

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



| | | |
|--|---|------|
| Customer : | | |
| Product line | : NEMA Premium Efficiency Three-Phase | |
| Product code : | 13163452 | |
| Catalog # : | 01518OT3E254TC-SG | |
| Frame | : 254/6TC | |
| Insulation class | : F | |
| Duty cycle | : Cont.(S1) | |
| Ambient temperature | : -20°C to +40°C | |
| Altitude | : 1000 m.a.s.l. | |
| Design | : B | |
| Cooling method | : IC01 - ODP | |
| Mounting | : F-1 | |
| Rotation ¹ | : Both (CW and CCW) | |
| Starting method | : Direct On Line | |
| Approx. weight ² | : 203 lb | |
| Moment of inertia (J) | : 1.82 sq.ft.lb | |
| Output [HP] | 15 | |
| Poles | 4 | |
| Frequency [Hz] | 60 | |
| Rated voltage [V] | 230/460 | |
| Rated current [A] | 37.2/18.6 | |
| L. R. Amperes [A] | 249/125 | |
| LRC [A] | 6.7x(Code H) | |
| No load current [A] | 19.0/9.50 | |
| Rated speed [RPM] | 1775 | |
| Slip [%] | 1.39 | |
| Rated torque [ft.lb] | 44.4 | |
| Locked rotor torque [%] | 240 | |
| Breakdown torque [%] | 300 | |
| Service factor | 1.15 | |
| Temperature rise | 80 K | |
| Locked rotor time | 30s (cold) 17s (hot) | |
| Noise level ² | 64.0 dB(A) | |
| Efficiency (%) | 25% | 91.0 |
| | 50% | 91.7 |
| | 75% | 92.4 |
| | 100% | 93.0 |
| Power Factor | 25% | 0.36 |
| | 50% | 0.62 |
| | 75% | 0.73 |
| | 100% | 0.80 |
| Bearing type | : <u>Drive end</u> 6309 Z C3 <u>Non drive end</u> 6208 Z C3 | |
| Sealing | : Without Without | |
| | : Bearing Seal Bearing Seal | |
| Lubrication interval | : 20000 h 20000 h | |
| Lubricant amount | : 13 g 8 g | |
| Lubricant type | : Mobil Polyrex EM | |
| Foundation loads | Max. traction : 541 lb | |
| | Max. compression : 744 lb | |
| Notes | | |
| USABLE @208V 41.1A SF 1.00 SFA 41.1A | | |
| 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 by | Performed | |
| Checked by | Checked | |
| Date | Date | |
| 13/04/2022 | | |
| Page | Revision | |
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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



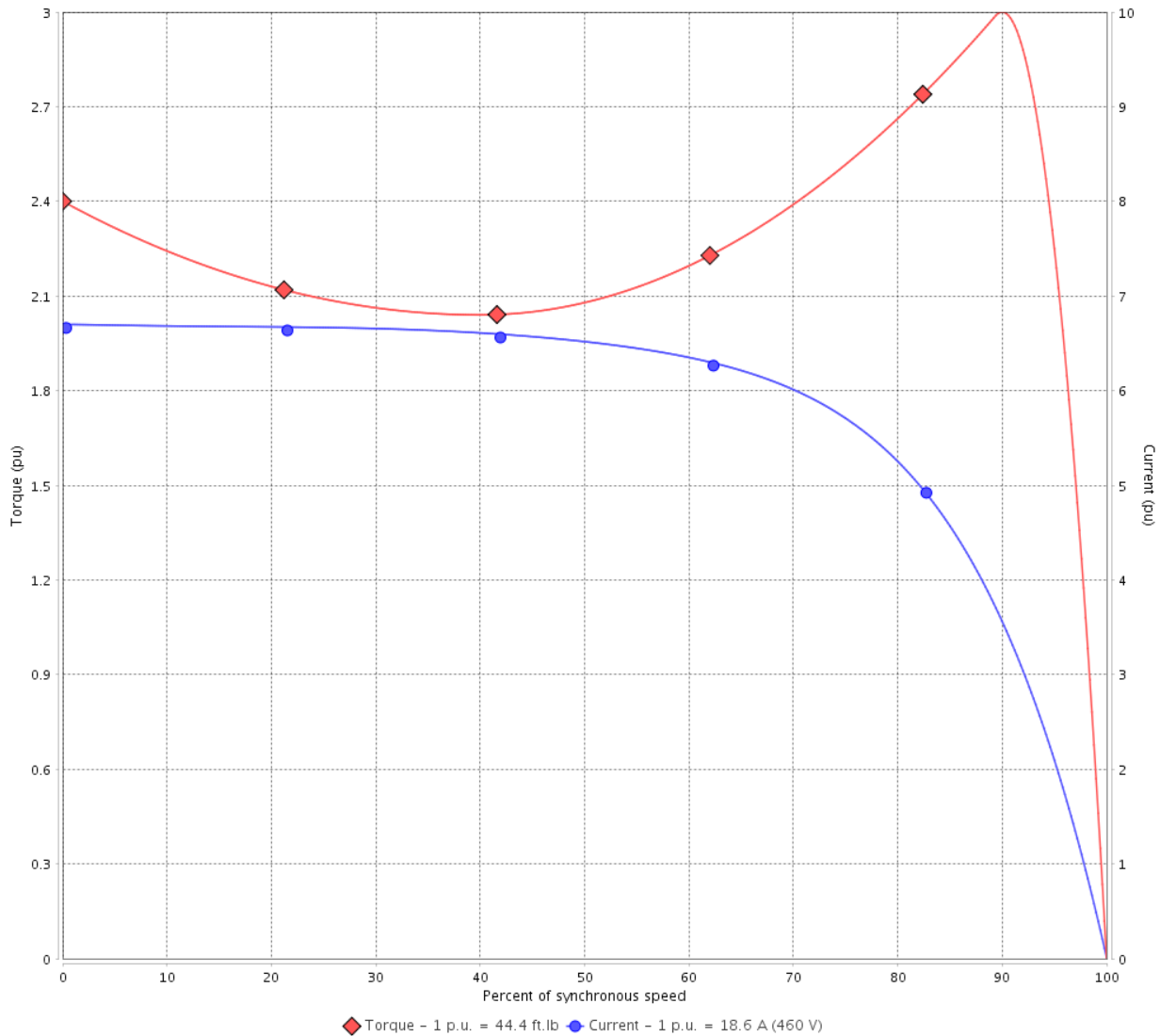
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163452

Catalog # : 01518OT3E254TC-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 37.2/18.6 A
 LRC : 6.7
 Rated torque : 44.4 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 300 %
 Rated speed : 1775 rpm

Moment of inertia (J) : 1.82 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 30s (cold) 17s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



