

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

| | | | | | | | | | | | | | | | | | | | |
|--|--|----------------------|------------------|----------------------|--------------|-----------|---------|---------|----------|--------|----------------------|-----------|---------|------------------|--------|------|----------------|--------------------|--|
| Customer : | | | | | | | | | | | | | | | | | | | |
| Product line | : NEMA Premium Efficiency Three-Phase | | | | | | | | | | | | | | | | | | |
| Product code : | 14387174 | | | | | | | | | | | | | | | | | | |
| Catalog # : | 04036ET3H324TS-W22G | | | | | | | | | | | | | | | | | | |
| Frame : 324/6TS Output : 40 HP (30 kW) Poles : 2 Frequency : 60 Hz Rated voltage : 575 V Rated current : 37.0 A L. R. Amperes : 233 A LRC : 6.3x(Code G) No load current : 10.4 A Rated speed : 3560 rpm Slip : 1.11 % Rated torque : 59.1 ft.lb Locked rotor torque : 250 % Breakdown torque : 240 % Insulation class : F Service factor : 1.25 Moment of inertia (J) : 4.90 sq.ft.lb Design : B | Locked rotor time : 39s (cold) 22s (hot) Temperature rise : 80 K Duty cycle : Cont.(S1) Ambient temperature : -20°C to +40°C Altitude : 1000 m.a.s.l. Protection degree : IP55 Cooling method : IC411 - TEFC Mounting : F-1 Rotation ¹ : Both (CW and CCW) Noise level ² : 76.0 dB(A) Starting method : Direct On Line Approx. weight ³ : 547 lb | | | | | | | | | | | | | | | | | | |
| Output | 25% 50% 75% 100% | | | | | | | | | | | | | | | | | | |
| Efficiency (%) | 91.6 91.7 92.4 92.4 | | | | | | | | | | | | | | | | | | |
| Power Factor | 0.55 0.80 0.86 0.88 | | | | | | | | | | | | | | | | | | |
| Foundation loads | | | | | | | | | | | | | | | | | | | |
| Max. traction | : 270 lb | | | | | | | | | | | | | | | | | | |
| Max. compression | : 817 lb | | | | | | | | | | | | | | | | | | |
| | <table border="0"> <tr> <td></td> <td style="text-align: center;"><u>Drive end</u></td> <td style="text-align: center;"><u>Non drive end</u></td> </tr> <tr> <td>Bearing type</td> <td>: 6312 C3</td> <td>6212 C3</td> </tr> <tr> <td>Sealing</td> <td>: V'Ring</td> <td>V'Ring</td> </tr> <tr> <td>Lubrication interval</td> <td>: 12000 h</td> <td>15000 h</td> </tr> <tr> <td>Lubricant amount</td> <td>: 21 g</td> <td>13 g</td> </tr> <tr> <td>Lubricant type</td> <td colspan="2">: Mobil Polyrex EM</td> </tr> </table> | | <u>Drive end</u> | <u>Non drive end</u> | Bearing type | : 6312 C3 | 6212 C3 | Sealing | : V'Ring | V'Ring | Lubrication interval | : 12000 h | 15000 h | Lubricant amount | : 21 g | 13 g | Lubricant type | : Mobil Polyrex EM | |
| | <u>Drive end</u> | <u>Non drive end</u> | | | | | | | | | | | | | | | | | |
| Bearing type | : 6312 C3 | 6212 C3 | | | | | | | | | | | | | | | | | |
| Sealing | : V'Ring | V'Ring | | | | | | | | | | | | | | | | | |
| Lubrication interval | : 12000 h | 15000 h | | | | | | | | | | | | | | | | | |
| Lubricant amount | : 21 g | 13 g | | | | | | | | | | | | | | | | | |
| Lubricant type | : Mobil Polyrex EM | | | | | | | | | | | | | | | | | | |
| Notes | | | | | | | | | | | | | | | | | | | |
| 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 / 6 | | | | | | | | | | | | | | | | |

