

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



| | | | | |
|--|---|--|----------------------|----------|
| Customer : | | | | |
| Product line | : Premium Efficiency Three-Phase | Product code : | 13497507 | |
| | | Catalog # : | .2518OT3E48-S | |
| Frame | : 48 | 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 | : 13.4 lb | |
| | | Moment of inertia (J) | : 0.0280 sq.ft.lb | |
| Output [HP] | 0.25 | 0.25 | 0.25 | |
| Poles | 4 | 4 | 4 | |
| Frequency [Hz] | 60 | 50 | 50 | |
| Rated voltage [V] | 208-230/460 | 190/380 | 220/415 | |
| Rated current [A] | 1.06-0.964/0.482 | 1.03/0.514 | 0.987/0.523 | |
| L. R. Amperes [A] | 6.04-5.49/2.75 | 4.73/2.36 | 4.74/2.51 | |
| LRC [A] | 5.7x(Code K) | 4.6x(Code G) | 4.8x(Code H) | |
| No load current [A] | 0.660-0.766/0.383 | 0.750/0.375 | 0.773/0.410 | |
| Rated speed [RPM] | 1740 | 1420 | 1430 | |
| Slip [%] | 3.33 | 5.33 | 4.67 | |
| Rated torque [ft.lb] | 0.754 | 0.925 | 0.918 | |
| Locked rotor torque [%] | 250 | 180 | 210 | |
| Breakdown torque [%] | 340 | 240 | 270 | |
| Service factor | | 1.35 | 1.15 | |
| Temperature rise | 80 K | 80 K | 80 K | |
| Locked rotor time | 61s (cold) 34s (hot) | 75s (cold) 42s (hot) | 68s (cold) 38s (hot) | |
| Noise level ² | 50.0 dB(A) | 49.0 dB(A) | 49.0 dB(A) | |
| Efficiency (%) | 25% | 57.5 | 59.4 | 57.4 |
| | 50% | 59.5 | 62.0 | 60.0 |
| | 75% | 68.0 | 67.0 | 66.0 |
| | 100% | 70.0 | 70.0 | 69.0 |
| Power Factor | 25% | 0.26 | 0.30 | 0.28 |
| | 50% | 0.46 | 0.53 | 0.50 |
| | 75% | 0.58 | 0.66 | 0.62 |
| | 100% | 0.67 | 0.76 | 0.72 |
| Bearing type | : Drive end 6203 ZZ Non drive end 6202 ZZ | Foundation loads | | |
| Sealing | : Without Without Bearing Seal Bearing Seal | Max. traction | : 21 lb | |
| | | Max. compression | : 34 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 | 14/04/2022 | | 1 / 13 | |

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Premium Efficiency Three-Phase

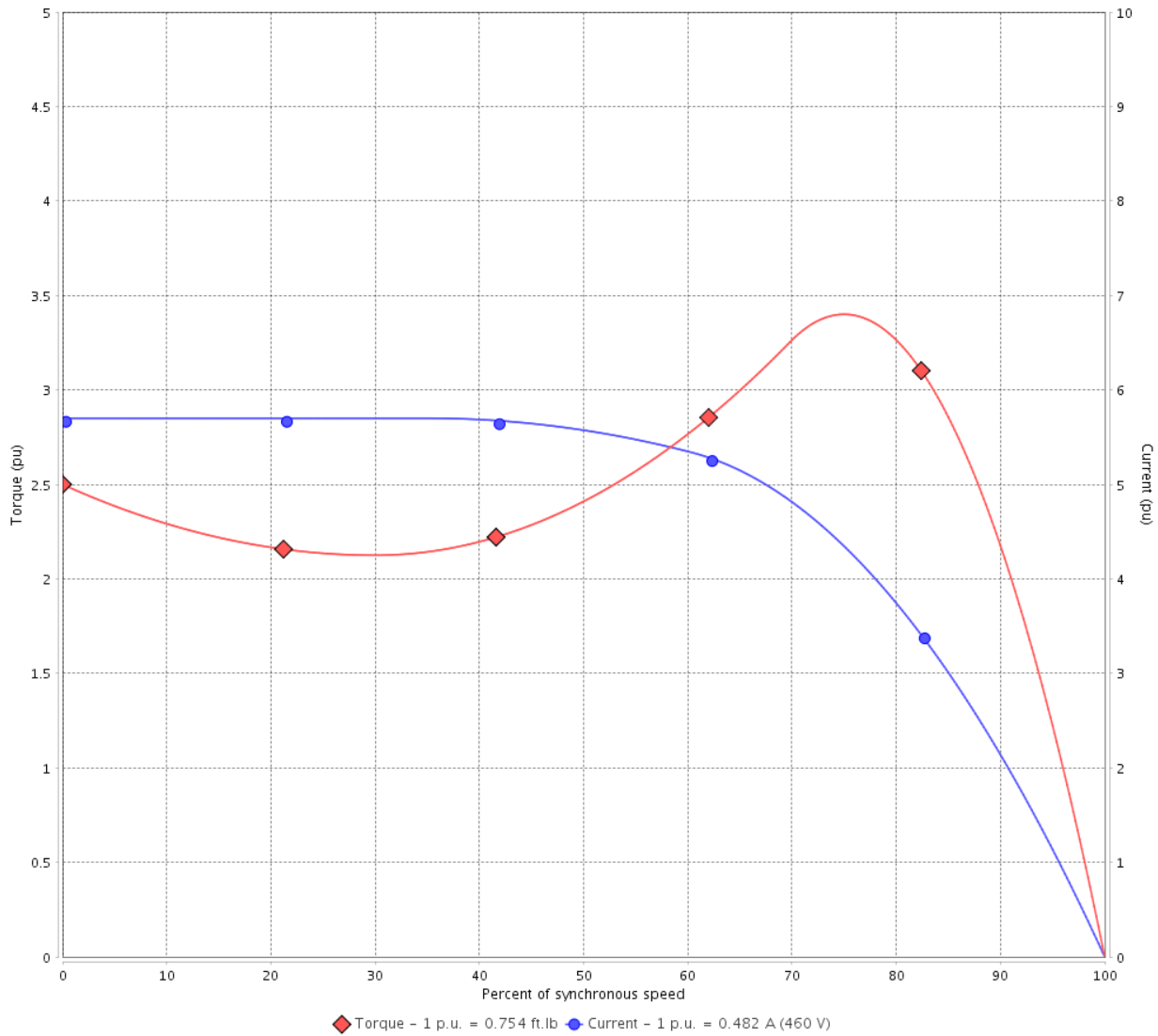
Product code :

13497507

Catalog # :

.2518OT3E48-S

TORQUE AND CURRENT VS SPEED CURVE



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

| | | | |
|---------------------|----------------------|-----------------------|-------------------|
| Rated current | : 1.06-0.964/0.482 A | Moment of inertia (J) | : 0.0280 sq.ft.lb |
| LRC | : 5.7 | Duty cycle | : Cont.(S1) |
| Rated torque | : 0.754 ft.lb | Insulation class | : F |
| Locked rotor torque | : 250 % | Service factor | : |
| Breakdown torque | : 340 % | Temperature rise | : 80 K |
| Rated speed | : 1740 rpm | | |

Locked rotor time : 61s (cold) 34s (hot)

