

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :				
Product line	: Premium Efficiency Three-Phase	Product code :	12809205	
		Catalog # :	.5018OT3E56C-S	
Frame	: 56C	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	: 21.1 lb	
		Moment of inertia (J)	: 0.0584 sq.ft.lb	
Output [HP]	0.5	0.5	0.5	
Poles	4	4	4	
Frequency [Hz]	60	50	50	
Rated voltage [V]	208-230/460	190/380	220/415	
Rated current [A]	1.90-1.72/0.861	1.89/0.943	1.79/0.948	
L. R. Amperes [A]	13.7-12.4/6.20	10.9/5.47	10.9/5.78	
LRC [A]	7.2x(Code L)	5.8x(Code J)	6.1x(Code K)	
No load current [A]	1.12-1.30/0.650	1.23/0.617	1.29/0.683	
Rated speed [RPM]	1765	1450	1455	
Slip [%]	1.94	3.33	3.00	
Rated torque [ft.lb]	1.49	1.81	1.80	
Locked rotor torque [%]	240	180	200	
Breakdown torque [%]	330	260	290	
Service factor		1.25	1.25	
Temperature rise	80 K	80 K	80 K	
Locked rotor time	48s (cold) 27s (hot)	55s (cold) 31s (hot)	50s (cold) 28s (hot)	
Noise level ²	52.0 dB(A)	49.0 dB(A)	49.0 dB(A)	
Efficiency (%)	25%	67.5	71.5	68.9
	50%	70.0	72.6	70.6
	75%	75.5	76.6	75.7
	100%	78.2	77.4	77.2
Power Factor	25%	0.26	0.31	0.28
	50%	0.47	0.55	0.51
	75%	0.60	0.68	0.64
	100%	0.69	0.77	0.73
Bearing type	: Drive end 6203 ZZ Non drive end 6202 ZZ	Foundation loads		
Sealing	: Without Without Bearing Seal Bearing Seal	Max. traction	: 40 lb	
		Max. compression	: 62 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				
Checked by			Page	Revision
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TORQUE AND CURRENT VS SPEED CURVE

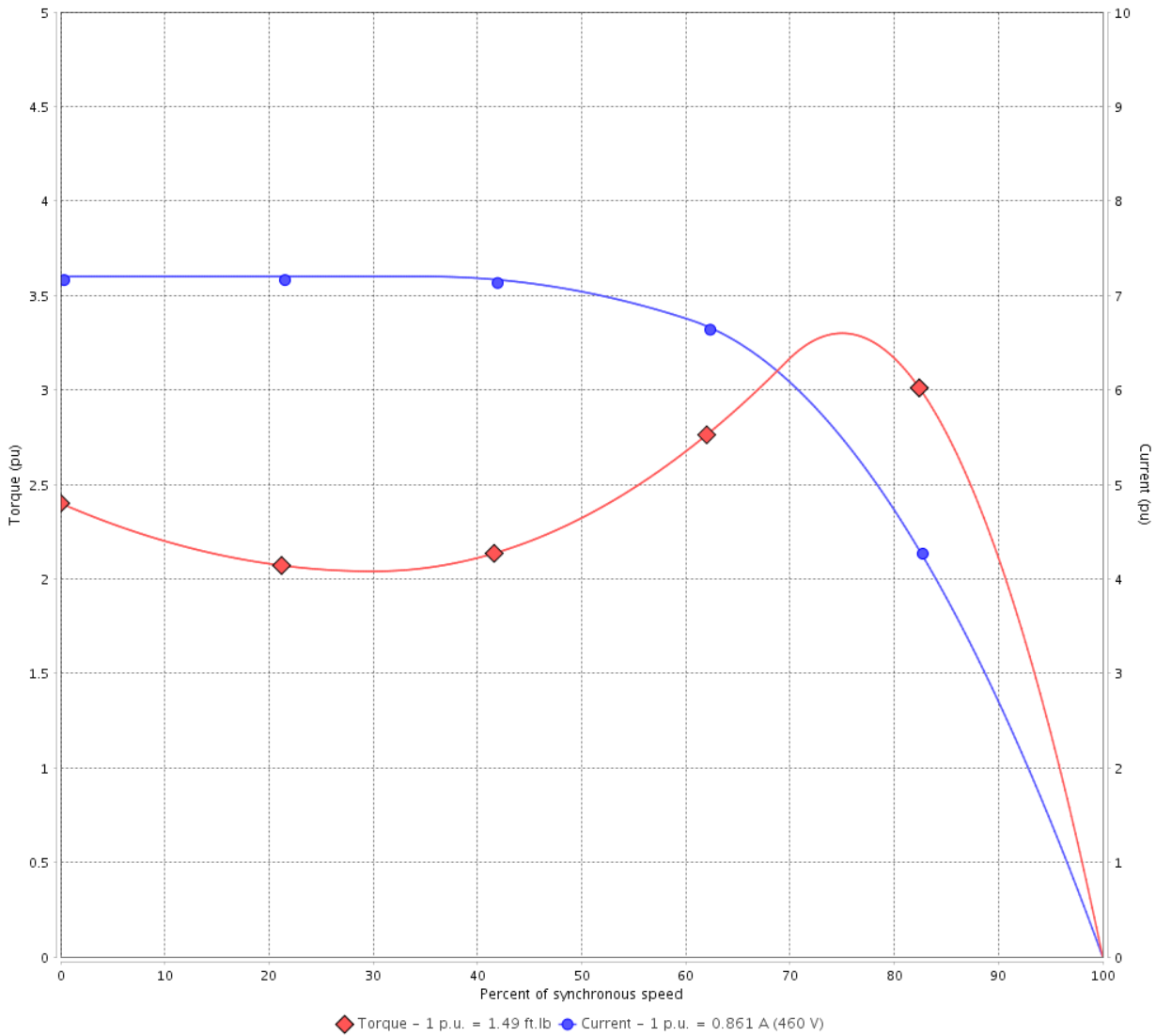
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Premium Efficiency Three-Phase Product code : 12809205
 Catalog # : .5018OT3E56C-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 208-230/460 V 60 Hz 4P

Rated current	: 1.90-1.72/0.861 A	Moment of inertia (J)	: 0.0584 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 1.49 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	:
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1765 rpm		

Locked rotor time : 48s (cold) 27s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

