

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



| | | | | |
|--|---|--|---------------------|----------|
| Customer : | | | | |
| Product line | : NEMA Premium Efficiency Three-Phase | Product code : | 13163401 | |
| | | Catalog # : | 00718ET3E213TC-SG | |
| Frame | : 213/5TC | 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 | : 130 lb | |
| Protection degree | : IP55 | Moment of inertia (J) | : 0.9380 sq.ft.lb | |
| Design | : B | | | |
| Output [HP] | 7.5 | 7.5 | 7.5 | |
| Poles | 4 | 4 | 4 | |
| Frequency [Hz] | 60 | 50 | 50 | |
| Rated voltage [V] | 230/460 | 190/380 | 220/415 | |
| Rated current [A] | 18.1/9.07 | 22.0/11.0 | 20.0/10.6 | |
| L. R. Amperes [A] | 132/66.2 | 136/68.2 | 136/72.1 | |
| LRC [A] | 7.3x(Code H) | 6.2x(Code G) | 6.8x(Code H) | |
| No load current [A] | 8.81/4.41 | 8.65/4.33 | 8.93/4.73 | |
| Rated speed [RPM] | 1770 | 1455 | 1460 | |
| Slip [%] | 1.67 | 3.00 | 2.67 | |
| Rated torque [ft.lb] | 22.3 | 27.1 | 27.0 | |
| Locked rotor torque [%] | 260 | 190 | 220 | |
| Breakdown torque [%] | 300 | 250 | 280 | |
| Service factor | 1.15 | 1.00 | 1.00 | |
| Temperature rise | 80 K | 105 K | 80 K | |
| Locked rotor time | 39s (cold) 22s (hot) | 0s (cold) 0s (hot) | 0s (cold) 0s (hot) | |
| Noise level ² | 60.0 dB(A) | 57.0 dB(A) | 57.0 dB(A) | |
| Efficiency (%) | 25% | 89.4 | 91.3 | 90.4 |
| | 50% | 90.2 | 90.2 | 89.8 |
| | 75% | 91.0 | 90.0 | 90.1 |
| | 100% | 91.7 | 88.6 | 89.2 |
| Power Factor | 25% | 0.39 | 0.45 | 0.41 |
| | 50% | 0.64 | 0.71 | 0.67 |
| | 75% | 0.76 | 0.82 | 0.79 |
| | 100% | 0.82 | 0.86 | 0.84 |
| Bearing type | : <u>Drive end</u> 6208 ZZ <u>Non drive end</u> 6206 ZZ | Foundation loads | | |
| Sealing | : V'Ring Without Bearing Seal | Max. traction | : 361 lb | |
| | | Max. compression | : 491 lb | |
| Lubrication interval | : - | | | |
| Lubricant amount | : - | | | |
| Lubricant type | : Mobil Polyrex EM | | | |
| Notes USABLE @208V 20.1A SF 1.00 SFA 20.1A | | | | |
| 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



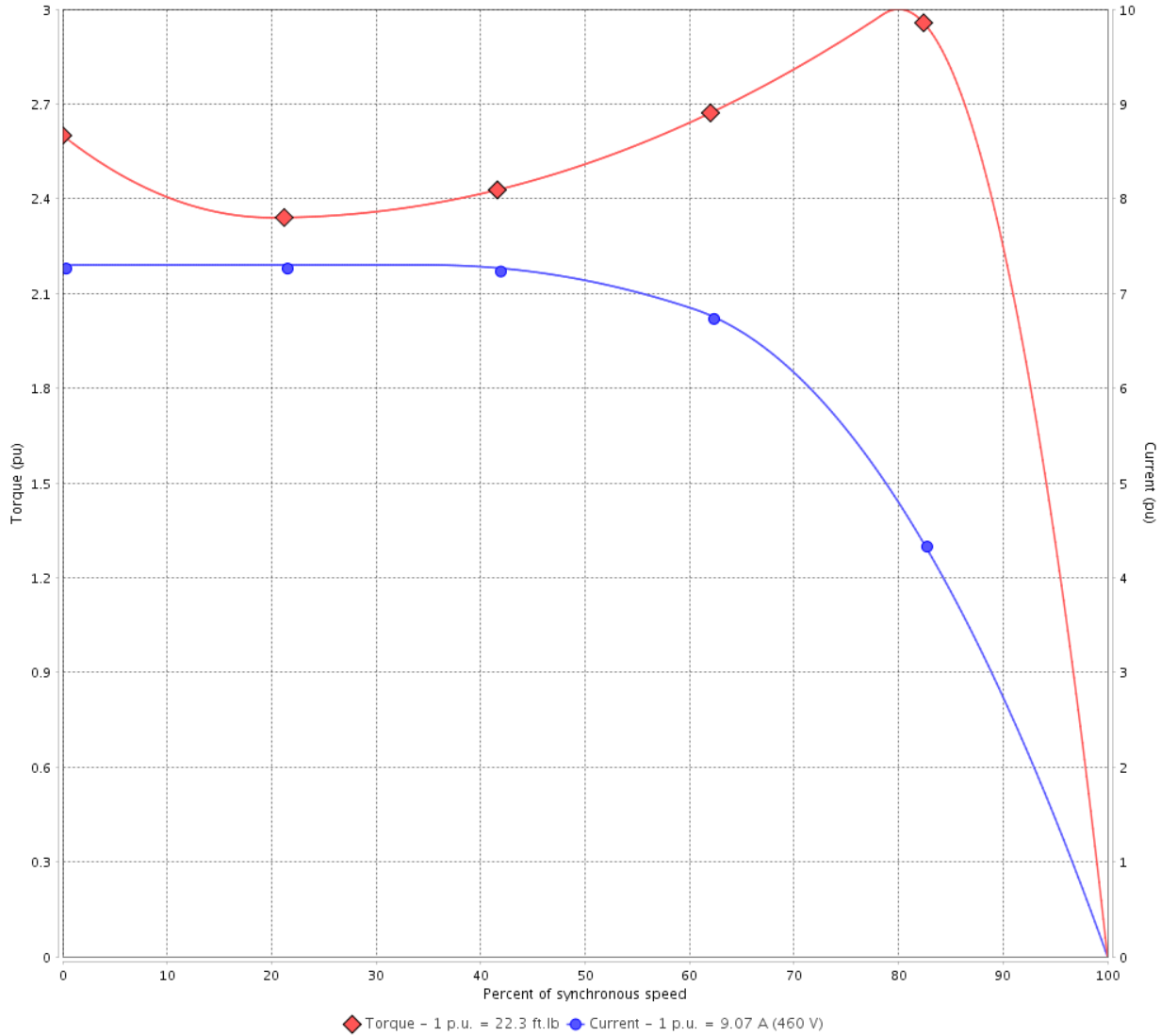
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163401

Catalog # : 00718ET3E213TC-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

| | | | |
|---------------------|---------------|-----------------------|-------------------|
| Rated current | : 18.1/9.07 A | Moment of inertia (J) | : 0.9380 sq.ft.lb |
| LRC | : 7.3 | Duty cycle | : Cont.(S1) |
| Rated torque | : 22.3 ft.lb | Insulation class | : F |
| Locked rotor torque | : 260 % | Service factor | : 1.15 |
| Breakdown torque | : 300 % | Temperature rise | : 80 K |
| Rated speed | : 1770 rpm | Design | : B |

Locked rotor time : 39s (cold) 22s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



