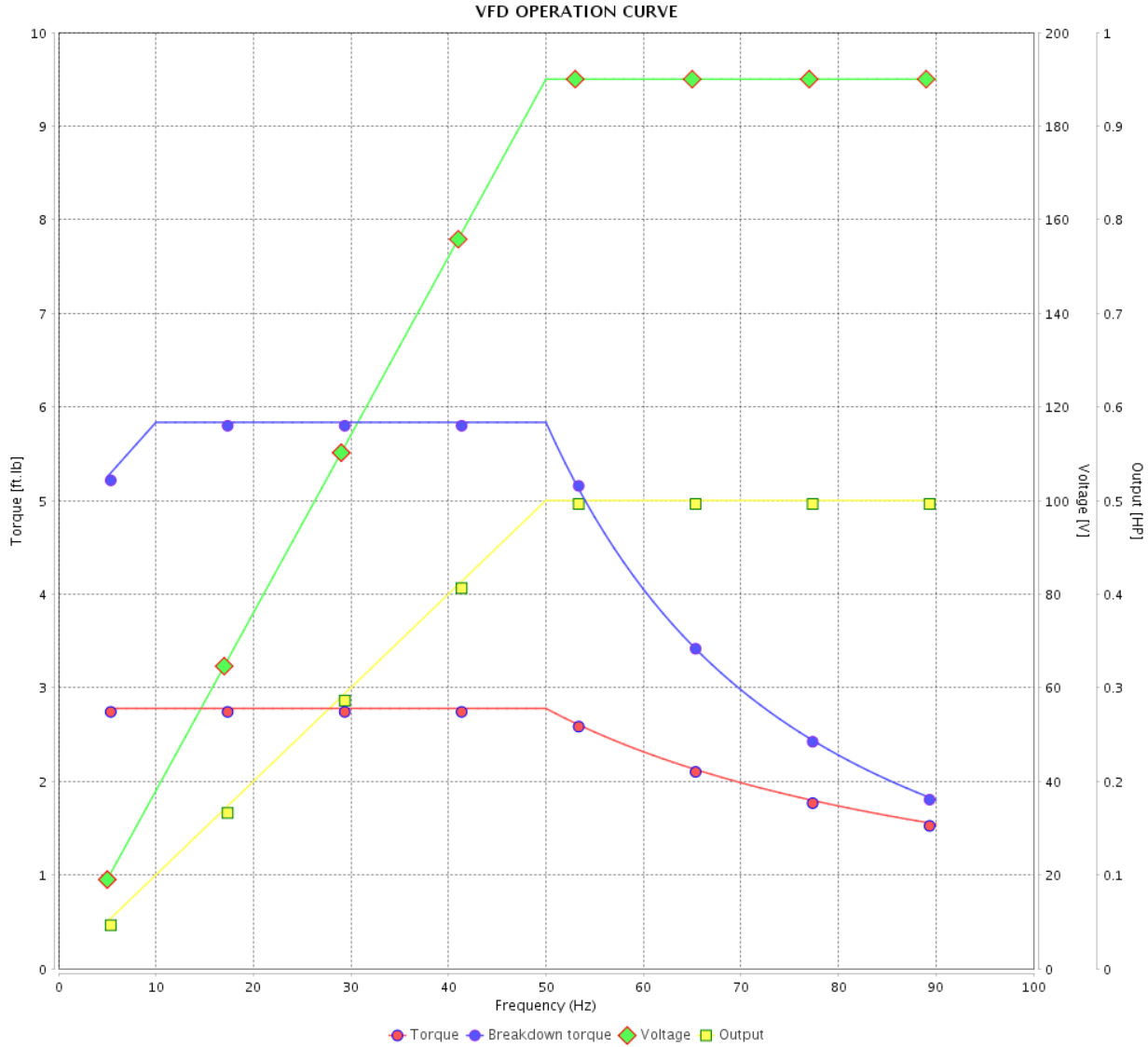
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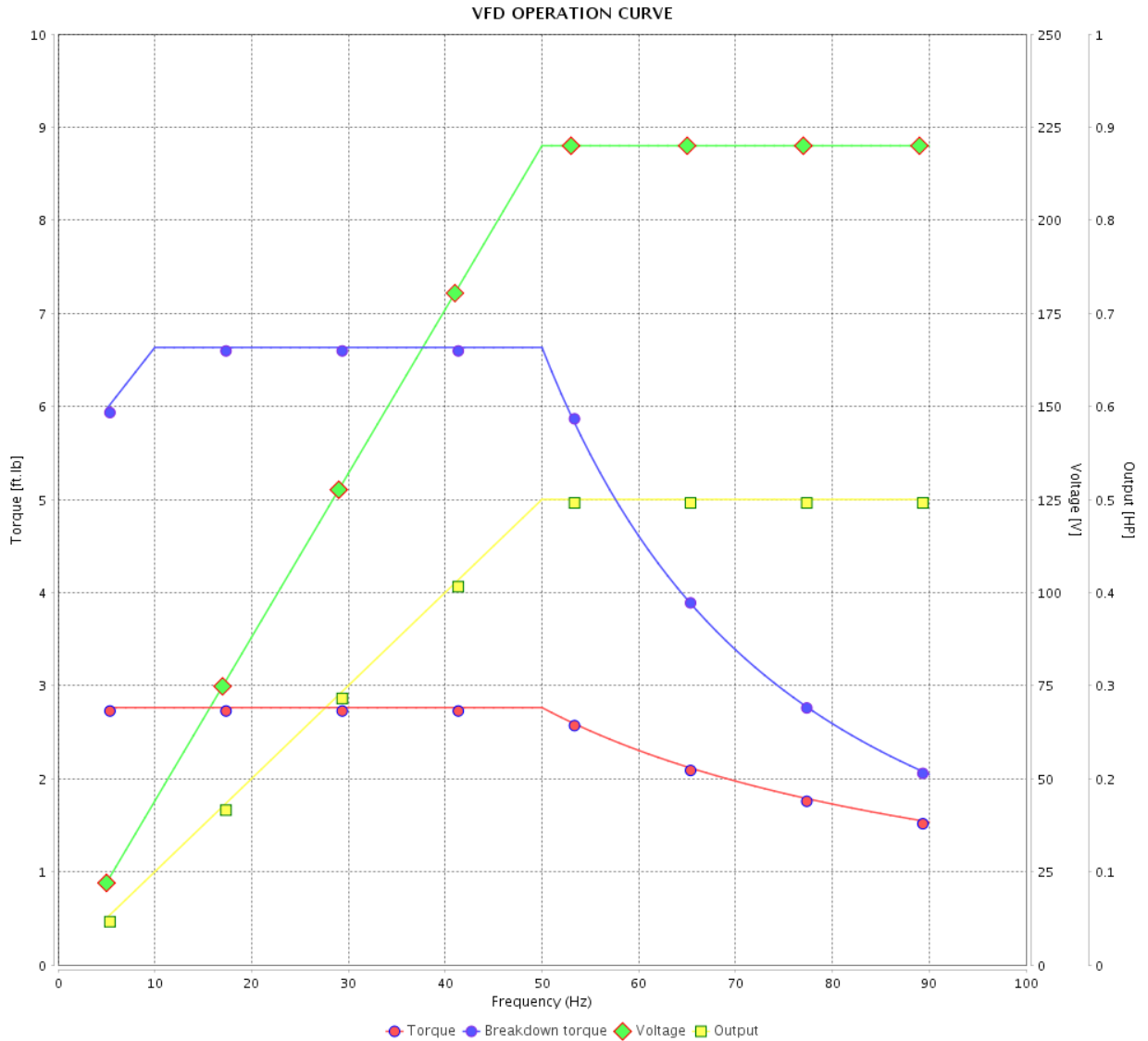