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



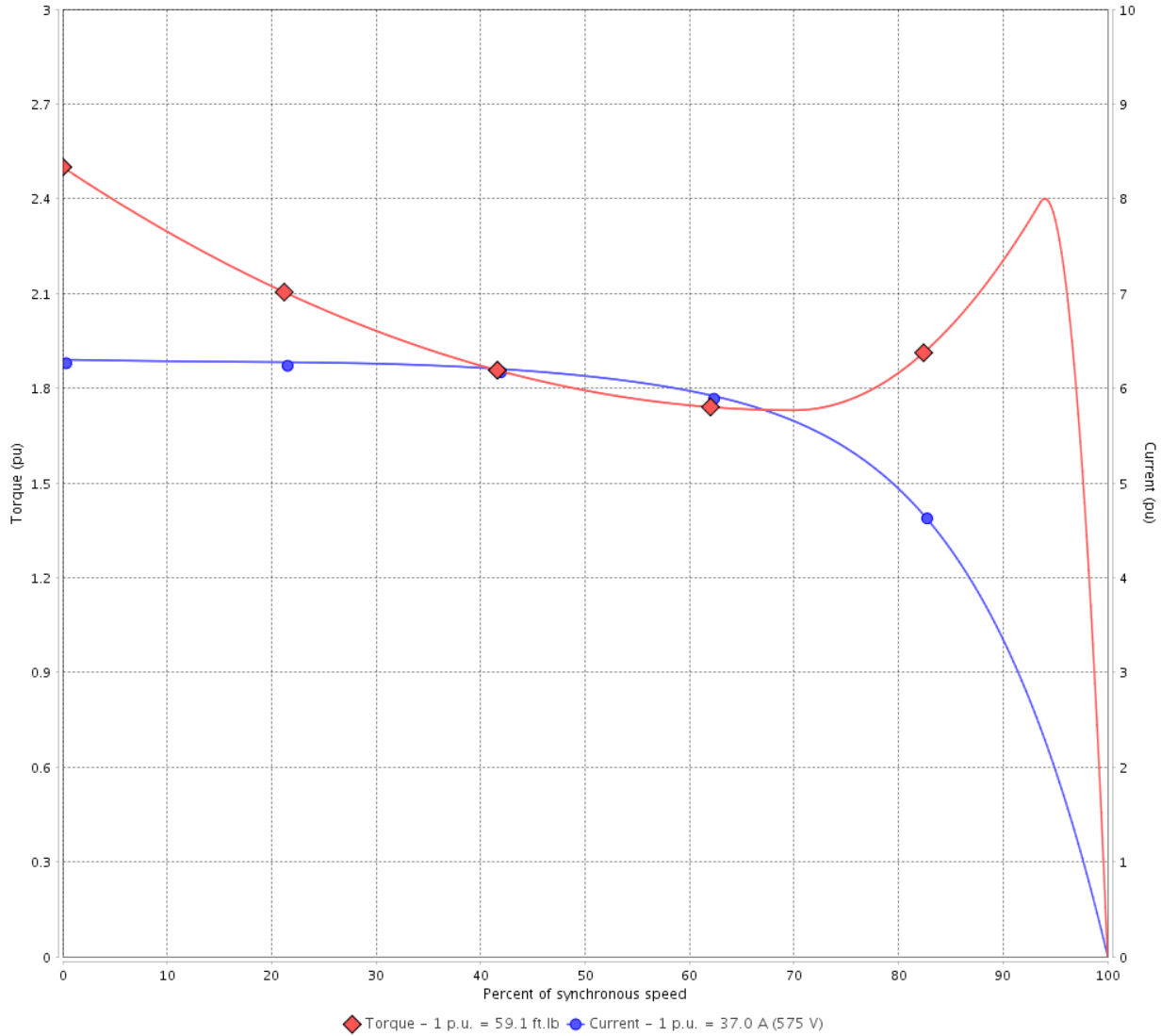
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14387174

