

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



| | | | | |
|--|---|--|---------------------|----------|
| Customer : | | | | |
| Product line | : JM Pump NEMA Premium Efficiency Three-Phase | Product code : | 13173711 | |
| | | Catalog # : | 00236OT3E145JM-SG | |
| Frame | : 143/5JM | 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 | : 38.8 lb | |
| Design | : B | Moment of inertia (J) | : 0.1151 sq.ft.lb | |
| 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] | 4.84/2.42 | 5.82/2.91 | 5.26/2.79 | |
| L. R. Amperes [A] | 43.1/21.5 | 40.2/20.1 | 40.0/21.2 | |
| LRC [A] | 8.9x(Code K) | 6.9x(Code H) | 7.6x(Code J) | |
| No load current [A] | 1.83/0.917 | 1.81/0.906 | 1.84/0.978 | |
| Rated speed [RPM] | 3510 | 2890 | 2900 | |
| Slip [%] | 2.50 | 3.67 | 3.33 | |
| Rated torque [ft.lb] | 2.99 | 3.63 | 3.62 | |
| Locked rotor torque [%] | 220 | 180 | 200 | |
| Breakdown torque [%] | 330 | 250 | 280 | |
| Service factor | | 1.15 | 1.15 | |
| Temperature rise | 80 K | 80 K | 80 K | |
| Locked rotor time | 25s (cold) 14s (hot) | 0s (cold) 0s (hot) | 0s (cold) 0s (hot) | |
| Noise level ² | 62.0 dB(A) | 60.0 dB(A) | 60.0 dB(A) | |
| Efficiency (%) | 25% | 83.7 | 85.4 | |
| | 50% | 84.0 | 84.7 | |
| | 75% | 85.5 | 85.4 | |
| | 100% | 85.5 | 84.3 | |
| Power Factor | 25% | 0.49 | 0.52 | |
| | 50% | 0.77 | 0.80 | |
| | 75% | 0.86 | 0.88 | |
| | 100% | 0.91 | 0.92 | |
| Bearing type | : <u>Drive end</u> 6206 ZZ <u>Non drive end</u> 6203 ZZ | Foundation loads | | |
| Sealing | : Without Without Bearing Seal Bearing Seal | Max. traction | : 69 lb | |
| | | Max. compression | : 107 lb | |
| Lubrication interval | : - - | | | |
| Lubricant amount | : - - | | | |
| Lubricant type | : Mobil Polyrex EM | | | |
| Notes USABLE @208V 5.35A SF 1.00 SFA 5.35A | | | | |
| 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 | 13/04/2022 | | 1 / | |

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



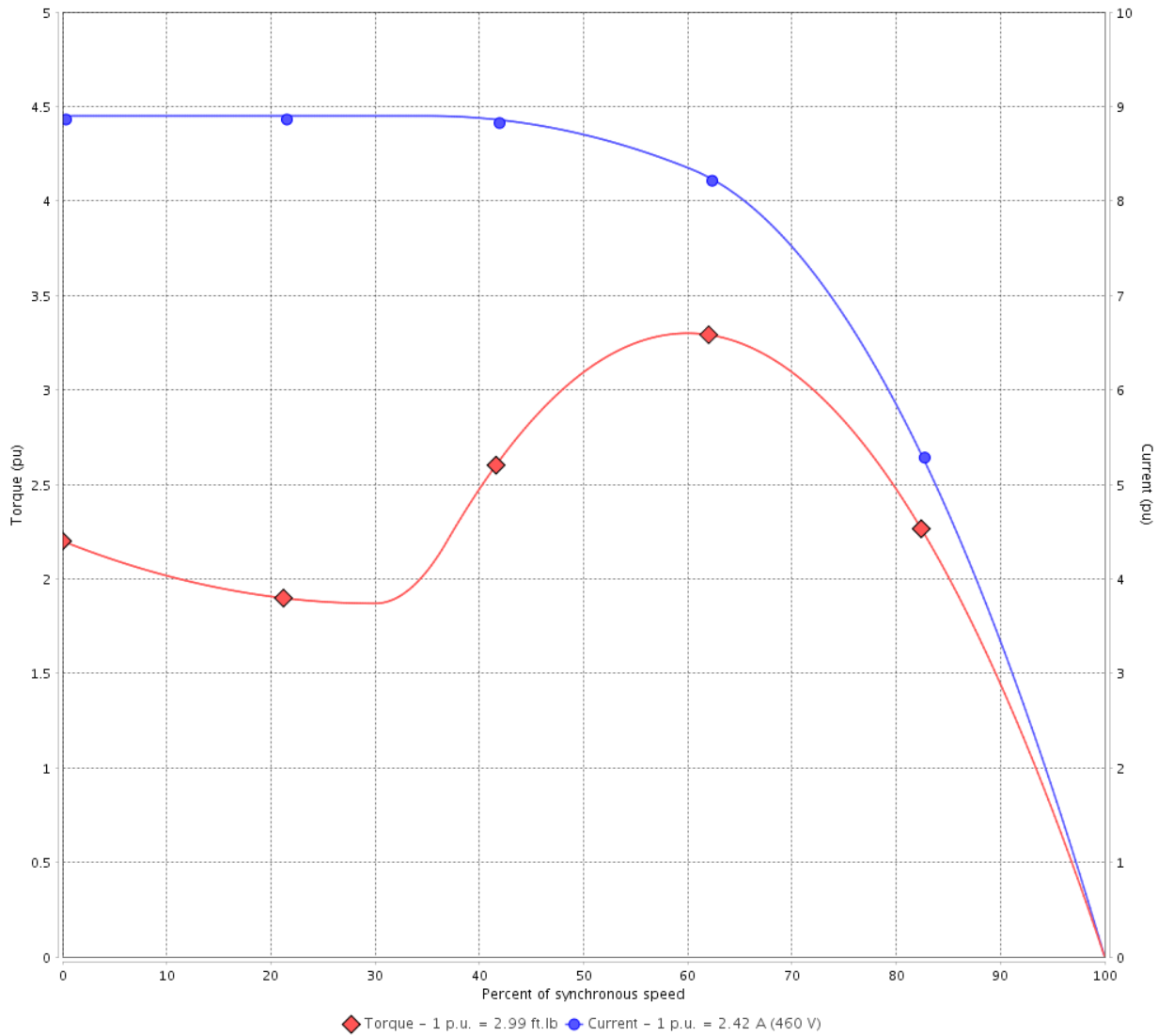
Customer :

