

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



| | | | | |
|--|---|--|---------------------|----------|
| Customer : | | | | |
| Product line | : JM Pump NEMA Premium Efficiency Three-Phase | Product code : | 13173710 | |
| | | Catalog # : | 00336OT3E145JM-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 | : 42.0 lb | |
| Design | : B | Moment of inertia (J) | : 0.1279 sq.ft.lb | |
| Output [HP] | 3 | 3 | 3 | |
| Poles | 2 | 2 | 2 | |
| Frequency [Hz] | 60 | 50 | 50 | |
| Rated voltage [V] | 230/460 | 190/380 | 220/415 | |
| Rated current [A] | 7.18/3.59 | 8.78/4.39 | 7.83/4.15 | |
| L. R. Amperes [A] | 57.4/28.7 | 53.6/26.8 | 53.2/28.2 | |
| LRC [A] | 8.0x(Code J) | 6.1x(Code G) | 6.8x(Code H) | |
| No load current [A] | 2.60/1.30 | 2.60/1.30 | 2.71/1.44 | |
| Rated speed [RPM] | 3480 | 2825 | 2840 | |
| Slip [%] | 3.33 | 5.83 | 5.33 | |
| Rated torque [ft.lb] | 4.53 | 5.58 | 5.55 | |
| Locked rotor torque [%] | 229 | 190 | 220 | |
| Breakdown torque [%] | 300 | 229 | 250 | |
| Service factor | | 1.00 | 1.00 | |
| Temperature rise | 80 K | 105 K | 105 K | |
| Locked rotor time | 16s (cold) 9s (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 | 88.4 | |
| | 50% | 84.0 | 86.6 | |
| | 75% | 85.5 | 85.6 | |
| | 100% | 85.5 | 83.2 | |
| Power Factor | 25% | 0.50 | 0.51 | |
| | 50% | 0.76 | 0.79 | |
| | 75% | 0.86 | 0.88 | |
| | 100% | 0.90 | 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 | : 99 lb | |
| | | Max. compression | : 142 lb | |
| Lubrication interval | : - - | | | |
| Lubricant amount | : - - | | | |
| Lubricant type | : Mobil Polyrex EM | | | |
| Notes USABLE @208V 7.94A SF 1.00 SFA 7.94A | | | | |
| 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 |
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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

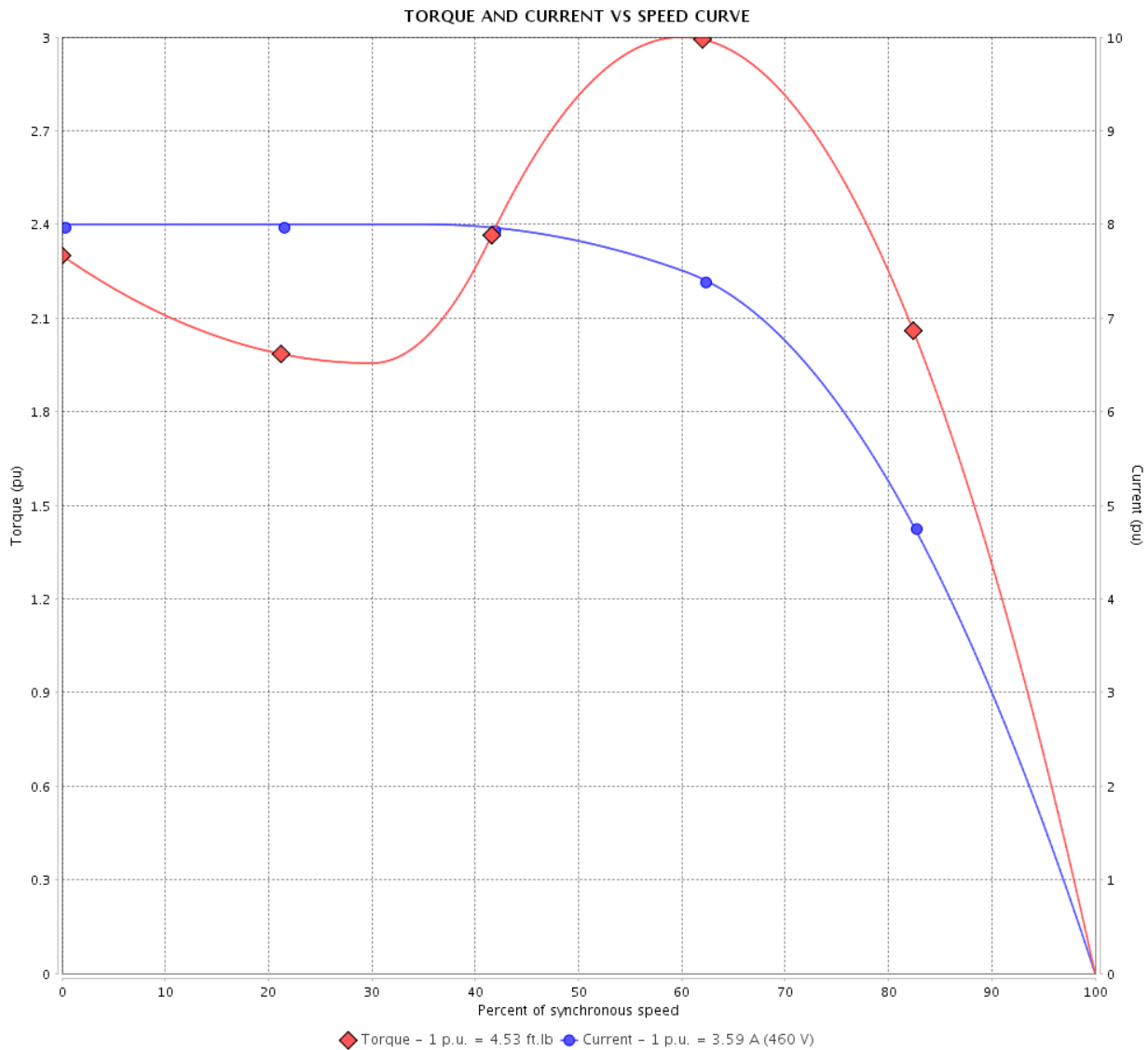


Customer :