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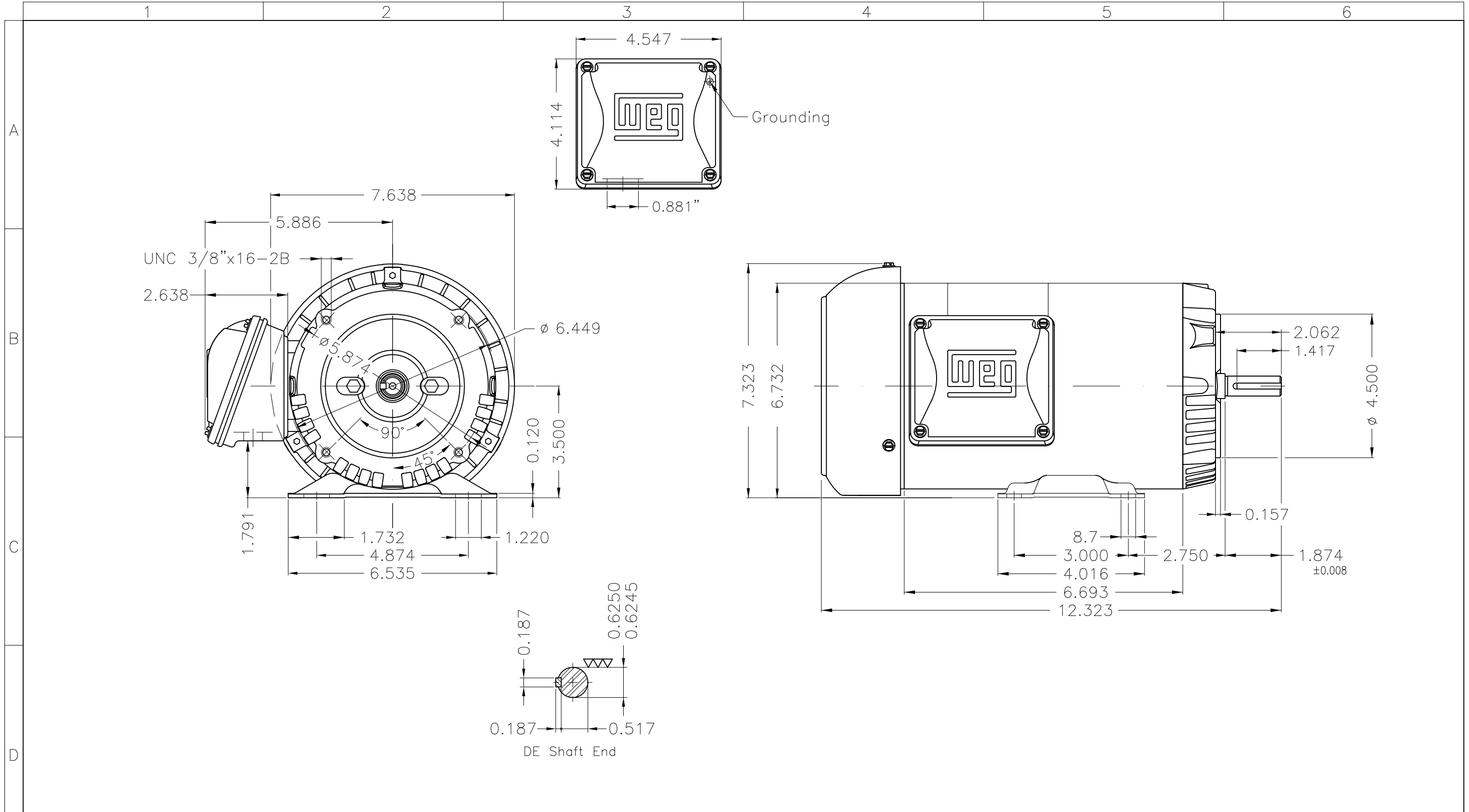