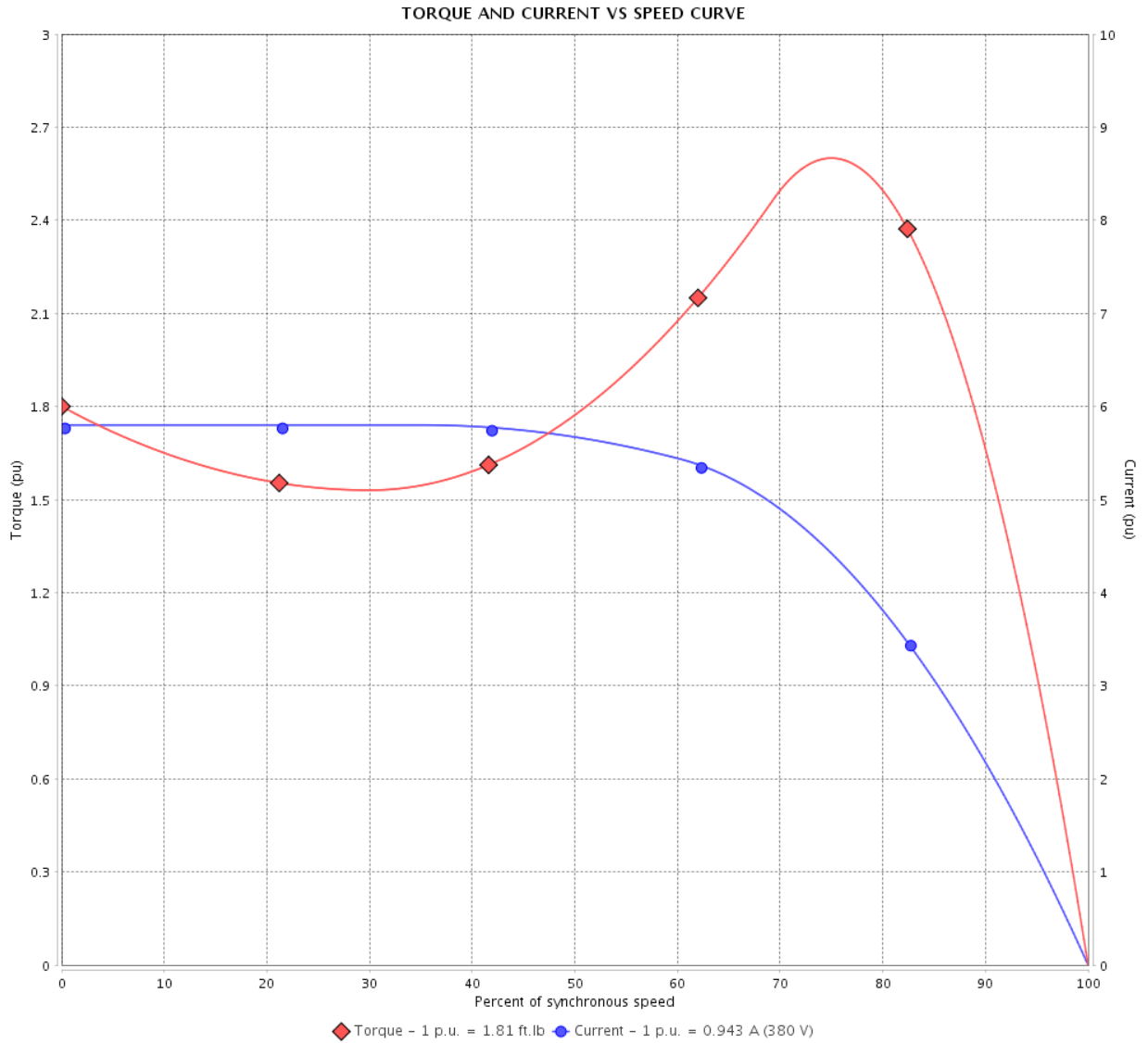
Product line : Premium Efficiency Three-Phase

Product code :

12809205

Catalog # :

.5018OT3E56C-S



Performance : 190/380 V 50 Hz 4P

Rated current : 1.89/0.943 A
 LRC : 5.8
 Rated torque : 1.81 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 260 %
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.0584 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K

Locked rotor time : 55s (cold) 31s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



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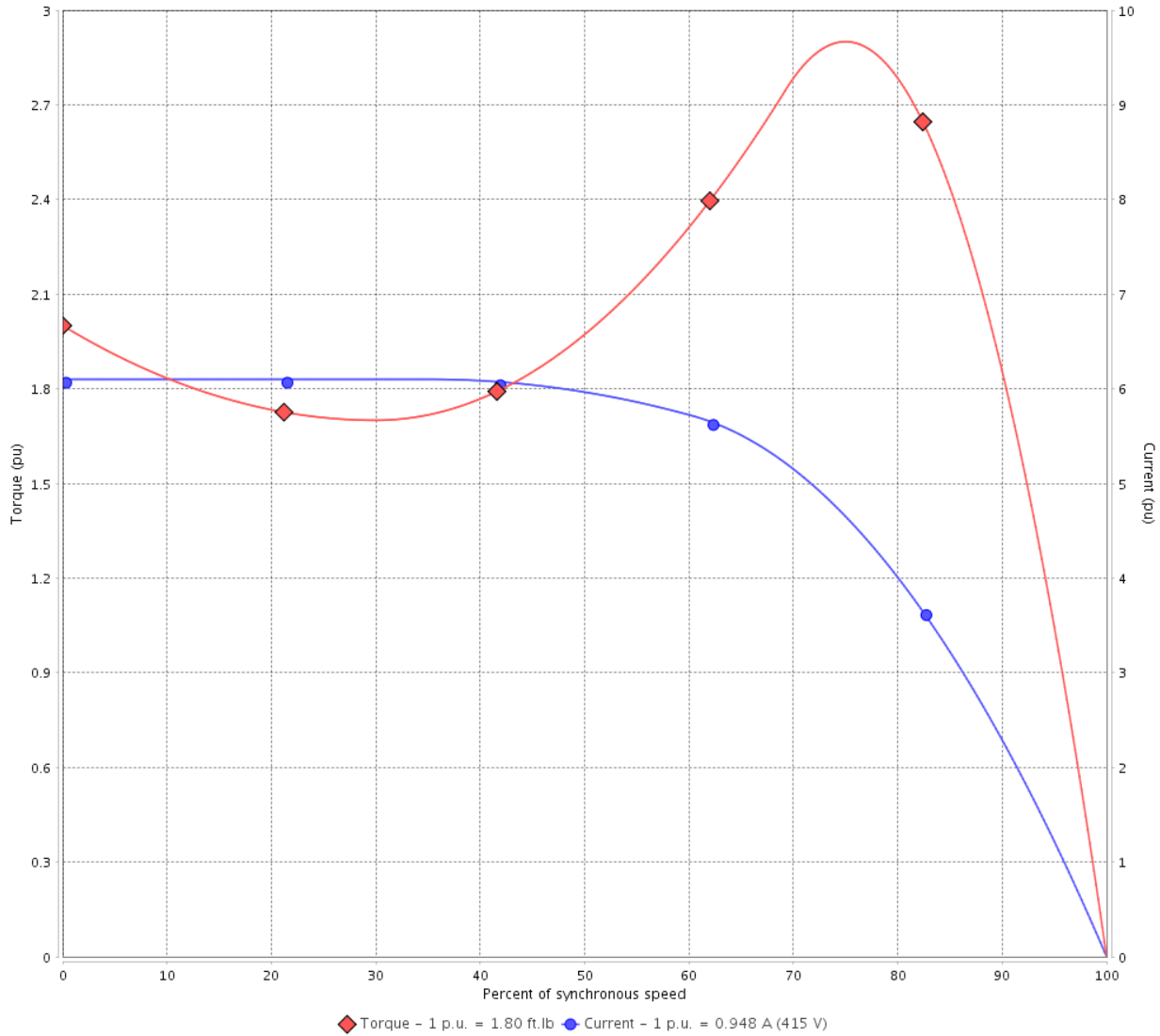
Product code :

12809205

Catalog # :

.5018OT3E56C-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 4P

Rated current : 1.79/0.948 A
 LRC : 6.1
 Rated torque : 1.80 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 290 %
 Rated speed : 1455 rpm

