

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



| | | | |
|--|---|--|---------------------|
| Customer : | | | |
| Product line | : JM Pump NEMA Premium Efficiency Three-Phase | Product code : | 14808527 |
| | | Catalog # : | 00236ET3E145JM-S |
| Frame | : 143/5JM | 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 ² | : 42.9 lb |
| Protection degree | : IP55 | Moment of inertia (J) | : 0.1279 sq.ft.lb |
| Design | : B | | |
| Output [HP] | 2 | 2 | 2 |
| Poles | 2 | 2 | 2 |
| Frequency [Hz] | 60 | 50 | 50 |
| Rated voltage [V] | 230/460 | 190/380 | 220/415 |
| Rated current [A] | 4.94/2.47 | 5.94/2.97 | 5.39/2.86 |
| L. R. Amperes [A] | 48.9/24.5 | 44.0/22.0 | 44.2/23.5 |
| LRC [A] | 9.9x(Code L) | 7.4x(Code J) | 8.2x(Code K) |
| No load current [A] | 2.13/1.06 | 2.10/1.05 | 2.14/1.13 |
| Rated speed [RPM] | 3520 | 2875 | 2890 |
| Slip [%] | 2.22 | 4.17 | 3.67 |
| Rated torque [ft.lb] | 2.98 | 3.65 | 3.63 |
| Locked rotor torque [%] | 250 | 229 | 260 |
| Breakdown torque [%] | 300 | 280 | 310 |
| Service factor | | 1.15 | 1.15 |
| Temperature rise | 80 K | 80 K | 80 K |
| Locked rotor time | 23s (cold) 13s (hot) | 0s (cold) 0s (hot) | 0s (cold) 0s (hot) |
| Noise level ² | 68.0 dB(A) | 65.0 dB(A) | 65.0 dB(A) |
| Efficiency (%) | 25% | 82.1 | 84.0 |
| | 50% | 82.5 | 83.7 |
| | 75% | 85.5 | 84.9 |
| | 100% | 85.5 | 84.1 |
| Power Factor | 25% | 0.45 | 0.48 |
| | 50% | 0.73 | 0.76 |
| | 75% | 0.83 | 0.86 |
| | 100% | 0.89 | 0.90 |
| Bearing type | : <u>Drive end</u> 6206 ZZ <u>Non drive end</u> 6203 ZZ | Foundation loads | |
| Sealing | : V'Ring Without Bearing Seal | Max. traction | : 76 lb |
| | | Max. compression | : 119 lb |
| Lubrication interval | : - | | |
| Lubricant amount | : - | | |
| Lubricant type | : Mobil Polyrex EM | | |
| Notes USABLE @208V 5.46A SF 1.00 SFA 5.46A | | | |
| 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 |
| Date | 13/04/2022 | | Revision |
| | | | 1 / 16 |

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

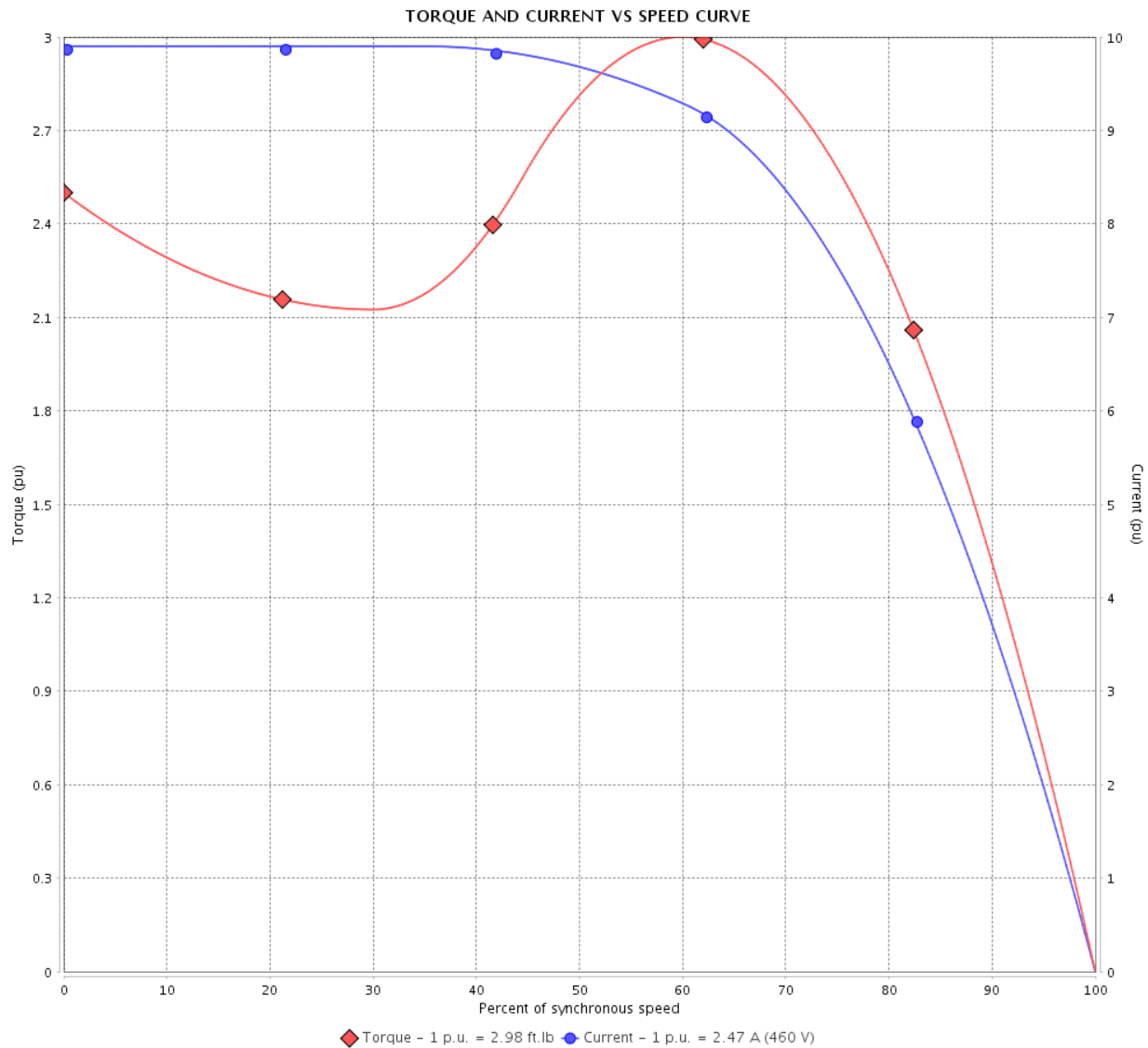


Customer :

Product line : JM Pump NEMA Premium
Efficiency Three-Phase

Product code : 14808527

Catalog # : 00236ET3E145JM-S



Performance : 230/460 V 60 Hz 2P

| | | | |
|---------------------|---------------|-----------------------|-------------------|
| Rated current | : 4.94/2.47 A | Moment of inertia (J) | : 0.1279 sq.ft.lb |
| LRC | : 9.9 | Duty cycle | : Cont.(S1) |
| Rated torque | : 2.98 ft.lb | Insulation class | : F |
| Locked rotor torque | : 250 % | Service factor | : |
| Breakdown torque | : 300 % | Temperature rise | : 80 K |
| Rated speed | : 3520 rpm | Design | : B |

