

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

| | | | | | | | | | | | | | | | | | | | |
|---|--|----------------------|------------------|----------------------|--------------|-----------|---------|---------|----------|--------|----------------------|-----------|---------|------------------|--------|------|----------------|------------------|--|
| Customer : | | | | | | | | | | | | | | | | | | | |
| Product line | : NEMA Premium Efficiency Three-Phase | | | | | | | | | | | | | | | | | | |
| Product code : | 11556413 | | | | | | | | | | | | | | | | | | |
| Catalog # : | 05018ET3H326TC-W22 | | | | | | | | | | | | | | | | | | |
| Frame : 324/6TC Output : 50 HP (37 kW) Poles : 4 Frequency : 60 Hz Rated voltage : 575 V Rated current : 47.4 A L. R. Amperes : 294 A LRC : 6.2x(Code G) No load current : 18.8 A Rated speed : 1775 rpm Slip : 1.39 % Rated torque : 148 ft.lb Locked rotor torque : 229 % Breakdown torque : 270 % Insulation class : F Service factor : 1.25 Moment of inertia (J) : 9.16 sq.ft.lb Design : B | Locked rotor time : 27s (cold) 15s (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 : 66.0 dB(A) Starting method : Direct On Line Approx. weight ³ : 608 lb | | | | | | | | | | | | | | | | | | |
| Output | 25% 50% 75% 100% | | | | | | | | | | | | | | | | | | |
| Efficiency (%) | 92.5 93.0 94.1 94.5 | | | | | | | | | | | | | | | | | | |
| Power Factor | 0.42 0.66 0.77 0.83 | | | | | | | | | | | | | | | | | | |
| Foundation loads | | | | | | | | | | | | | | | | | | | |
| Max. traction | : 1229 lb | | | | | | | | | | | | | | | | | | |
| Max. compression | : 1837 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>: 20000 h</td> <td>20000 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" style="text-align: center;">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 | : 20000 h | 20000 h | Lubricant amount | : 21 g | 13 g | Lubricant type | Mobil Polyrex EM | |
| | <u>Drive end</u> | <u>Non drive end</u> | | | | | | | | | | | | | | | | | |
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| Sealing | : V'Ring | V'Ring | | | | | | | | | | | | | | | | | |
| Lubrication interval | : 20000 h | 20000 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 | 12/04/2022 | | 1 / 6 | | | | | | | | | | | | | | | | |