Product line : JM Pump NEMA Premium
Efficiency Three-Phase

Product code : 13173710

Catalog # : 00336OT3E145JM-SG



Performance : 230/460 V 60 Hz 2P

| | | | |
|---------------------|---------------|-----------------------|-------------------|
| Rated current | : 7.18/3.59 A | Moment of inertia (J) | : 0.1279 sq.ft.lb |
| LRC | : 8.0 | Duty cycle | : Cont.(S1) |
| Rated torque | : 4.53 ft.lb | Insulation class | : F |
| Locked rotor torque | : 229 % | Service factor | : |
| Breakdown torque | : 300 % | Temperature rise | : 80 K |
| Rated speed | : 3480 rpm | Design | : B |

Locked rotor time : 16s (cold) 9s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



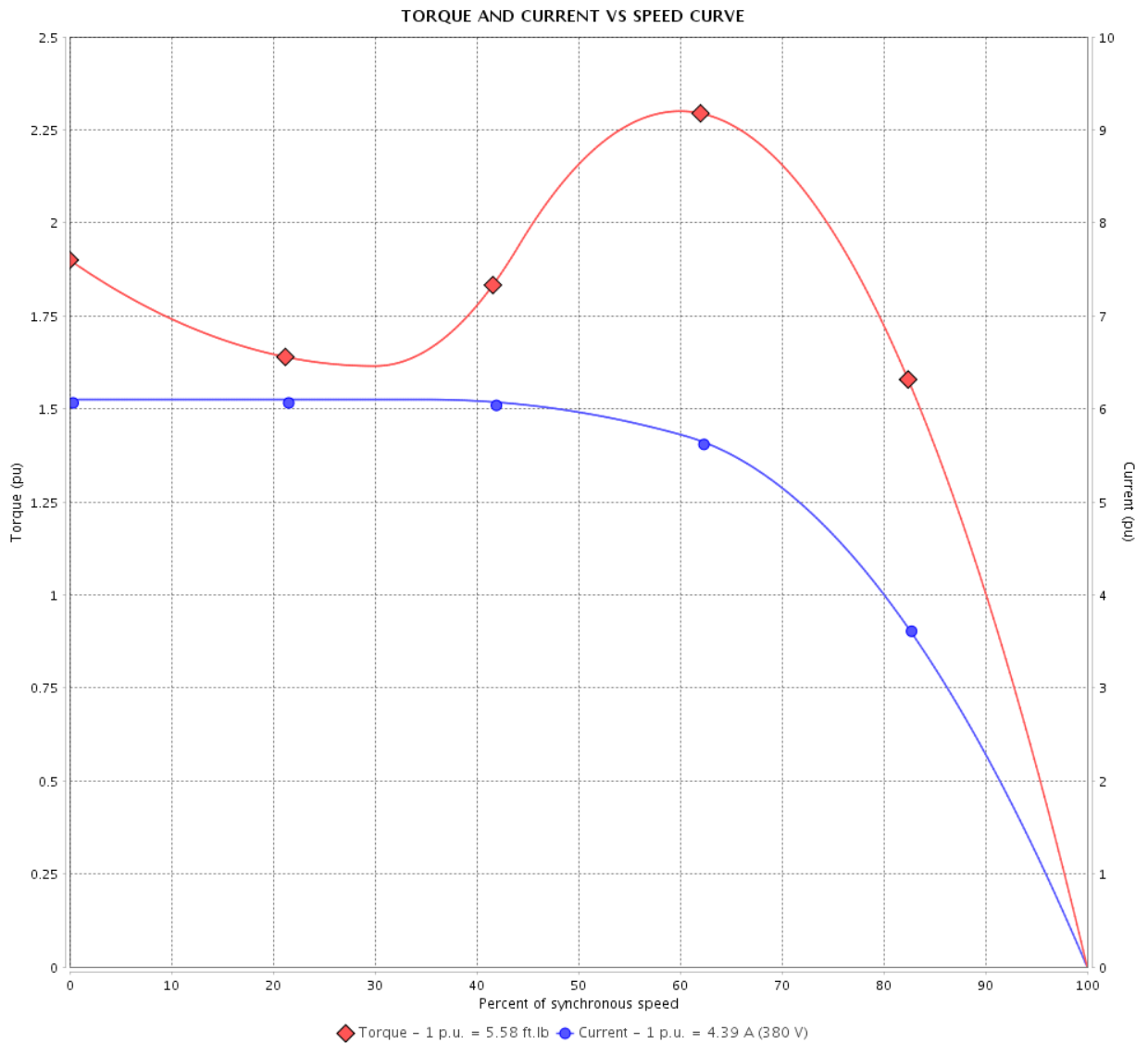
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13173710

Catalog # : 00336OT3E145JM-SG



Performance : 190/380 V 50 Hz 2P

Rated current : 8.78/4.39 A
 LRC : 6.1
 Rated torque : 5.58 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 229 %
 Rated speed : 2825 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 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



