

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

| | | | | | | | | | | | | | | | | | | | |
|---|--|----------------------|------------------|----------------------|----------------|---------|---------|-----------|------------|------------|------------------------|---------|---------|--------------------|-----|-----|------------------|------------------|--|
| Customer : | | | | | | | | | | | | | | | | | | | |
| Product line | : NEMA Premium Efficiency Three-Phase | | | | | | | | | | | | | | | | | | |
| Product code : | 11432605 | | | | | | | | | | | | | | | | | | |
| Catalog # : | 00236ST3HIE145T-W22 | | | | | | | | | | | | | | | | | | |
| Frame : 143/5T Output : 2 HP (1.5 kW) Poles : 2 Frequency : 60 Hz Rated voltage : 575 V Rated current : 2.05 A L. R. Amperes : 18.2 A LRC : 8.9x(Code L) No load current : 0.720 A Rated speed : 3475 rpm Slip : 3.47 % Rated torque : 3.02 ft.lb Locked rotor torque : 350 % Breakdown torque : 380 % Insulation class : F Service factor : 1.25 Moment of inertia (J) : 0.0605 sq.ft.lb Design : B | Locked rotor time : 30s (cold) 17s (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 : 68.0 dB(A) Starting method : Direct On Line Approx. weight ³ : 57.3 lb | | | | | | | | | | | | | | | | | | |
| Output | 25% 50% 75% 100% | | | | | | | | | | | | | | | | | | |
| Efficiency (%) | 82.0 82.5 85.5 85.5 | | | | | | | | | | | | | | | | | | |
| Power Factor | 0.47 0.71 0.80 0.86 | | | | | | | | | | | | | | | | | | |
| Foundation loads | | | | | | | | | | | | | | | | | | | |
| Max. traction : 71 lb | | | | | | | | | | | | | | | | | | | |
| Max. compression : 128 lb | | | | | | | | | | | | | | | | | | | |
| | <table border="0" style="width:100%;"> <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 style="text-align: center;">6205 C3</td> <td style="text-align: center;">6204 C3</td> </tr> <tr> <td>Sealing :</td> <td style="text-align: center;">Inpro/Seal</td> <td style="text-align: center;">Inpro/Seal</td> </tr> <tr> <td>Lubrication interval :</td> <td style="text-align: center;">20000 h</td> <td style="text-align: center;">20000 h</td> </tr> <tr> <td>Lubricant amount :</td> <td style="text-align: center;">4 g</td> <td style="text-align: center;">4 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 : | 6205 C3 | 6204 C3 | Sealing : | Inpro/Seal | Inpro/Seal | Lubrication interval : | 20000 h | 20000 h | Lubricant amount : | 4 g | 4 g | Lubricant type : | Mobil Polyrex EM | |
| | <u>Drive end</u> | <u>Non drive end</u> | | | | | | | | | | | | | | | | | |
| Bearing type : | 6205 C3 | 6204 C3 | | | | | | | | | | | | | | | | | |
| Sealing : | Inpro/Seal | Inpro/Seal | | | | | | | | | | | | | | | | | |
| Lubrication interval : | 20000 h | 20000 h | | | | | | | | | | | | | | | | | |
| Lubricant amount : | 4 g | 4 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



