

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



| | | | | | |
|--|-------------------------|--|--|--|----------------------|
| Customer | | | | | |
| Product line | | : W40 NEMA Premium Efficiency Three-Phase | | Product code : 14366964 Catalog # : 01518OT3E254T-W40 | |
| Frame : 254T | | 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 : 247 lb | | | |
| Protection degree : IP23 | | Moment of inertia (J) : 2.72 sq.ft.lb | | | |
| Design : B | | | | | |
| Output [HP] | 15 | 10 | 10 | 10 | 10 |
| Poles | 4 | 4 | 4 | 4 | 4 |
| Frequency [Hz] | 60 | 50 | 50 | 50 | 50 |
| Rated voltage [V] | 230/460 | 380 | 400 | 415 | 415 |
| Rated current [A] | 35.0/17.5 | 15.3 | 14.9 | 14.7 | 14.7 |
| L. R. Amperes [A] | 224/112 | 101 | 101 | 103 | 103 |
| LRC [A] | 6.4x(Code G) | 6.6x(Code H) | 6.8x(Code H) | 7.0x(Code J) | 7.0x(Code J) |
| No load current [A] | 13.6/6.80 | 7.00 | 7.30 | 7.80 | 7.80 |
| Rated speed [RPM] | 1775 | 1475 | 1480 | 1480 | 1480 |
| Slip [%] | 1.39 | 1.67 | 1.33 | 1.33 | 1.33 |
| Rated torque [ft.lb] | 44.4 | 35.6 | 35.5 | 35.5 | 35.5 |
| Locked rotor torque [%] | 220 | 240 | 280 | 310 | 310 |
| Breakdown torque [%] | 260 | 300 | 330 | 360 | 360 |
| Service factor | 1.25 | 1.00 | 1.00 | 1.00 | 1.00 |
| Temperature rise | 80 K | 80 K | 80 K | 80 K | 80 K |
| Locked rotor time | 61s (cold) 34s (hot) | 66s (cold) 37s (hot) | 59s (cold) 33s (hot) | 54s (cold) 30s (hot) | 54s (cold) 30s (hot) |
| Noise level ² | 62.0 dB(A) | | | | |
| Efficiency (%) | 25% | 91.0 | 88.9 | 89.0 | 89.0 |
| | 50% | 91.7 | 89.2 | 89.2 | 89.2 |
| | 75% | 92.4 | 91.0 | 91.0 | 91.0 |
| | 100% | 93.0 | 91.0 | 91.0 | 91.0 |
| Power Factor | 25% | 0.43 | 0.38 | 0.35 | 0.32 |
| | 50% | 0.66 | 0.62 | 0.58 | 0.55 |
| | 75% | 0.78 | 0.75 | 0.72 | 0.69 |
| | 100% | 0.85 | 0.82 | 0.80 | 0.78 |
| Bearing type | : Drive end : 6309 Z C3 | : Non drive end : 6209 Z C3 | Foundation loads | | |
| Sealing | : Without | : Without | Max. traction | | |
| | : Bearing Seal | : Bearing Seal | Max. compression | | |
| Lubrication interval | : 20000 h | : 20000 h | | | |
| Lubricant amount | : 13 g | : 9 g | | | |
| Lubricant type | : Mobil Polyrex EM | | | | |
| Notes USABLE @208V 38.7A SF 1.15 SFA 44.5A | | | | | |
| 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 | | | | | |
| Checked by | | | | Page | Revision |
| Date | 13/04/2022 | | | 1 / 21 | |