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



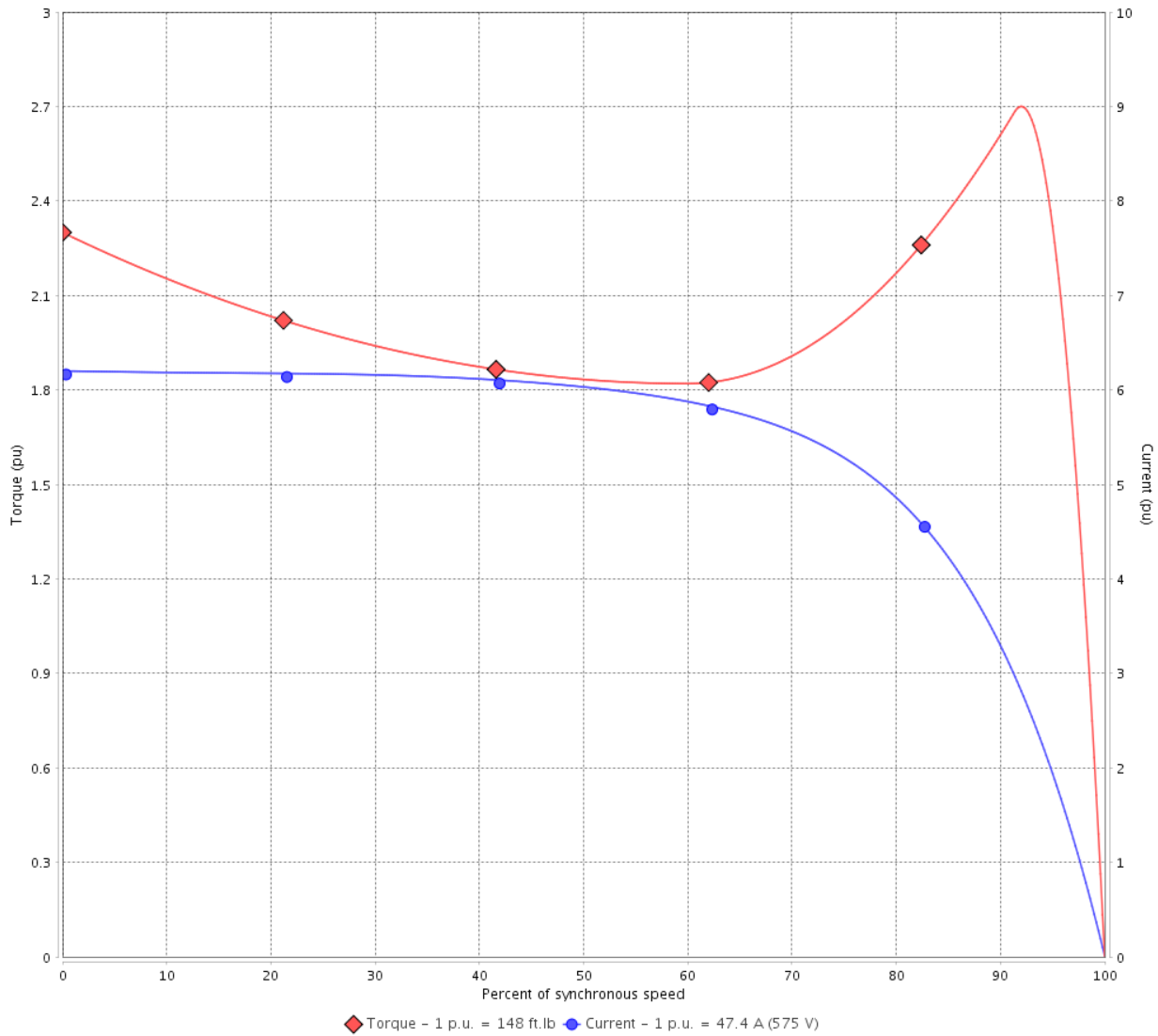
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11556413

Catalog # : 05018ET3H326TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 575 V 60 Hz 4P

| | | | |
|---------------------|-------------|-----------------------|-----------------|
| Rated current | : 47.4 A | Moment of inertia (J) | : 9.16 sq.ft.lb |
| LRC | : 6.2 | Duty cycle | : Cont.(S1) |
| Rated torque | : 148 ft.lb | Insulation class | : F |
| Locked rotor torque | : 229 % | Service factor | : 1.25 |
| Breakdown torque | : 270 % | Temperature rise | : 80 K |
| Rated speed | : 1775 rpm | Design | : B |

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

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|---------------|----------|
| | | | | |
| Performed by | | | Page 2 / 6 | Revision |
| Checked by | | | | |
| Date | 12/04/2022 | | | |

