

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :		
Product line	: Standard Efficiency Three-Phase	
Product code :	14797647	
Catalog # :	.7512ES3E56-S	
Frame	: 56H	
Insulation class	: F	
Duty cycle	: Cont.(S1)	
Ambient temperature	: -20°C to +40°C	
Altitude	: 1000 m.a.s.l.	
Protection degree	: IP55	
Design	: A	
Cooling method	: IC411 - TEFC	
Mounting	: F-1	
Rotation ¹	: Both (CW and CCW)	
Starting method	: Direct On Line	
Approx. weight ³	: 30.8 lb	
Moment of inertia (J)	: 0.1331 sq.ft.lb	
Output [HP]	0.75	
Poles	6	
Frequency [Hz]	60	
Rated voltage [V]	208-230/460	
Rated current [A]	2.96-2.68/1.34	
L. R. Amperes [A]	17.2-15.5/7.77	
LRC [A]	5.8x(Code K)	
No load current [A]	1.67-1.94/0.971	
Rated speed [RPM]	1155	
Slip [%]	3.75	
Rated torque [ft.lb]	3.41	
Locked rotor torque [%]	229	
Breakdown torque [%]	300	
Service factor	1.00	
Temperature rise	80 K	
Locked rotor time	37s (cold) 21s (hot)	
Noise level ²	50.0 dB(A)	
Efficiency (%)	25%	68.4
	50%	70.0
	75%	74.0
	100%	75.5
Power Factor	25%	0.26
	50%	0.46
	75%	0.59
	100%	0.68
Bearing type	: <u>Drive end</u> 6203 ZZ <u>Non drive end</u> 6202 ZZ	
Sealing	: V'Ring Without Bearing Seal	
Lubrication interval	: - -	
Lubricant amount	: - -	
Lubricant type	: Mobil Polyrex EM	
Foundation loads	Max. traction : 79 lb	
	Max. compression : 110 lb	
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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Checked by	Checked	
Date	Date	
11/04/2022		
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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Standard Efficiency Three-Phase

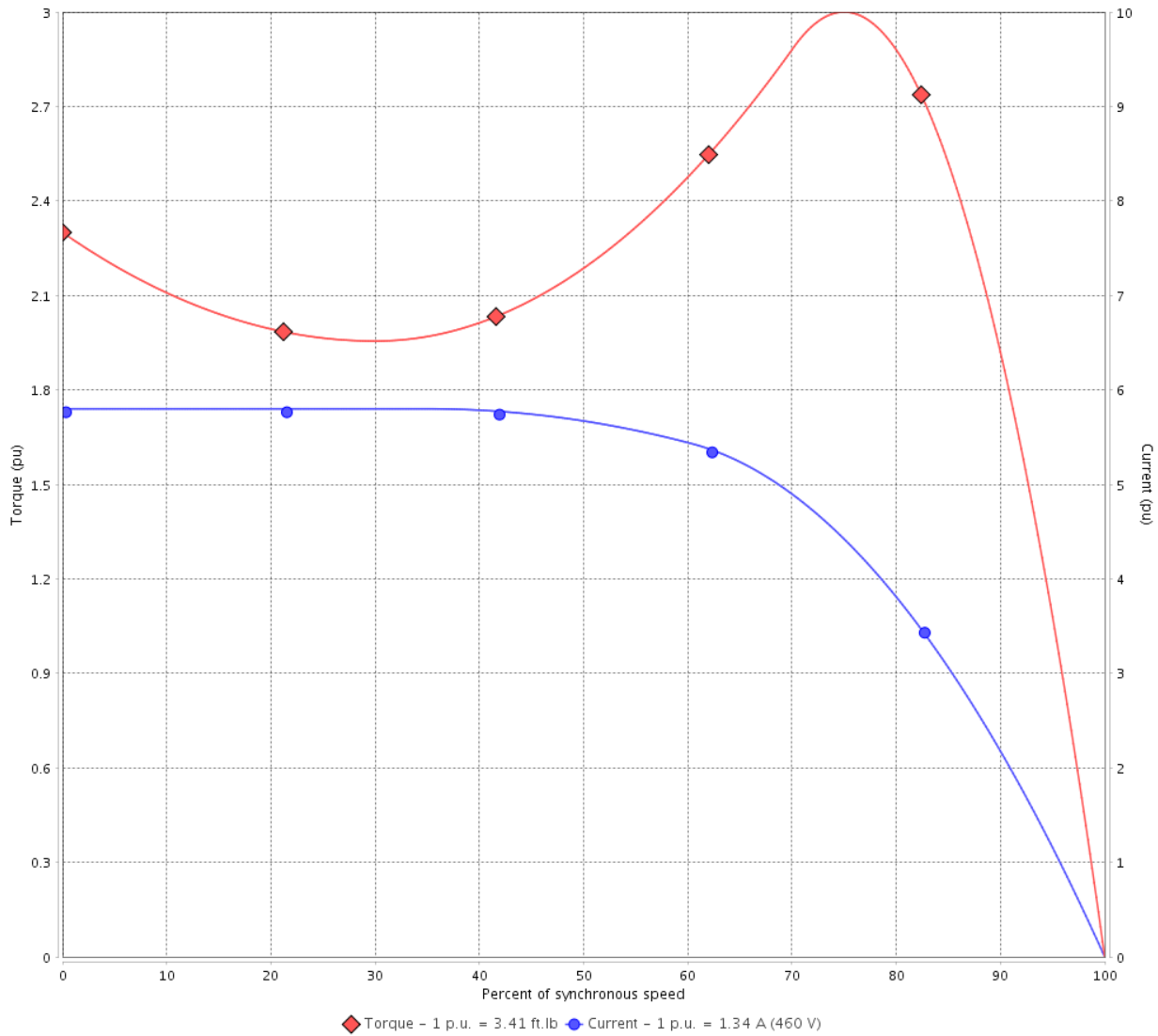
Product code :

14797647

Catalog # :

.7512ES3E56-S

TORQUE AND CURRENT VS SPEED CURVE



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

Rated current	: 2.96-2.68/1.34 A	Moment of inertia (J)	: 0.1331 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 3.41 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	:
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1155 rpm	Design	: A

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

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TORQUE AND CURRENT VS SPEED CURVE