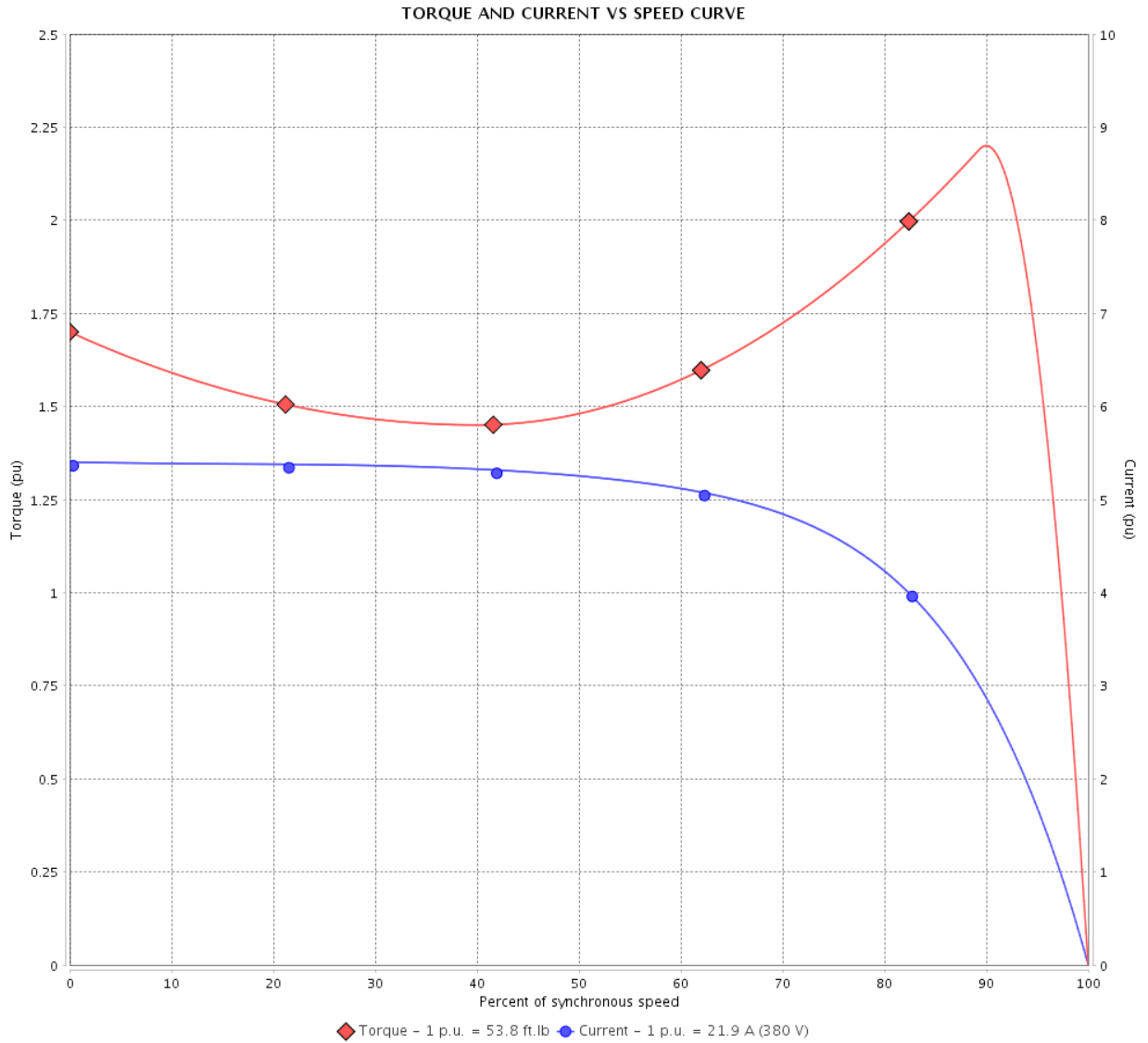
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163452

Catalog # : 01518OT3E254TC-SG



Performance : 190/380 V 50 Hz 4P

Rated current : 43.8/21.9 A
 LRC : 5.4
 Rated torque : 53.8 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 220 %
 Rated speed : 1465 rpm

Moment of inertia (J) : 1.82 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



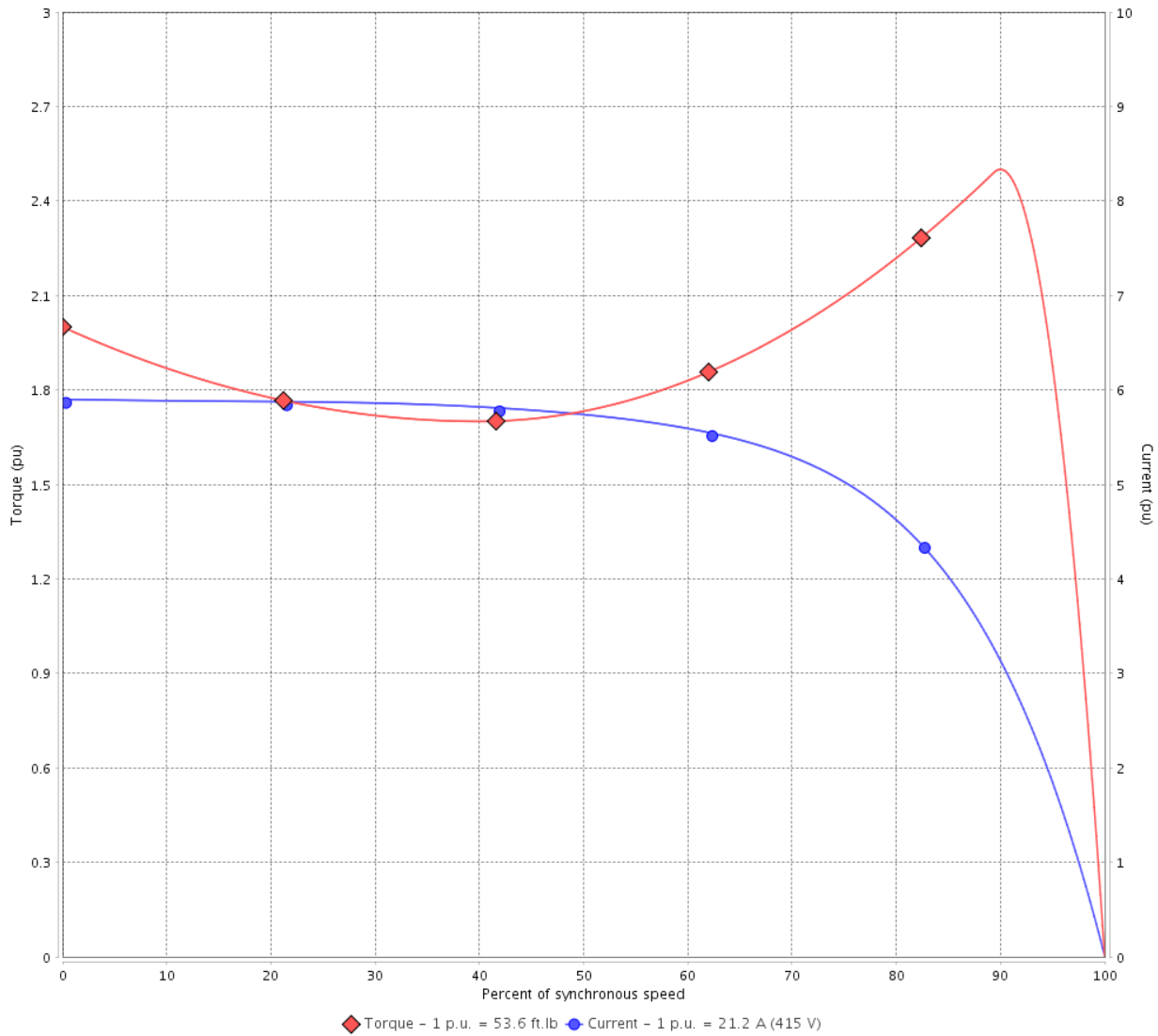
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163452