Catalog # : 04036ET3H324TS-W22G

TORQUE AND CURRENT VS SPEED CURVE



Performance : 575 V 60 Hz 2P

| | | | |
|---------------------|--------------|-----------------------|-----------------|
| Rated current | : 37.0 A | Moment of inertia (J) | : 4.90 sq.ft.lb |
| LRC | : 6.3 | Duty cycle | : Cont.(S1) |
| Rated torque | : 59.1 ft.lb | Insulation class | : F |
| Locked rotor torque | : 250 % | Service factor | : 1.25 |
| Breakdown torque | : 240 % | Temperature rise | : 80 K |
| Rated speed | : 3560 rpm | Design | : B |

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

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|---------------|----------|
| | | | | |
| Performed by | | | Page 2 / 6 | Revision |
| Checked by | | | | |
| Date | 13/04/2022 | | | |

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

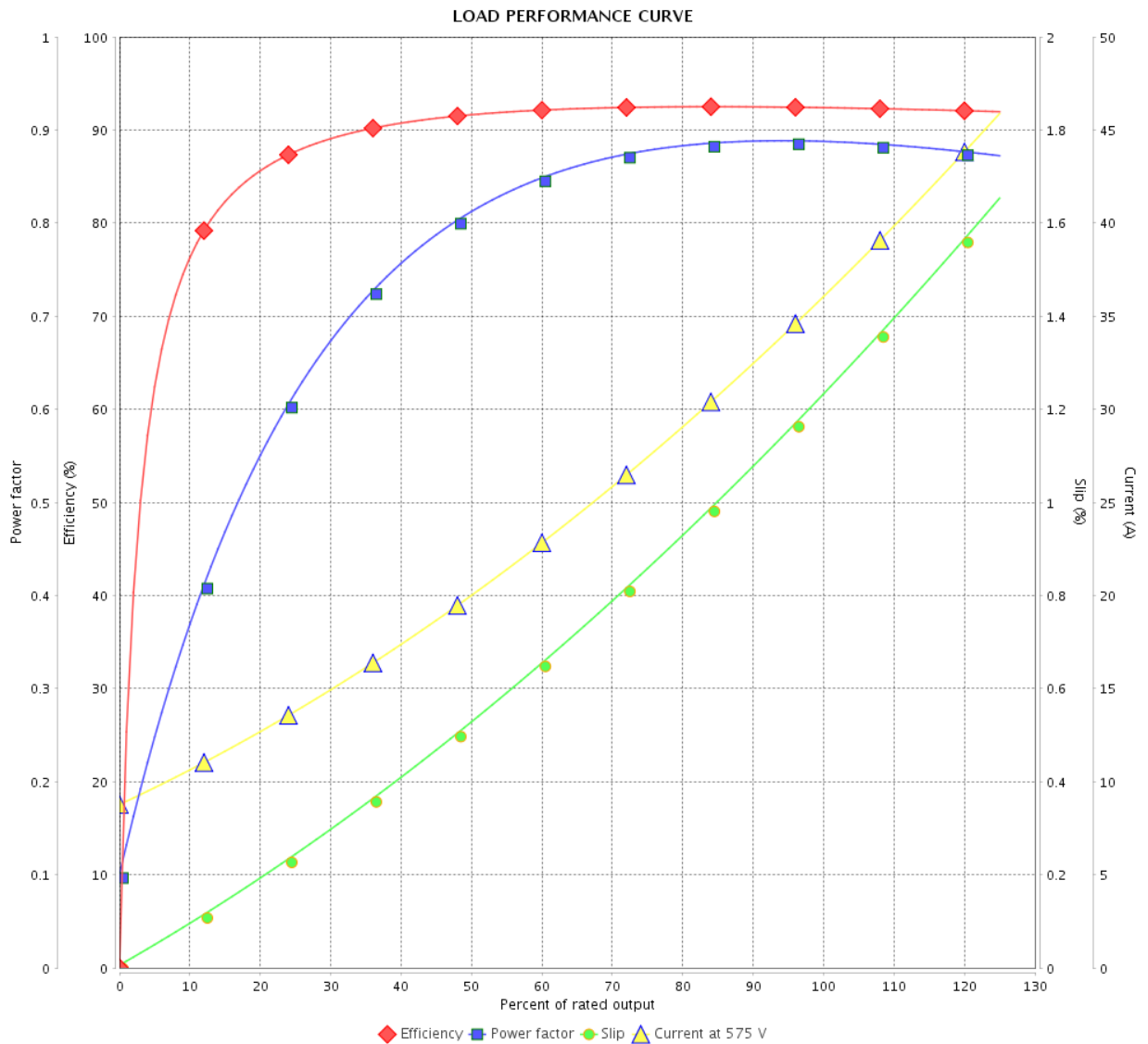


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14387174

Catalog # : 04036ET3H324TS-W22G



Performance : 575 V 60 Hz 2P

Rated current : 37.0 A
 LRC : 6.3
 Rated torque : 59.1 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 240 %