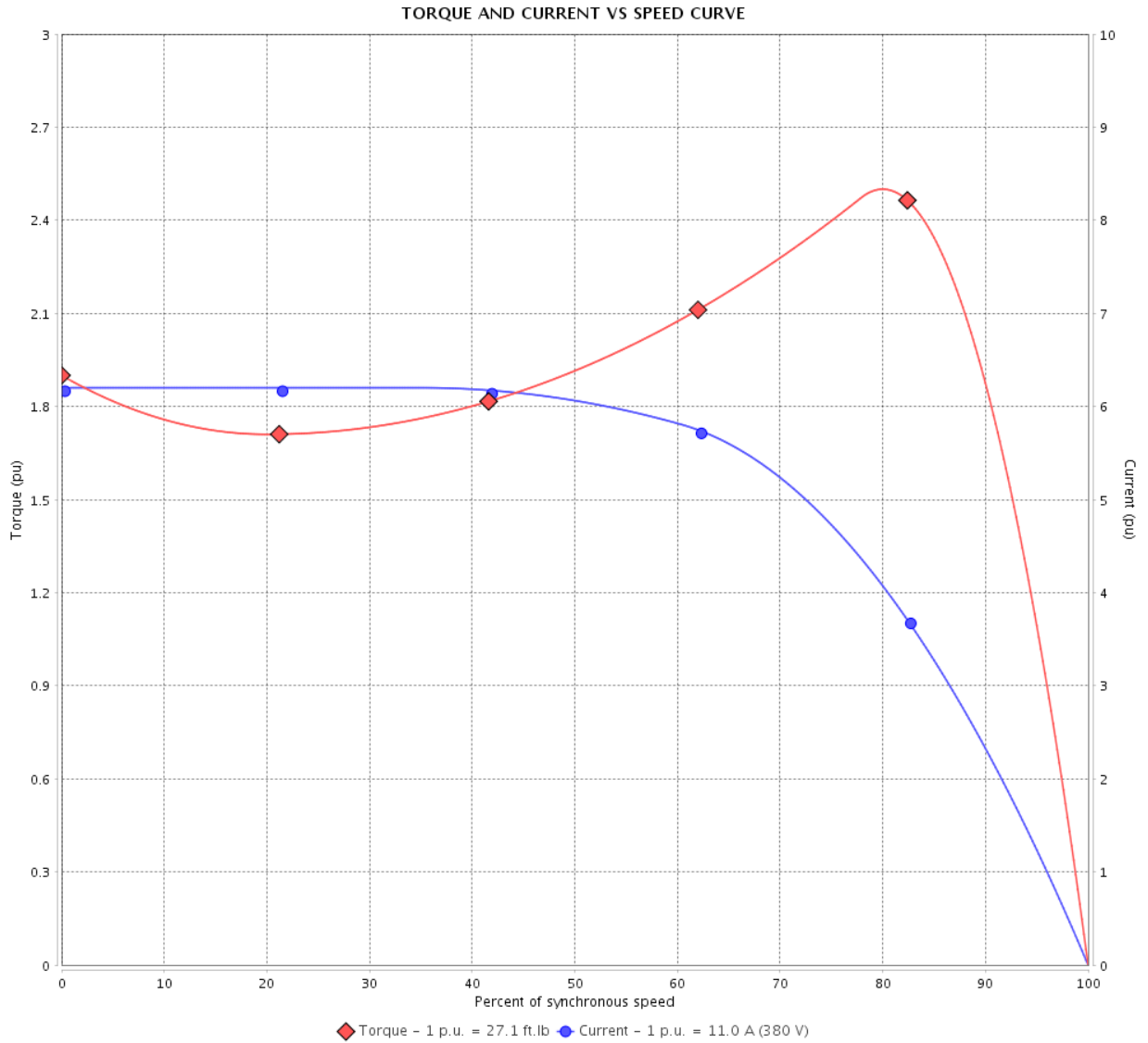
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163401

Catalog # : 00718ET3E213TC-SG



Performance : 190/380 V 50 Hz 4P

Rated current : 22.0/11.0 A
 LRC : 6.2
 Rated torque : 27.1 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 250 %
 Rated speed : 1455 rpm

Moment of inertia (J) : 0.9380 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



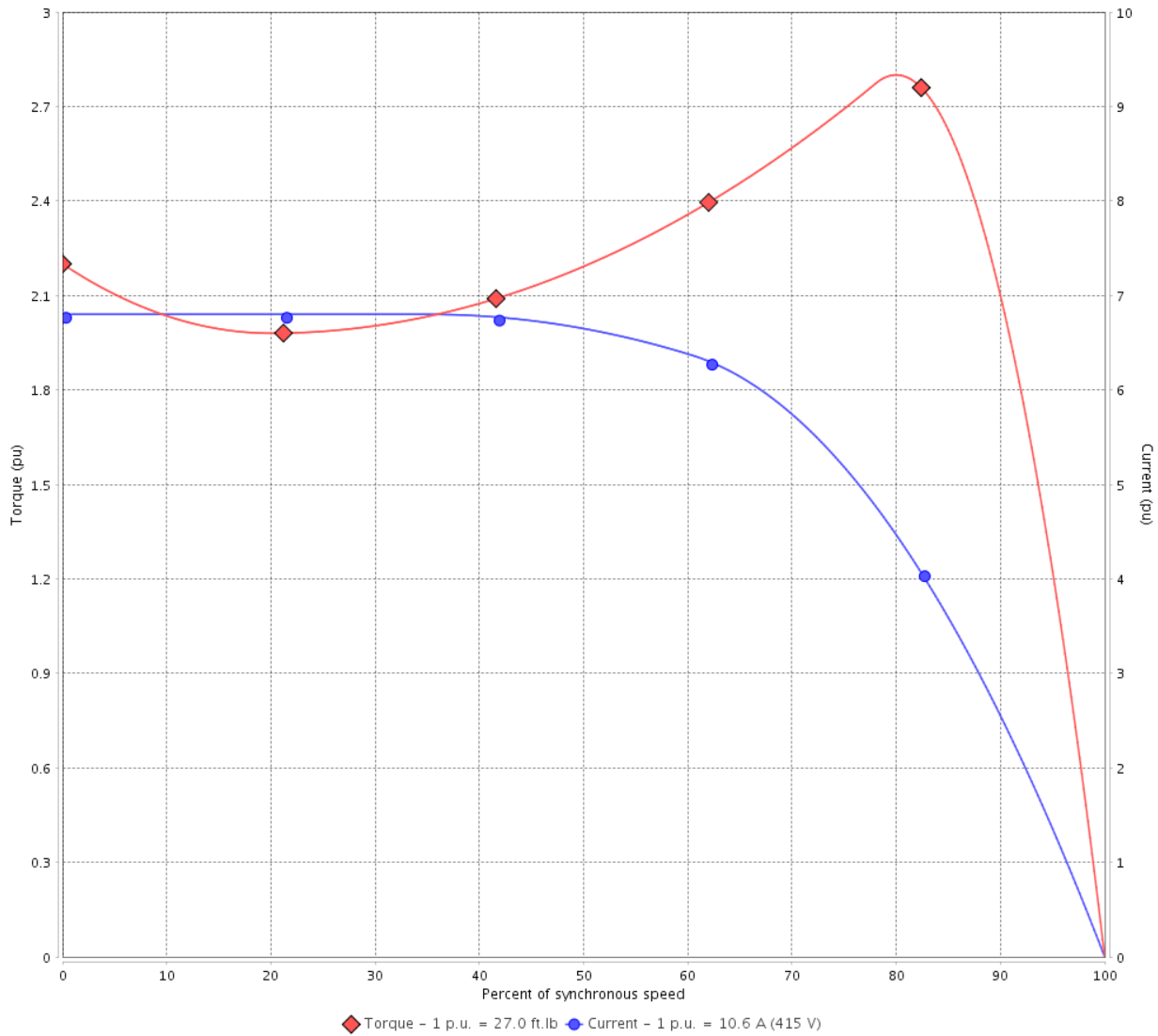
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163401