Moment of inertia (J) : 0.0584 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K

Locked rotor time : 50s (cold) 28s (hot)

Rev.	Changes Summary	Performed	Checked	Date
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Date	11/04/2022			

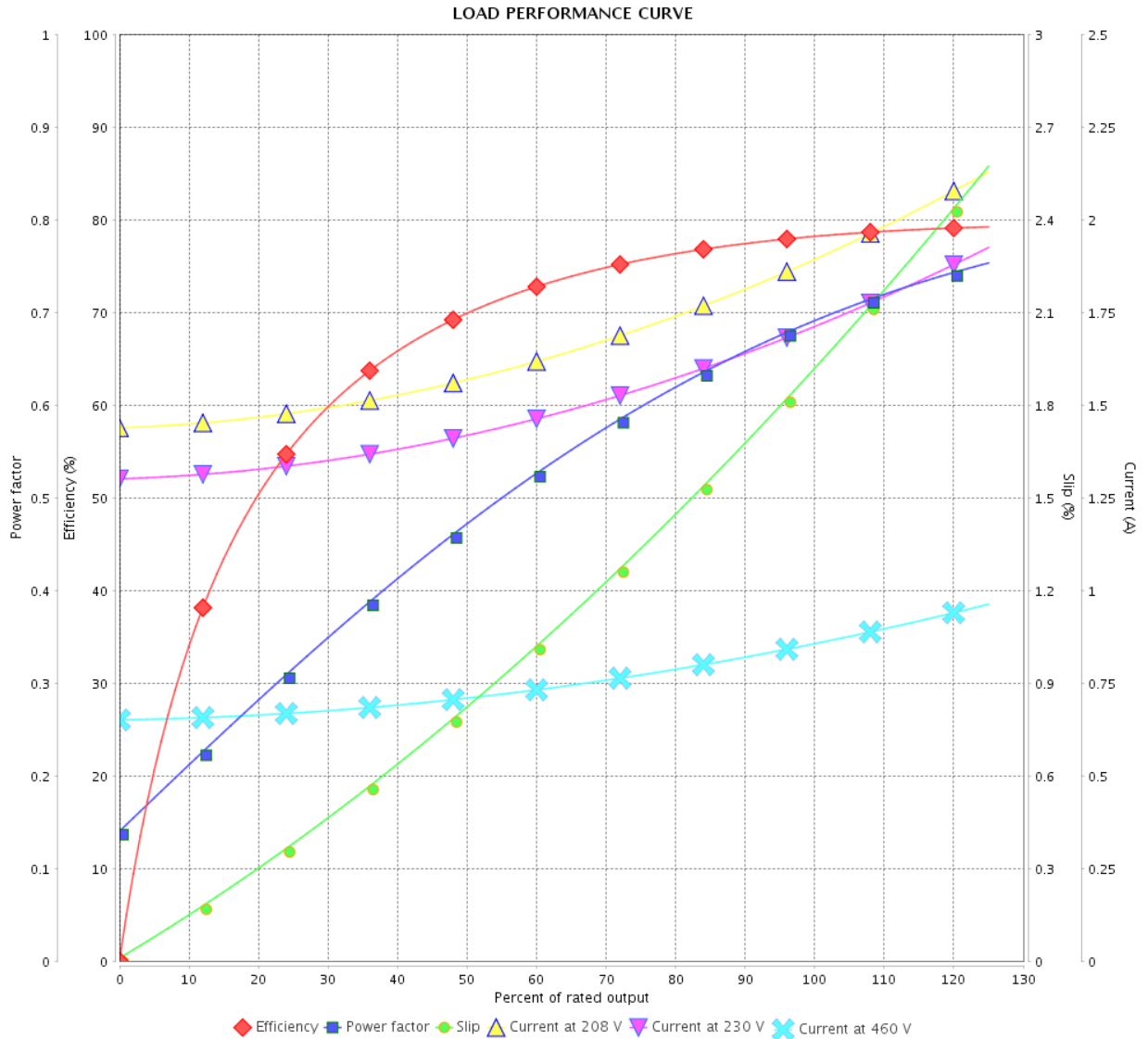
LOAD PERFORMANCE CURVE

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Customer :

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Performance : 208-230/460 V 60 Hz 4P

Rated current : 1.90-1.72/0.861 A
 LRC : 7.2
 Rated torque : 1.49 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 330 %
 Rated speed : 1765 rpm

Moment of inertia (J) : 0.0584 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor :
 Temperature rise : 80 K

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Date				

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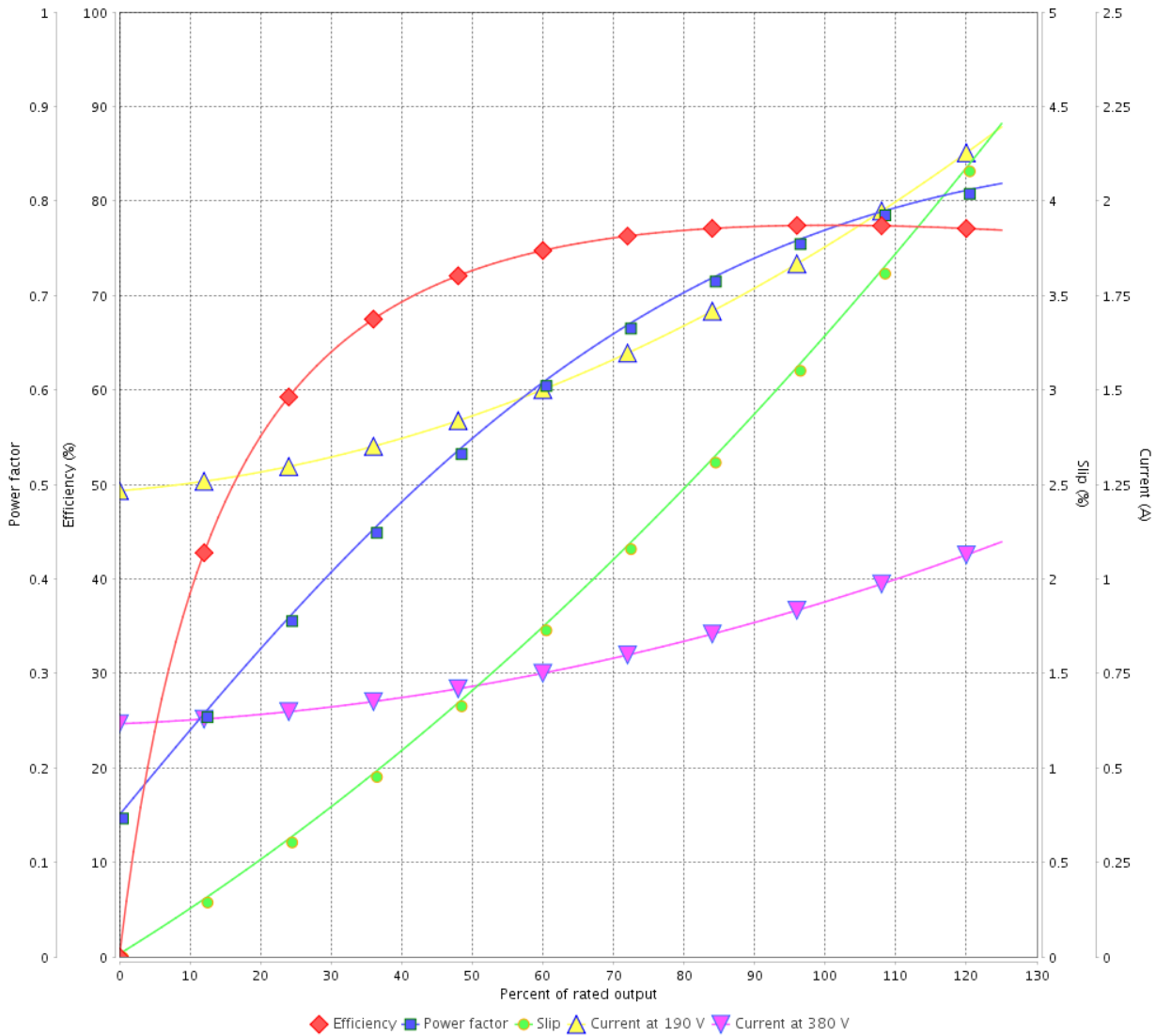
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Performance : 190/380 V 50 Hz 4P