Product line : JM Pump NEMA Premium
Efficiency Three-Phase

Product code : 13173711

Catalog # : 002360T3E145JM-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 2P

| | | | |
|---------------------|---------------|-----------------------|-------------------|
| Rated current | : 4.84/2.42 A | Moment of inertia (J) | : 0.1151 sq.ft.lb |
| LRC | : 8.9 | Duty cycle | : Cont.(S1) |
| Rated torque | : 2.99 ft.lb | Insulation class | : F |
| Locked rotor torque | : 220 % | Service factor | : |
| Breakdown torque | : 330 % | Temperature rise | : 80 K |
| Rated speed | : 3510 rpm | Design | : B |

Locked rotor time : 25s (cold) 14s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



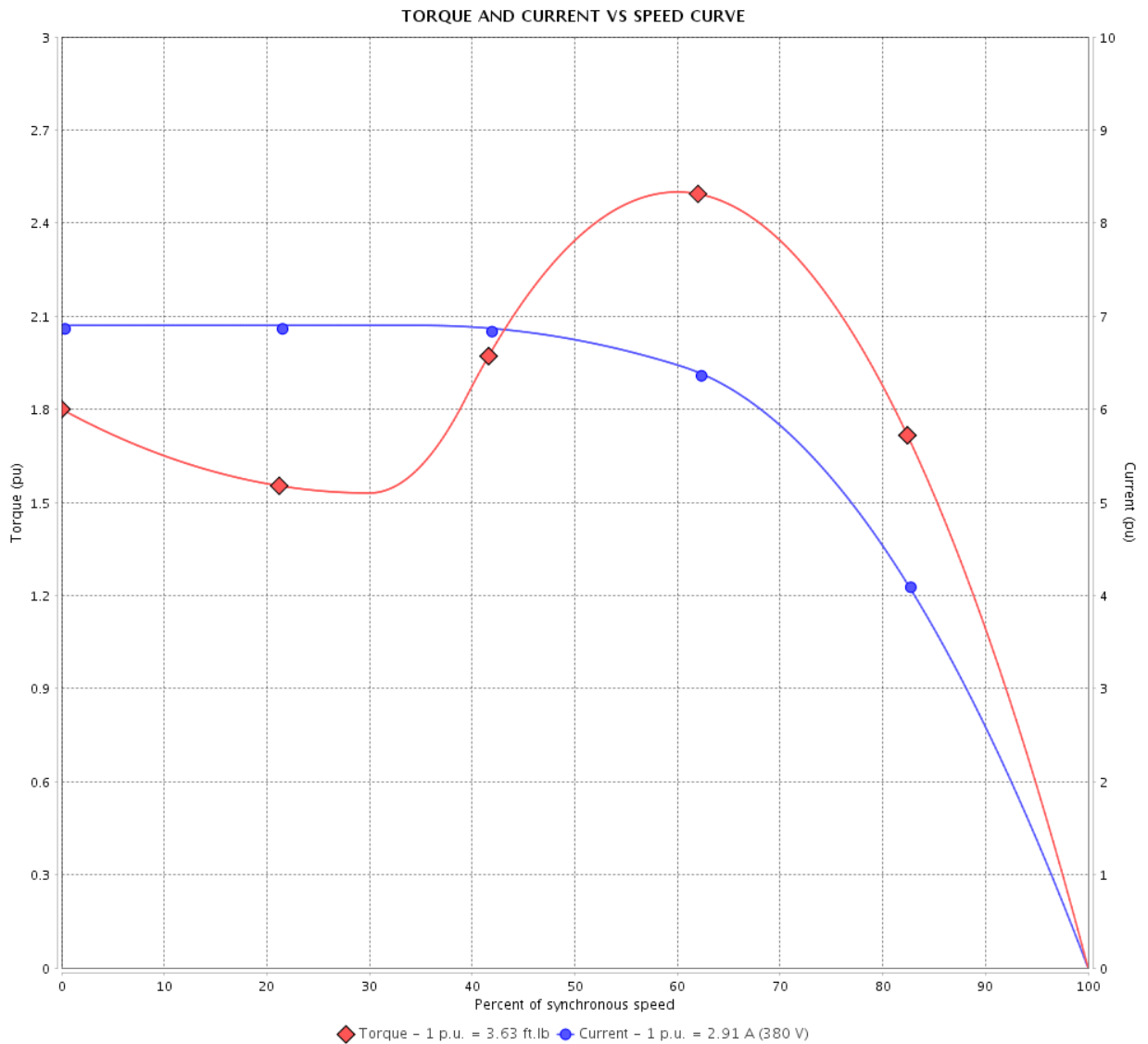
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13173711

Catalog # : 00236OT3E145JM-SG



Performance : 190/380 V 50 Hz 2P

Rated current : 5.82/2.91 A
 LRC : 6.9
 Rated torque : 3.63 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 250 %
 Rated speed : 2890 rpm

Moment of inertia (J) : 0.1151 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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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



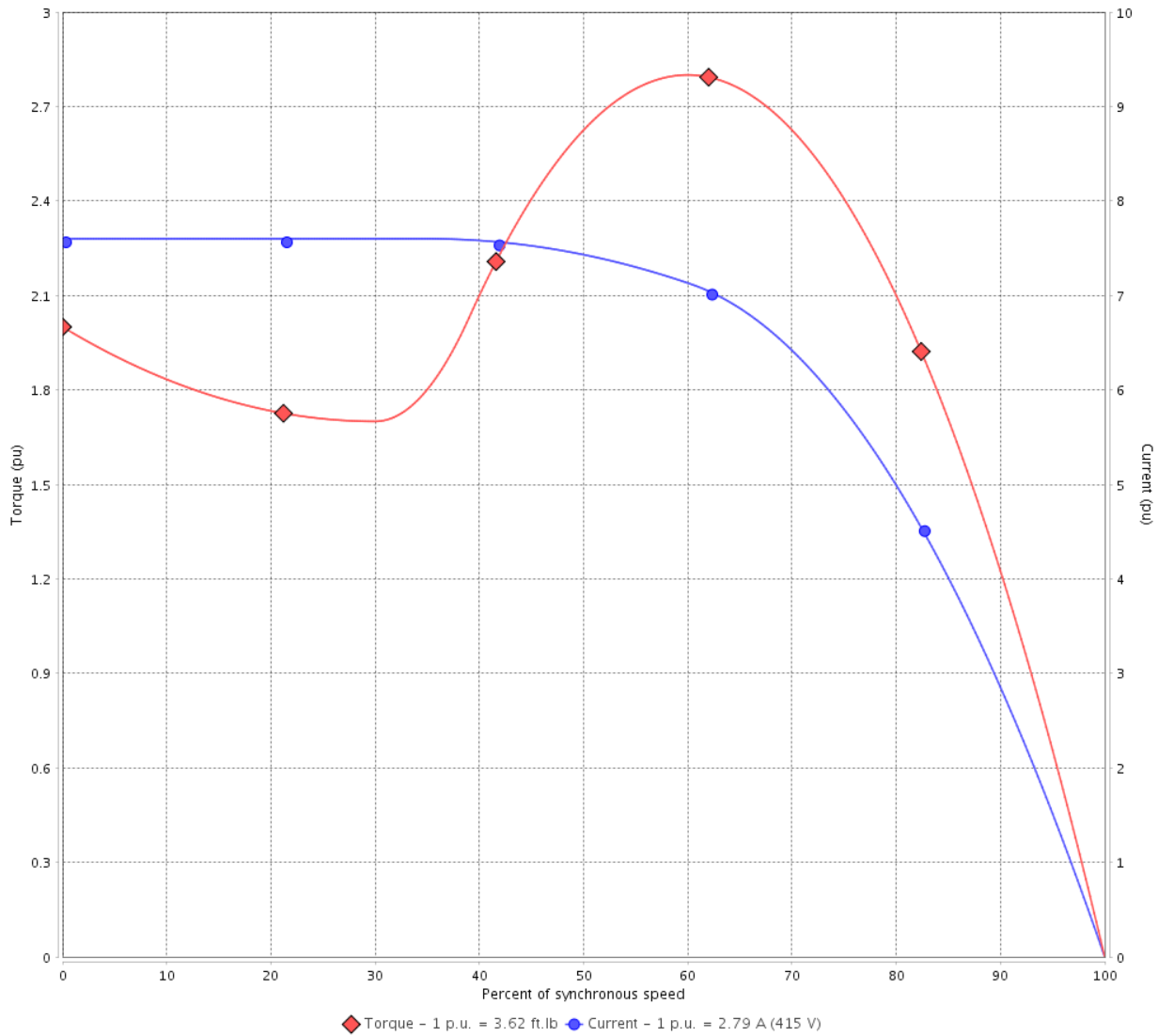
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Product code : 13173711

