

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



| | | | | | |
|--|----------------------|---------------------------------------|--|---------------------------|---------------------|
| Customer | | | | | |
| Product line | | : NEMA Premium Efficiency Three-Phase | Product code : | | 14296383 |
| | | | Catalog # : | | 00236XT3E145TC |
| Frame | | : 143/5TC | 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 | | : 75.5 lb |
| Protection degree | | : IP55 | Moment of inertia (J) | | : 0.0551 sq.ft.lb |
| Design | | : B | | | |
| Output [HP] | 2 | 2 | 2 | 2 | |
| Poles | 2 | 2 | 2 | 2 | |
| Frequency [Hz] | 60 | 50 | 50 | 50 | |
| Rated voltage [V] | 230/460 | 380 | 400 | 415 | |
| Rated current [A] | 5.38/2.69 | 3.25 | 3.09 | 3.05 | |
| L. R. Amperes [A] | 49.5/24.7 | 22.8 | 23.2 | 24.4 | |
| LRC [A] | 9.2x(Code L) | 7.0x(Code J) | 7.5x(Code K) | 8.0x(Code K) | |
| No load current [A] | 2.40/1.20 | 1.10 | 1.20 | 1.30 | |
| Rated speed [RPM] | 3495 | 2860 | 2880 | 2890 | |
| Slip [%] | 2.92 | 4.67 | 4.00 | 3.67 | |
| Rated torque [ft.lb] | 3.01 | 3.67 | 3.65 | 3.63 | |
| Locked rotor torque [%] | 370 | 270 | 310 | 340 | |
| Breakdown torque [%] | 420 | 290 | 330 | 360 | |
| Service factor | 1.15 | 1.00 | 1.00 | 1.00 | |
| Temperature rise | 80 K | 80 K | 80 K | 80 K | |
| Locked rotor time | 27s (cold) 15s (hot) | 37s (cold) 21s (hot) | 37s (cold) 21s (hot) | 37s (cold) 21s (hot) | |
| Noise level ² | 68.0 dB(A) | 62.0 dB(A) | 62.0 dB(A) | 62.0 dB(A) | |
| Efficiency (%) | 25% | | | | |
| | 50% | 80.0 | 81.5 | 82.5 | 81.5 |
| | 75% | 84.0 | 82.5 | 84.5 | 84.5 |
| | 100% | 85.5 | 82.5 | 84.5 | 84.5 |
| Power Factor | 25% | | | | |
| | 50% | 0.64 | 0.70 | 0.66 | 0.62 |
| | 75% | 0.76 | 0.81 | 0.78 | 0.75 |
| | 100% | 0.82 | 0.85 | 0.83 | 0.81 |
| Bearing type | | Drive end : 6205 2RS | Non drive end : 6204 2RS | Foundation loads | |
| Sealing | | : Oil Seal | : Lip Seal | Max. traction : 76 lb | |
| Lubrication interval | | : - | : - | Max. compression : 151 lb | |
| Lubricant amount | | : - | : - | | |
| Lubricant type | | : Mobil Polyrex EM | | | |
| Notes | | | | | |
| USABLE @208V 5.95A SF 1.15 SFA 6.84A | | | | | |
| 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. | | |
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Thermal protection

| ID | Application | Type | Quantity | Sensing Temperature |
|----|-------------|----------------------|-----------|---------------------|
| 1 | Winding | Thermostat - 2 wires | 1 x Phase | 155 °C |

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TORQUE AND CURRENT VS SPEED CURVE



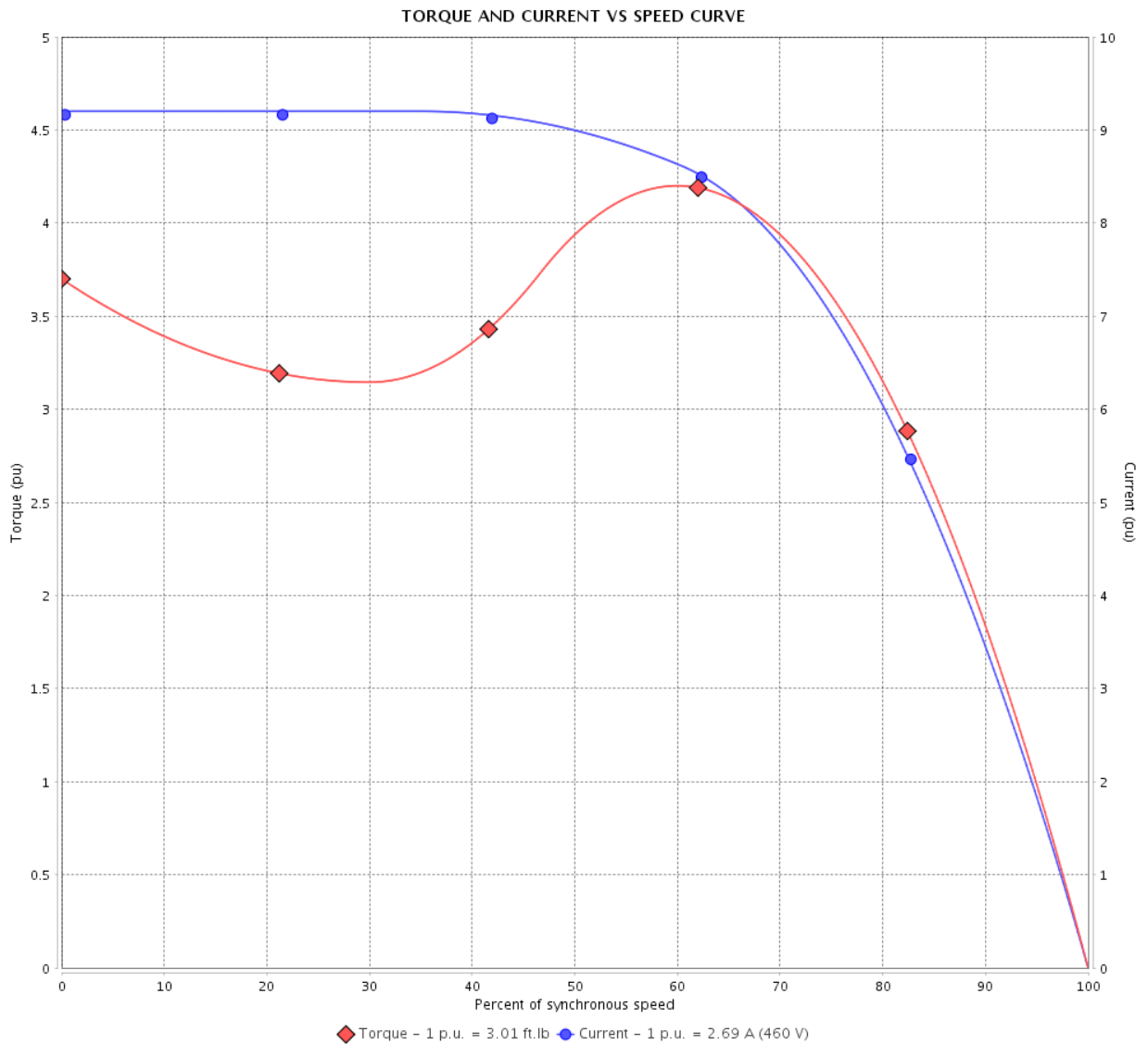
Three Phase Induction Motor - Squirrel Cage

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Product code : 14296383

Catalog # : 00236XT3E145TC



Performance : 230/460 V 60 Hz 2P

Rated current : 5.38/2.69 A
 LRC : 9.2
 Rated torque : 3.01 ft.lb
 Locked rotor torque : 370 %
 Breakdown torque : 420 %
 Rated speed : 3495 rpm

Moment of inertia (J) : 0.0551 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 27s (cold) 15s (hot)

