

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



| | | | | |
|--|---|--|----------------------|----------|
| Customer : | | | | |
| Product line | : Premium Efficiency Three-Phase | Product code : | 12809012 | |
| | | Catalog # : | .3318OT3E56C-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 | : 17.7 lb | |
| | | Moment of inertia (J) | : 0.0453 sq.ft.lb | |
| Output [HP] | 0.33 | 0.33 | 0.33 | |
| Poles | 4 | 4 | 4 | |
| Frequency [Hz] | 60 | 50 | 50 | |
| Rated voltage [V] | 208-230/460 | 190/380 | 220/415 | |
| Rated current [A] | 1.48-1.34/0.668 | 1.44/0.718 | 1.37/0.727 | |
| L. R. Amperes [A] | 9.16-8.28/4.14 | 7.32/3.66 | 7.27/3.85 | |
| LRC [A] | 6.2x(Code L) | 5.1x(Code J) | 5.3x(Code K) | |
| No load current [A] | 0.948-1.10/0.550 | 1.04/0.522 | 1.10/0.581 | |
| Rated speed [RPM] | 1765 | 1450 | 1455 | |
| Slip [%] | 1.94 | 3.33 | 3.00 | |
| Rated torque [ft.lb] | 0.982 | 1.20 | 1.19 | |
| Locked rotor torque [%] | 229 | 160 | 180 | |
| Breakdown torque [%] | 330 | 250 | 280 | |
| Service factor | | 1.35 | 1.35 | |
| Temperature rise | 80 K | 80 K | 80 K | |
| Locked rotor time | 64s (cold) 36s (hot) | 77s (cold) 43s (hot) | 68s (cold) 38s (hot) | |
| Noise level ² | 52.0 dB(A) | 49.0 dB(A) | 49.0 dB(A) | |
| Efficiency (%) | 25% | 59.2 | 60.3 | |
| | 50% | 62.0 | 62.7 | |
| | 75% | 70.0 | 69.3 | |
| | 100% | 73.4 | 71.9 | |
| Power Factor | 25% | 0.24 | 0.25 | |
| | 50% | 0.44 | 0.47 | |
| | 75% | 0.55 | 0.59 | |
| | 100% | 0.64 | 0.69 | |
| Bearing type | : Drive end 6203 ZZ Non drive end 6202 ZZ | Foundation loads | | |
| Sealing | : Without Without Bearing Seal Bearing Seal | Max. traction | : 23 lb | |
| | | Max. compression | : 41 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. | | |
| Rev. | Changes Summary | Performed | Checked | Date |
| Performed by | | | | |
| Checked by | | | Page | Revision |
| Date | 11/04/2022 | | 1 / 13 | |

TORQUE AND CURRENT VS SPEED CURVE

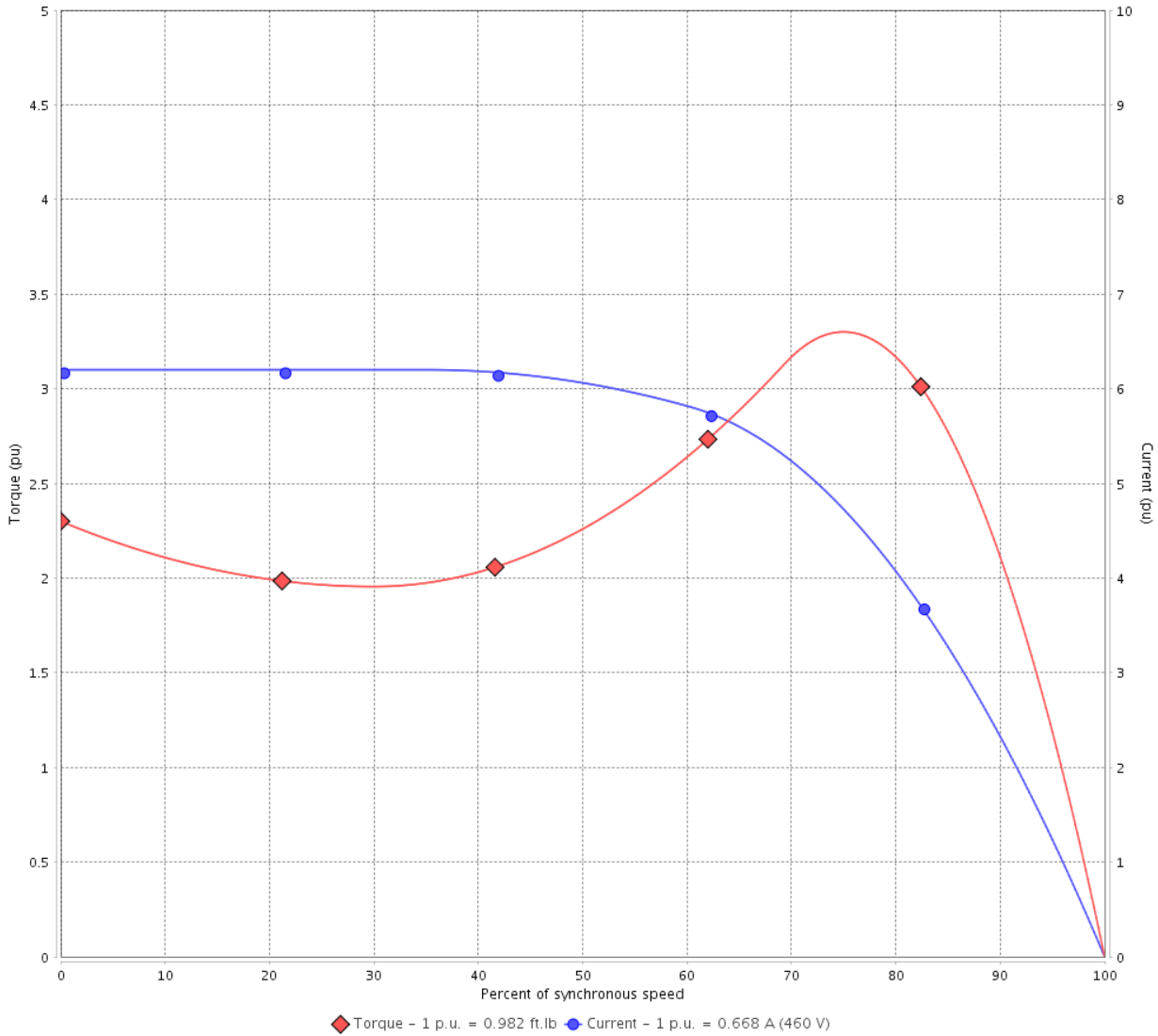
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Premium Efficiency Three-Phase Product code : 12809012
 Catalog # : .3318OT3E56C-S

TORQUE AND CURRENT VS SPEED CURVE



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

| | | | |
|---------------------|---------------------|-----------------------|-------------------|
| Rated current | : 1.48-1.34/0.668 A | Moment of inertia (J) | : 0.0453 sq.ft.lb |
| LRC | : 6.2 | Duty cycle | : Cont.(S1) |
| Rated torque | : 0.982 ft.lb | Insulation class | : F |
| Locked rotor torque | : 229 % | Service factor | : |
| Breakdown torque | : 330 % | Temperature rise | : 80 K |
| Rated speed | : 1765 rpm | | |

Locked rotor time : 64s (cold) 36s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