Catalog # : 00236OT3E145JM-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 2P

Rated current : 5.26/2.79 A
LRC : 7.6
Rated torque : 3.62 ft.lb
Locked rotor torque : 200 %
Breakdown torque : 280 %
Rated speed : 2900 rpm

Moment of inertia (J) : 0.1151 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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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

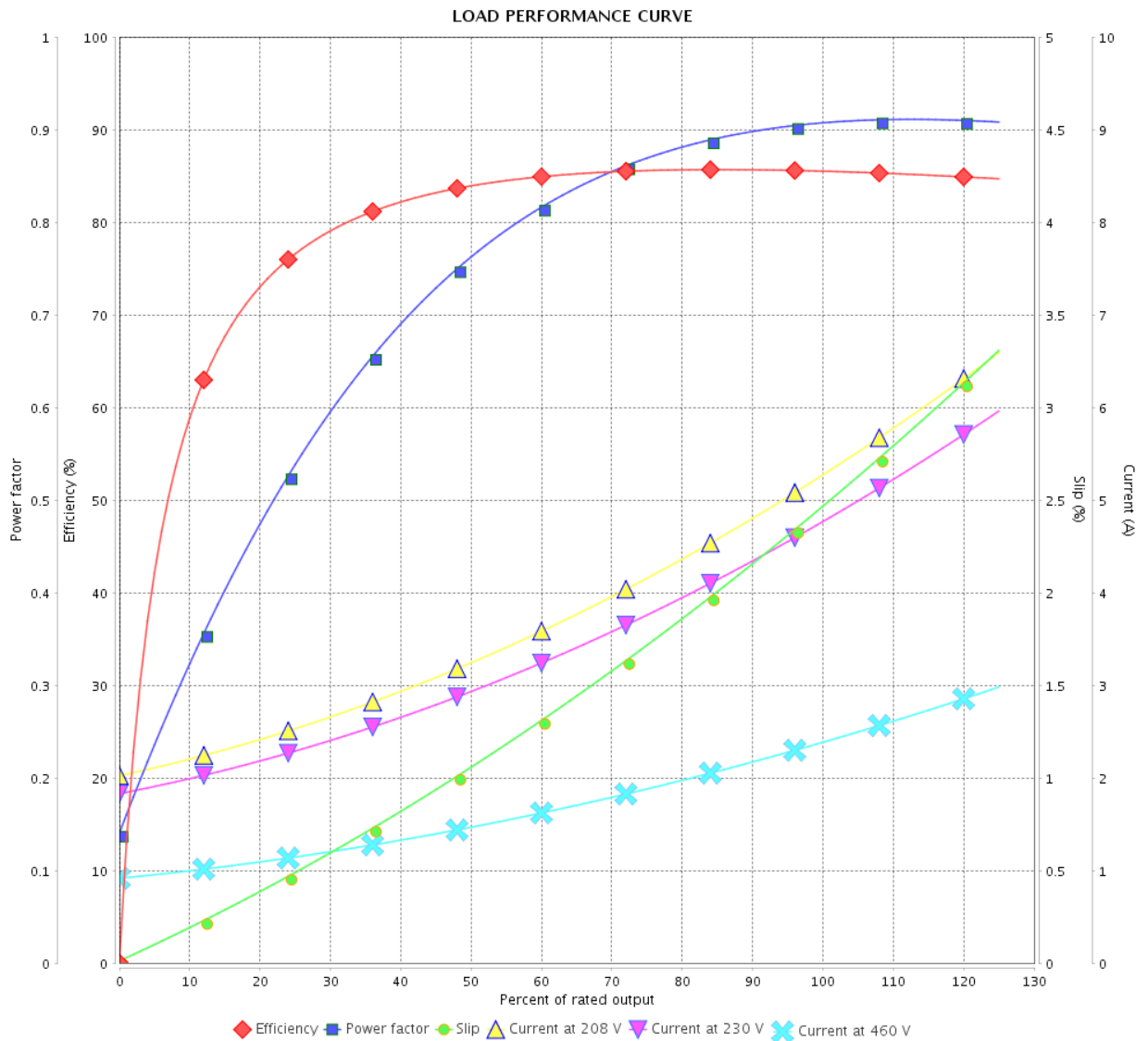


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LOAD PERFORMANCE CURVE

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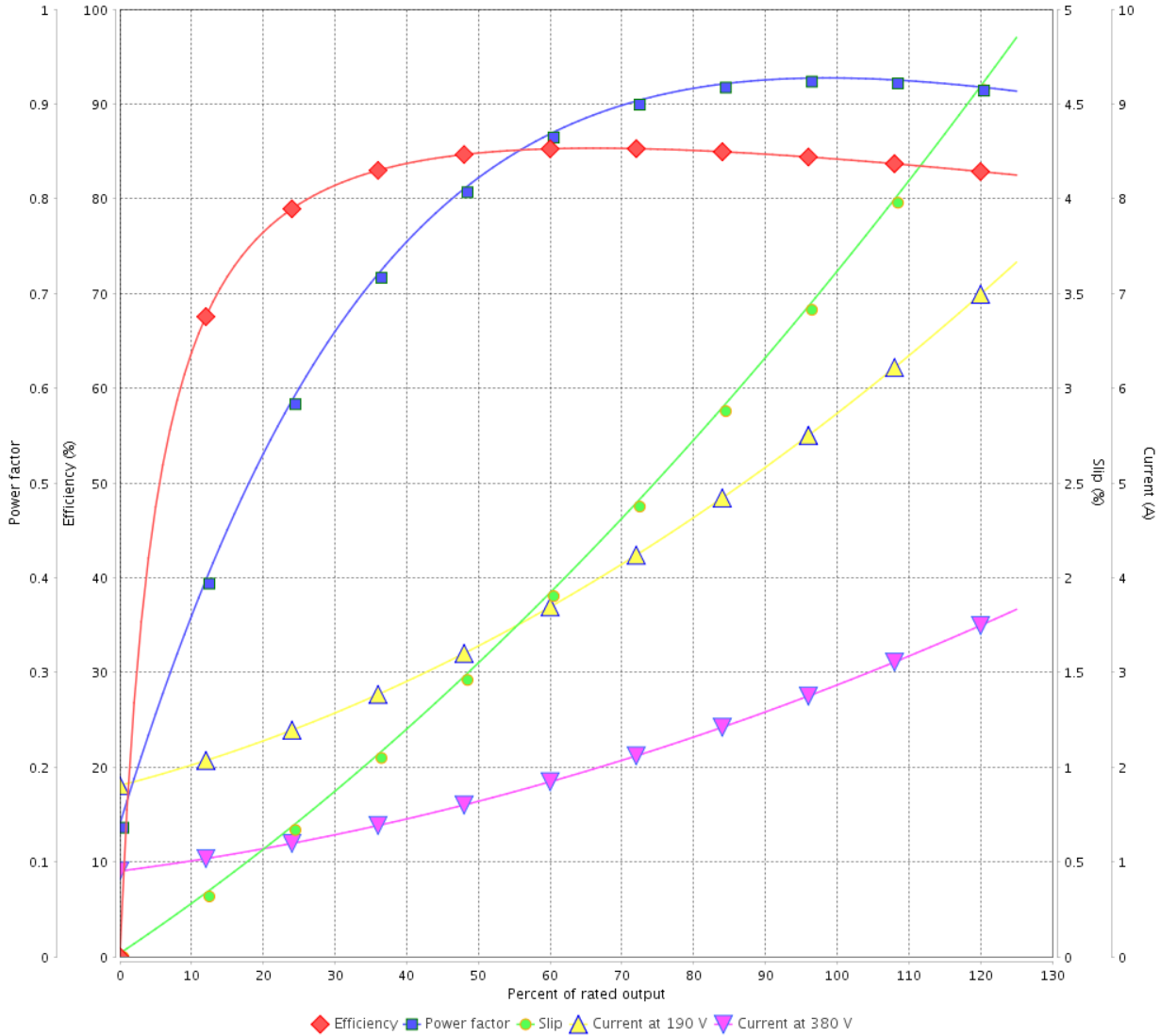
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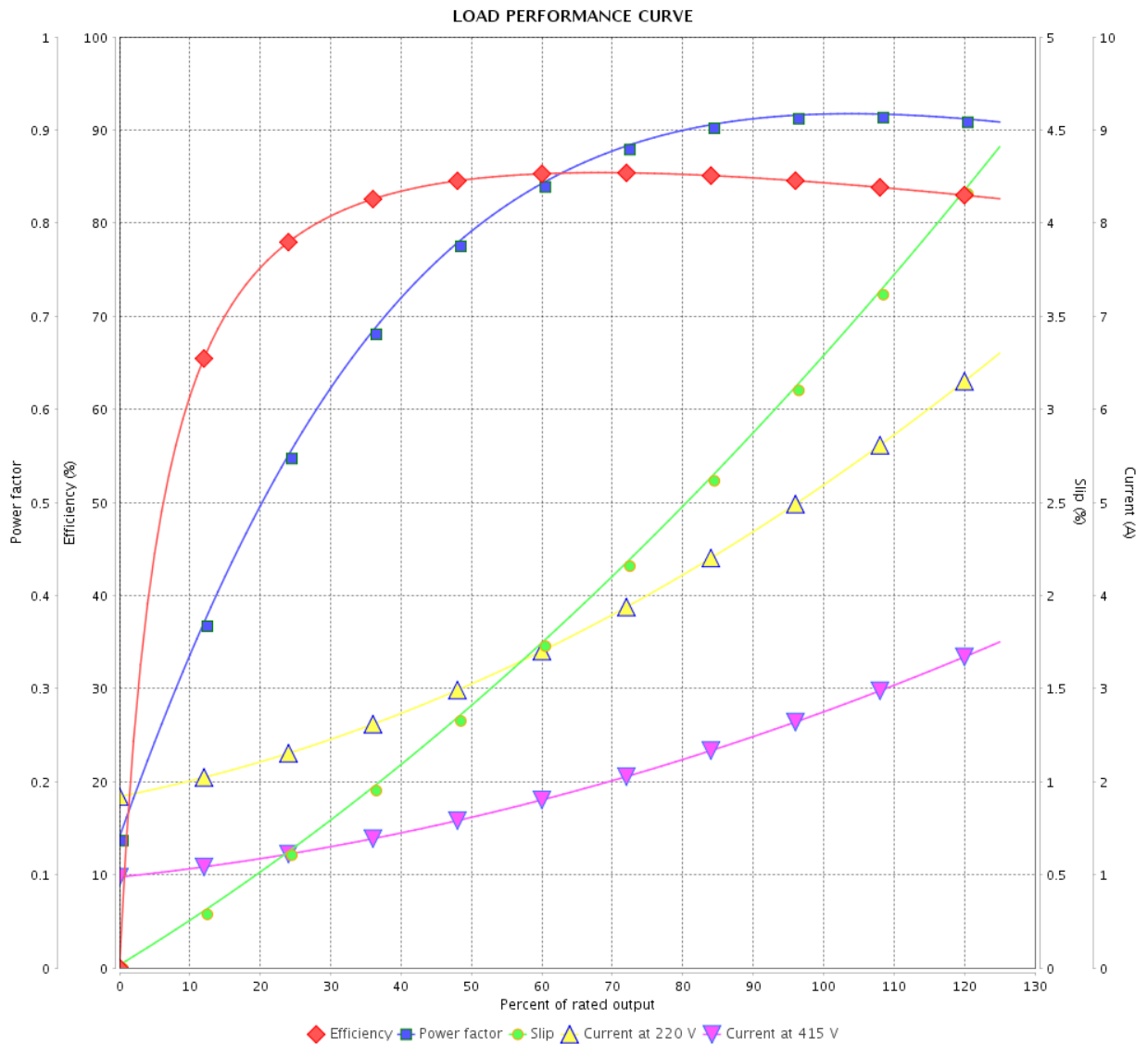


