

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



| | | | | | |
|--|--|------------------------------|--|---------------------|----------|
| Customer : | | | | | |
| Product line | : W40 NEMA Premium Efficiency Three-Phase | Product code : | 14272868 | | |
| | | Catalog # : | 25018OT3GRB445T-W40 | | |
| Frame | : 444/5T | Cooling method | : IC01 - ODP | | |
| Insulation class | : F | Mounting | : F-1 | | |
| Duty cycle | : Cont.(S1) | Rotation ¹ | : Both (CW and CCW) | | |
| Ambient temperature | : -20°C to +40°C | Starting method | : Direct On Line | | |
| Altitude | : 1000 m.a.s.l. | Approx. weight ² | : 1542 lb | | |
| Protection degree | : IP23 | Moment of inertia (J) | : 50.9 sq.ft.lb | | |
| Design | : B | | | | |
| Output [HP] | 250 | 200 | 200 | 200 | |
| Poles | 4 | 4 | 4 | 4 | |
| Frequency [Hz] | 60 | 50 | 50 | 50 | |
| Rated voltage [V] | 460 | 380 | 400 | 415 | |
| Rated current [A] | 289 | 283 | 272 | 269 | |
| L. R. Amperes [A] | 1850 | 1953 | 1986 | 1991 | |
| LRC [A] | 6.4x(Code G) | 6.9x(Code H) | 7.3x(Code H) | 7.4x(Code J) | |
| No load current [A] | 106 | 105 | 115 | 125 | |
| Rated speed [RPM] | 1780 | 1480 | 1480 | 1485 | |
| Slip [%] | 1.11 | 1.33 | 1.33 | 1.00 | |
| Rated torque [ft.lb] | 738 | 710 | 710 | 707 | |
| Locked rotor torque [%] | 210 | 200 | 229 | 250 | |
| Breakdown torque [%] | 240 | 220 | 240 | 270 | |
| Service factor | 1.15 | 1.00 | 1.00 | 1.00 | |
| Temperature rise | 80 K | 80 K | 80 K | 80 K | |
| Locked rotor time | 16s (cold) 9s (hot) | 14s (cold) 8s (hot) | 14s (cold) 8s (hot) | 14s (cold) 8s (hot) | |
| Noise level ² | 78.0 dB(A) | | | | |
| Efficiency (%) | 25% | 95.3 | 95.2 | 94.9 | 94.4 |
| | 50% | 95.4 | 95.5 | 95.3 | 94.9 |
| | 75% | 95.8 | 95.6 | 95.5 | 95.4 |
| | 100% | 95.8 | 95.8 | 95.8 | 95.8 |
| Power Factor | 25% | 0.46 | 0.46 | 0.41 | 0.38 |
| | 50% | 0.72 | 0.72 | 0.67 | 0.64 |
| | 75% | 0.80 | 0.81 | 0.78 | 0.75 |
| | 100% | 0.84 | 0.84 | 0.83 | 0.81 |
| Bearing type | : <u>Drive end</u> NU-319 C3 | <u>Non drive end</u> 6314 C3 | Foundation loads | | |
| Sealing | : Without | Without | Max. traction | : 4320 lb | |
| | Bearing Seal | Bearing Seal | Max. compression | : 5861 lb | |
| Lubrication interval | : 18825 h | 20000 h | | | |
| Lubricant amount | : 45 g | 27 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. | | |
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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



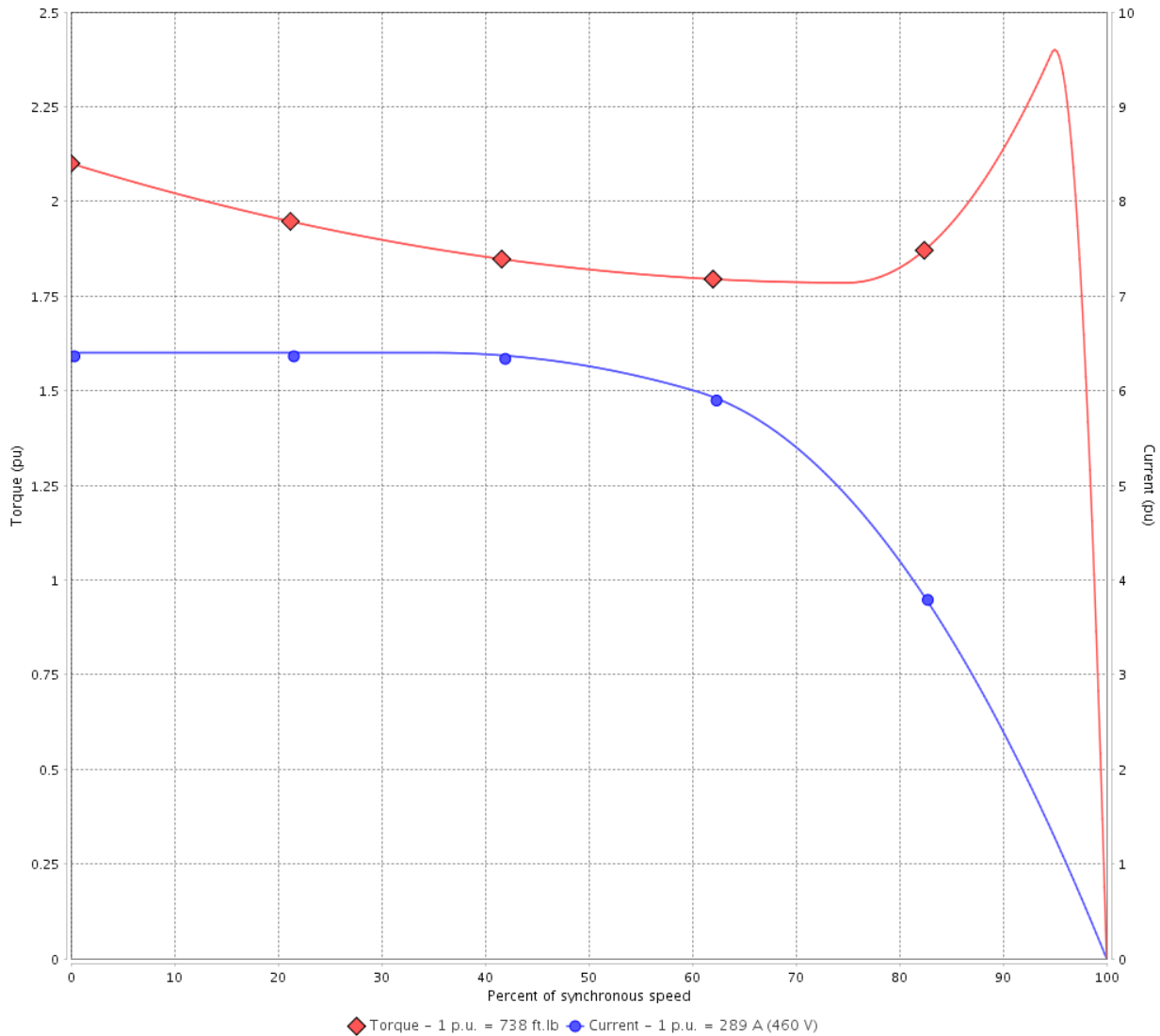
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14272868

Catalog # : 25018OT3GRB445T-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

| | | | |
|---------------------|-------------|-----------------------|-----------------|
| Rated current | : 289 A | Moment of inertia (J) | : 50.9 sq.ft.lb |
| LRC | : 6.4 | Duty cycle | : Cont.(S1) |
| Rated torque | : 738 ft.lb | Insulation class | : F |
| Locked rotor torque | : 210 % | Service factor | : 1.15 |
| Breakdown torque | : 240 % | Temperature rise | : 80 K |
| Rated speed | : 1780 rpm | Design | : B |

Locked rotor time : 16s (cold) 9s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



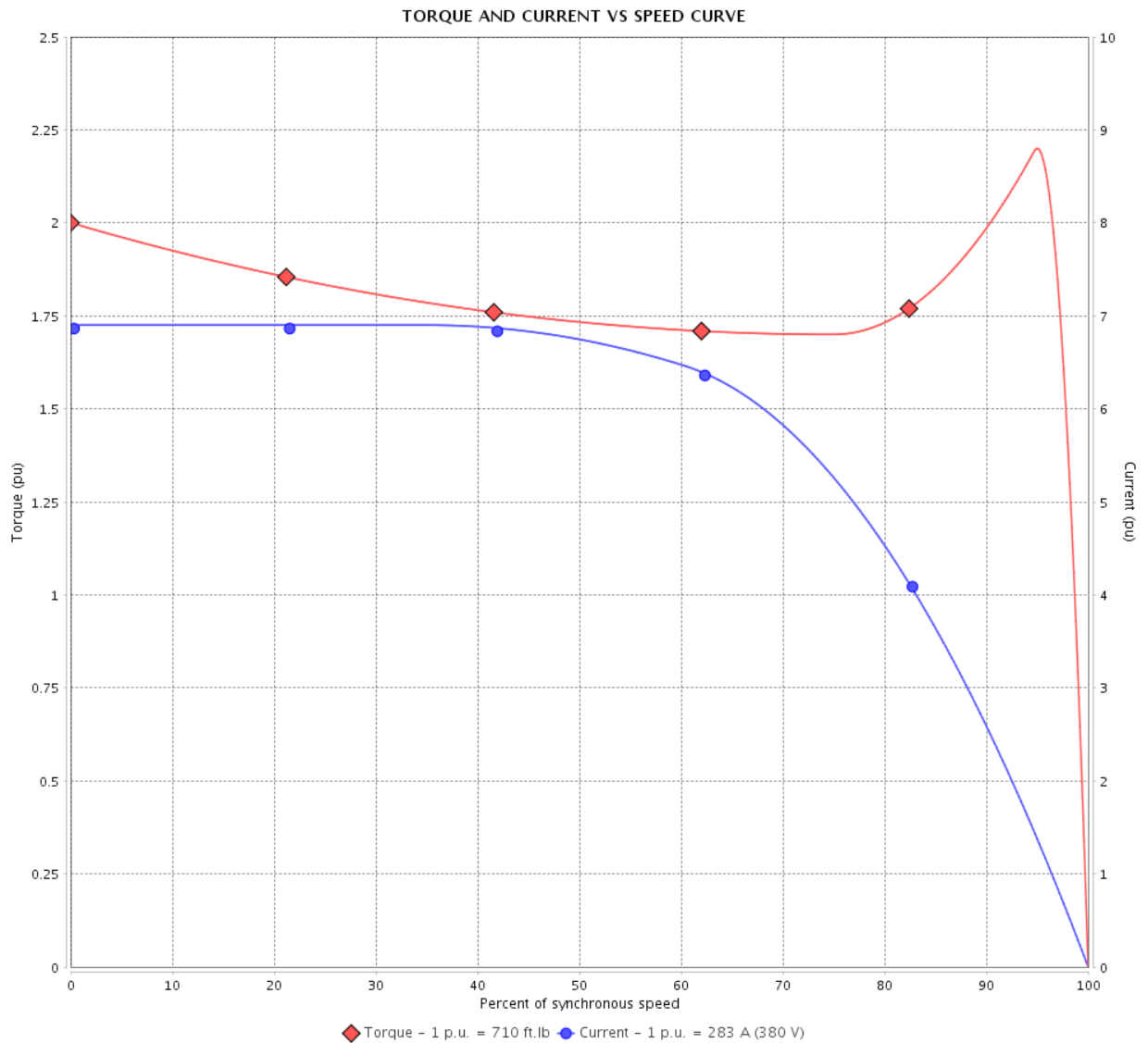
Three Phase Induction Motor - Squirrel Cage