Locked rotor time : 23s (cold) 13s (hot)

| Rev. | Changes Summary | Performed | Checked | Date |
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| Performed by | | | Page 2 / 16 | Revision |
| Checked by | | | | |
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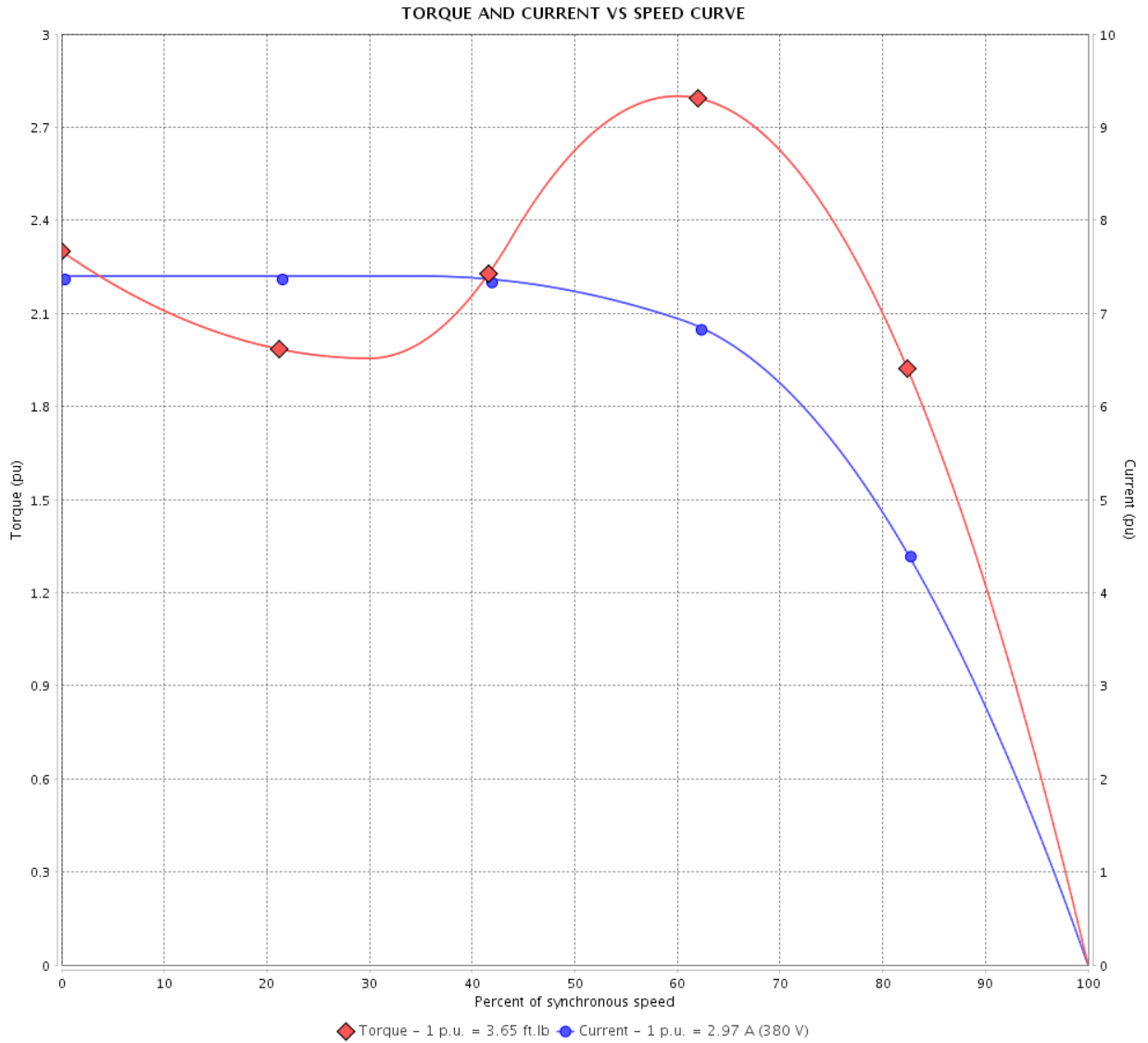
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 14808527

Catalog # : 00236ET3E145JM-S



Performance : 190/380 V 50 Hz 2P

Rated current : 5.94/2.97 A
 LRC : 7.4
 Rated torque : 3.65 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 280 %
 Rated speed : 2875 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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

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|--------------|-----------------|-----------|----------------|----------|
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| Performed by | | | Page 3 / 16 | Revision |
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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



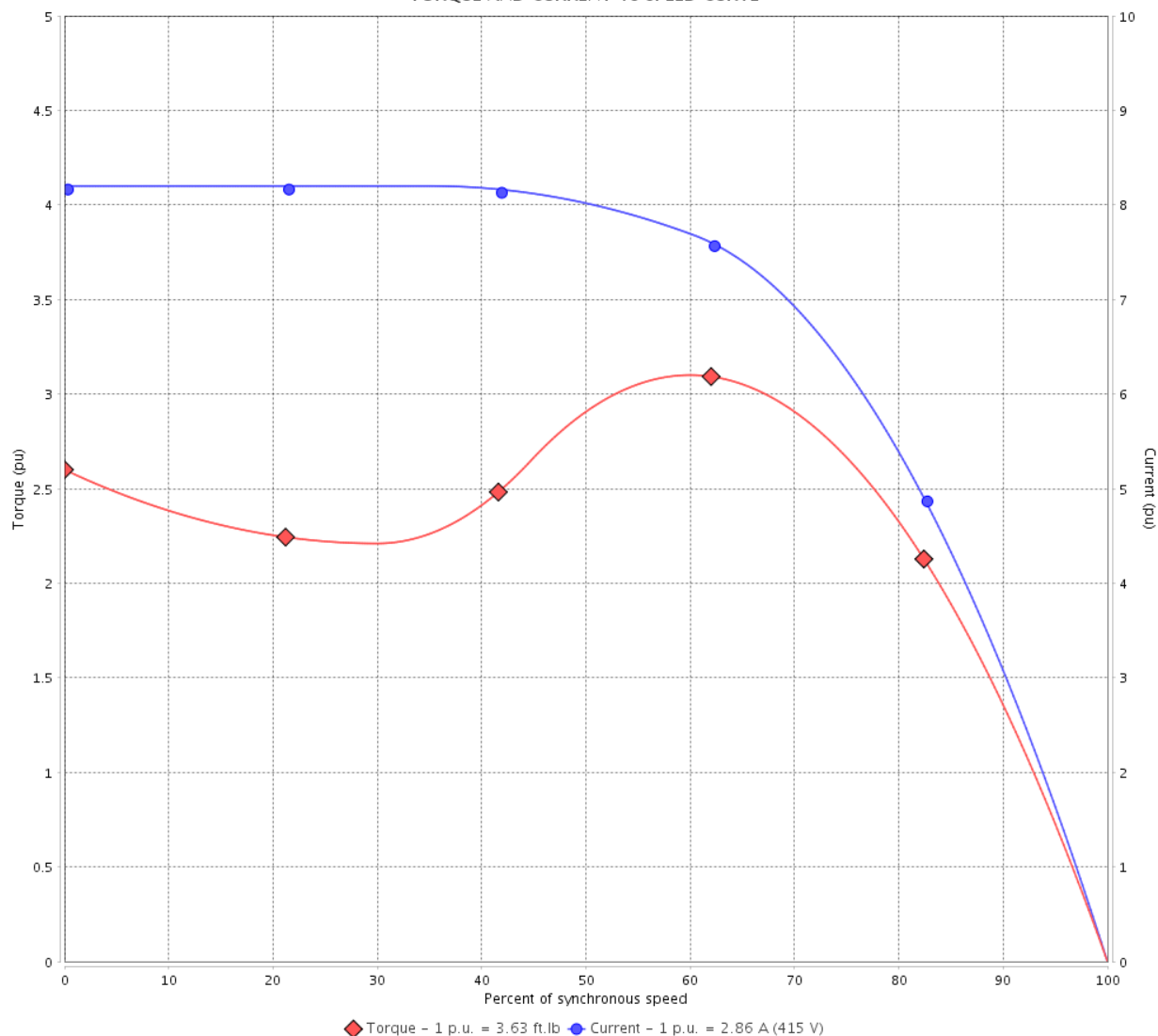
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 2P

| | | | |
|---------------------|---------------|-----------------------|-------------------|
| Rated current | : 5.39/2.86 A | Moment of inertia (J) | : 0.1279 sq.ft.lb |
| LRC | : 8.2 | Duty cycle | : Cont.(S1) |
| Rated torque | : 3.63 ft.lb | Insulation class | : F |
| Locked rotor torque | : 260 % | Service factor | : 1.15 |
| Breakdown torque | : 310 % | Temperature rise | : 80 K |
| Rated speed | : 2890 rpm | Design | : B |

