

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 12011329
Catalog # : 60012ET3G588/9-W22

| | | | |
|-----------------------|-------------------|-----------------------------|------------------------|
| Frame | : 588/9T | Locked rotor time | : 55s (cold) 31s (hot) |
| Output | : 600 HP (440 kW) | Temperature rise | : 80 K |
| Poles | : 6 | Duty cycle | : Cont.(S1) |
| Frequency | : 60 Hz | Ambient temperature | : -20°C to +40°C |
| Rated voltage | : 460 V | Altitude | : 1000 m.a.s.l. |
| Rated current | : 727 A | Protection degree | : IP55 |
| L. R. Amperes | : 4580 A | Cooling method | : IC411 - TEFC |
| LRC | : 6.3x(Code G) | Mounting | : F-1 |
| No load current | : 330 A | Rotation ¹ | : Both (CW and CCW) |
| Rated speed | : 1190 rpm | Noise level ² | : 77.0 dB(A) |
| Slip | : 0.83 % | Starting method | : Direct On Line |
| Rated torque | : 2610 ft.lb | Approx. weight ³ | : 5828 lb |
| Locked rotor torque | : 220 % | | |
| Breakdown torque | : 229 % | | |
| Insulation class | : F | | |
| Service factor | : 1.00 | | |
| Moment of inertia (J) | : 449 sq.ft.lb | | |

| | | | | | | |
|----------------|------|------|------|------|------------------|------------|
| Output | 25% | 50% | 75% | 100% | Foundation loads | |
| Efficiency (%) | 95.2 | 95.4 | 96.1 | 96.2 | Max. traction | : 12026 lb |
| Power Factor | 0.38 | 0.63 | 0.74 | 0.79 | Max. compression | : 17855 lb |

| | | | |
|----------------------|---|--------------------|----------------------|
| | | <u>Drive end</u> | <u>Non drive end</u> |
| Bearing type | : | 6322 C3 | 6319 C3 |
| Sealing | : | Taconite Labyrinth | Taconite Labyrinth |
| Lubrication interval | : | 11000 h | 13000 h |
| Lubricant amount | : | 60 g | 45 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 Revision 1 / 7 | | |
| Checked by | | | | |
| Date | 09/01/2018 | | | |