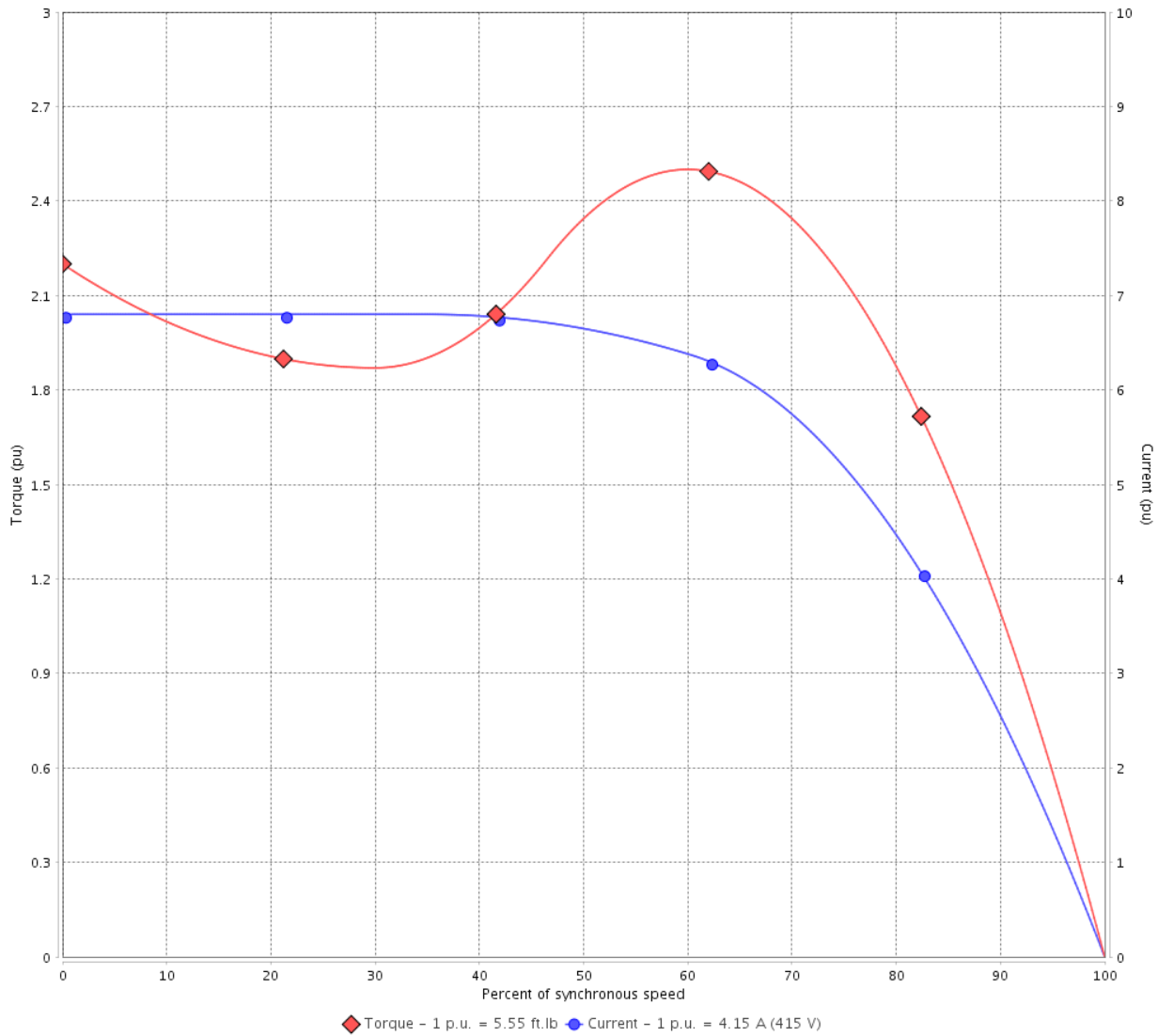
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Efficiency Three-Phase

Product code : 13173710

Catalog # : 00336OT3E145JM-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 2P

Rated current : 7.83/4.15 A
LRC : 6.8
Rated torque : 5.55 ft.lb
Locked rotor torque : 220 %
Breakdown torque : 250 %
Rated speed : 2840 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 105 K
Design : B