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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

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Efficiency Three-Phase

Product code : 13173711

Catalog # : 00236OT3E145JM-SG

Performance : 230/460 V 60 Hz 2P

Rated current : 4.84/2.42 A
LRC : 8.9
Rated torque : 2.99 ft.lb
Locked rotor torque : 220 %
Breakdown torque : 330 %
Rated speed : 3510 rpm

Moment of inertia (J) : 0.1151 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor :
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

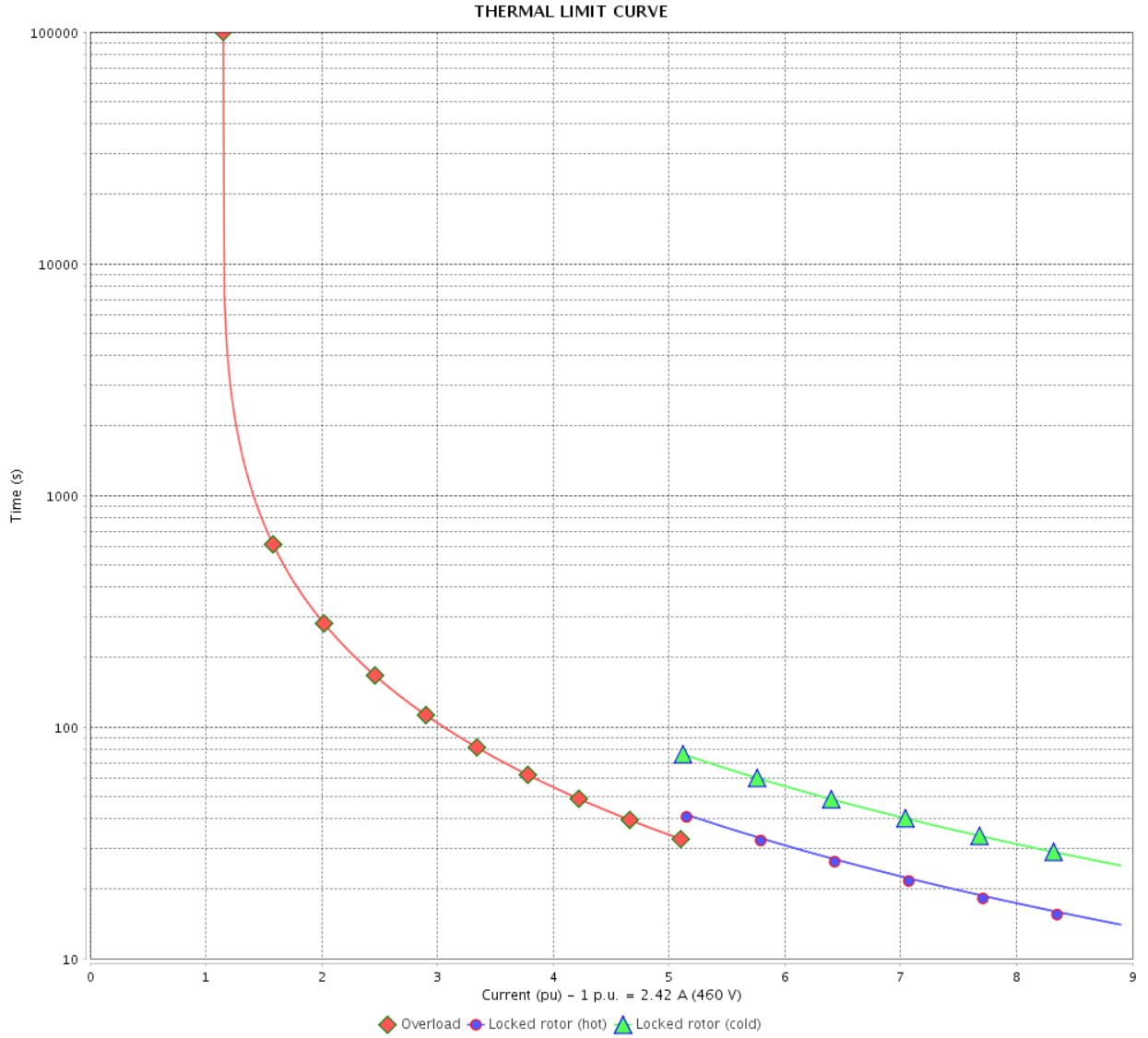
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THERMAL LIMIT CURVE