Catalog # : 015180T3E254TC-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 4P

| | | | |
|---------------------|---------------|-----------------------|-----------------|
| Rated current | : 40.0/21.2 A | Moment of inertia (J) | : 1.82 sq.ft.lb |
| LRC | : 5.9 | Duty cycle | : Cont.(S1) |
| Rated torque | : 53.6 ft.lb | Insulation class | : F |
| Locked rotor torque | : 200 % | Service factor | : 1.15 |
| Breakdown torque | : 250 % | Temperature rise | : 80 K |
| Rated speed | : 1470 rpm | Design | : B |

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

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

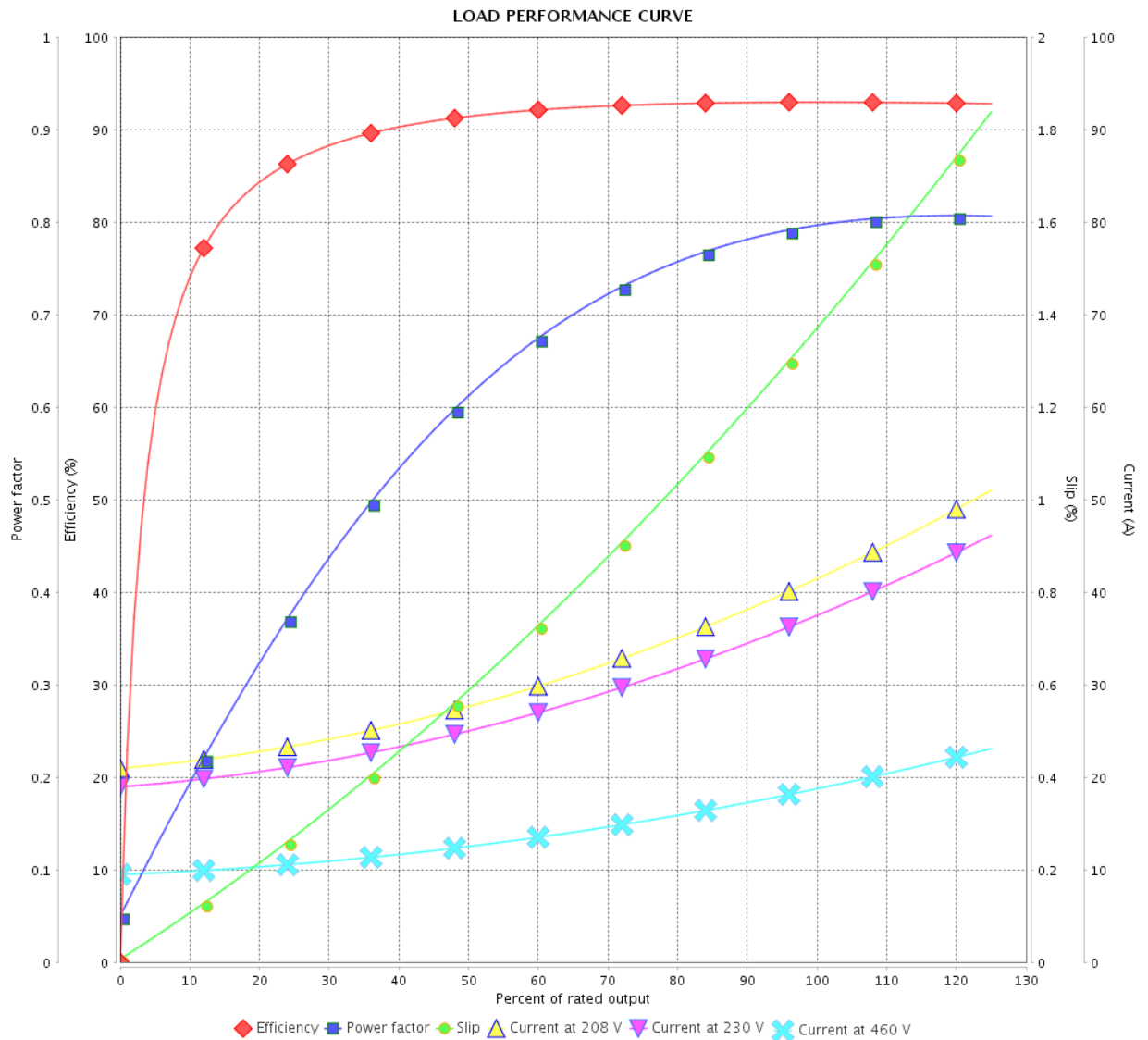


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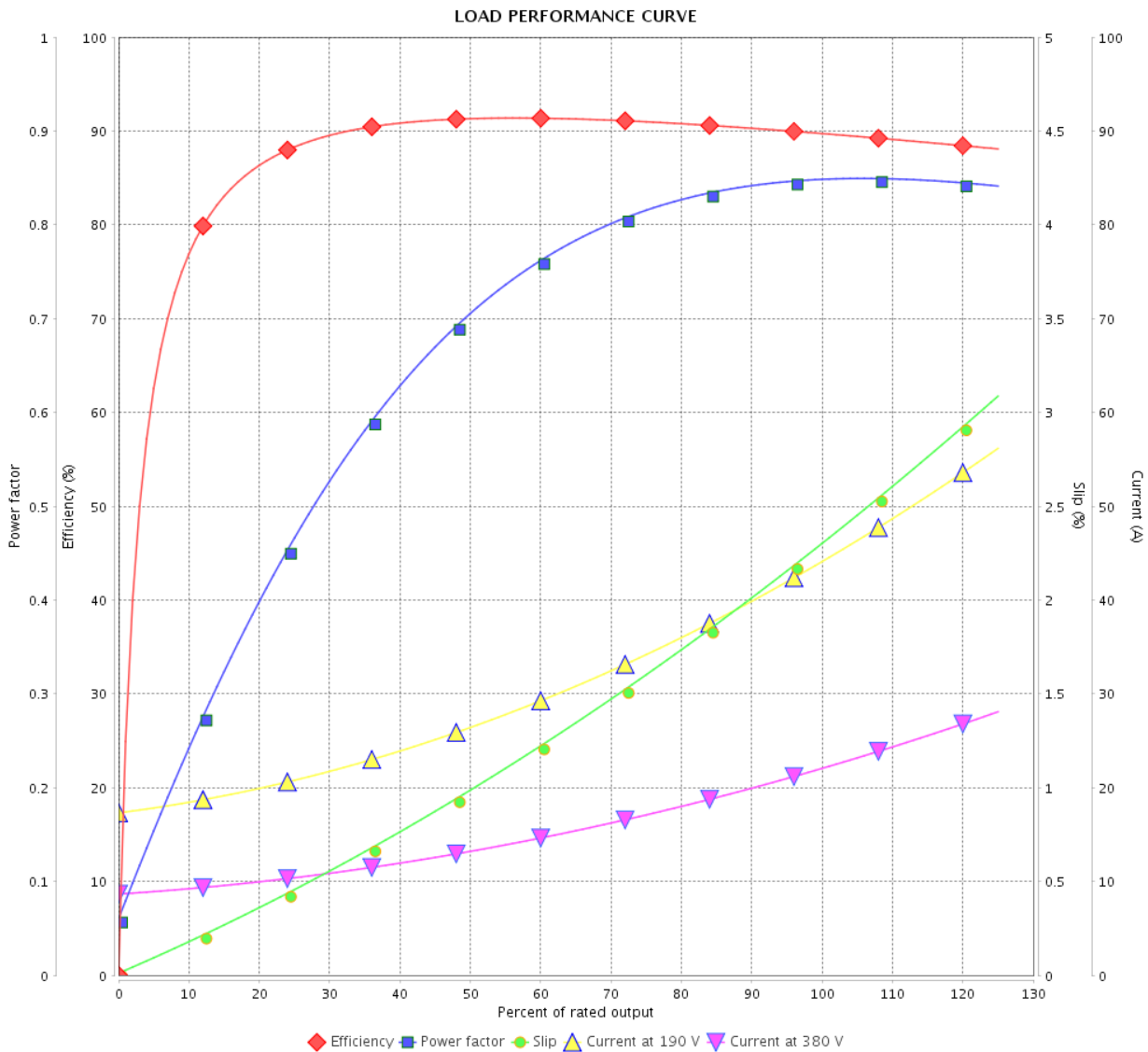