Customer :

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Catalog # : 25018OT3GRB445T-W40



Performance : 380 V 50 Hz 4P IE3

| | | | |
|---------------------|-------------|-----------------------|-----------------|
| Rated current | : 283 A | Moment of inertia (J) | : 50.9 sq.ft.lb |
| LRC | : 6.9 | Duty cycle | : Cont.(S1) |
| Rated torque | : 710 ft.lb | Insulation class | : F |
| Locked rotor torque | : 200 % | Service factor | : 1.00 |
| Breakdown torque | : 220 % | Temperature rise | : 80 K |
| Rated speed | : 1480 rpm | Design | : B |

Locked rotor time : 14s (cold) 8s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

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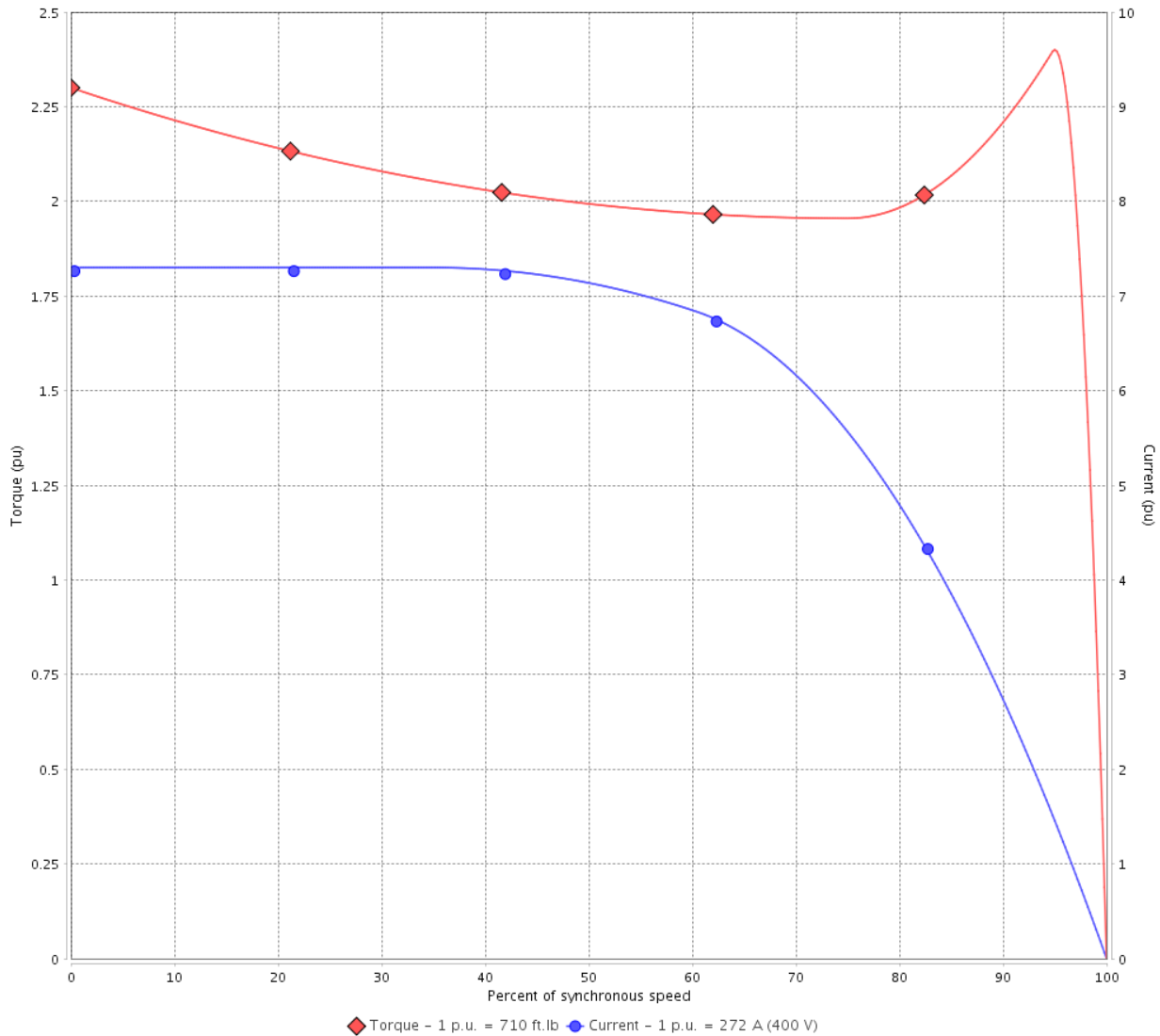
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Product code : 14272868

Catalog # : 25018OT3GRB445T-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

| | | | |
|---------------------|-------------|-----------------------|-----------------|
| Rated current | : 272 A | Moment of inertia (J) | : 50.9 sq.ft.lb |
| LRC | : 7.3 | Duty cycle | : Cont.(S1) |
| Rated torque | : 710 ft.lb | Insulation class | : F |
| Locked rotor torque | : 229 % | Service factor | : 1.00 |
| Breakdown torque | : 240 % | Temperature rise | : 80 K |
| Rated speed | : 1480 rpm | Design | : B |

Locked rotor time : 14s (cold) 8s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



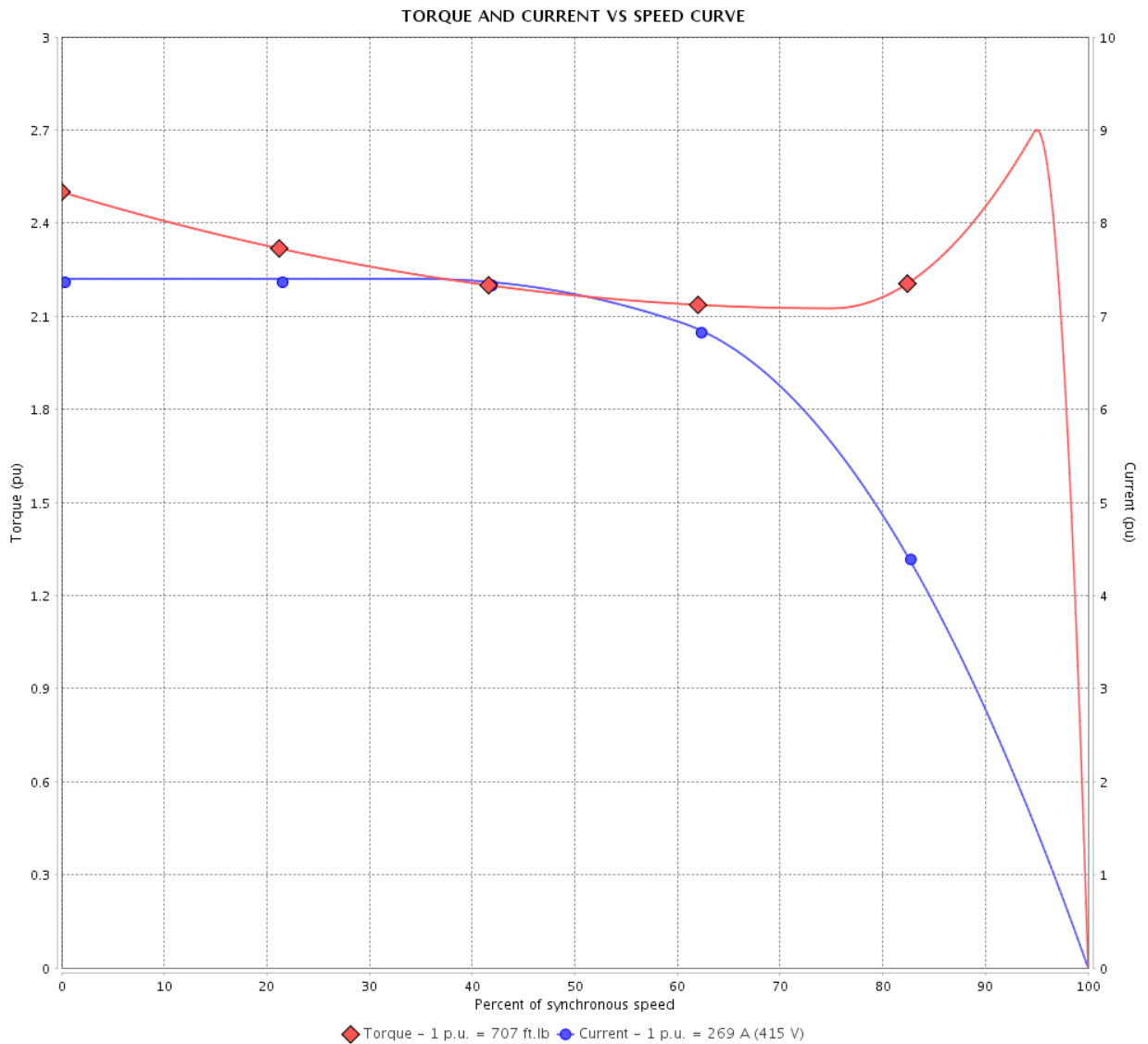
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Performance : 415 V 50 Hz 4P IE3