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|--------------|-----------------|-----------|----------------|----------|
| | | | | |
| Performed by | | | Page 2 / 13 | Revision |
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TORQUE AND CURRENT VS SPEED CURVE



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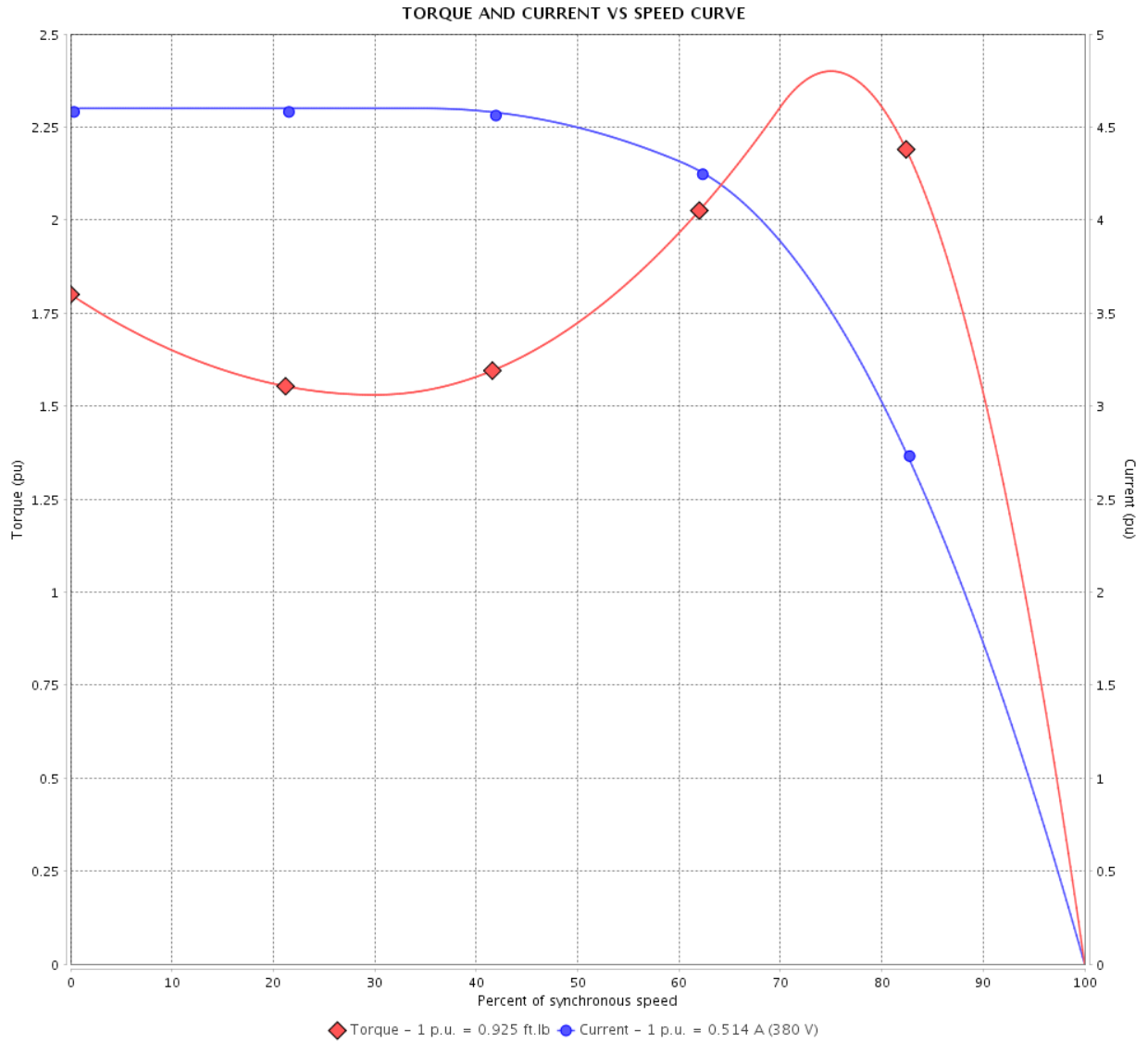
Product line : Premium Efficiency Three-Phase

Product code :

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Catalog # :

.2518OT3E48-S



Performance : 190/380 V 50 Hz 4P

Rated current : 1.03/0.514 A
 LRC : 4.6
 Rated torque : 0.925 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 240 %
 Rated speed : 1420 rpm

Moment of inertia (J) : 0.0280 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.35
 Temperature rise : 80 K

Locked rotor time : 75s (cold) 42s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



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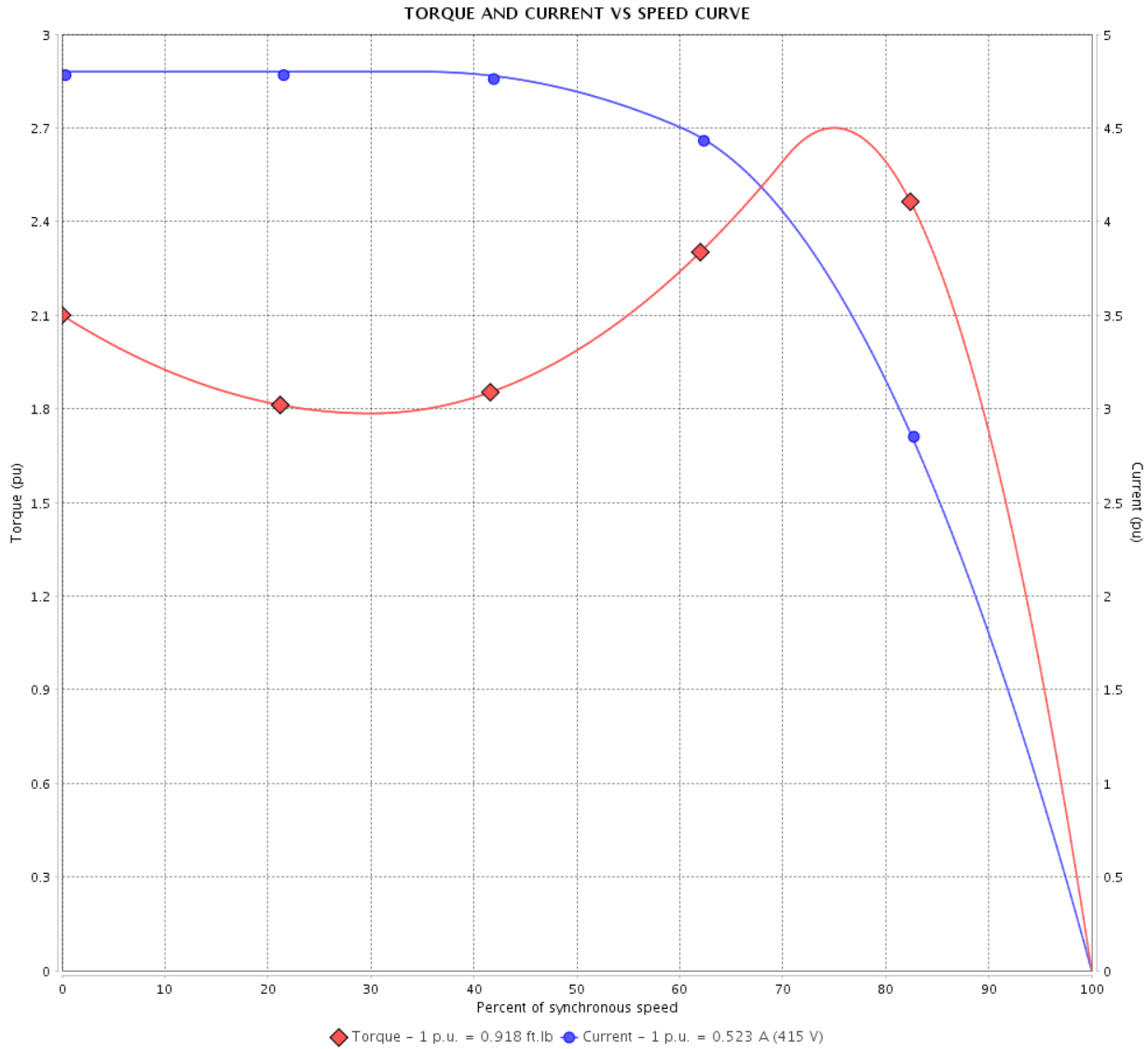
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Catalog # :