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

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LOAD PERFORMANCE CURVE

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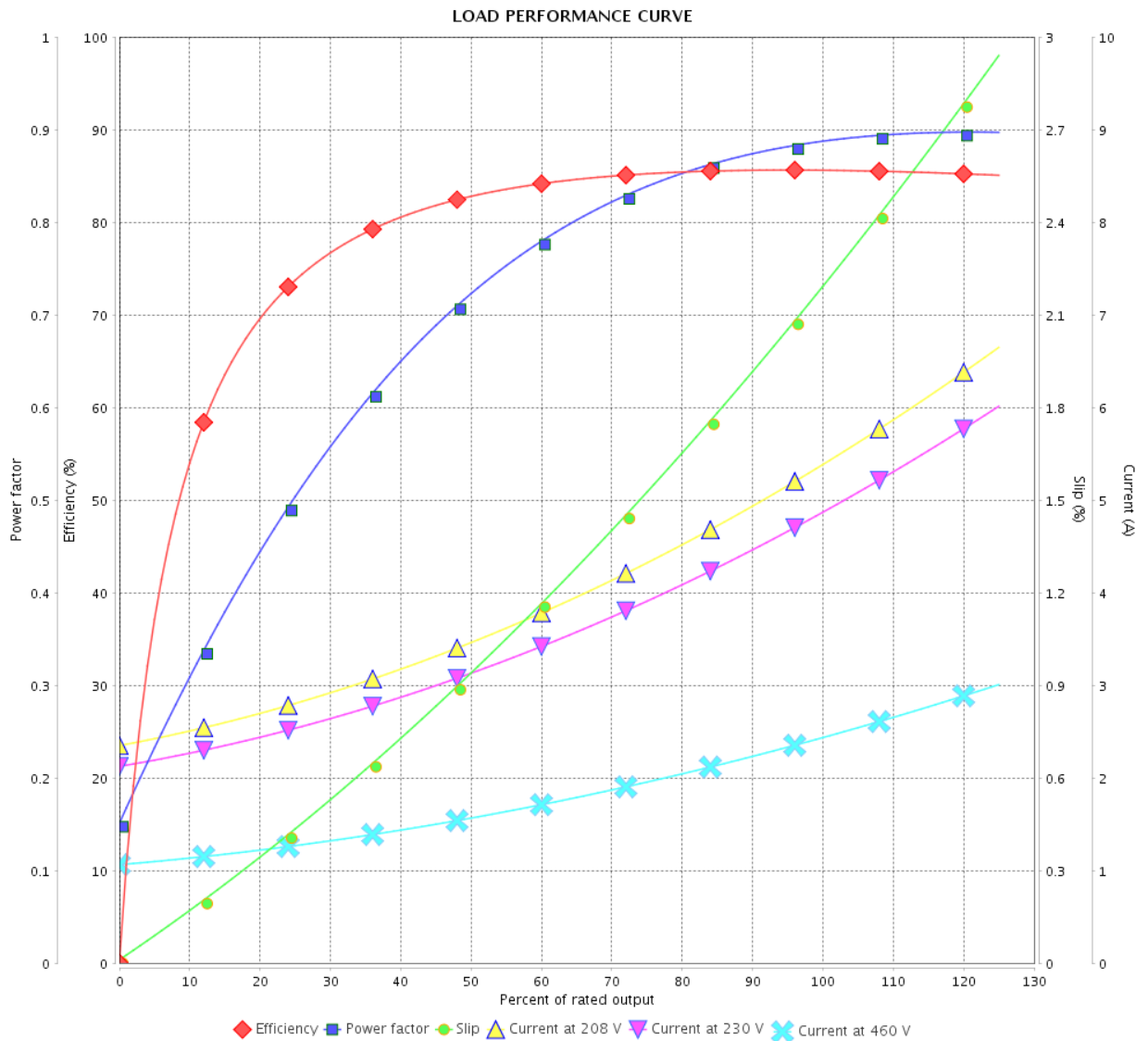