 Rated speed : 3560 rpm

Moment of inertia (J) : 4.90 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|------------|---------|----------|
| | | | | |
| Performed by | | Page | | Revision |
| Checked by | | 3 / 6 | | |
| Date | | 13/04/2022 | | |

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
Product code : 14387174
Catalog # : 04036ET3H324TS-W22G

Performance : 575 V 60 Hz 2P

| | | | |
|---------------------|--------------|-----------------------|-----------------|
| Rated current | : 37.0 A | Moment of inertia (J) | : 4.90 sq.ft.lb |
| LRC | : 6.3 | Duty cycle | : Cont.(S1) |
| Rated torque | : 59.1 ft.lb | Insulation class | : F |
| Locked rotor torque | : 250 % | Service factor | : 1.25 |
| Breakdown torque | : 240 % | Temperature rise | : 80 K |
| Rated speed | : 3560 rpm | Design | : B |

Heating constant

Cooling constant

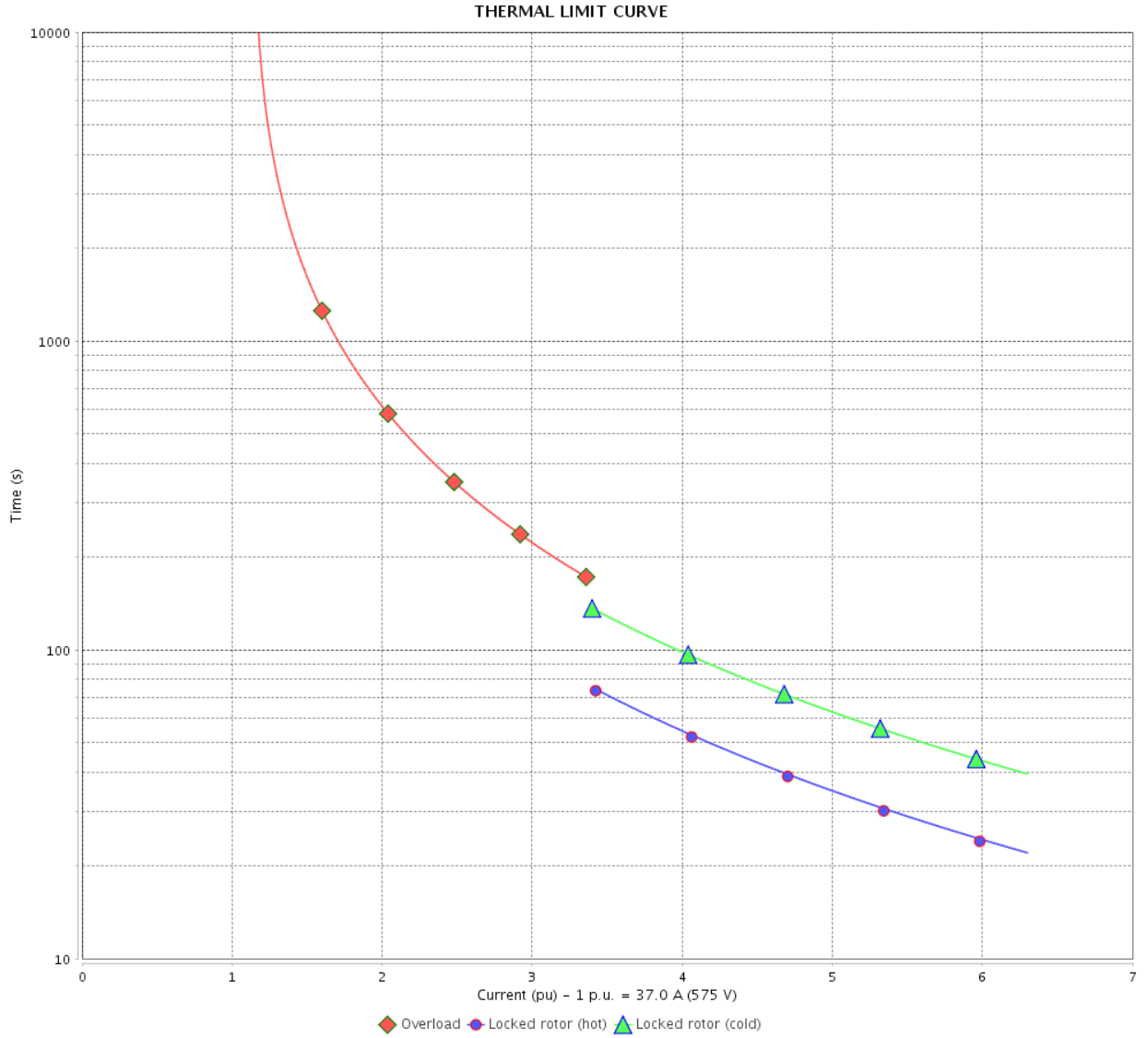
| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|---------|----------|
| Performed by | | | | |
| Checked by | | | Page | Revision |
| Date | 13/04/2022 | | 4 / 6 | |