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 LRC : 4.8
 Rated torque : 0.918 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 270 %
 Rated speed : 1430 rpm

Moment of inertia (J) : 0.0280 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K

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

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|--------------|-----------------|-----------|----------------|----------|
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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



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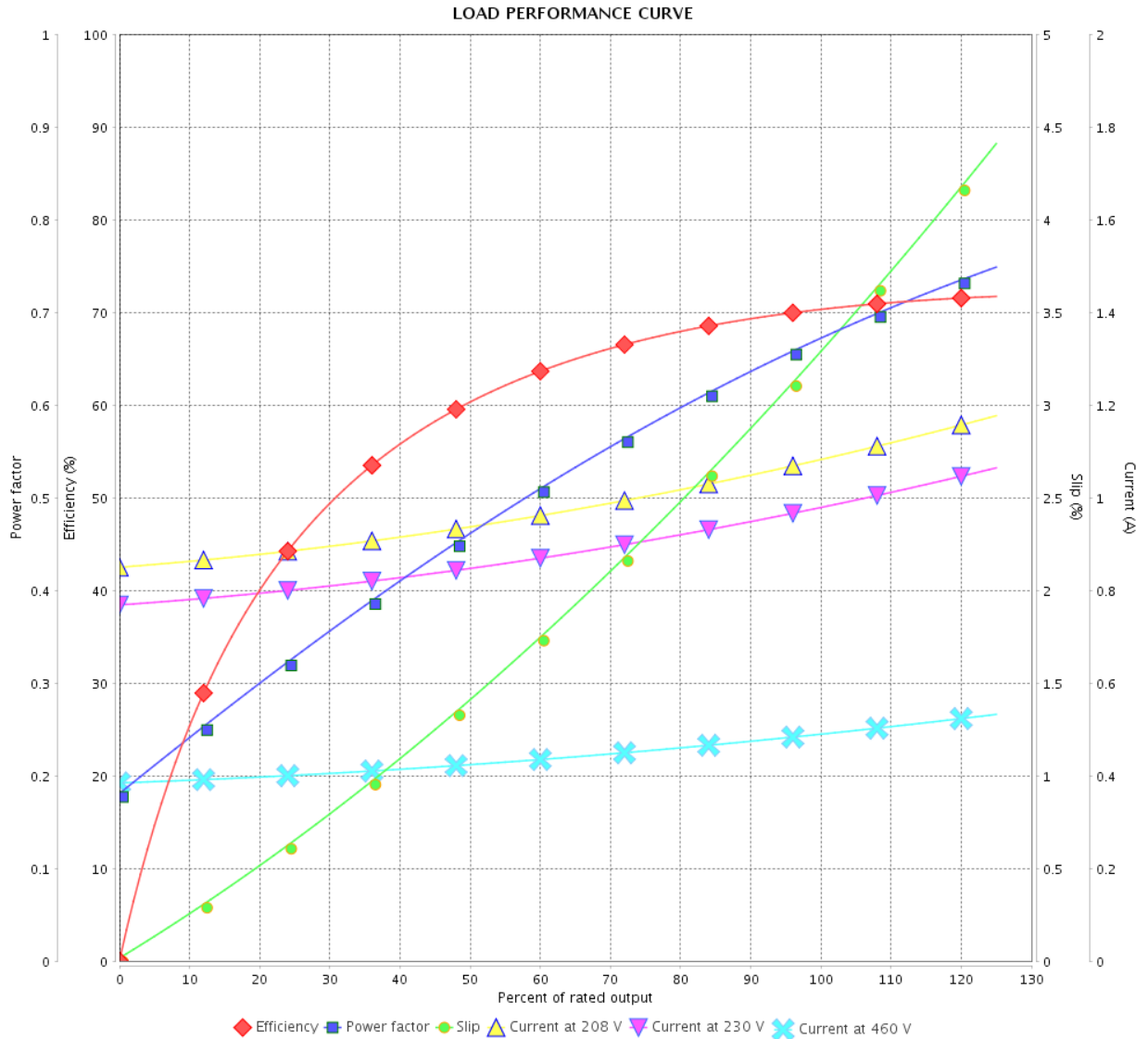