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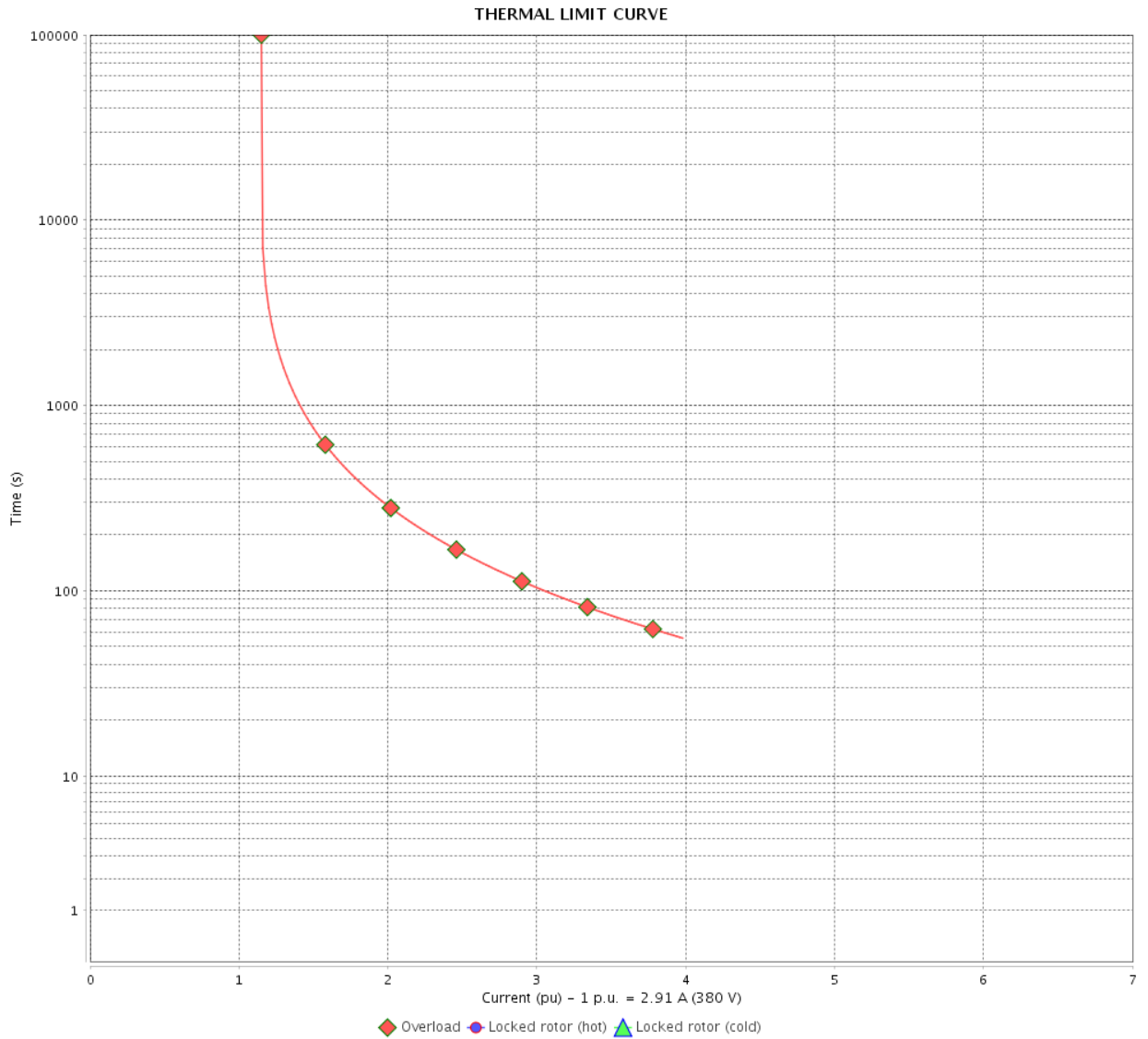
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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Insulation class : F
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Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

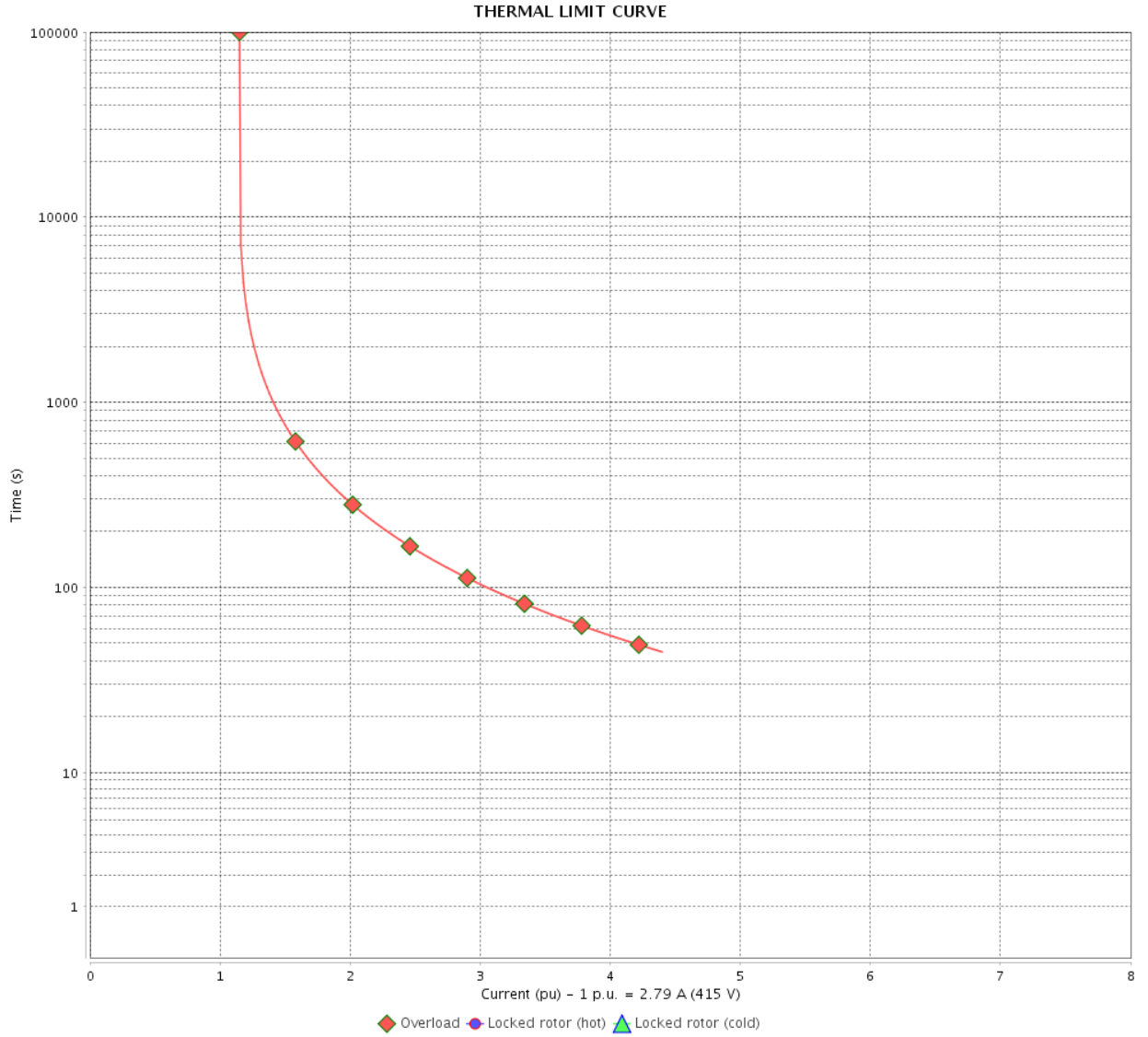
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