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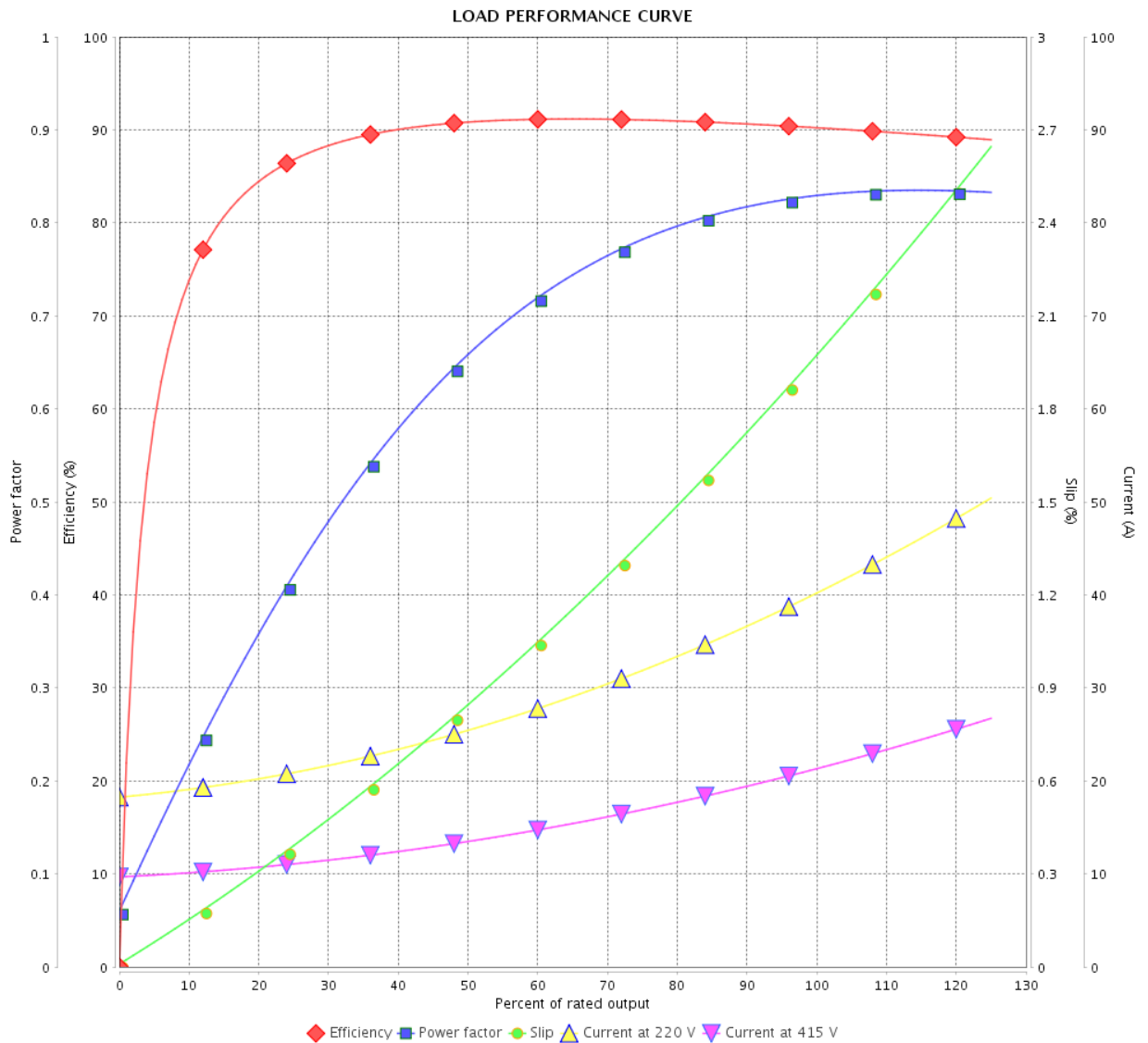


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Rated current : 40.0/21.2 A
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THERMAL LIMIT CURVE

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Customer :

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Product code : 13163452
Catalog # : 01518OT3E254TC-SG

Performance : 230/460 V 60 Hz 4P

| | | | |
|---------------------|---------------|-----------------------|-----------------|
| Rated current | : 37.2/18.6 A | Moment of inertia (J) | : 1.82 sq.ft.lb |
| LRC | : 6.7 | Duty cycle | : Cont.(S1) |
| Rated torque | : 44.4 ft.lb | Insulation class | : F |
| Locked rotor torque | : 240 % | Service factor | : 1.15 |
| Breakdown torque | : 300 % | Temperature rise | : 80 K |
| Rated speed | : 1775 rpm | Design | : B |