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 Locked rotor torque : 250 %
 Breakdown torque : 340 %
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 Service factor :
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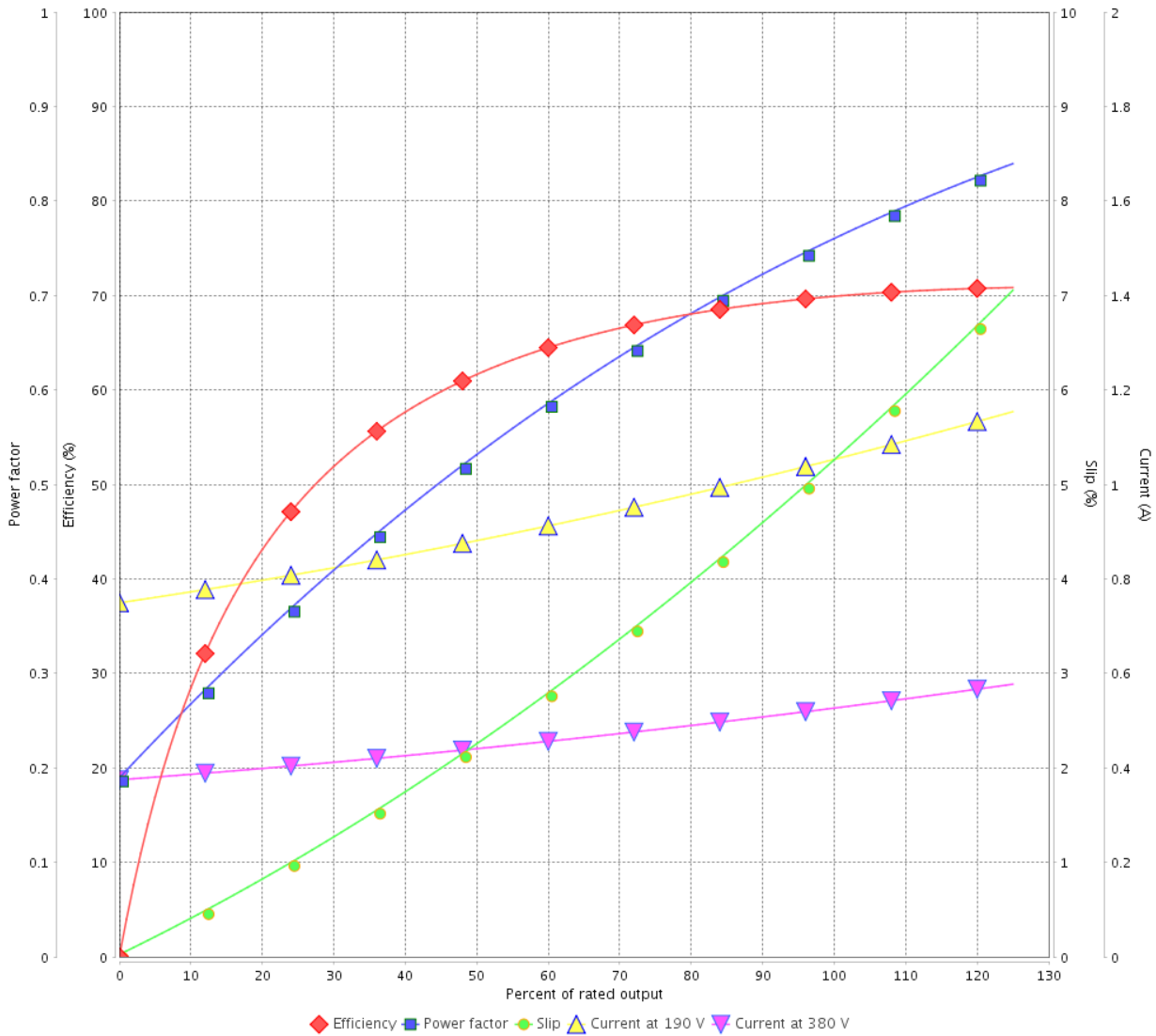
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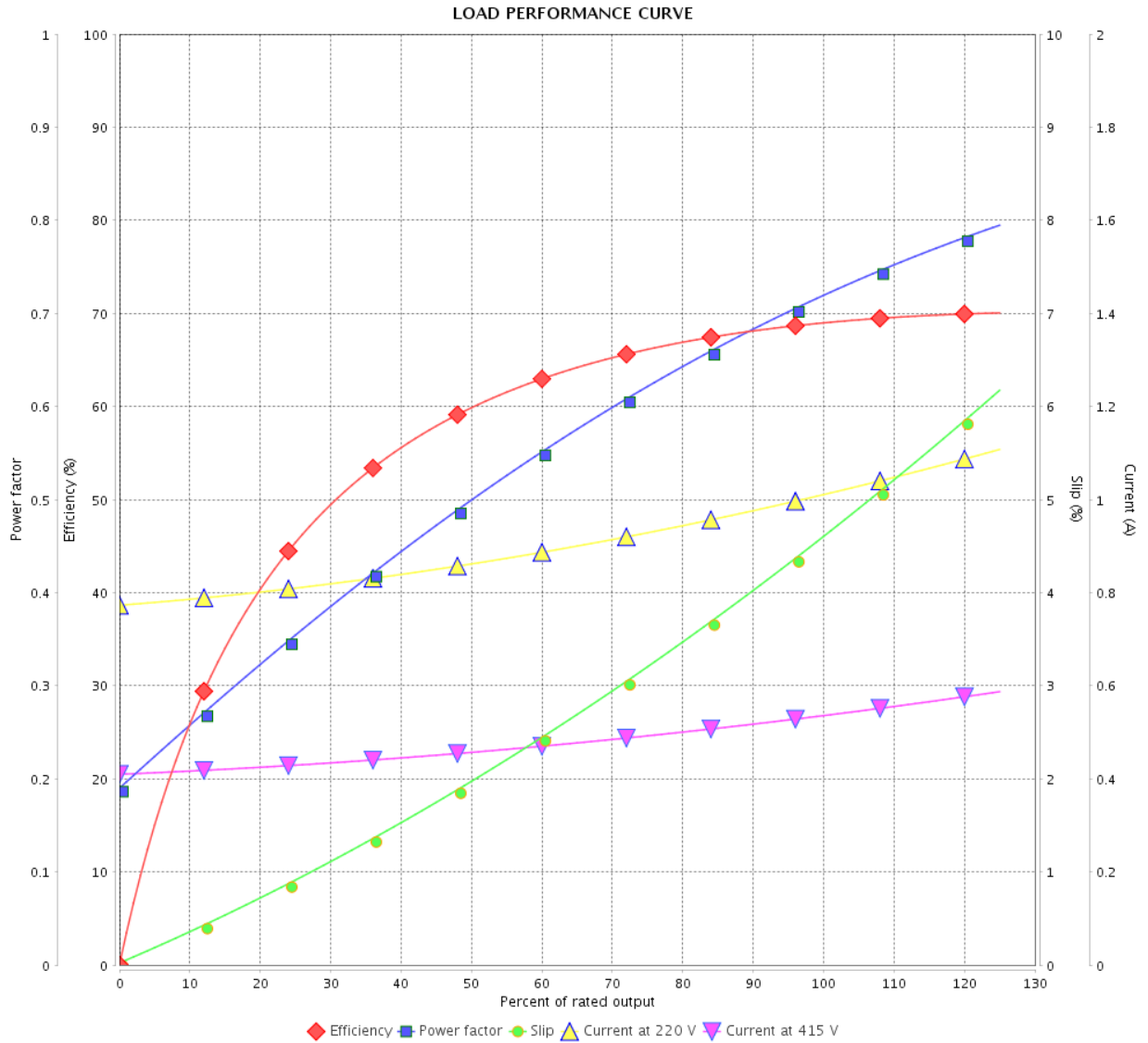
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| Performed by | | Page | | Revision |
| Checked by | | 7 / 13 | | |
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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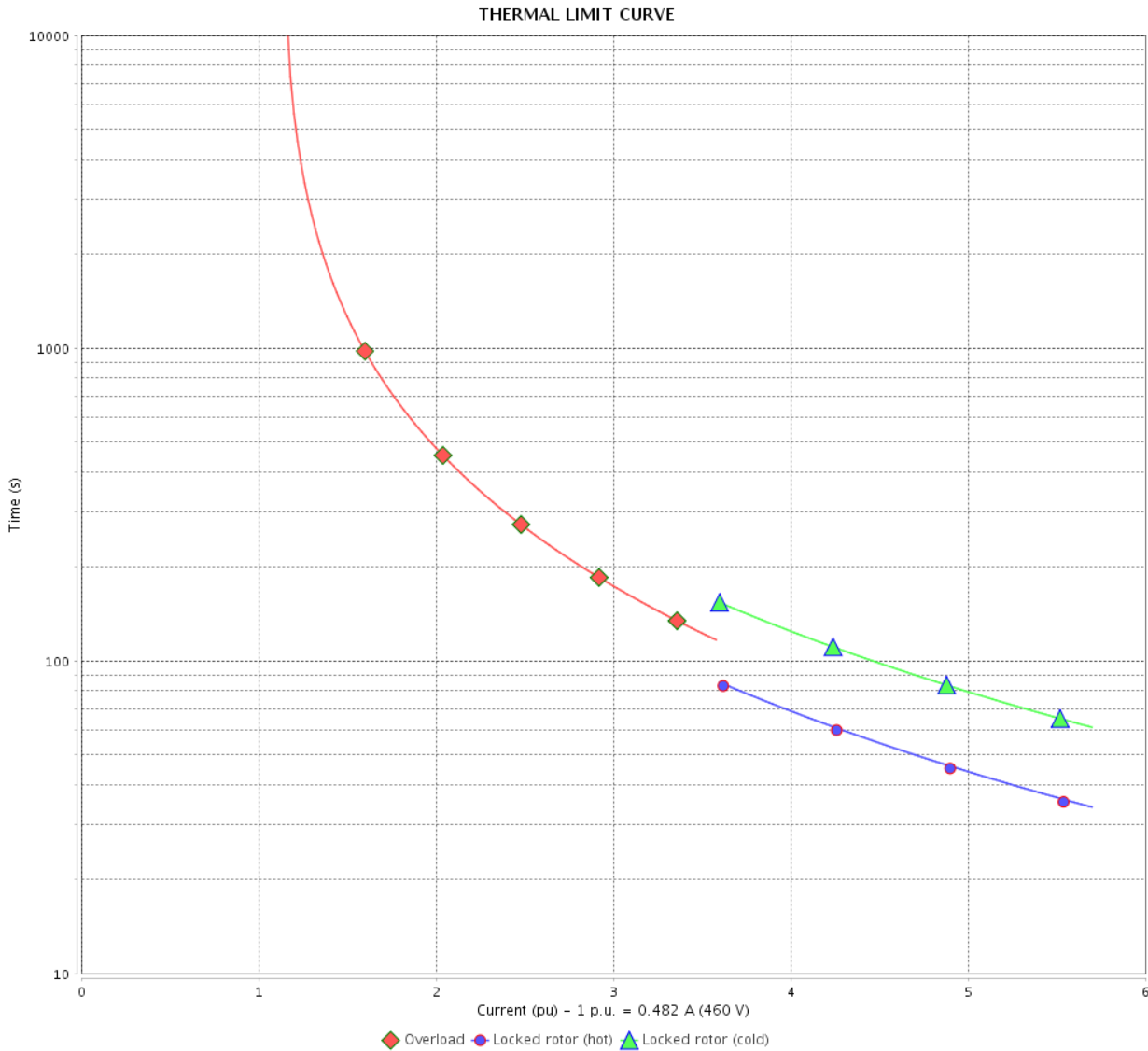
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 Rated speed : 1740 rpm