Three Phase Induction Motor - Squirrel Cage

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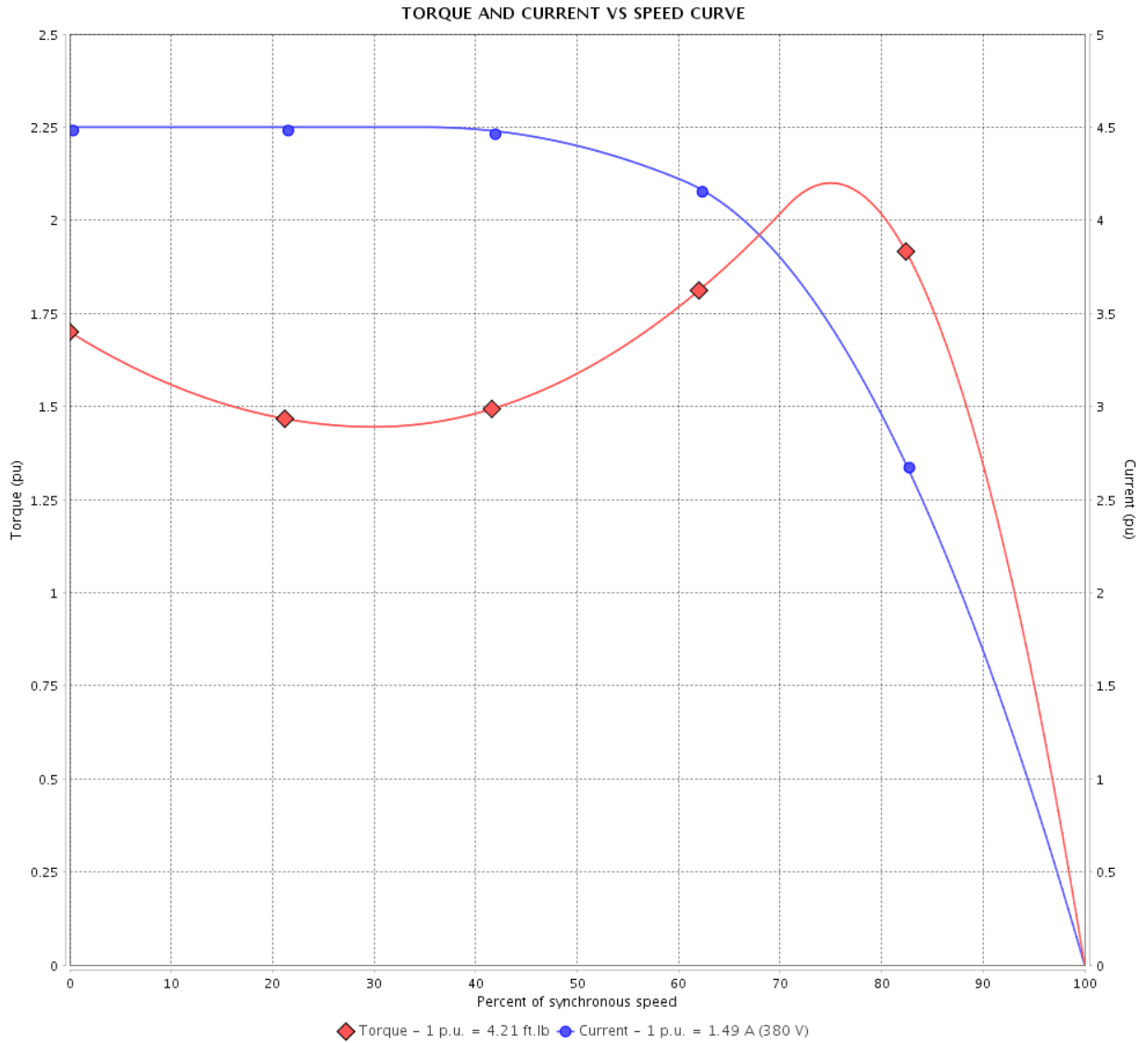
Product line : Standard Efficiency Three-Phase

Product code :

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Catalog # :

.7512ES3E56-S



Performance : 190/380 V 50 Hz 6P

Rated current : 2.98/1.49 A
 LRC : 4.5
 Rated torque : 4.21 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 210 %
 Rated speed : 935 rpm

Moment of inertia (J) : 0.1331 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : A

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

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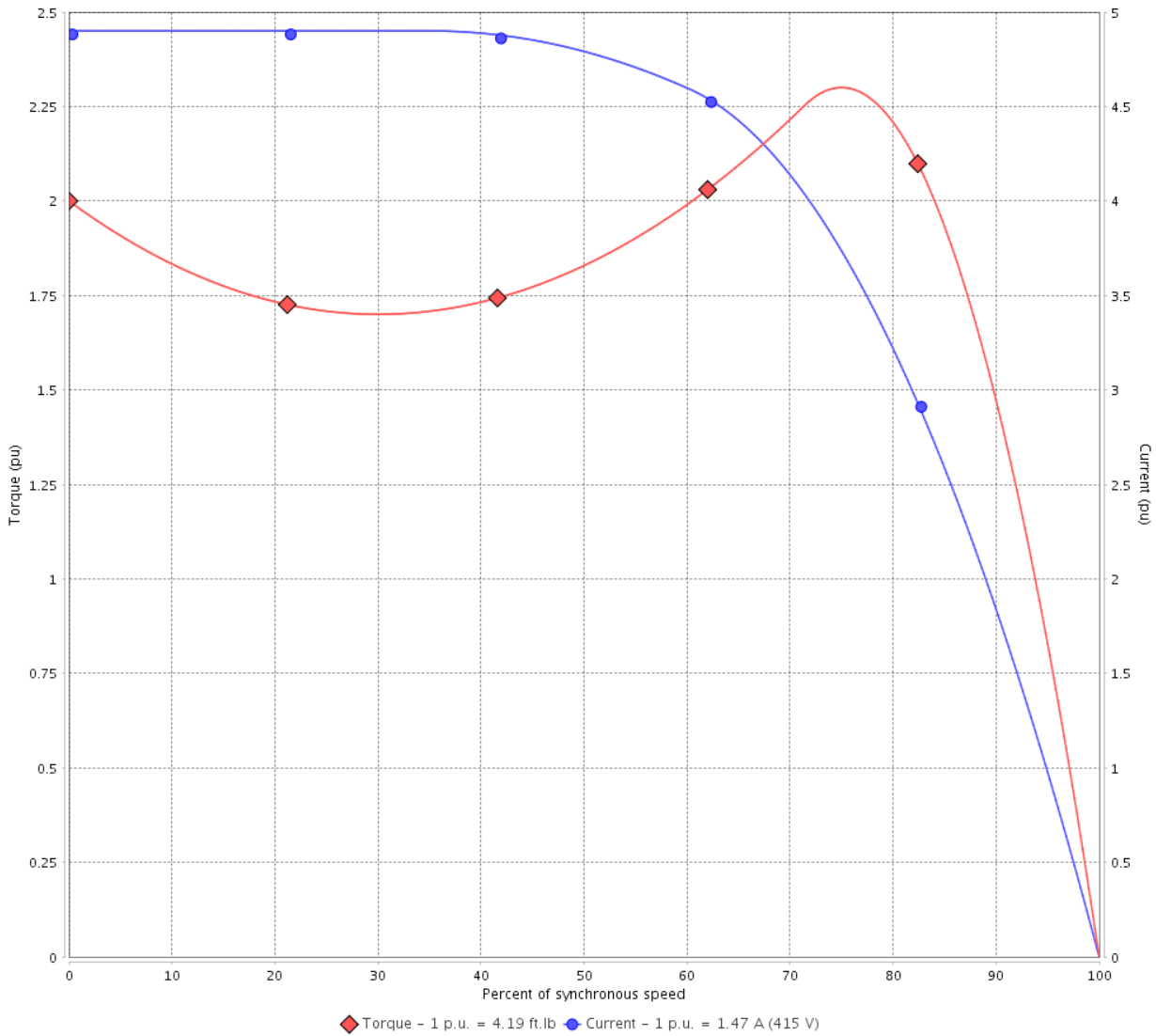
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 6P