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

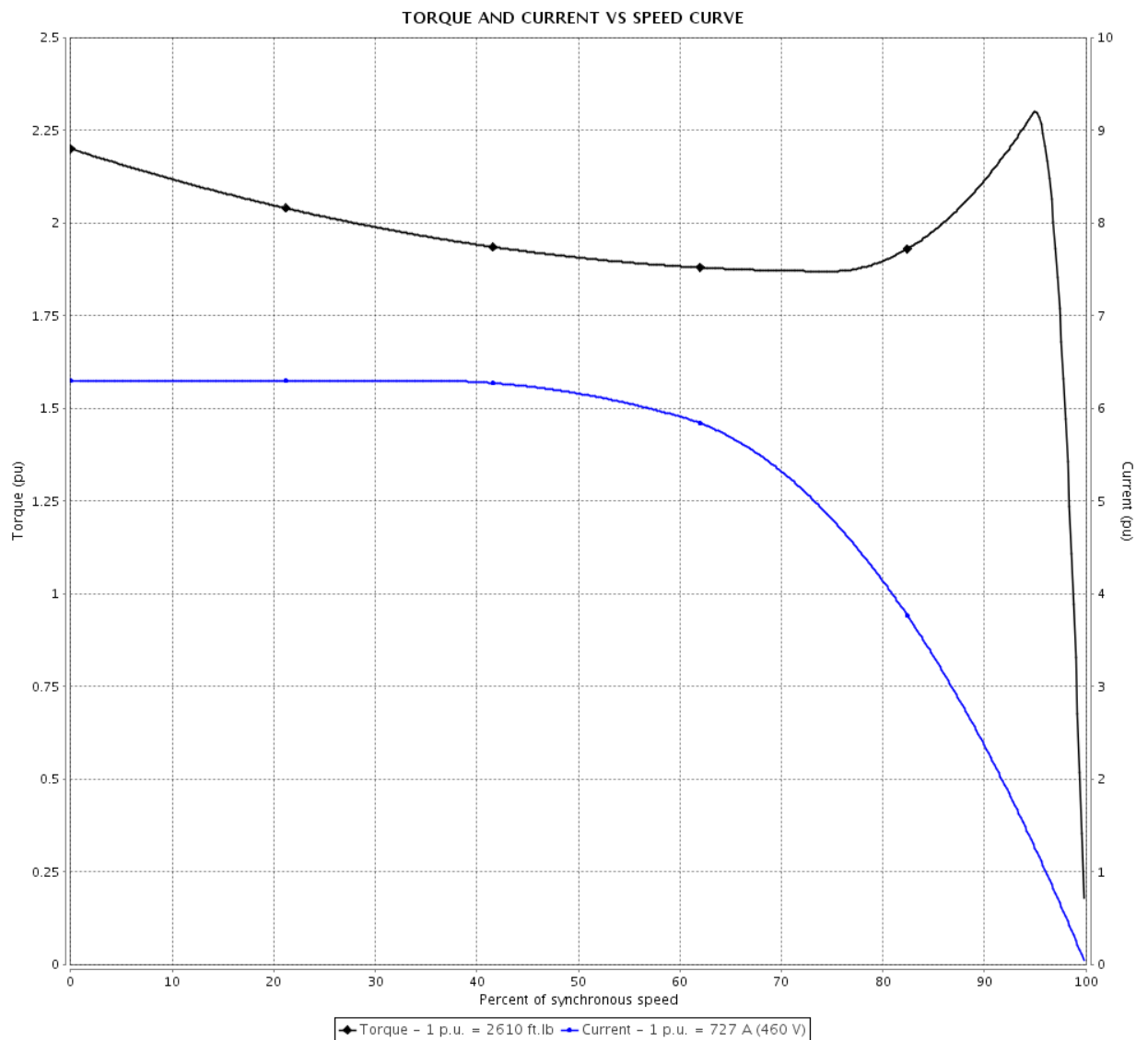


Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 12011329

Catalog # : 60012ET3G588/9-W22



Performance : 460 V 60 Hz 6P

| | | | |
|---------------------|--------------|-----------------------|----------------|
| Rated current | : 727 A | Moment of inertia (J) | : 449 sq.ft.lb |
| LRC | : 6.3 | Duty cycle | : Cont.(S1) |
| Rated torque | : 2610 ft.lb | Insulation class | : F |
| Locked rotor torque | : 220 % | Service factor | : 1.00 |
| Breakdown torque | : 229 % | Temperature rise | : 80 K |
| Rated speed | : 1190 rpm | | |

Locked rotor time : 55s (cold) 31s (hot)

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|---------------|----------|
| | | | | |
| Performed by | | | | |
| Checked by | | | | |
| Date | 09/01/2018 | | Page 3 / 7 | Revision |