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| Checked by | | | 5 / 16 | |
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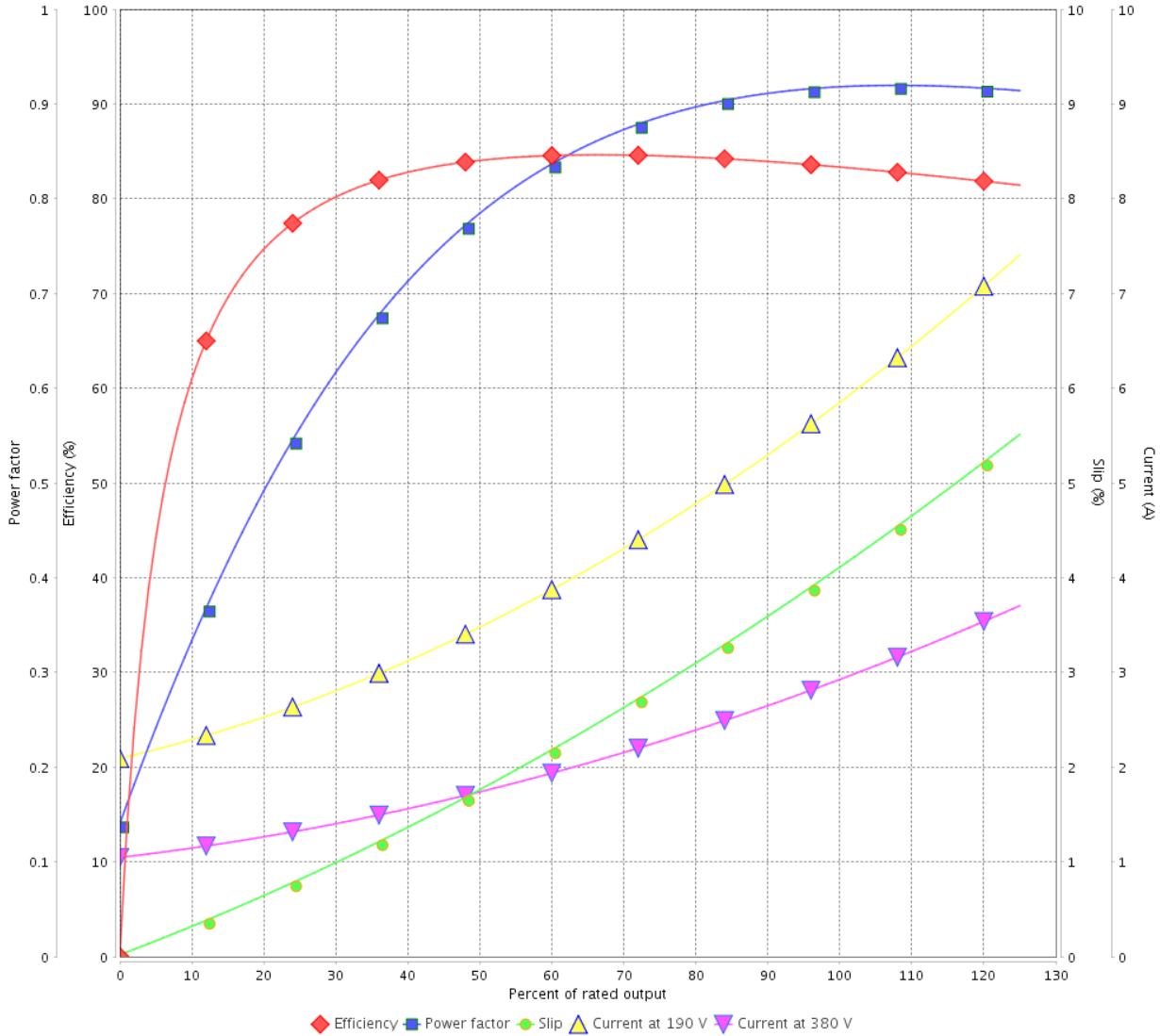
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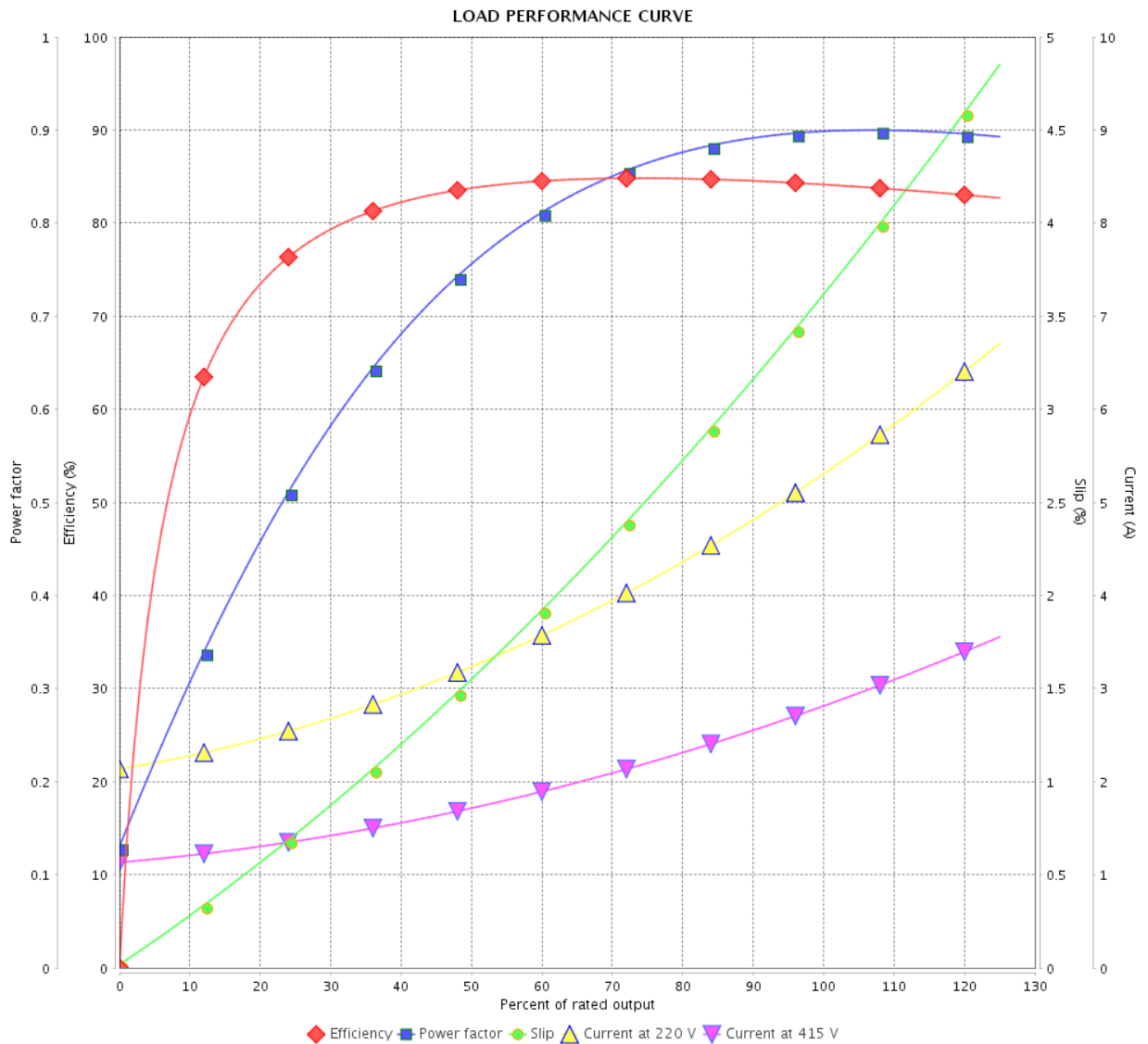


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THERMAL LIMIT CURVE



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Rated current : 4.94/2.47 A
LRC : 9.9
Rated torque : 2.98 ft.lb
Locked rotor torque : 250 %
Breakdown torque : 300 %
Rated speed : 3520 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor :
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

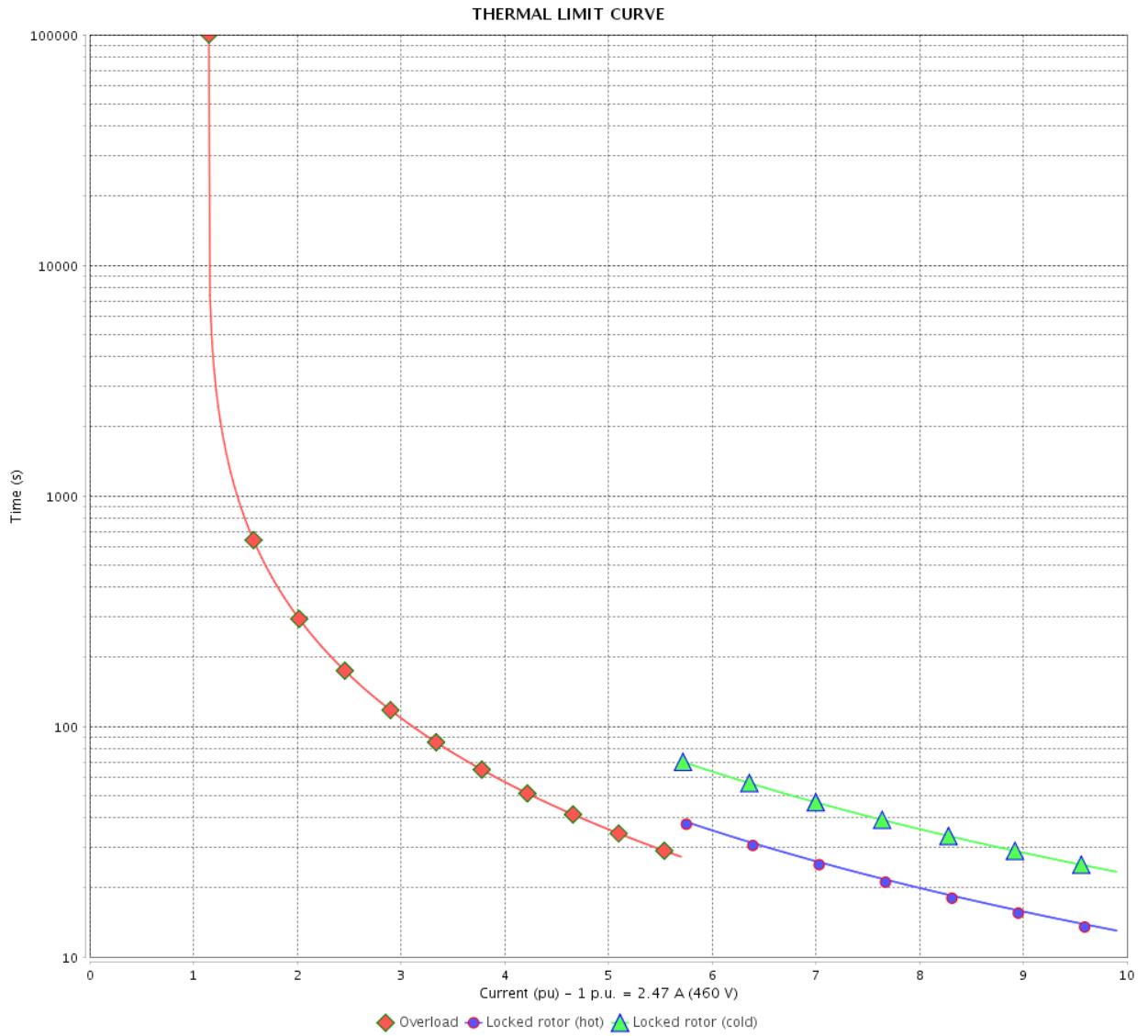
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| Date | 13/04/2022 | | 8 / 16 | |

