

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 JM Pump NEMA Premium Efficiency Three-Phase Product code : 14484725
Catalog # : 05018OT3H326JM-W40

| | | | |
|-----------------------|-----------------|-----------------------------|------------------------|
| Frame | : 324/6JM | Locked rotor time | : 19s (cold) 11s (hot) |
| Output | : 50 HP (37 kW) | Temperature rise | : 80 K |
| Poles | : 4 | Duty cycle | : Cont.(S1) |
| Frequency | : 60 Hz | Ambient temperature | : -20°C to +40°C |
| Rated voltage | : 575 V | Altitude | : 1000 m.a.s.l. |
| Rated current | : 46.8 A | Protection degree | : IP23 |
| L. R. Amperes | : 295 A | Cooling method | : IC01 - ODP |
| LRC | : 6.3x(Code G) | Mounting | : F-1 |
| No load current | : 18.6 A | Rotation ¹ | : Both (CW and CCW) |
| Rated speed | : 1775 rpm | Noise level ² | : 66.0 dB(A) |
| Slip | : 1.39 % | Starting method | : Direct On Line |
| Rated torque | : 148 ft.lb | Approx. weight ³ | : 597 lb |
| Locked rotor torque | : 240 % | | |
| Breakdown torque | : 240 % | | |
| Insulation class | : F | | |
| Service factor | : 1.25 | | |
| Moment of inertia (J) | : 7.08 sq.ft.lb | | |
| Design | : B | | |

| | | | | | |
|----------------|------|------|------|------|------------------|
| Output | 25% | 50% | 75% | 100% | Foundation loads |
| Efficiency (%) | 94.0 | 94.1 | 94.5 | 94.5 | Max. traction |
| Power Factor | 0.44 | 0.70 | 0.80 | 0.84 | Max. compression |

| | | | |
|----------------------|---|----------------------|----------------------|
| | | <u>Drive end</u> | <u>Non drive end</u> |
| Bearing type | : | 6312 Z C3 | 6211 Z C3 |
| Sealing | : | Without Bearing Seal | Without Bearing Seal |
| Lubrication interval | : | 20000 h | 20000 h |
| Lubricant amount | : | 21 g | 11 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 | | Page 1 / 6 Revision | | |
| Checked by | | | | |
| Date | 10/04/2020 | | | |