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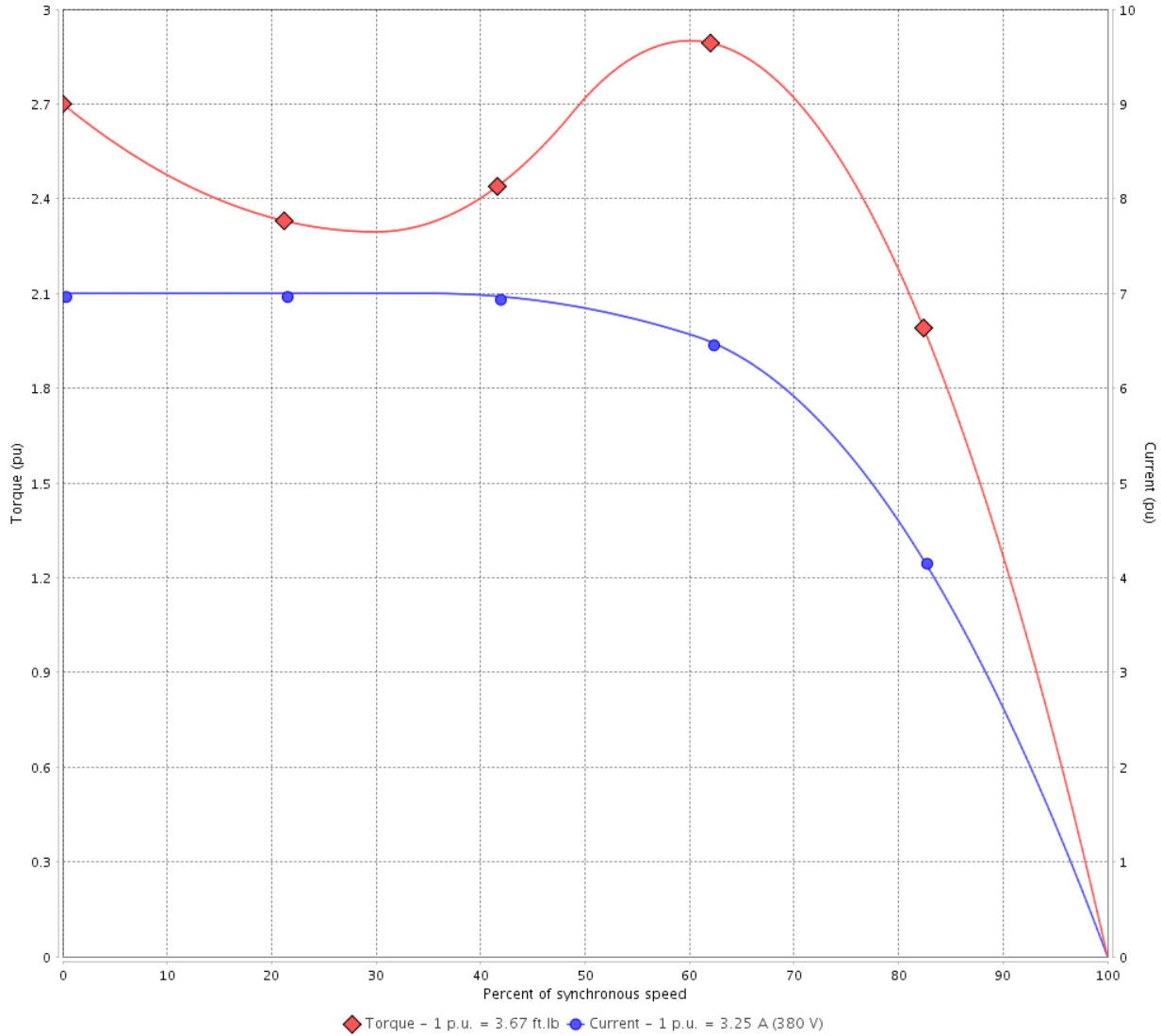
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 2P IE2

| | | | |
|---------------------|--------------|-----------------------|-------------------|
| Rated current | : 3.25 A | Moment of inertia (J) | : 0.0551 sq.ft.lb |
| LRC | : 7.0 | Duty cycle | : Cont.(S1) |
| Rated torque | : 3.67 ft.lb | Insulation class | : F |
| Locked rotor torque | : 270 % | Service factor | : 1.00 |
| Breakdown torque | : 290 % | Temperature rise | : 80 K |
| Rated speed | : 2860 rpm | Design | : B |

Locked rotor time : 37s (cold) 21s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



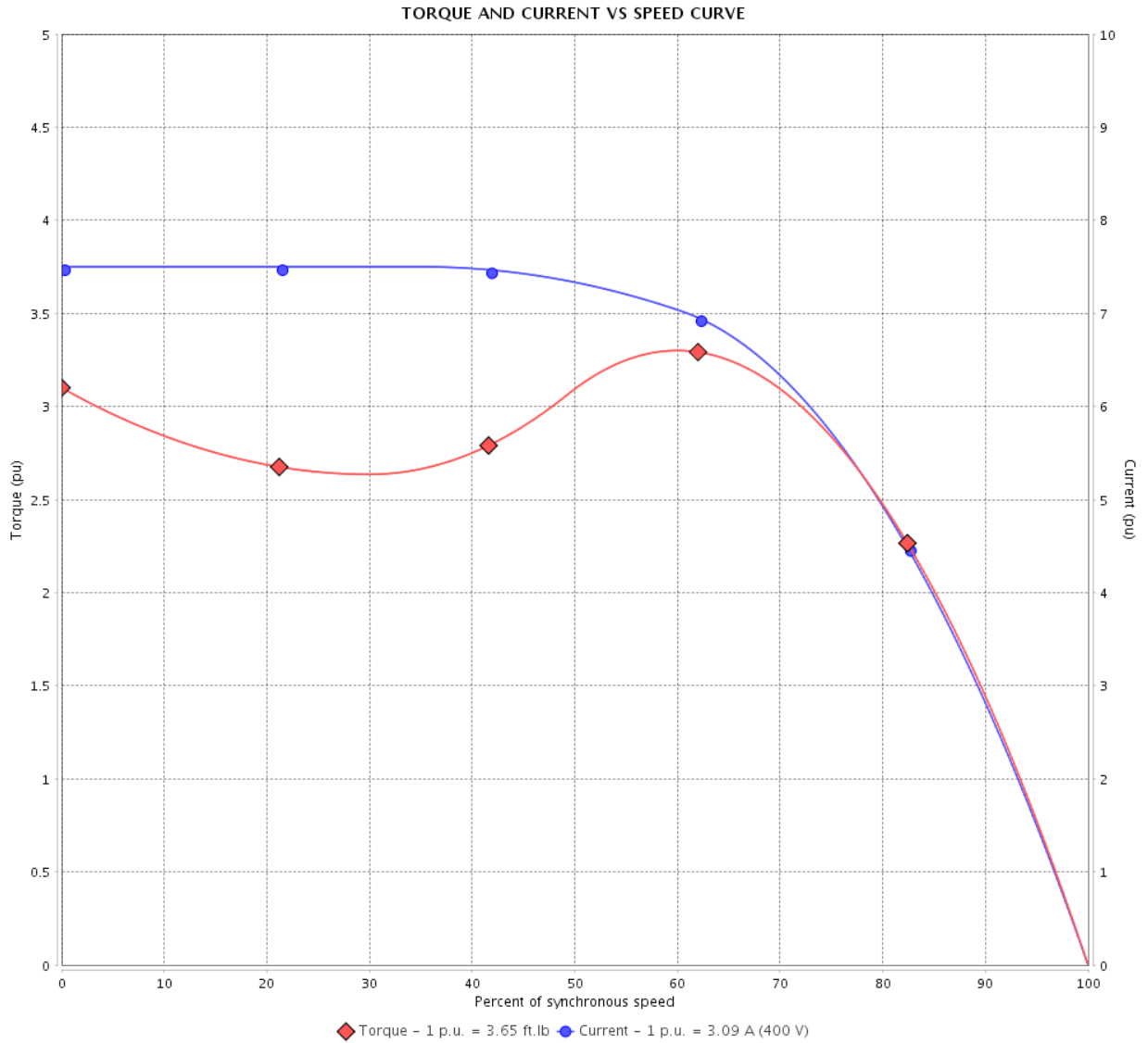
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Performance : 400 V 50 Hz 2P IE3

Rated current : 3.09 A
 LRC : 7.5
 Rated torque : 3.65 ft.lb
 Locked rotor torque : 310 %
 Breakdown torque : 330 %
 Rated speed : 2880 rpm

Moment of inertia (J) : 0.0551 sq.ft.lb
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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



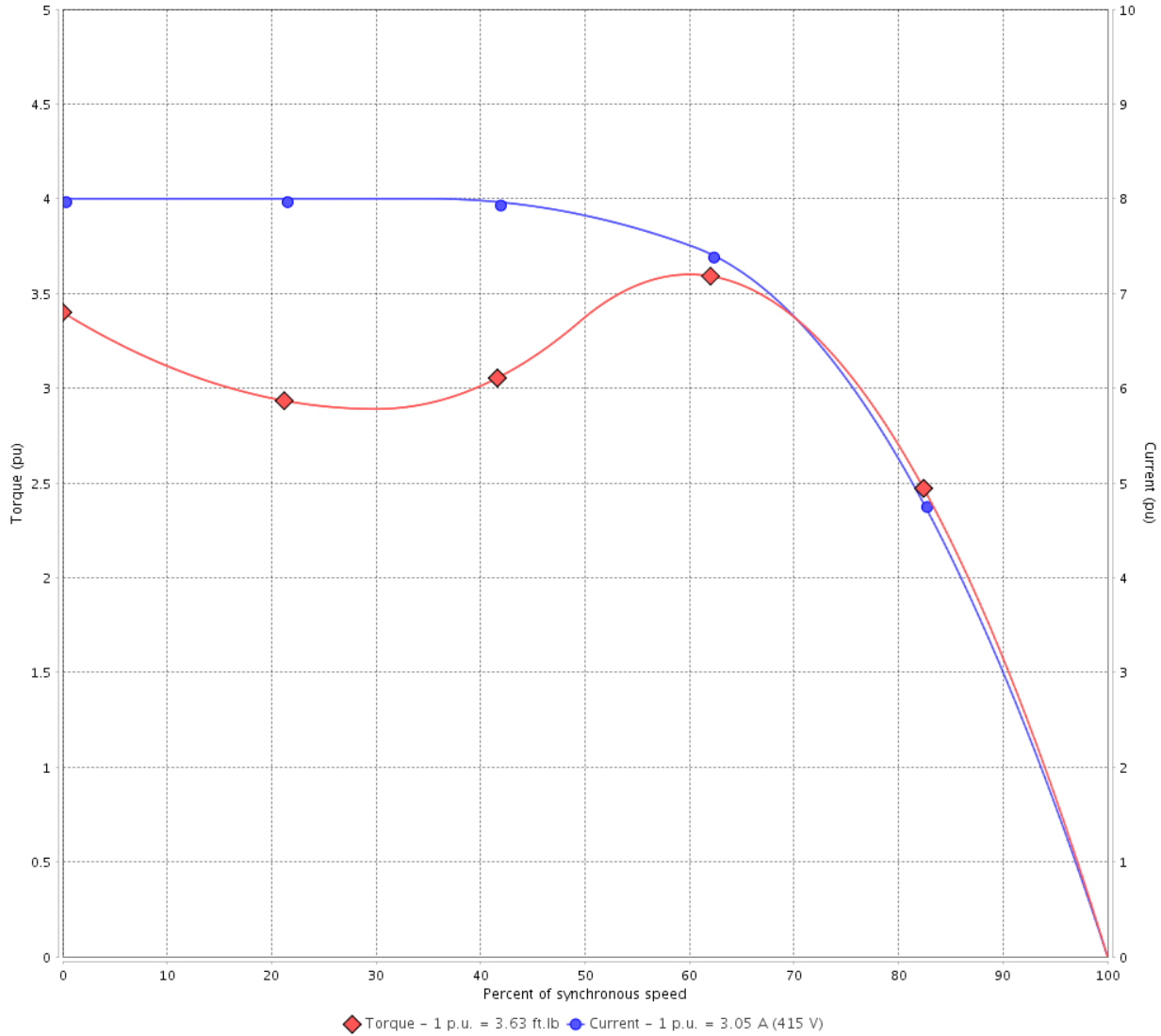
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| LRC | : 8.0 | Duty cycle | : Cont.(S1) |
| Rated torque | : 3.63 ft.lb | Insulation class | : F |
| Locked rotor torque | : 340 % | Service factor | : 1.00 |
| Breakdown torque | : 360 % | Temperature rise | : 80 K |
| Rated speed | : 2890 rpm | Design | : B |