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| Checked by | | | | |
| Date | | | | |
| | | | 9 / 16 | |

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Service factor : 1.15
Temperature rise : 80 K
Design : B

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Cooling constant

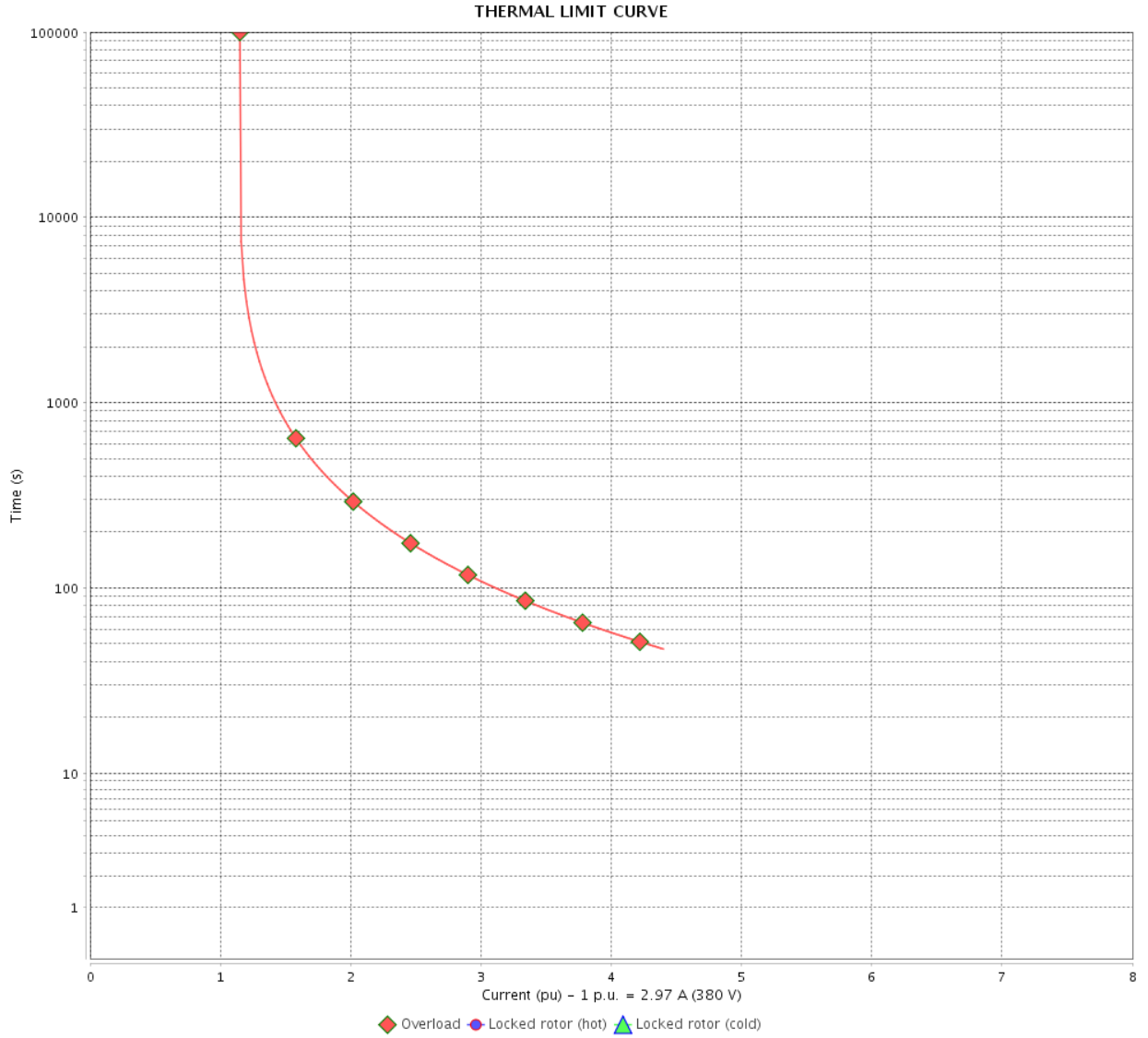
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| Rev. | Changes Summary | Performed | Checked | Date |
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Cooling constant

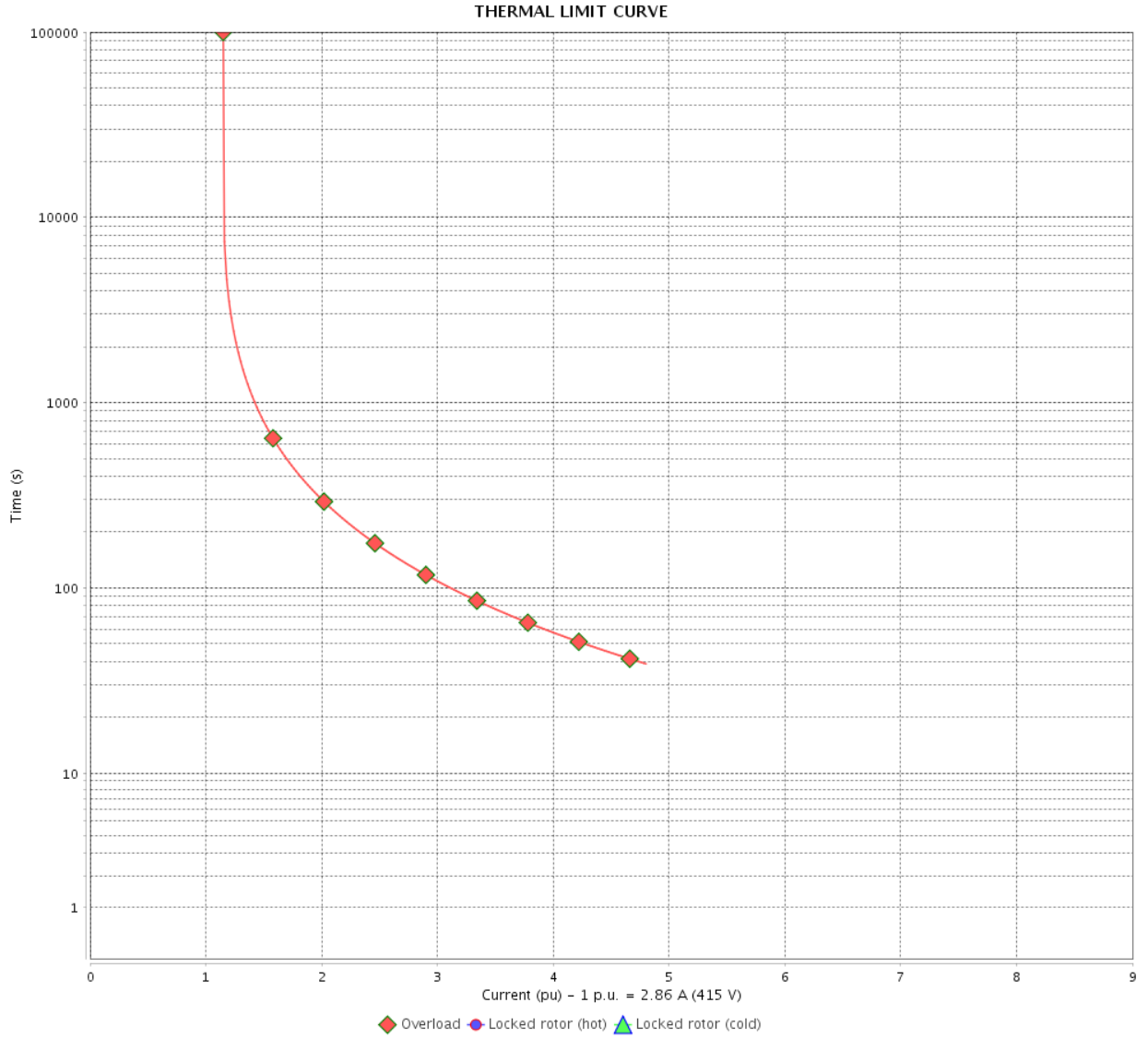
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| Date | 13/04/2022 | | 12 / 16 | |