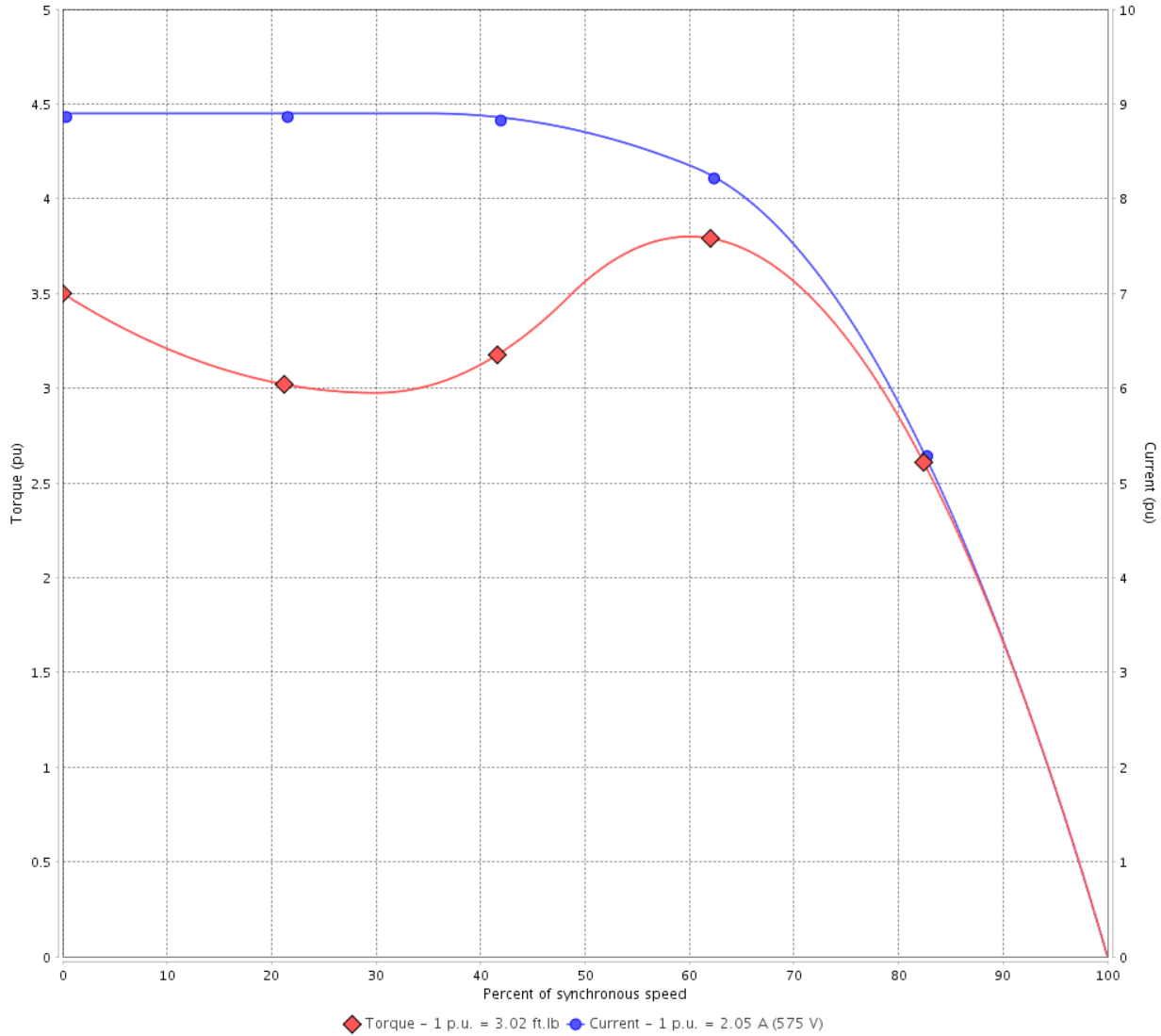
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11432605

Catalog # : 00236ST3HIE145T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 575 V 60 Hz 2P

| | | | |
|---------------------|--------------|-----------------------|-------------------|
| Rated current | : 2.05 A | Moment of inertia (J) | : 0.0605 sq.ft.lb |
| LRC | : 8.9 | Duty cycle | : Cont.(S1) |
| Rated torque | : 3.02 ft.lb | Insulation class | : F |
| Locked rotor torque | : 350 % | Service factor | : 1.25 |
| Breakdown torque | : 380 % | Temperature rise | : 80 K |
| Rated speed | : 3475 rpm | Design | : B |