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

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

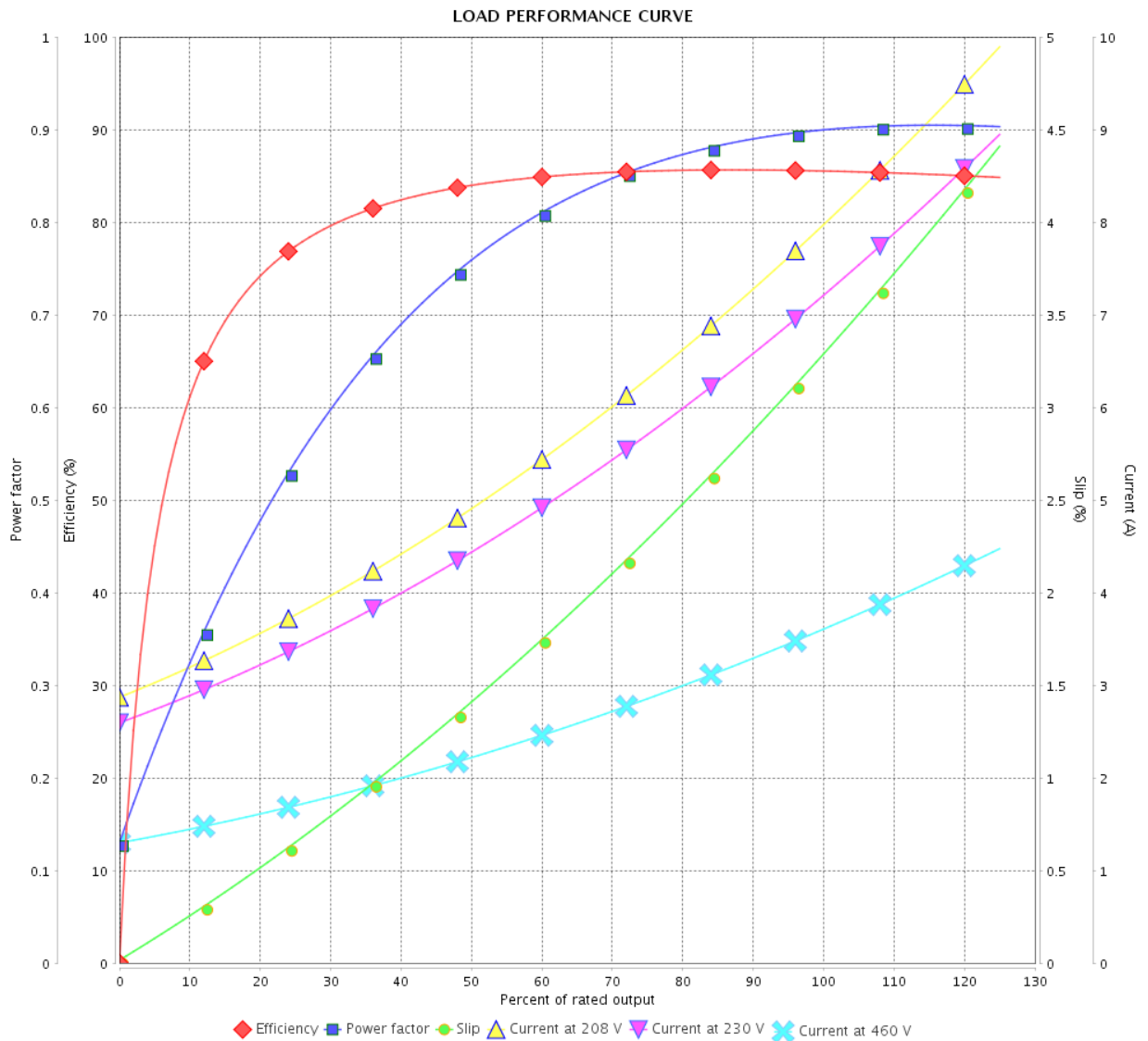