Catalog # : 00718ET3E213TC-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 4P

| | | | |
|---------------------|---------------|-----------------------|-------------------|
| Rated current | : 20.0/10.6 A | Moment of inertia (J) | : 0.9380 sq.ft.lb |
| LRC | : 6.8 | Duty cycle | : Cont.(S1) |
| Rated torque | : 27.0 ft.lb | Insulation class | : F |
| Locked rotor torque | : 220 % | Service factor | : 1.00 |
| Breakdown torque | : 280 % | Temperature rise | : 80 K |
| Rated speed | : 1460 rpm | Design | : B |

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

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

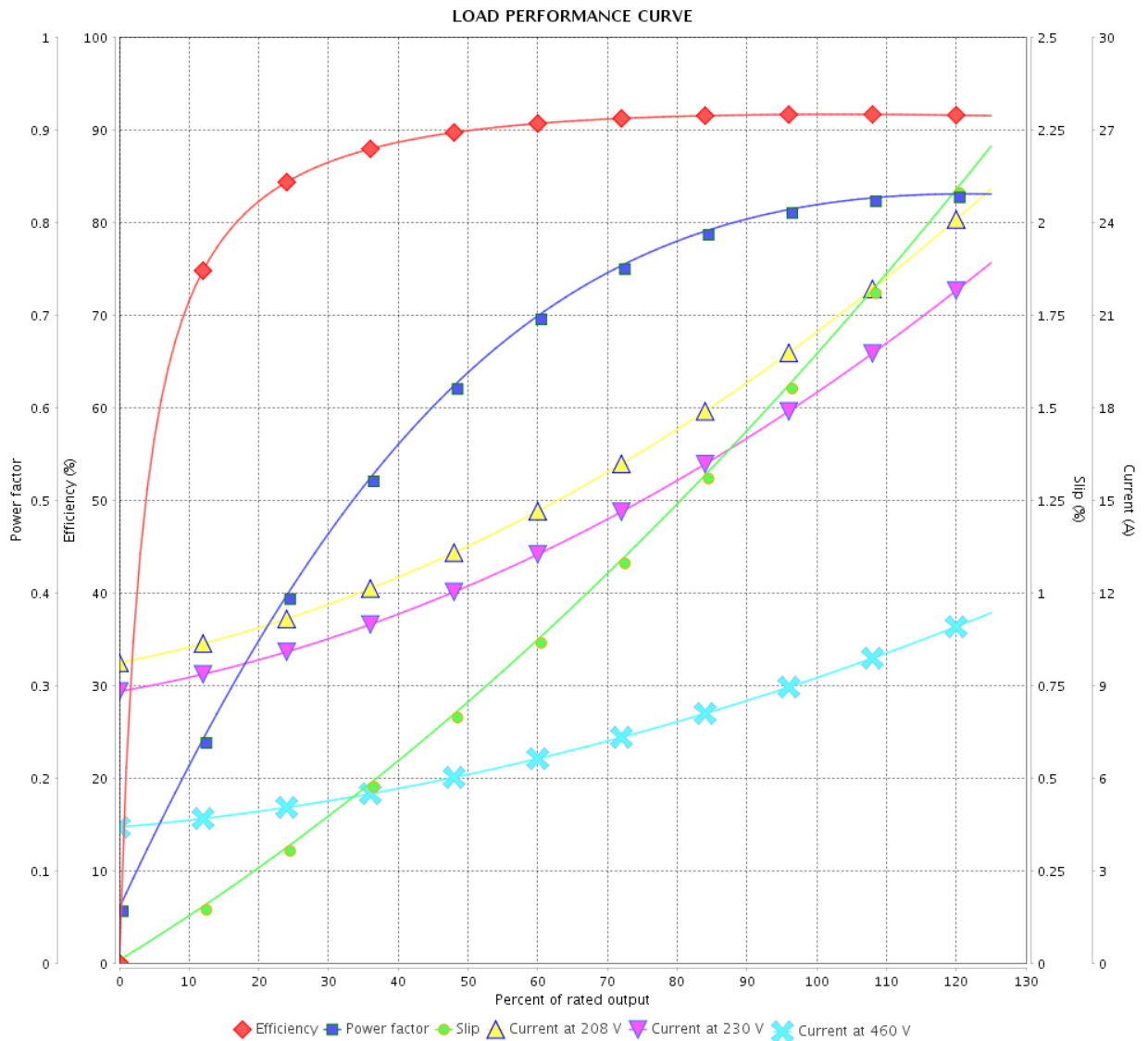


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Product code : 13163401

Catalog # : 00718ET3E213TC-SG



Performance : 230/460 V 60 Hz 4P

Rated current : 18.1/9.07 A
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 Locked rotor torque : 260 %
 Breakdown torque : 300 %
 Rated speed : 1770 rpm

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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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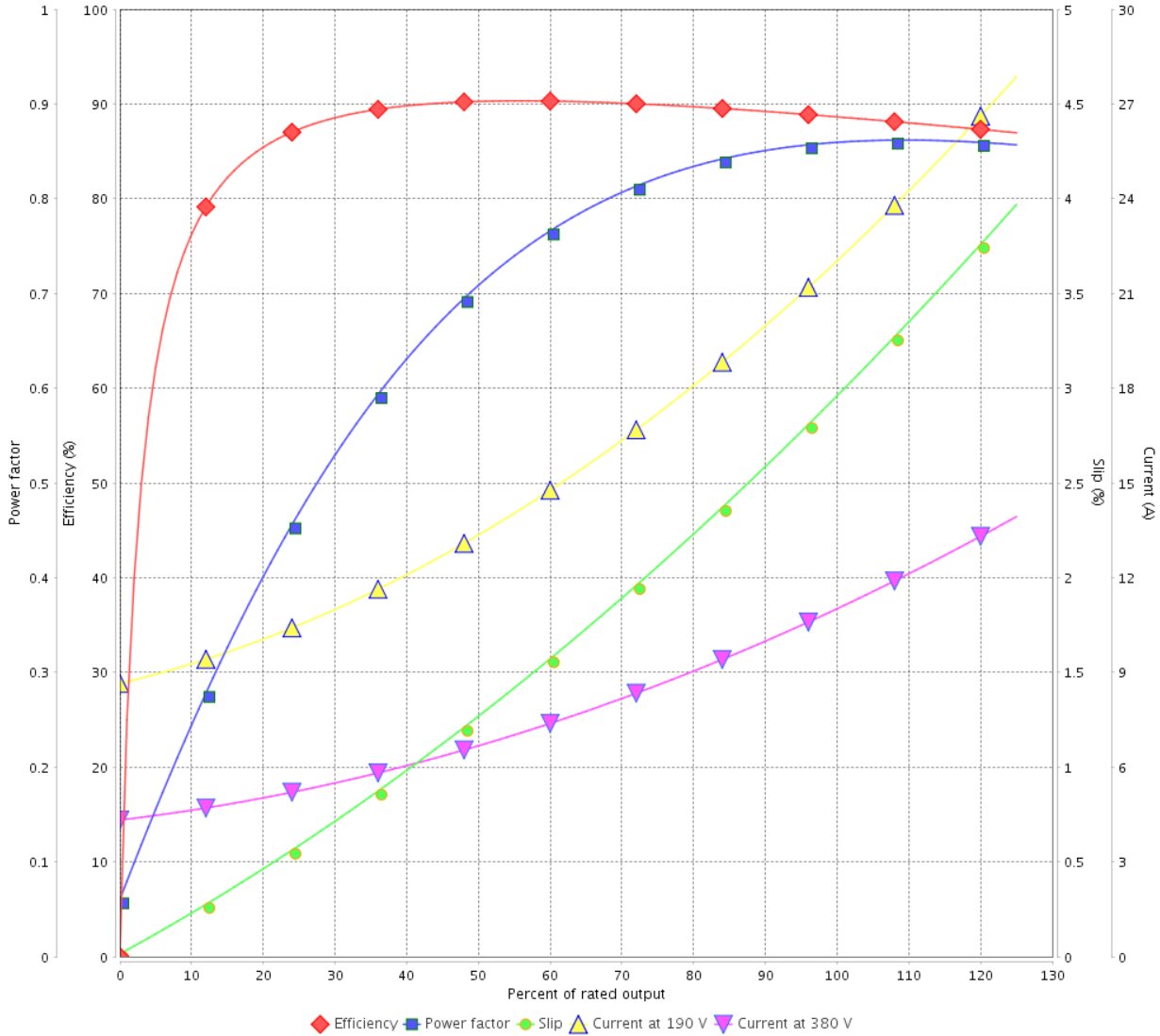
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Performance : 190/380 V 50 Hz 4P