Rated current : 2.77/1.47 A
 LRC : 4.9
 Rated torque : 4.19 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 229 %
 Rated speed : 940 rpm

Moment of inertia (J) : 0.1331 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : A

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

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



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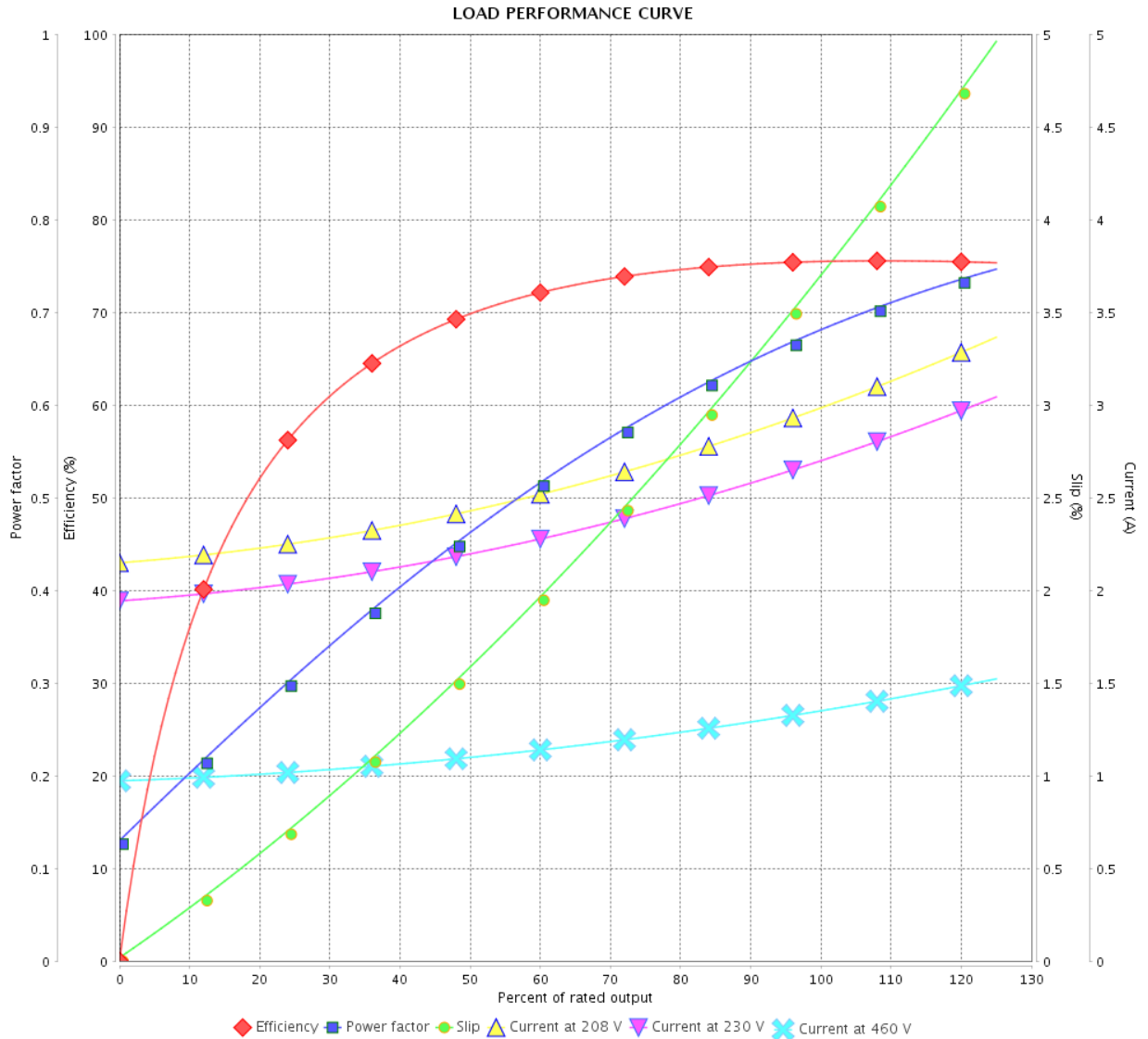
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 Insulation class : F
 Service factor :
 Temperature rise : 80 K
 Design : A

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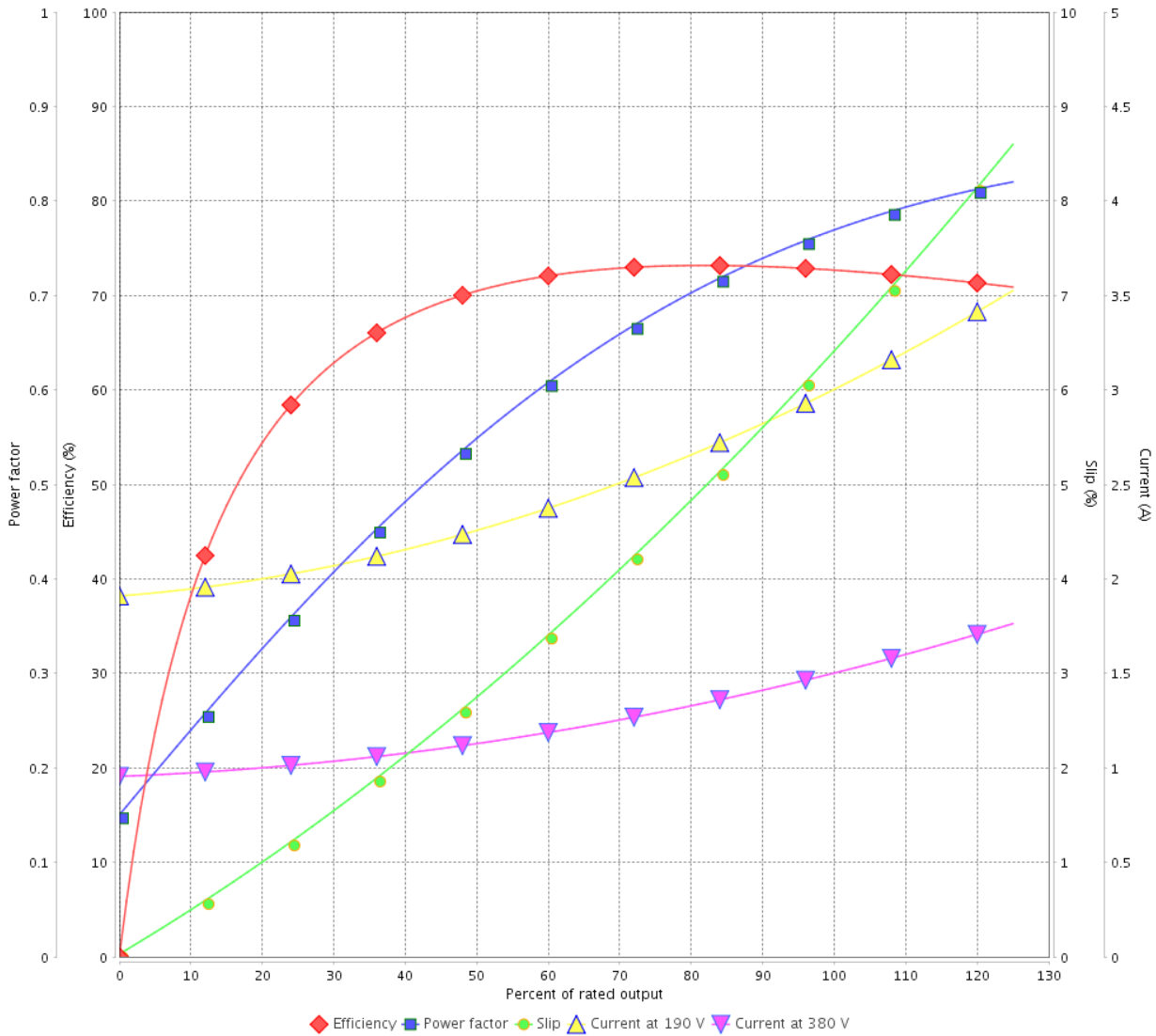
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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : A