| | | | |
|---------------------|-------------|-----------------------|-----------------|
| Rated current | : 269 A | Moment of inertia (J) | : 50.9 sq.ft.lb |
| LRC | : 7.4 | Duty cycle | : Cont.(S1) |
| Rated torque | : 707 ft.lb | Insulation class | : F |
| Locked rotor torque | : 250 % | Service factor | : 1.00 |
| Breakdown torque | : 270 % | Temperature rise | : 80 K |
| Rated speed | : 1485 rpm | Design | : B |

Locked rotor time : 14s (cold) 8s (hot)

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LOAD PERFORMANCE CURVE

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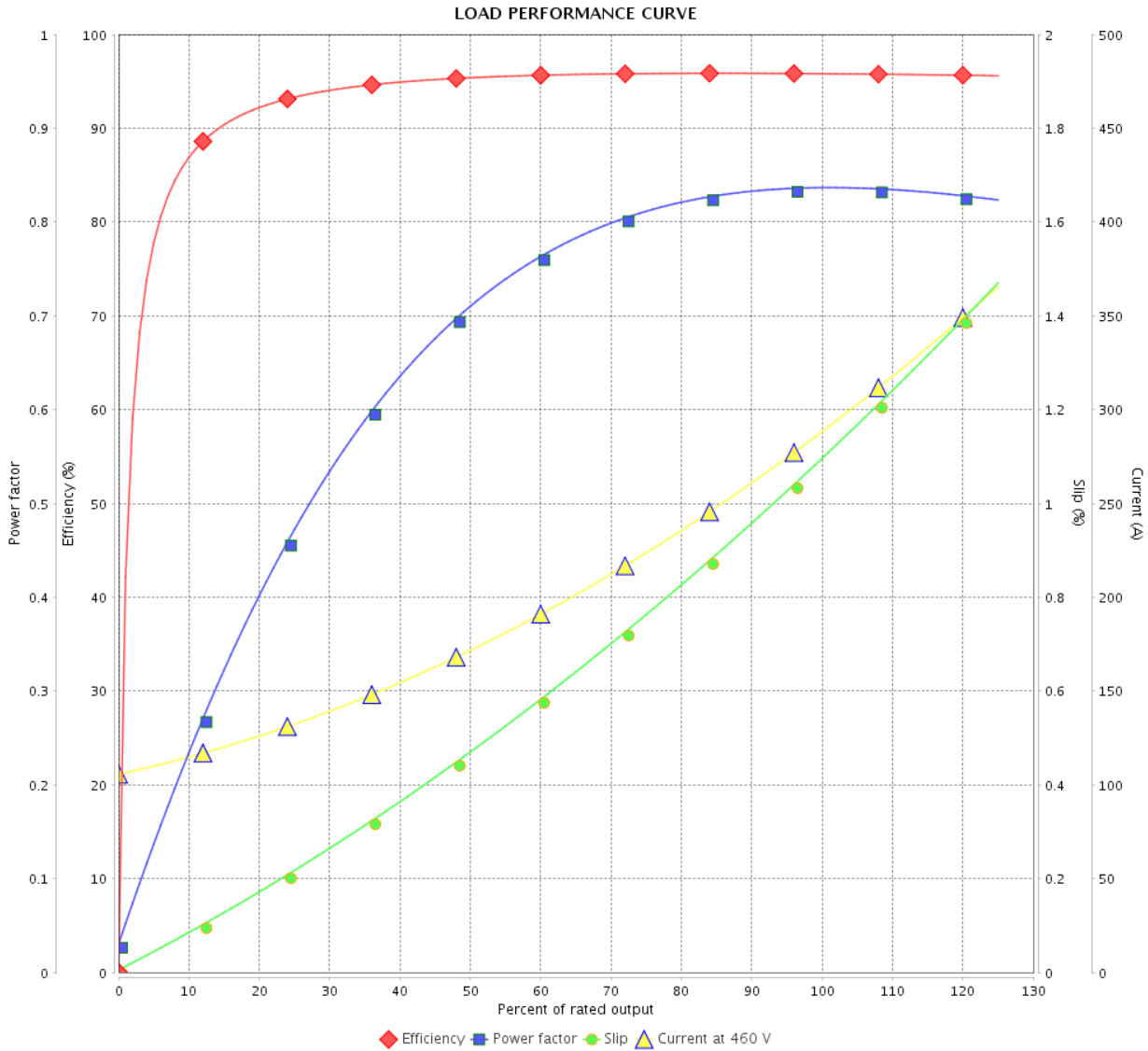


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Performance : 460 V 60 Hz 4P

| | | | |
|---------------------|-------------|-----------------------|-----------------|
| Rated current | : 289 A | Moment of inertia (J) | : 50.9 sq.ft.lb |
| LRC | : 6.4 | Duty cycle | : Cont.(S1) |
| Rated torque | : 738 ft.lb | Insulation class | : F |
| Locked rotor torque | : 210 % | Service factor | : 1.15 |
| Breakdown torque | : 240 % | Temperature rise | : 80 K |
| Rated speed | : 1780 rpm | Design | : B |

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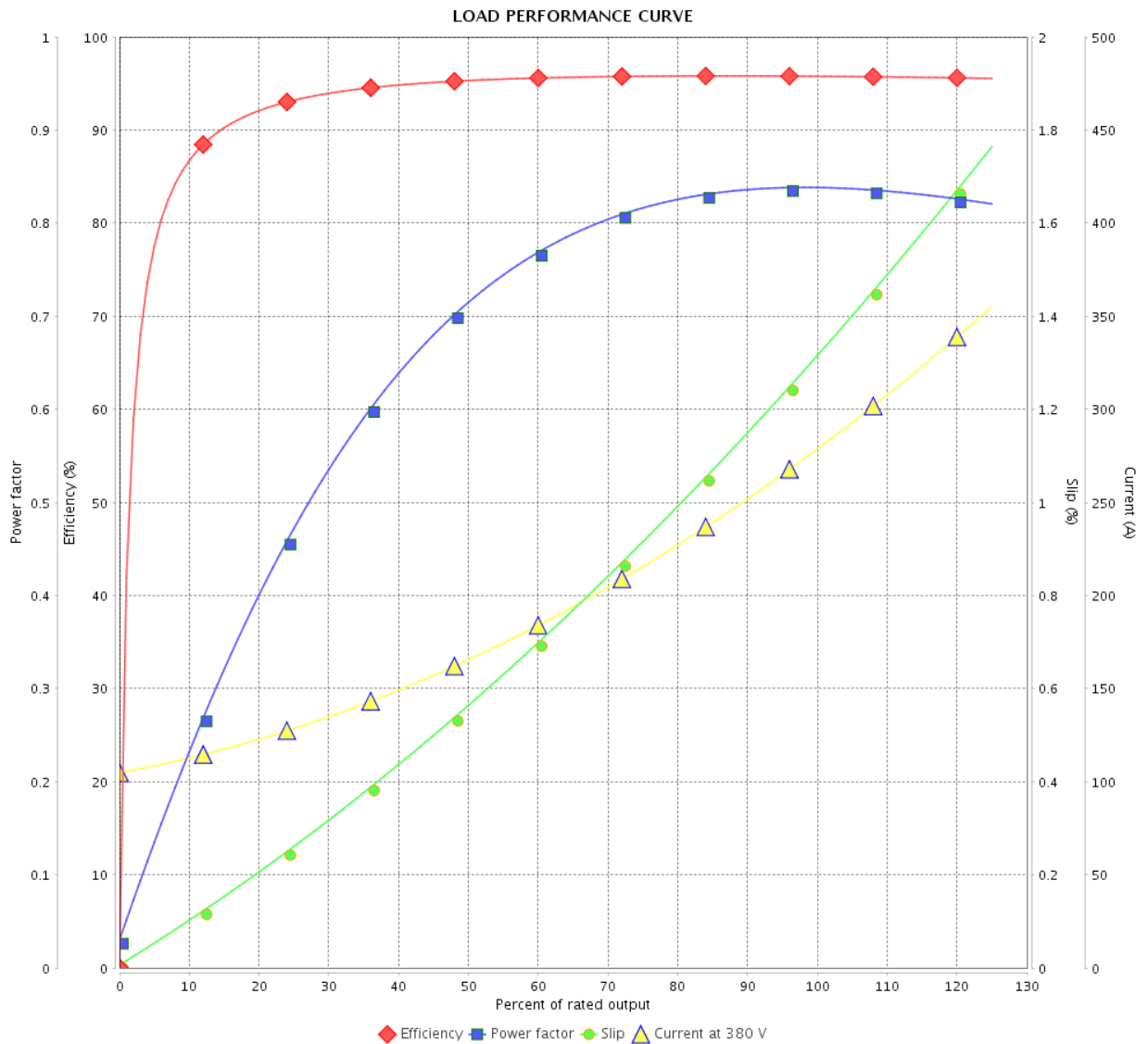