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



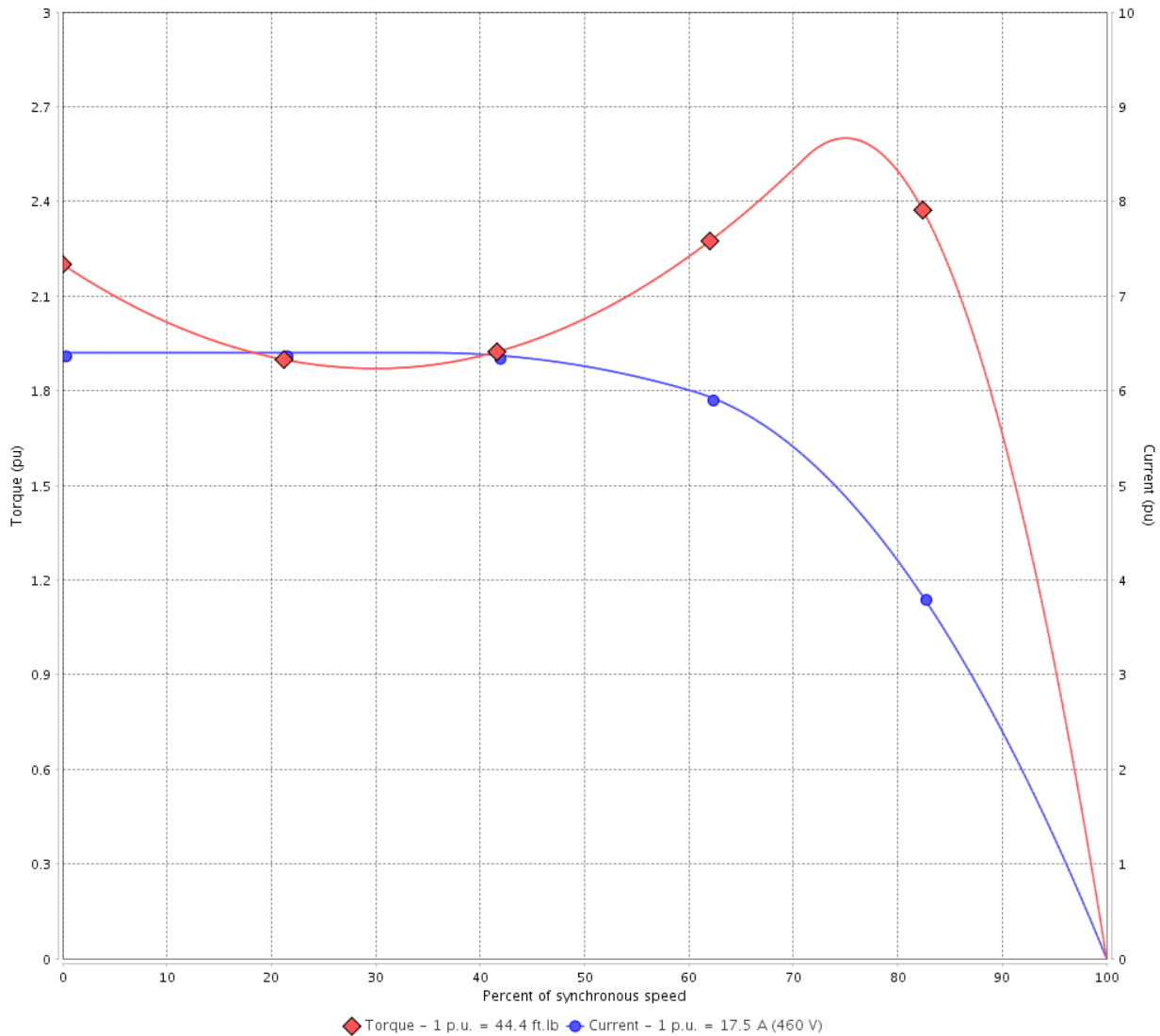
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14366964

Catalog # : 01518OT3E254T-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

| | | | |
|---------------------|---------------|-----------------------|-----------------|
| Rated current | : 35.0/17.5 A | Moment of inertia (J) | : 2.72 sq.ft.lb |
| LRC | : 6.4 | Duty cycle | : Cont.(S1) |
| Rated torque | : 44.4 ft.lb | Insulation class | : F |
| Locked rotor torque | : 220 % | Service factor | : 1.25 |
| Breakdown torque | : 260 % | Temperature rise | : 80 K |
| Rated speed | : 1775 rpm | Design | : B |