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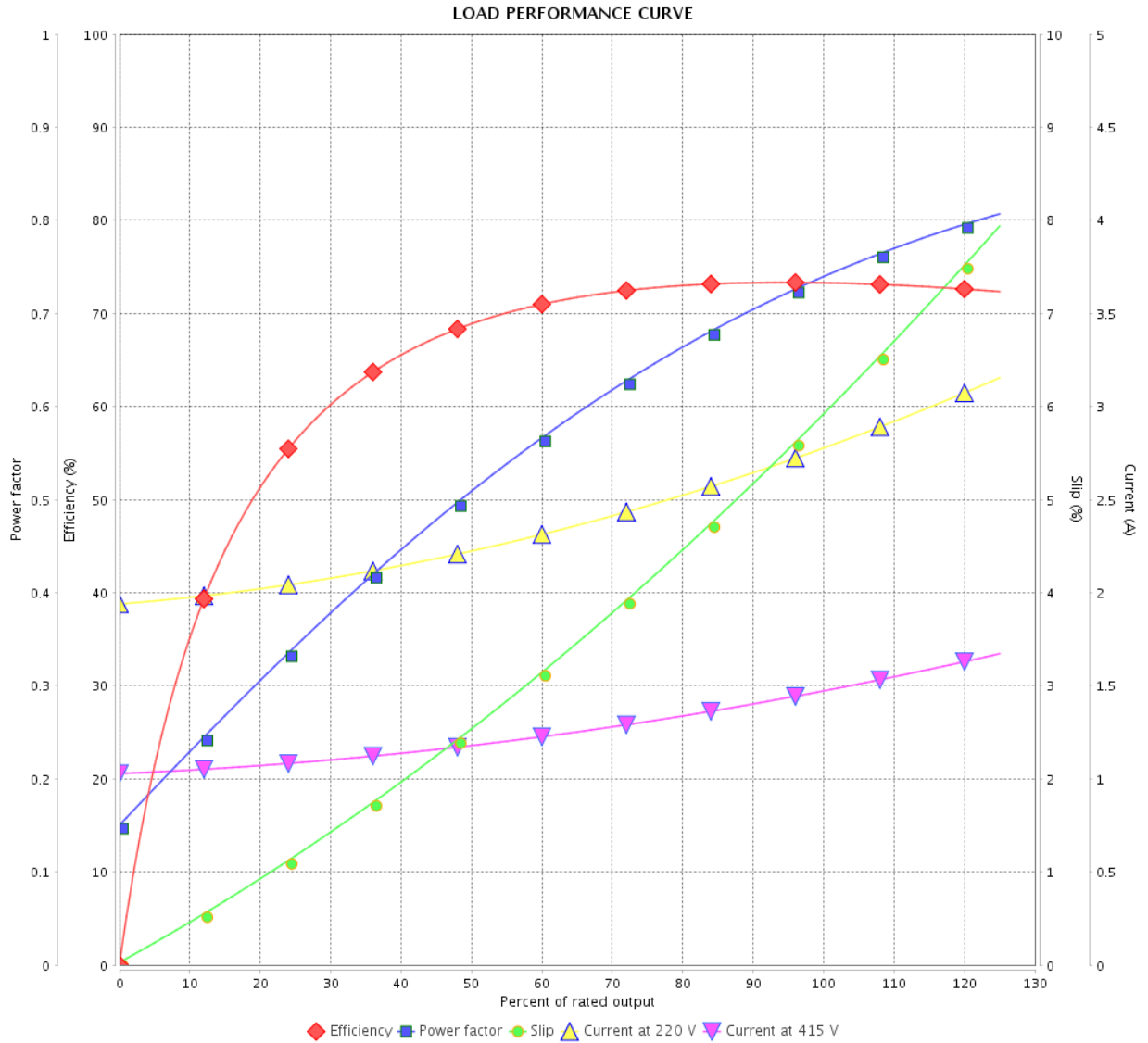
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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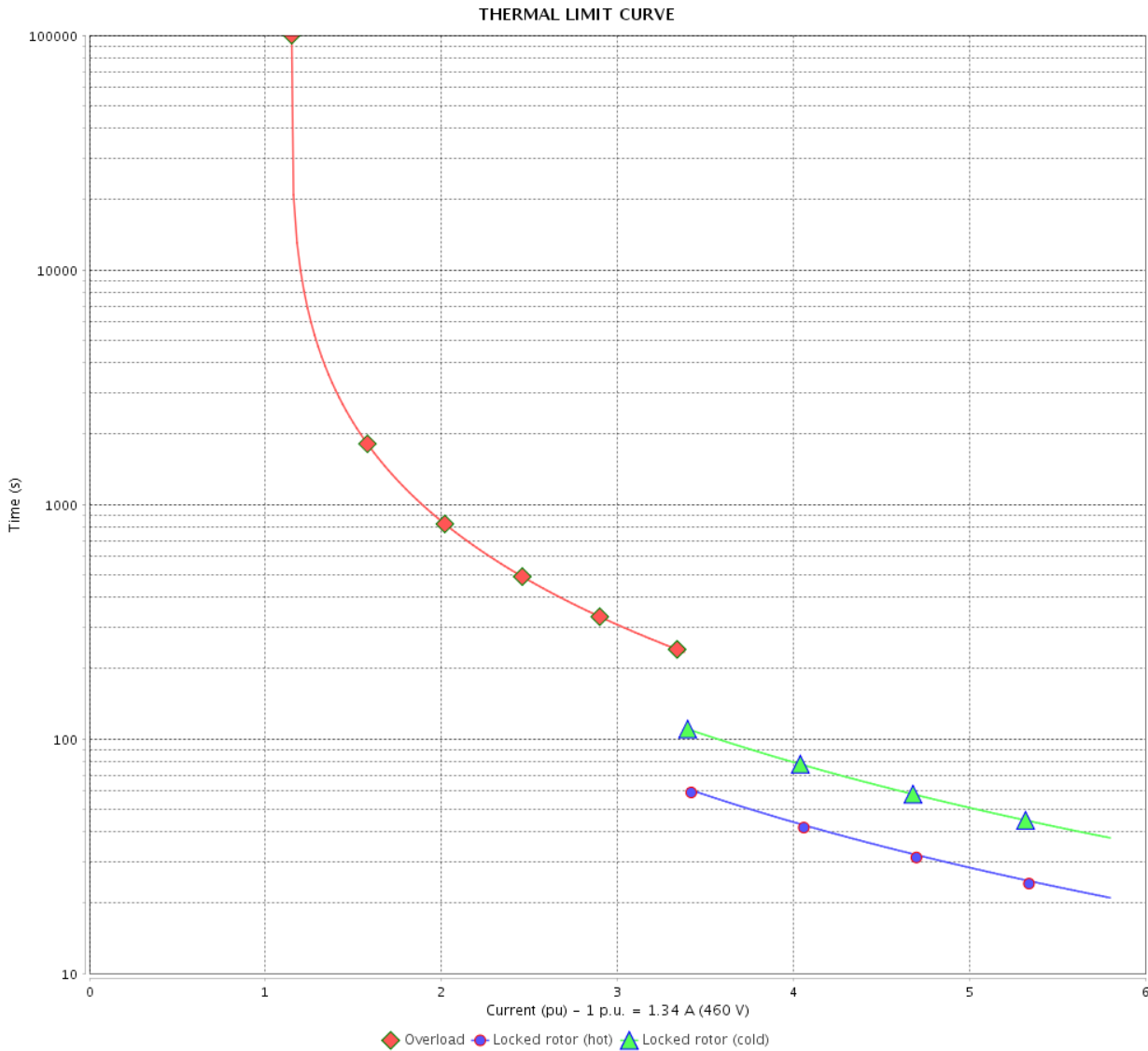
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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor :
 Temperature rise : 80 K
 Design : A

