# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase

Product code : 11939477

| | | | |
|---|---|---|---|
| Frame | : 182/4T | Cooling method | : IC411 - TEFC |
| Insulation class | : F | Mounting | : F-1 |
| Duty cycle | : Cont.(S1) | Rotation¹ | : Both (CW and CCW) |
| Ambient temperature | : -20°C to +40°C | Starting method | : Direct On Line |
| Altitude | : 1000 m.a.s.l. | Approx. weight³ | : 49.9 kg |
| Protection degree | : IP55 | Moment of inertia (J) | : 0.0094 kgm² |
| Design | : B | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Output [HP] | | 5 | 4 | 4 | 4 | 5 | 5 | 5 |
| Poles | | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Frequency [Hz] | | 60 | 50 | 50 | 50 | 50 | 50 | 50 |
| Rated voltage [V] | | 460 | 380 | 400 | 415 | 380 | 400 | 415 |
| Rated current [A] | | 5.90 | 5.79 | 5.57 | 5.43 | 7.14 | 6.78 | 6.61 |
| L. R. Amperes [A] | | 44.8 | 42.8 | 45.1 | 48.3 | 42.1 | 44.7 | 47.6 |
| LRC [A] | | 7.6x(Code J) | 7.4x(Code H) | 8.1x(Code J) | 8.9x(Code K) | 5.9x(Code F) | 6.6x(Code G) | 7.2x(Code H) |
| No load current [A] | | 2.00 | 2.00 | 2.15 | 2.25 | 2.00 | 2.15 | 2.25 |
| Rated speed [RPM] | | 3485 | 2890 | 2900 | 2910 | 2850 | 2870 | 2880 |
| Slip [%] | | 3.19 | 3.67 | 3.33 | 3.00 | 5.00 | 4.33 | 4.00 |
| Rated torque [kgfm] | | 1.04 | 1.00 | 1.00 | 0.998 | 1.27 | 1.26 | 1.26 |
| Locked rotor torque [%] | | 229 | 229 | 270 | 300 | 180 | 210 | 240 |
| Breakdown torque [%] | | 350 | 320 | 370 | 400 | 250 | 290 | 320 |
| Service factor | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Temperature rise | | 80 K | 80 K | 80 K | 80 K | 80 K | 80 K | 80 K |
| Locked rotor time | | 45s (cold) 25s (hot) | 32s (cold) 18s (hot) | 32s (cold) 18s (hot) | 32s (cold) 18s (hot) | 32s (cold) 18s (hot) | 32s (cold) 18s (hot) | 32s (cold) 18s (hot) |
| Noise level² | | 66.0 dB(A) | 62.0 dB(A) | 62.0 dB(A) | 62.0 dB(A) | 62.0 dB(A) | 62.0 dB(A) | 62.0 dB(A) |
| Efficiency (%) | 25% | | | | | | | |
| | 50% | 86.5 | 86.3 | 86.3 | 86.1 | 87.5 | 87.5 | 87.5 |
| | 75% | 88.5 | 87.7 | 88.2 | 88.2 | 87.5 | 88.5 | 88.5 |
| | 100% | 88.5 | 87.5 | 88.3 | 88.3 | 86.5 | 87.5 | 87.5 |
| Power Factor | 25% | | | | | | | |
| | 50% | 0.76 | 0.74 | 0.71 | 0.68 | 0.81 | 0.78 | 0.76 |
| | 75% | 0.85 | 0.85 | 0.83 | 0.81 | 0.88 | 0.87 | 0.85 |
| | 100% | 0.89 | 0.90 | 0.88 | 0.87 | 0.91 | 0.90 | 0.89 |

Losses at normative operating points (speed;torque), in percentage of rated output power

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Losses (%) | P1 (0,9;1,0) | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 |
| | P2 (0,5;1,0) | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 |
| | P3 (0,25;1,0) | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 | 8.9 |
| | P4 (0,9;0,5) | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 |
| | P5 (0,5;0,5) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| | P6 (0,5;0,25) | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| | P7 (0,25;0,25) | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |

| | | Drive end | Non drive end |
|---|---|---|---|
| Bearing type | : | 6207 C3 | 6206 C3 |
| Sealing | : | Taconite Labyrinth | Taconite Labyrinth |
| Lubrication interval | : | 20000 h | 20000 h |
| Lubricant amount | : | 7 g | 5 g |
| Lubricant type | : | Mobil Polyrex EM | |

Foundation loads

Max. traction : 59 kgf

Max. compression : 109 kgf

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# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage

Customer :

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.