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|---------------|---------|----------|
| | | | | |
| Performed by | | Page 5 / 6 | | Revision |
| Checked by | | | | |
| Date | | | | |

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



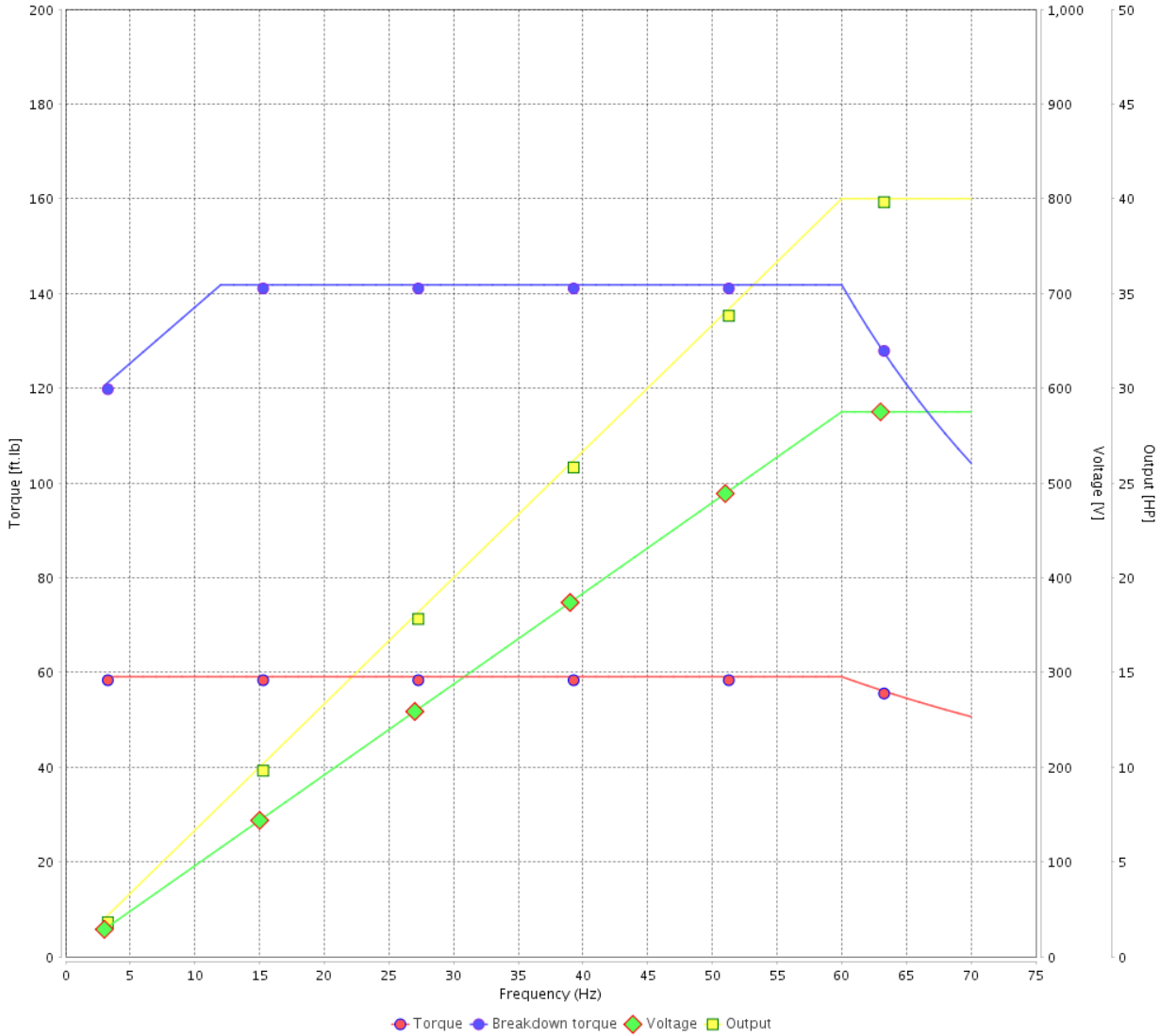
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14387174