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

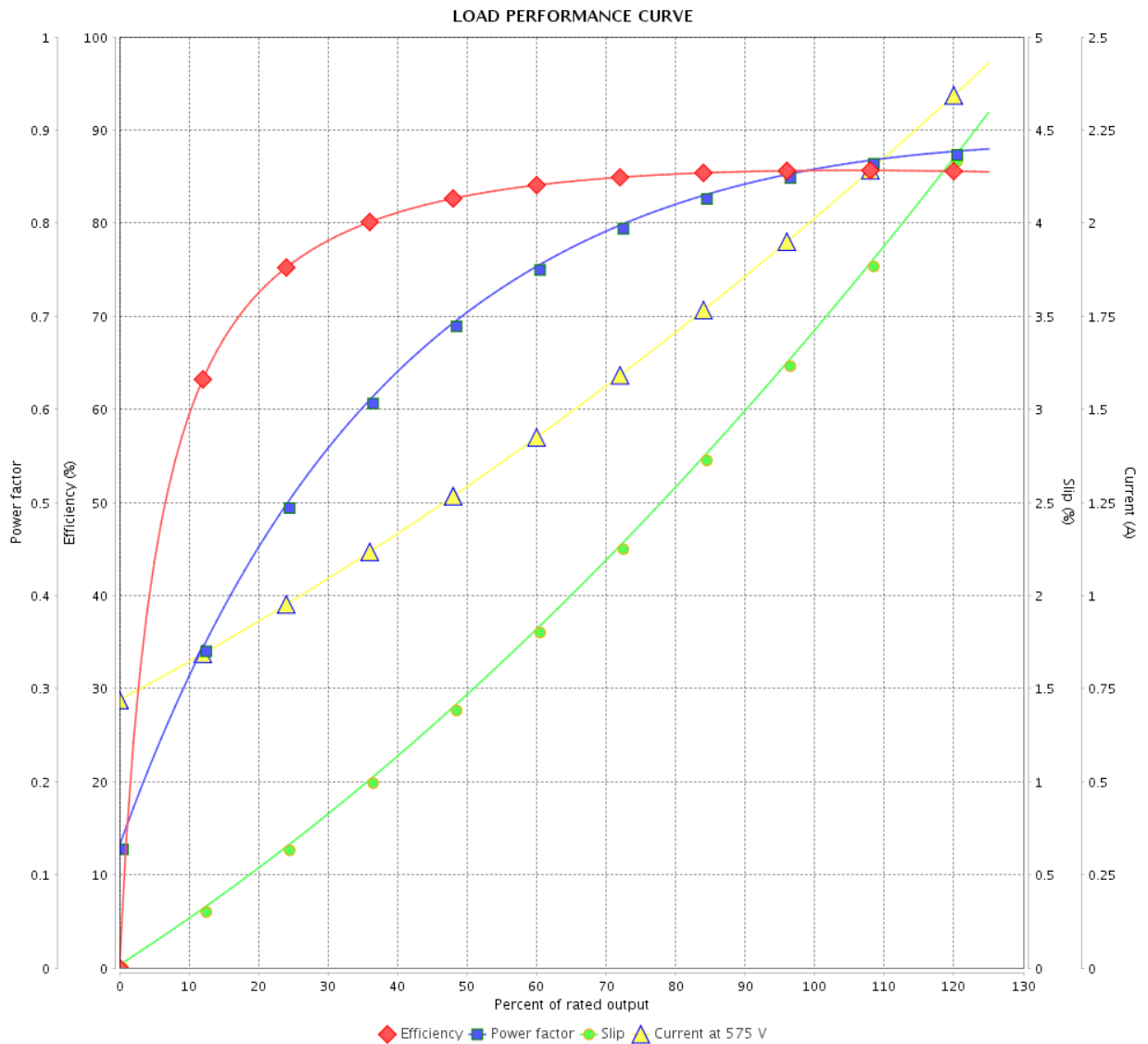


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Catalog # : 00236ST3HIE145T-W22



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 Service factor : 1.25
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| | | | | |
| Performed by | | Page | | Revision |
| Checked by | | 3 / 6 | | |
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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