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

Heating constant

Cooling constant

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| Checked by | | 8 / 13 | | |
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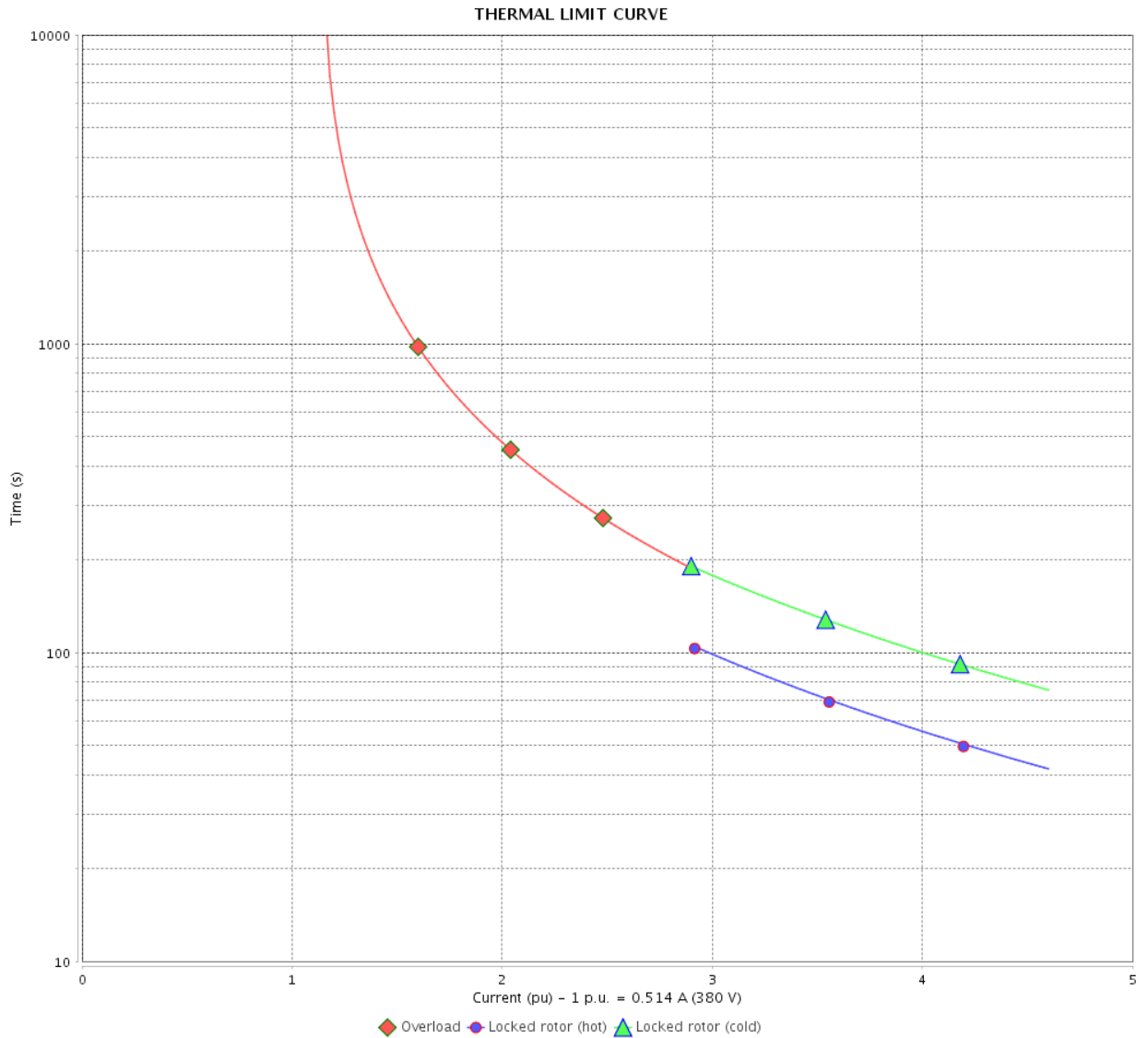
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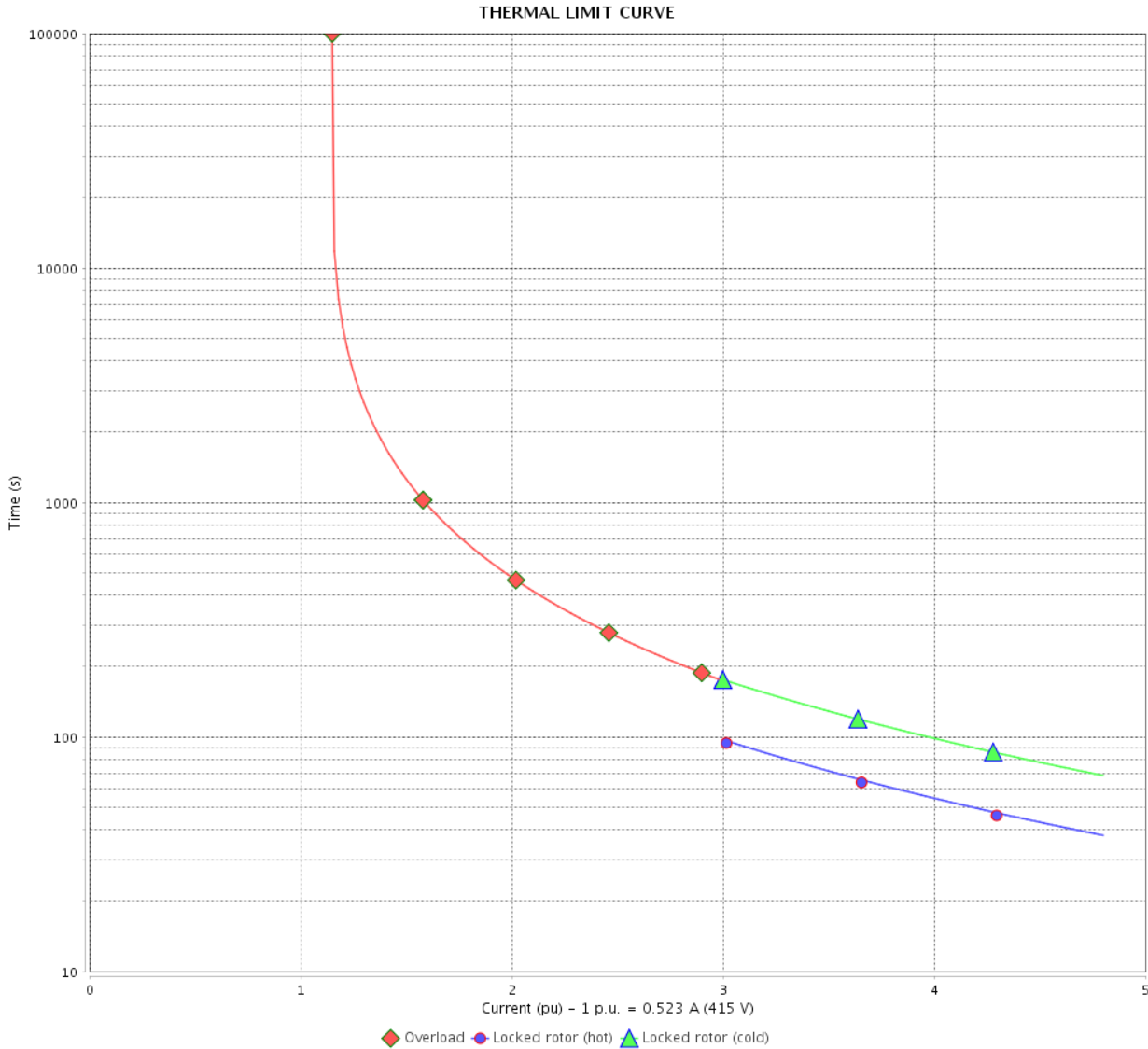
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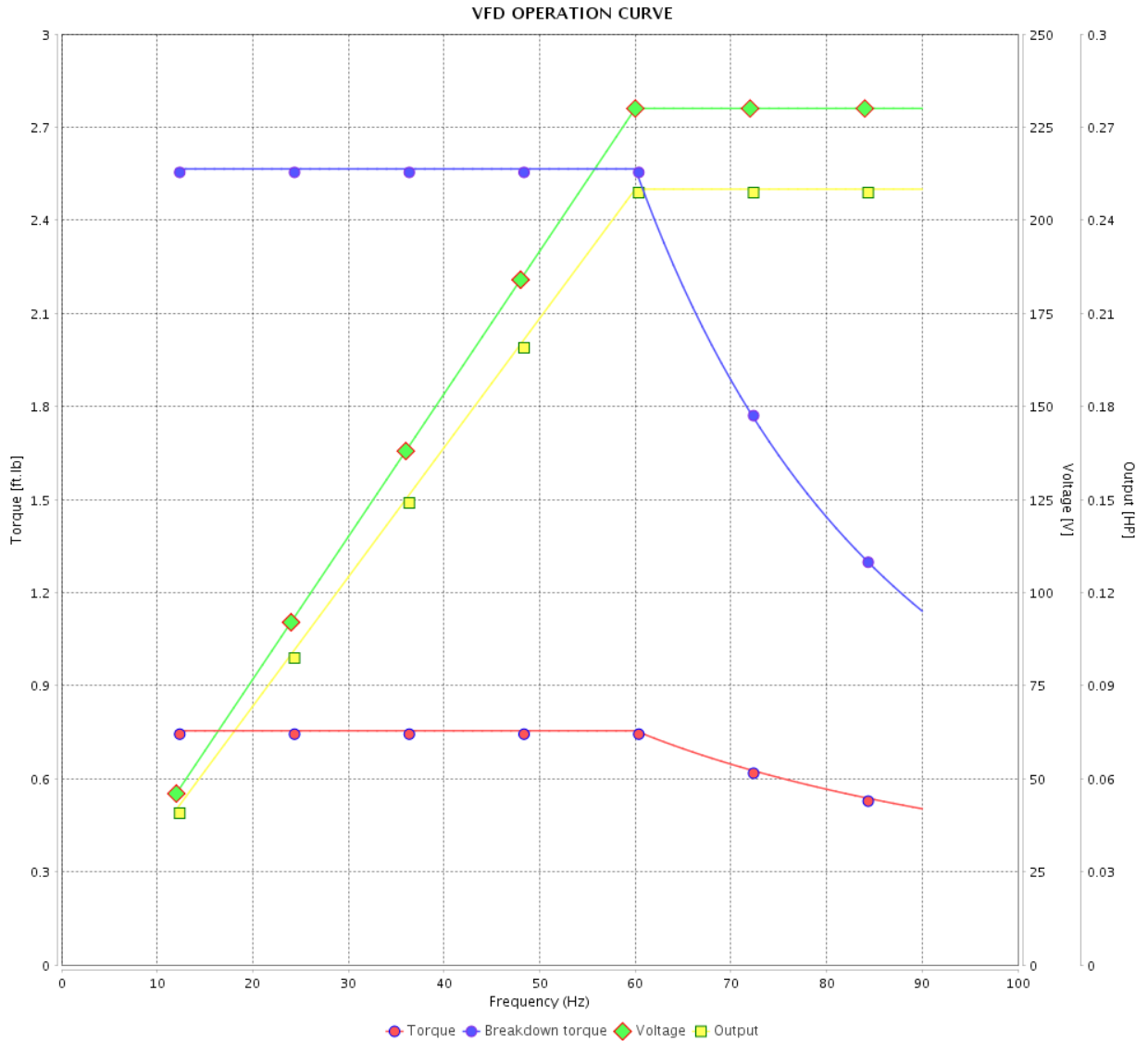
VFD OPERATION CURVE