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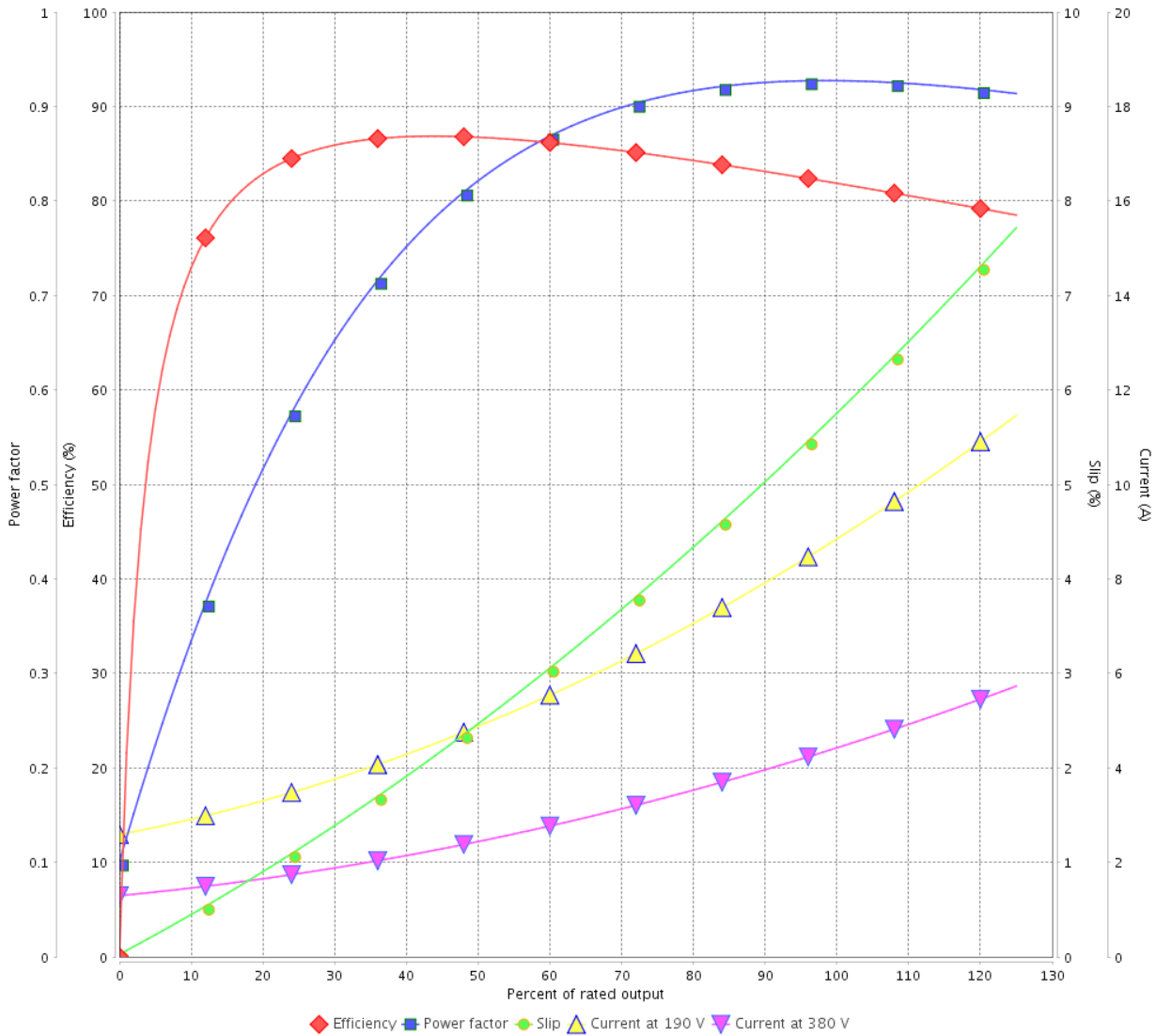
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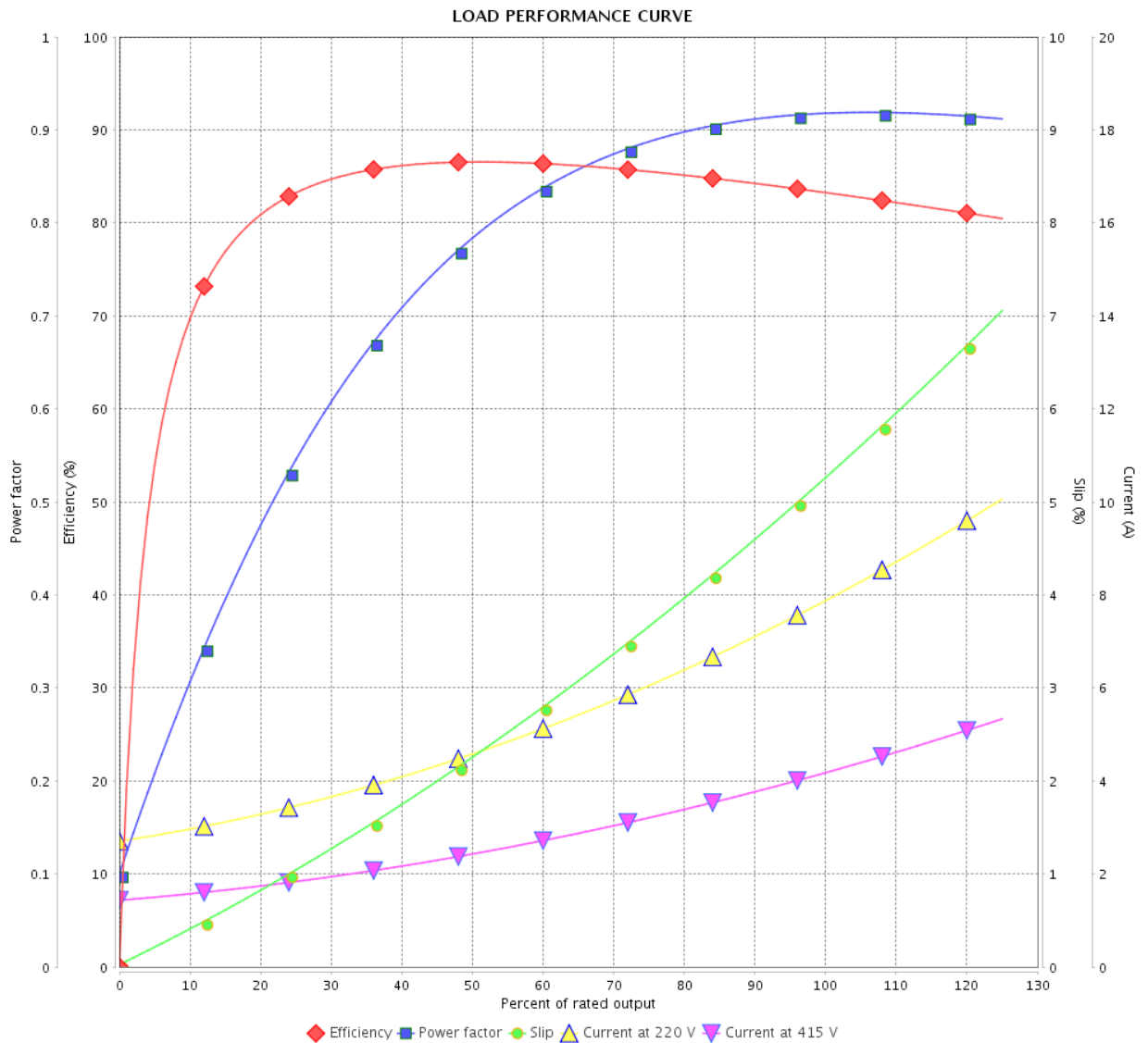