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Heating constant

Cooling constant

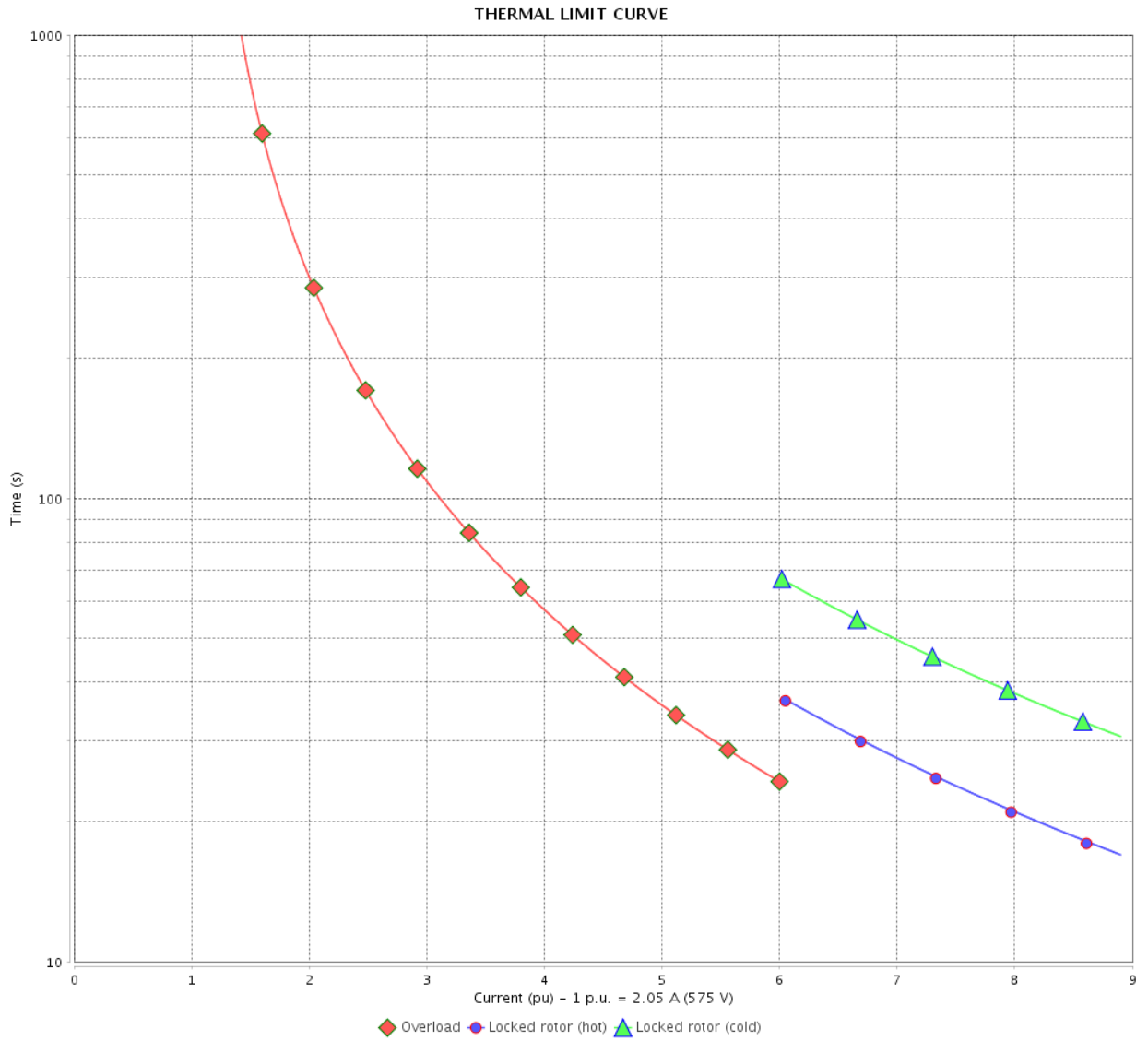
| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|---------|----------|
| Performed by | | | | |
| Checked by | | | Page | Revision |
| Date | 13/04/2022 | | 4 / 6 | |