Locked rotor time : 37s (cold) 21s (hot)

| Rev. | Changes Summary | Performed | Checked | Date |
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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

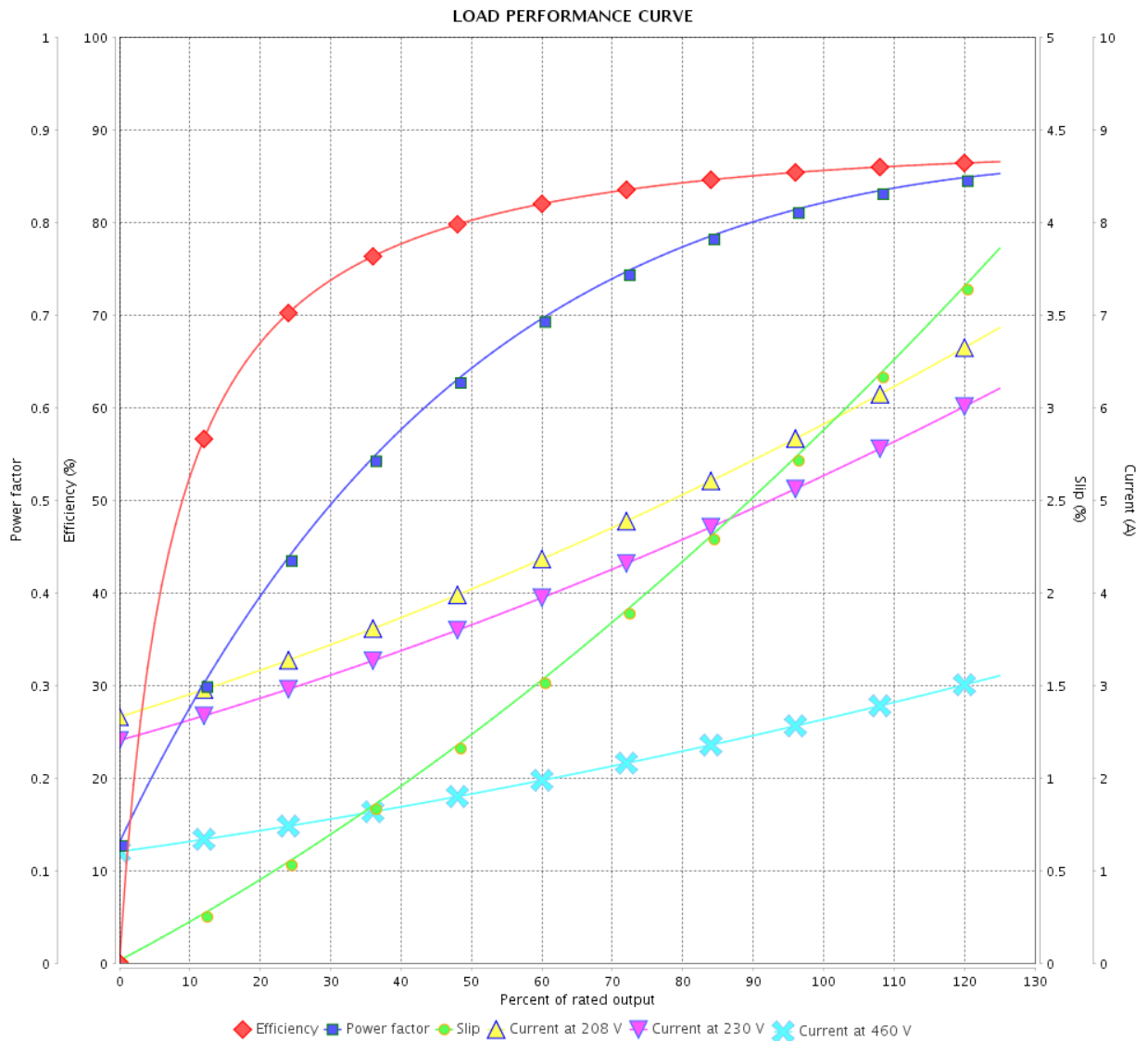


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Rated current : 5.38/2.69 A
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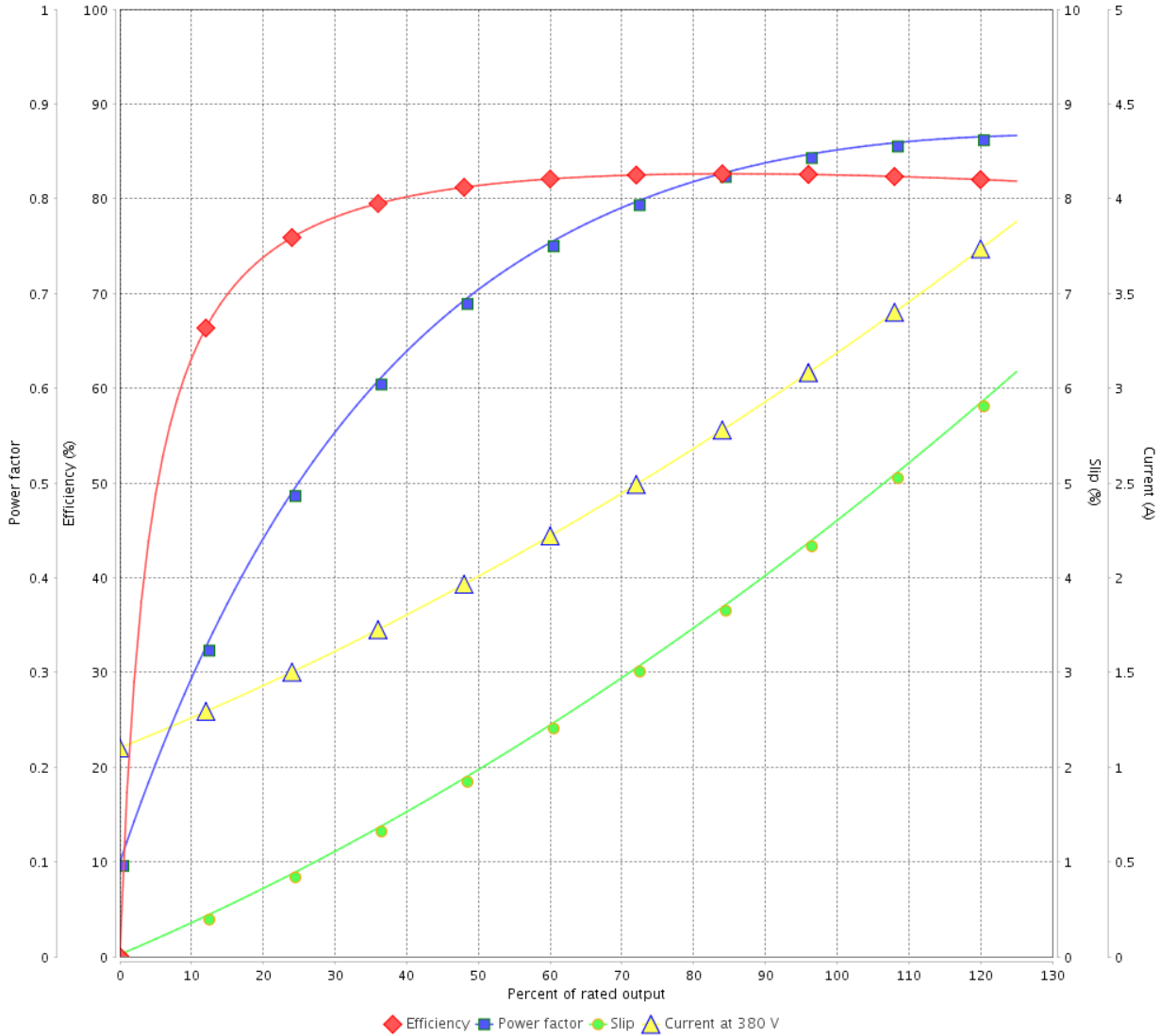
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 Locked rotor torque : 270 %
 Breakdown torque : 290 %
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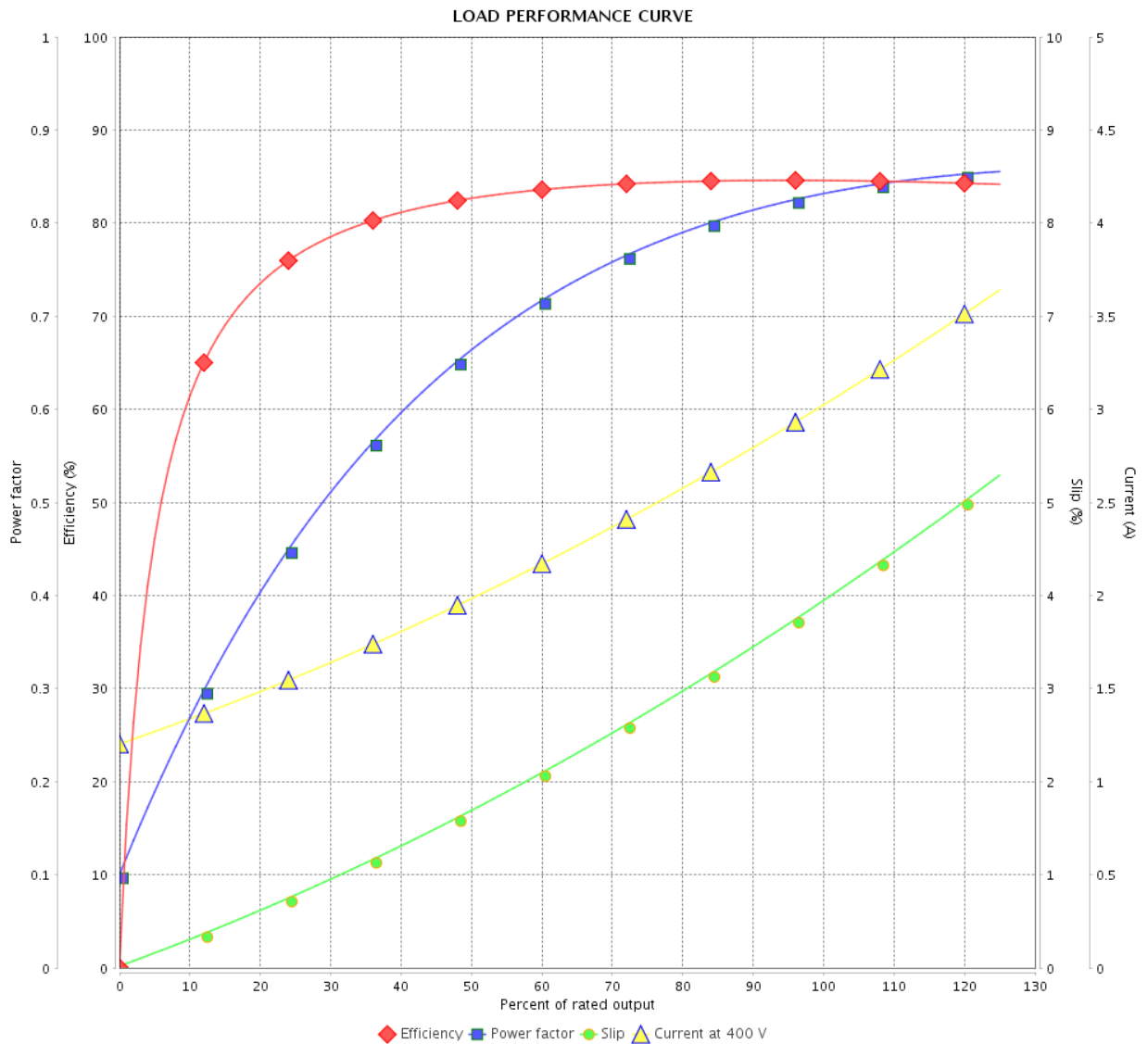