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THERMAL LIMIT CURVE



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Product code : 13173710

Catalog # : 00336OT3E145JM-SG

Performance : 230/460 V 60 Hz 2P

Rated current : 7.18/3.59 A
LRC : 8.0
Rated torque : 4.53 ft.lb
Locked rotor torque : 229 %
Breakdown torque : 300 %
Rated speed : 3480 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

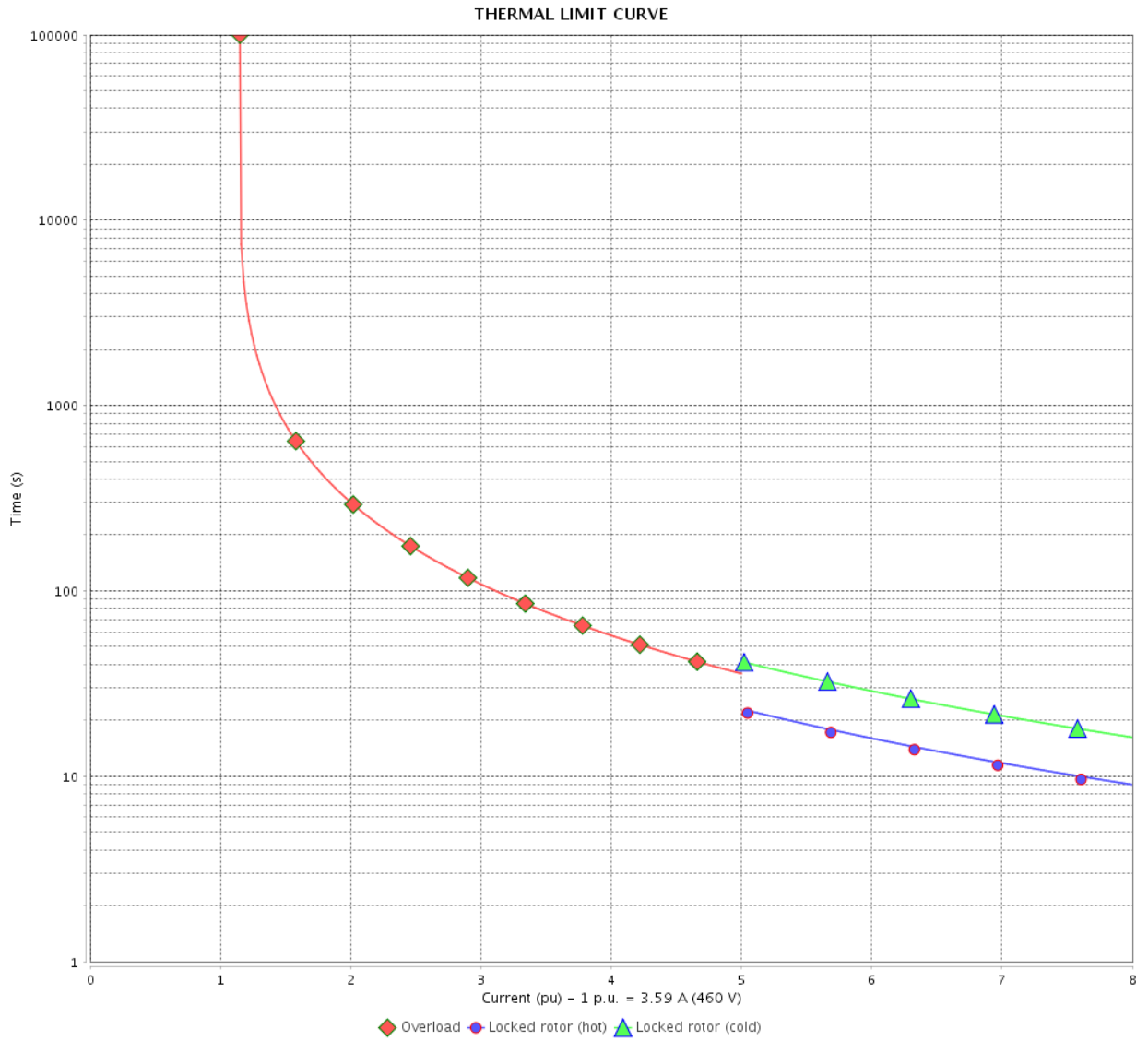
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THERMAL LIMIT CURVE

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THERMAL LIMIT CURVE



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Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 105 K
Design : B