Heating constant

Cooling constant

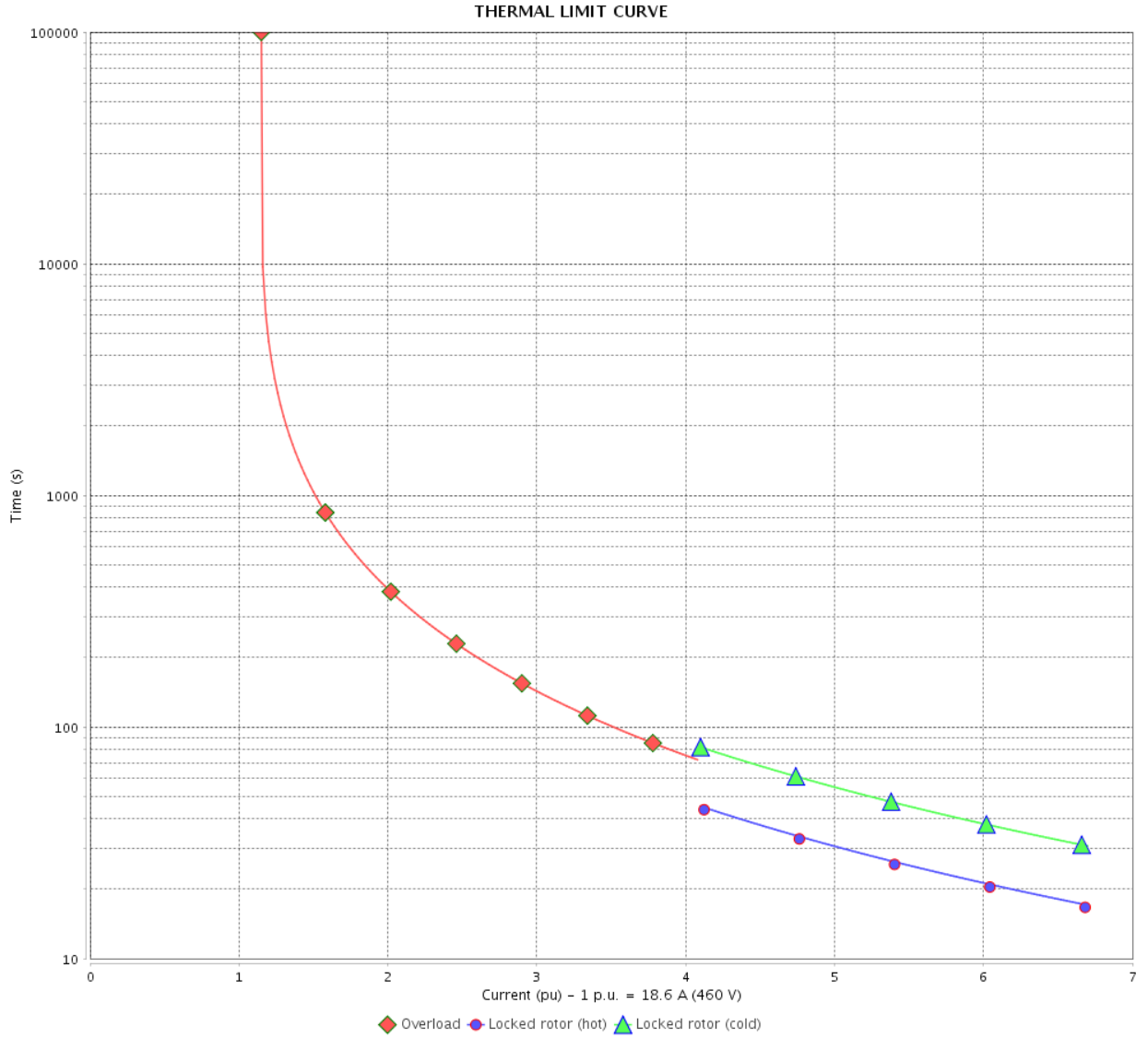
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THERMAL LIMIT CURVE

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Heating constant

Cooling constant

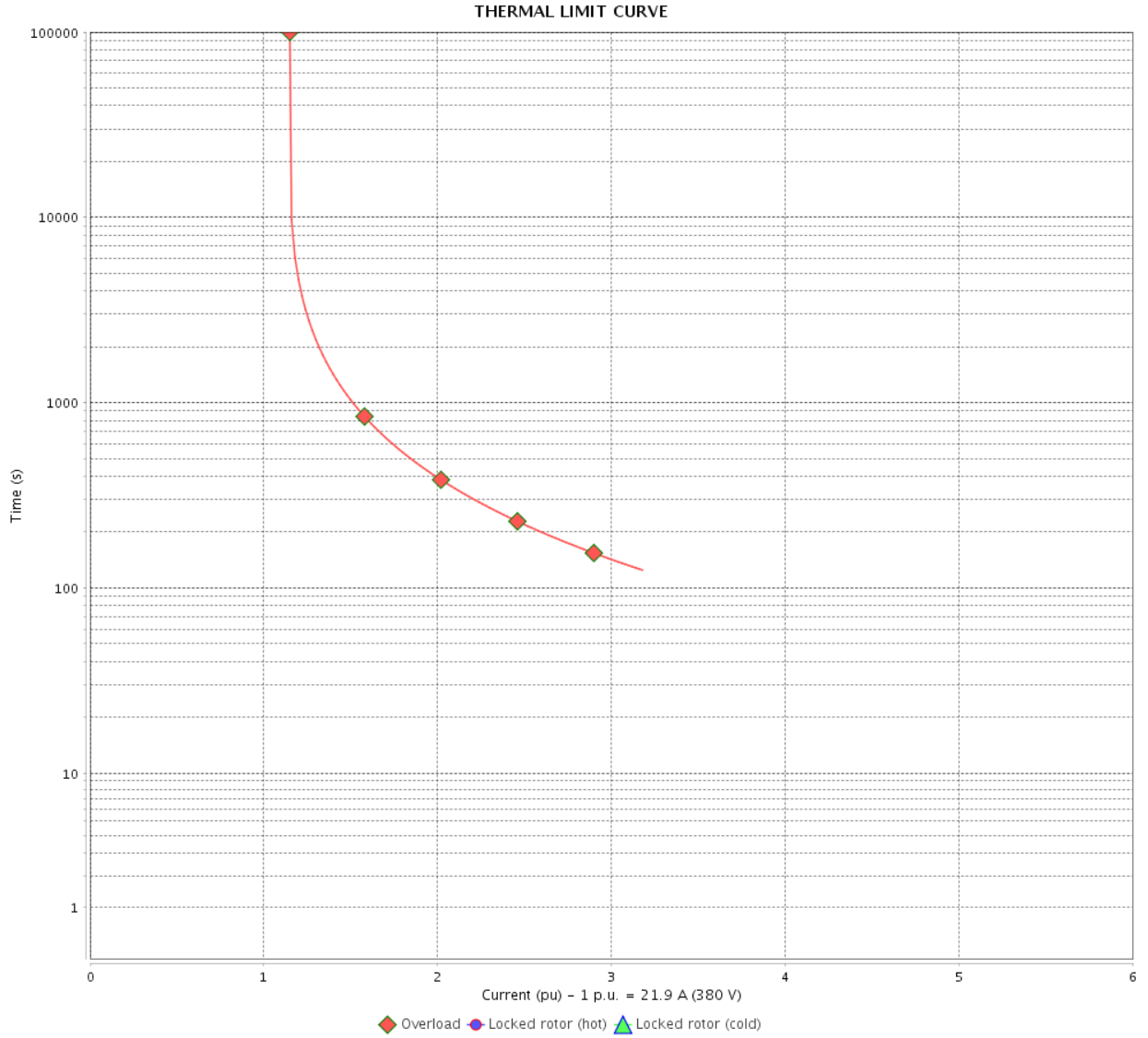
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|---------------------|---------------|-----------------------|-----------------|
| Rated current | : 40.0/21.2 A | Moment of inertia (J) | : 1.82 sq.ft.lb |
| LRC | : 5.9 | Duty cycle | : Cont.(S1) |
| Rated torque | : 53.6 ft.lb | Insulation class | : F |
| Locked rotor torque | : 200 % | Service factor | : 1.15 |
| Breakdown torque | : 250 % | Temperature rise | : 80 K |
| Rated speed | : 1470 rpm | Design | : B |