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Performance : 400 V 50 Hz 2P IE3

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 Locked rotor torque : 310 %
 Breakdown torque : 330 %
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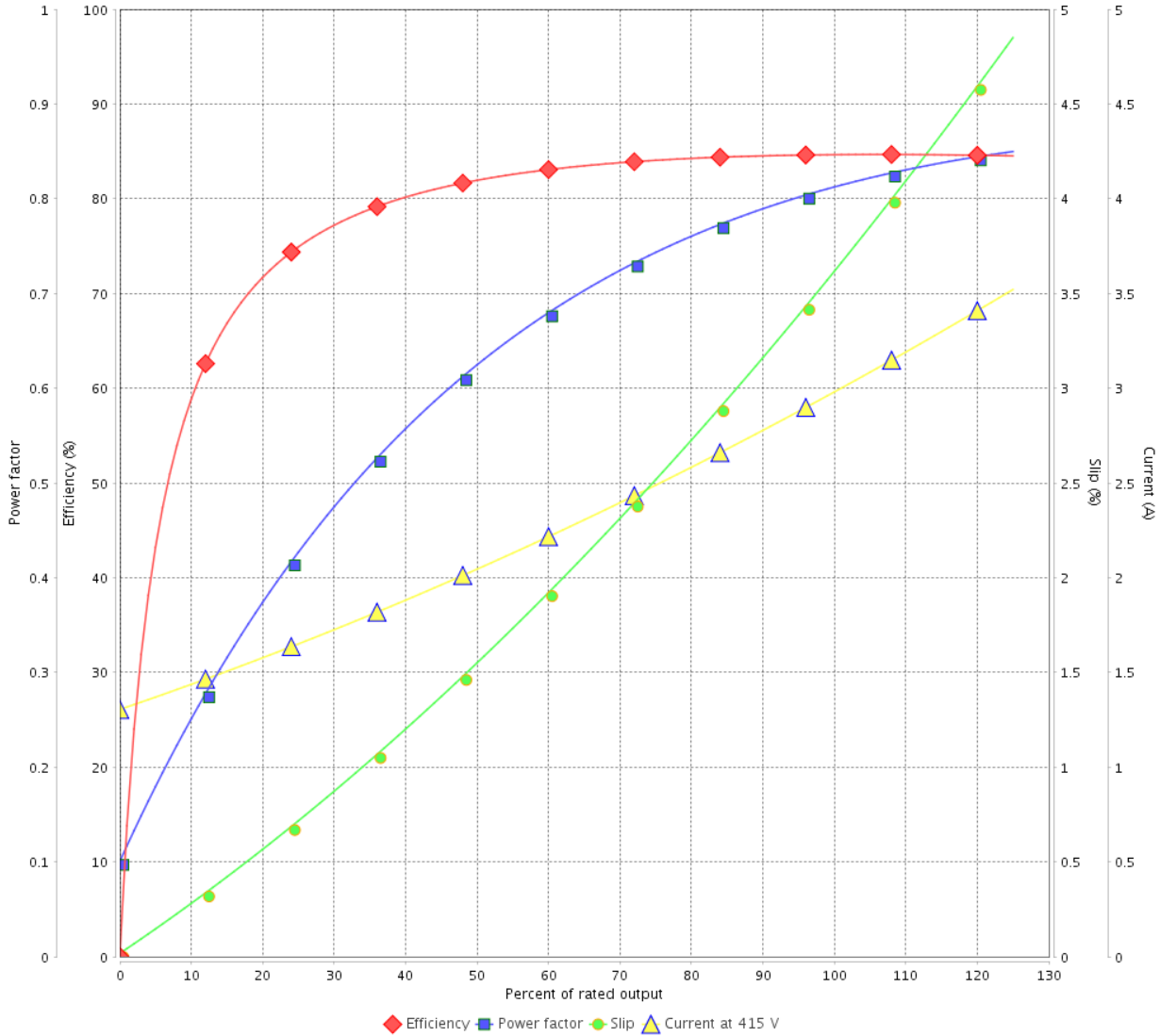
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THERMAL LIMIT CURVE