Heating constant

Cooling constant

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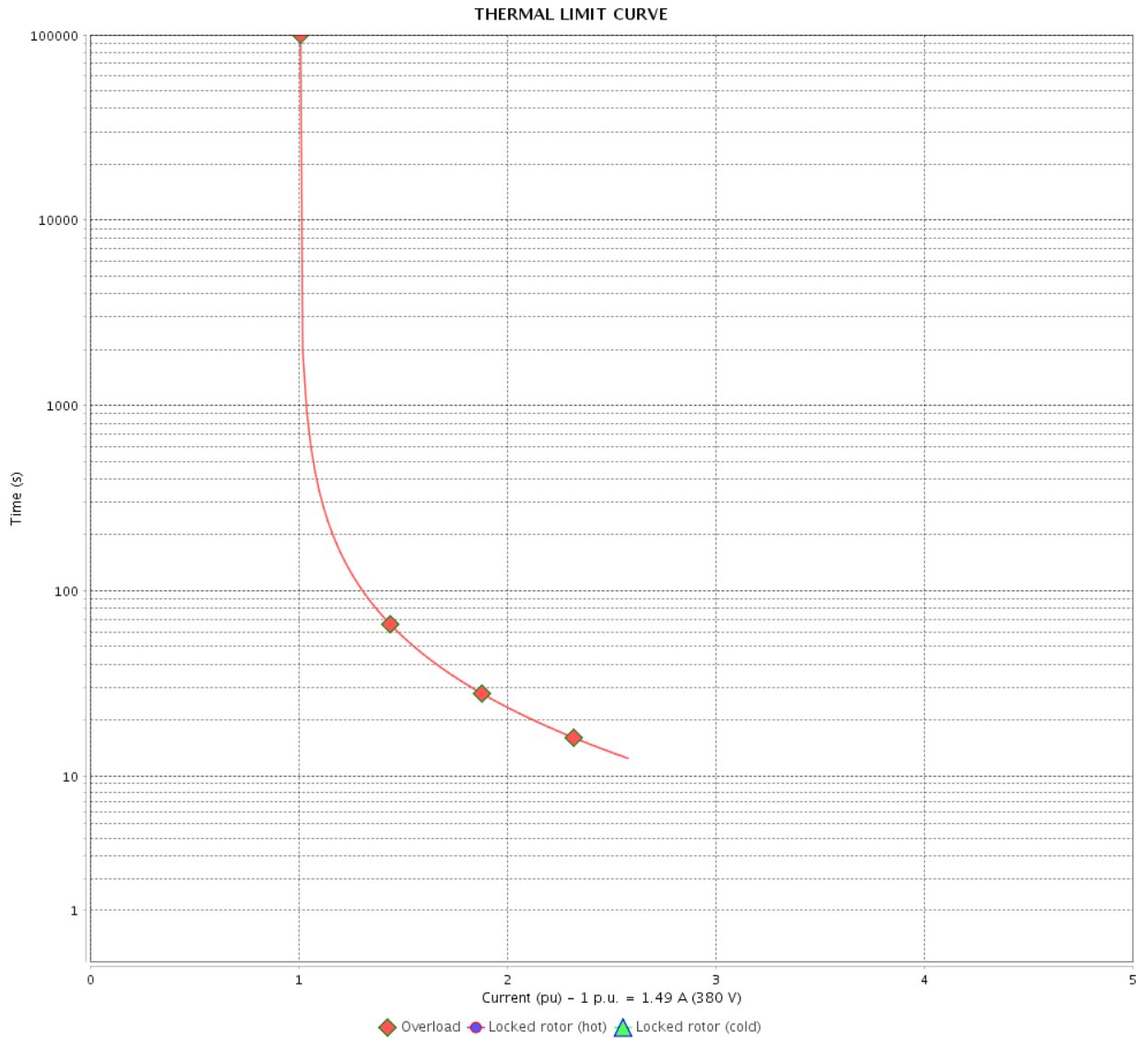
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Cooling constant