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

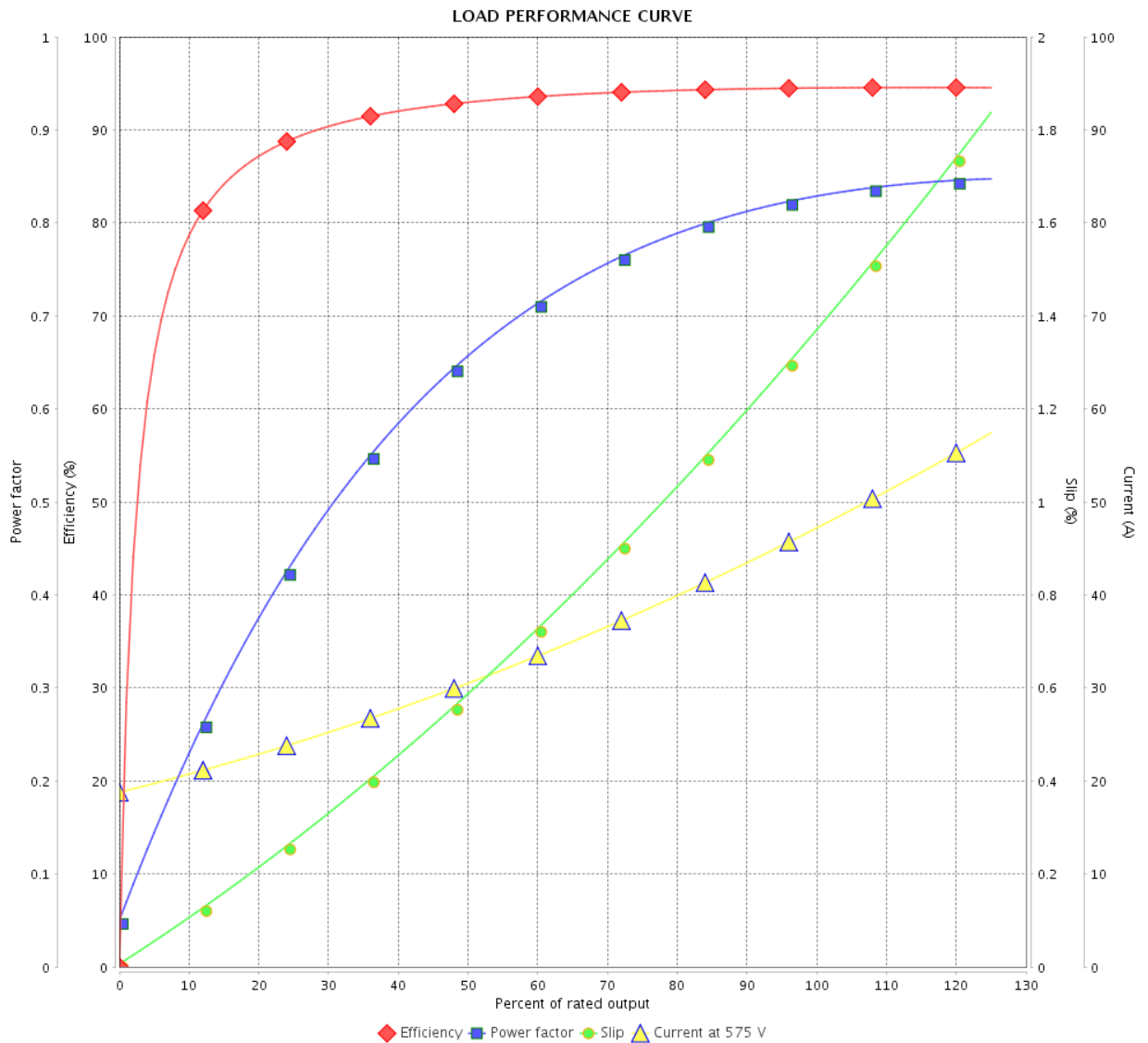


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THERMAL LIMIT CURVE



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Heating constant

Cooling constant

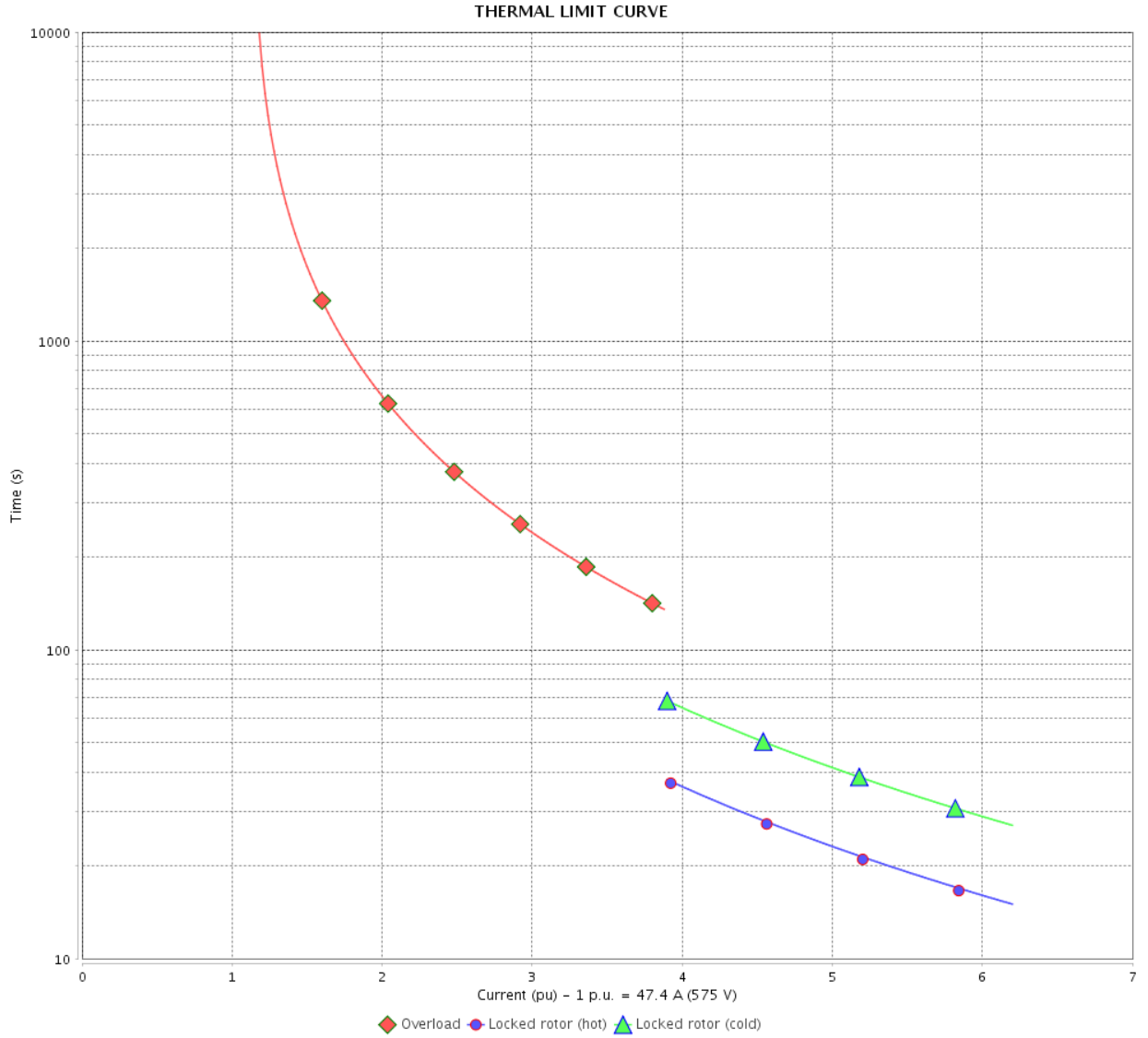
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| Performed by | | | Page | Revision |
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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