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

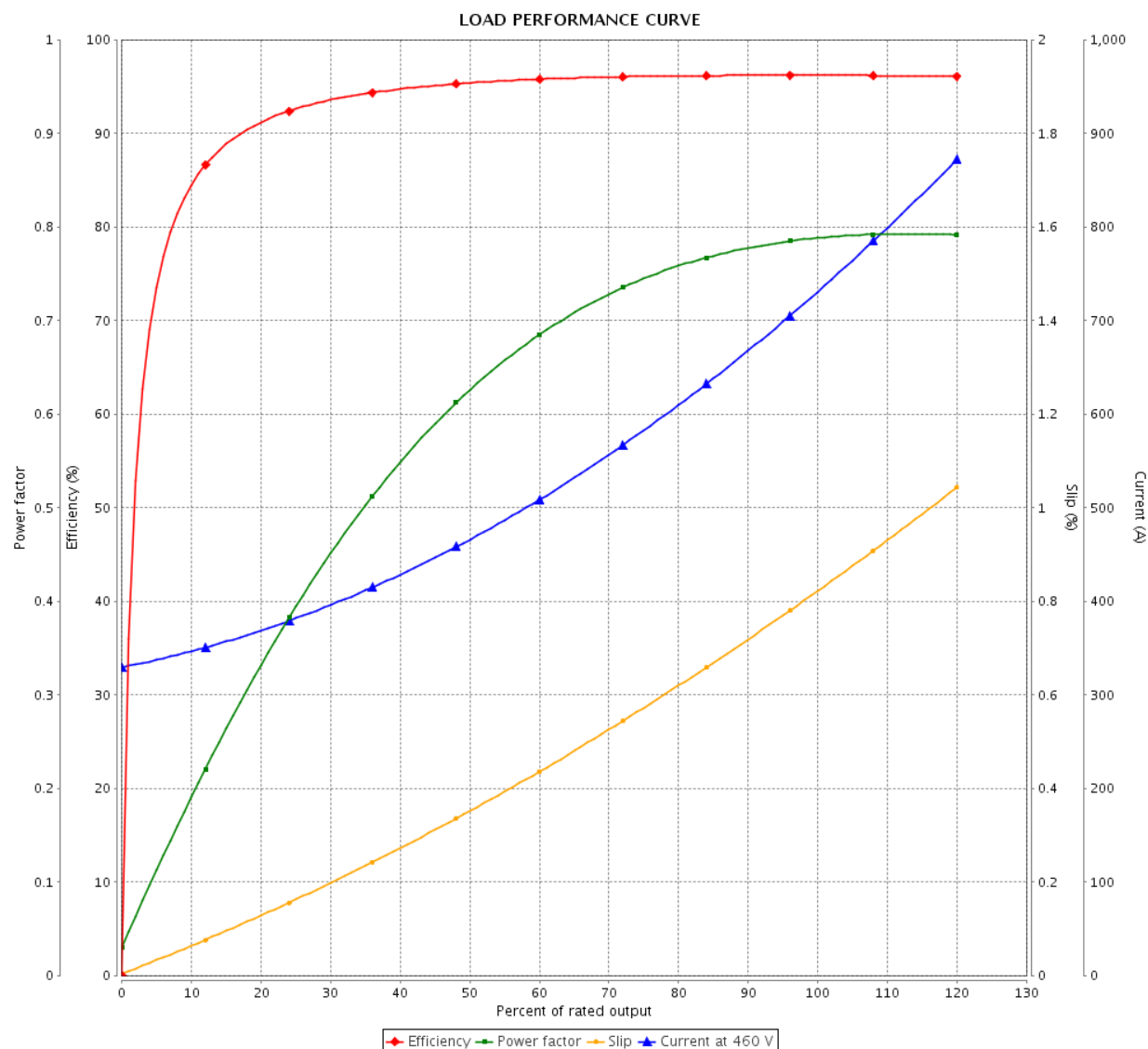


Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 12011329

Catalog # : 60012ET3G588/9-W22



Performance : 460 V 60 Hz 6P

Rated current : 727 A
LRC : 6.3
Rated torque : 2610 ft.lb
Locked rotor torque : 220 %
Breakdown torque : 229 %