Catalog # : 04036ET3H324TS-W22G

VFD OPERATION CURVE



Performance : 575 V 60 Hz 2P

Rated current : 37.0 A
 LRC : 6.3
 Rated torque : 59.1 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 240 %
 Rated speed : 3560 rpm

Moment of inertia (J) : 4.90 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

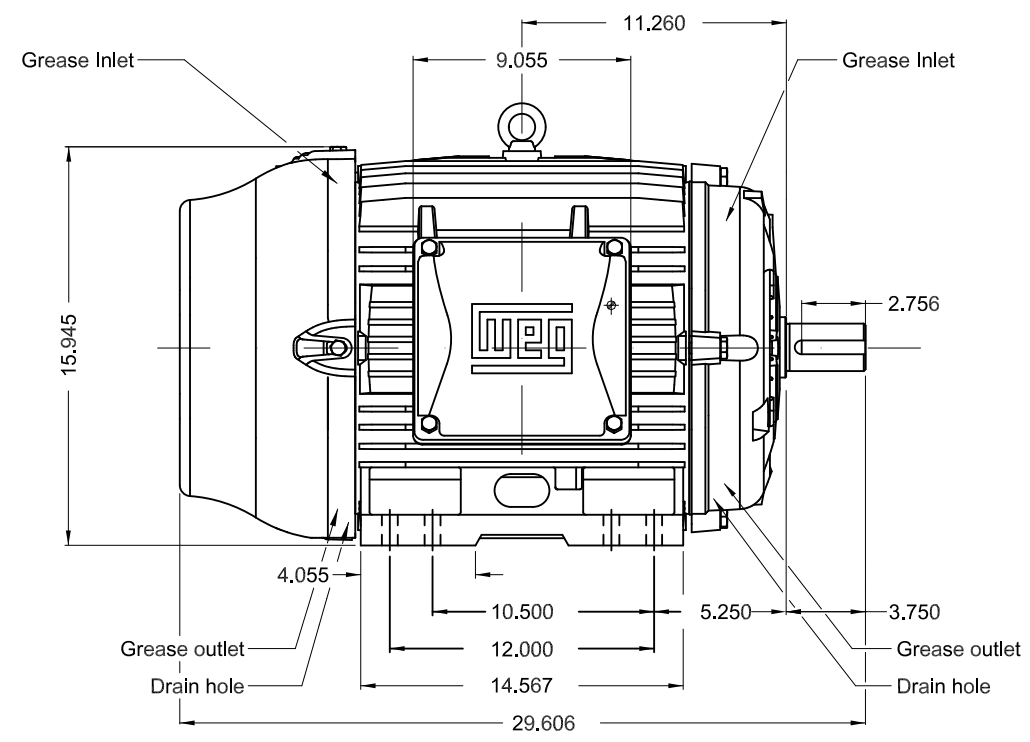
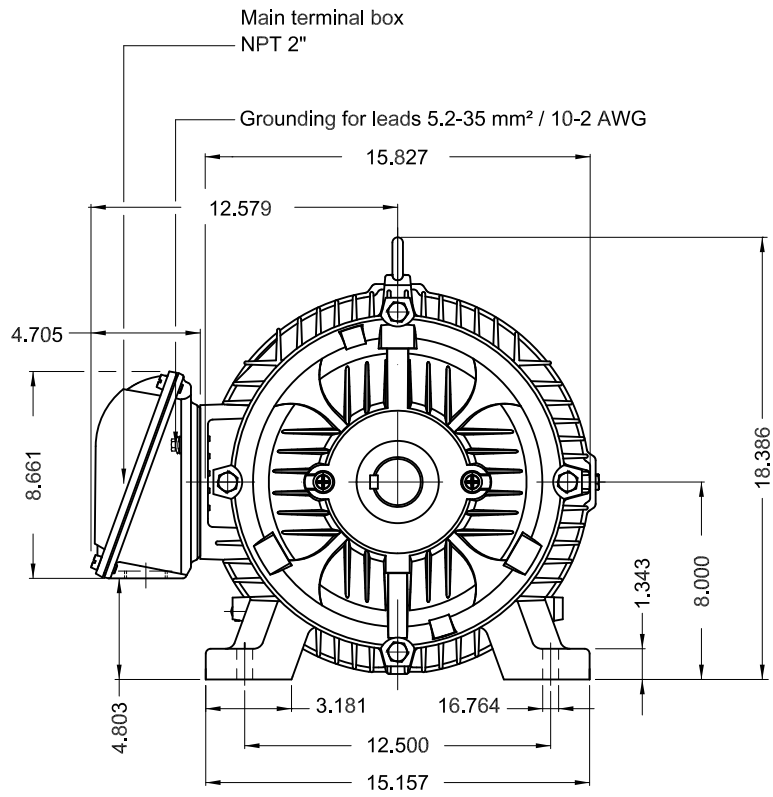
| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|---------------|----------|
| | | | | |
| Performed by | | | Page 6 / 6 | Revision |
| Checked by | | | | |
| Date | 13/04/2022 | | | |

1 2 3 4 5 6

A

B

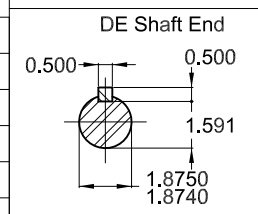
C



D

E

- Without vertical jackscrews
- Internal AEGIS ground ring on the DE
- Color RAL 5009
- Painting plan 203A
- Mounting NEMA F-1
- Mounting B3R(D)



40 HP 02 Poles 60 Hz A

| ECM | LOC | SUMMARY OF MODIFICATIONS | EXECUTED | CHECKED | RELEASED | DATE | VER |
|----------|-----------|---|---------------------|---------|----------|------|-----|
| EXECUTED | PIRWBUSER | THREE PH. MOTOR W22 PREM. EFF. FRAME 324/6TS IP55 TEFC | | | | | |
| CHECKED | | | | | | | |
| RELEASED | | | | | | | |
| REL DT. | WMO | Jaragua do Sul | Product Engineering | SHEET | 1 / 1 | | |

PREVIEW
WDD