Three Phase Induction Motor - Squirrel Cage



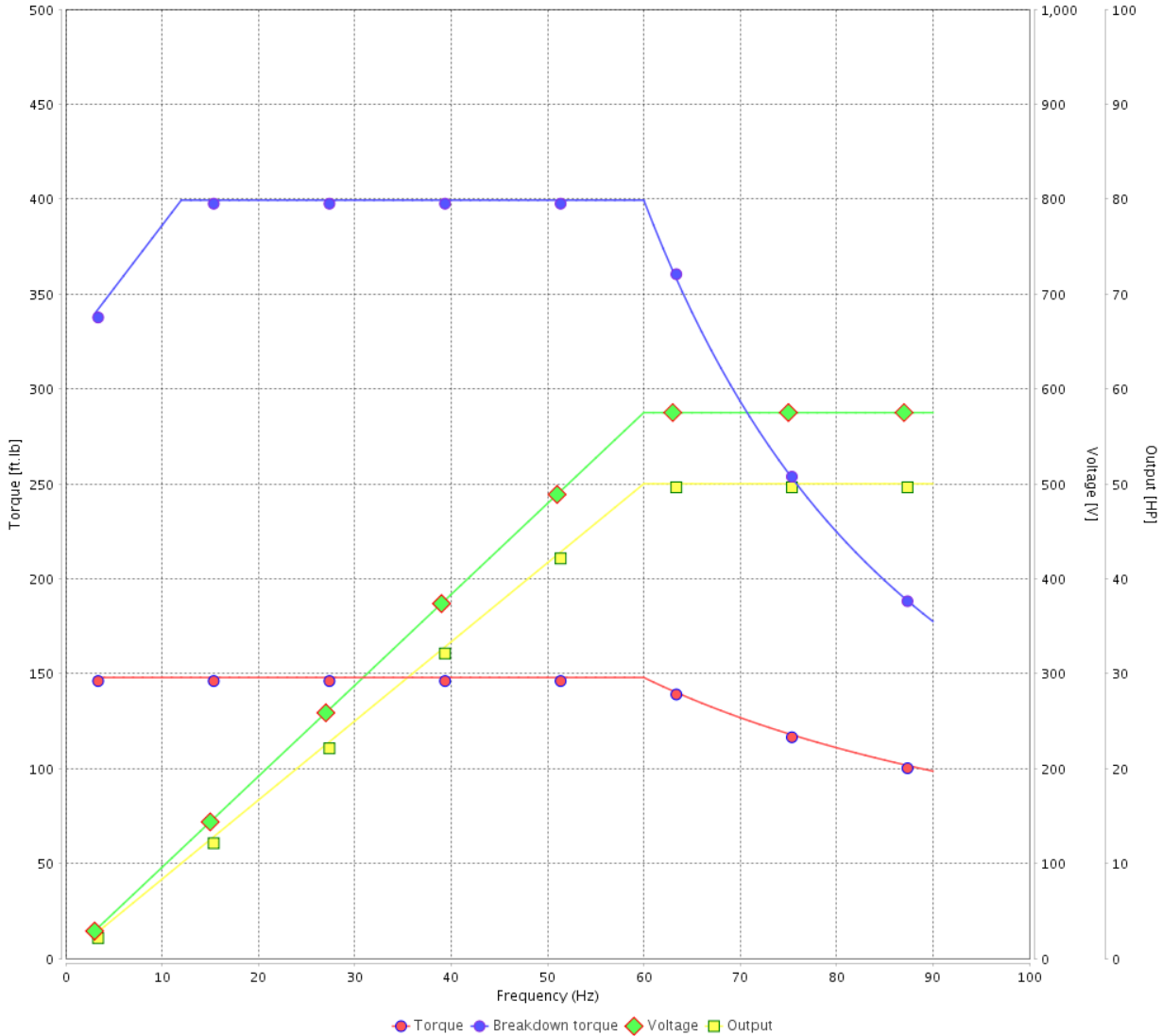
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