

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 JM Pump High Efficiency
Three-Phase

Product code : 14832415

Catalog # : 04036OP3HFP286JMV-W4

Frame : 284/6JM
Output : 40 HP (30 kW)
Poles : 2
Frequency : 60 Hz
Rated voltage : 575 V
Rated current : 37.8 A
L. R. Amperes : 230 A
LRC : 6.1x(Code G)
No load current : 11.2 A
Rated speed : 3535 rpm
Slip : 1.81 %
Rated torque : 59.4 ft.lb
Locked rotor torque : 170 %
Breakdown torque : 250 %
Insulation class : F
Service factor : 1.15
Moment of inertia (J) : 1.91 sq.ft.lb
Design : B

Locked rotor time : 18s (cold) 10s (hot)
Temperature rise : 80 K
Duty cycle : Cont.(S1)
Ambient temperature : -20°C to +40°C
Altitude : 1000 m.a.s.l.
Protection degree : IP23
Cooling method : IC01 - ODP
Mounting : W-6
Rotation¹ : Both (CW and CCW)
Starting method : Direct On Line
Approx. weight³ : 347 lb

| Output | 25% | 50% | 75% | 100% |
|----------------|------|------|------|------|
| Efficiency (%) | 90.8 | 91.0 | 91.7 | 91.7 |
| Power Factor | 0.54 | 0.78 | 0.86 | 0.87 |

Foundation loads

Efficiency (%)
Power Factor

90.8
0.54

91.0
0.78

91.7
0.86

91.7
0.87

Max. traction

Max. compression

| | Drive end | Non drive end |
|----------------------|----------------------|----------------------|
| Bearing type | 6311 Z C3 | 6211 Z C3 |
| Sealing | Without Bearing Seal | Without Bearing Seal |
| Lubrication interval | 11517 h | 14226 h |
| Lubricant amount | 18 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



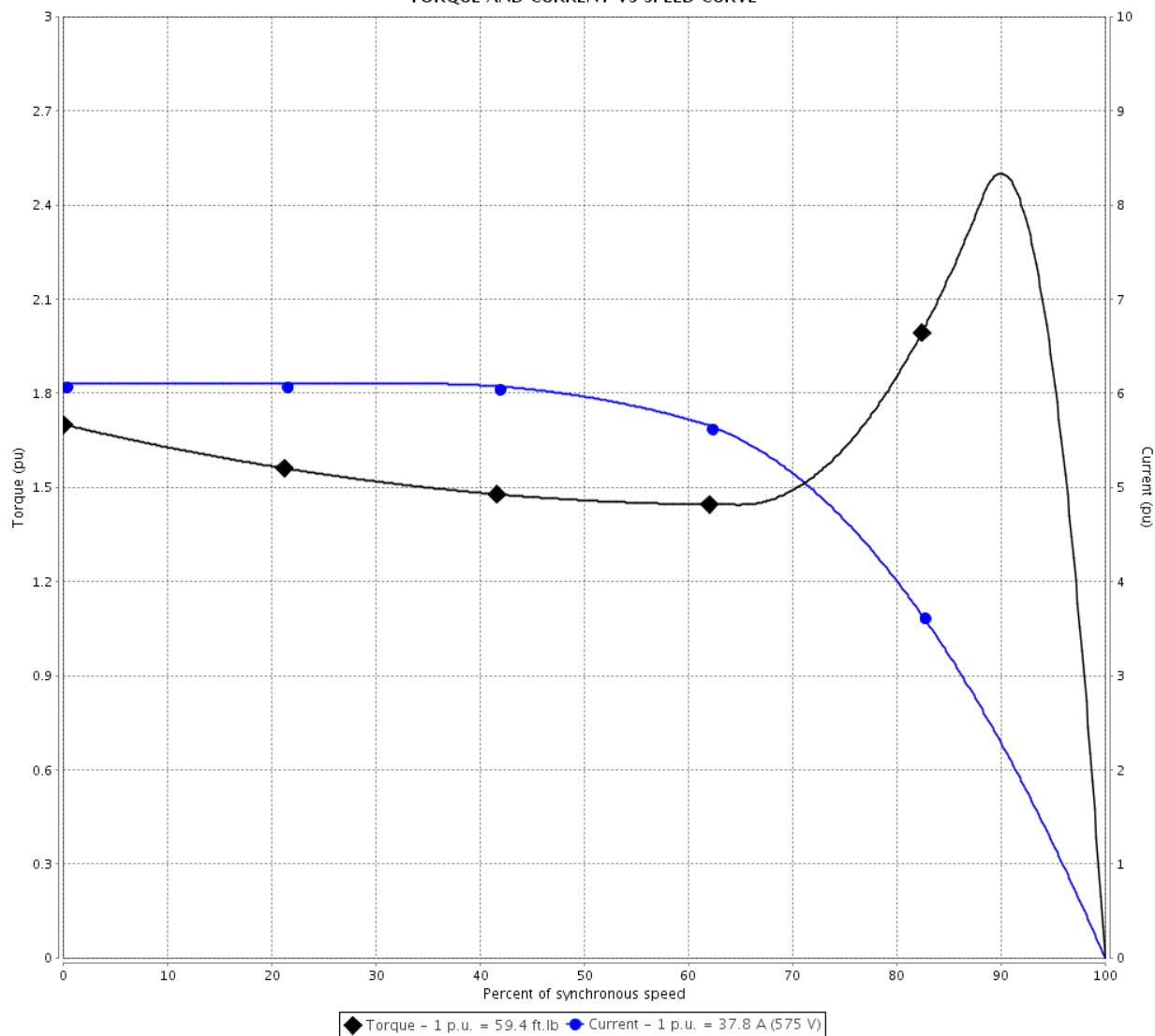
Customer :