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Fan cover - steel plate
 Color Munsell N 1 matte black
 Painting plan 207N
 Mounting F-1/B34R(D)

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR ROLLED STEEL					
CHECKED		FRAME 56C IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

0.5 HP 06 Poles 60 Hz

Dimensions in inches XME A3



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MADE IN BRAZIL

MAT: 14796991

W01.TE0IC0X0X

MODEL .5012ES3E56C-S

05OCT2021 B/N:

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

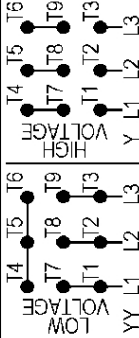
CT 2:1/VT 1000:1

PH 3	Hz 60	HP 0.50
FR 56C		KW 0.37
DUTY CONT.		V 208-230/460
ALT 1000 m.a.s.l.		A 2.19-1.98/0.992
INS CL F AT 80K	IP55	SFA 2.19-2.28/1.14
AMB 40°C	DES -	SF 1.15
ENCL TEFC	CODE K	PF 0.65
USABLE @ 208V SF1.00		RPM 1160
		NEMA NOM. EFF 72.0%

ALTERNATE RATING: 0.50HP 50Hz 190-220/380-415V SF1.15
2.14-2.02/1.07-1.07A 945RPM EFF 89.8% (IE2) IEC 60034-1

For safe area-Inverter duty motor For 60Hz use on VPWM 1000:1 VT, 10:1 CT

DE 6203-ZZ	ODE 6202-ZZ	MOBIL POLYREX EM
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T1-BLU T2-WHT
 T3-ORG T4-YEL
 T5-BLK T6-GRY
 T7-PNK T8-RED
 T9-BRK RED

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.