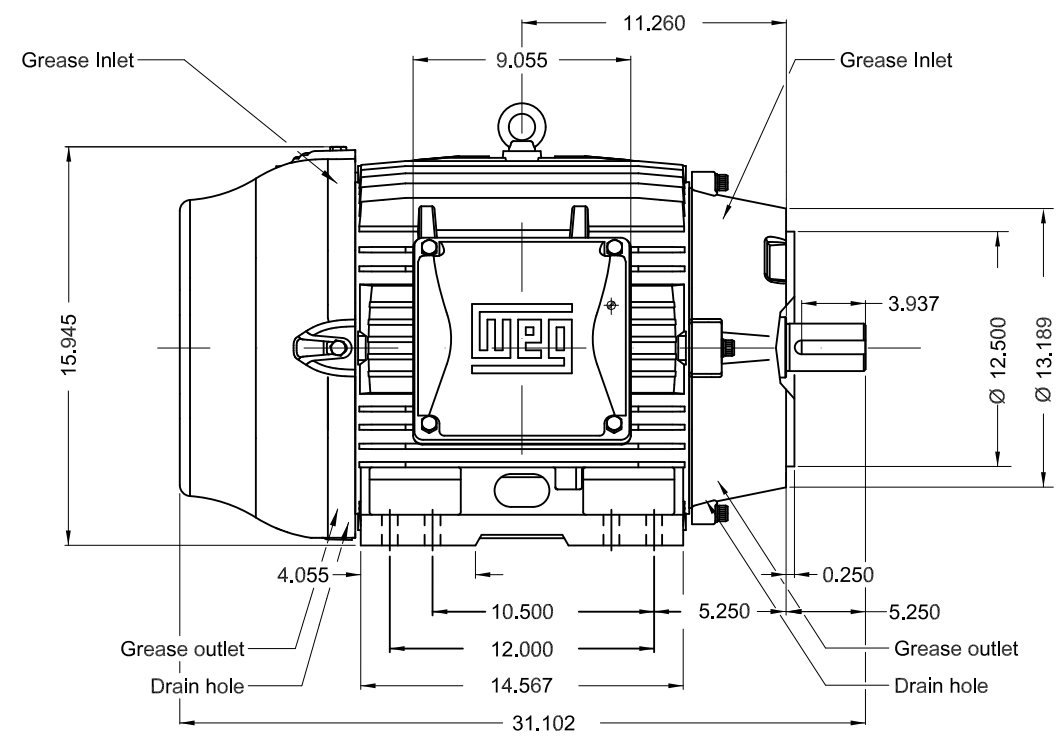
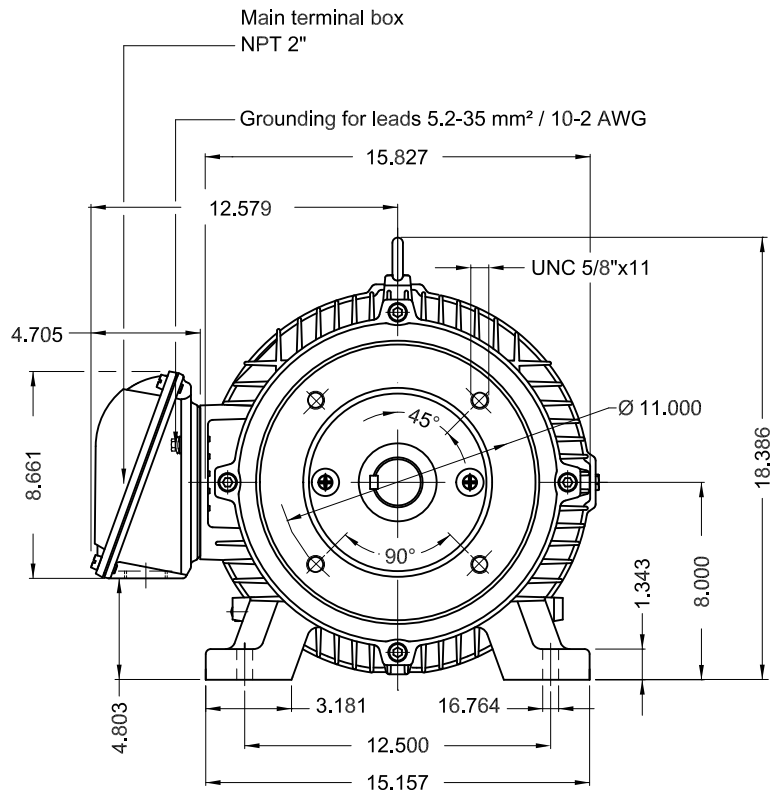
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| Date | 12/04/2022 | | | |