Product line : W40 JM Pump High Efficiency
Three-Phase

Product code : 14832415

Catalog # : 04036OP3HFP286JMV-
W4

TORQUE AND CURRENT VS SPEED CURVE



Performance : 575 V 60 Hz 2P

| | | | |
|---------------------|--------------|-----------------------|-----------------|
| Rated current | : 37.8 A | Moment of inertia (J) | : 1.91 sq.ft.lb |
| LRC | : 6.1 | Duty cycle | : Cont.(S1) |
| Rated torque | : 59.4 ft.lb | Insulation class | : F |
| Locked rotor torque | : 170 % | Service factor | : 1.15 |
| Breakdown torque | : 250 % | Temperature rise | : 80 K |
| Rated speed | : 3535 rpm | Design | : B |

Locked rotor time : 18s (cold) 10s (hot)

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|---------------|---------|------|
| | | | | |
| Performed by | | Page 2 / 6 | | |
| Checked by | | | | |
| Date | 10/04/2020 | | | |
| | | Revision | | |

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

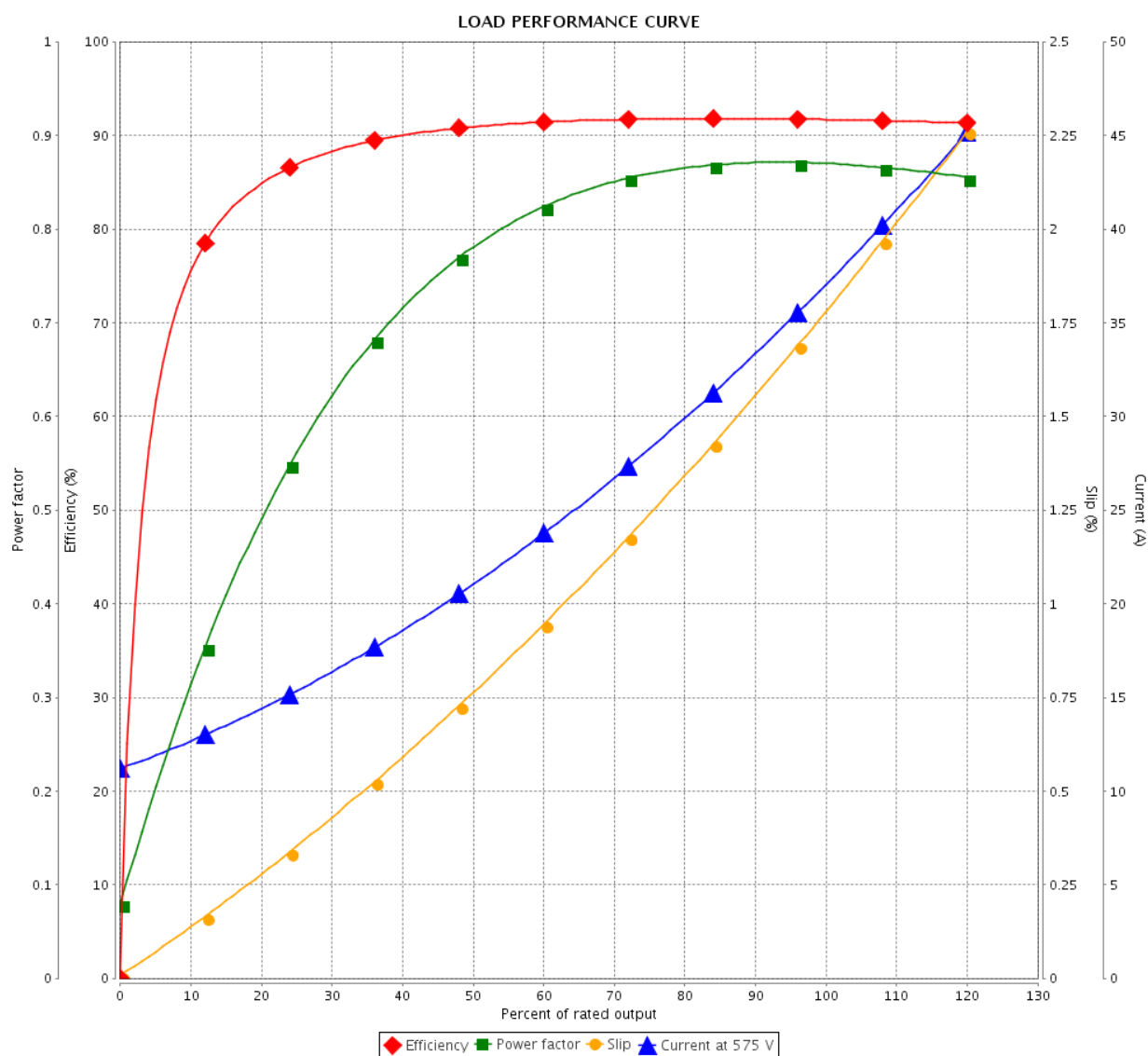


Customer :

Product line : W40 JM Pump High Efficiency
Three-Phase

Product code : 14832415

Catalog # : 04036OP3HFP286JMV-W4



Performance : 575 V 60 Hz 2P

Rated current : 37.8 A
LRC : 6.1
Rated torque : 59.4 ft.lb
Locked rotor torque : 170 %
Breakdown torque : 250 %
Rated speed : 3535 rpm

Moment of inertia (J) : 1.91 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|---------------|---------|------|
| | | | | |
| Performed by | | Page 3 / 6 | | |
| Checked by | | | | |
| Date | 10/04/2020 | | | |
| | | Revision | | |

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 JM Pump High Efficiency
Three-Phase

Product code : 14832415

Catalog # : 04036OP3HFP286JMV-
W4

Performance : 575 V 60 Hz 2P

| | | | |
|---------------------|--------------|-----------------------|-----------------|
| Rated current | : 37.8 A | Moment of inertia (J) | : 1.91 sq.ft.lb |
| LRC | : 6.1 | Duty cycle | : Cont.(S1) |
| Rated torque | : 59.4 ft.lb | Insulation class | : F |
| Locked rotor torque | : 170 % | Service factor | : 1.15 |
| Breakdown torque | : 250 % | Temperature rise | : 80 K |
| Rated speed | : 3535 rpm | Design | : B |