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Design : B

Heating constant

Cooling constant

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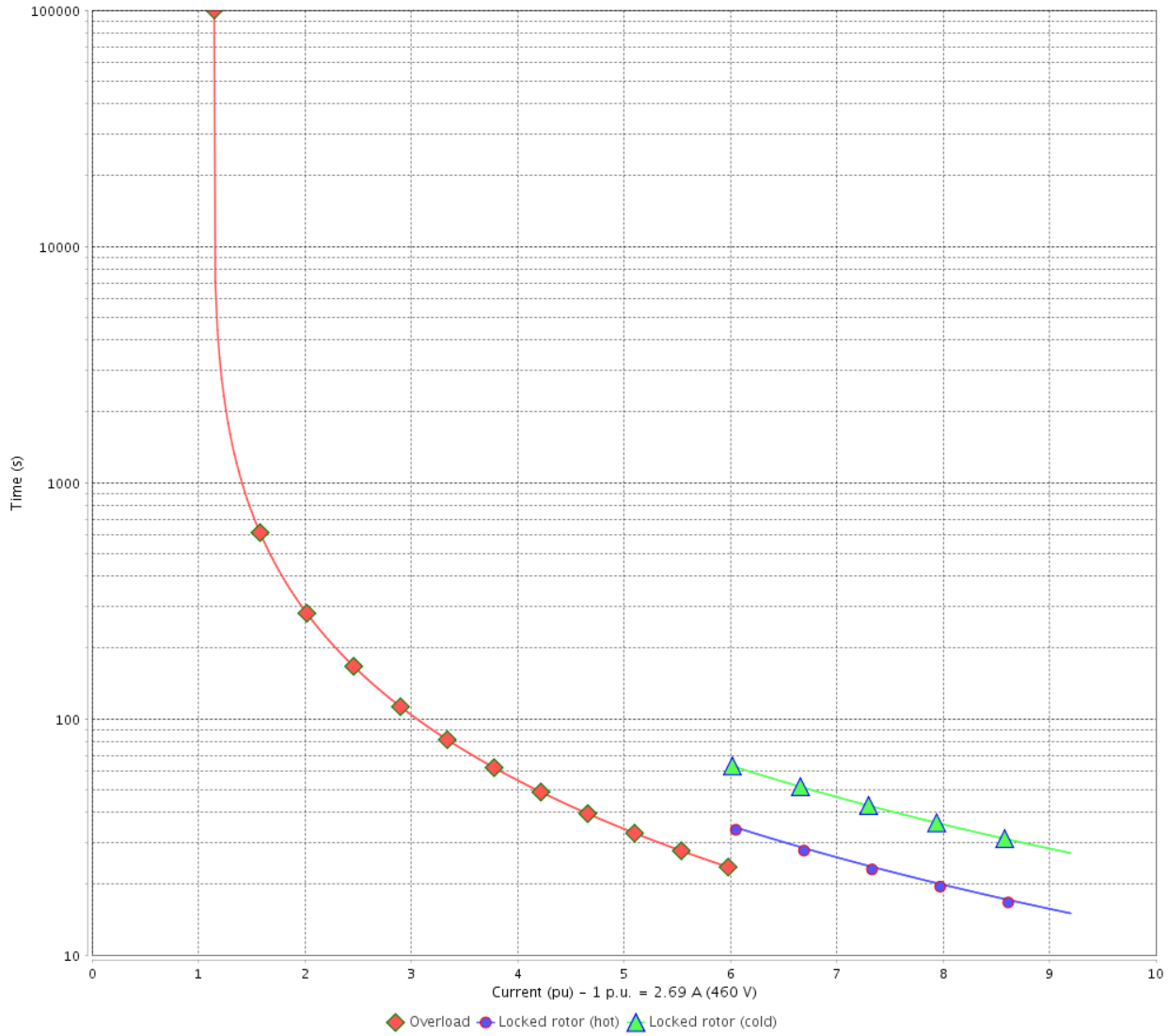
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Rated torque : 3.67 ft.lb
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Breakdown torque : 290 %
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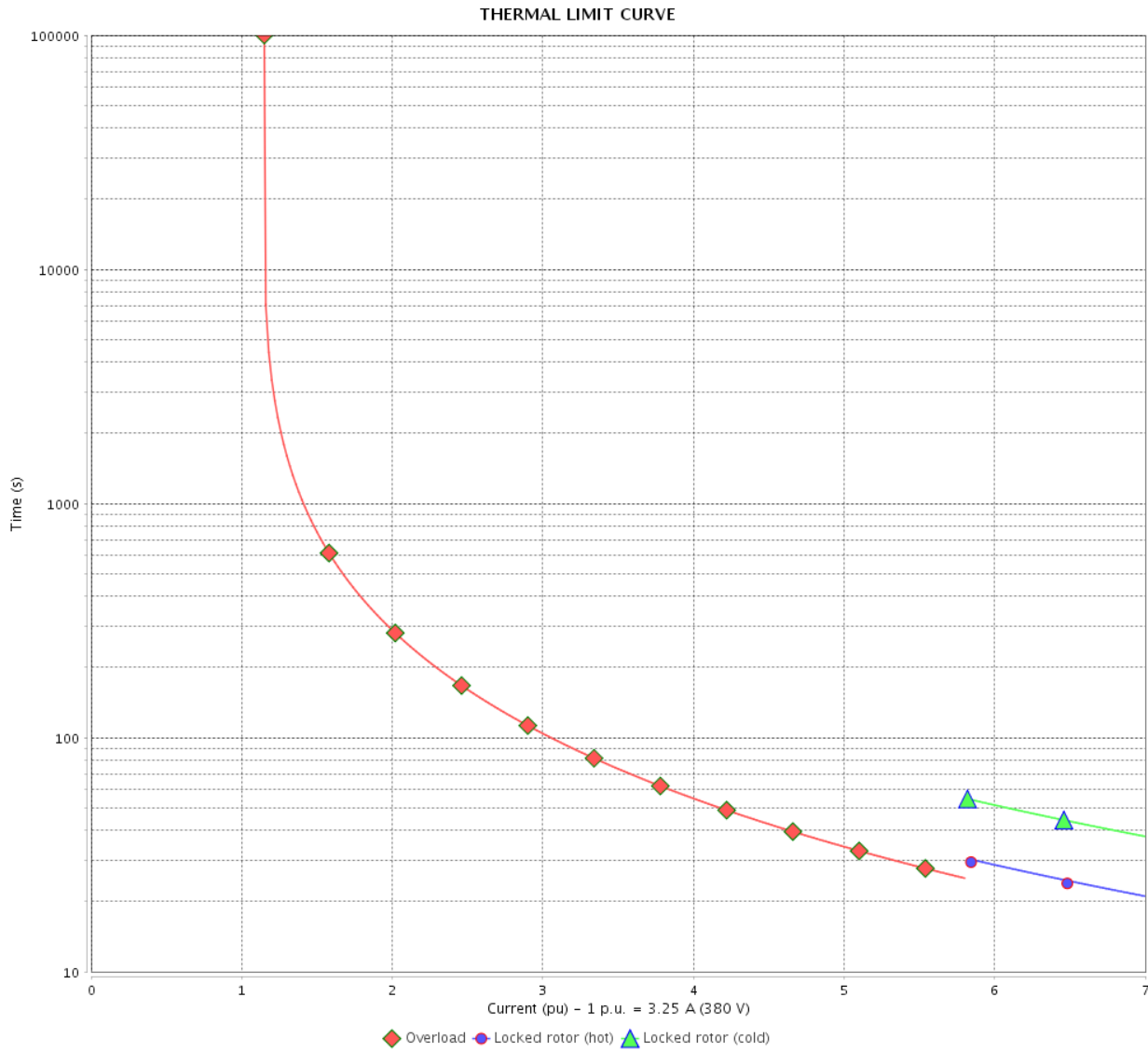
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| LRC : 7.5 | Duty cycle : Cont.(S1) |
| Rated torque : 3.65 ft.lb | Insulation class : F |
| Locked rotor torque : 310 % | Service factor : 1.00 |
| Breakdown torque : 330 % | Temperature rise : 80 K |
| Rated speed : 2880 rpm | Design : B |

Heating constant

Cooling constant

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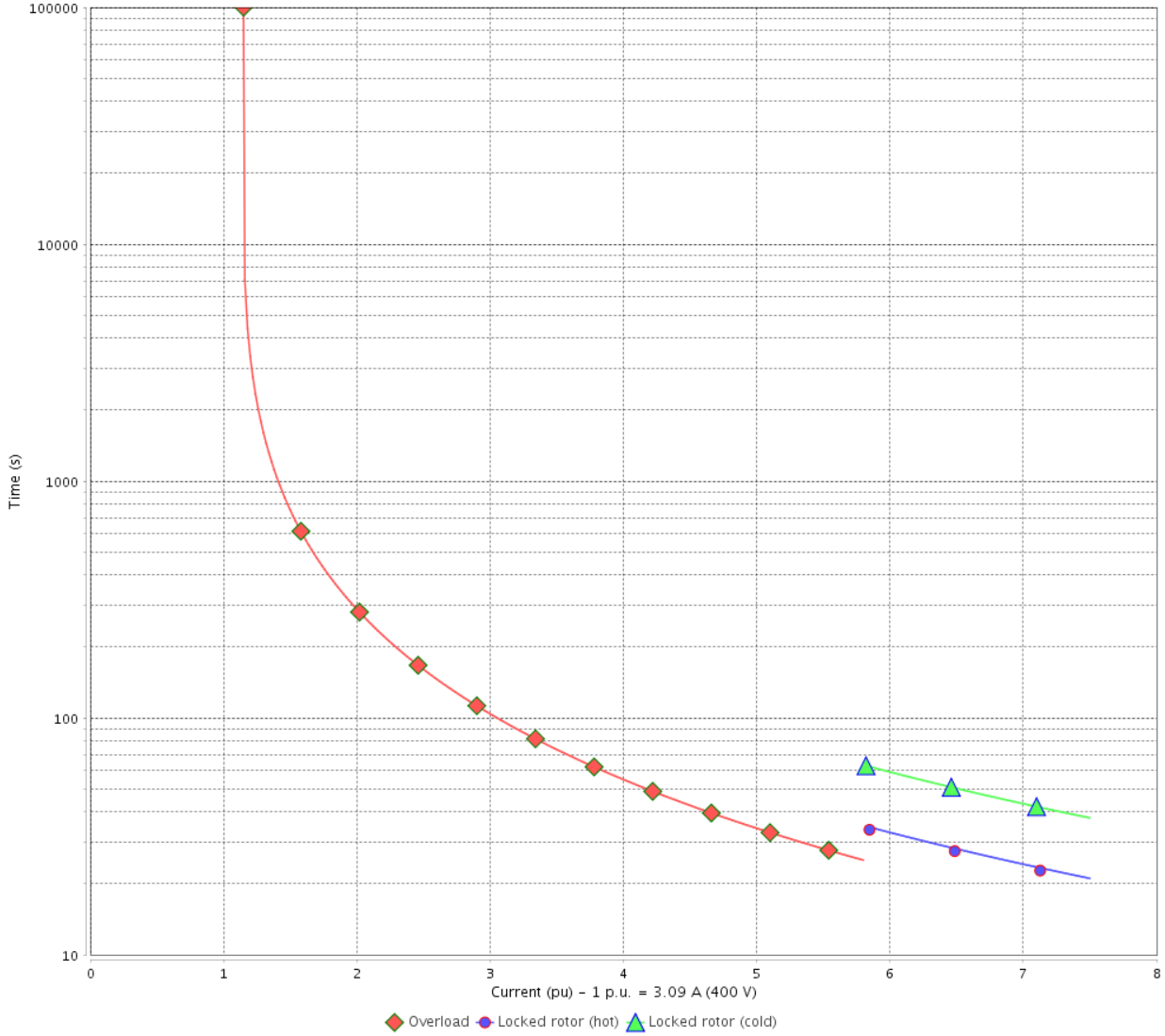
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| LRC | : 8.0 | Duty cycle | : Cont.(S1) |
| Rated torque | : 3.63 ft.lb | Insulation class | : F |
| Locked rotor torque | : 340 % | Service factor | : 1.00 |
| Breakdown torque | : 360 % | Temperature rise | : 80 K |
| Rated speed | : 2890 rpm | Design | : B |