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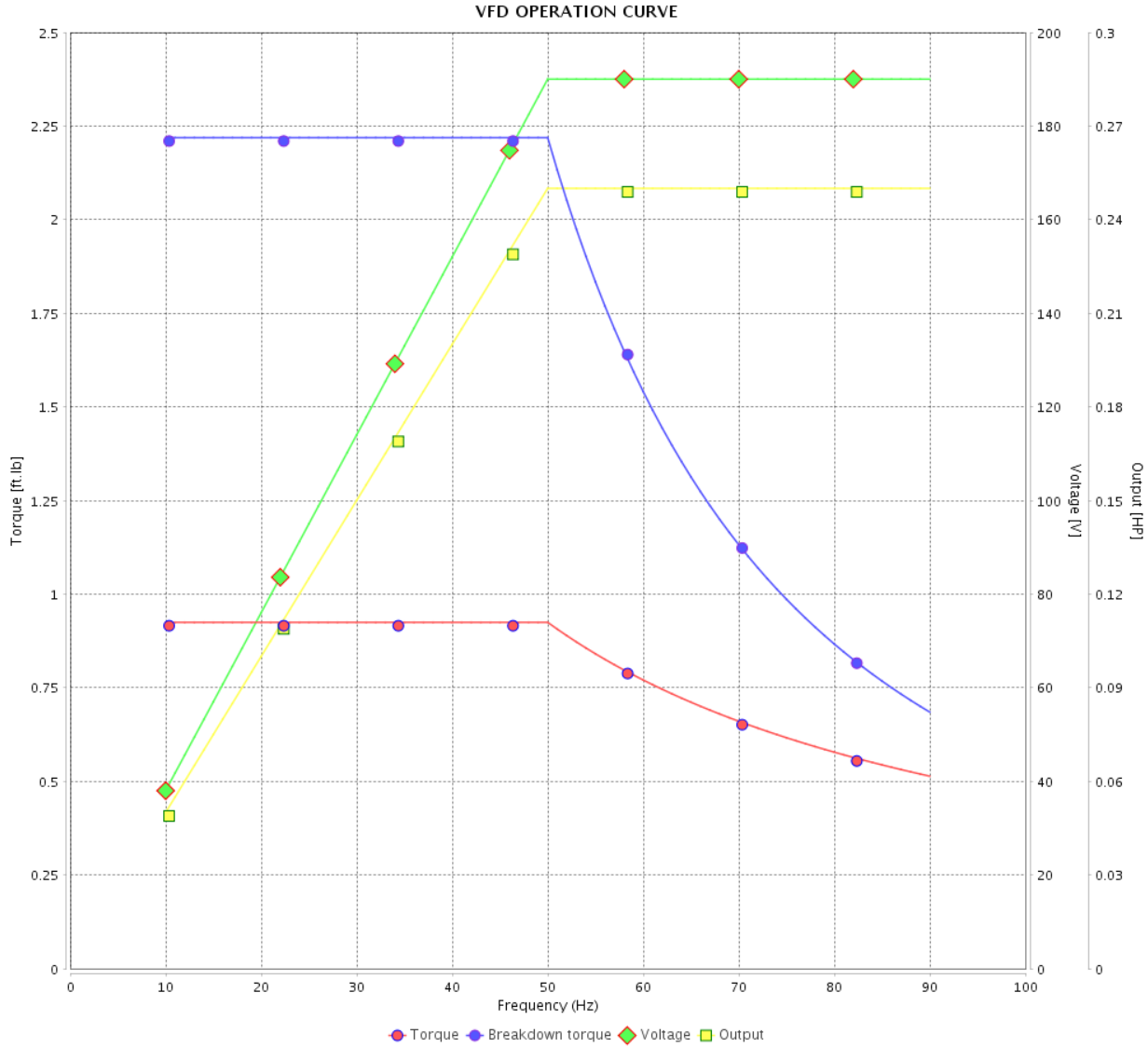
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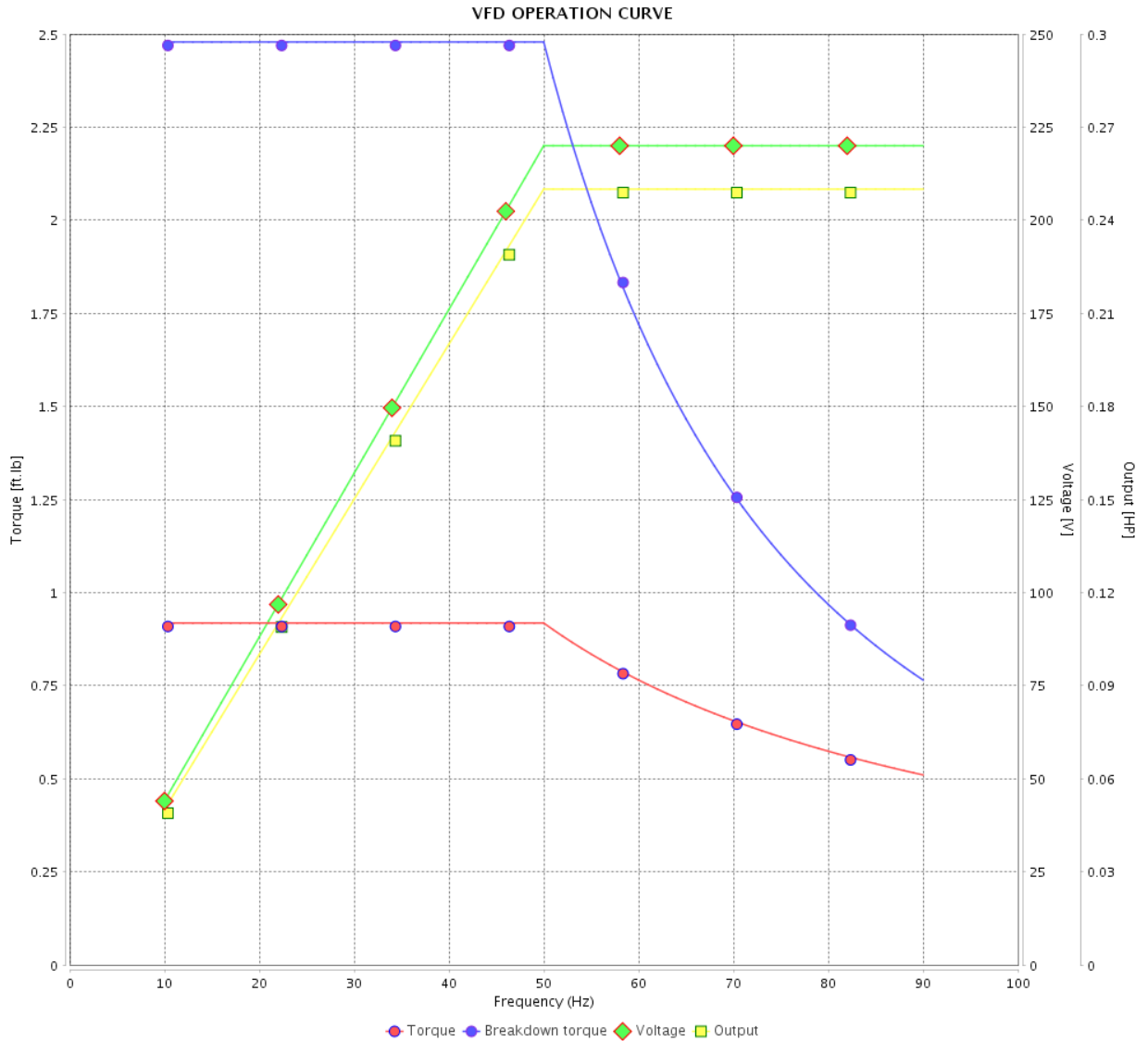