Heating constant

Cooling constant

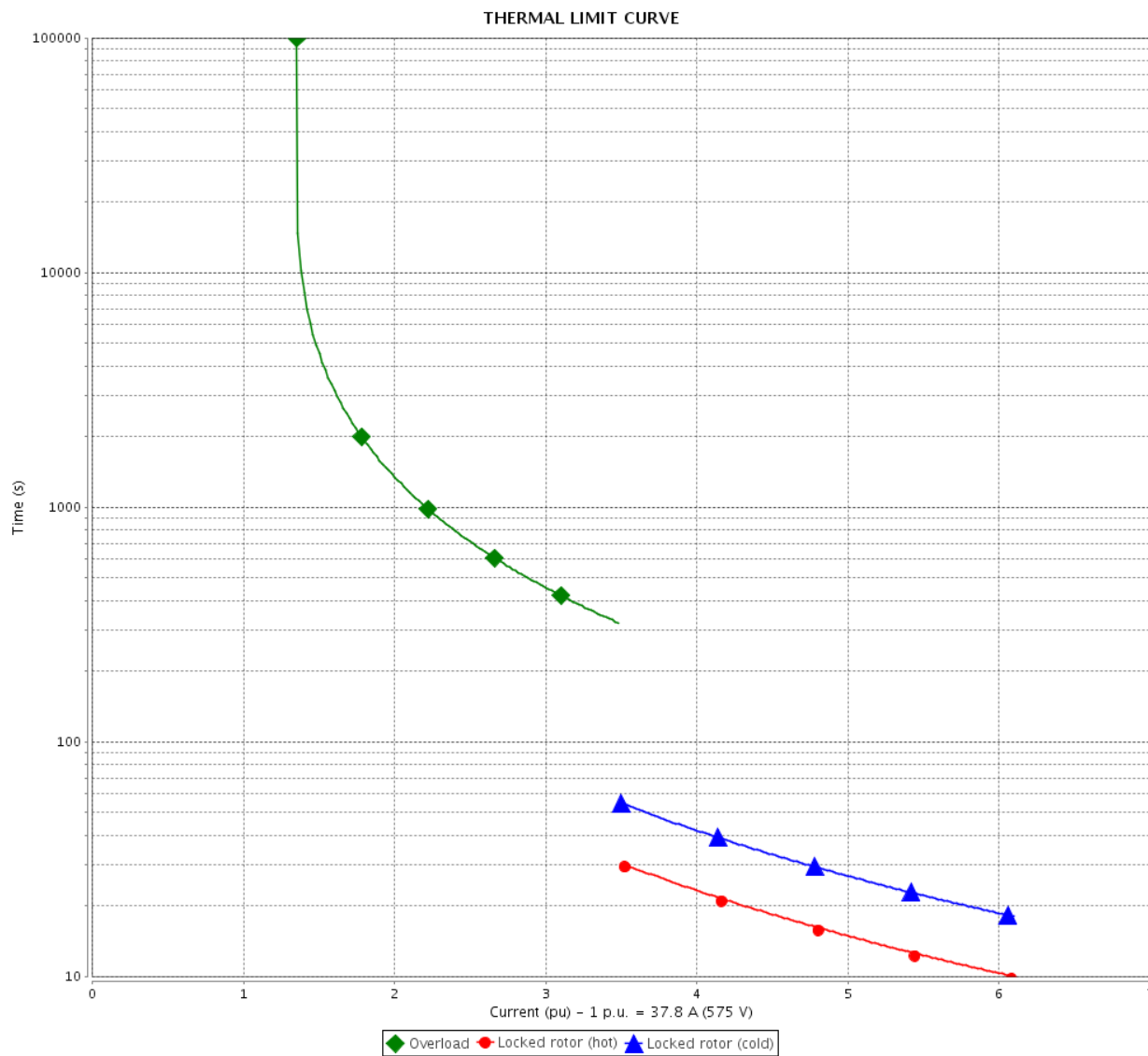
| Rev. | Changes Summary | | Performed | Checked | Date |
|--------------|-----------------|--|-----------|---------|----------|
| | | | | | |
| Performed by | | | | Page | Revision |
| Checked by | | | | 4 / 6 | |
| Date | 10/04/2020 | | | | |