THERMAL LIMIT CURVE

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|--------------|-----------------|-------------------------------|---------|------|
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

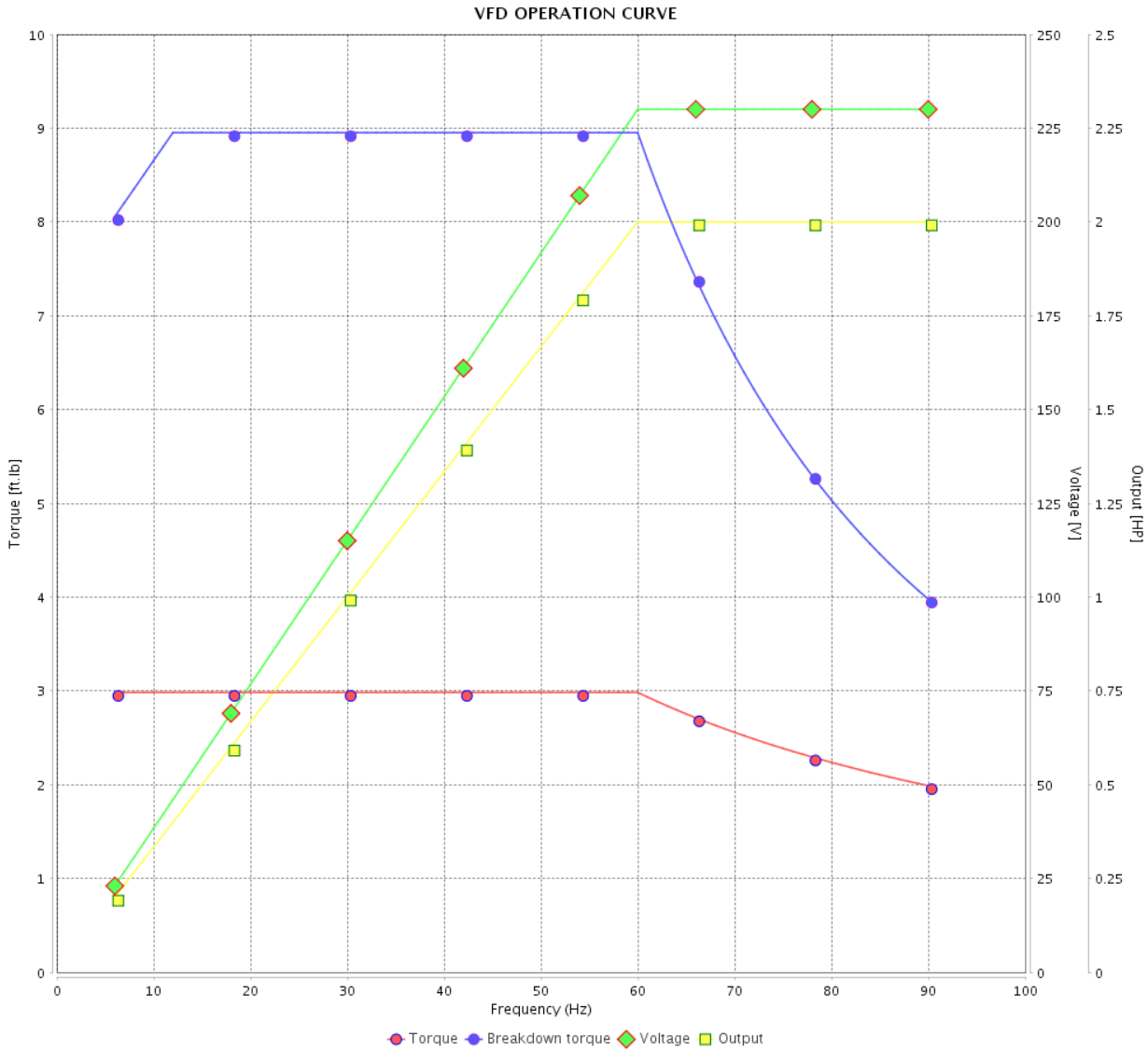


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Performance : 230/460 V 60 Hz 2P

Rated current : 4.94/2.47 A
 LRC : 9.9
 Rated torque : 2.98 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 300 %
 Rated speed : 3520 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor :
 Temperature rise : 80 K
 Design : B

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|--------------|-----------------|-----------|-----------------|----------|
| | | | | |
| Performed by | | | Page 14 / 16 | Revision |
| Checked by | | | | |
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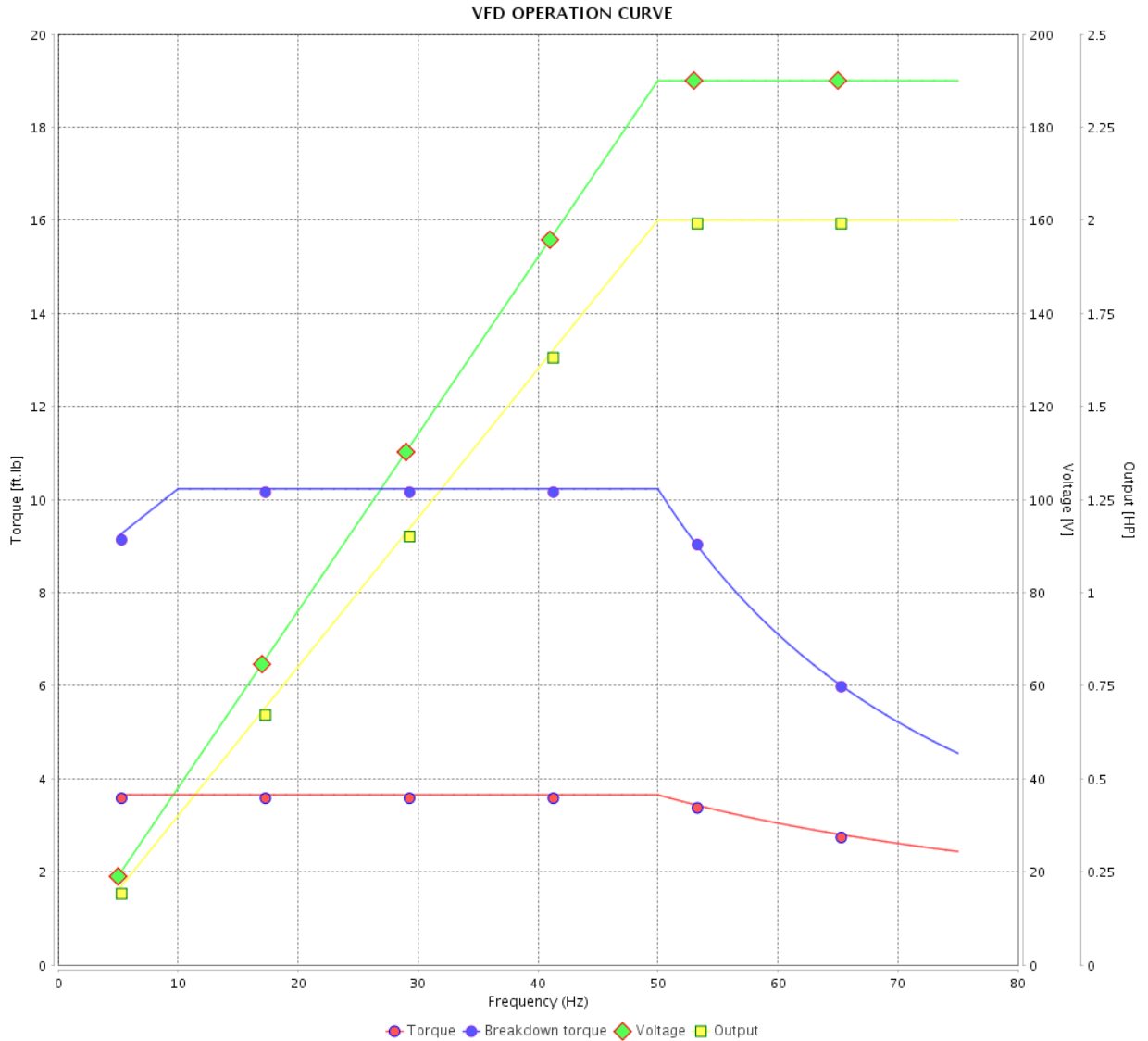