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 Breakdown torque : 250 %
 Rated speed : 1455 rpm

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 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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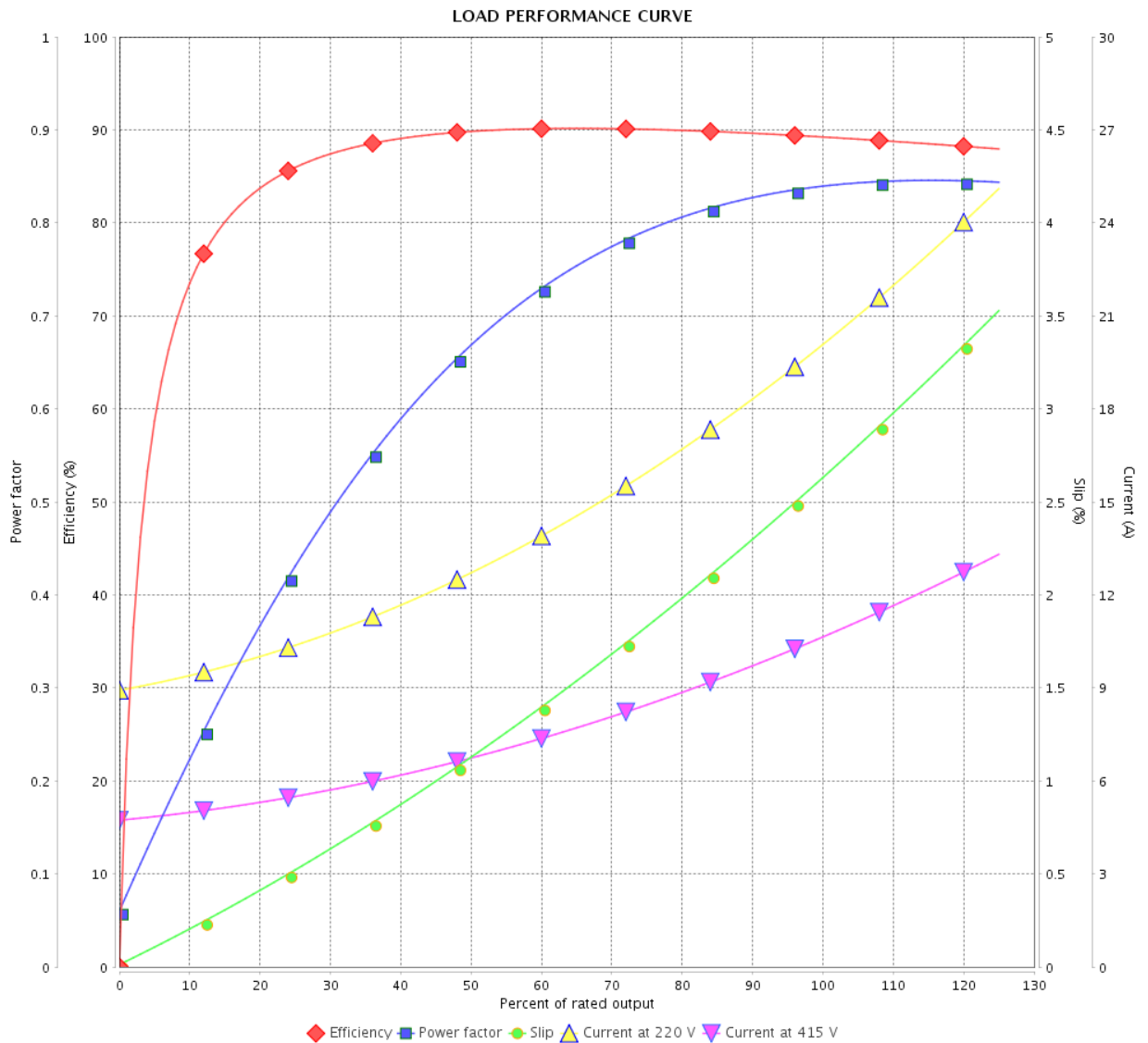


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Performance : 220/415 V 50 Hz 4P

Rated current : 20.0/10.6 A
 LRC : 6.8
 Rated torque : 27.0 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 280 %
 Rated speed : 1460 rpm

Moment of inertia (J) : 0.9380 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase
Product code : 13163401
Catalog # : 00718ET3E213TC-SG

Performance : 230/460 V 60 Hz 4P

| | | | |
|---------------------|---------------|-----------------------|-------------------|
| Rated current | : 18.1/9.07 A | Moment of inertia (J) | : 0.9380 sq.ft.lb |
| LRC | : 7.3 | Duty cycle | : Cont.(S1) |
| Rated torque | : 22.3 ft.lb | Insulation class | : F |
| Locked rotor torque | : 260 % | Service factor | : 1.15 |
| Breakdown torque | : 300 % | Temperature rise | : 80 K |
| Rated speed | : 1770 rpm | Design | : B |

Heating constant

Cooling constant

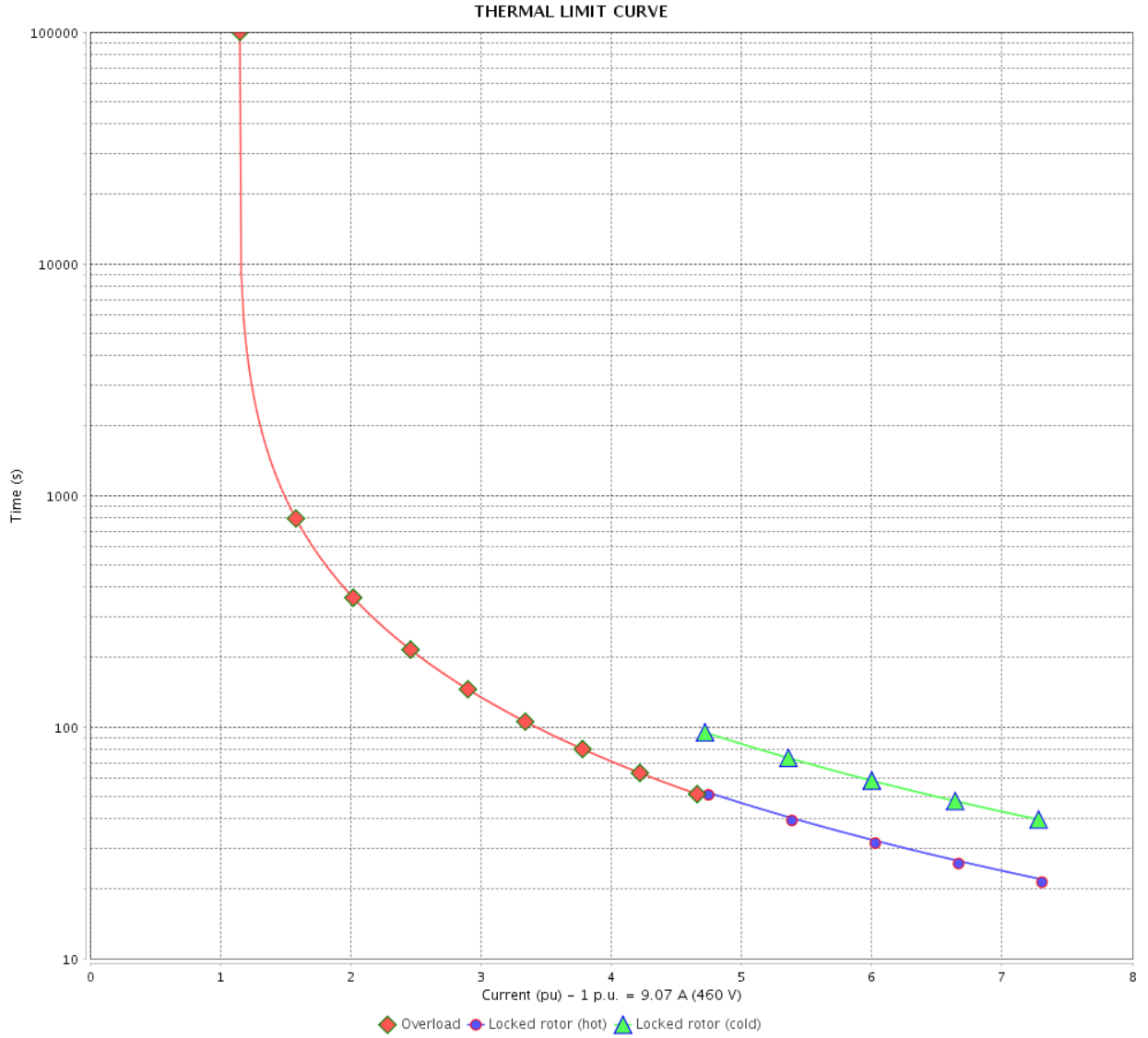
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