Locked rotor time : 61s (cold) 34s (hot)

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|----------------|----------|
| | | | | |
| Performed by | | | Page 2 / 21 | Revision |
| Checked by | | | | |
| Date | 13/04/2022 | | | |

TORQUE AND CURRENT VS SPEED CURVE



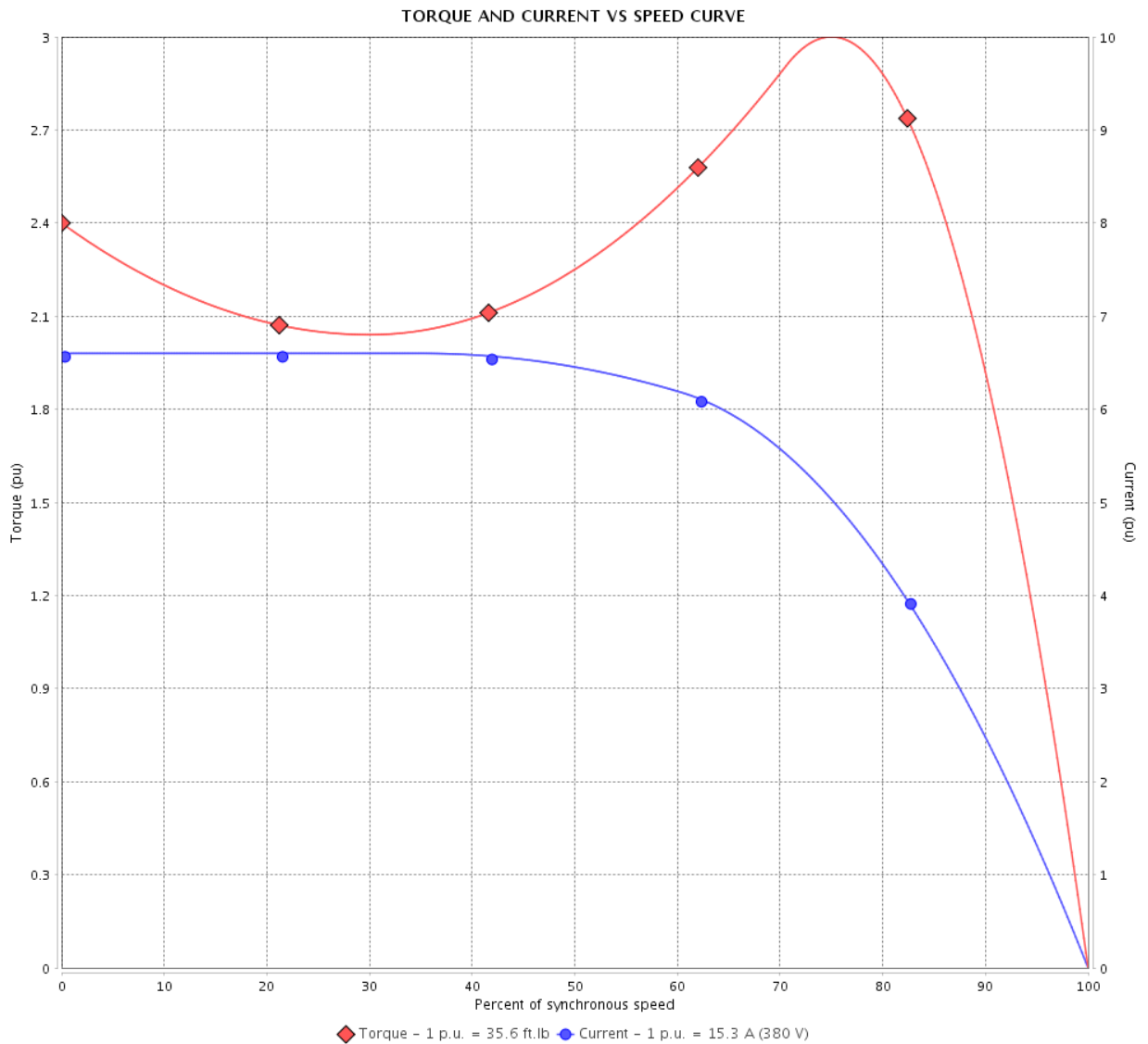
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14366964