Rated current : 1.89/0.943 A
 LRC : 5.8
 Rated torque : 1.81 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 260 %
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.0584 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K

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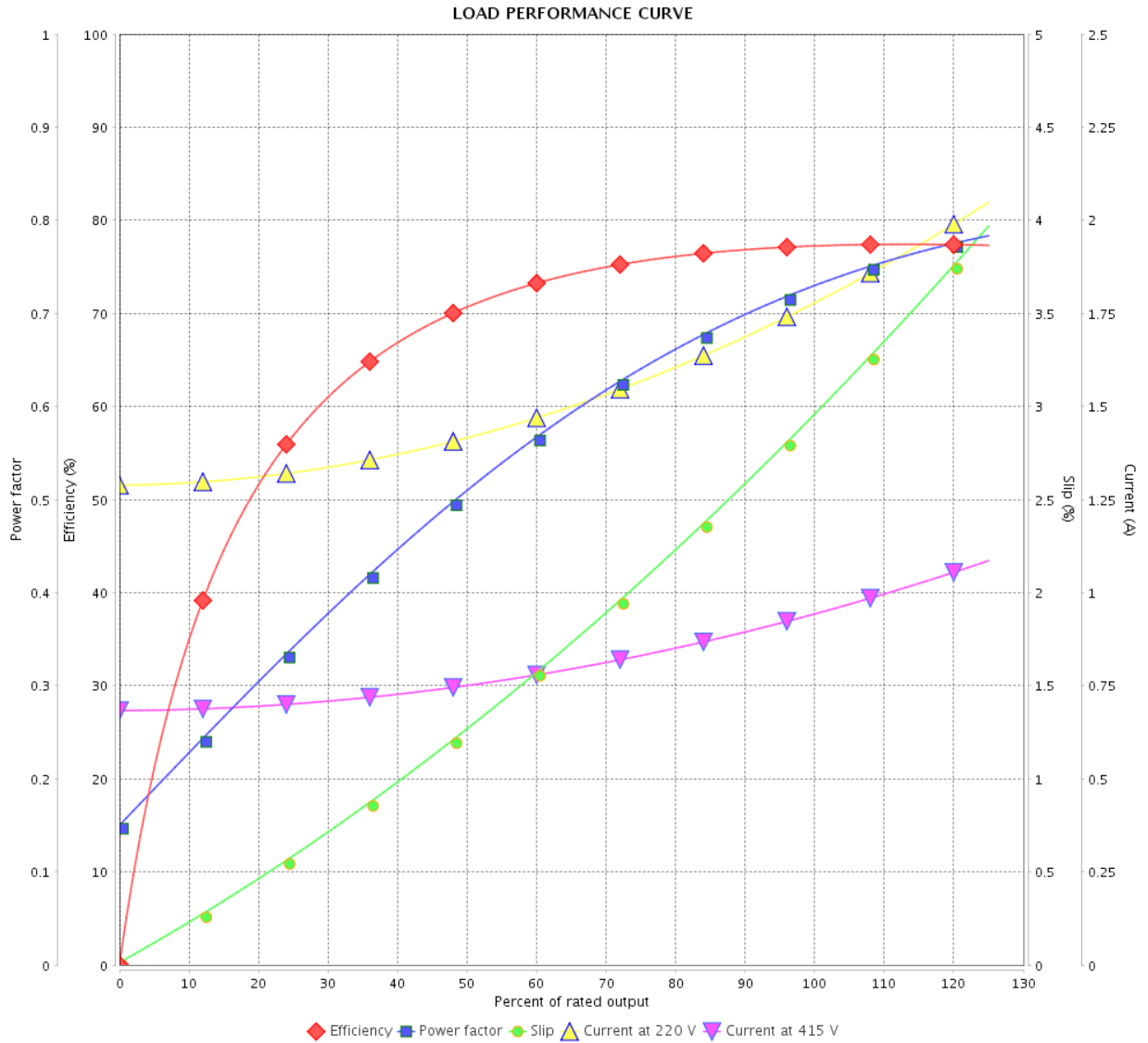
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

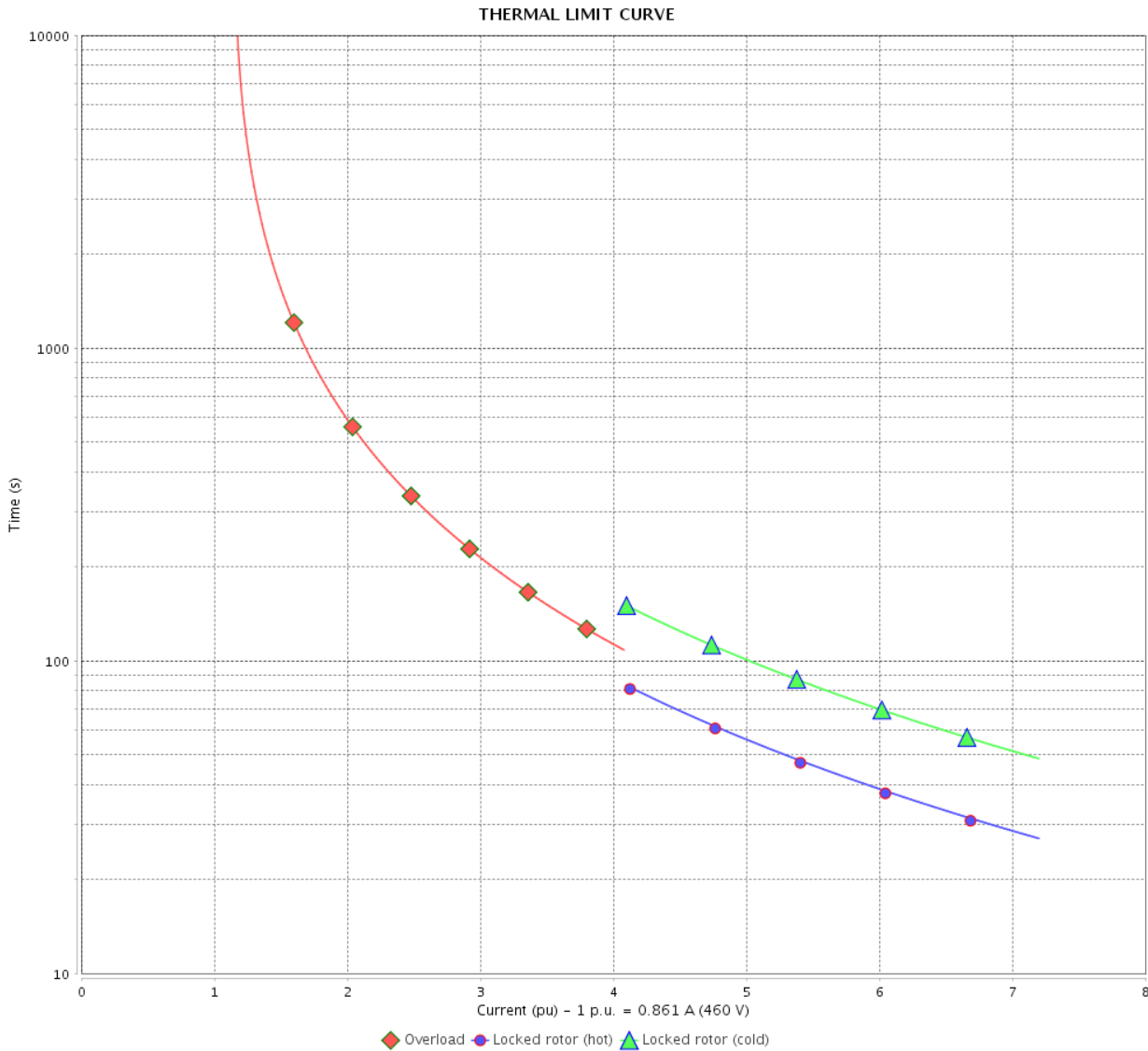
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 Locked rotor torque : 240 %
 Breakdown torque : 330 %
 Rated speed : 1765 rpm