Rated speed : 1190 rpm

Moment of inertia (J) : 449 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K

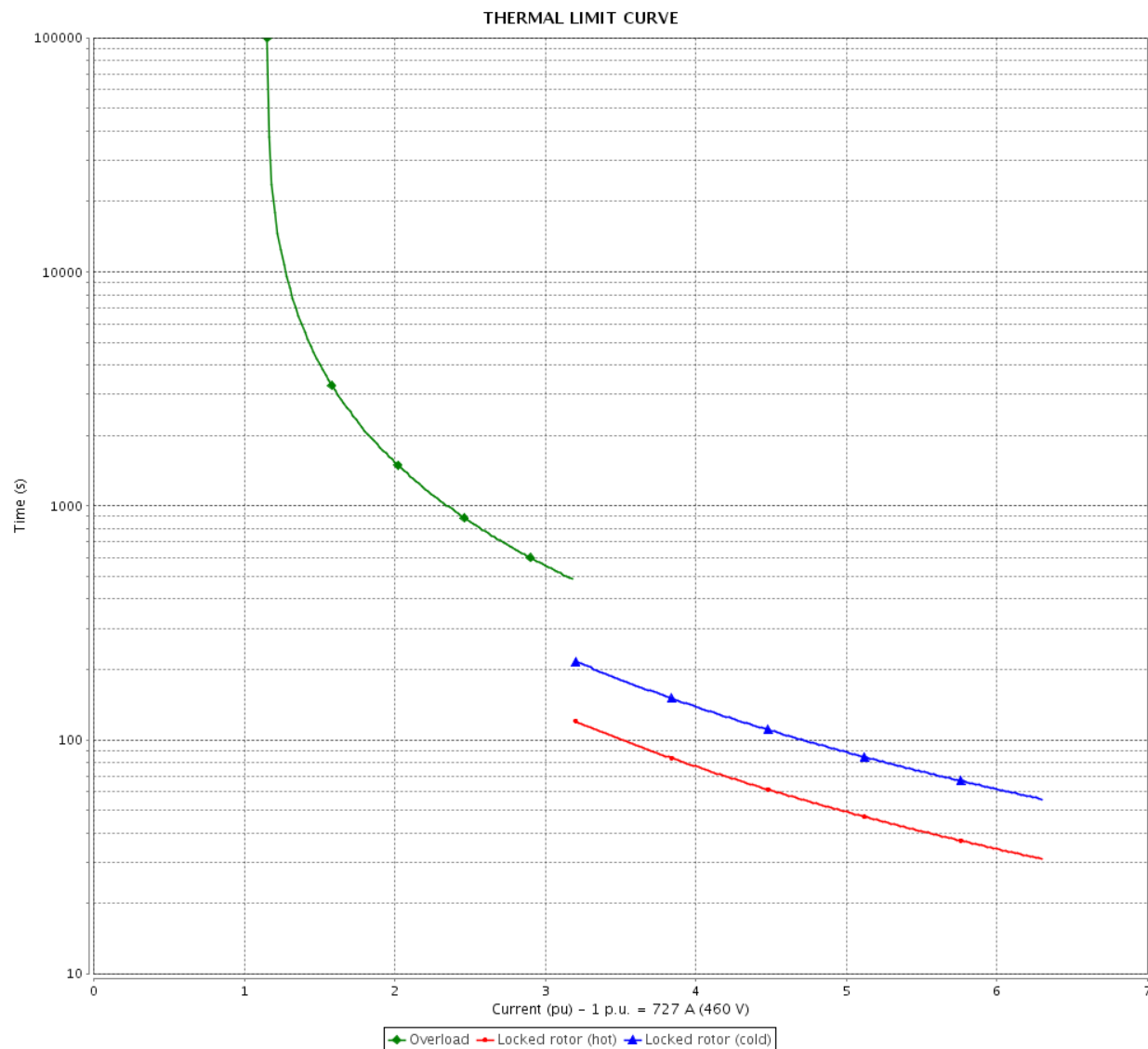
| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------------------|---------|------|
| | | | | |
| Performed by | | Page 4 / 7Revision | | |
| Checked by | | | | |
| Date | 09/01/2018 | | | |