Three Phase Induction Motor - Squirrel Cage

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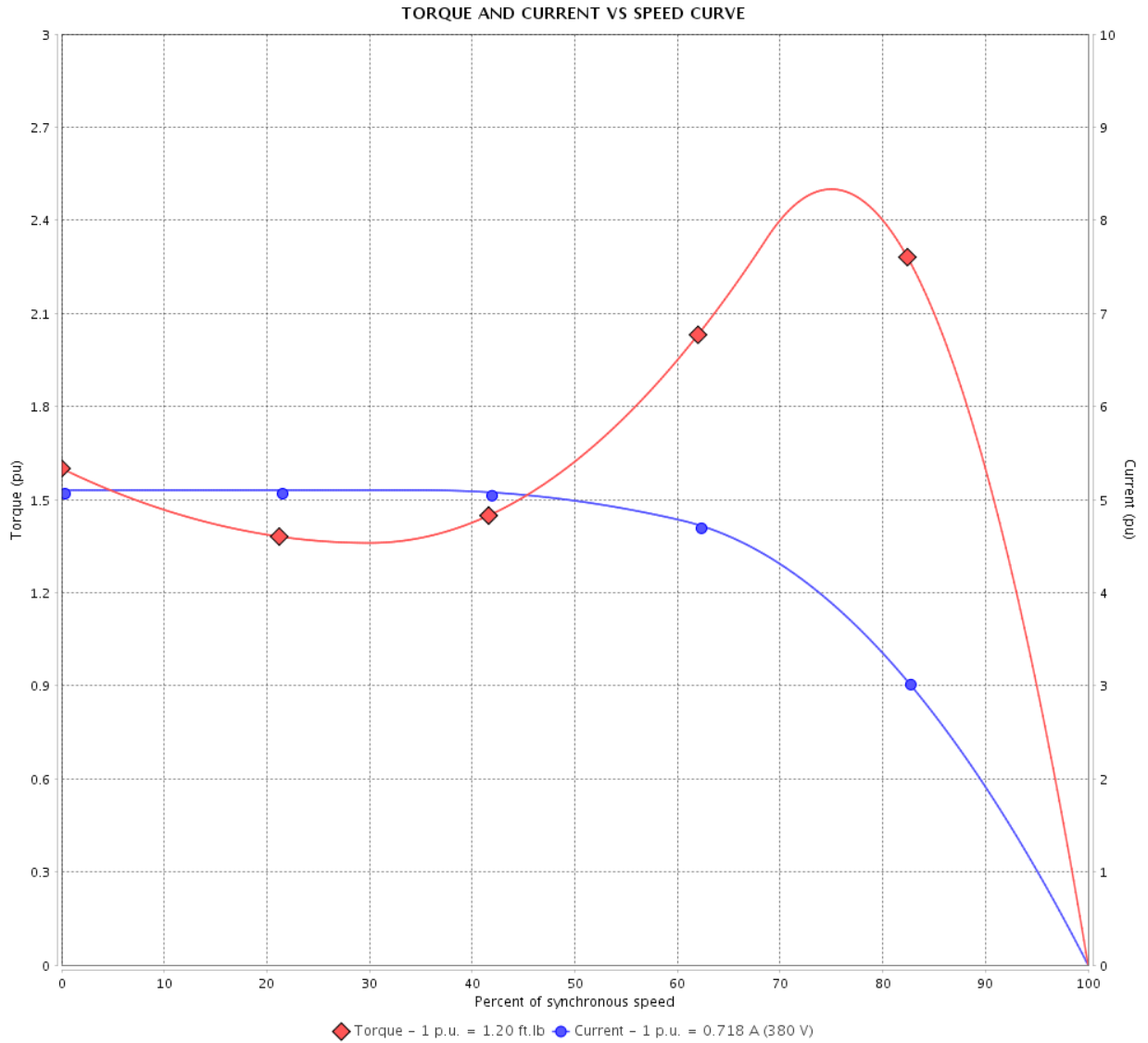
Product line : Premium Efficiency Three-Phase

Product code :

12809012

Catalog # :

.3318OT3E56C-S



Performance : 190/380 V 50 Hz 4P

Rated current : 1.44/0.718 A
 LRC : 5.1
 Rated torque : 1.20 ft.lb
 Locked rotor torque : 160 %
 Breakdown torque : 250 %
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.0453 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.35
 Temperature rise : 80 K

Locked rotor time : 77s (cold) 43s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

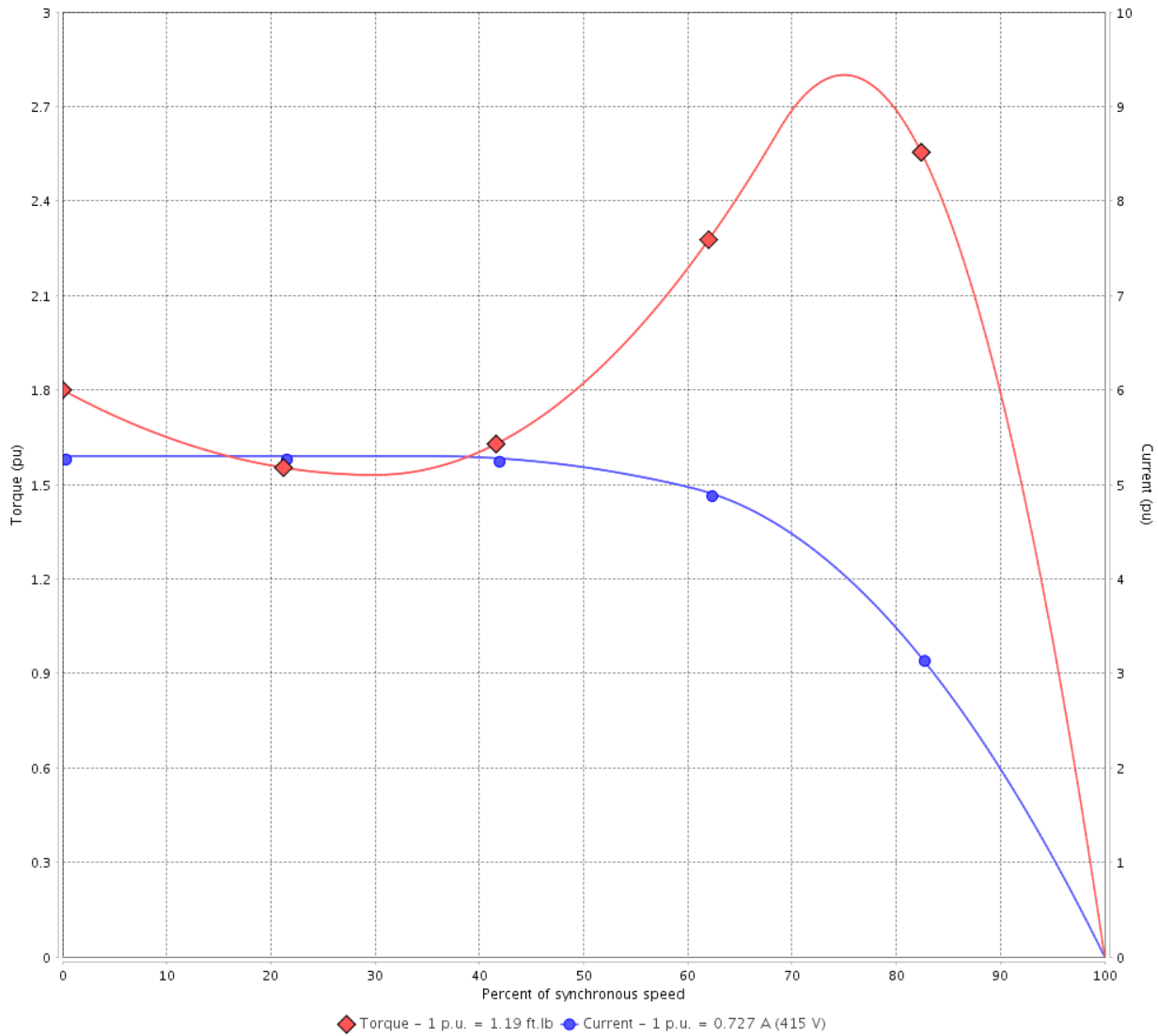
Three Phase Induction Motor - Squirrel Cage