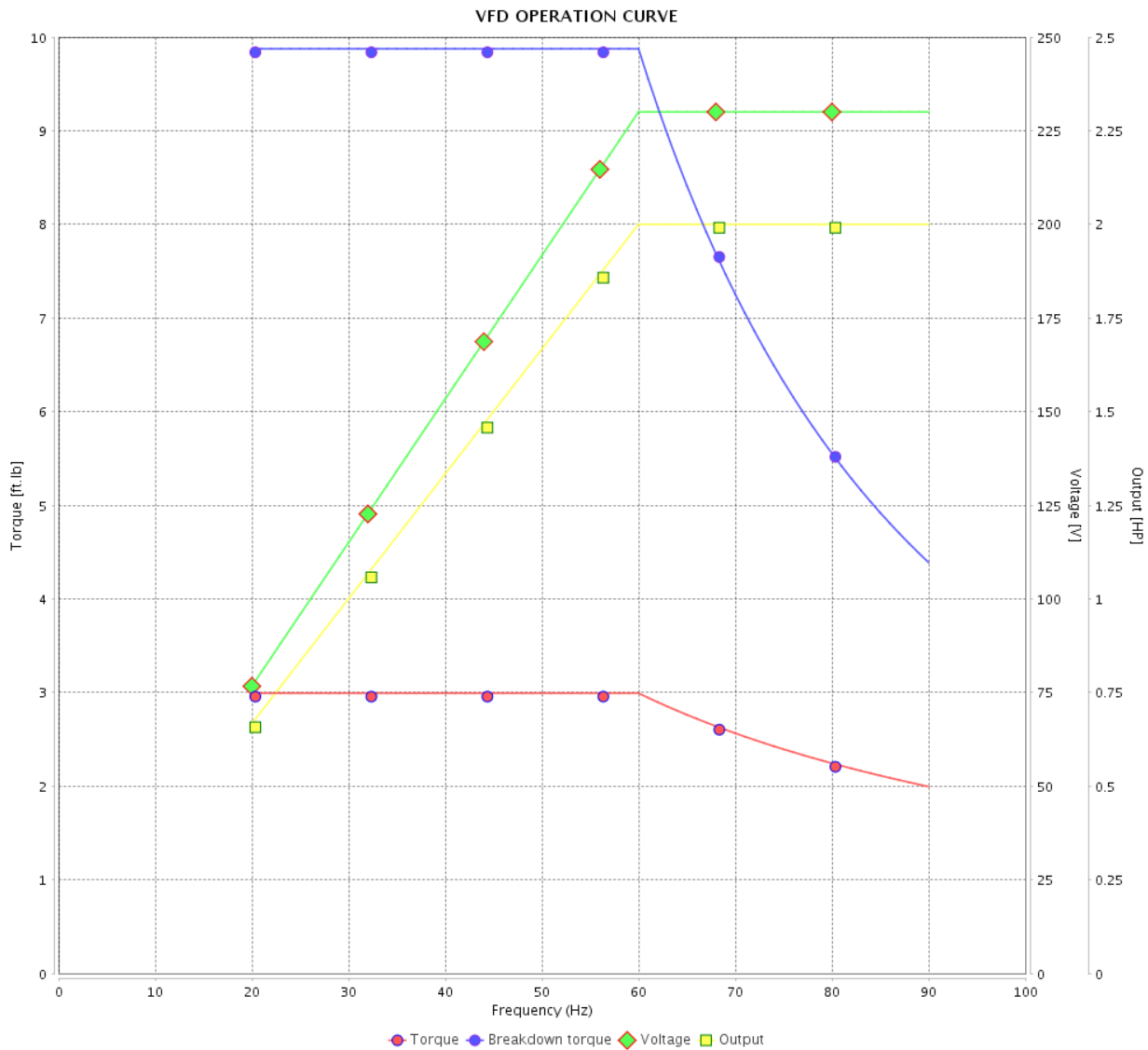


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Efficiency Three-Phase

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Performance : 230/460 V 60 Hz 2P