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :



| Rev. | Changes Summary | | Performed | Checked | Date |
|--------------|-----------------|--|-----------|---------|----------|
| | | | | | |
| Performed by | | | | Page | Revision |
| Checked by | | | | 6 / 7 | |
| Date | 09/01/2018 | | | | |

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

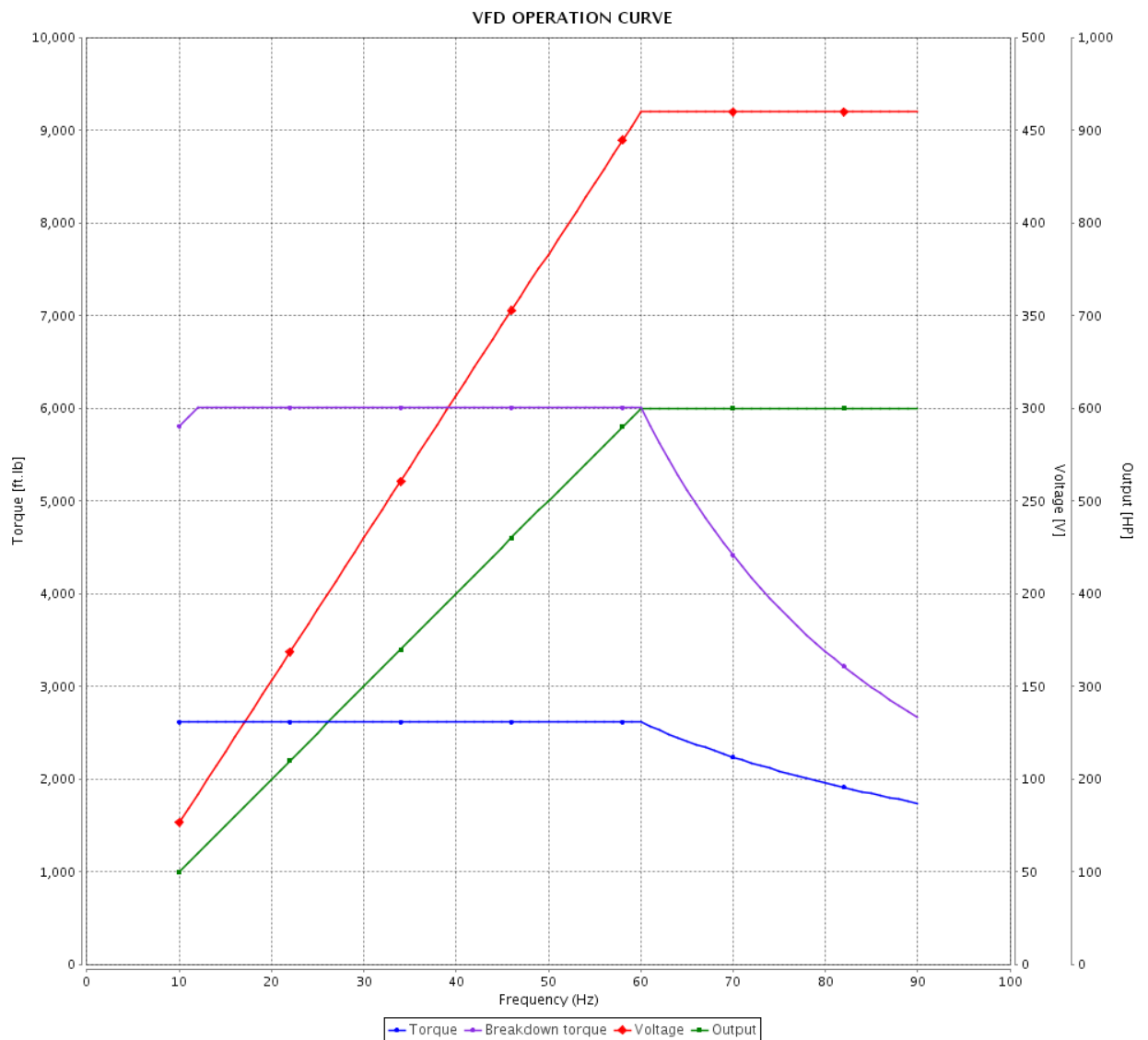


Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 12011329

Catalog # : 60012ET3G588/9-W22



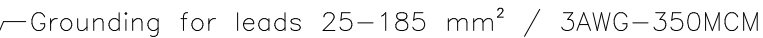