Catalog # : 01518OT3E254T-W40



Performance : 380 V 50 Hz 4P IE3

| | | | |
|---------------------|--------------|-----------------------|-----------------|
| Rated current | : 15.3 A | Moment of inertia (J) | : 2.72 sq.ft.lb |
| LRC | : 6.6 | Duty cycle | : Cont.(S1) |
| Rated torque | : 35.6 ft.lb | Insulation class | : F |
| Locked rotor torque | : 240 % | Service factor | : 1.00 |
| Breakdown torque | : 300 % | Temperature rise | : 80 K |
| Rated speed | : 1475 rpm | Design | : B |

Locked rotor time : 66s (cold) 37s (hot)

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|----------------|----------|
| | | | | |
| Performed by | | | Page 3 / 21 | Revision |
| Checked by | | | | |
| Date | 13/04/2022 | | | |

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



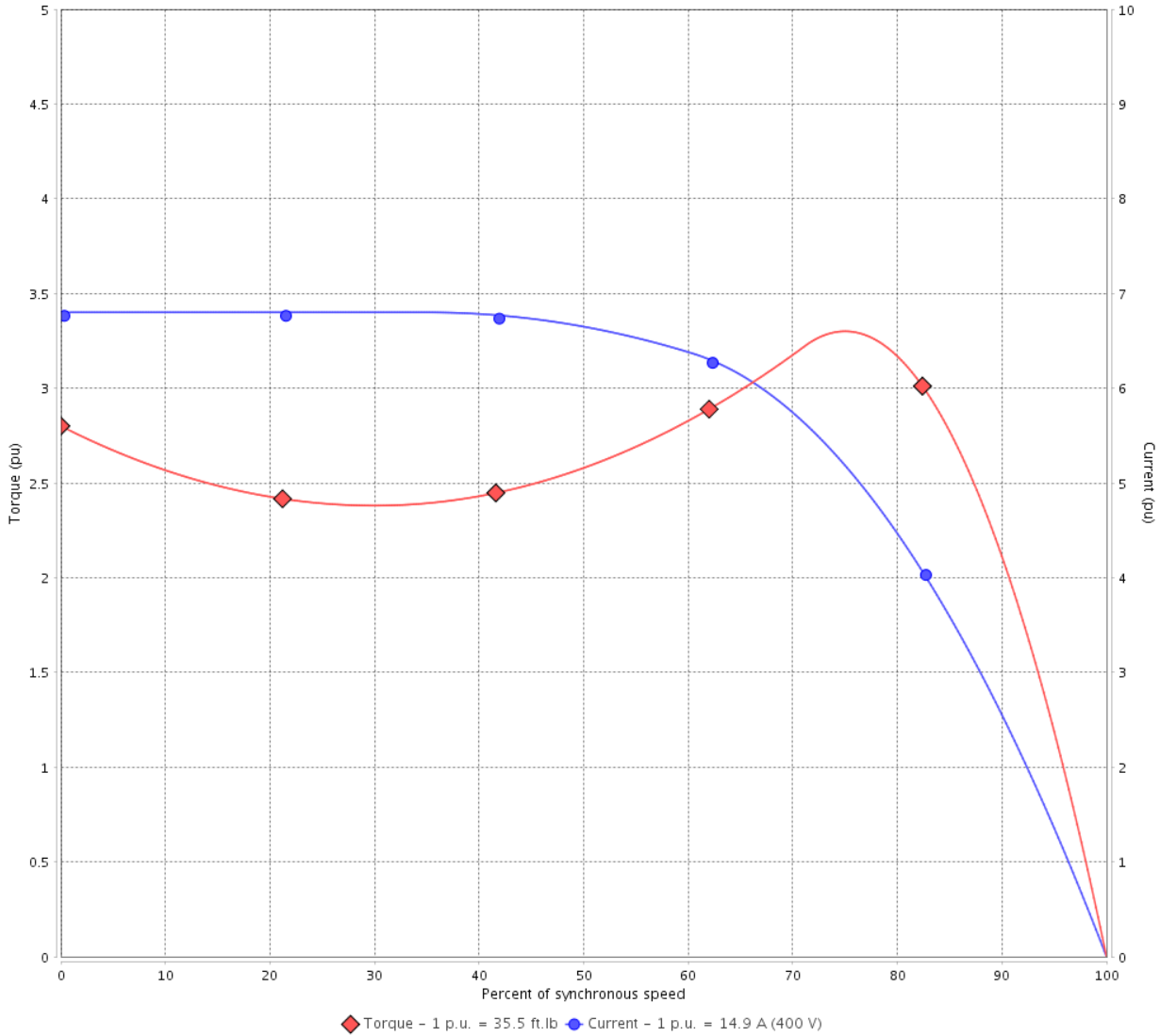
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14366964