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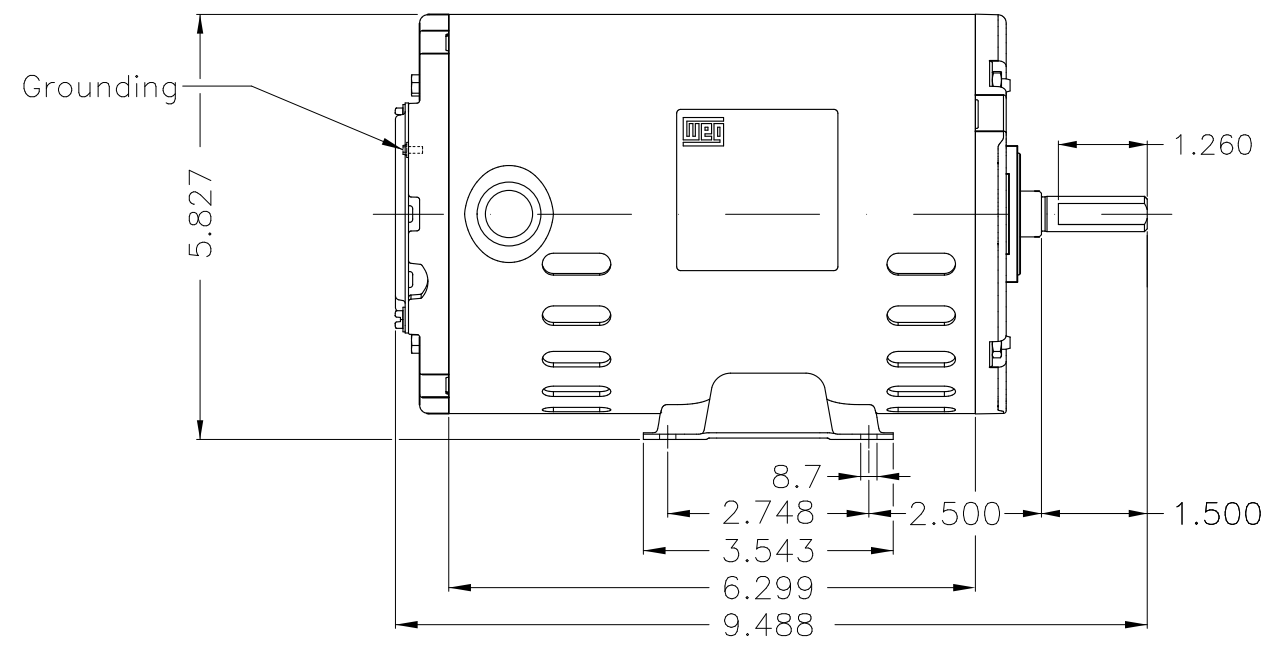
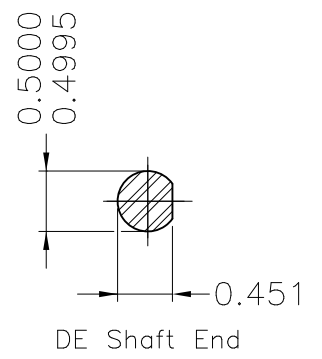
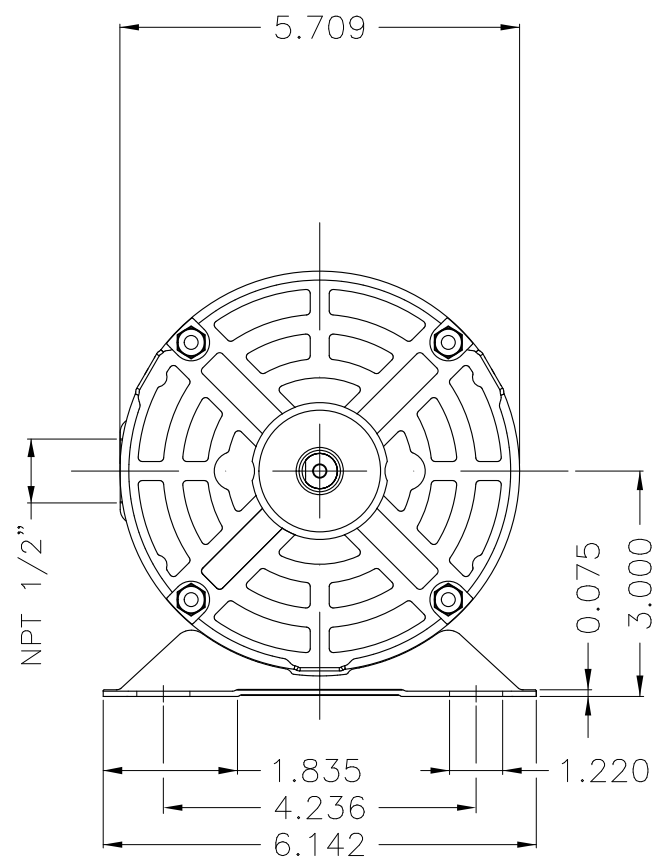
A