Performance : 460 V 60 Hz 6P

Rated current : 727 A
LRC : 6.3
Rated torque : 2610 ft.lb
Locked rotor torque : 220 %
Breakdown torque : 229 %
Rated speed : 1190 rpm

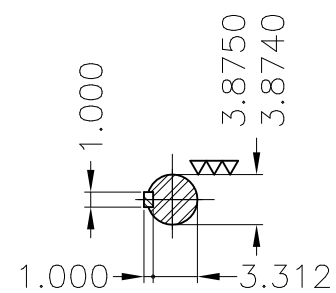
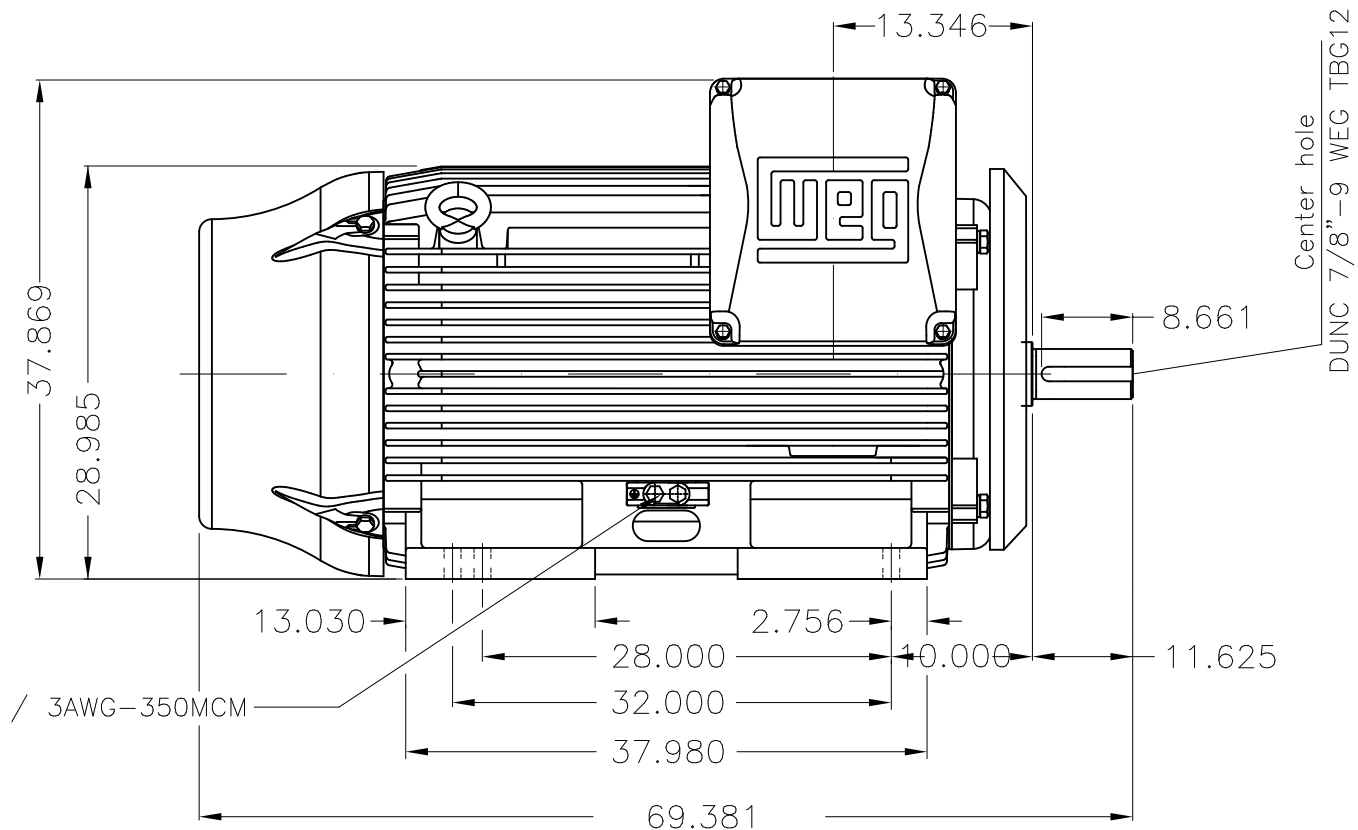
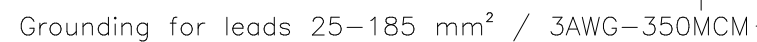
Moment of inertia (J) : 449 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|---------------|---------|------|
| | | | | |
| Performed by | | Page 7 / 7 | | |
| Checked by | | | | |
| Date | 09/01/2018 | | | |
| | | Revision | | |