Heating constant

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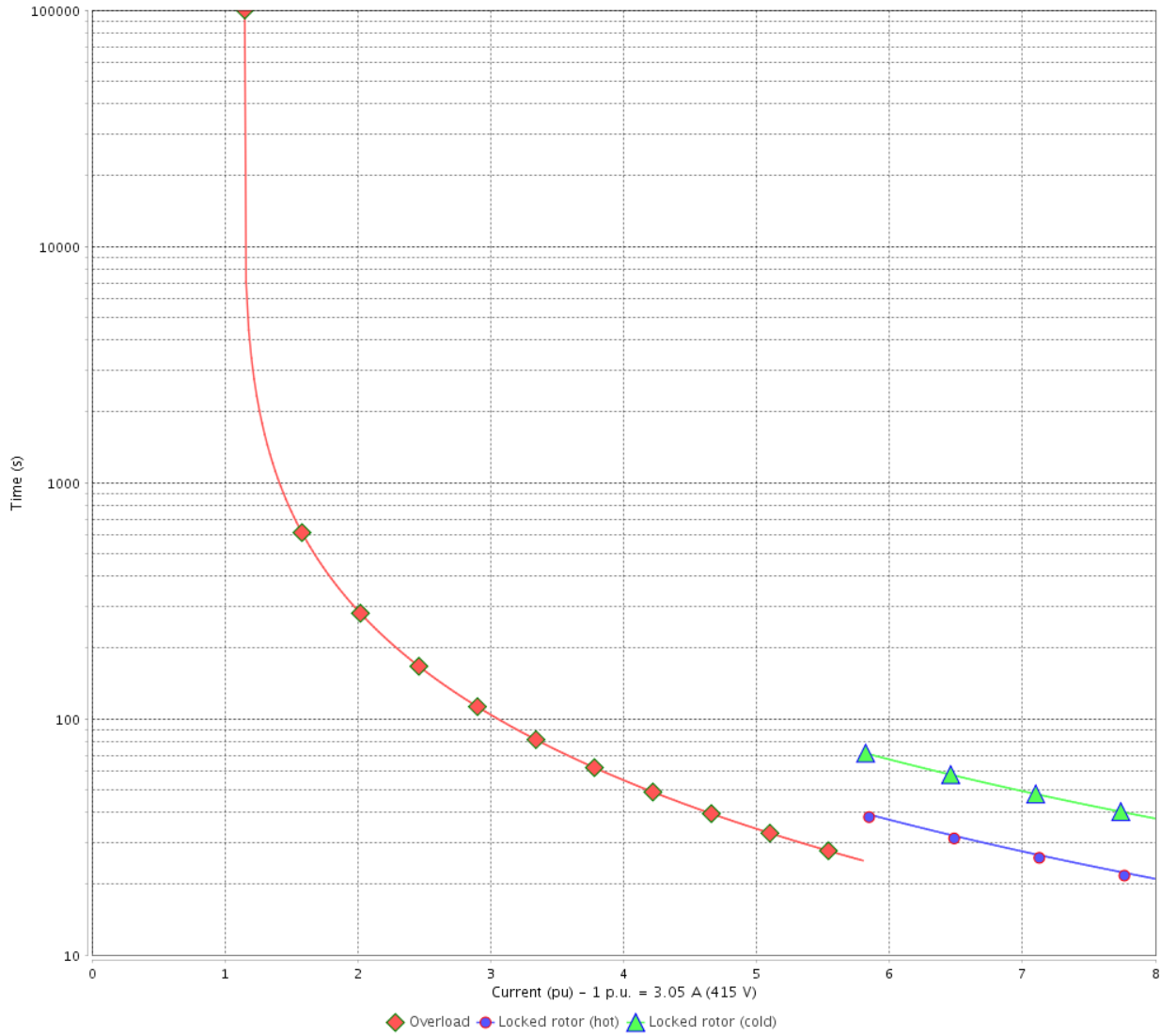
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