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TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 4P

| | | | |
|---------------------|----------------|-----------------------|-------------------|
| Rated current | : 1.37/0.727 A | Moment of inertia (J) | : 0.0453 sq.ft.lb |
| LRC | : 5.3 | Duty cycle | : Cont.(S1) |
| Rated torque | : 1.19 ft.lb | Insulation class | : F |
| Locked rotor torque | : 180 % | Service factor | : 1.35 |
| Breakdown torque | : 280 % | Temperature rise | : 80 K |
| Rated speed | : 1455 rpm | | |

Locked rotor time : 68s (cold) 38s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



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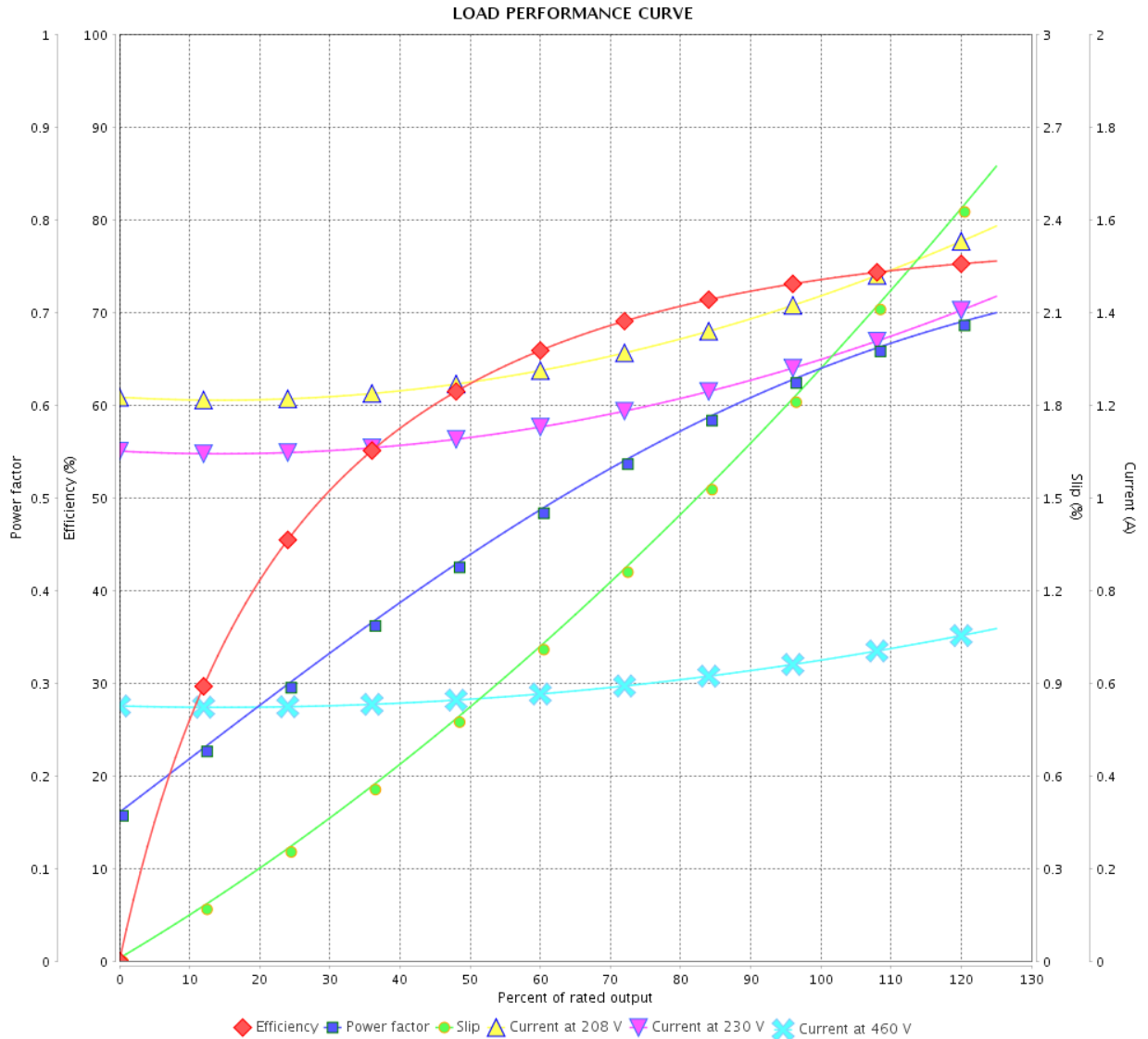
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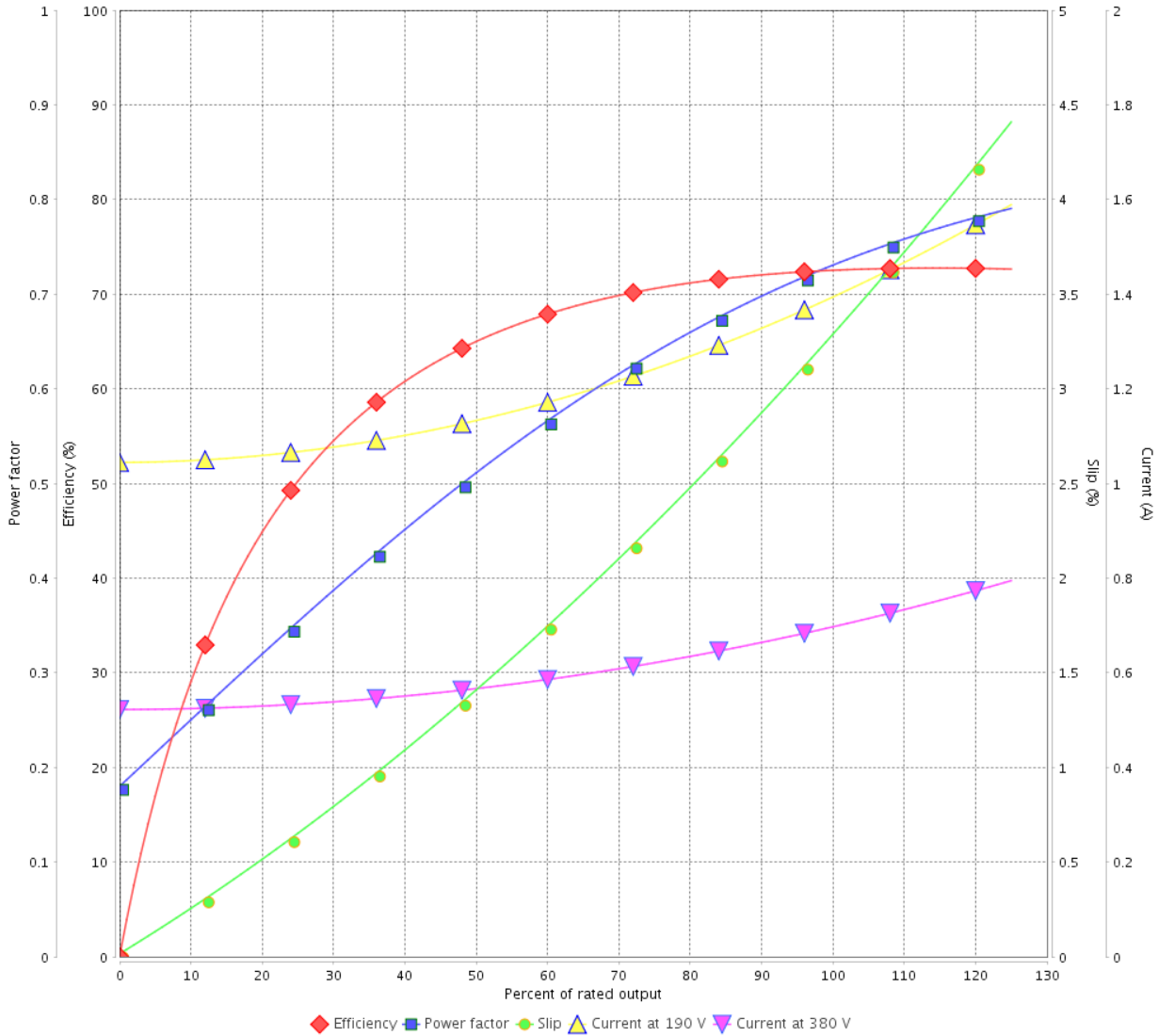
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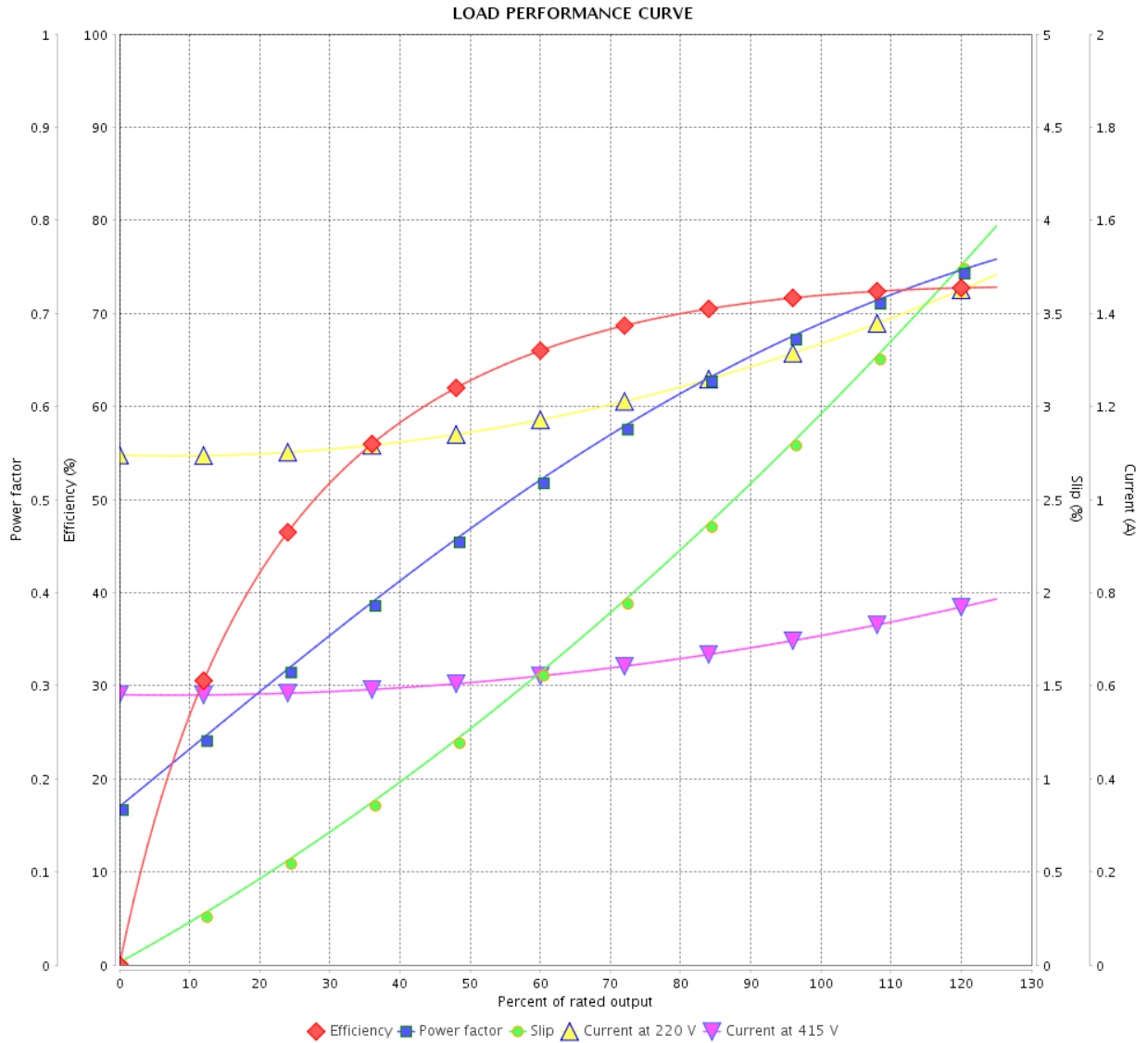
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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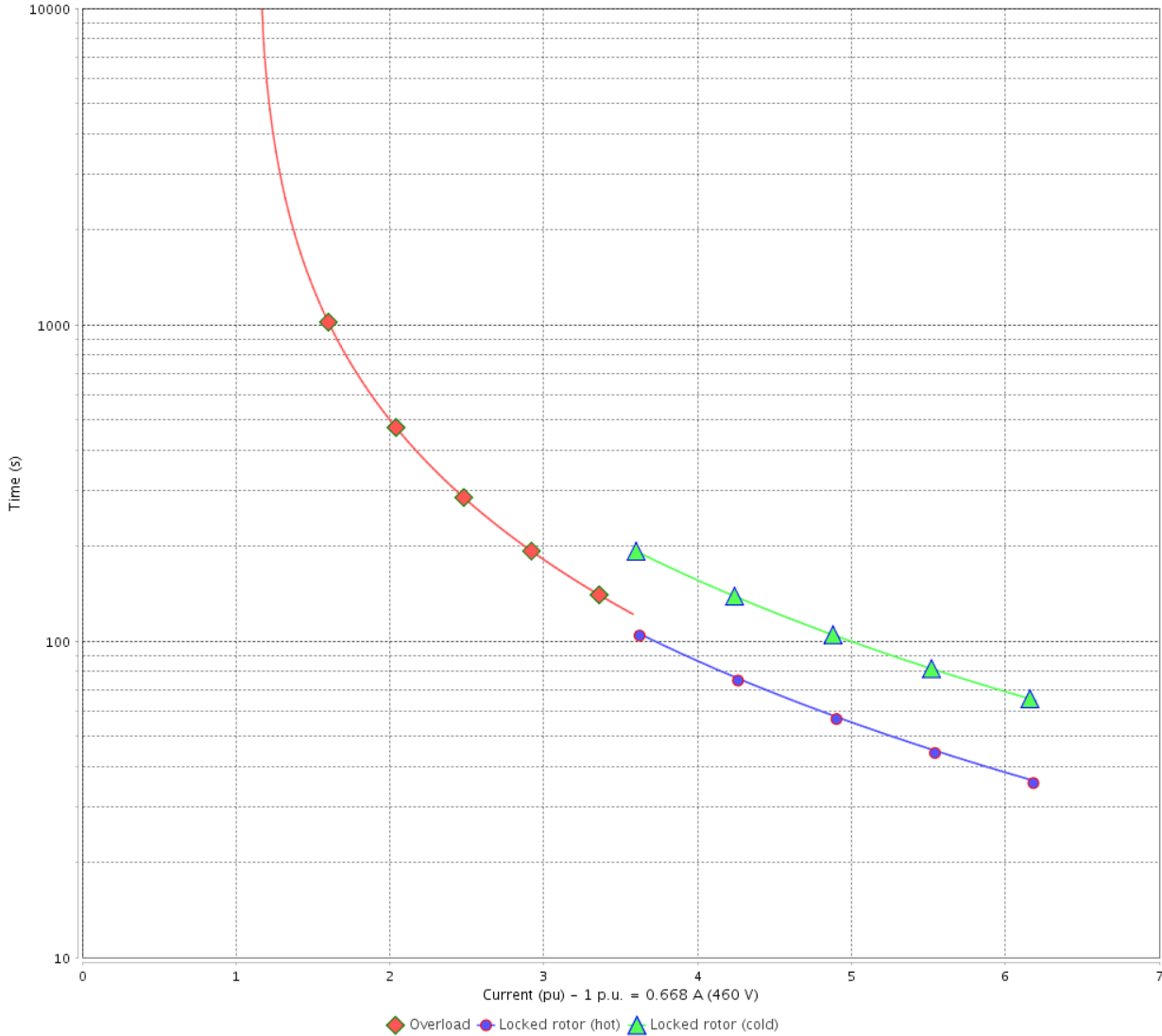
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 Service factor :
 Temperature rise : 80 K