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 | 10/04/2020 | | | | |

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

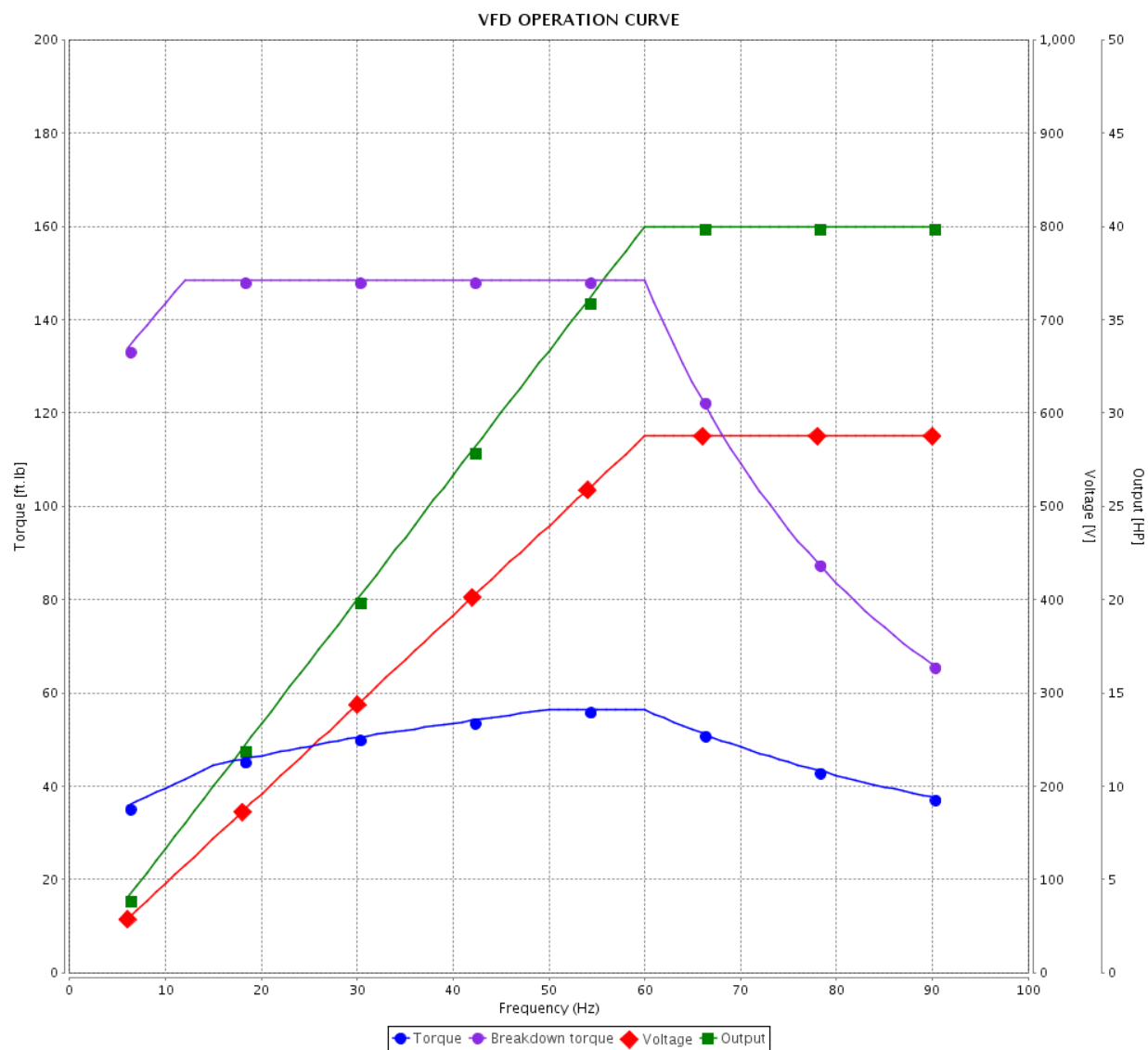


Customer :