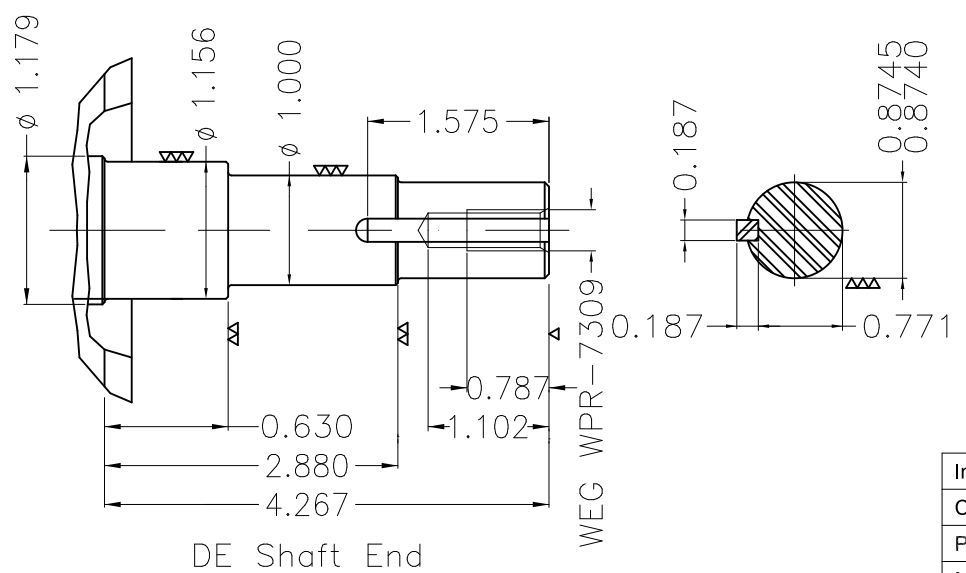
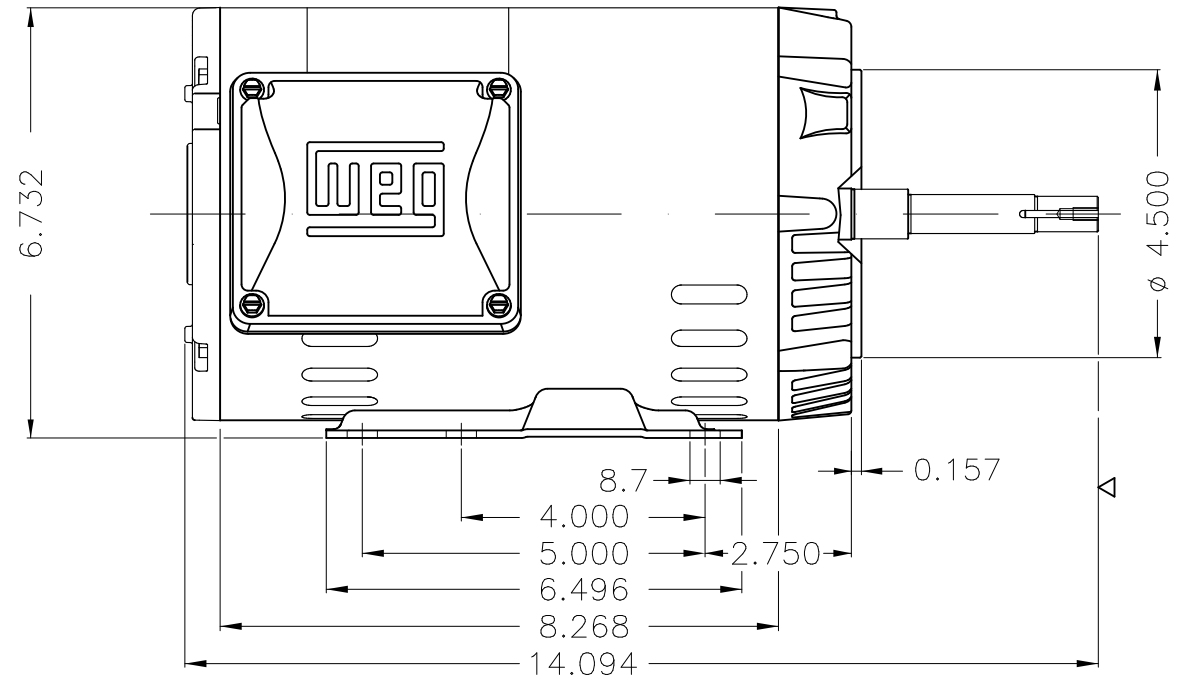
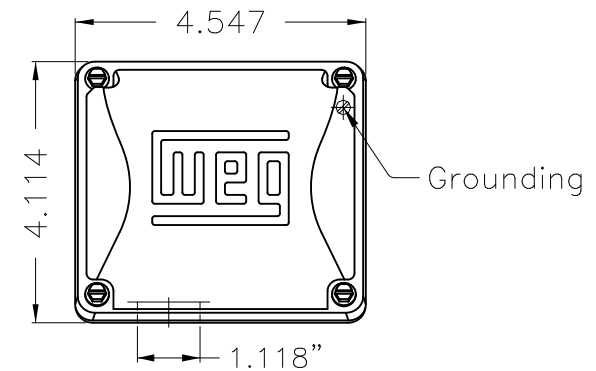
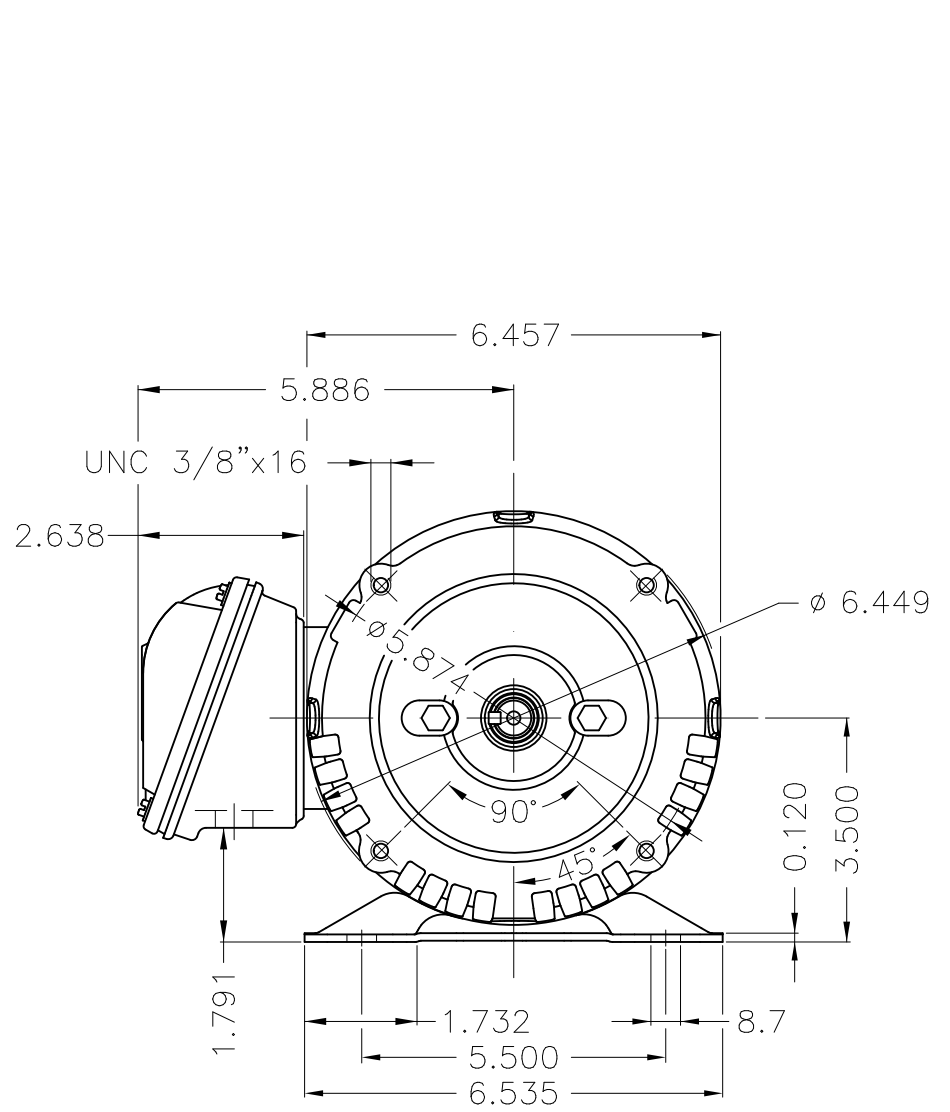
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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor :
 Temperature rise : 80 K
 Design : B

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| | | 14 / | | |

1 2 3 4 5 6

A
B
C
D
E



EUNC 3/8" - 16 WEG WPR-7309

DE Shaft End

Internal AEGIS ground ring on the DE
 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 | PIRWUSER | THREE PH. MOTOR ROLLED STEEL CLOSE COUPLED PUMP JN TYPE PSE 1/2 | | | | | |
| CHECKED | | FRAME 143/5JM IP21 ODP | | | | | |
| RELEASED | | | | | | | |
| REL DT. | | WMO Jaragua do Sul | | | | | |

2 HP 02 Poles 60 Hz

Product Engineering SHEET 1 / 1



Dimensions in inches XME A3

**NEMA
Premium**

MADE IN MEXICO

MAT: 13173711 CC029A

W01.T00IC0X0N

MODEL 002360T3E145JM-SG

06OCT2021 B/N:



| | | |
|---------------------|--------|------------------------|
| 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 4.84/2.42 |
| INS CL F AT 80K | | SFA 5.57/2.78 |
| AMB 40°C | DES B | SF 1.15 |
| ENCL ODP | CODE K | PF 0.91 |
| USABLE @ 208V 5.35A | | RPM 3510 |
| SF1.00 | | NEMA NOM. EFF 85.5% |

ALTERNATE RATING: 2.0HP 50Hz 190-220/380-415V SF1.15
 5.82-5.11/2.91-2.71A 2890RPM EFF 84.2% (IE3) IEC 60034-1

Inverter duty motor For 80Hz use on VPWM 1000:1 VT, 3:1 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.