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| LRC | : 6.2 | Duty cycle | : Cont.(S1) |
| Rated torque | : 27.1 ft.lb | Insulation class | : F |
| Locked rotor torque | : 190 % | Service factor | : 1.00 |
| Breakdown torque | : 250 % | Temperature rise | : 105 K |
| Rated speed | : 1455 rpm | Design | : B |

Heating constant

Cooling constant

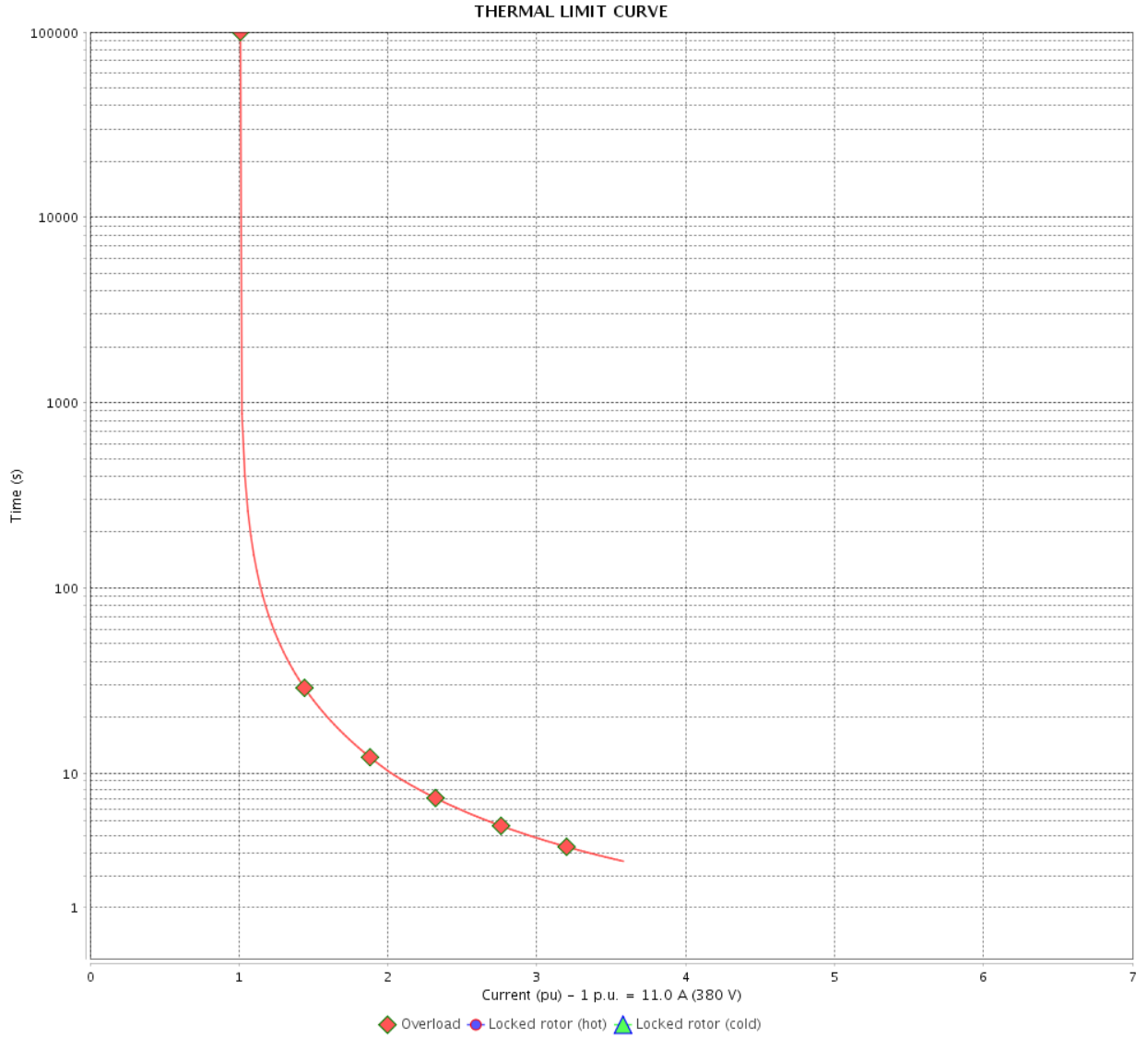
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THERMAL LIMIT CURVE

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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

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Performance : 220/415 V 50 Hz 4P

| | | | |
|---------------------|---------------|-----------------------|-------------------|
| Rated current | : 20.0/10.6 A | Moment of inertia (J) | : 0.9380 sq.ft.lb |
| LRC | : 6.8 | Duty cycle | : Cont.(S1) |
| Rated torque | : 27.0 ft.lb | Insulation class | : F |
| Locked rotor torque | : 220 % | Service factor | : 1.00 |
| Breakdown torque | : 280 % | Temperature rise | : 80 K |
| Rated speed | : 1460 rpm | Design | : B |