Heating constant

Cooling constant

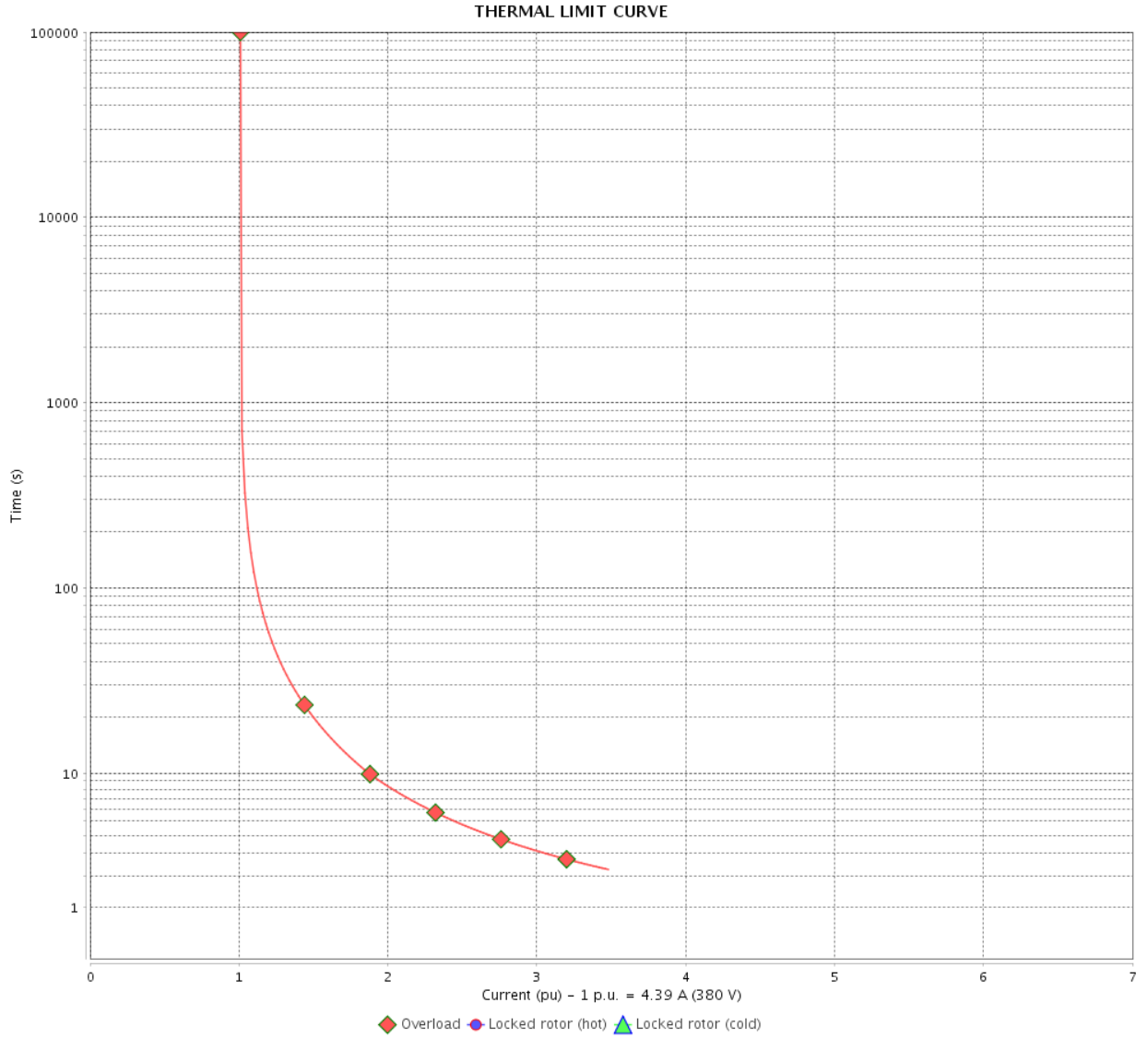
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Design : B

Heating constant

Cooling constant

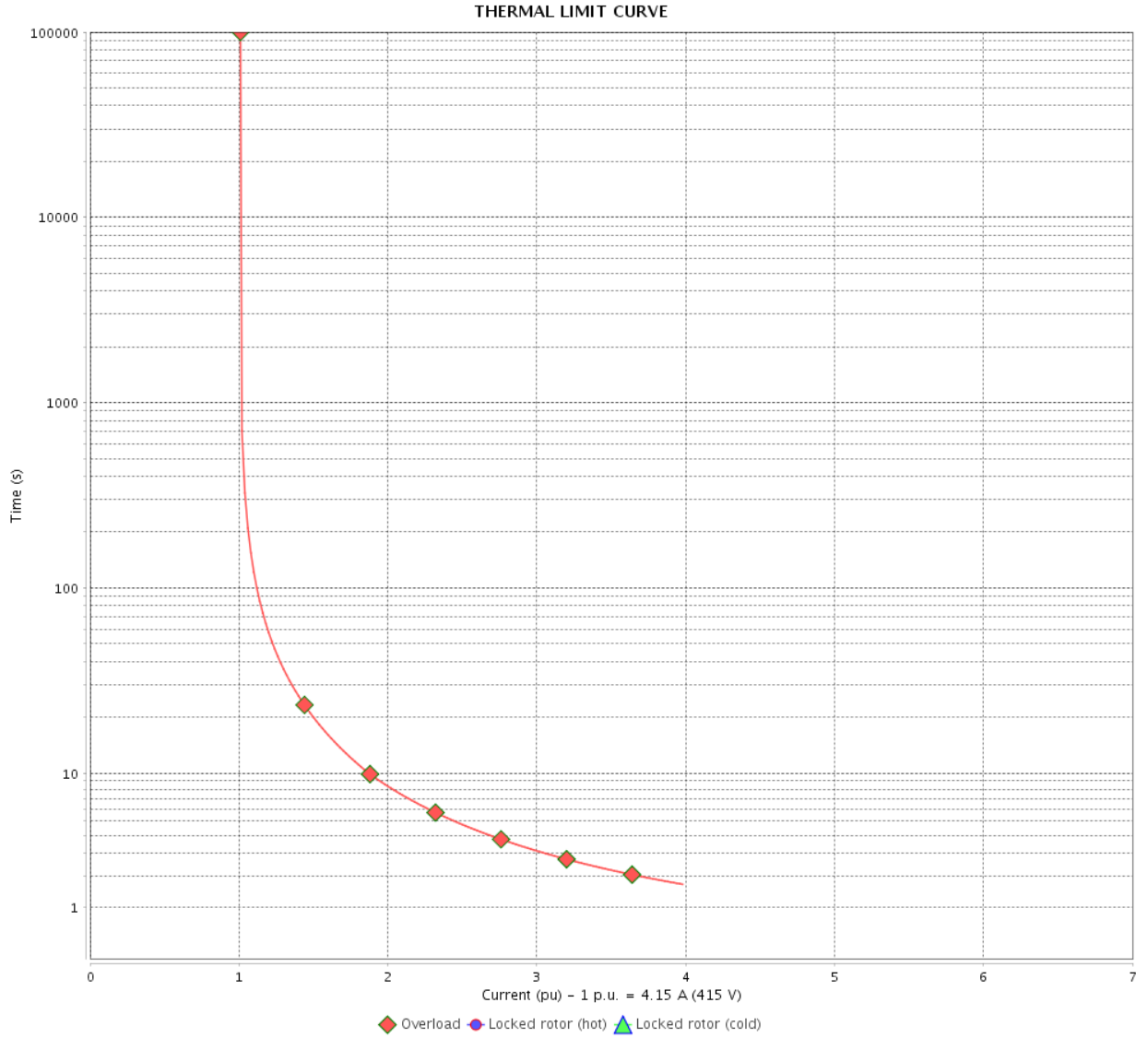
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