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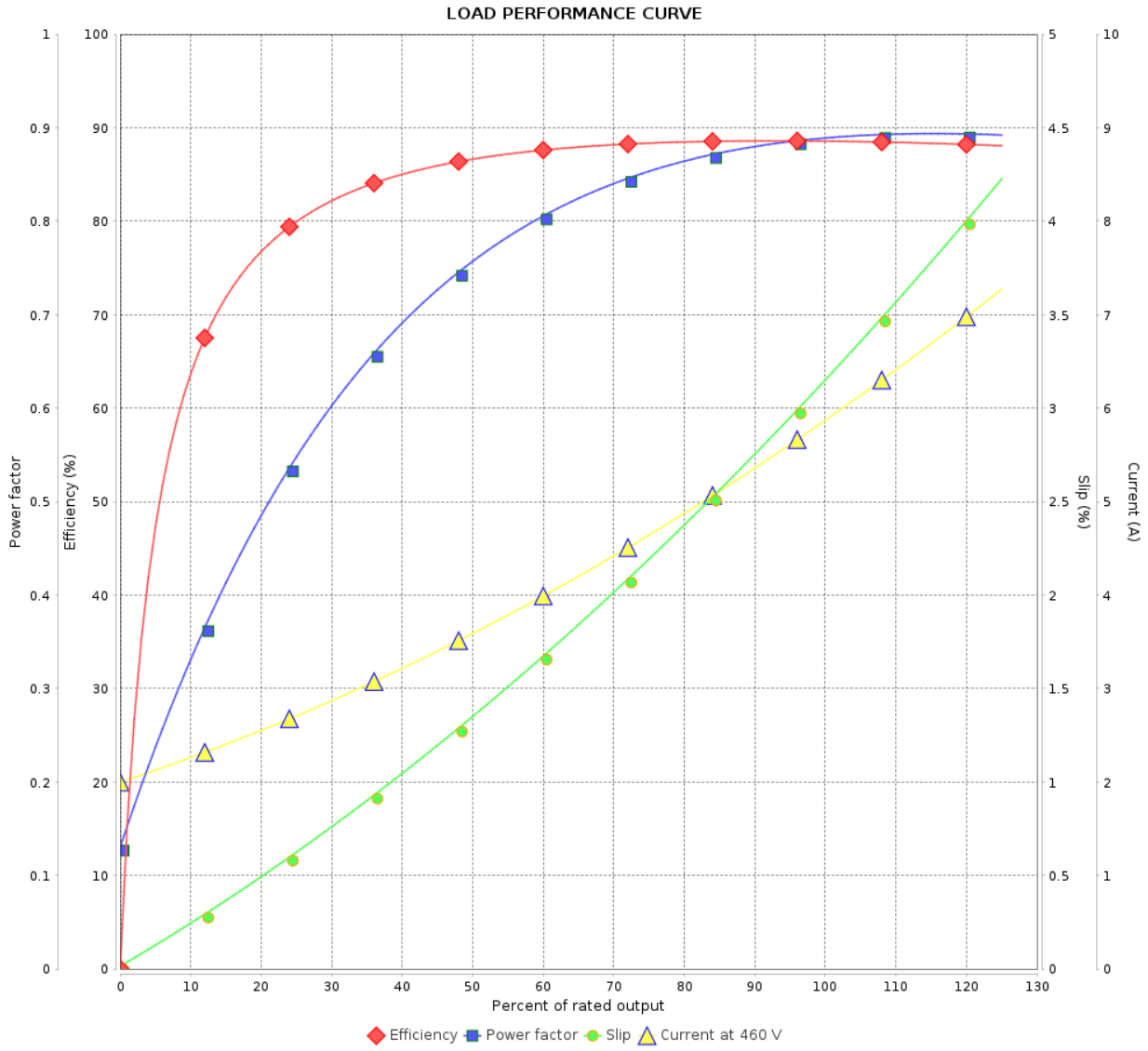
# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase

Product code : 11939477




| Performance | : 460 V 60 Hz 2P | | |
|---|---|---|---|
| Rated current | : 5.90 A | Moment of inertia (J) | : 0.0094 kgm² |
| LRC | : 7.6 | Duty cycle | : Cont.(S1) |
| Rated torque | : 1.04 kgfm | Insulation class | : F |
| Locked rotor torque | : 229 % | Service factor | : 1.25 |
| Breakdown torque | : 350 % | Temperature rise | : 80 K |
| Rated speed | : 3485 rpm | Design | : B |