Heating constant

Cooling constant

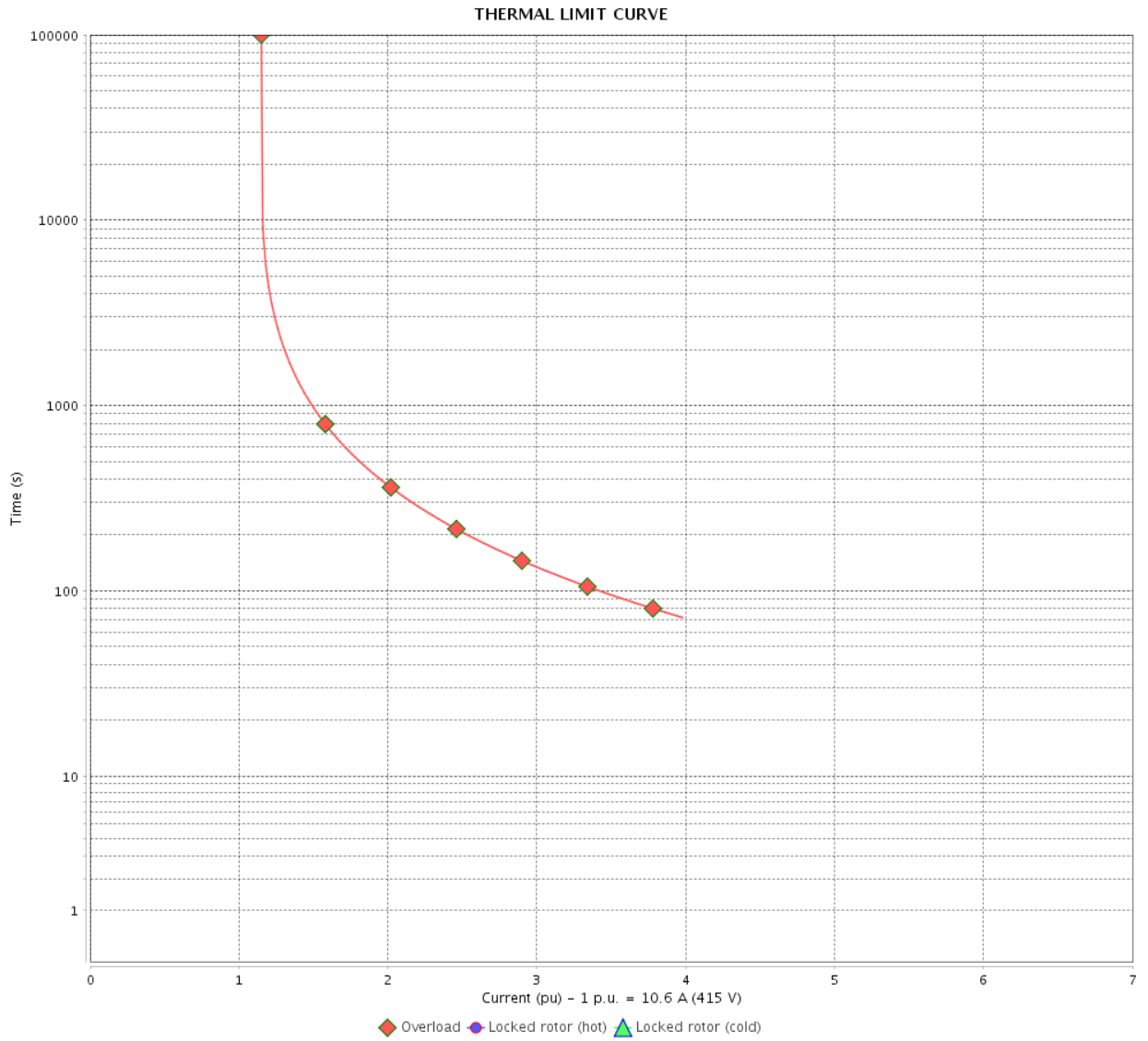
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



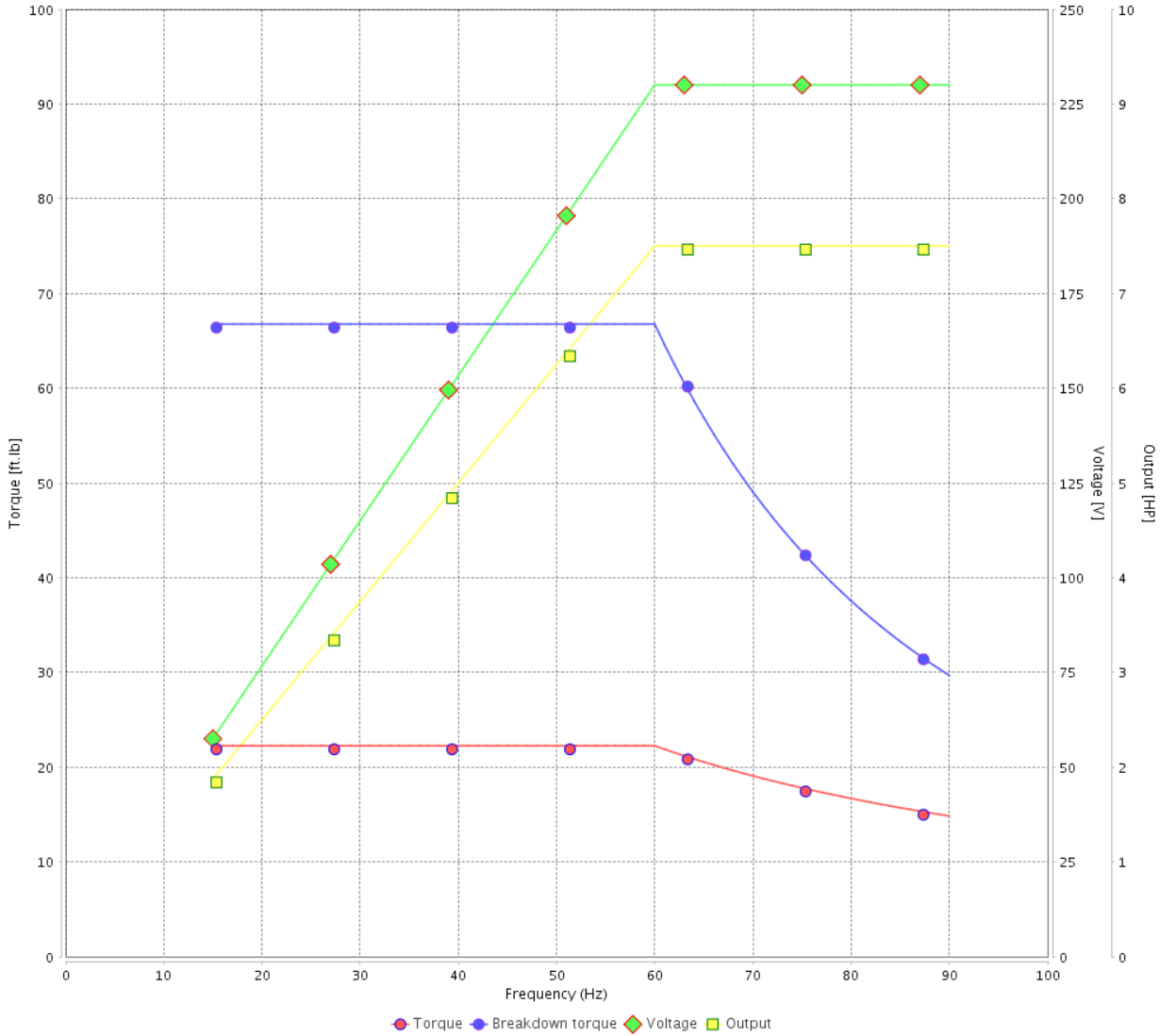
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163401

Catalog # : 00718ET3E213TC-SG

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 18.1/9.07 A
 LRC : 7.3
 Rated torque : 22.3 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 300 %
 Rated speed : 1770 rpm

Moment of inertia (J) : 0.9380 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