Heating constant

Cooling constant

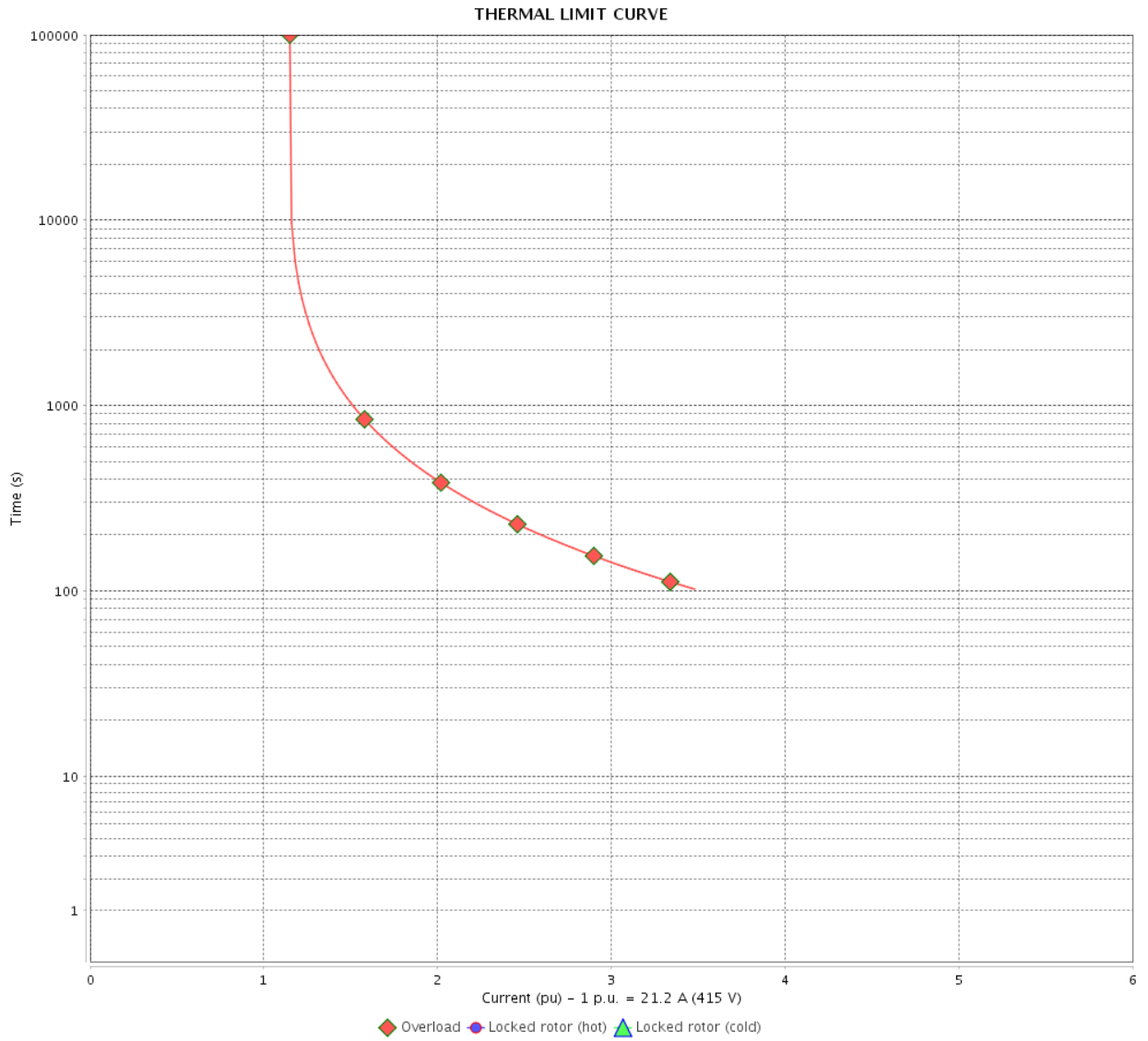
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THERMAL LIMIT CURVE

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



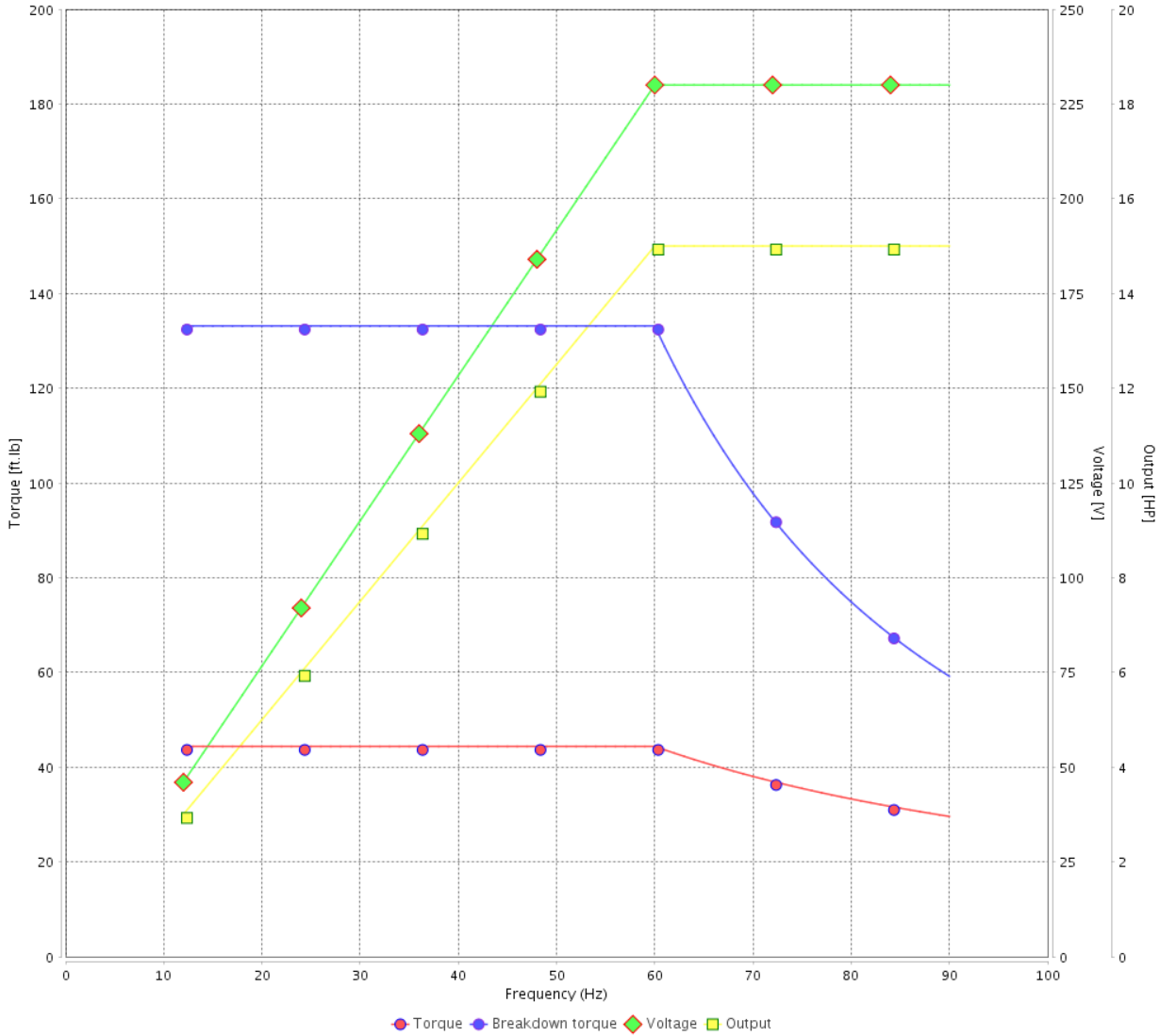
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VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 37.2/18.6 A
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 Rated torque : 44.4 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 300 %
 Rated speed : 1775 rpm