Moment of inertia (J) : 0.0584 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor :
 Temperature rise : 80 K

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
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Checked by				
Date				
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

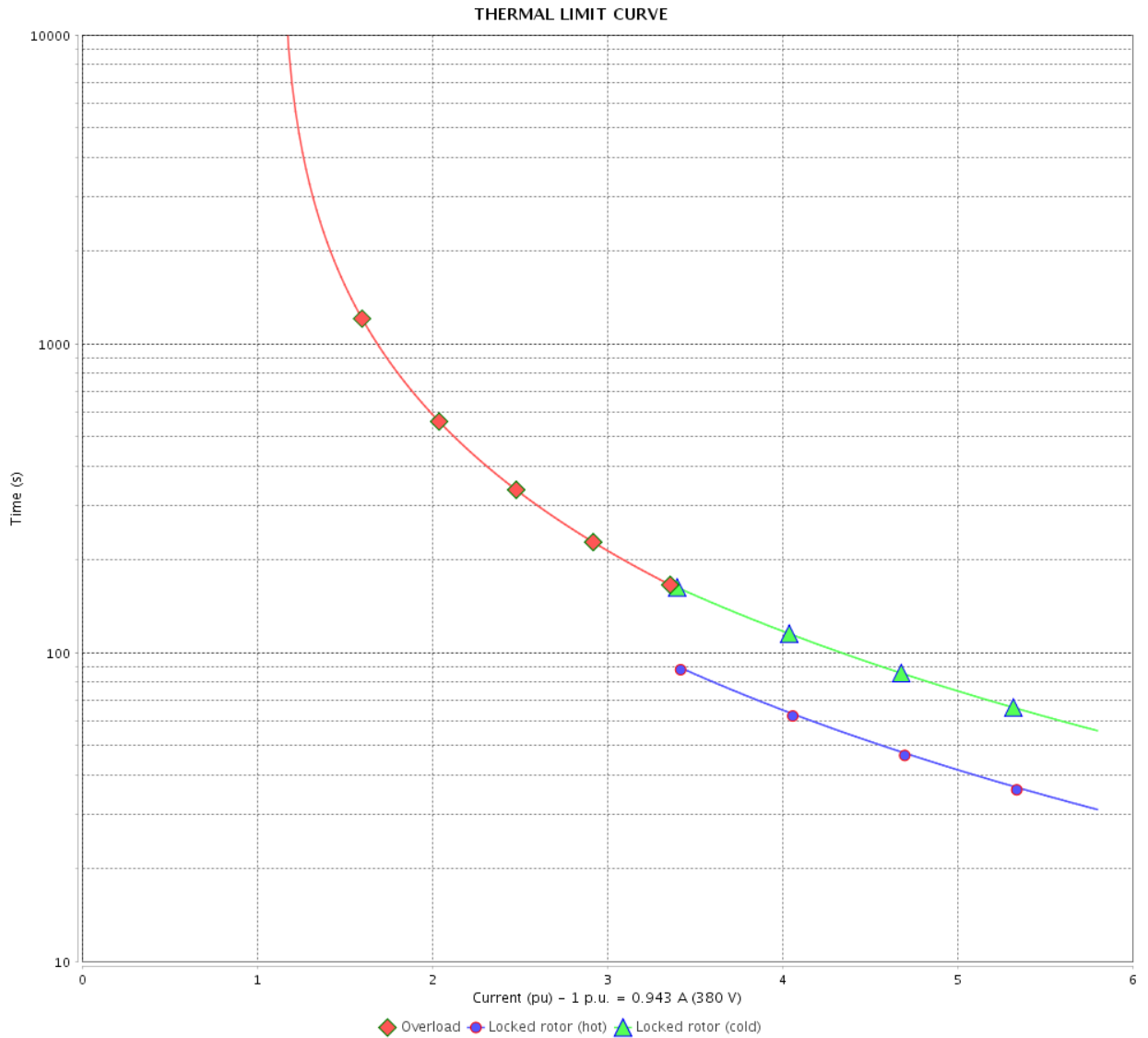
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Performance : 190/380 V 50 Hz 4P

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 Breakdown torque : 260 %
 Rated speed : 1450 rpm