B

C

D

E



| | | | | | | | | | |
|---------------------|-----------|---|---------------------|--|----------|---------|----------|-------|-----|
| Without coating | | | | | | | | | |
| Mounting F-1/B3R(D) | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| ECM | LOC | SUMMARY OF MODIFICATIONS | | | EXECUTED | CHECKED | RELEASED | DATE | VER |
| EXECUTED | PIRWBUSER | THREE PH. MOTOR ROLLED STEEL PREM. EFF. | | | PREVIEW | WDD | SHEET | 1 / 1 | |
| CHECKED | | FRAME 48 IP21 ODP | | | | | | | |
| RELEASED | | | | | | | | | |
| REL DT. | WMO | Jaragua do Sul | Product Engineering | | | | | | |

0.25 HP 04 Poles 60 Hz

A



NEMA
Premium



3PT9
UL US LISTED



MADE IN MEXICO

MAT: 13497507

W01.T00IC0X0X

MODEL .25180T3E48-S

04FEB2022 B/N:

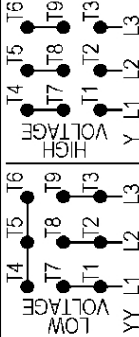


| | | |
|----------------------|--------|------------------------|
| PH 3 | Hz 60 | HP 0.25 |
| FR 48 | | KW 0.18 |
| DUTY CONT. | | V 208-230/460 |
| ALT 1000 m.a.s.l | | A 1.06-0.964/0.482 |
| INS CL F AT 80K | | SFA 1.06-1.30/0.651 |
| AMB 40°C | DES - | SF 1.35 |
| ENCL ODP | CODE K | PF 0.67 |
| USABLE @ 208V SF1.00 | | RPM 1740 |
| | | NEMA NOM. EFF 70.0% |

ALTERNATE RATING: 0.25HP 50Hz 190-220/380-415V SF1.35
 1.03-1.01/0.514-0.534A 1420RPM EFF 88.0% (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.