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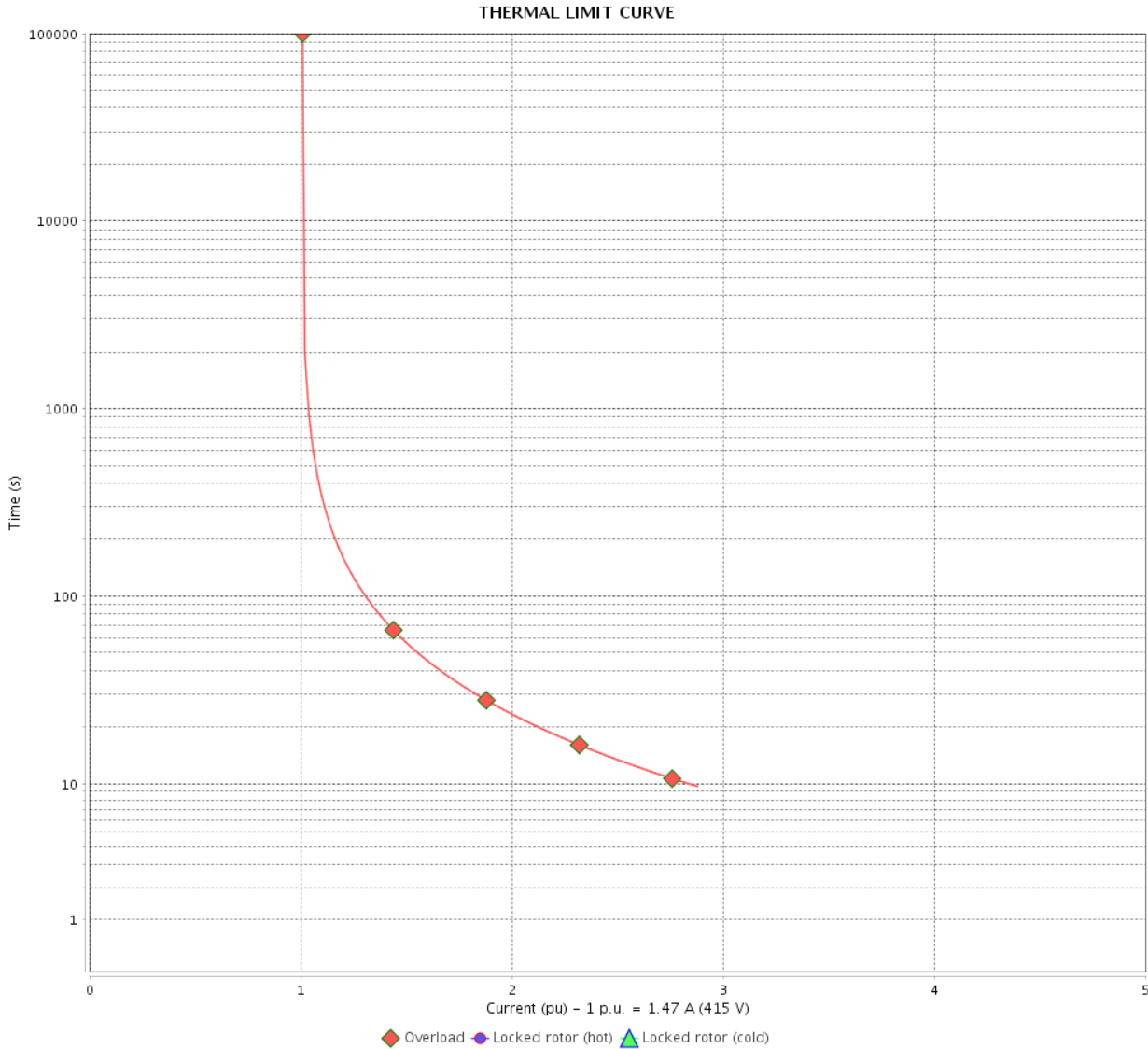


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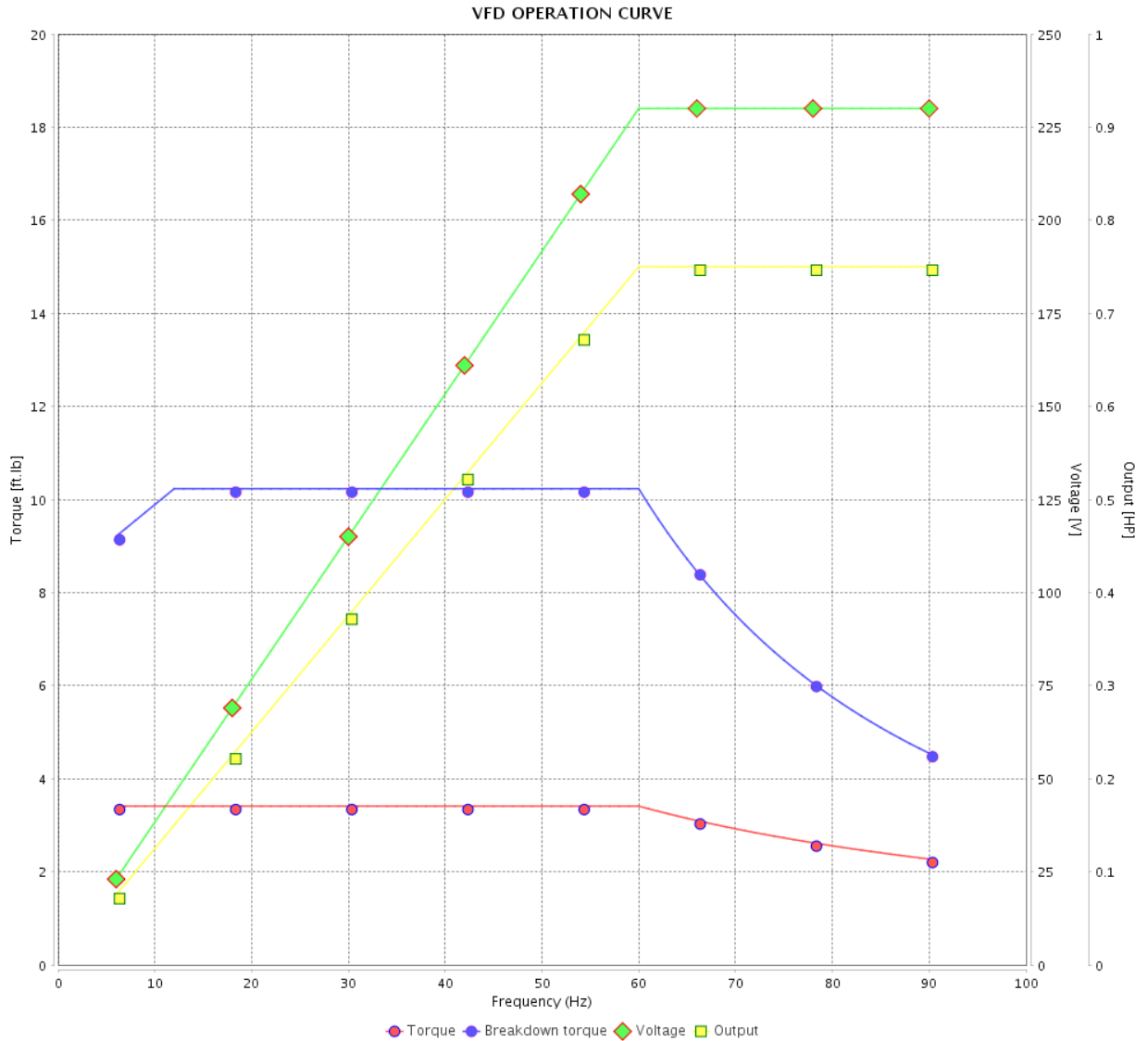
VFD OPERATION CURVE