Catalog # : 01518OT3E254T-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

| | | | |
|---------------------|--------------|-----------------------|-----------------|
| Rated current | : 14.9 A | Moment of inertia (J) | : 2.72 sq.ft.lb |
| LRC | : 6.8 | Duty cycle | : Cont.(S1) |
| Rated torque | : 35.5 ft.lb | Insulation class | : F |
| Locked rotor torque | : 280 % | Service factor | : 1.00 |
| Breakdown torque | : 330 % | Temperature rise | : 80 K |
| Rated speed | : 1480 rpm | Design | : B |

Locked rotor time : 59s (cold) 33s (hot)

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|----------------|----------|
| | | | | |
| Performed by | | | Page 4 / 21 | Revision |
| Checked by | | | | |
| Date | 13/04/2022 | | | |

TORQUE AND CURRENT VS SPEED CURVE



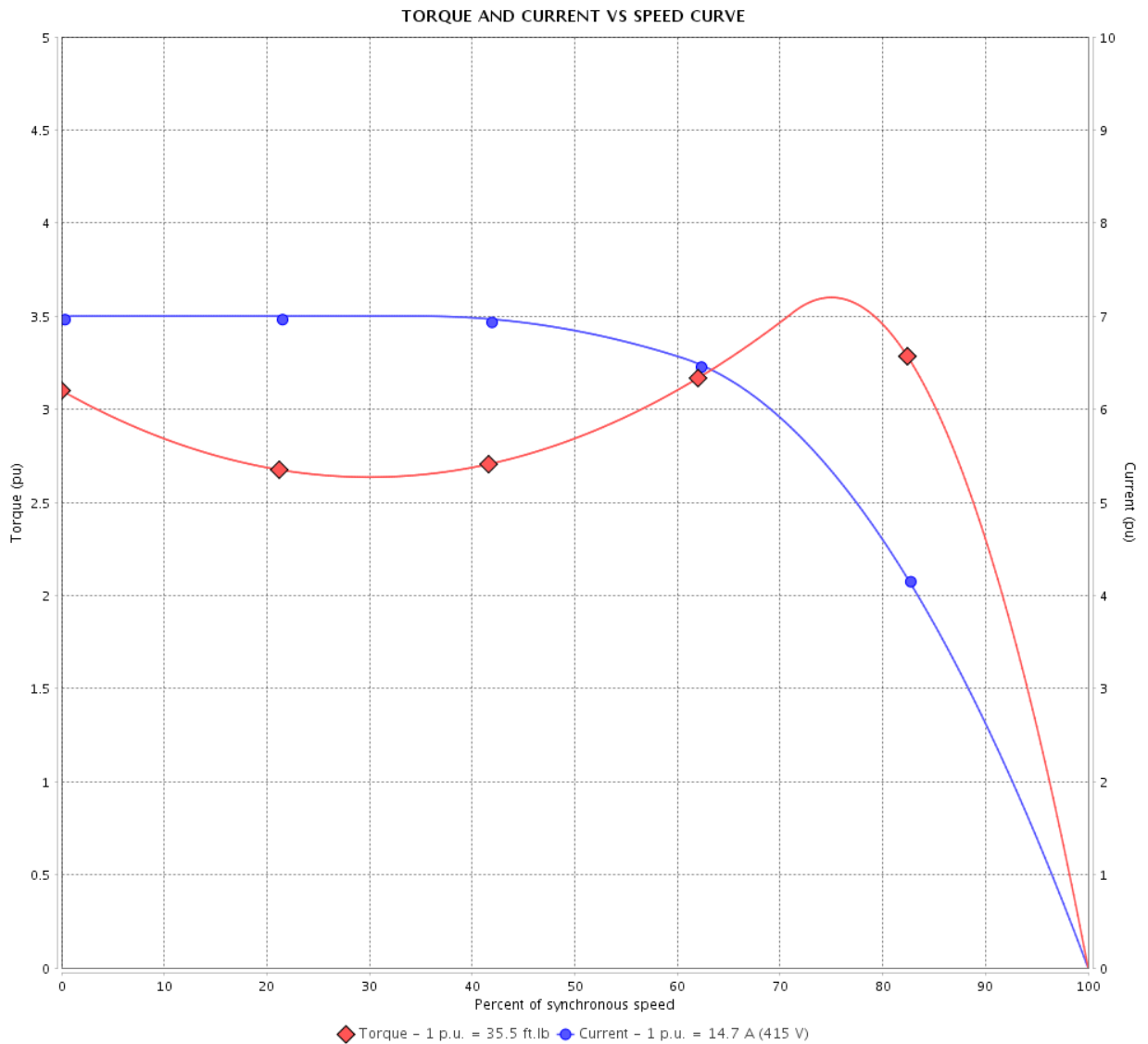
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14366964

Catalog # : 01518OT3E254T-W40



Performance : 415 V 50 Hz 4P IE3

Rated current : 14.7 A
LRC : 7.0
Rated torque : 35.5 ft.lb
Locked rotor torque : 310 %
Breakdown torque : 360 %
Rated speed : 1480 rpm

Moment of inertia (J) : 2.72 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

Locked rotor time : 54s (cold) 30s (hot)

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|----------------|----------|
| | | | | |
| Performed by | | | Page 5 / 21 | Revision |
| Checked by | | | | |
| Date | 13/04/2022 | | | |