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Product code : 14272868

Catalog # : 25018OT3GRB445T-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 283 A
 LRC : 6.9
 Rated torque : 710 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 220 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 50.9 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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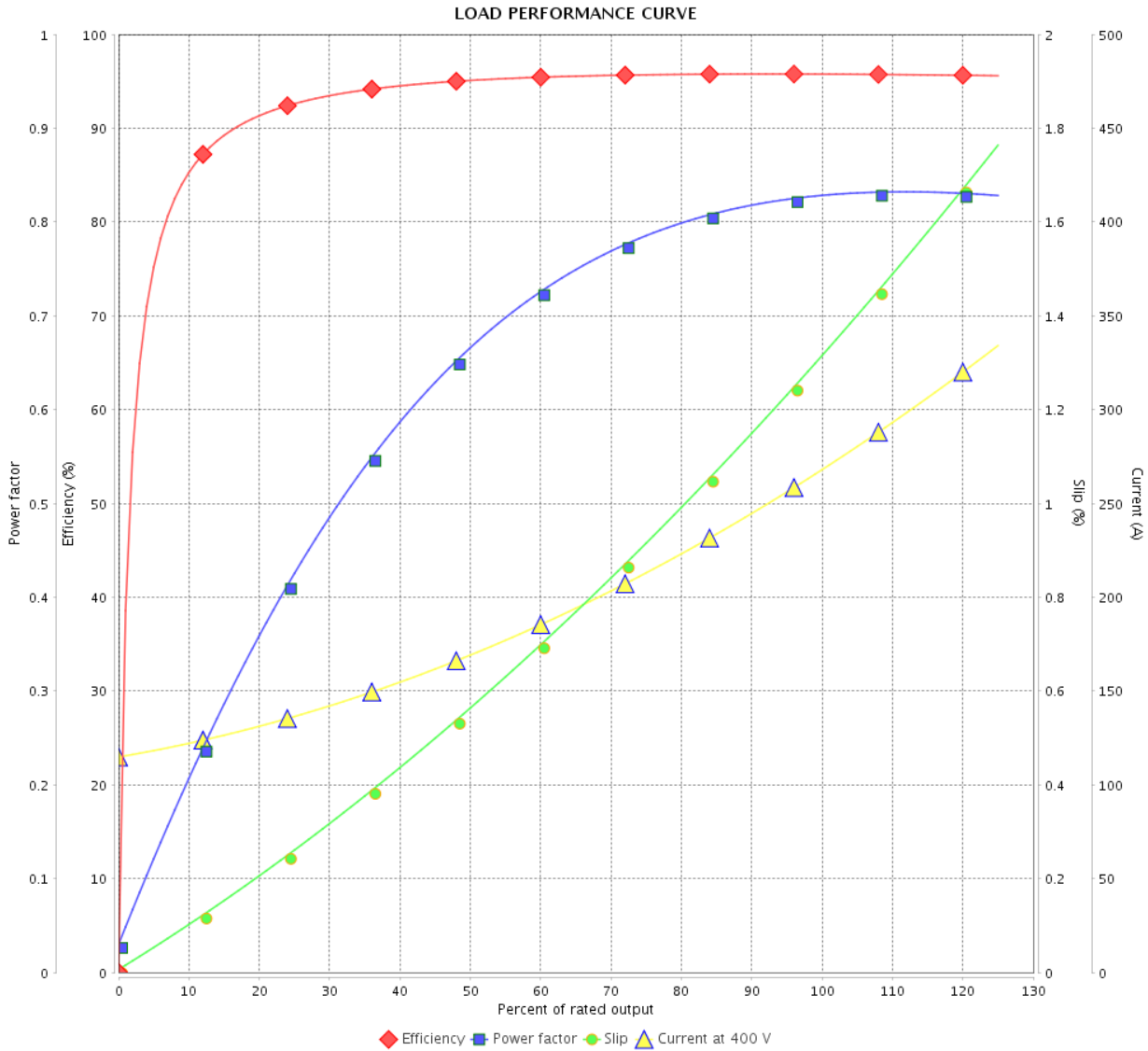


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Catalog # : 25018OT3GRB445T-W40



Performance : 400 V 50 Hz 4P IE3

Rated current : 272 A
 LRC : 7.3
 Rated torque : 710 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 240 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 50.9 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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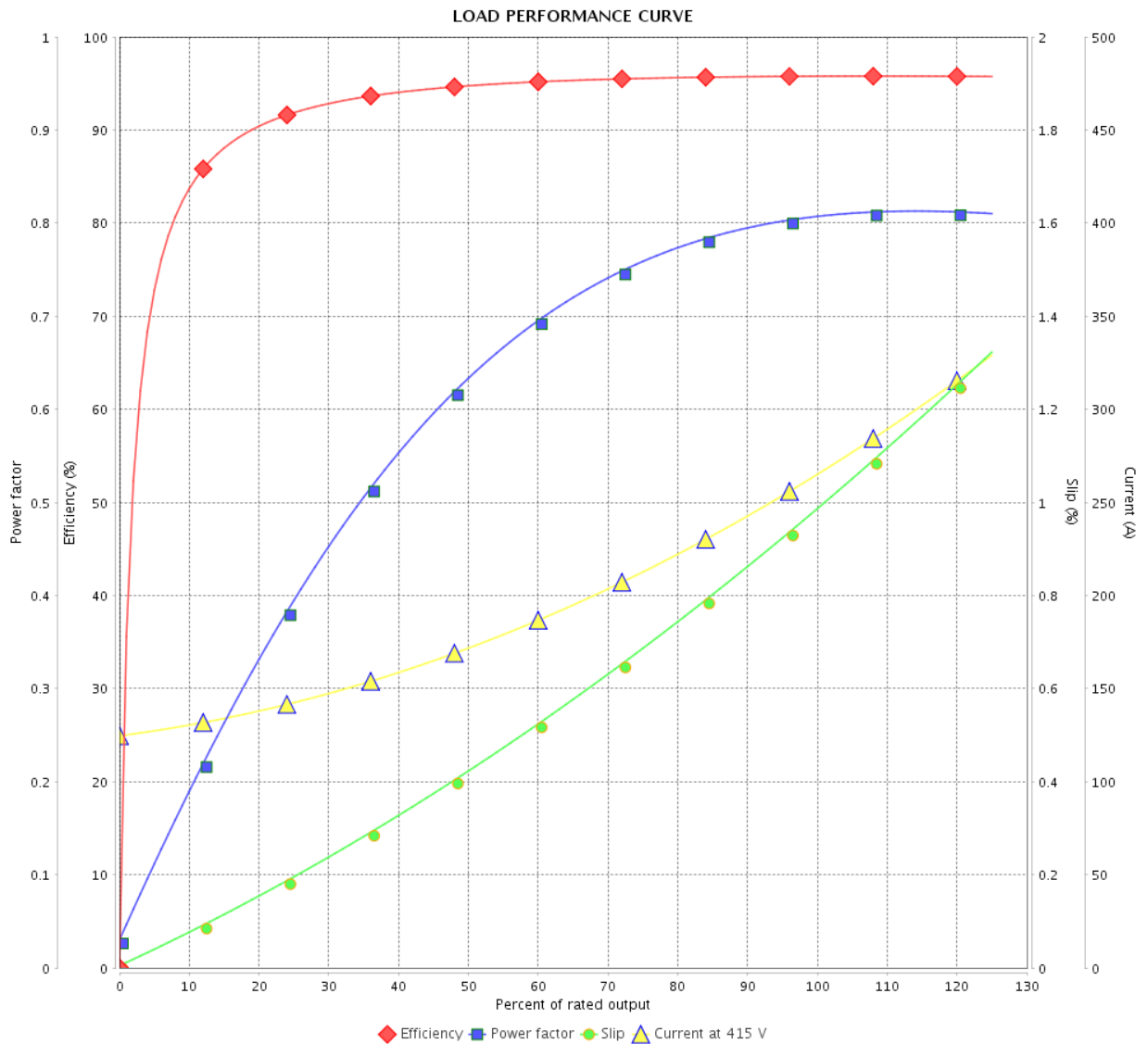


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Performance : 415 V 50 Hz 4P IE3

Rated current : 269 A
LRC : 7.4
Rated torque : 707 ft.lb
Locked rotor torque : 250 %
Breakdown torque : 270 %
Rated speed : 1485 rpm

Moment of inertia (J) : 50.9 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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THERMAL LIMIT CURVE



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Customer :

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Performance : 460 V 60 Hz 4P

| | | | |
|---------------------|-------------|-----------------------|-----------------|
| Rated current | : 289 A | Moment of inertia (J) | : 50.9 sq.ft.lb |
| LRC | : 6.4 | Duty cycle | : Cont.(S1) |
| Rated torque | : 738 ft.lb | Insulation class | : F |
| Locked rotor torque | : 210 % | Service factor | : 1.15 |
| Breakdown torque | : 240 % | Temperature rise | : 80 K |
| Rated speed | : 1780 rpm | Design | : B |