1 2 3 4 5 6

A

B

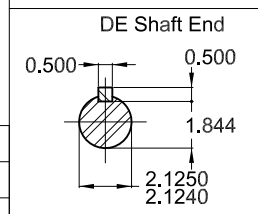
C



D

E

Color RAL 5009
 Painting plan 203A
 Mounting B34R(D)



50 HP 04 Poles 60 Hz A

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

PREVIEW
WDD





NEMA
Premium
W22



FOR SAFE AREA
Mod.TE1BFOXON
CC029A



Class I, Div 2, Gr A, B, C and D - T3
Class I, Zone 2, IIC - T3
Class II, Div 2, Gr F and G - T4
For use on PWM: Gr. A, B, C, D and F,
VT 1000:1, CT 20:1, 1.00SF - T3A

CT050504NPW22

Inverter Duty Motor
Severe Duty

PH3 60Hz Fr. 324/6TC 1000m.a.s.l. IP55 TEFC 608lb

V 575

A 47.4

HP 50

kW 37

SF 1.25

SFA 59.3

RPM 1775

PF 0.83

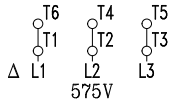
AMB 40°C

INS cl. F DT80K

NEMA NOM EFF 94.5%

DUTY CONT.

DES B Code G



→ 6312-C3 (21g)

→ 6212-C3 (13g)



MOBIL POLYREX EM (20000h)



MADE IN BRAZIL
11556413