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

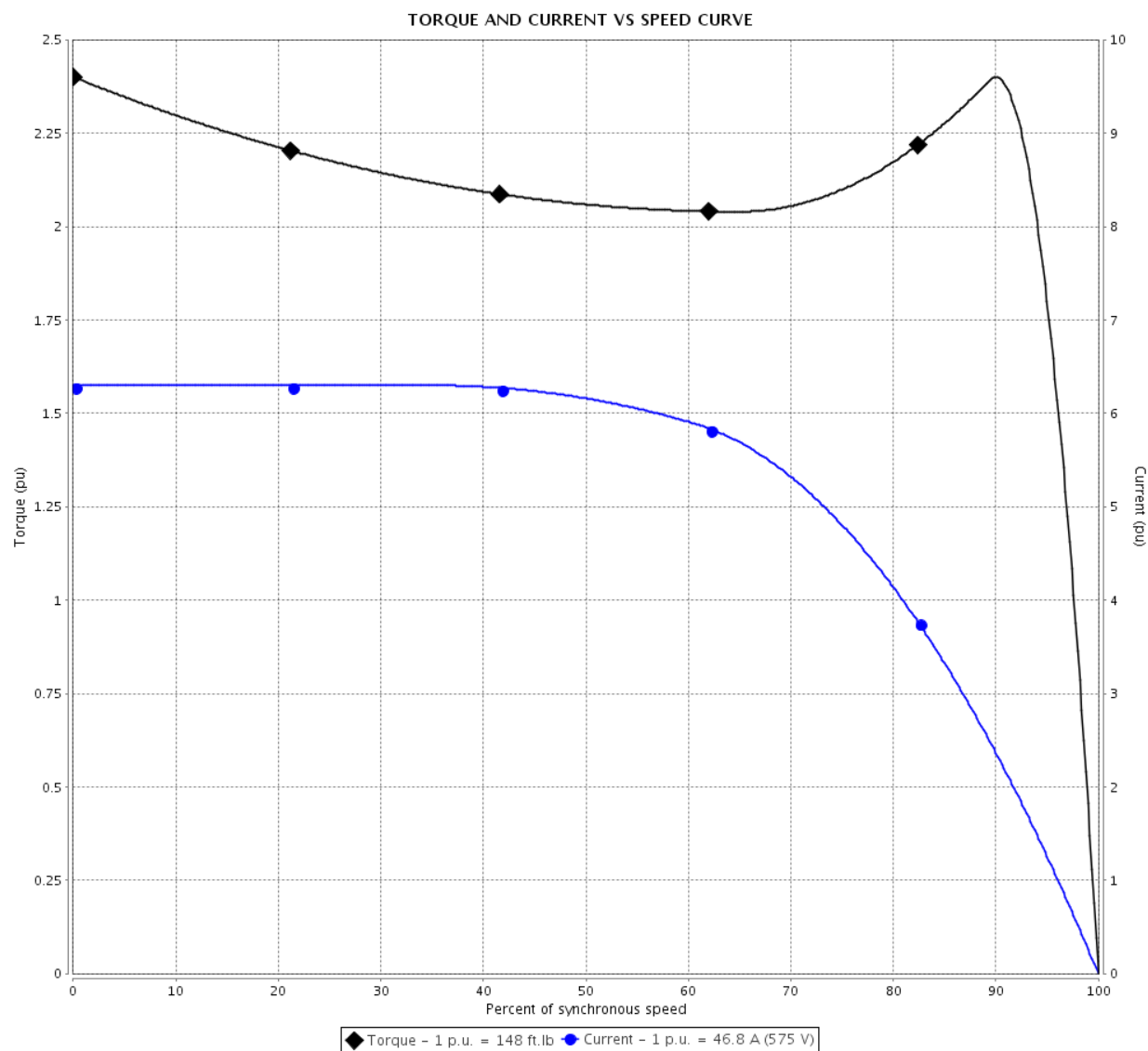


Customer :

Product line : W40 JM Pump NEMA Premium
Efficiency Three-Phase

Product code : 14484725

Catalog # : 05018OT3H326JM-W40



Performance : 575 V 60 Hz 4P

| | | | |
|---------------------|-------------|-----------------------|-----------------|
| Rated current | : 46.8 A | Moment of inertia (J) | : 7.08 sq.ft.lb |
| LRC | : 6.3 | Duty cycle | : Cont.(S1) |
| Rated torque | : 148 ft.lb | Insulation class | : F |
| Locked rotor torque | : 240 % | Service factor | : 1.25 |
| Breakdown torque | : 240 % | Temperature rise | : 80 K |
| Rated speed | : 1775 rpm | Design | : B |

Locked rotor time : 19s (cold) 11s (hot)

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|--------------------------|---------|------|
| | | | | |
| Performed by | | Page 2 / 6 Revision | | |
| Checked by | | | | |
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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