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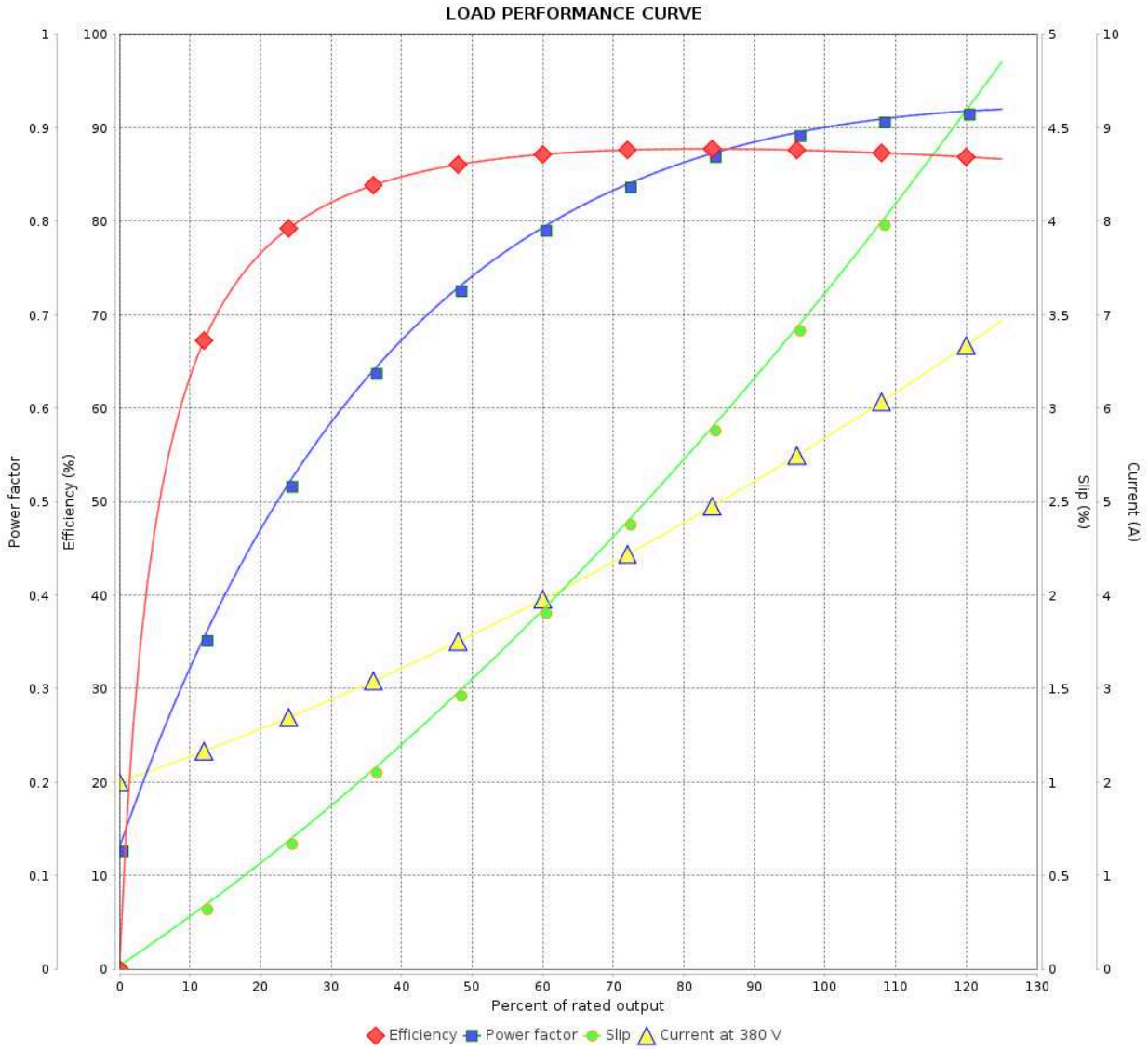
# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase

Product code : 11939477




| | | | |
|---|---|---|---|
| Performance | : 380 V 50 Hz 2P IE3 | | |
| Rated current | : 5.79 A | Moment of inertia (J) | : 0.0094 kgm² |
| LRC | : 7.4 | Duty cycle | : Cont.(S1) |
| Rated torque | : 1.00 kgfm | Insulation class | : F |
| Locked rotor torque | : 229 % | Service factor | : 1.25 |
| Breakdown torque | : 320 % | Temperature rise | : 80 K |
| Rated speed | : 2890 rpm | Design | : B |