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 Insulation class : F
 Service factor :
 Temperature rise : 80 K
 Design : A

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



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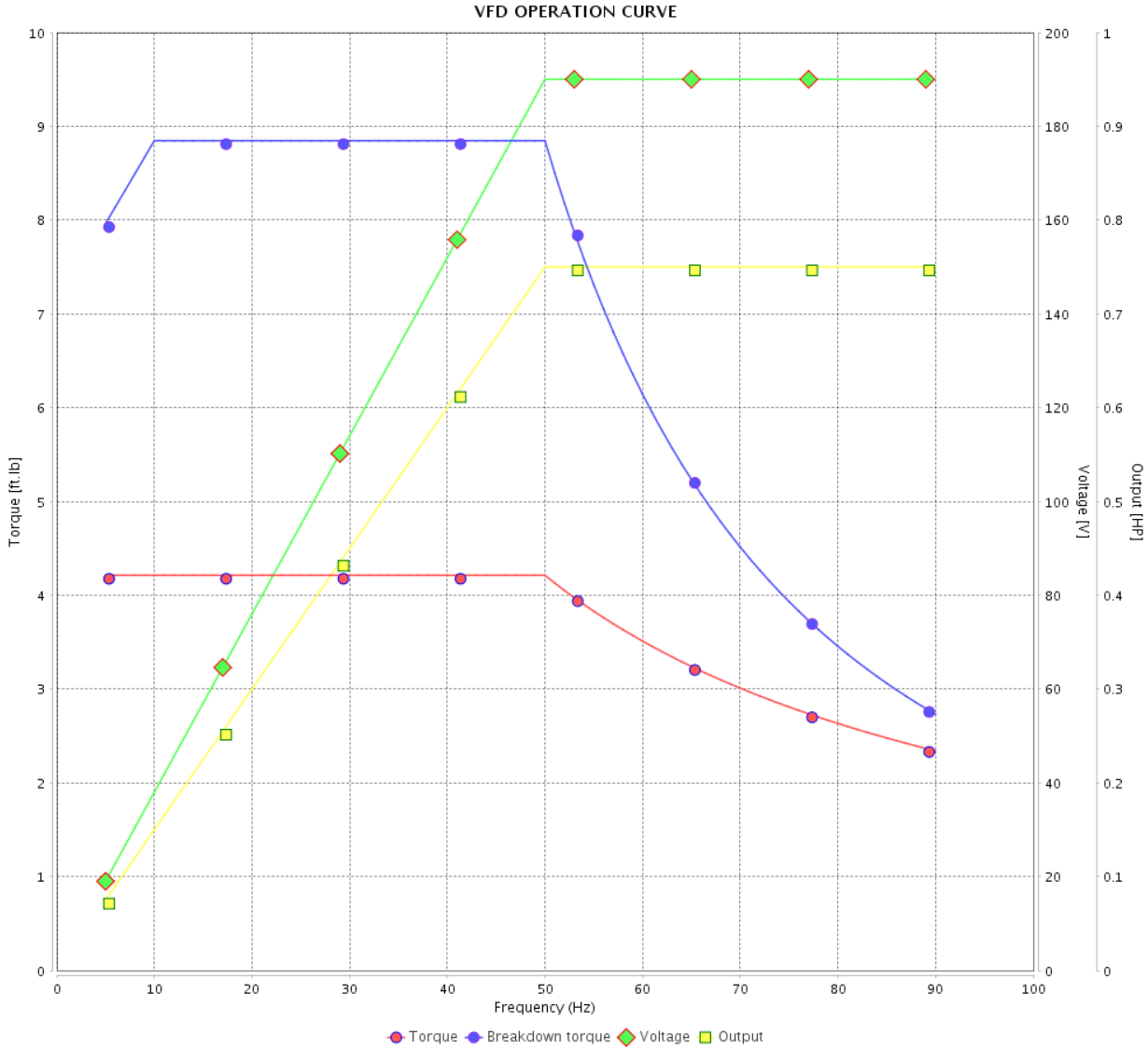
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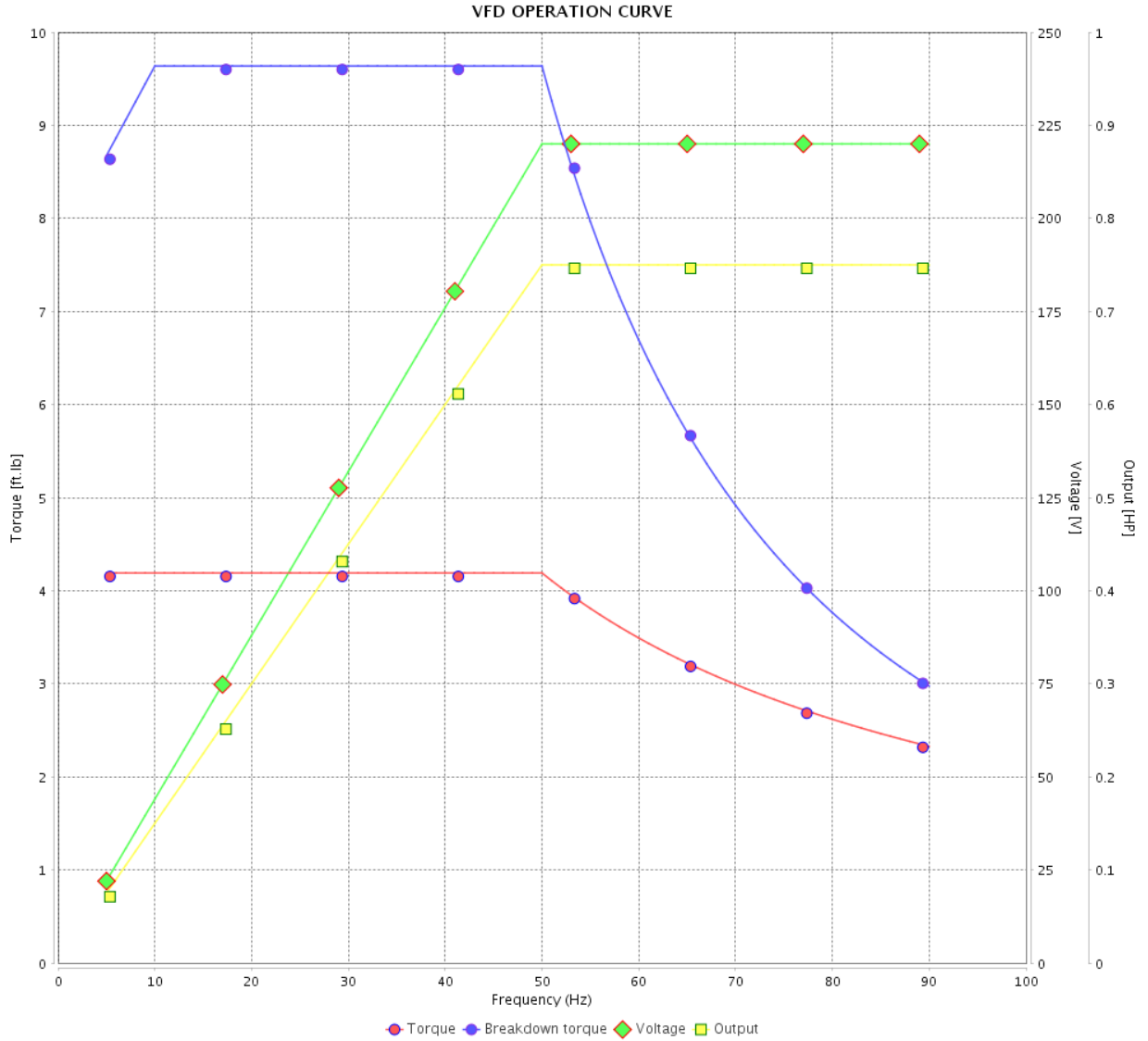
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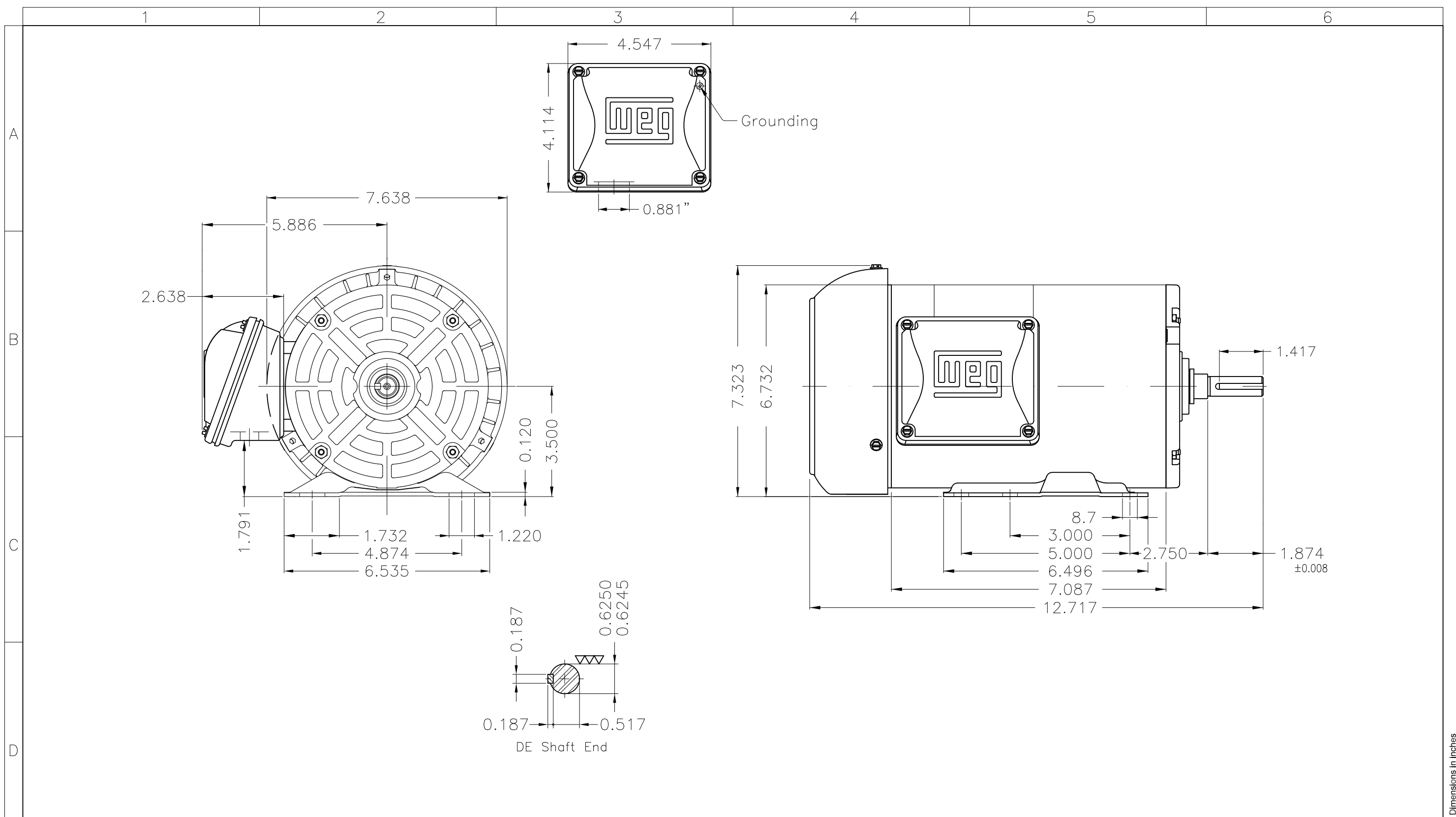