Moment of inertia (J) : 1.82 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

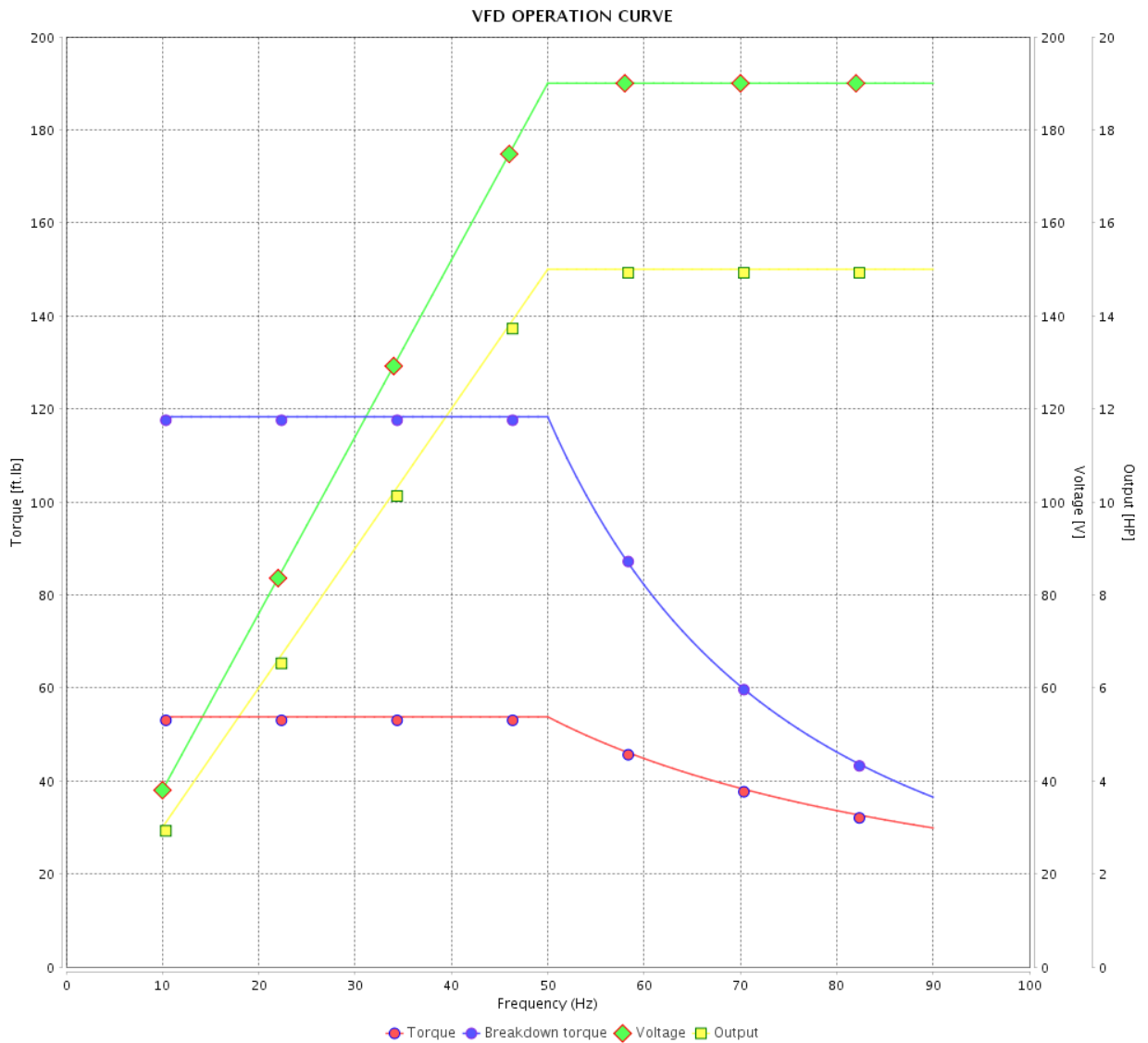


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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



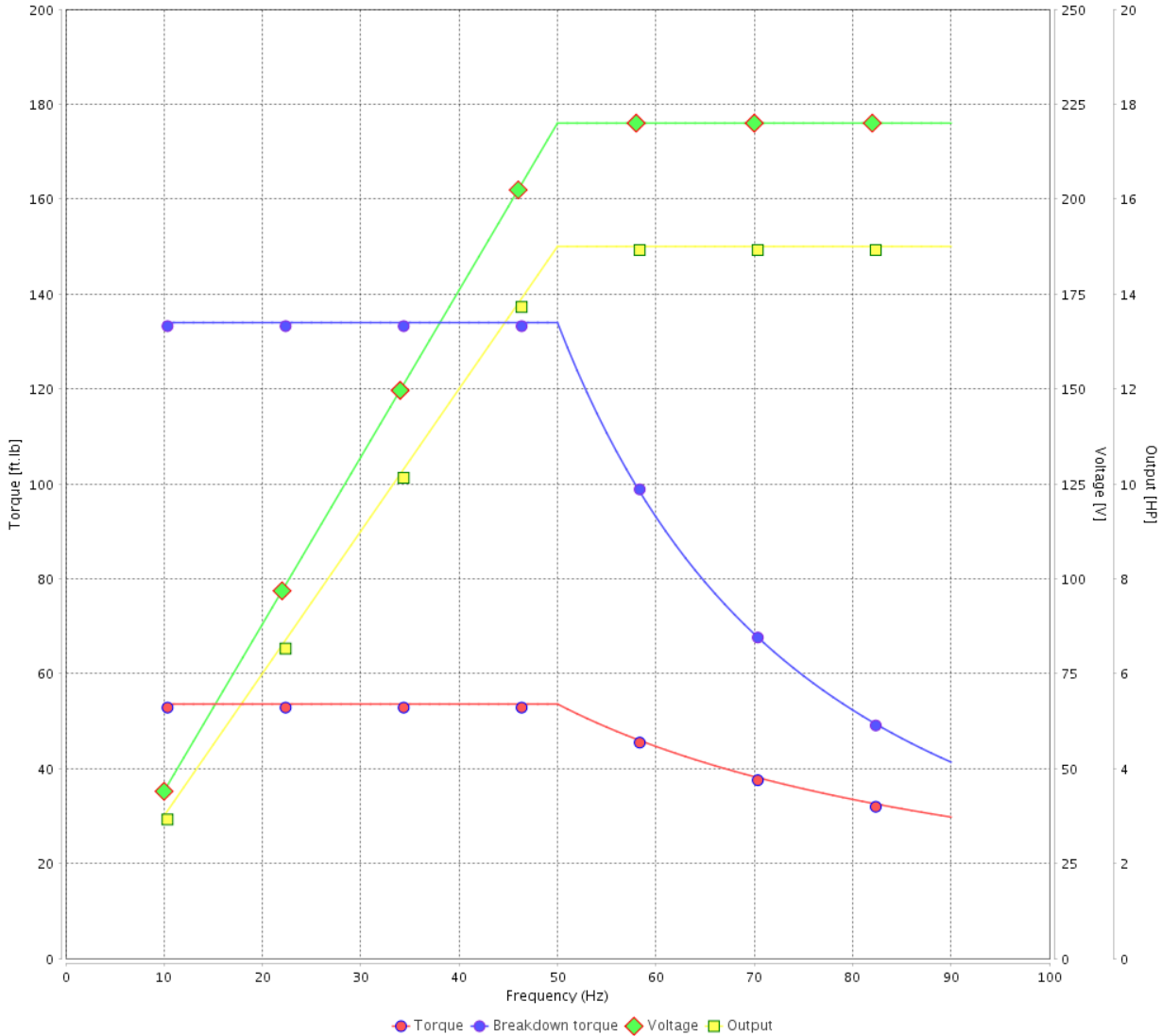
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VFD OPERATION CURVE