THIS IS AN UPDATED REVISION, THE
PREVIOUS ONE MUST BE DISREGARDED.

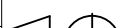



Main terminal box



DE Shaft End

Mounting B3R(D)

| | | | | | | | | |
|----------|------------|---------------------------------------------------------------------------------------|------------------------------------------|---------------------|----------|---------------------------------------------------------------------------------------|----------|----------|
| | | | | | | | | |
| | | | | | | | | |
| ECM | LOC | SUMMARY OF MODIFICATIONS | | | EXECUTED | CHECKED | RELEASED | DATE VER |
| EXECUTED | USERADMIN |  | THREE PHASE W22 MOTOR - NEMA PREMIUM EFF | | |  | | |
| CHECKED | | | FRAME 588/9T IP55 TEFC | | | | | |
| RELEASED | | | WEG code: 12011329 | | | | | |
| REL DT | 09.01.2018 | WMO | Jaragua do Sul | Product Engineering | SHEET | 1 / 1 | | |



ZME A3

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

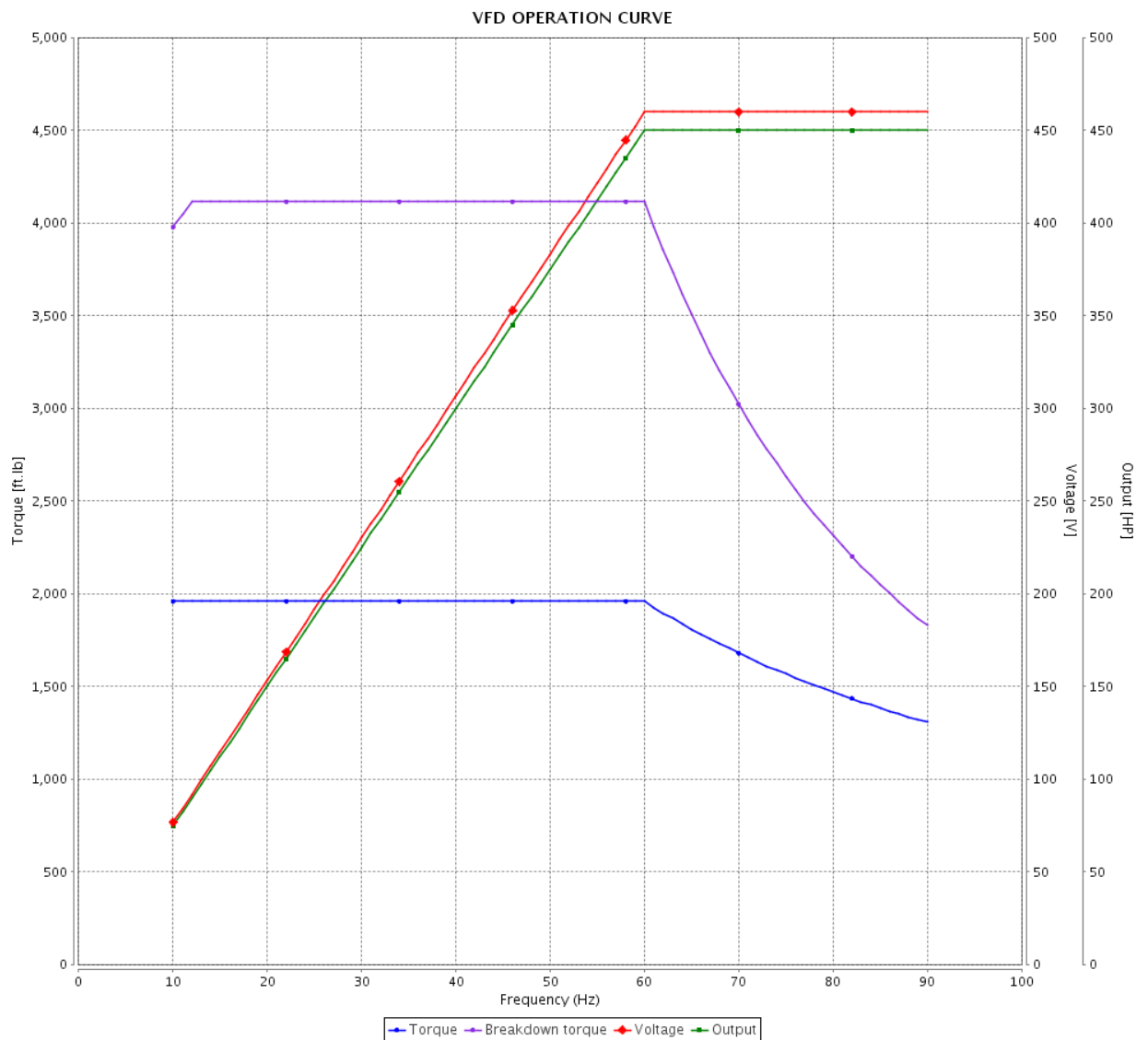


Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 12052653

Catalog # : 45012ET3G586/7-W22

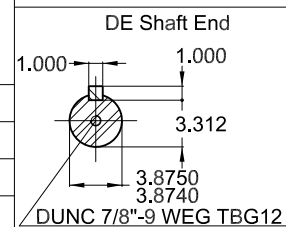
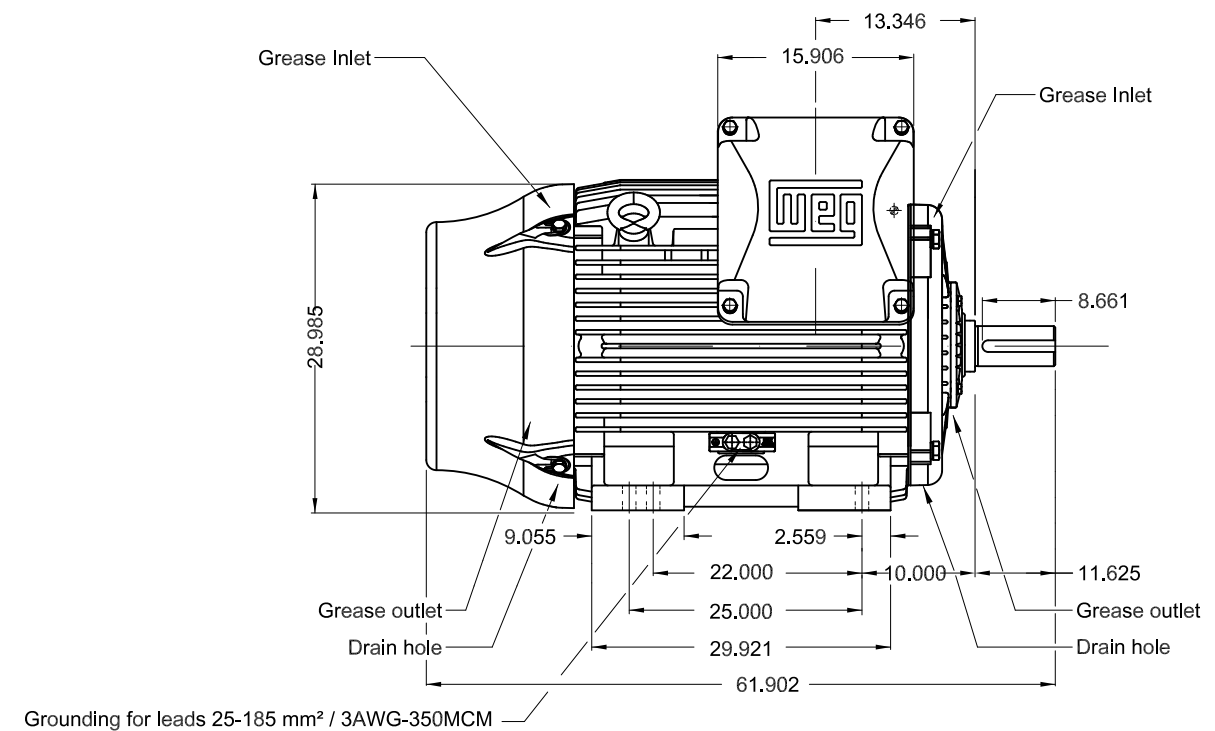