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Heating constant

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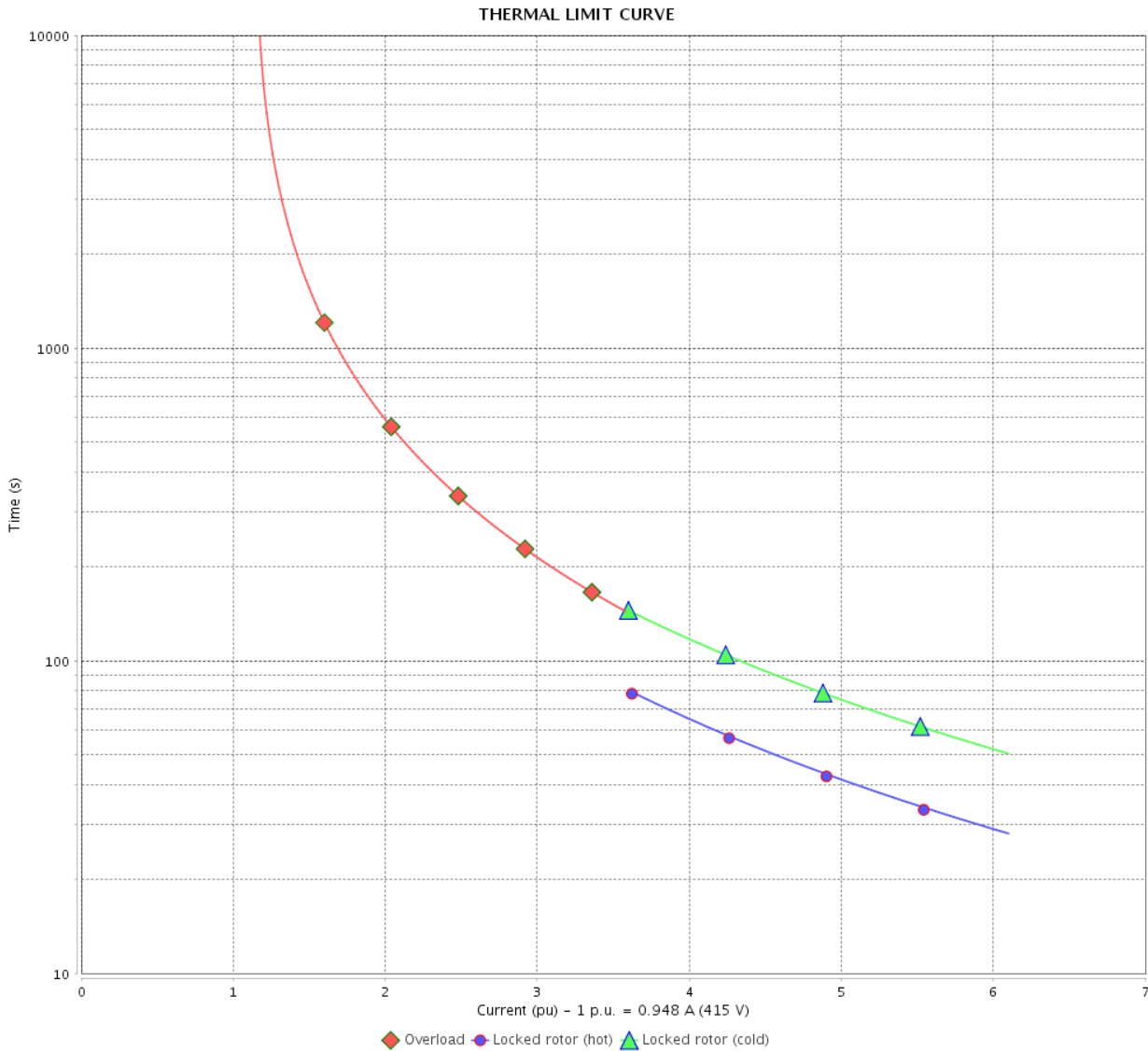
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

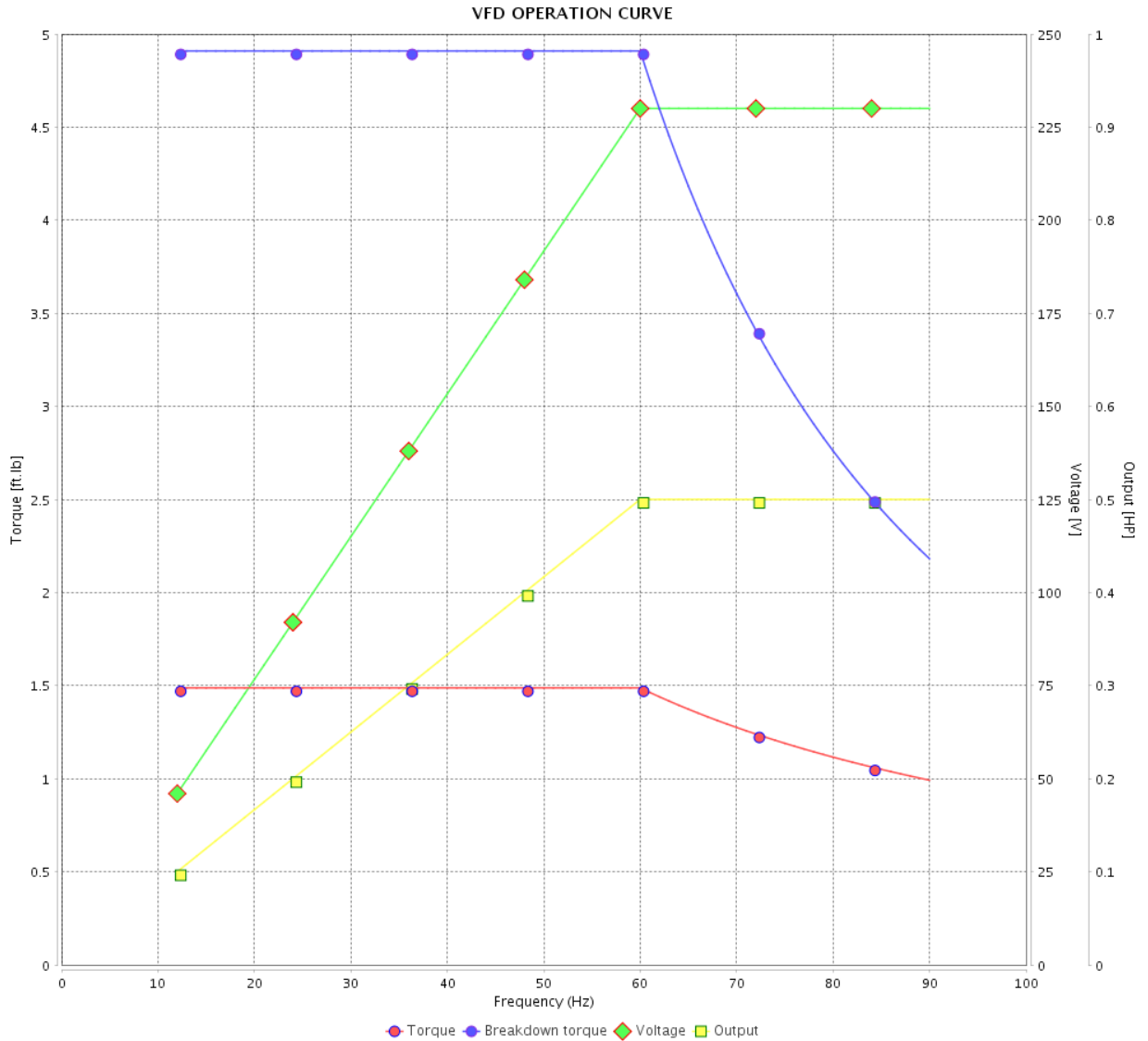
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Performance : 208-230/460 V 60 Hz 4P

Rated current : 1.90-1.72/0.861 A
 LRC : 7.2
 Rated torque : 1.49 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 330 %
 Rated speed : 1765 rpm

Moment of inertia (J) : 0.0584 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor :
 Temperature rise : 80 K