Heating constant

Cooling constant

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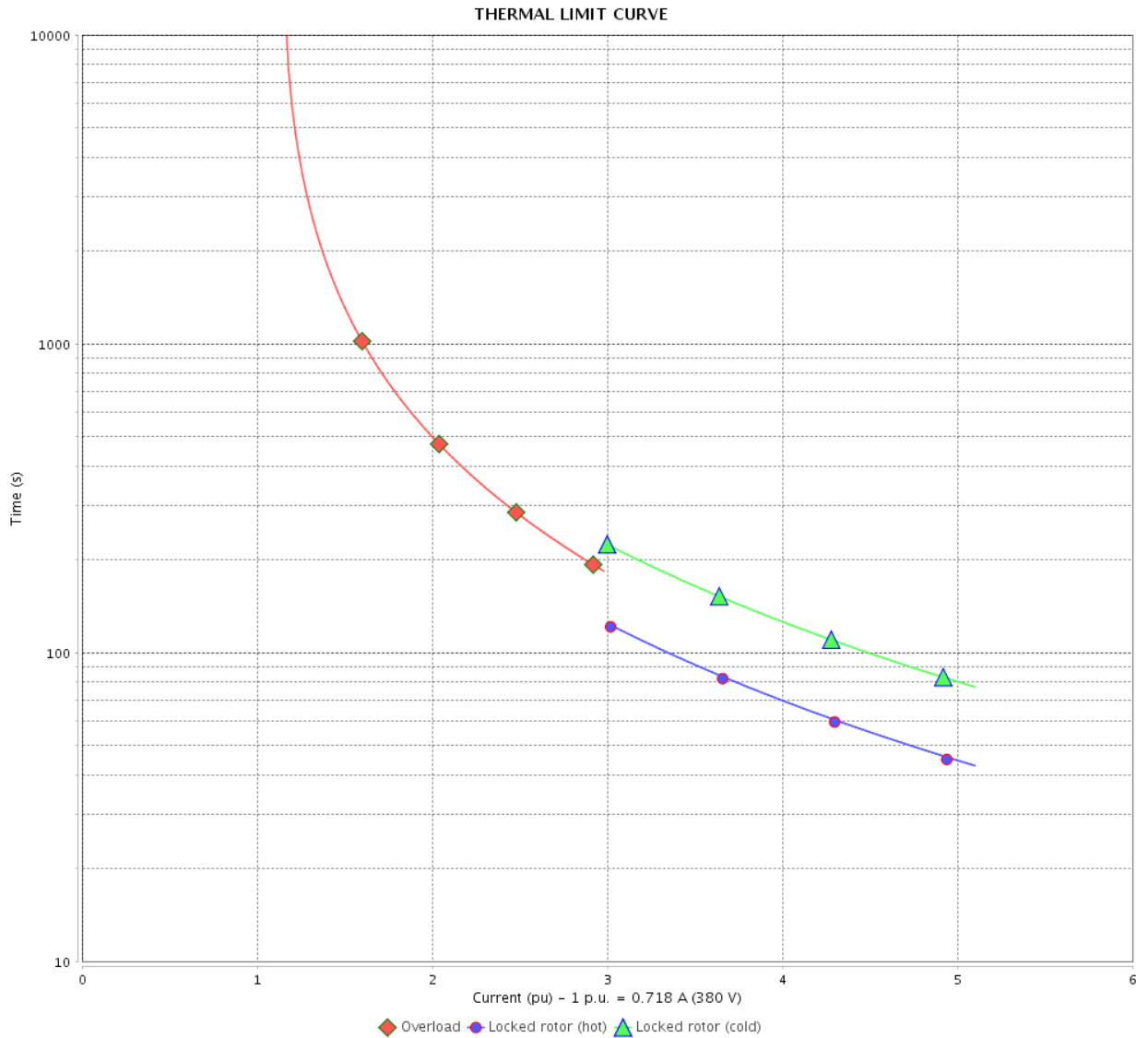
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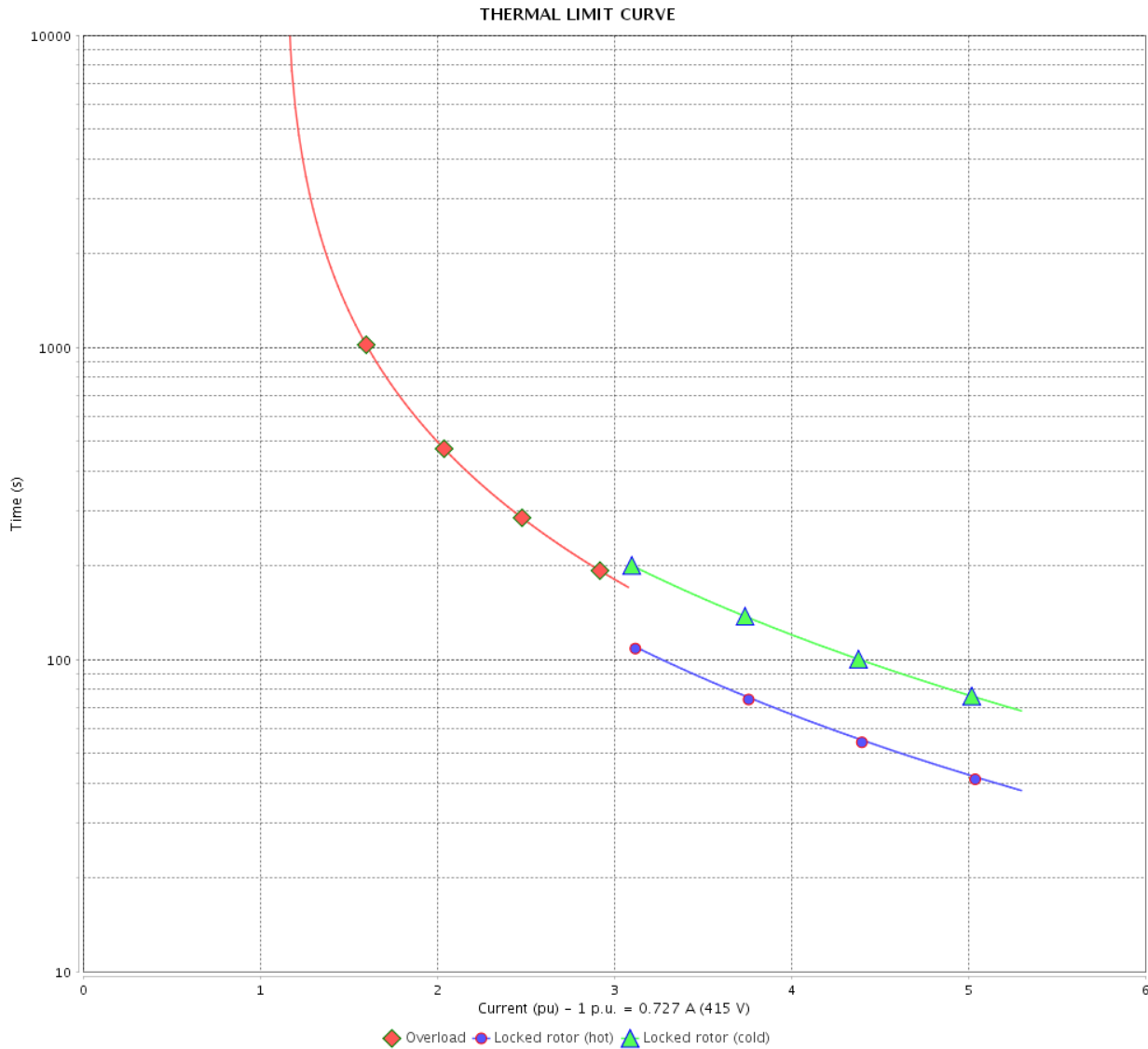
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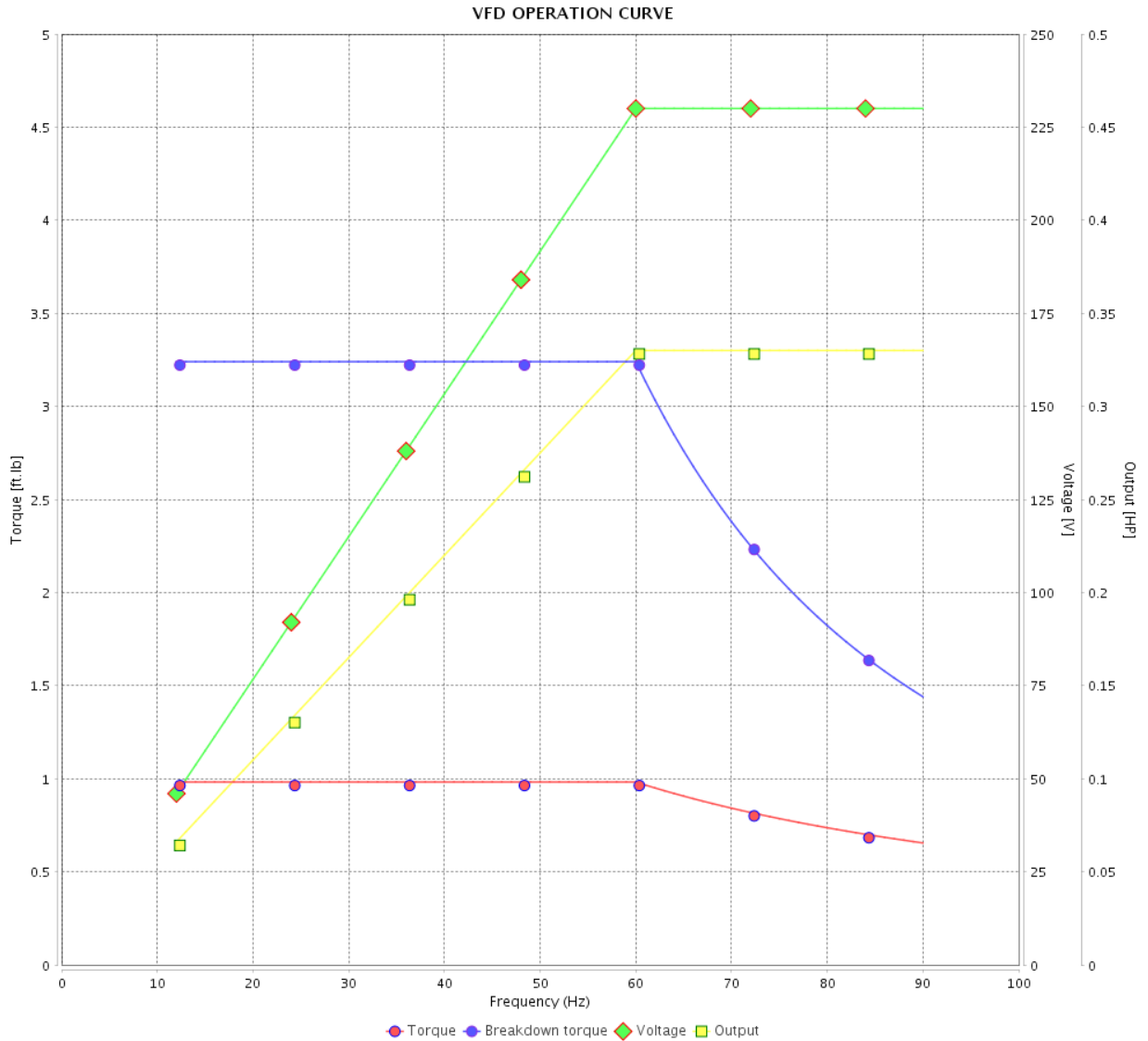
VFD OPERATION CURVE