Product line : W40 JM Pump High Efficiency
Three-Phase

Product code : 14832415

Catalog # : 04036OP3HFP286JMV-
W4

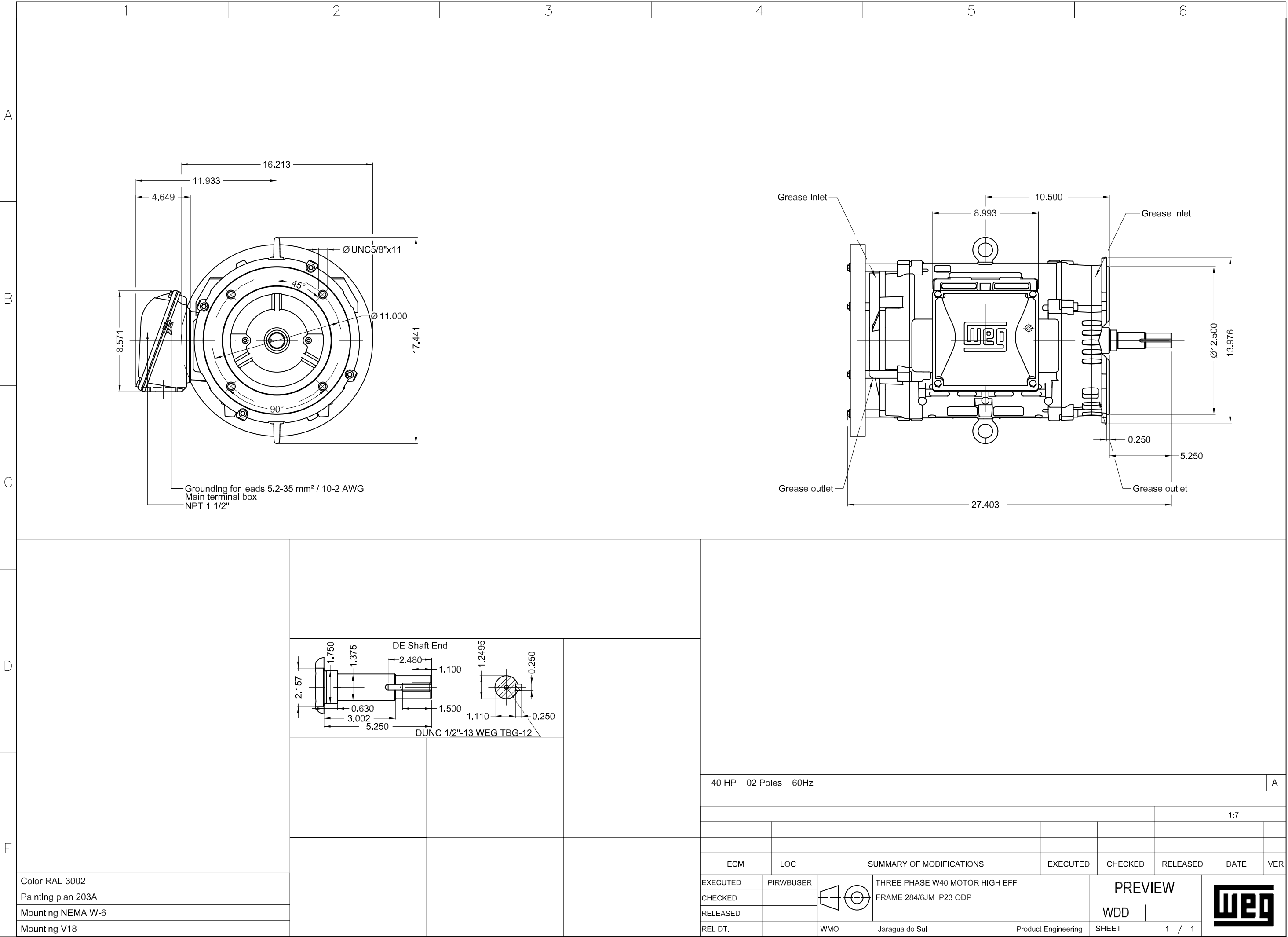


Performance : 575 V 60 Hz 2P

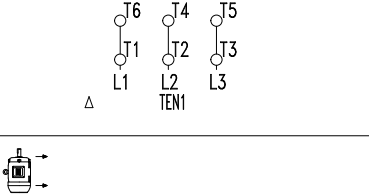

Rated current : 37.8 A
LRC : 6.1
Rated torque : 59.4 ft.lb
Locked rotor torque : 170 %
Breakdown torque : 250 %
Rated speed : 3535 rpm

Moment of inertia (J) : 1.91 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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



**W40***Severe Duty*

| | | | | | | | |
|--------------|------|--------|-------------------|------------|---|--|--|
| PH | FR | HP(kW) | | Hz |  | | |
| V — | | A — | | | | | |
| NEMA NOM EFF | | — | % | RPM | | | |
| ENCL ODP | DUTY | | INS. CL. | ΔT | | | |
| PF | | DES — | CODE | AMB. |  | | |
| SF | SFA | | ALT 1000 m.a.s.l. | | | | |
| | | | | | Lbs | | |