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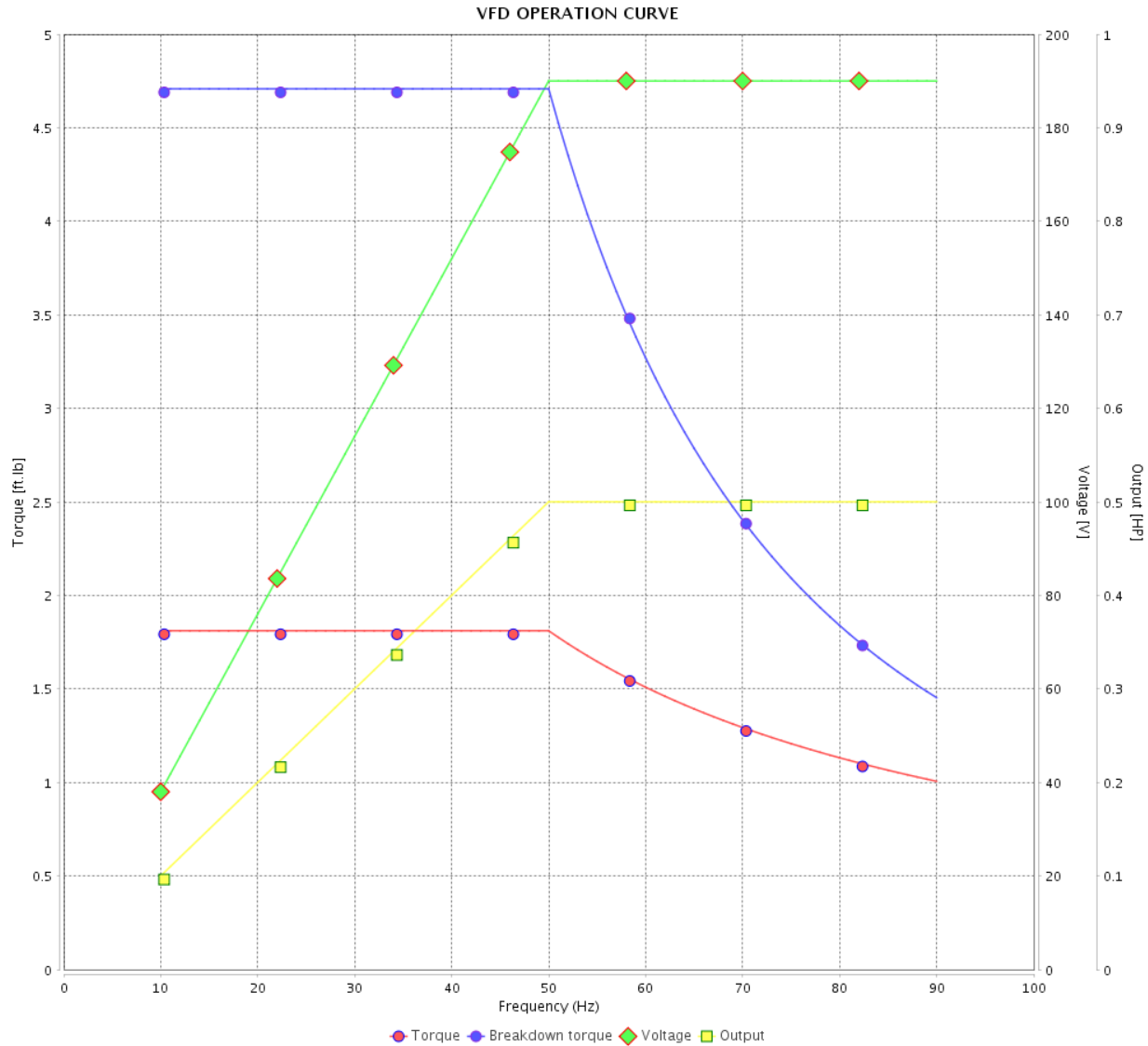
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VFD OPERATION CURVE

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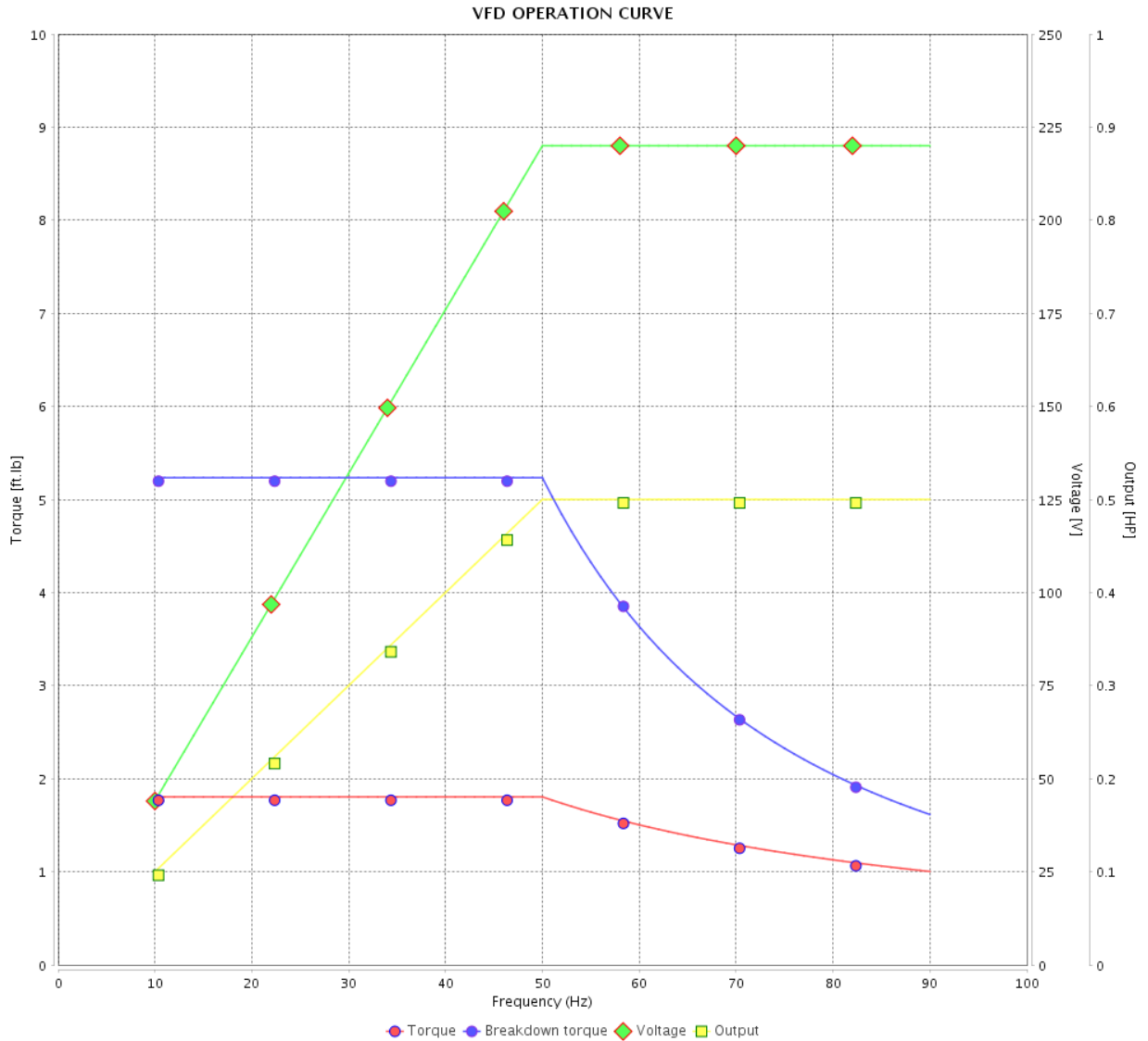
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			13 / 13	