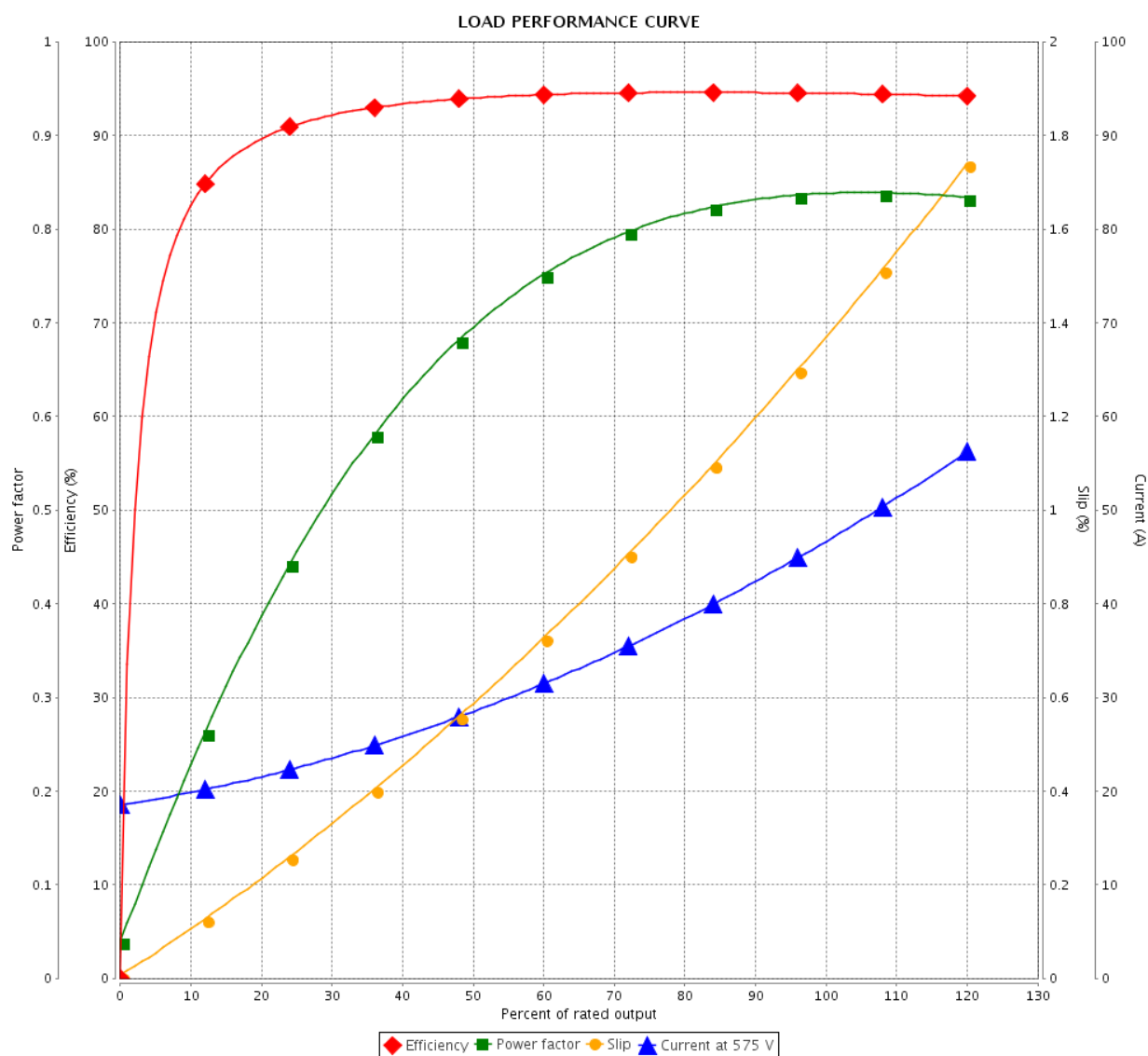


Customer :

Product line : W40 JM Pump NEMA Premium
Efficiency Three-Phase

Product code : 14484725

Catalog # : 05018OT3H326JM-W40



Performance : 575 V 60 Hz 4P

Rated current : 46.8 A
LRC : 6.3
Rated torque : 148 ft.lb
Locked rotor torque : 240 %
Breakdown torque : 240 %
Rated speed : 1775 rpm

Moment of inertia (J) : 7.08 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 |
|--------------|-----------------|---------------|---------|------|
| | | | | |
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| Checked by | | | | |
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| | | Revision | | |

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer

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Product line

: W40 JM Pump NEMA Premium
Efficiency Three-Phase

Product code :

14484725

Catalog # :

05018OT3H326JM-W40

Performance : 575 V 60 Hz 4P

Rated current

: 46.8 A

LRC

: 6.3

Rated torque

: 148 ft.lb

Locked rotor torque

: 240 %

Breakdown torque

: 240 %

Rated speed

: 1775 rpm

Moment of inertia (J)

: 7.08 sq.ft.lb

Duty cycle

: Cont.(S1)

Insulation class

: F

Service factor

: 1.25

Temperature rise

: 80 K

Design

: B

Heating constant

Cooling constant

Rev.