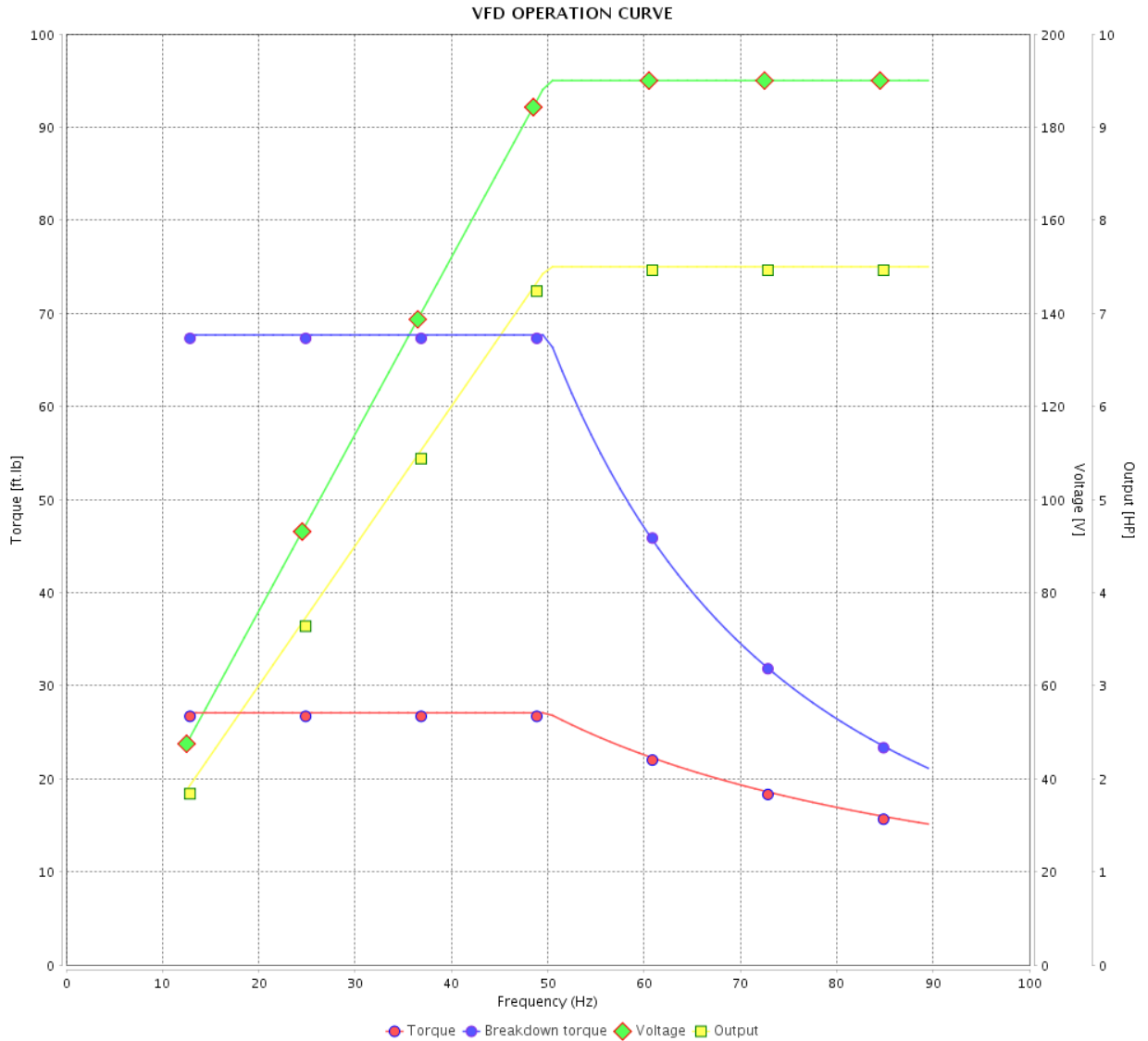


Customer :

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Product code : 13163401

Catalog # : 00718ET3E213TC-SG



Performance : 190/380 V 50 Hz 4P

Rated current : 22.0/11.0 A
 LRC : 6.2
 Rated torque : 27.1 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 250 %
 Rated speed : 1455 rpm

Moment of inertia (J) : 0.9380 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

| Rev. | Changes Summary | Performed | Checked | Date |
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



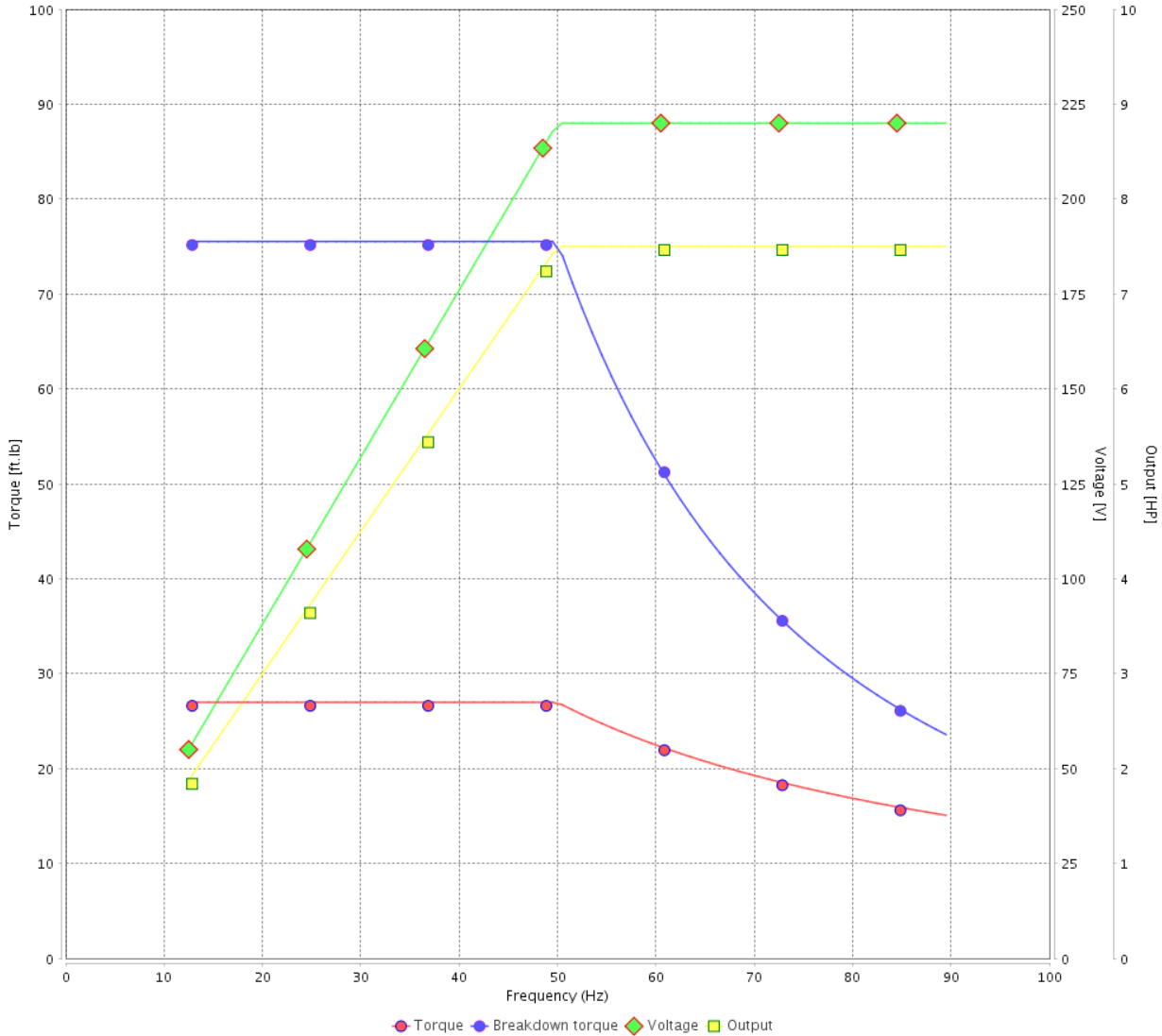
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163401

Catalog # : 00718ET3E213TC-SG

VFD OPERATION CURVE



Performance : 220/415 V 50 Hz 4P

Rated current : 20.0/10.6 A
 LRC : 6.8
 Rated torque : 27.0 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 280 %
 Rated speed : 1460 rpm