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| | | | | |
| Performed by | | Page | | Revision |
| Checked by | | 15 / 16 | | |
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VFD OPERATION CURVE

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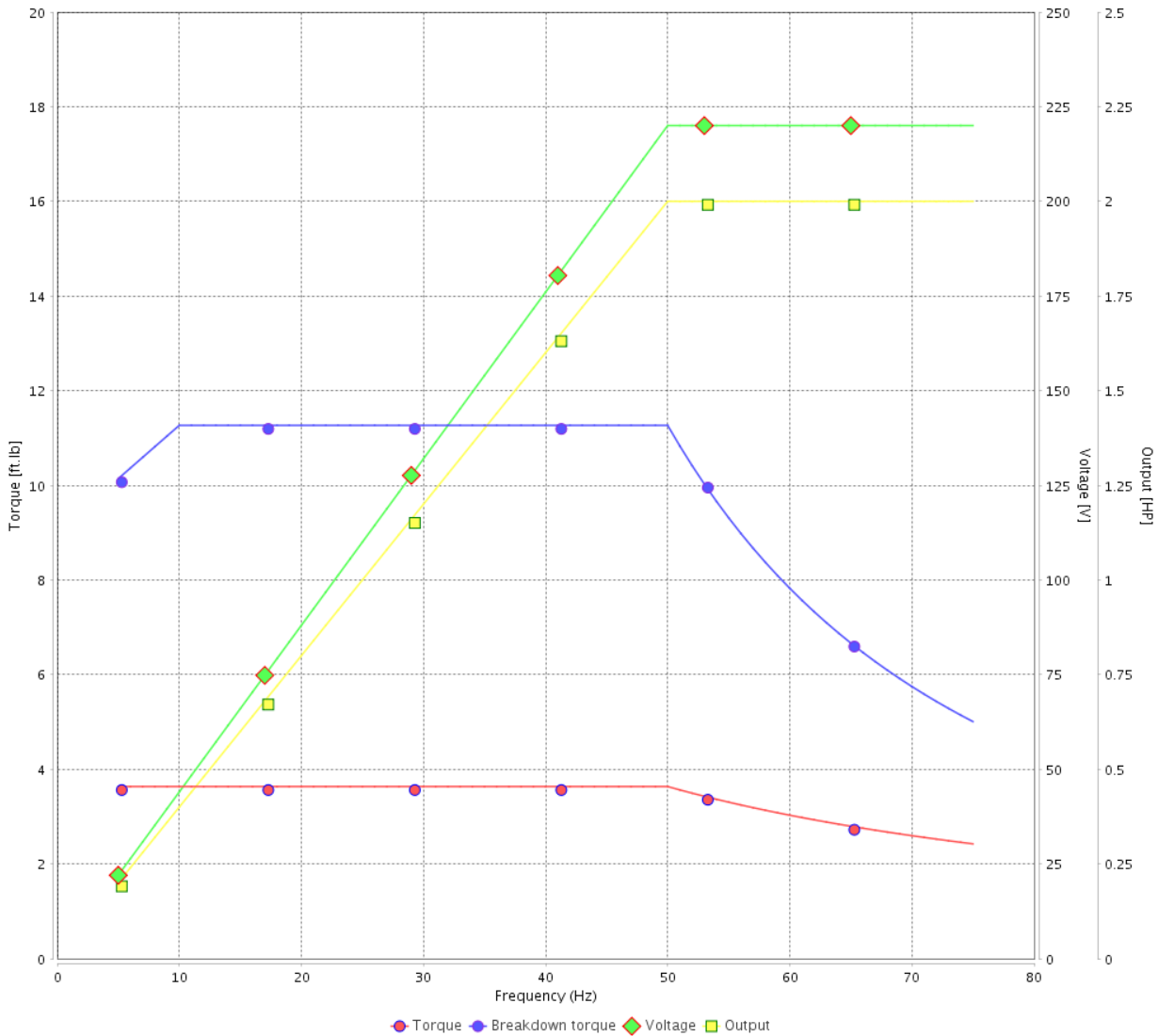
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VFD OPERATION CURVE