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



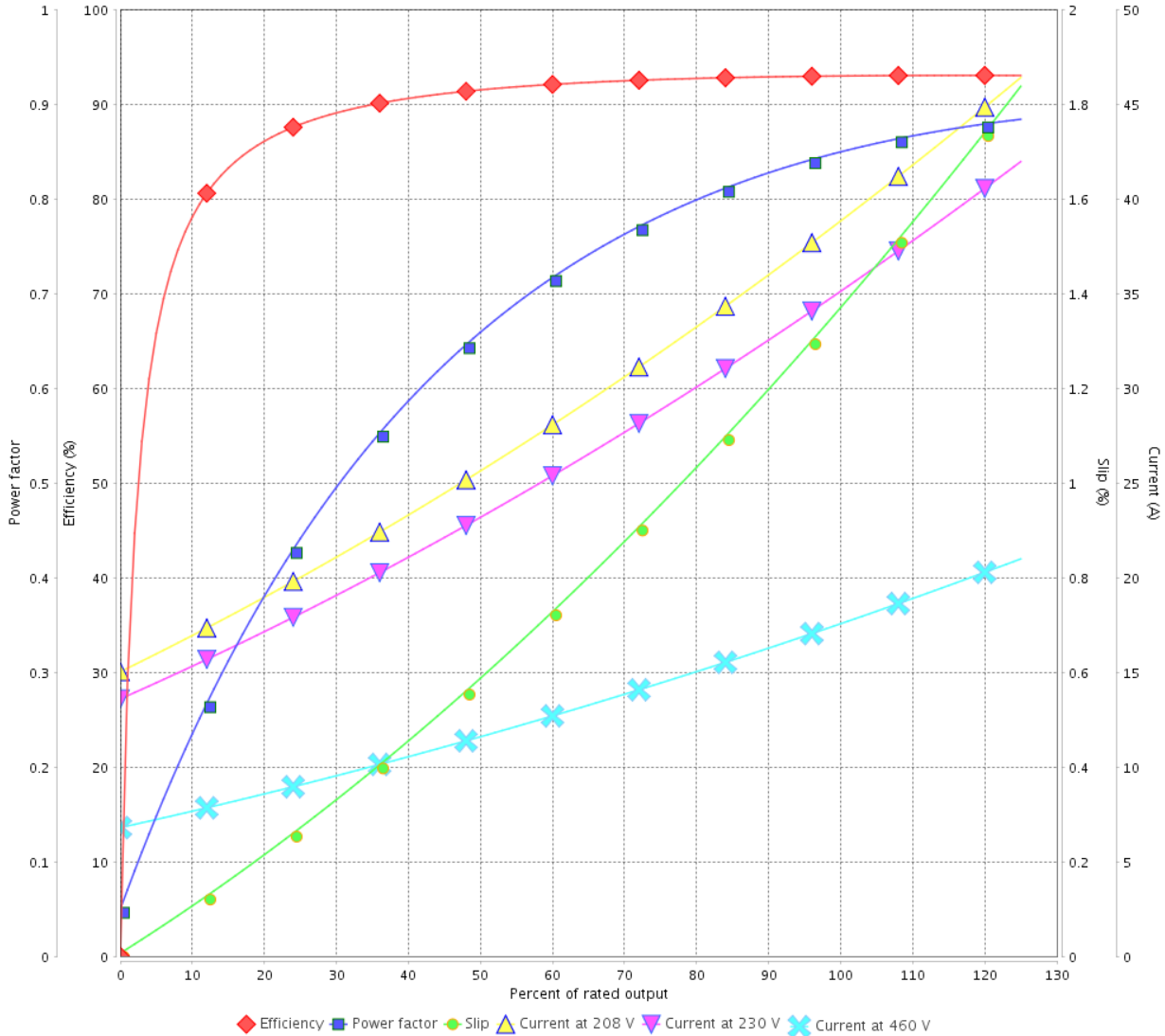
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14366964

Catalog # : 01518OT3E254T-W40

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 35.0/17.5 A
 LRC : 6.4
 Rated torque : 44.4 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 260 %
 Rated speed : 1775 rpm

Moment of inertia (J) : 2.72 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 |
|--------------|-----------------|-----------|----------------|----------|
| | | | | |
| Performed by | | | Page 6 / 21 | Revision |
| Checked by | | | | |
| Date | 13/04/2022 | | | |