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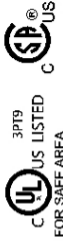
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Fan cover - steel plate											
Without coating											
Mounting F-1/B3R(D)											
ECM	LOC	SUMMARY OF MODIFICATIONS					EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR ROLLED STEEL					PREVIEW	WDD	SHEET	1 / 1	
CHECKED		FRAME 56H IP55 TEFC									
RELEASED											
REL DT.		WMO	Jaragua do Sul	Product Engineering							

0.75 HP 06 Poles 60 Hz



MADE IN BRAZIL

MAT: 14797647

W01.TE0IC0X0X

MODEL 7512ES3E56-S

15MAR2022 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 0.75
FR 56H		KW 0.55
DUTY CONT.		V 208-230/460
ALT 1000 m.a.s.l.		A 2.96-2.68/1.34
INS CL F AT 80K	IP55	SFA 2.96-3.08/1.54
AMB 40°C	DES A	SF 1.15
ENCL TEFC	CODE K	PF 0.68
USABLE @ 208V SF1.00		RPM 1155
		NEMA NOM. EFF 75.5%

ALTERNATE RATING: 0.75HP 50Hz 190-220/380-415V SF1.00
2.98-2.77/1.49-1.47A 935RPM EFF 72.6% (IE1) 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.