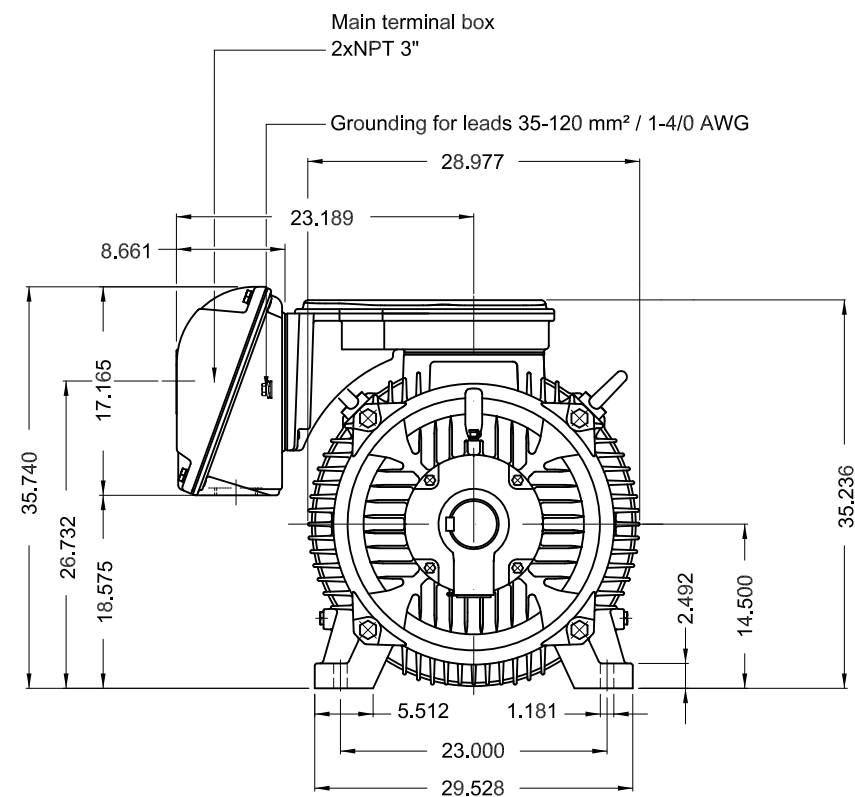


Performance : 460 V 60 Hz 6P



Rated current : 532 A
LRC : 6.1
Rated torque : 1960 ft.lb
Locked rotor torque : 210 %
Breakdown torque : 210 %
Rated speed : 1190 rpm

Moment of inertia (J) : 368 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|---------------|---------|------|
| | | | | |
| Performed by | | Page 7 / 7 | | |
| Checked by | | | | |
| Date | 17/07/2018 | | | |
| | | Revision | | |



| |
|-------------------------------------------------------|
| NDE endshield with electrically insulated bearing hub |
| Color RAL 5009 |
| Painting plan 203A |
| Mounting B3R(D) |

| 450 HP 06 Poles 60Hz | | | | | | | A |
|----------------------------|-----------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------------------|--------------------|----------|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| ECM | LOC | SUMMARY OF MODIFICATIONS | | | EXECUTED | CHECKED | RELEASED |
| EXECUTED | USERADMIN |  | THREE PHASE W22 MOTOR - NEMA PREMIUM EFF FRAME 586/7T IP55 TEFC | | | PREVIEW WDD | |
| CHECKED | | | | | | | |
| RELEASED | | | | | | | |
| REL DT | | WMO | Jaragua do Sul | Product Engineering | SHEET | 1 / 1 | |
| | | | | |  | | |