Heating constant

Cooling constant

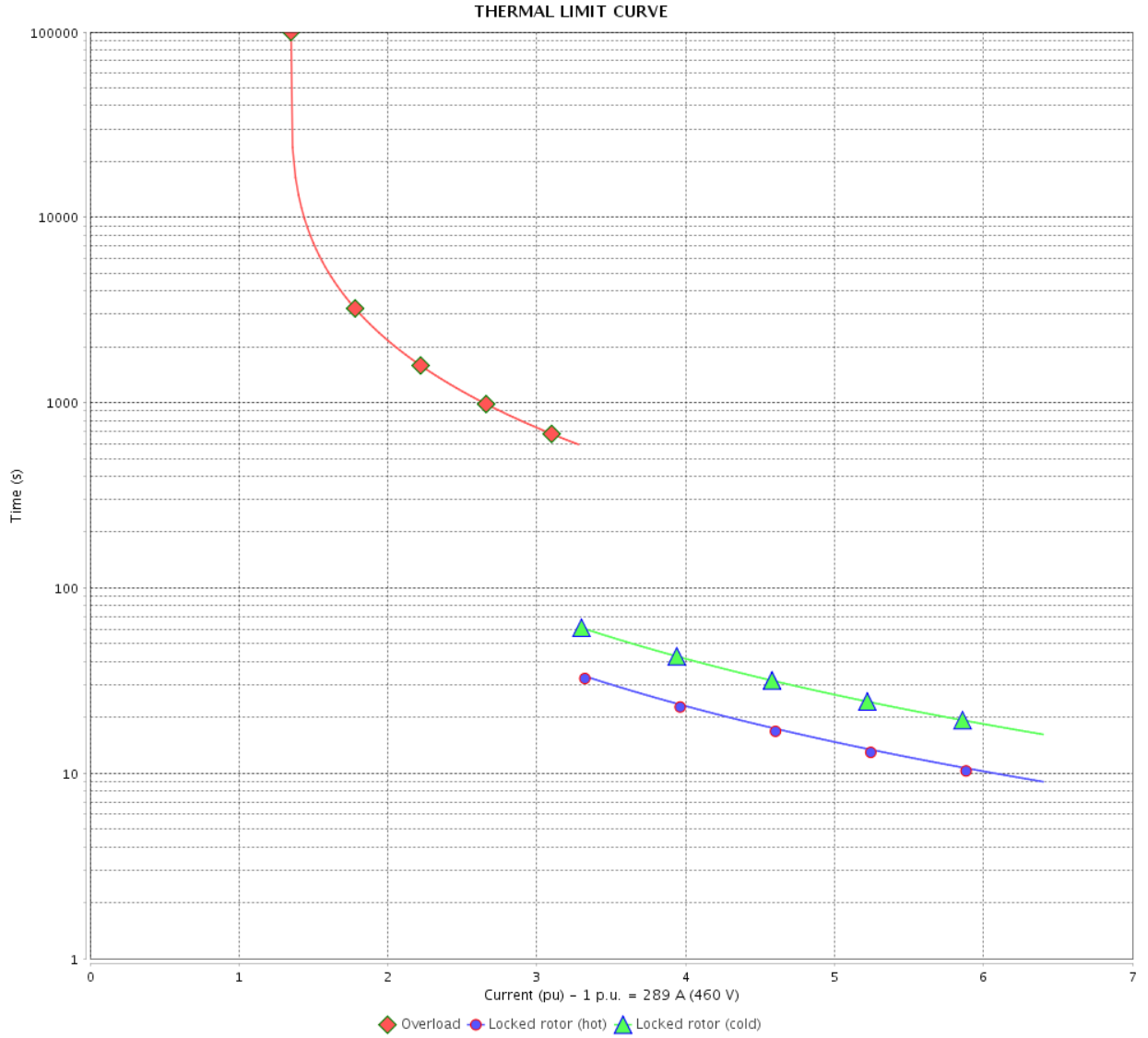
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THERMAL LIMIT CURVE

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Performance : 380 V 50 Hz 4P IE3

| | | | |
|---------------------|-------------|-----------------------|-----------------|
| Rated current | : 283 A | Moment of inertia (J) | : 50.9 sq.ft.lb |
| LRC | : 6.9 | Duty cycle | : Cont.(S1) |
| Rated torque | : 710 ft.lb | Insulation class | : F |
| Locked rotor torque | : 200 % | Service factor | : 1.00 |
| Breakdown torque | : 220 % | Temperature rise | : 80 K |
| Rated speed | : 1480 rpm | Design | : B |

Heating constant

Cooling constant

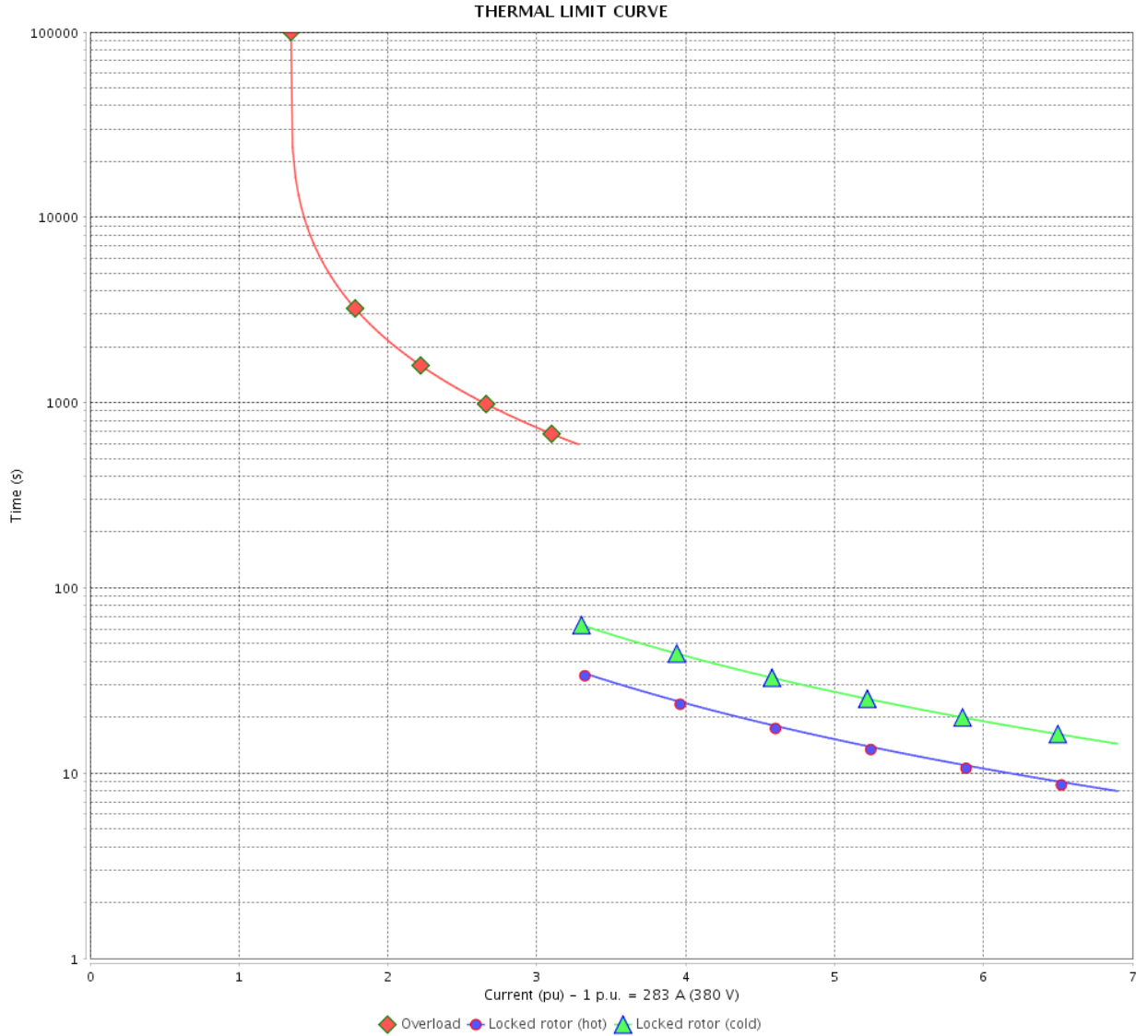
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THERMAL LIMIT CURVE

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Performance : 400 V 50 Hz 4P IE3

| | | | |
|---------------------|-------------|-----------------------|-----------------|
| Rated current | : 272 A | Moment of inertia (J) | : 50.9 sq.ft.lb |
| LRC | : 7.3 | Duty cycle | : Cont.(S1) |
| Rated torque | : 710 ft.lb | Insulation class | : F |
| Locked rotor torque | : 229 % | Service factor | : 1.00 |
| Breakdown torque | : 240 % | Temperature rise | : 80 K |
| Rated speed | : 1480 rpm | Design | : B |