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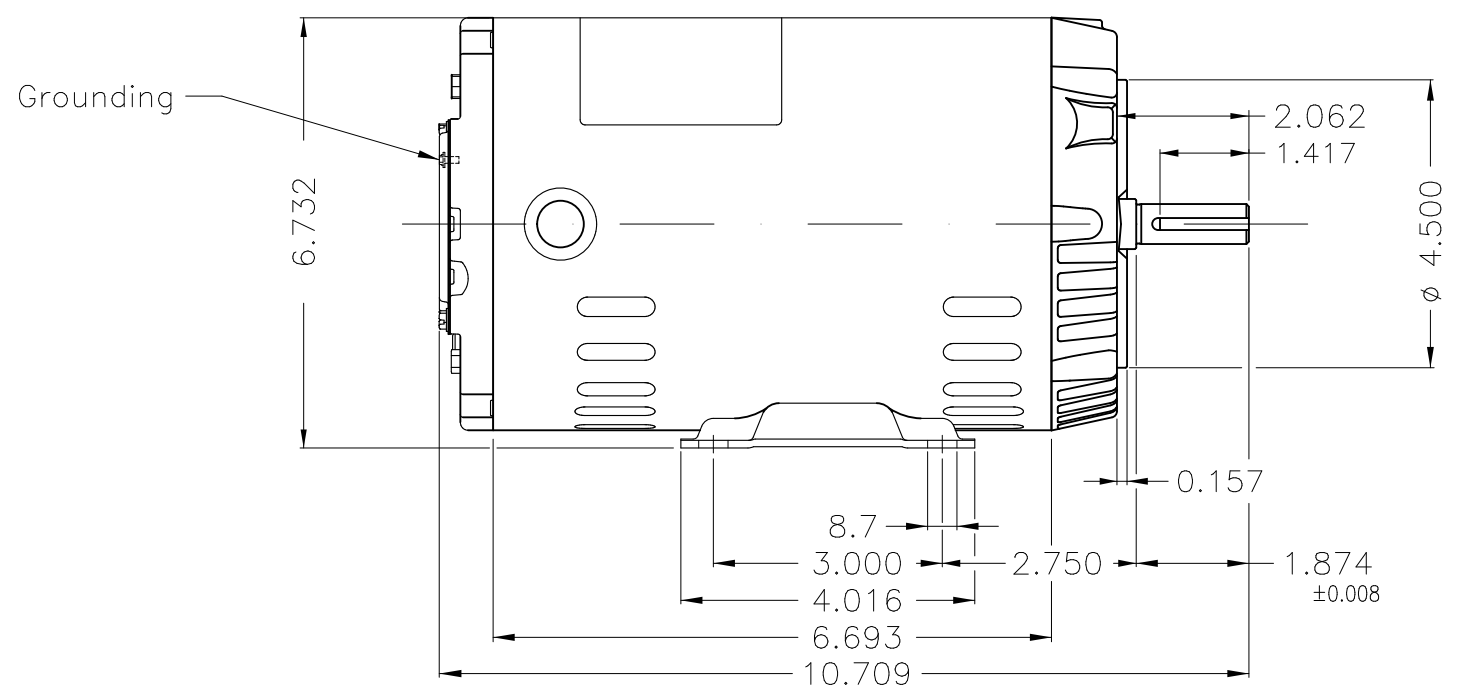
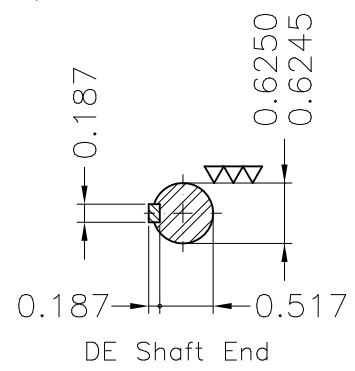
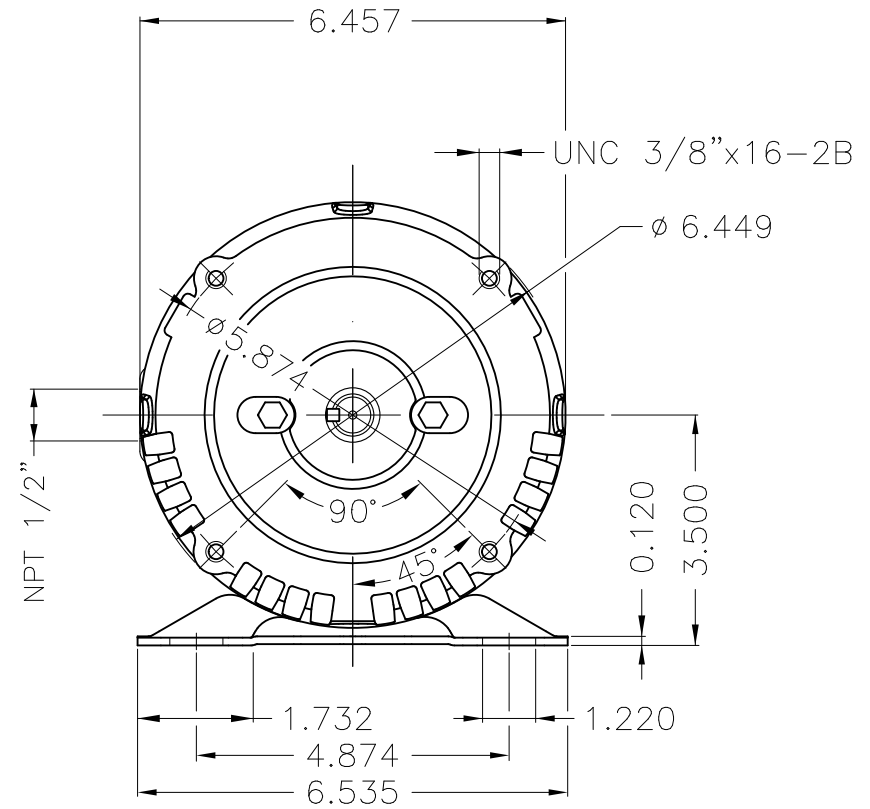
A

B

C

D

E



Without coating										
Mounting F-1/B34R(D)										
ECM	LOC	SUMMARY OF MODIFICATIONS				EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR ROLLED STEEL PREM. EFF.					PREVIEW WDD			
CHECKED		FRAME 56C IP21 ODP								
RELEASED										
REL DT.		WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1				

0.5 HP 04 Poles 60 Hz

A



NEMA
Premium



3PT9



Energy Verified

MADE IN MEXICO

MAT: 12809205

W01.T00IC0X0X

MODEL 50180T3E56C-S

28MAR2022 B/N:



PH 3	Hz 60	HP 0.50
FR 56C		KW 0.37
DUTY CONT.		V 230/460
ALT 1000 m.a.s.l.		A 1.72/0.861
INS CL F AT 80K		SFA 2.15/1.08
AMB 40°C	DES -	SF 1.25
ENCL ODP	CODE L	PF 0.69
USABLE @ 208V 1.90A		RPM 1765
SF1.00		AVG.F.L. 78.2%

ALTERNATE RATING: 0.50HP 50Hz 190-220/380-415V SF1.25
1.89-1.81/0.943-0.959A 1450RPM EFF 78.7% (IE2) IEC 60034-1

Inverter duty motor For 80Hz use on VPWM 1000:1 VT, 5:1 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.