| Rev. | Changes Summary | Performed | Checked | Date |
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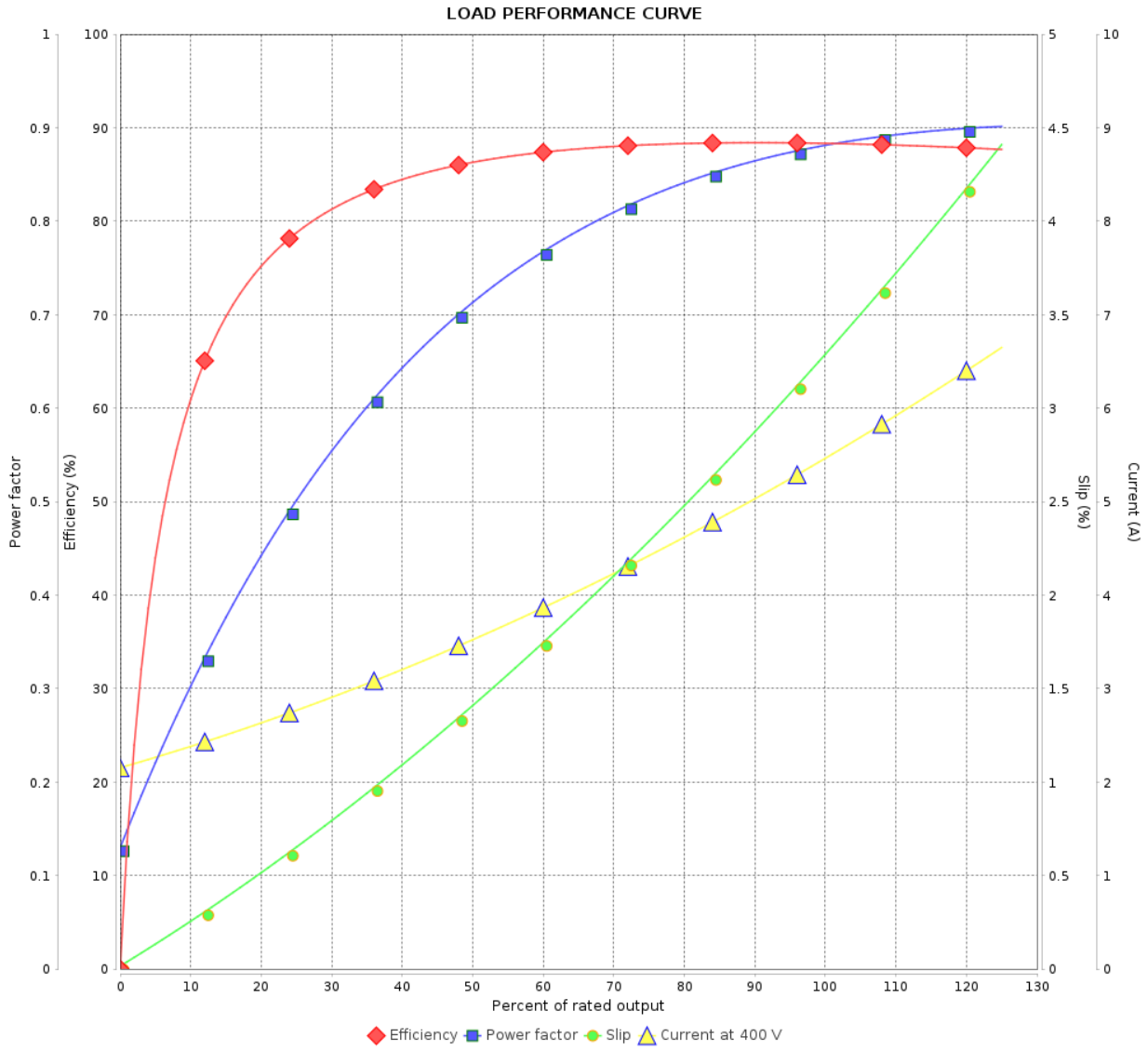
# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase

Product code : 11939477




| | | | |
|---|---|---|---|
| Performance | : 400 V 50 Hz 2P IE3 | | |
| Rated current | : 5.57 A | Moment of inertia (J) | : 0.0094 kgm² |
| LRC | : 8.1 | Duty cycle | : Cont.(S1) |
| Rated torque | : 1.00 kgfm | Insulation class | : F |
| Locked rotor torque | : 270 % | Service factor | : 1.25 |
| Breakdown torque | : 370 % | Temperature rise | : 80 K |
| Rated speed | : 2900 rpm | Design | : B |

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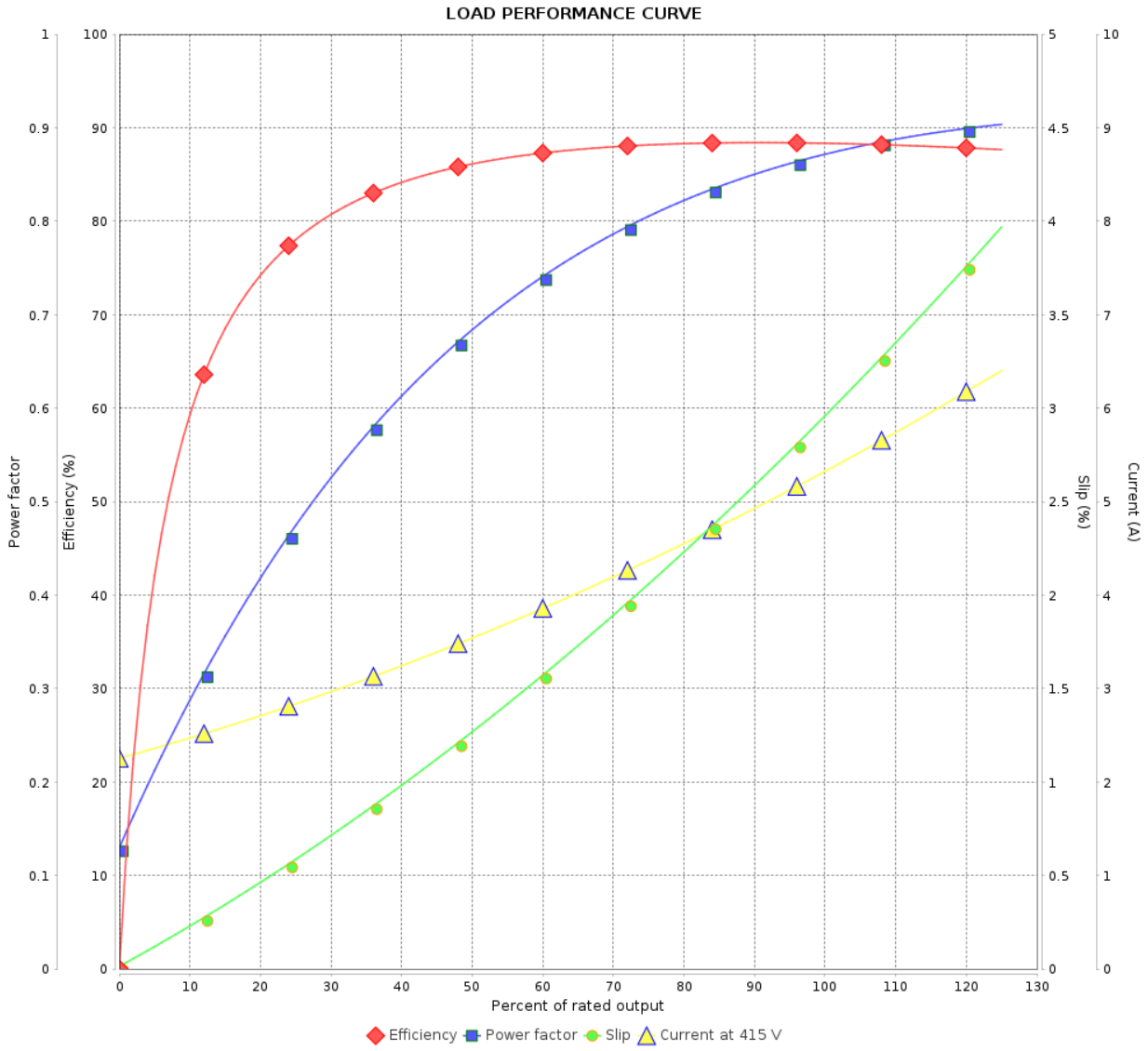
# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase

Product code : 11939477




| | | | |
|---|---|---|---|
| Performance | : 415 V 50 Hz 2P IE3 | | |
| Rated current | : 5.43 A | Moment of inertia (J) | : 0.0094 kgm² |
| LRC | : 8.9 | Duty cycle | : Cont.(S1) |
| Rated torque | : 0.998 kgfm | Insulation class | : F |
| Locked rotor torque | : 300 % | Service factor | : 1.25 |
| Breakdown torque | : 400 % | Temperature rise | : 80 K |
| Rated speed | : 2910 rpm | Design | : B |

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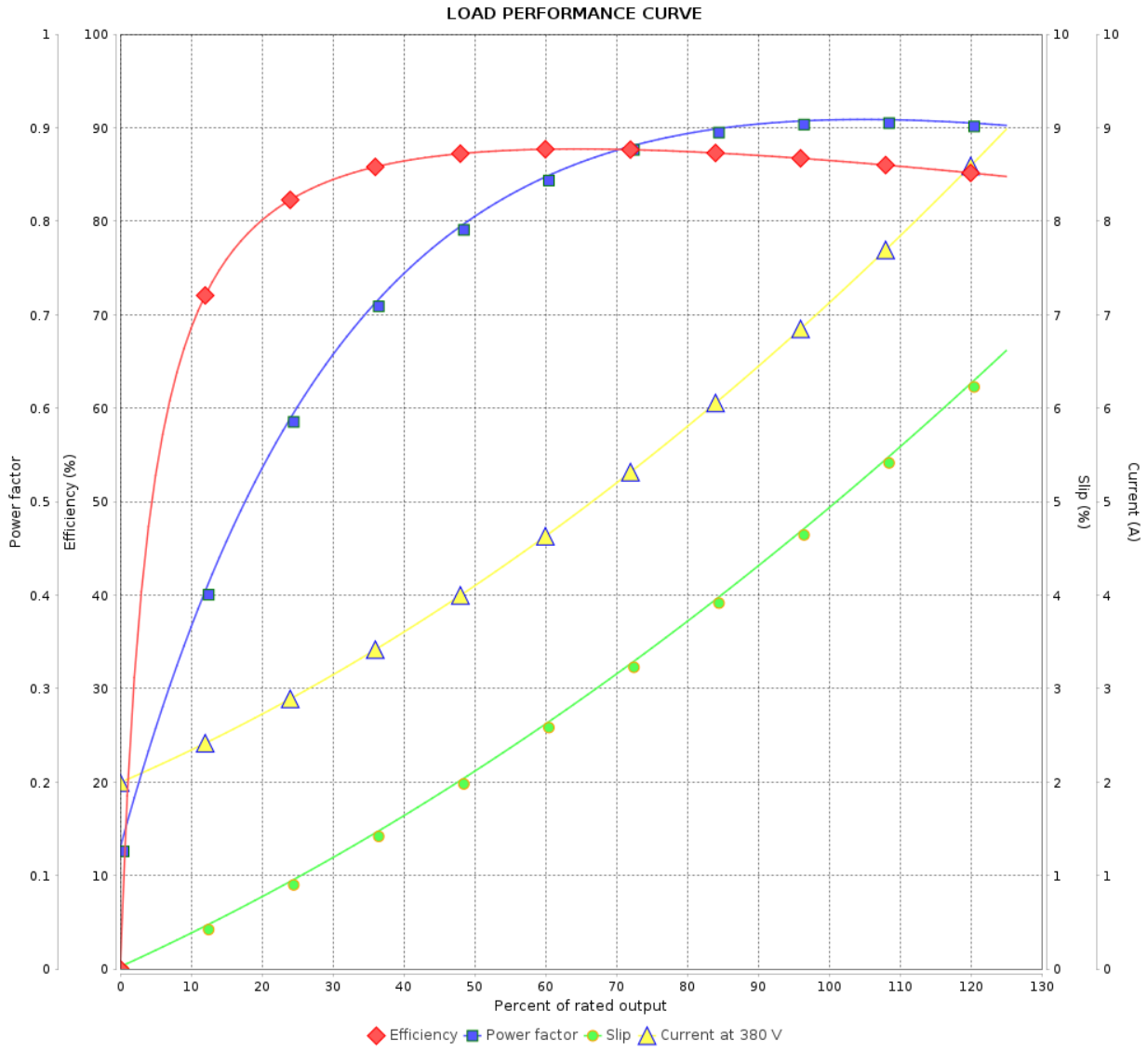
# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase