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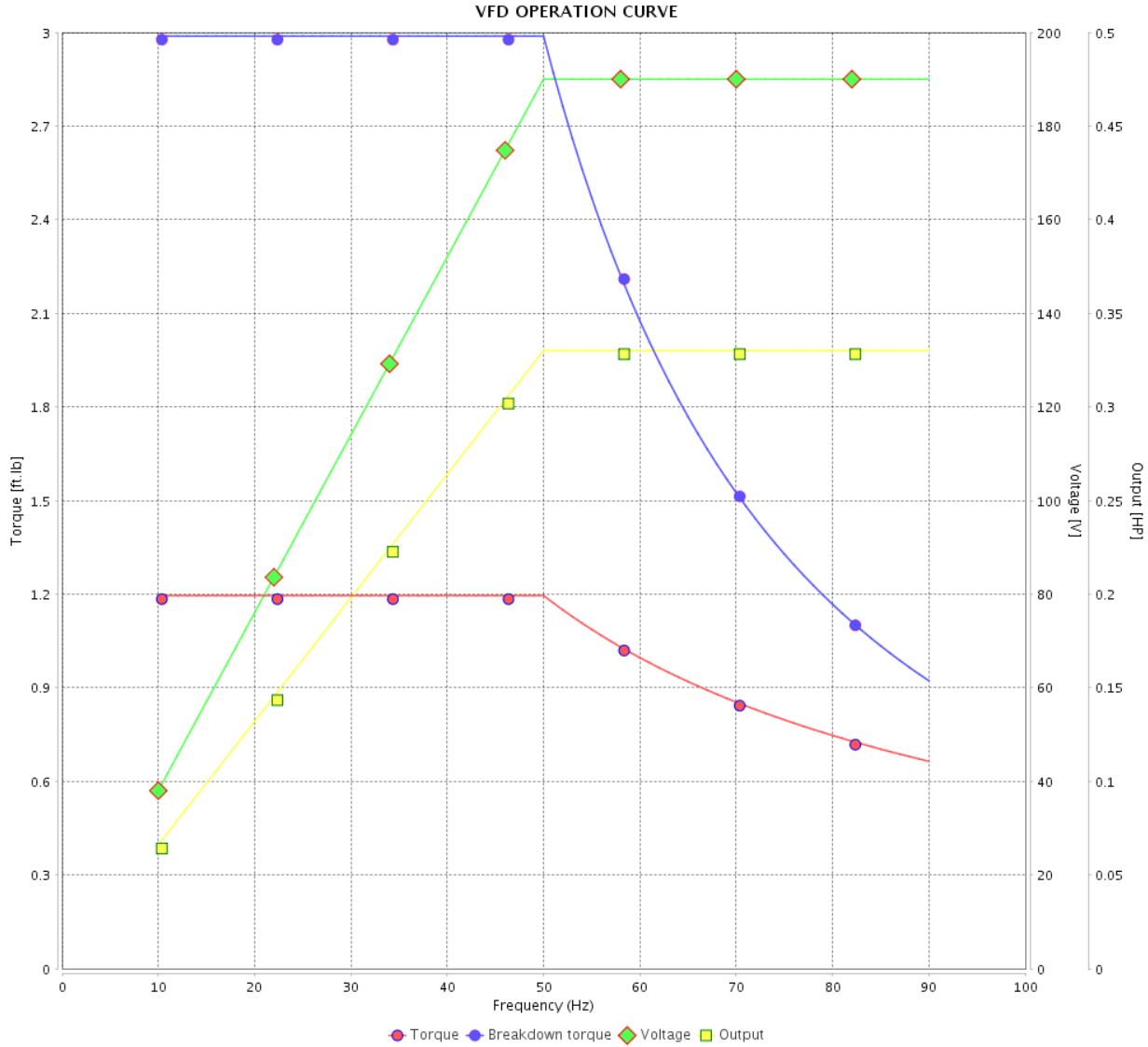
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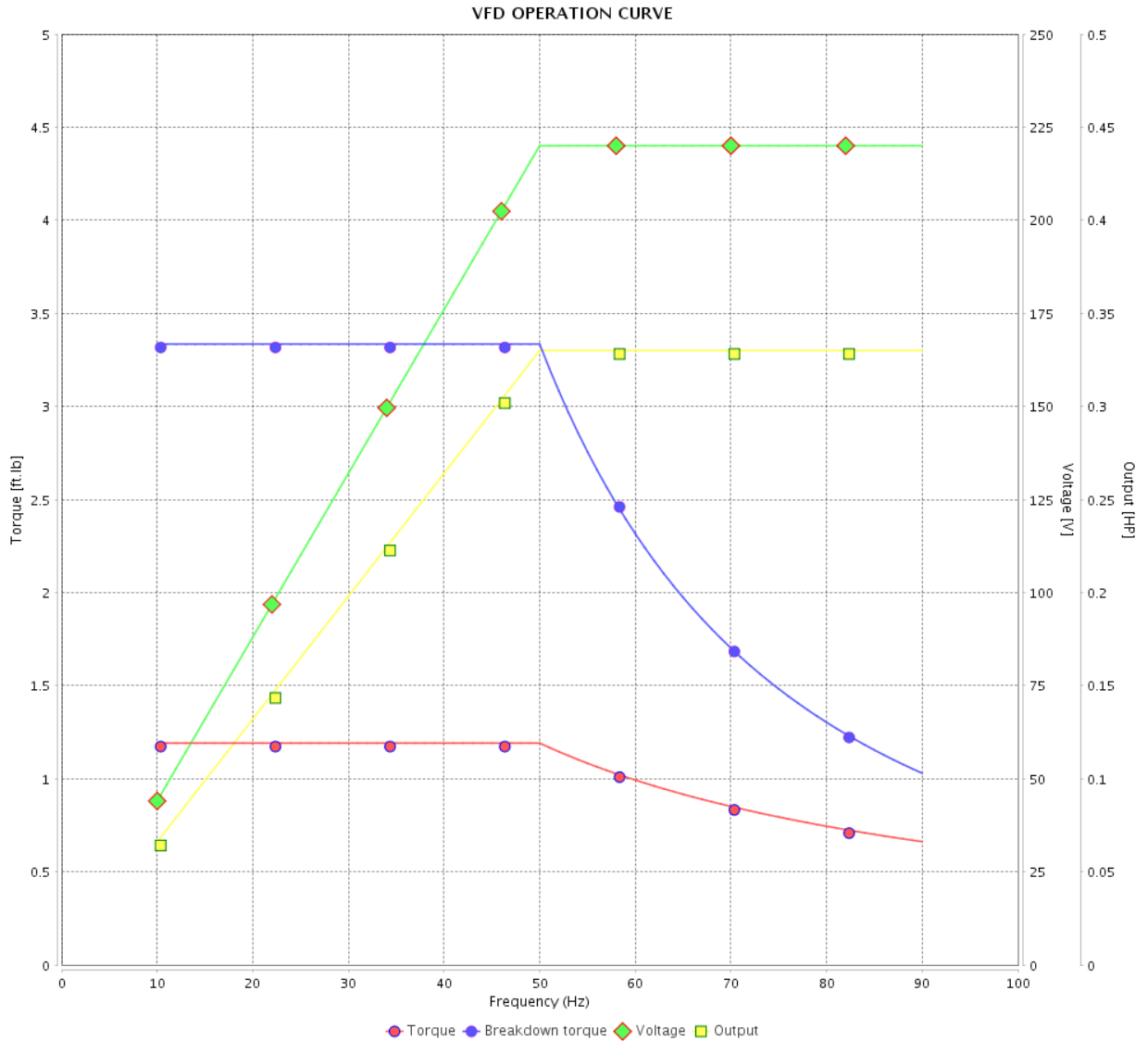