Heating constant

Cooling constant

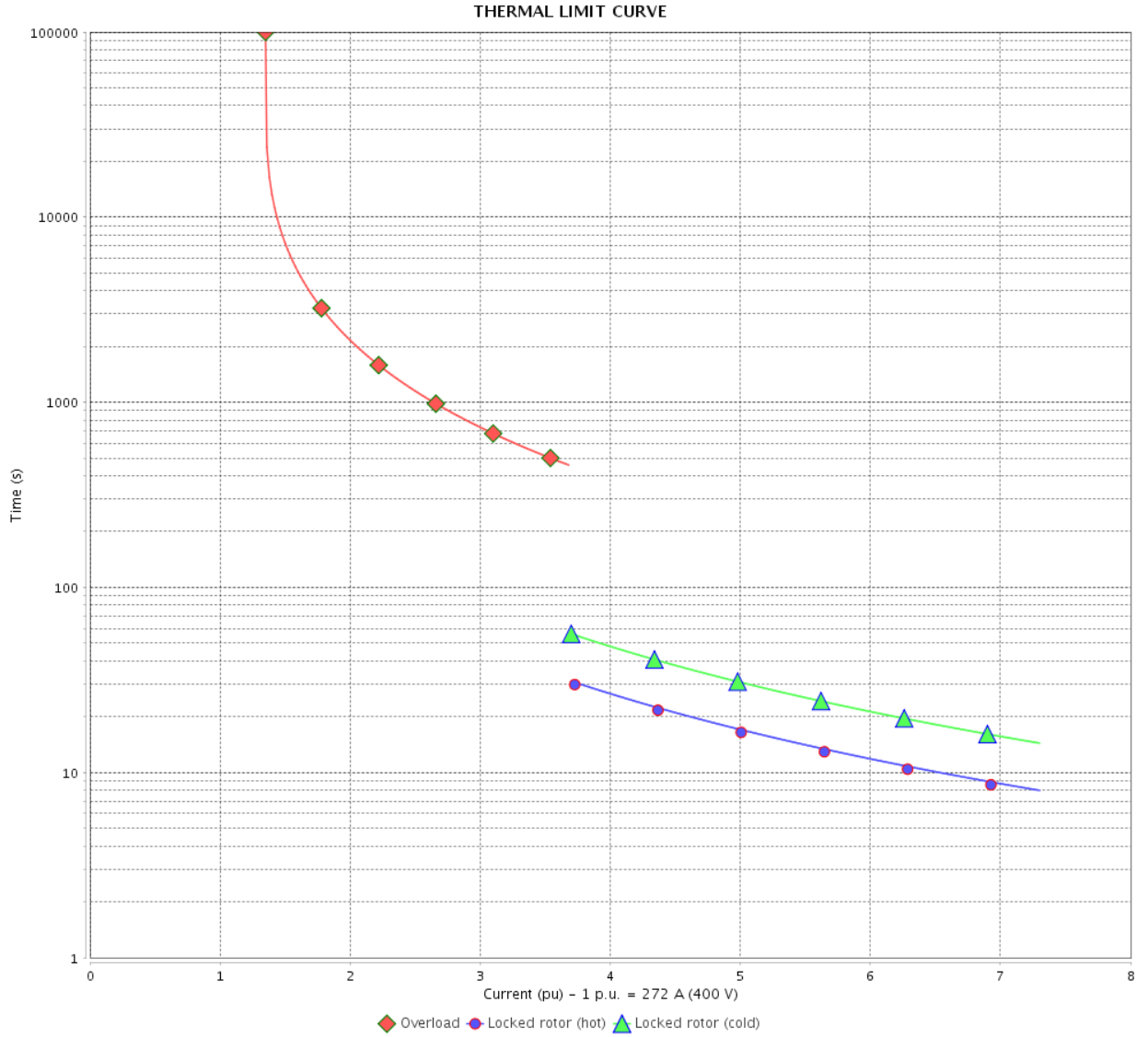
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THERMAL LIMIT CURVE

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Catalog # : 25018OT3GRB445T-W40

Performance : 415 V 50 Hz 4P IE3

| | | | |
|---------------------|-------------|-----------------------|-----------------|
| Rated current | : 269 A | Moment of inertia (J) | : 50.9 sq.ft.lb |
| LRC | : 7.4 | Duty cycle | : Cont.(S1) |
| Rated torque | : 707 ft.lb | Insulation class | : F |
| Locked rotor torque | : 250 % | Service factor | : 1.00 |
| Breakdown torque | : 270 % | Temperature rise | : 80 K |
| Rated speed | : 1485 rpm | Design | : B |

Heating constant

Cooling constant

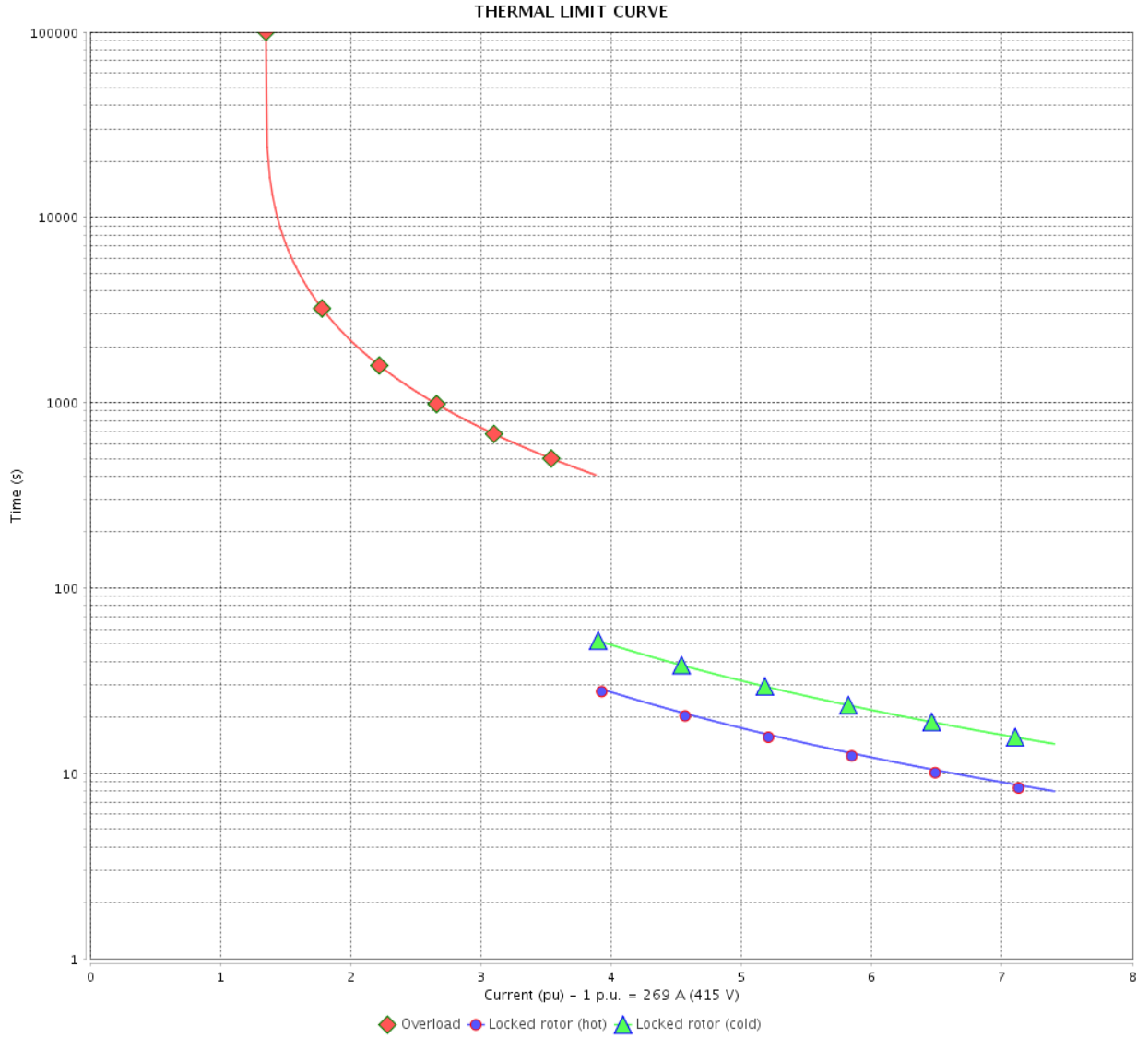
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THERMAL LIMIT CURVE

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

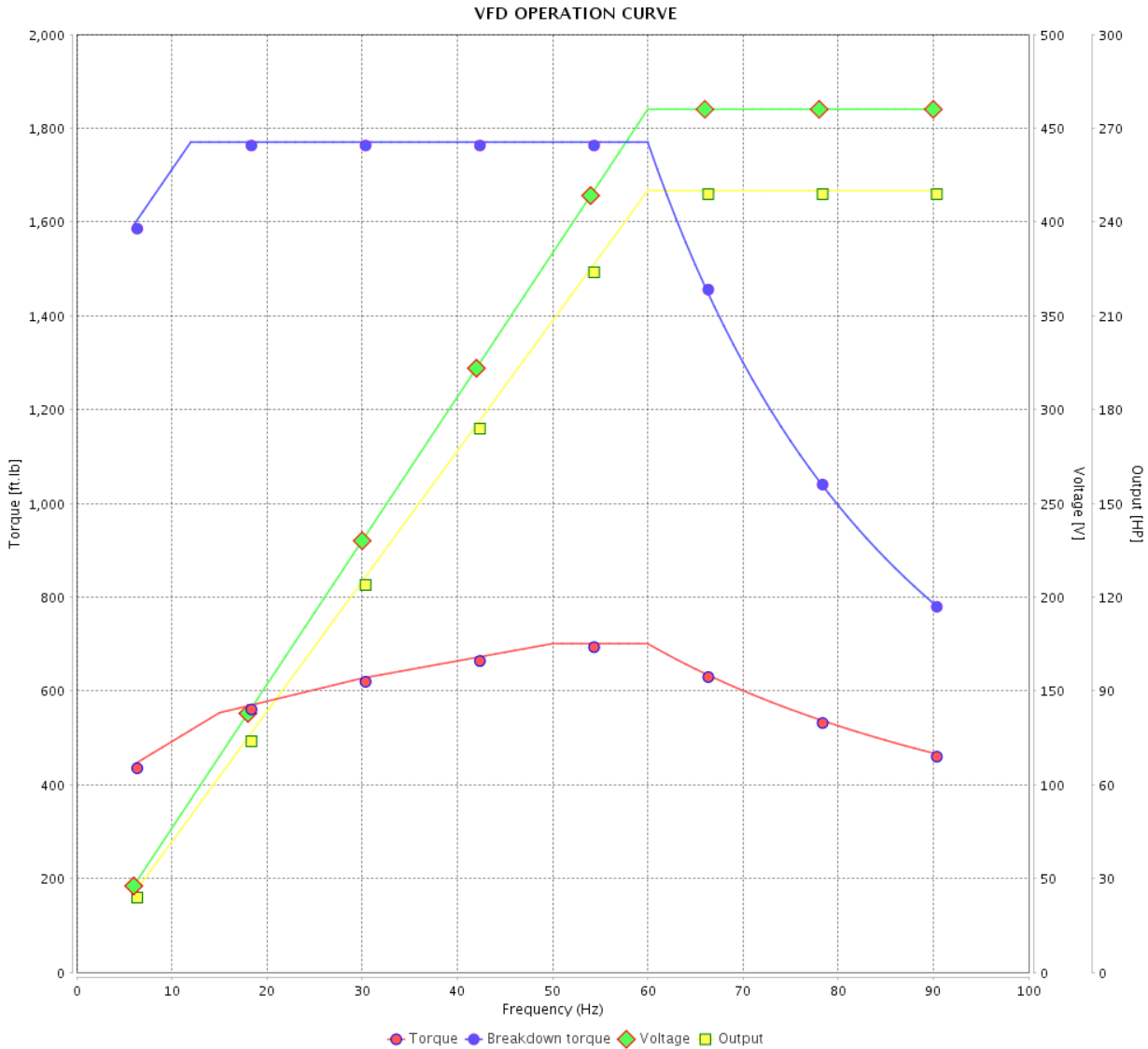


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| Locked rotor torque | : 210 % | Service factor | : 1.15 |
| Breakdown torque | : 240 % | Temperature rise | : 80 K |
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