Product code : 11939477




| | | | |
|---|---|---|---|
| Performance | : 380 V 50 Hz 2P IE2 | | |
| Rated current | : 7.14 A | Moment of inertia (J) | : 0.0094 kgm² |
| LRC | : 5.9 | Duty cycle | : Cont.(S1) |
| Rated torque | : 1.27 kgfm | Insulation class | : F |
| Locked rotor torque | : 180 % | Service factor | : 1.25 |
| Breakdown torque | : 250 % | Temperature rise | : 80 K |
| Rated speed | : 2850 rpm | Design | : B |

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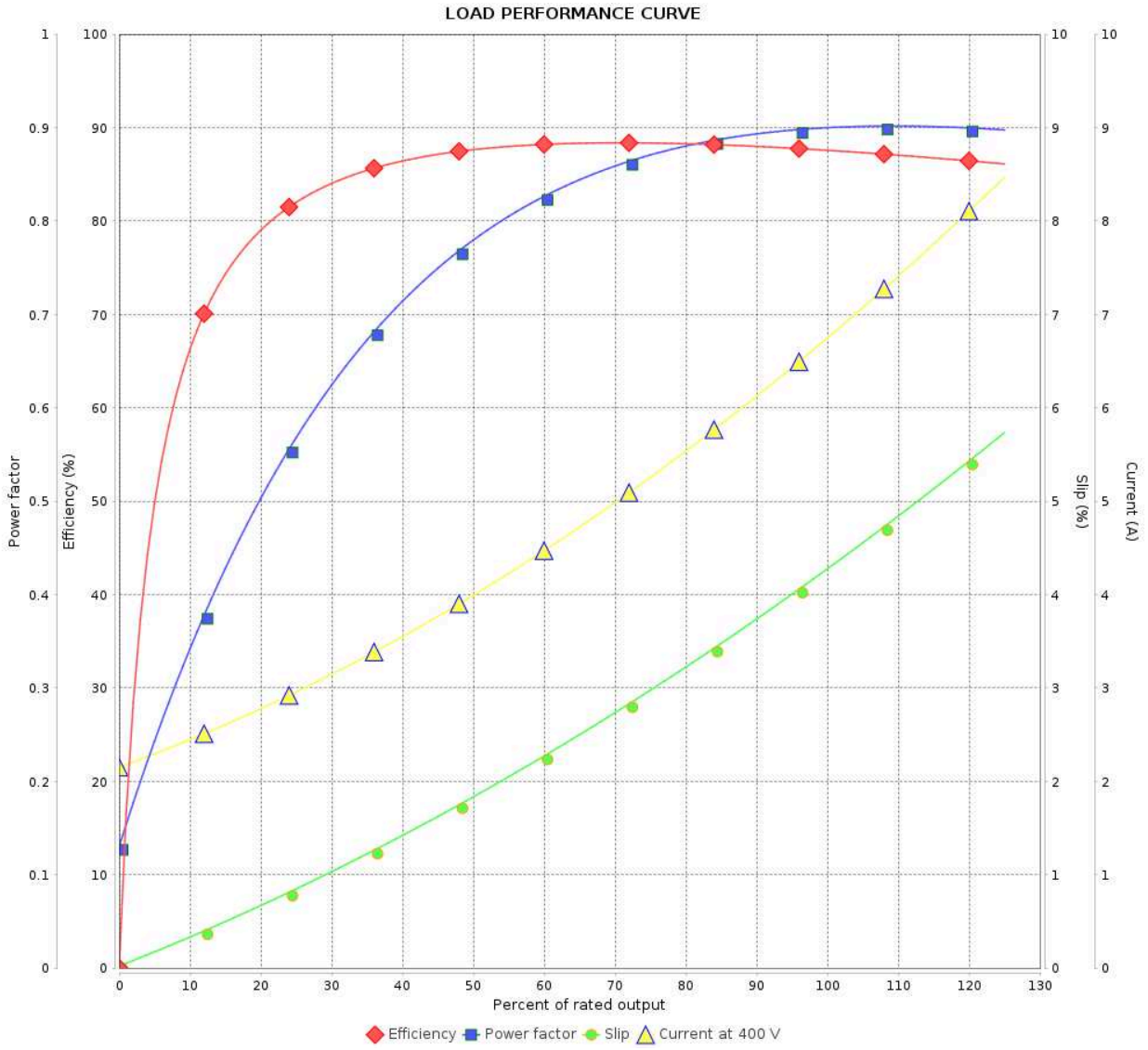
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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