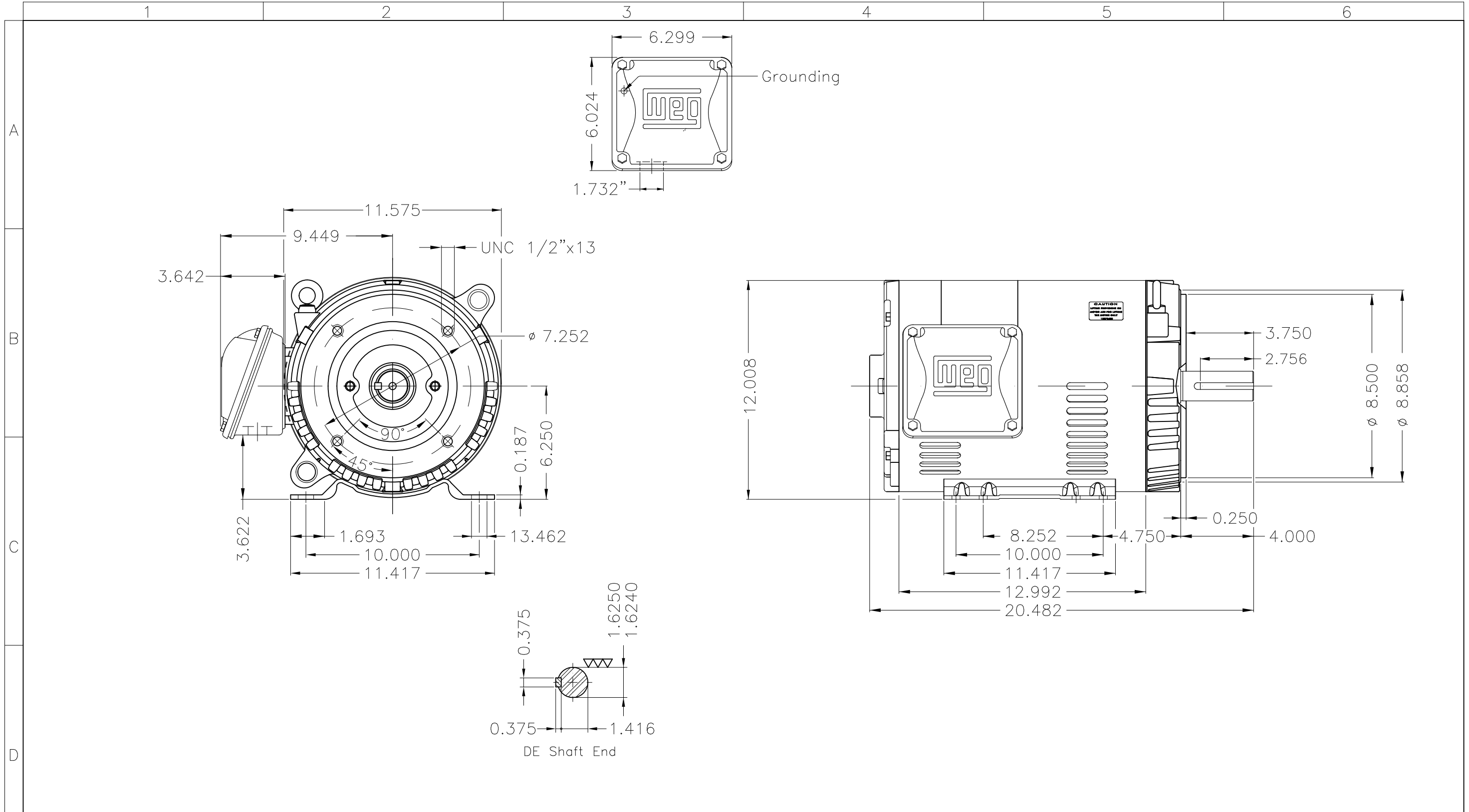


Performance : 220/415 V 50 Hz 4P

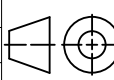
Rated current : 40.0/21.2 A
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 Breakdown torque : 250 %
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Internal AEGIS ground ring on the DE
 Color Munsell N 1 matte black
 Painting plan 207N
 Mounting F-1/B34R(D)

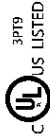
| ECM | LOC | SUMMARY OF MODIFICATIONS | EXECUTED | CHECKED | RELEASED | DATE | VER |
|----------|-----------|---|---------------------|-------------|----------|------|-----|
| EXECUTED | PIRWBUSER |  THREE PH. MOTOR ROLLED STEEL PREM. EFF. FRAME 254/6TC IP21 ODP | | | | | |
| CHECKED | | | | | | | |
| RELEASED | | | | | | | |
| REL DT. | | WMO Jaragua do Sul | Product Engineering | SHEET 1 / 1 | | | |

15 HP 04 Poles 60 Hz

A

PREVIEW
WDD



**NEMA**
Premium

3PT9



Energy Verified

MADE IN MEXICO

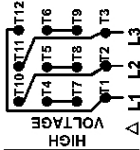
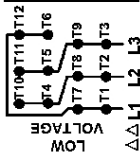
MAT: 13163452 CC029A**W01.T00IC0X0N****MODEL 015180T3E254TC-SG****16FEB2022 S/N:**

| | | |
|----------------------------|---------------|--------------------------------|
| PH 3 | Hz 60 | HP 15 |
| FR 254/6TC | | KW 11 |
| DUTY CONT. | | V 230/460 |
| ALT 1000 m.a.s.l. | | A 37.2/18.6 |
| INS CL F AT 80K | | SFA 42.8/21.4 |
| AMB 40°C | DES B | SF 1.15 |
| ENCL ODP | CODE H | PF 0.80 |
| USABLE @ 208V 41.1A | | RPM 1775 |
| SF1.00 | | NEMA NOM. EFF 93.0% |

ALTERNATE RATING: 15HP 50Hz 190-220/380-415V SF1.15
43.8-39.4/21.9-20.9A 1465RPM EFF 89.7% (IE1) IEC 60034-1

Inverter duty motor For 80Hz use on VPWM 1000:1 VT, 5:1 CT

DE 6309-Z-C3 ODE 6208-Z-C3 MOBIL POLYREX EM 20000h



T1-BLU T2-WHT
T3-ORG T4-YEL
T5-BLK T6-GRY
T7-PNK T8-RED
T9-BRK RED
T10-CURRY
T11-GRN T12-VLT

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.