Performance : 220/415 V 50 Hz 2P

Rated current : 5.39/2.86 A
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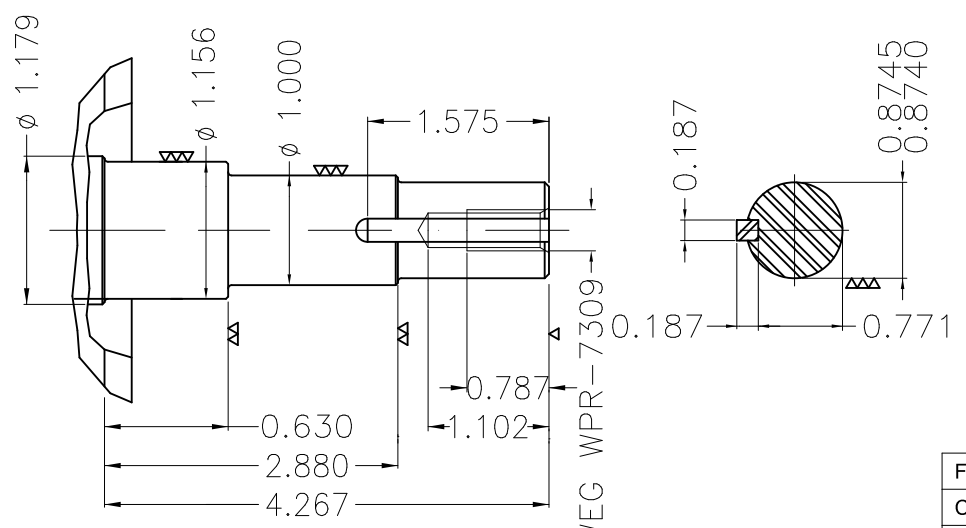
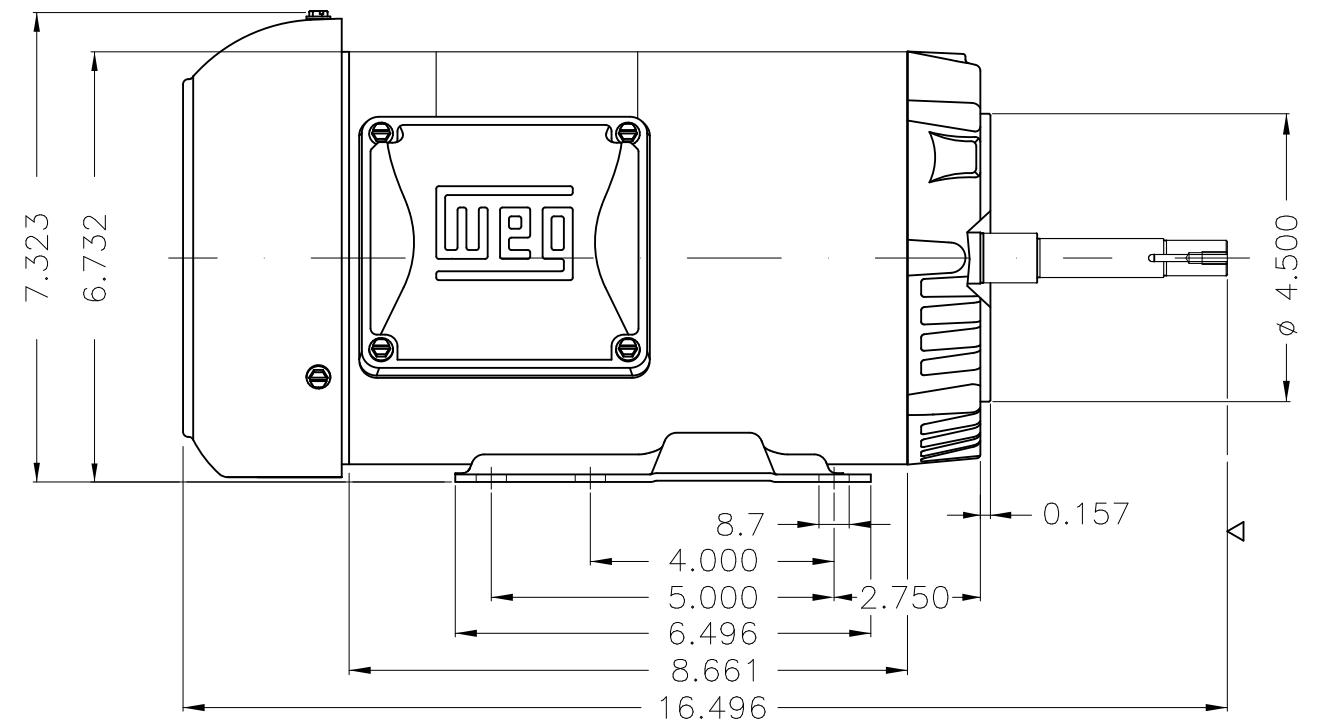
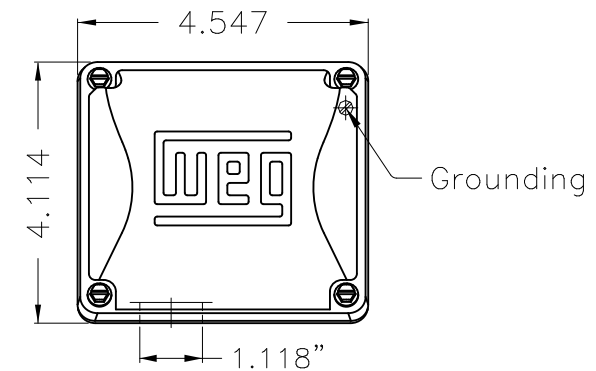
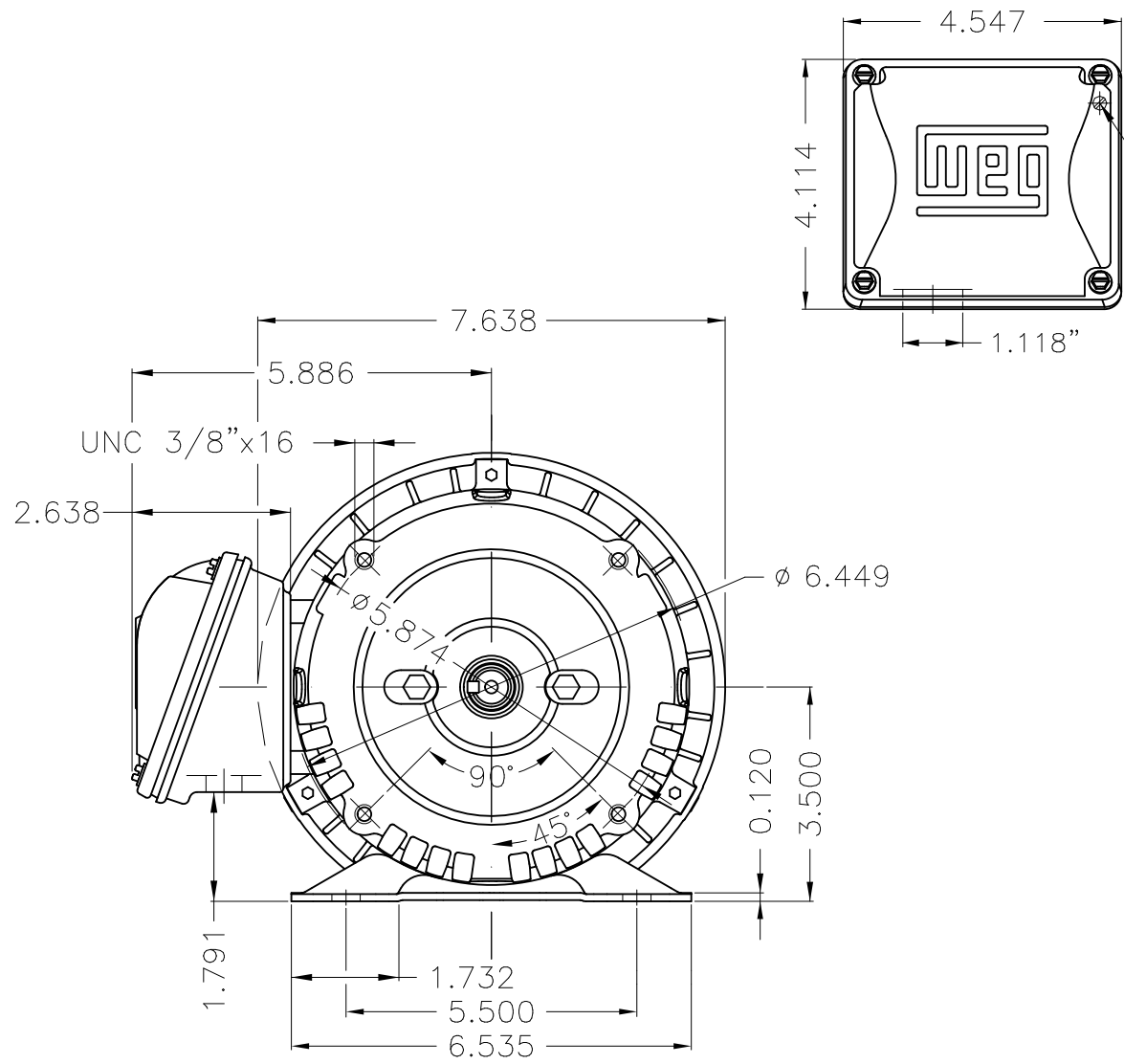
A

B

C

D

E



EUNC 3/8"-16 WEG WPR-7309

DE Shaft End

| | | | | | | |
|-------------------------------|--|--|--|--|--|--|
| 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 | PIRBUSER | | THREE PH. MOTOR ROLLED STEEL CLOSE COUPLED PUMP JN TYPE PSE 143 | | | PREVIEW WDD | | REL DT. | WMO |
| CHECKED | | | FRAME 143/5JM IP55 TEFC | | | | | | |
| RELEASED | | | | | | | | | |
| REL DT. | | | Jaragua do Sul | Product Engineering | SHEET | 1 / 1 | | | |

2 HP 02 Poles 60 Hz



NEMA
Premium



MADE IN MEXICO

MAT: 14808527 CC029A

W01.TE0IC0X0N

MODEL 00236ET3E145JM-S

29MAR2022 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 2.0 |
| FR 143/5JM | | KW 1.5 |
| DUTY CONT. | | V 230/460 |
| ALT 1000 m.a.s.l. | | A 4.94/2.47 |
| INS CL F AT 80K | IP55 | SFA 5.68/2.84 |
| AMB 40°C | DES B | SF 1.15 |
| ENCL TEFC | CODE L | PF 0.89 |
| USABLE @ 208V 5.46A | | RPM 3520 |
| SF1.00 | | NEMA NOM. EFF 85.5% |

| | | | |
|-------------------------|---------|------------------|-------------|
| ALTERNATE RATING: 2.0HP | 50Hz | 190-220/380-415V | SF1.15 |
| 5.94-5.23/2.97-2.77A | 2875RPM | EFF 83.3% (IE2) | IEC 60034-1 |

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

| | | |
|------------|-------------|------------------|
| DE 6206-ZZ | ODE 6203-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.