| | | | |
|---|---|---|---|
| Customer | : | | |
| Product line | : W22 IEEE 841 NEMA Premium Efficiency Three-Phase | Product code : | 11939477 |




| | | | |
|---|---|---|---|
| Performance | : 400 V 50 Hz 2P IE2 | | |
| Rated current | : 6.78 A | Moment of inertia (J) | : 0.0094 kgm² |
| LRC | : 6.6 | Duty cycle | : Cont.(S1) |
| Rated torque | : 1.26 kgfm | Insulation class | : F |
| Locked rotor torque | : 210 % | Service factor | : 1.25 |
| Breakdown torque | : 290 % | Temperature rise | : 80 K |
| Rated speed | : 2870 rpm | Design | : B |

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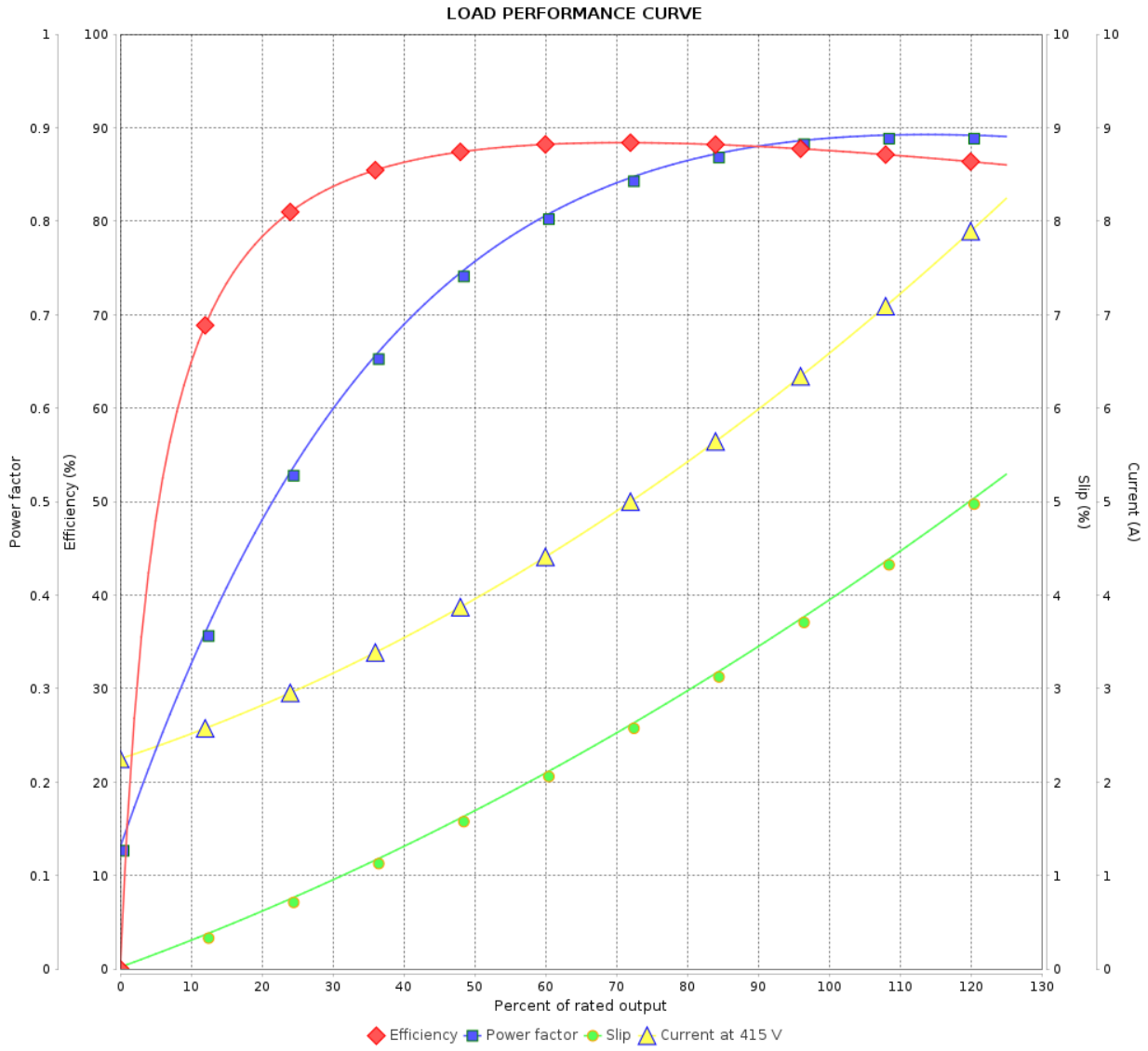
# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