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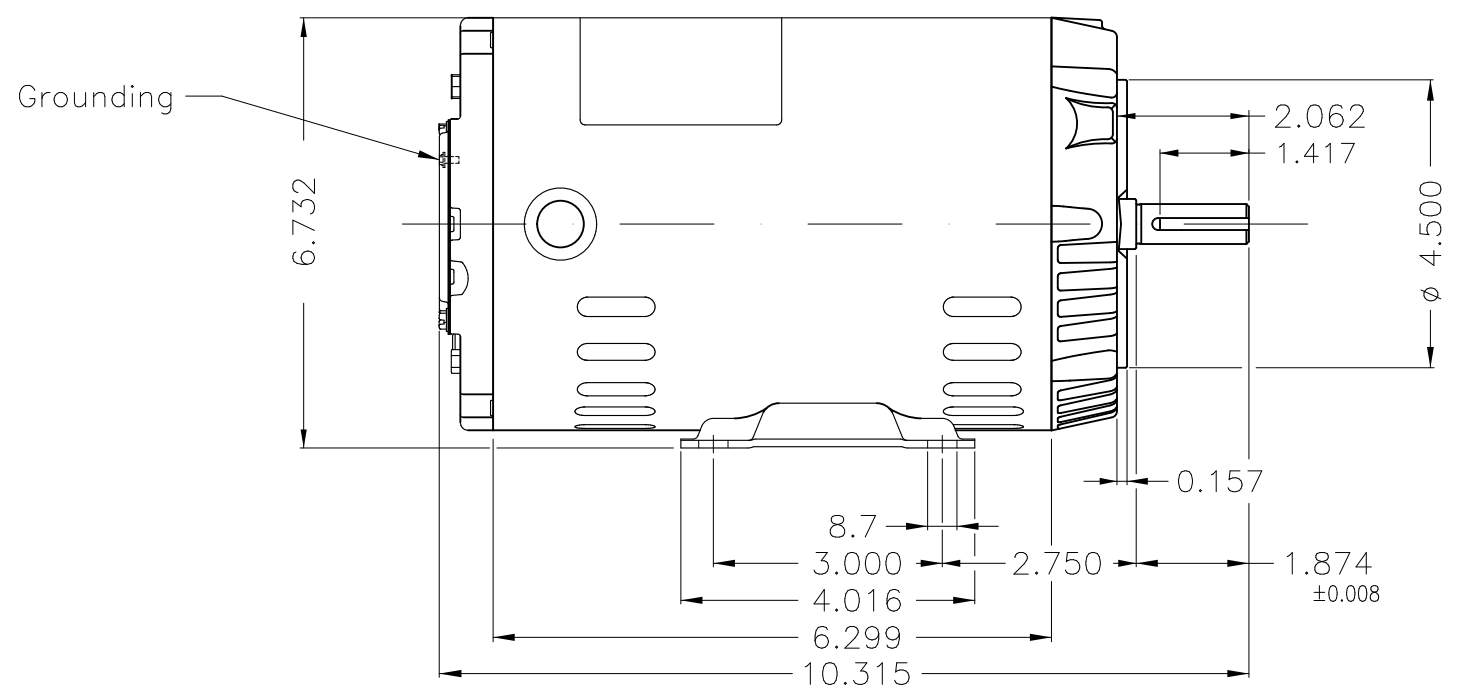
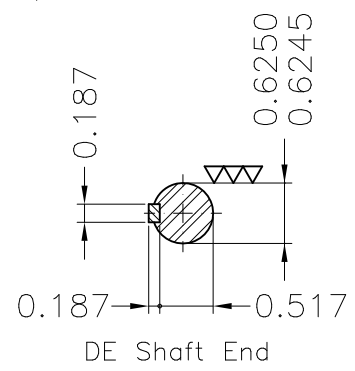
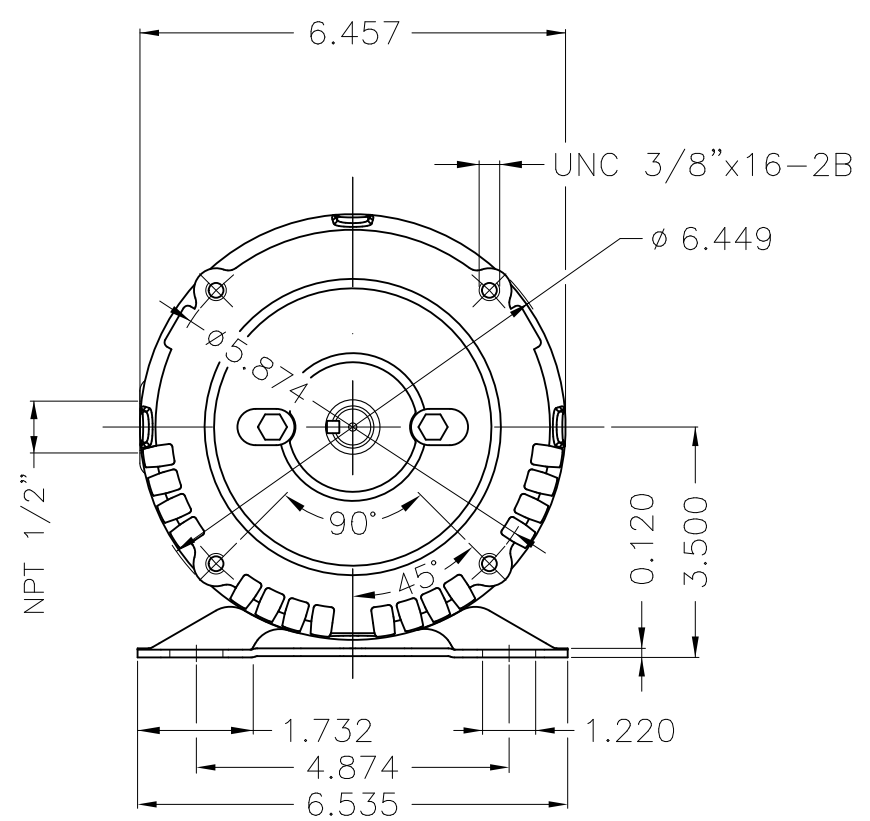
A