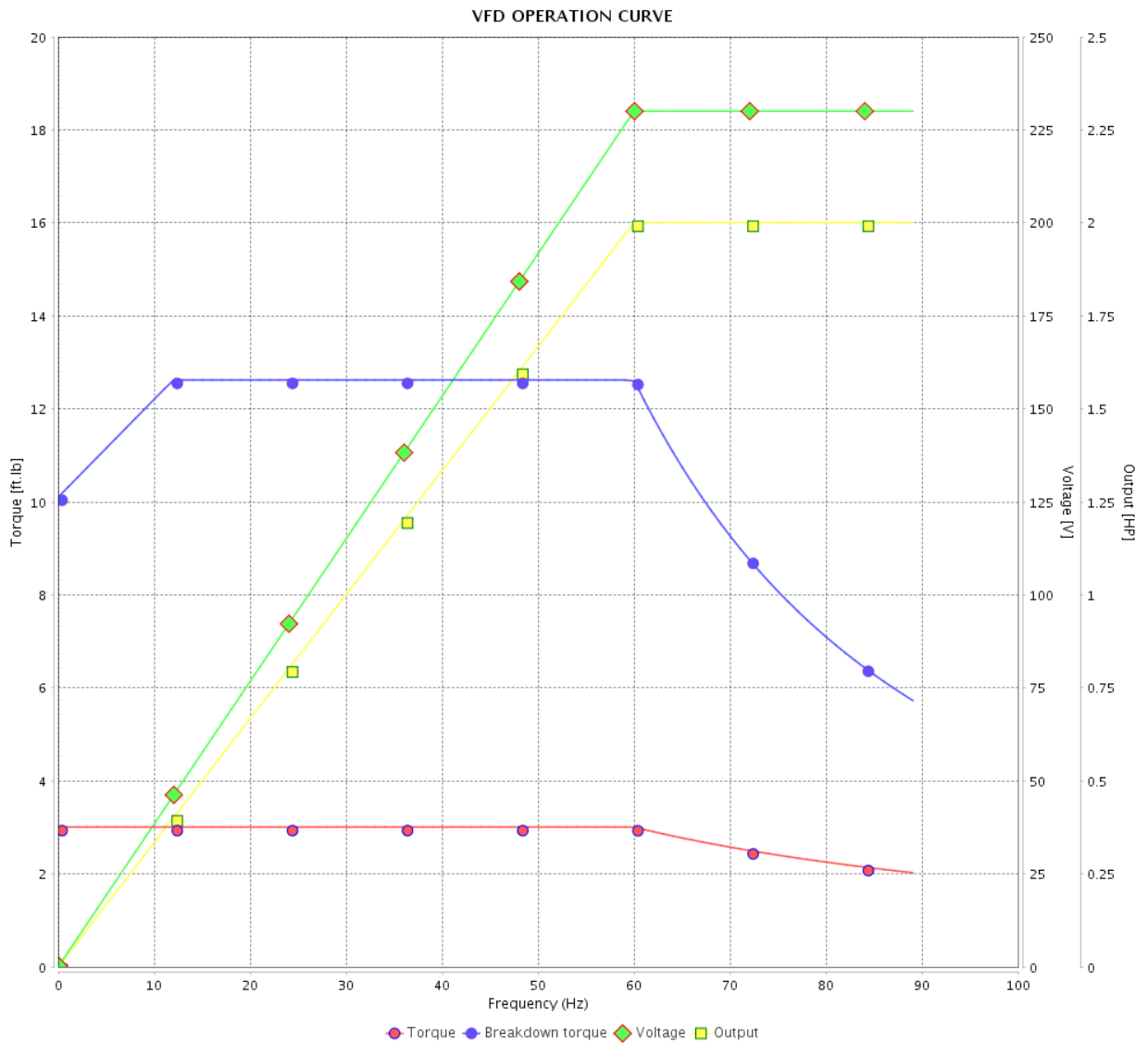


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VFD OPERATION CURVE

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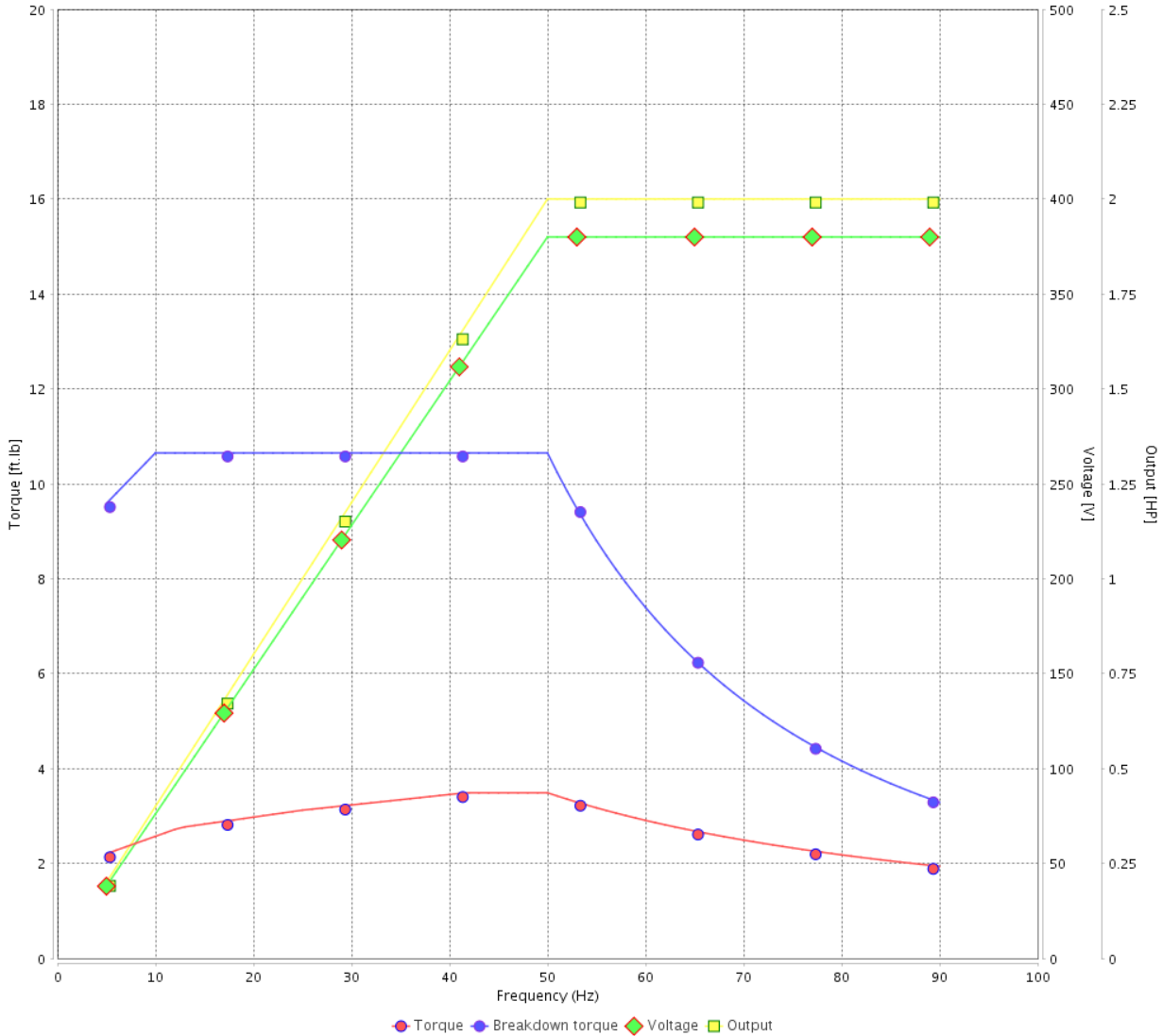
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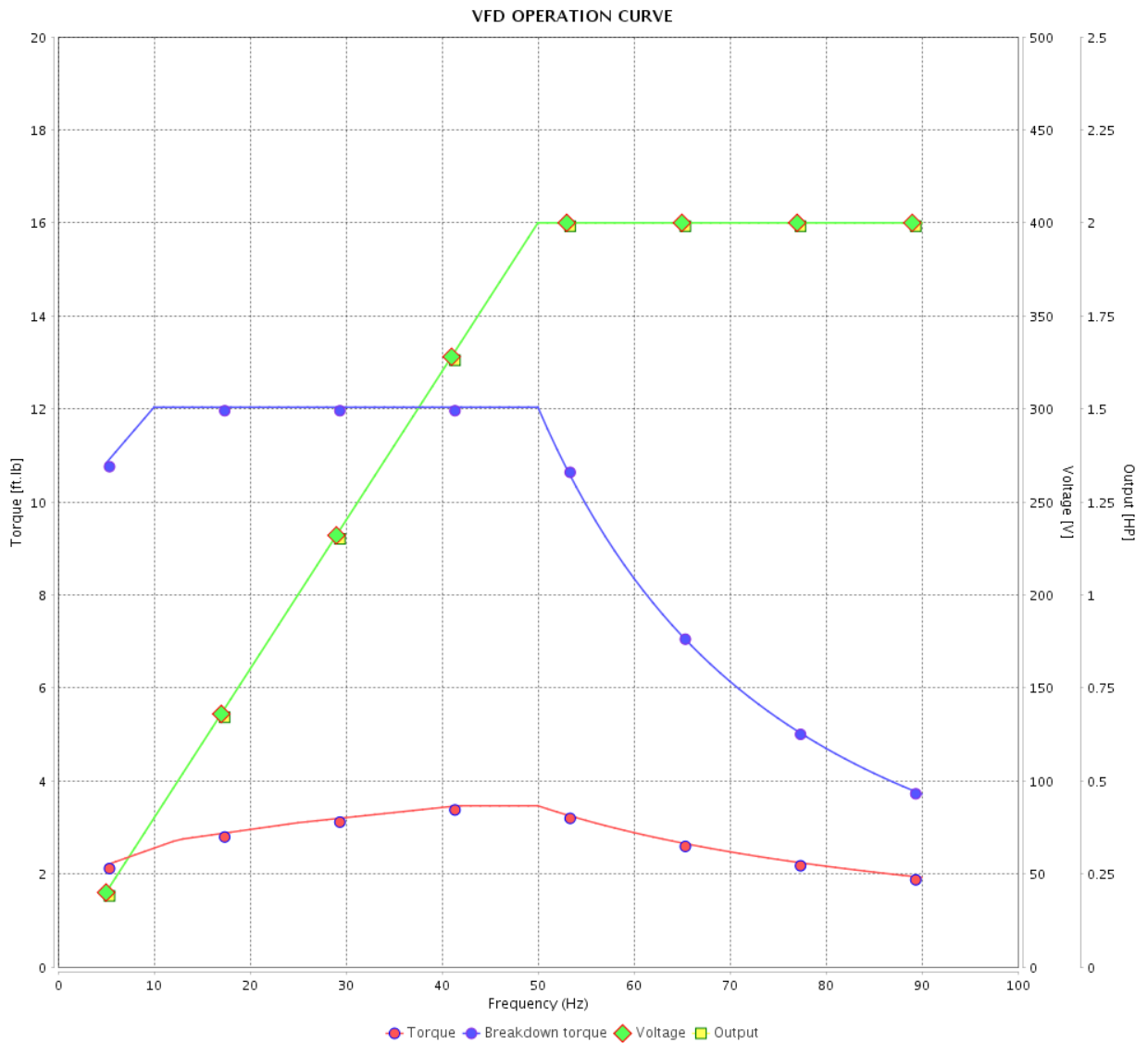