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

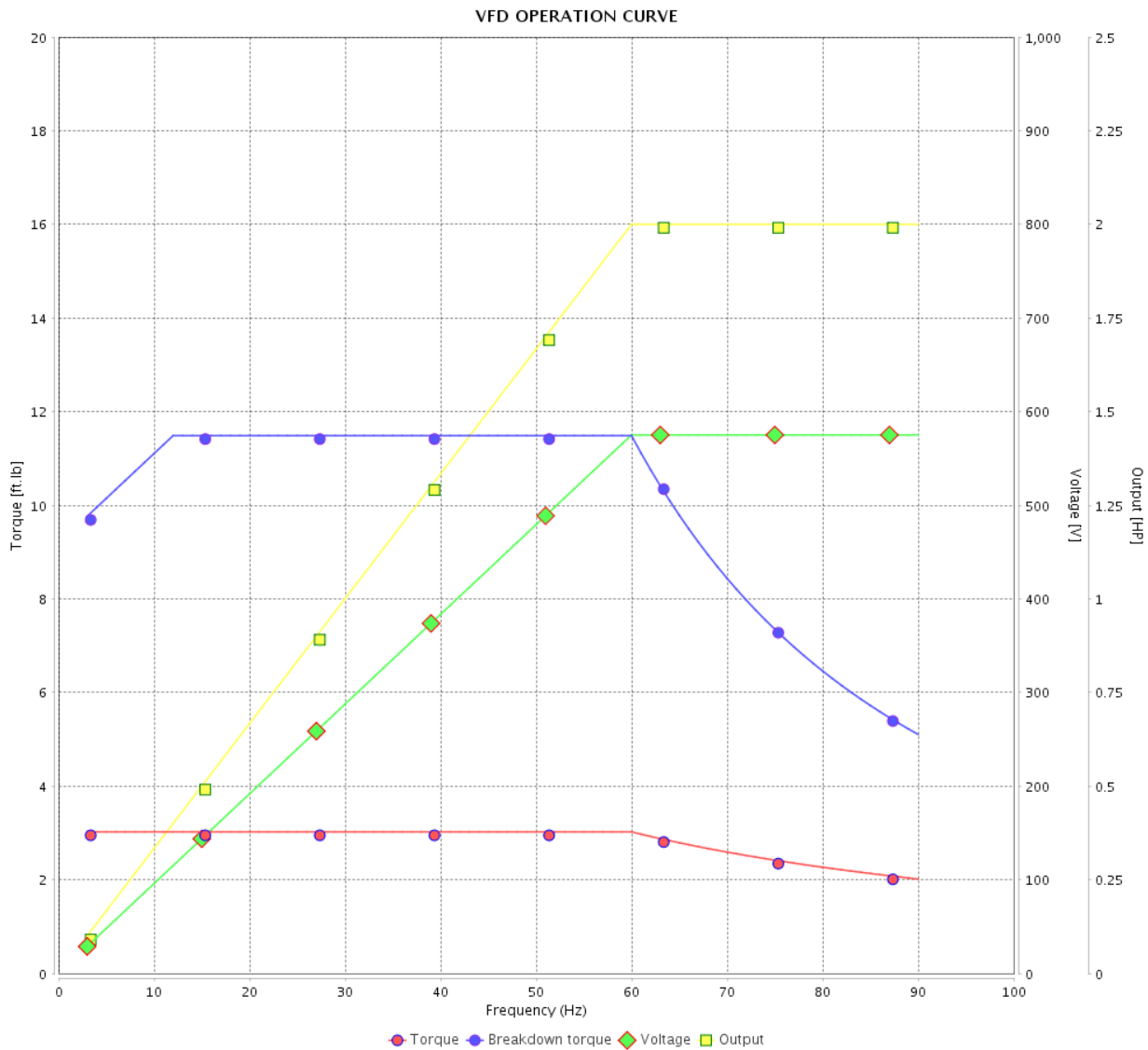


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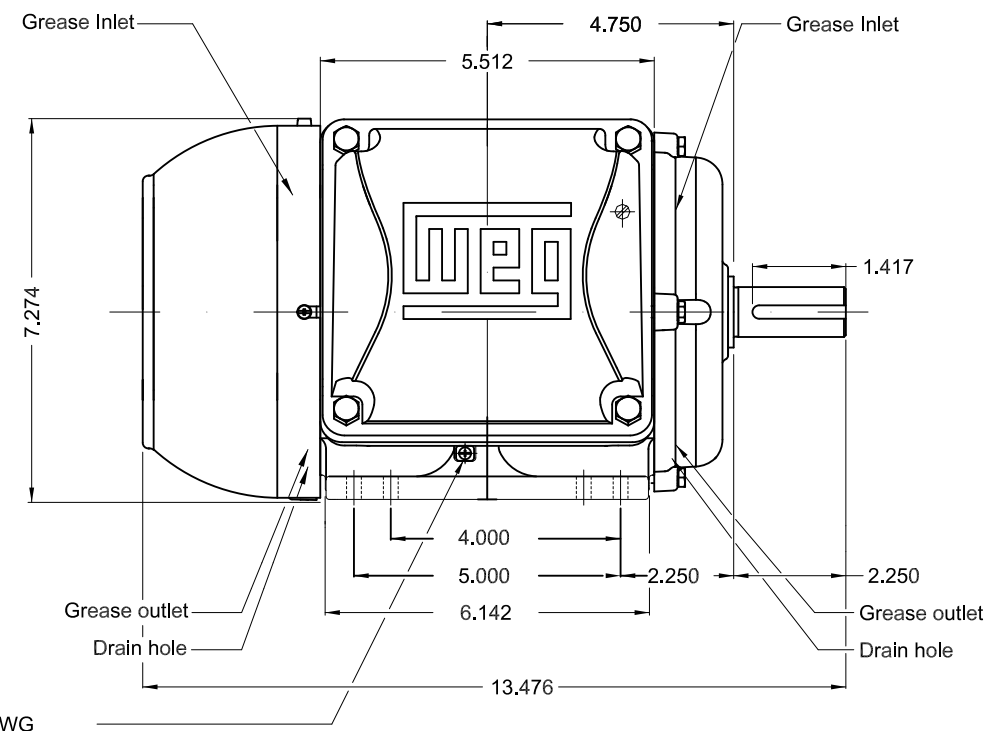
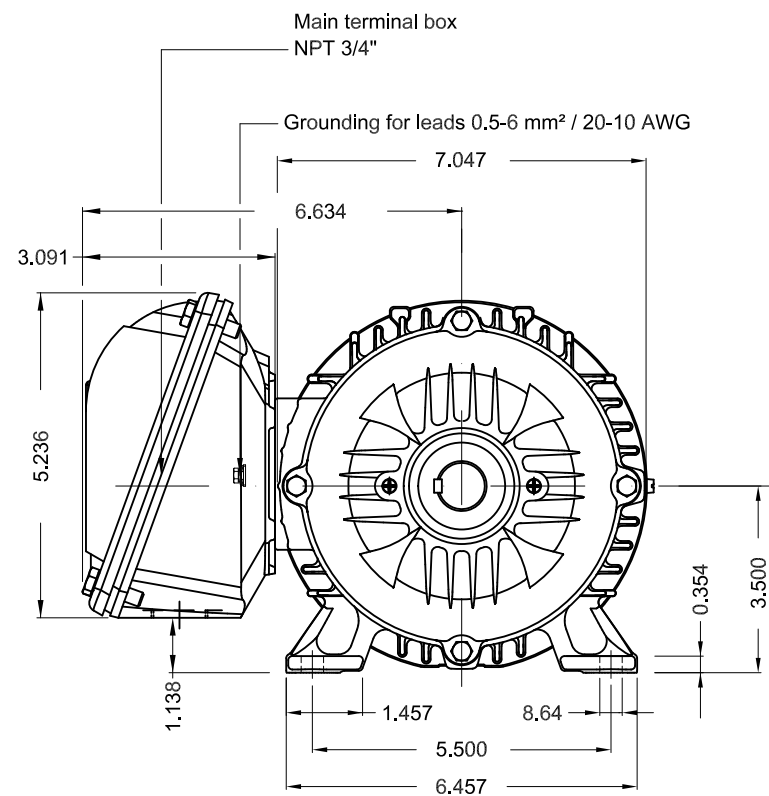


Performance : 575 V 60 Hz 2P

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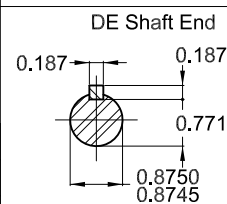
Moment of inertia (J) : 0.0605 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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| Date | | | | |



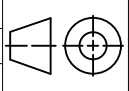
Grounding for leads 0.5-6 mm² / 20-10 AWG

Color RAL 5009
 Painting plan 202E
 Mounting B3R(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 IEEE 841 W22 PREM. EFF. FRAME 143/5T IP55 TEFC | | | | | |
| CHECKED | | | | | | | |
| RELEASED | | | | | | | |
| REL DT. | | | | | | | |
| | WMO | Jaragua do Sul | Product Engineering | SHEET 1 / 1 | | | |

PREVIEW
 WDD



MADE IN BRAZIL
11432605



NEMA
Premium

W22

IE002502W22I S

Inverter Duty Motor
Severe Duty

IEEE
841-2009



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 - T5
For use on PWM: Gr. A, B, C, D, F and G,
VT 1000:1, CT 20:1, 1.00SF - T4A



FOR SAFE AREA
Mod. TE1BFOXON
CC029A

PH3 60Hz Fr. 143/5T 1000m.a.s.l. IP55 TEFC 62lb

V 575

A 2.05

HP 2.0

kW 1.5

SF 1.25

SFA 2.56

RPM 3475

PF 0.86

AMB 40°C

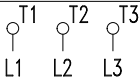
INS cl. F DT80K

NEMA NOM EFF 85.5%

DUTY CONT.

DES B Code L

GUARANT. EFF 82.5%



→ 6205-C3 (4g) 25BC02X30

→ 6204-C3 (4g) 20BC02X30

MOBIL POLYREX EM (20000h)