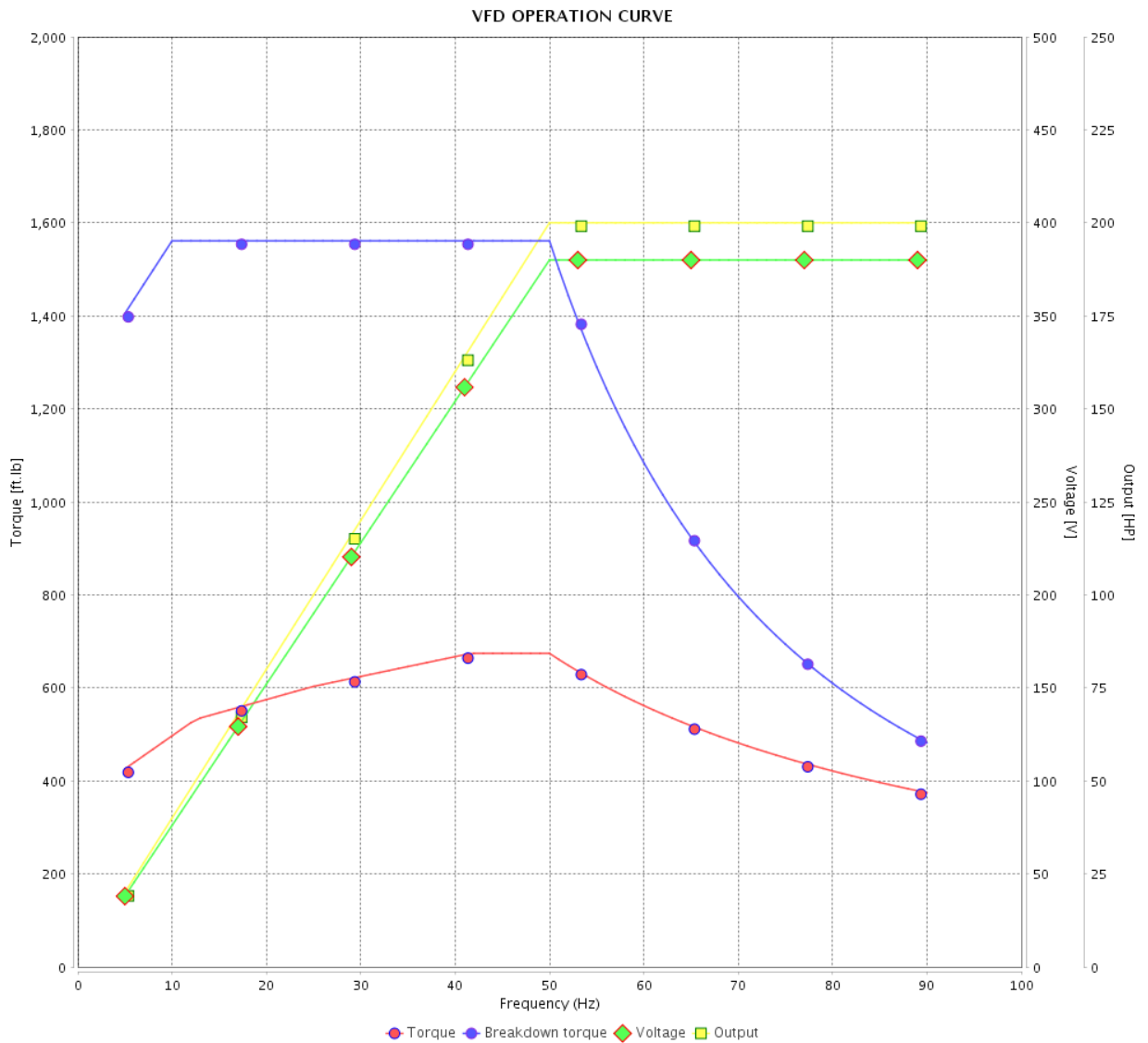


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Breakdown torque : 220 %
Rated speed : 1480 rpm

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Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



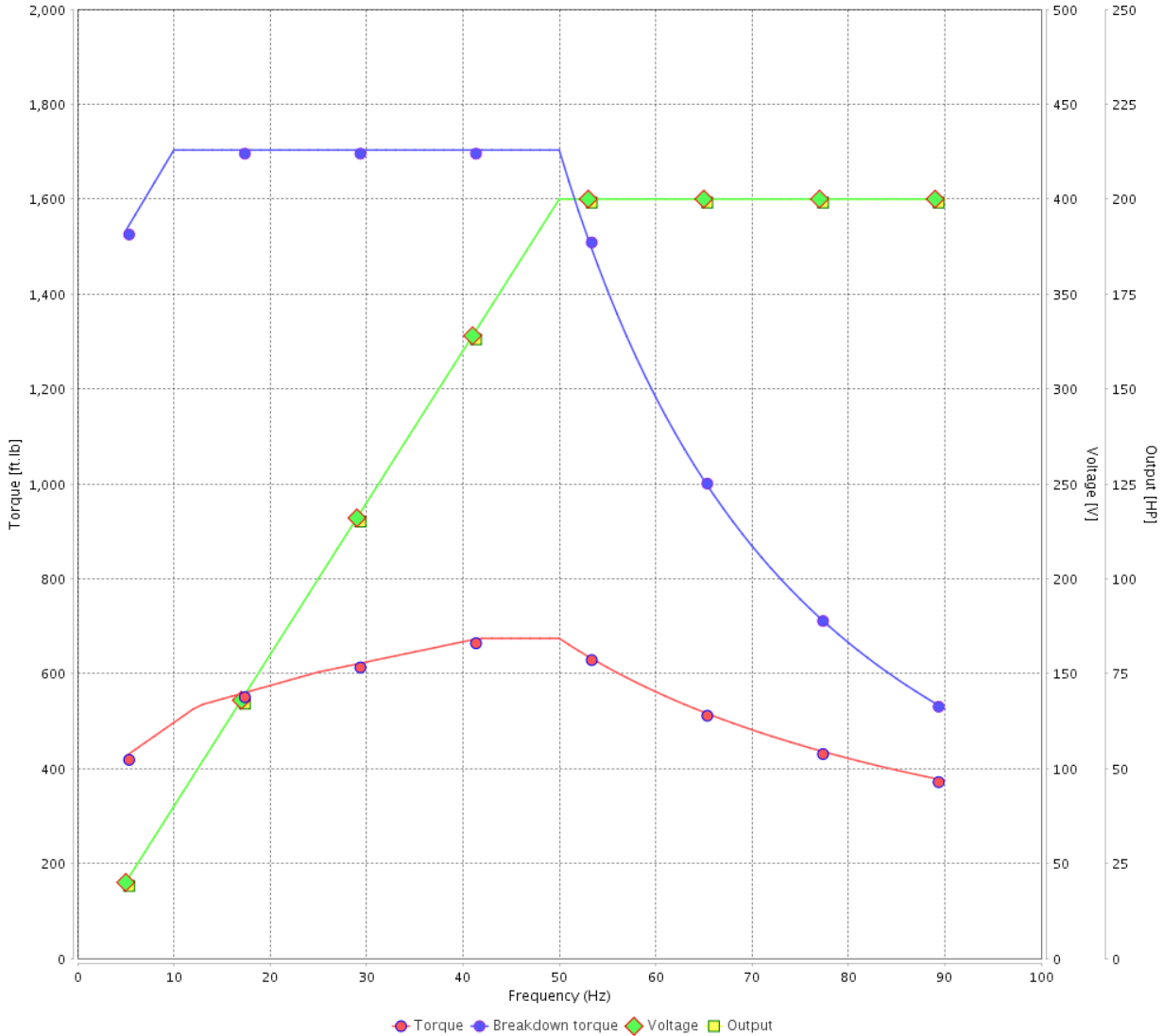
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VFD OPERATION CURVE