Changes Summary

Performed

Checked

Date

Performed by

Checked by

Date

10/04/2020

Page

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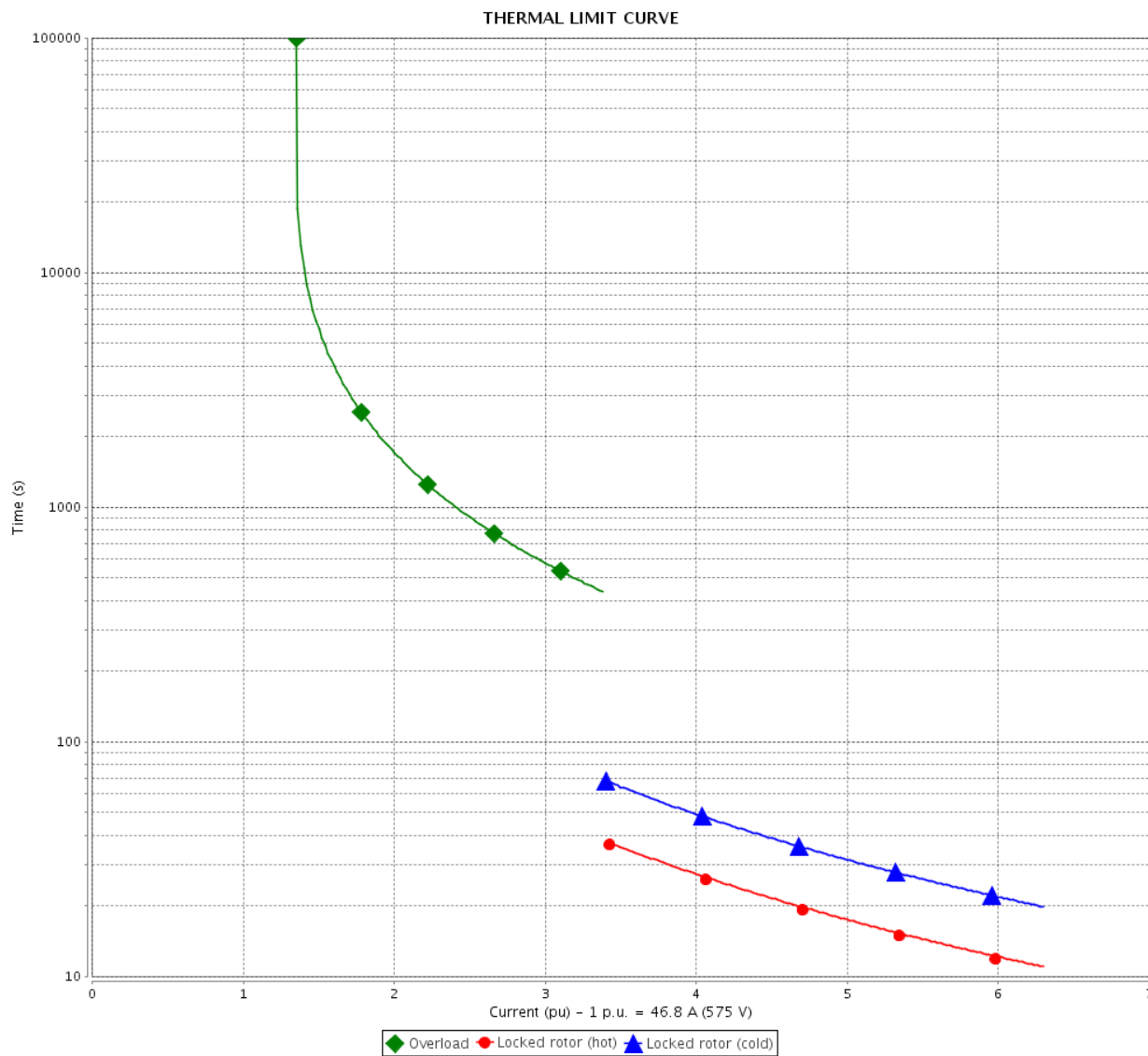
Revision

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



| Rev. | Changes Summary | | Performed | Checked | Date |
|--------------|-----------------|--|---------------|----------|------|
| | | | | | |
| Performed by | | | | | |
| Checked by | | | | | |
| Date | 10/04/2020 | | | | |
| | | | Page 5 / 6 | Revision | |