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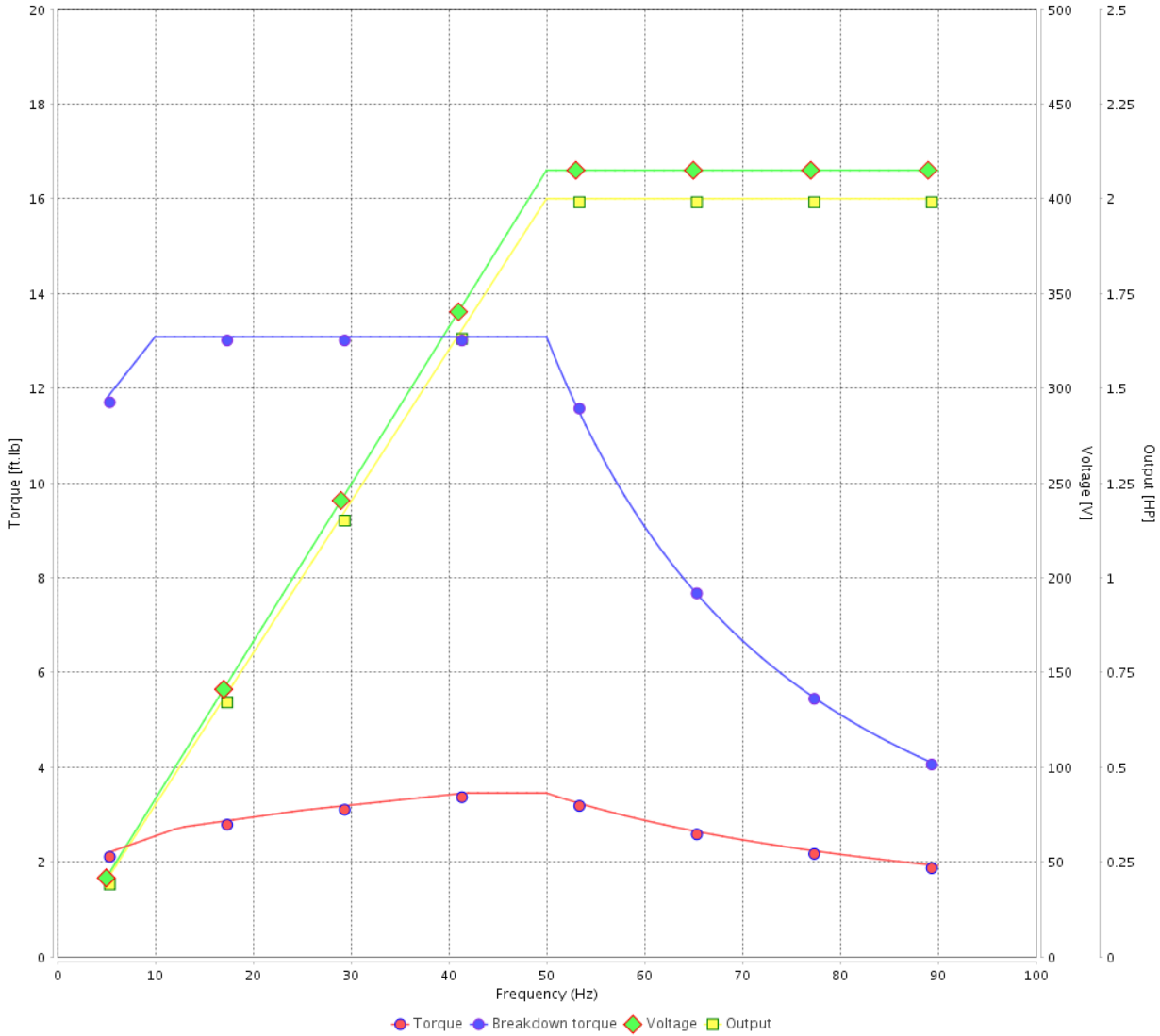
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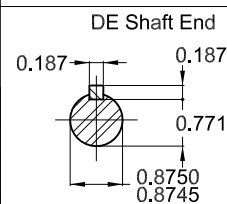
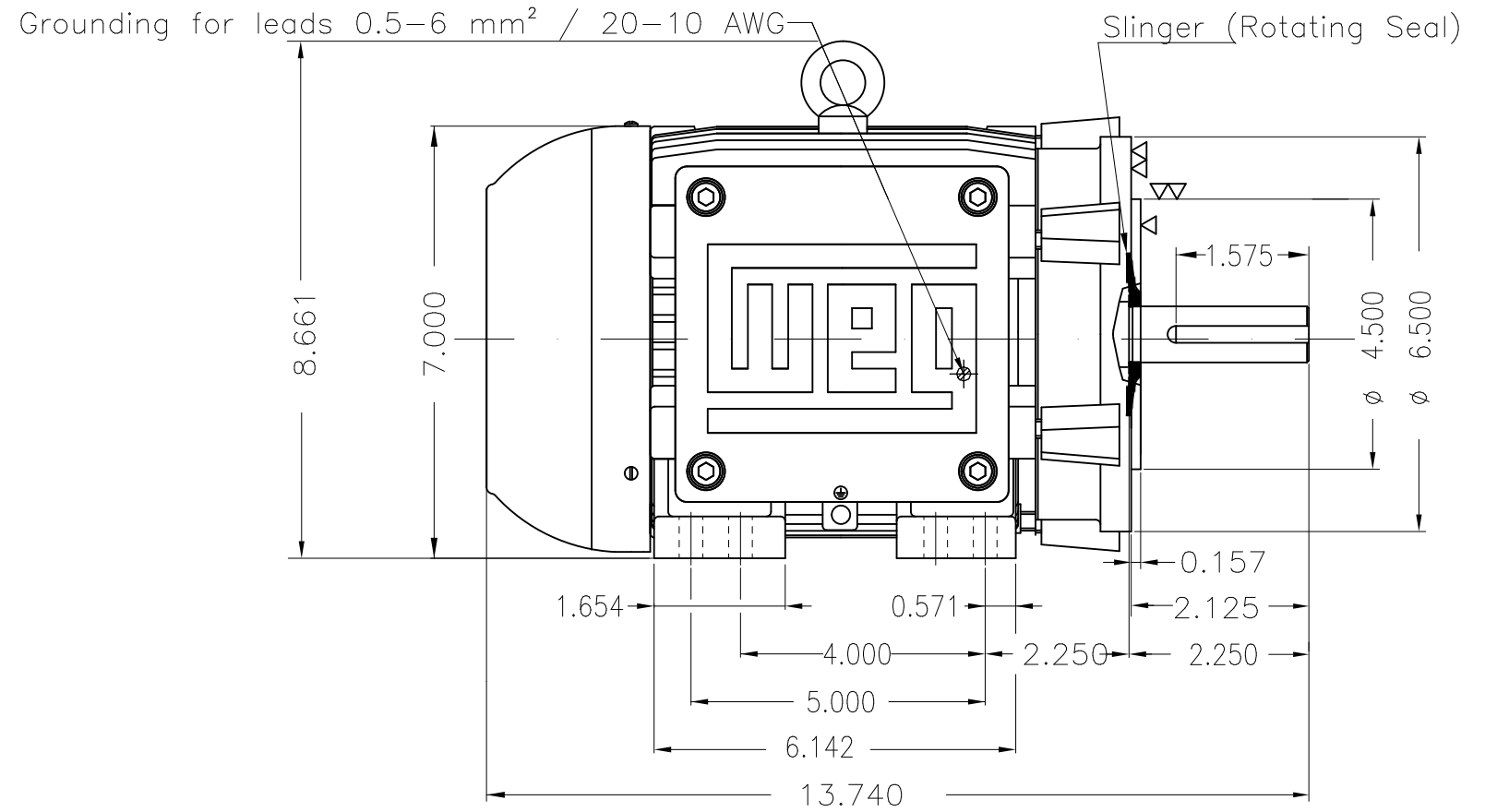
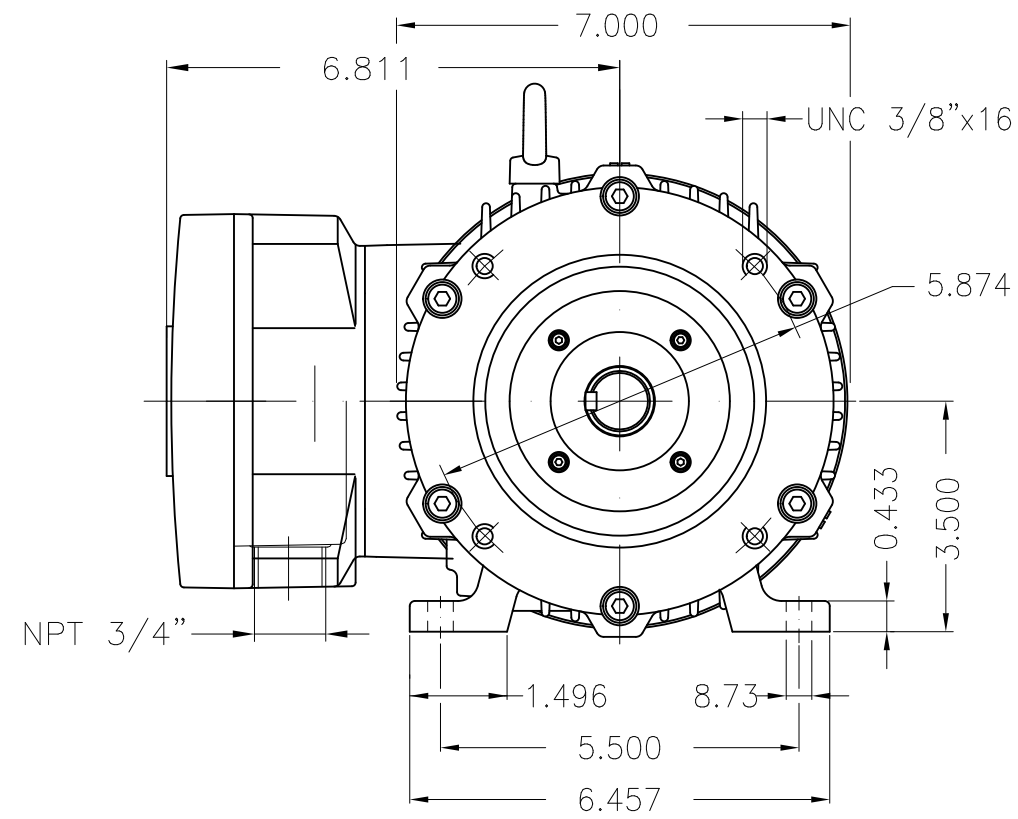


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Color RAL 5009
 Painting plan 202P
 Mounting NEMA F-1
 Mounting B34R(D)

2 HP 02 Poles 60 Hz

Dimensions in inches

| ECM | LOC | SUMMARY OF MODIFICATIONS | EXECUTED | CHECKED | RELEASED | DATE | VER |
|----------|-----------|--|---------------------|---------|----------|------|-----|
| EXECUTED | PIRWBUSER | THREE PH. MOTOR EXPLOSION PROOF PREM. EFF. | | | | | |
| CHECKED | | FRAME 143/5TC IP55 TEFC | | | | | |
| RELEASED | | | | | | | |
| REL DT. | WMO | Jaragua do Sul | Product Engineering | | | | |

PREVIEW
 WDD



SHEET 1 / 1

MADE IN BRAZIL

**W21X NEMA**
Premium

14296383

CC029A

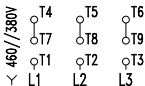
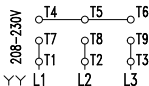
Inverter Duty Motor
Severe Duty

LISTED

MODEL 00236XT3E145TC

| | | | |
|--------------------------|--------------|--------------------|-------------------|
| PH 3 | FR 143/5TC | | |
| HP(kW) 2.0(1.5) | | HZ 60 | IP55 |
| V 230/460 | | A 5.38/2.69 | |
| RPM 3495 | | NEMA NOM EFF 85.5% | |
| PF 0.82 | | SFA 6.19/3.09 | DES B |
| INS CL F Δ T 80 K | | SF 1.15 | ENCL TEFC |
| DUTY CONT. | | CODE L | ALT 1000 m.a.s.l. |
| AMB 40°C | USABLE @208V | 5.95 A | SF 1.15 SFA 6.84 |
| AMB 55°C SF1.0 | | | |

2.0HP 1.5kW 50Hz 380V 3.25A 2860RPM SF1.00 EFF 82.5% (IE2)



→ 6205-2RS MOBIL POLYREX EM
→ 6204-2RS

75 Lbs



TEMP CODE T3C
CSA/UL: Class I - Div. 1 - Groups C and D
CSA: Class II - Div. 1 - Groups F and G
CSA: Class I - Zone 1 - IIB

EXPLOSION PROOF MOTOR

FOR USE ON VPWM VFD 1000:1VT, 20:1CT, 1.0SF, T3C, AMB 40°C.