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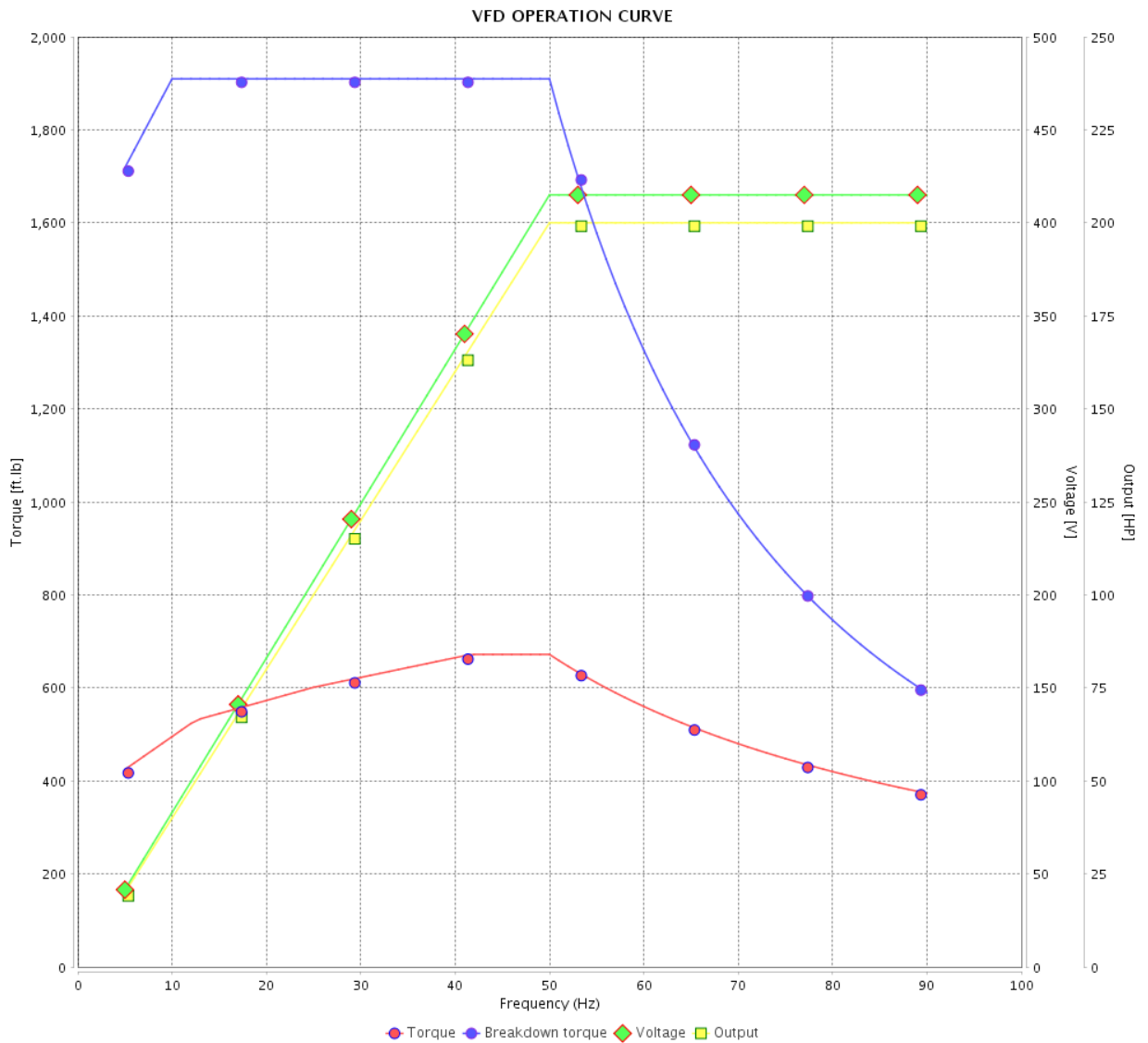


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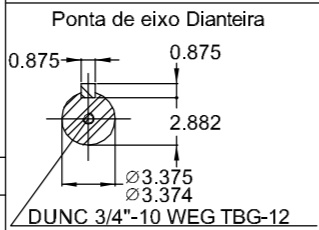
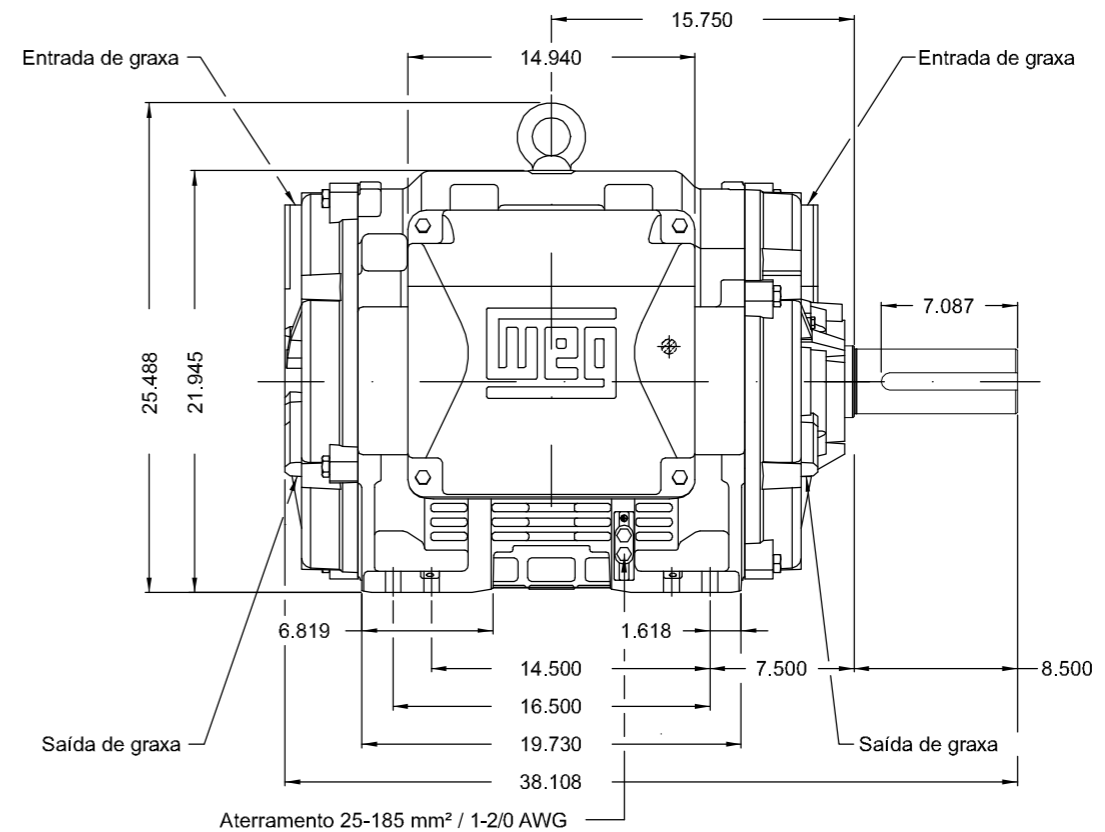
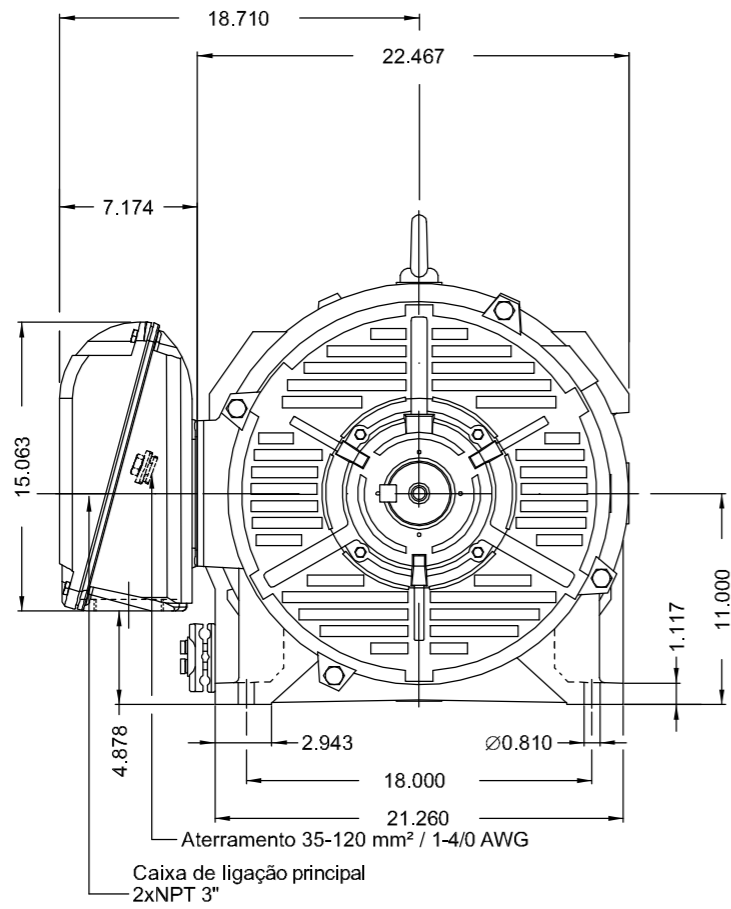


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250 HP 04 Polos 60Hz

| | | | | | |
|------------------|------------|--|-----------------------|-----------------------|-------------------|
| | | ESC / SCALE | | [1:10] | |
| 500001470179 | BURIGO | PIRWBUSER | PIRWBUSER | 27.06.2018 | |
| ECM ECM | LOC LOC | EXECUTADO EXECUTED | VERIFICADO CHECKED | LIBERADO RELEASED | DATA DATE |
| EXEC. /EXECUTED | BURIGO | RESUMO MODIFICAÇÃO SUMMARY OF MODIFICATIONS | | | |
| VERIF. /CHECKED | PIRWBUSER | MOTOR TRIFÁSICO W40 NEMA PREMIUM EFF | | 10005861275 | |
| LIBER. /RELEASED | PIRWBUSER | CARÇAÇA 444/5T IP23 ODP | | 000 | 00 |
| DATA LB /REL DT | 27.06.2018 | WMO | Jaragua do Sul | Engenharia de Produto | FOLHA/SHEET 1 / 1 |

Forma construtiva NEMA F-1
Forma construtiva B3D



CÓPIA SEM CONTROLE
Dimensões em polegadas
LIBERADO
ZME A3