B


C

D

E



Dimensions in inches

| | | | | | | | | | | |
|----------------------|----------|---|----------------|---------------------|-------|---|-----------------------|----------|------|-----|
| 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 | | | | |

0.33 HP 04 Poles 60 Hz

A

XME A3



NEMA
Premium



3PT9



Energy Verified

MADE IN BRAZIL

MAT: 12809012
W01.T00IC0X0X
MODEL 33180T3E56C-S
01JUL2021 B/N:

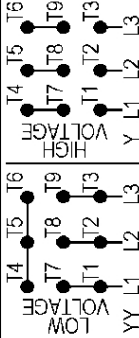


| | | |
|---------------------|--------|------------------------|
| PH 3 | Hz 60 | HP 0.33 |
| FR 56C | | KW 0.25 |
| DUTY CONT. | | V 230/460 |
| ALT 1000 m.a.s.l. | | A 1.34/0.668 |
| INS CL F AT 80K | | SFA 1.81/0.902 |
| AMB 40°C | DES - | SF 1.35 |
| ENCL ODP | CODE M | PF 0.64 |
| USABLE @ 208V 1.48A | | RPM 1765 |
| SF1.00 | | AVG.F.L. 73.4% EFF. |

ALTERNATE RATING: 0.33HP 50Hz 190-220/380-415V SF1.35
1.44-1.40/0.718-0.740A 1450RPM EFF 71.2% (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 |
|------------|-------------|------------------|



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.