Moment of inertia (J) : 0.9380 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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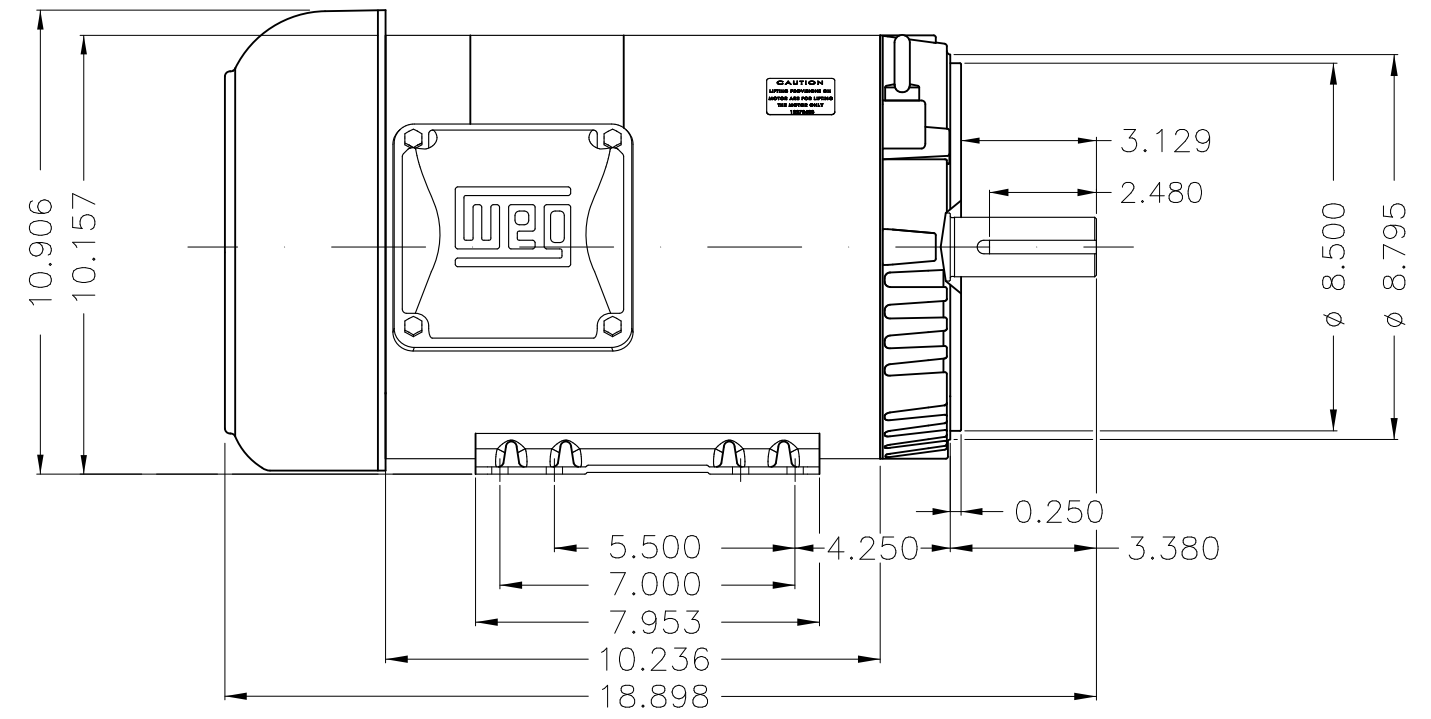
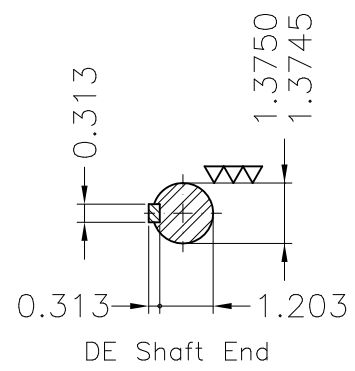
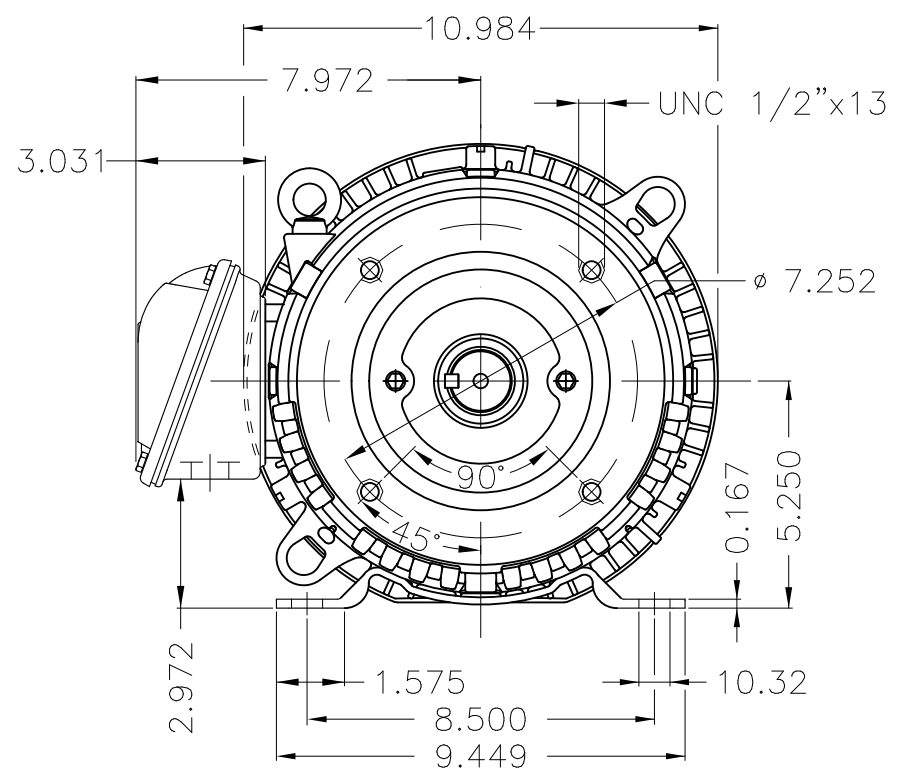
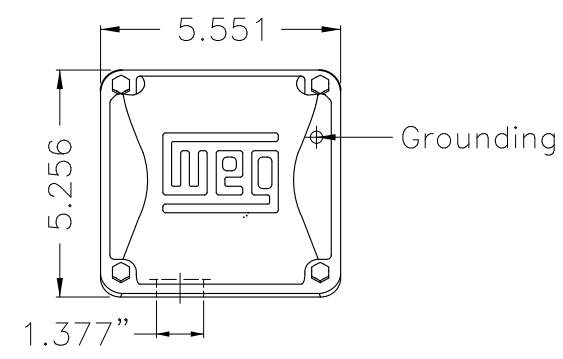
A

B

C

D

E



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 | PIRWBUSER | THREE PH. MOTOR ROLLED STEEL PREM. EFF. | | | | | |
| CHECKED | | FRAME 213/5TC IP55 TEFC | | | | | |
| RELEASED | | | | | | | |
| REL DT. | WMO | Jaragua do Sul | Product Engineering | SHEET | 1 / 1 | | |

7.5 HP 04 Poles 60 Hz

A

PREVIEW
WDD



**NEMA**
Premium

MADE IN MEXICO

MAT: 13163401 CC029A**W01.TE0IC0X0N****MODEL 00718ET3E213TC-SG****28MAR2022 S/N:**

| | | |
|----------------------------|---------------|--------------------------------|
| PH 3 | Hz 60 | HP 7.5 |
| FR 213/5TC | | KW 5.5 |
| DUTY CONT. | | V 230/460 |
| ALT 1000 m.a.s.l. | | A 18.1/9.07 |
| INS CL F AT 80K | IP55 | SFA 20.8/10.4 |
| AMB 40°C | DES B | SF 1.15 |
| ENCL TEFC | CODE H | PF 0.82 |
| USABLE @ 208V 20.1A | | RPM 1770 |
| SF1.00 | | NEMA NOM. EFF 91.7% |

| |
|---|
| ALTERNATE RATING: 7.5HP 50Hz 190-220/380-415V SF1.00 |
| 22.0-19.4/11.0-10.3A 1455RPM EFF 88.6% (IE2) IEC 60034-1 |

Inverter duty motor For 80Hz use on VPWM 1000:1 VT, 4:1 CT

| | | |
|-------------------|--------------------|-------------------------|
| DE 6208-ZZ | ODE 6206-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.