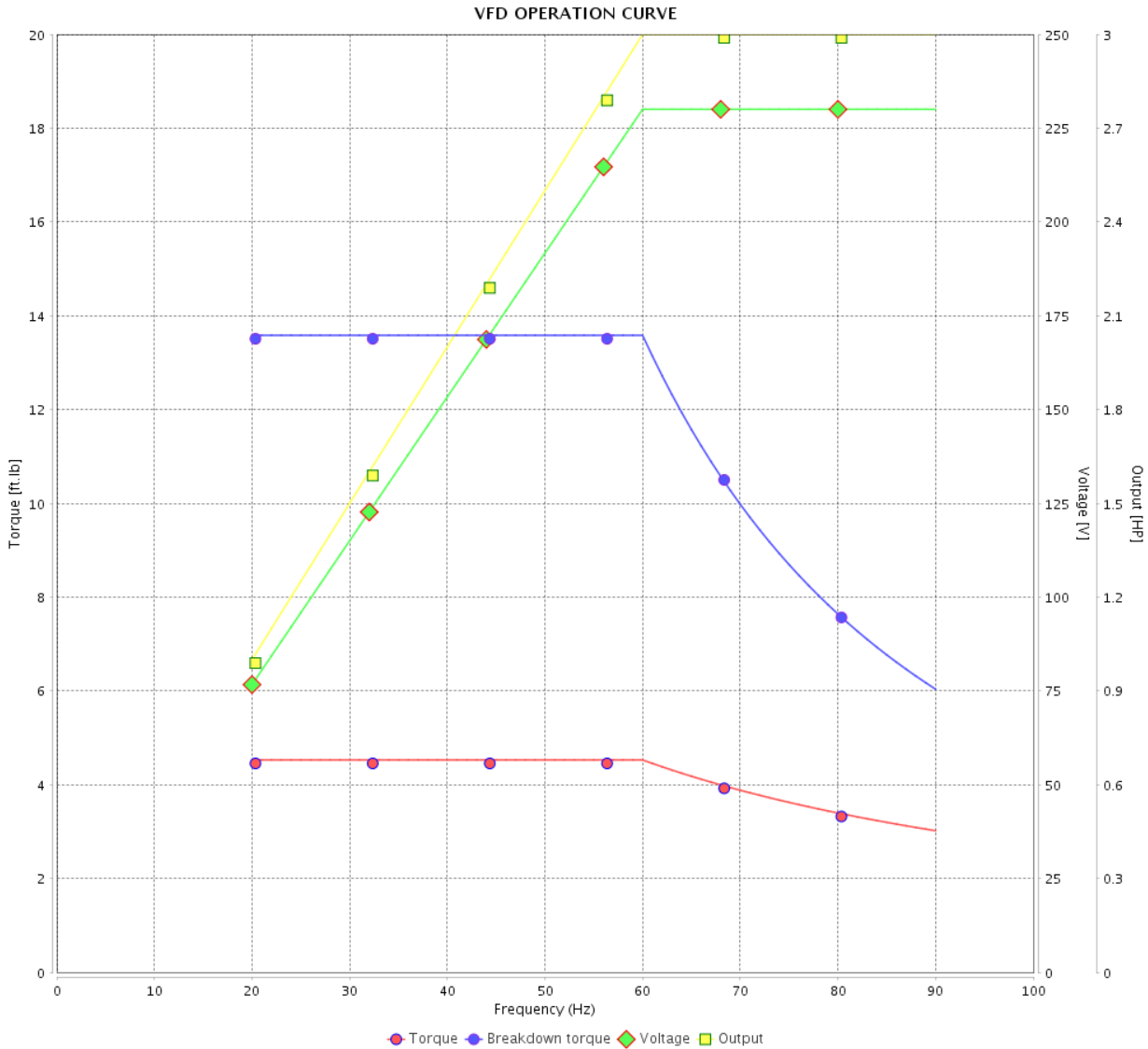


Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13173710

Catalog # : 003360T3E145JM-SG



Performance : 230/460 V 60 Hz 2P

Rated current : 7.18/3.59 A
 LRC : 8.0
 Rated torque : 4.53 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 300 %
 Rated speed : 3480 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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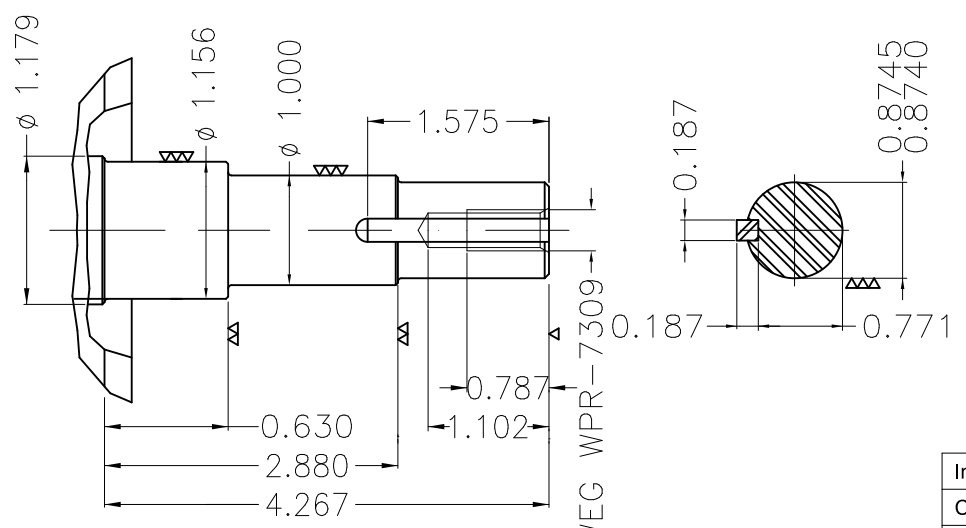
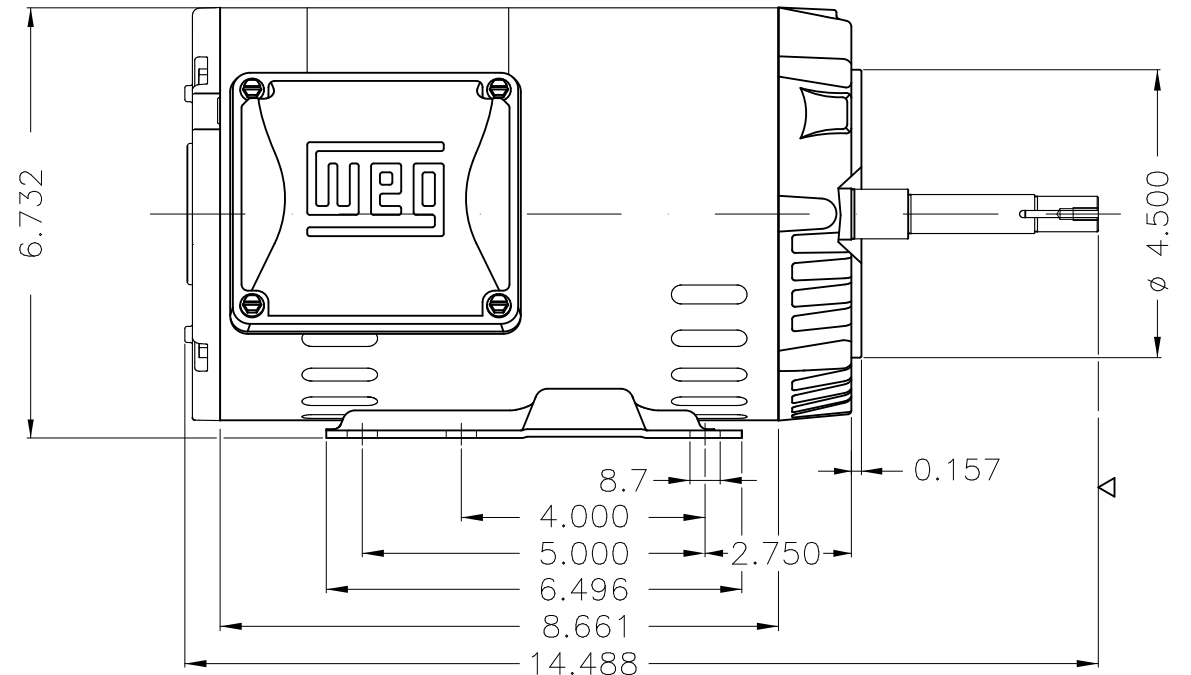
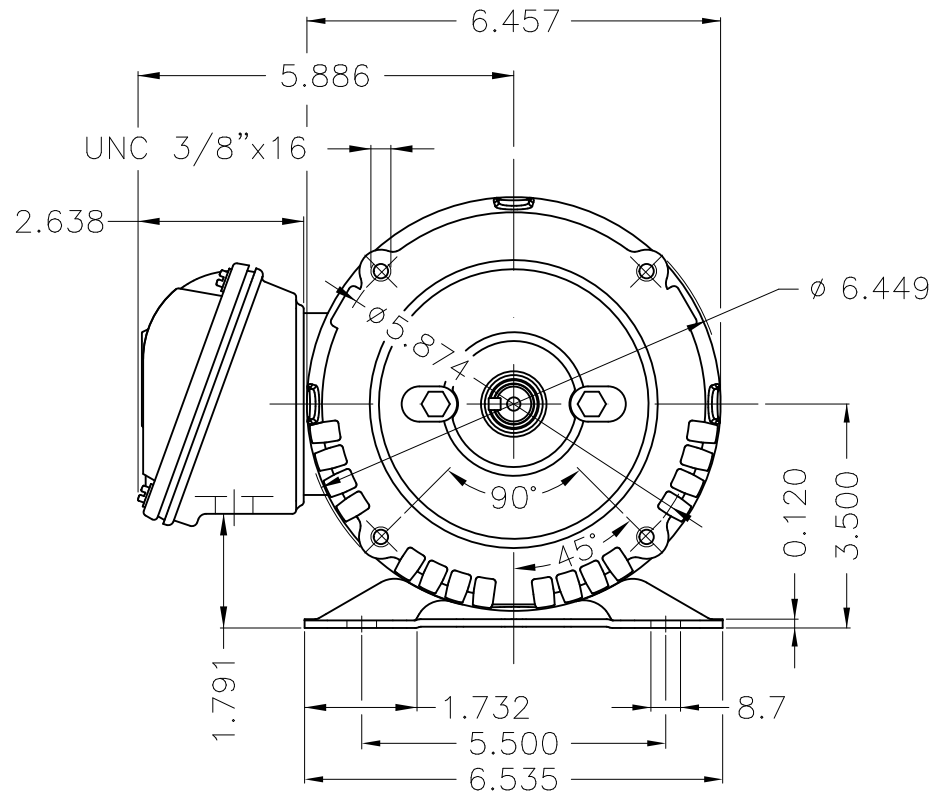
A

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 | Product Engineering | WDD | SHEET | 1 / 1 | |

3 HP 02 Poles 60 Hz