Customer :

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Product code : 11939477

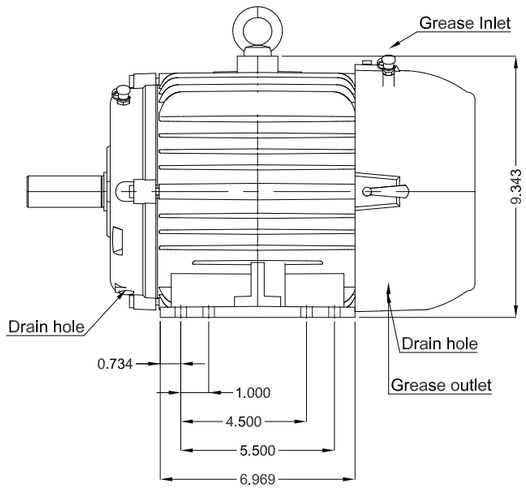


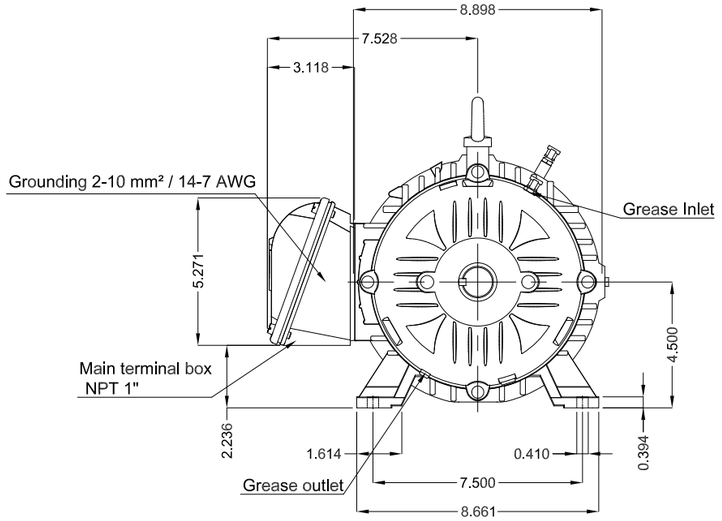

| | | | |
|---|---|---|---|
| Performance | : 415 V 50 Hz 2P IE2 | | |
| Rated current | : 6.61 A | Moment of inertia (J) | : 0.0094 kgm² |
| LRC | : 7.2 | Duty cycle | : Cont.(S1) |
| Rated torque | : 1.26 kgfm | Insulation class | : F |
| Locked rotor torque | : 240 % | Service factor | : 1.25 |
| Breakdown torque | : 320 % | Temperature rise | : 80 K |
| Rated speed | : 2880 rpm | Design | : B |

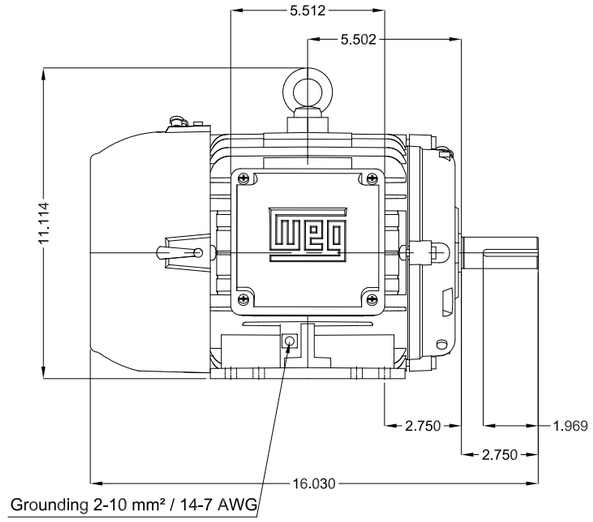
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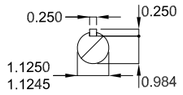



Sealing - Taconite labyrinth
Grease outlet according to IEEE841
Color RAL 5009
Painting plan 202E
Mounting B3R(D)

DE Shaft End




5 HP 02 Poles 60 Hz | A

| ECM | LOC | SUMMARY OF MODIFICATIONS | EXECUTED | CHECKED | RELEASED | DATE | VER |
|---|---|---|---|---|---|---|---|
| | | | HYBRISUSER | | | | 00 |

| | | | |
|---|---|---|---|
| EXECUTED | HYBRISUSER | THREE PH. MOTOR IEEE 841 W22 NEMA PREM. EFF. | PREVIEW |
| CHECKED | | FRAME 182/4T IP55 TEFC | WDD 00 |
| RELEASED | | | SHEET / |
| REL. DATE | | | |

Dimensions in inches

A3

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