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

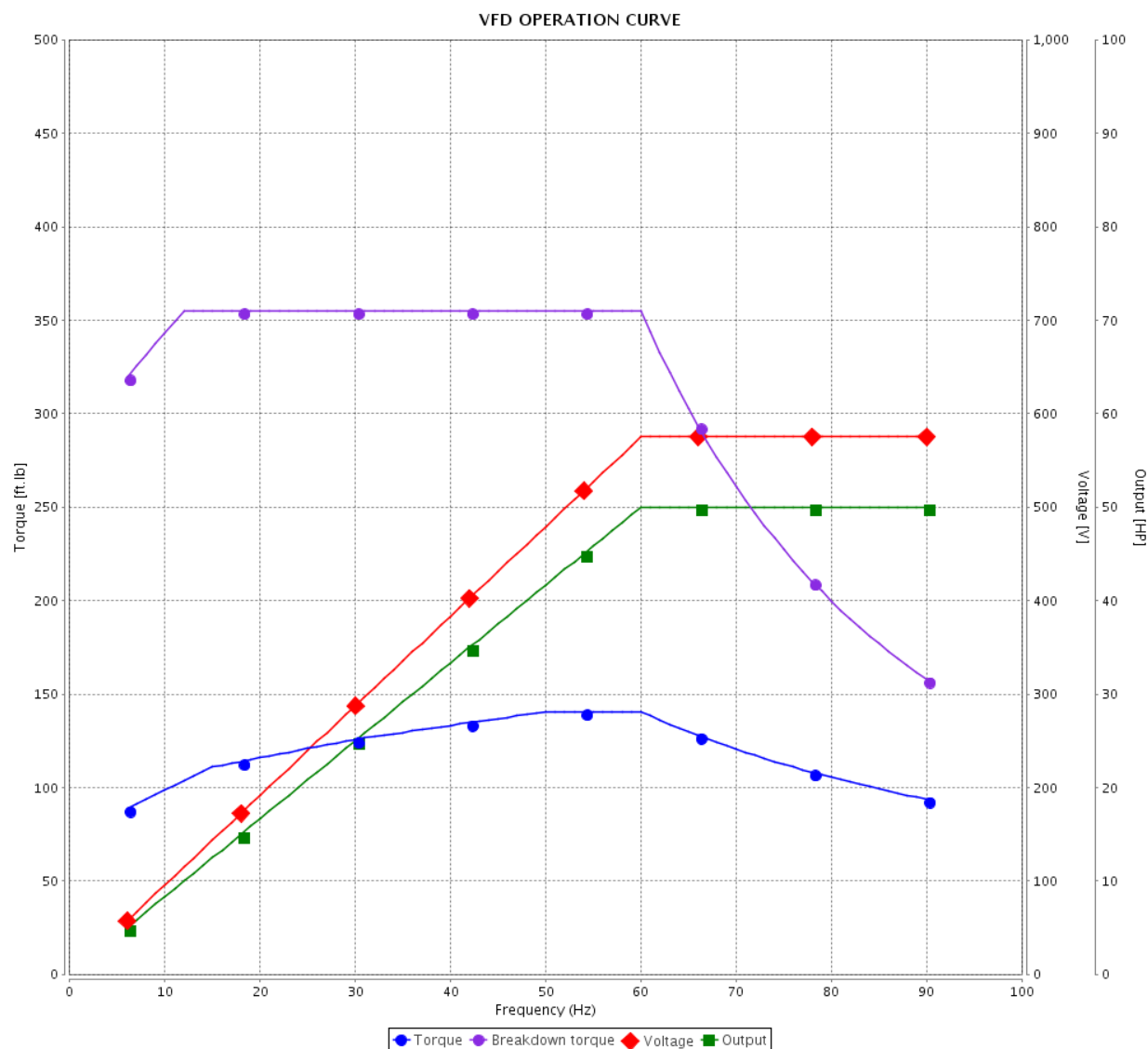


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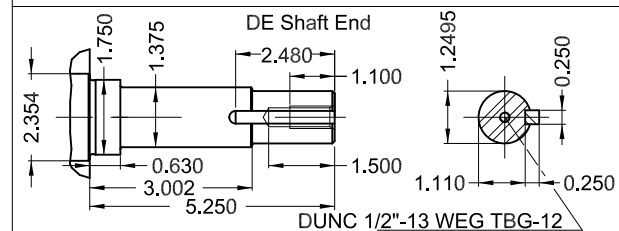
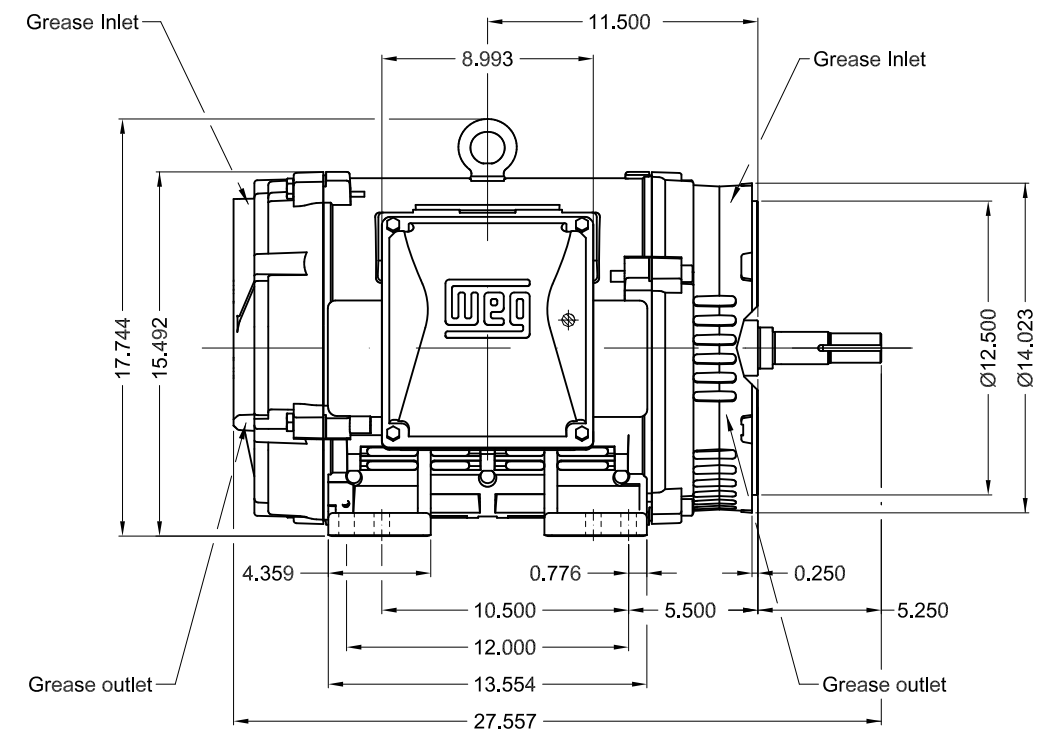
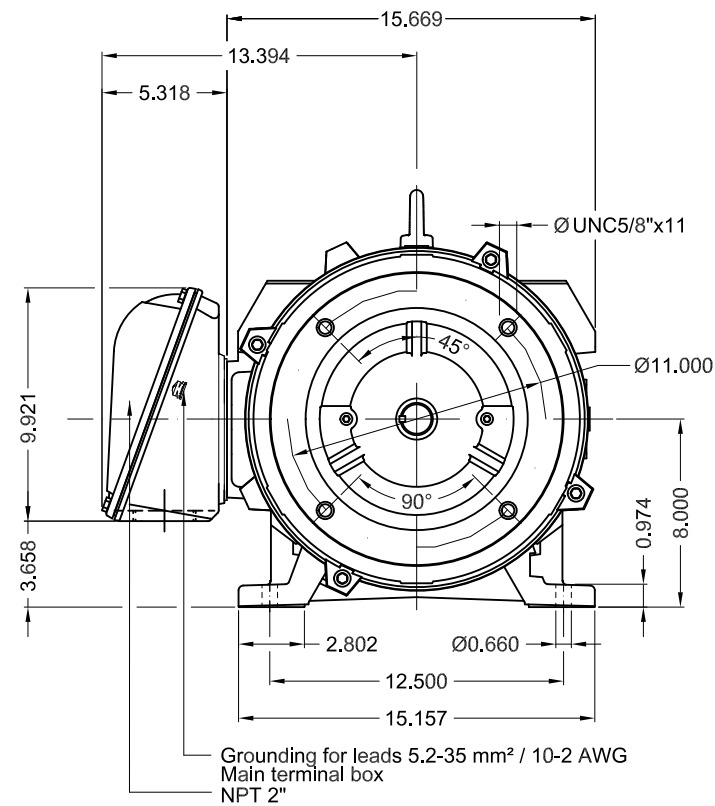




Performance : 575 V 60 Hz 4P

Rated current : 46.8 A
LRC : 6.3
Rated torque : 148 ft.lb
Locked rotor torque : 240 %
Breakdown torque : 240 %
Rated speed : 1775 rpm

Moment of inertia (J) : 7.08 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

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|--------------|-----------------|-----------------------|---------|------|
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| Checked by | | | | |
| Date | 10/04/2020 | | | |



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|---------------------------|--|-----------|--|---|--|--|--|----------|--|---------------------|--|----------|--|---|--|-------|--|
| 50 HP 04 Poles 60Hz | | | | | | | | | | A | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | 1:8 | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| ECM | | LOC | | SUMMARY OF MODIFICATIONS | | | | EXECUTED | | CHECKED | | RELEASED | | DATE | | VER | |
| EXECUTED | | PIRWBUSER | |  | | THREE PHASE W40 MOTOR NEMA PREMIUM EFF FRAME 324/6JM IP23 ODP | | | | PREVIEW WDD | | | |  | | | |
| CHECKED | | | | | | | | | | | | | | | | | |
| RELEASED | | | | | | | | | | | | | | | | | |
| REL DT. | | | | WMO | | Jaragua do Sul | | | | Product Engineering | | | | SHEET | | 1 / 1 | |