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

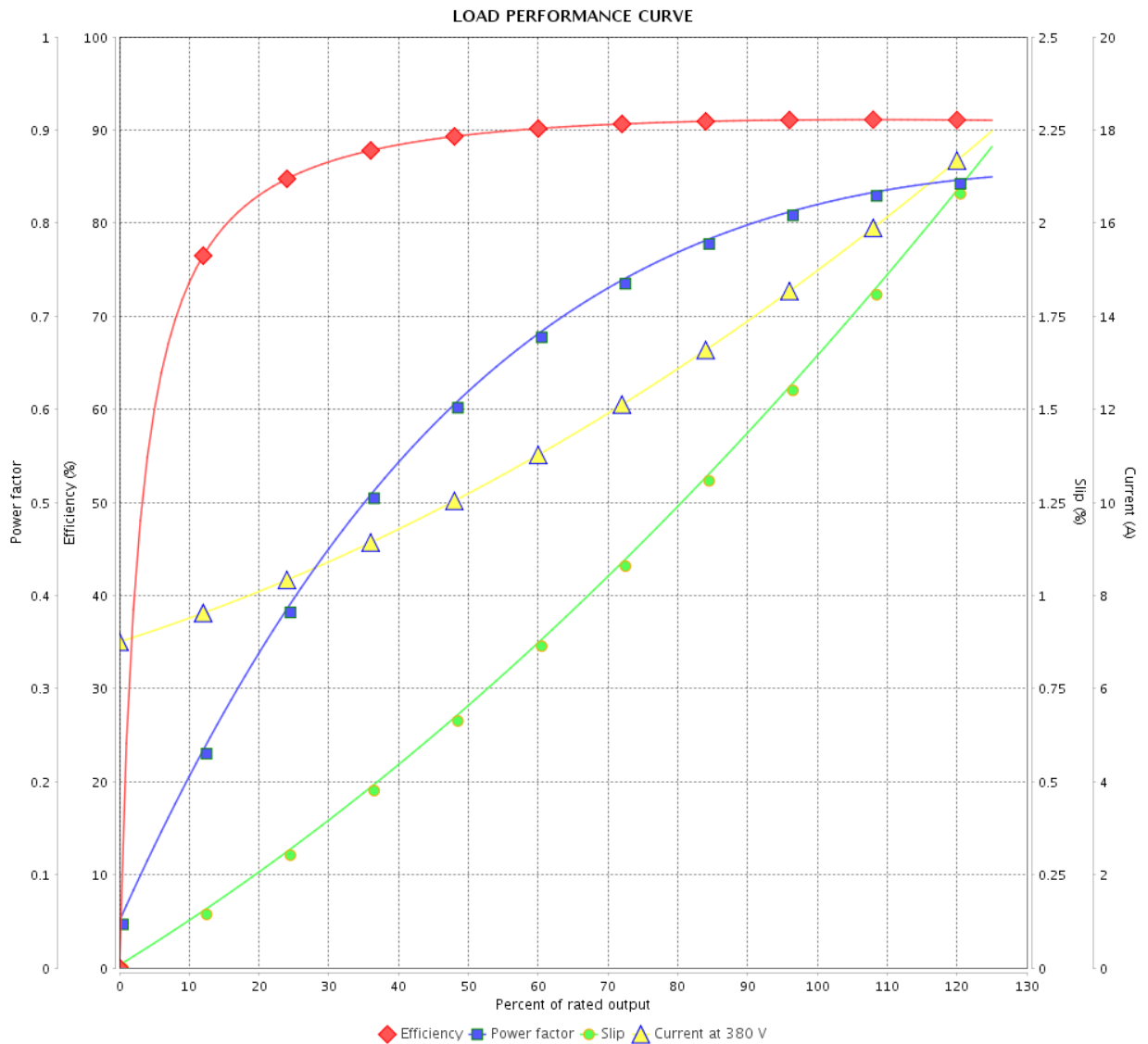


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14366964

Catalog # : 01518OT3E254T-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 15.3 A
 LRC : 6.6
 Rated torque : 35.6 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 300 %
 Rated speed : 1475 rpm

Moment of inertia (J) : 2.72 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|------------|---------|----------|
| | | | | |
| Performed by | | Page | | Revision |
| Checked by | | 7 / 21 | | |
| Date | | 13/04/2022 | | |

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



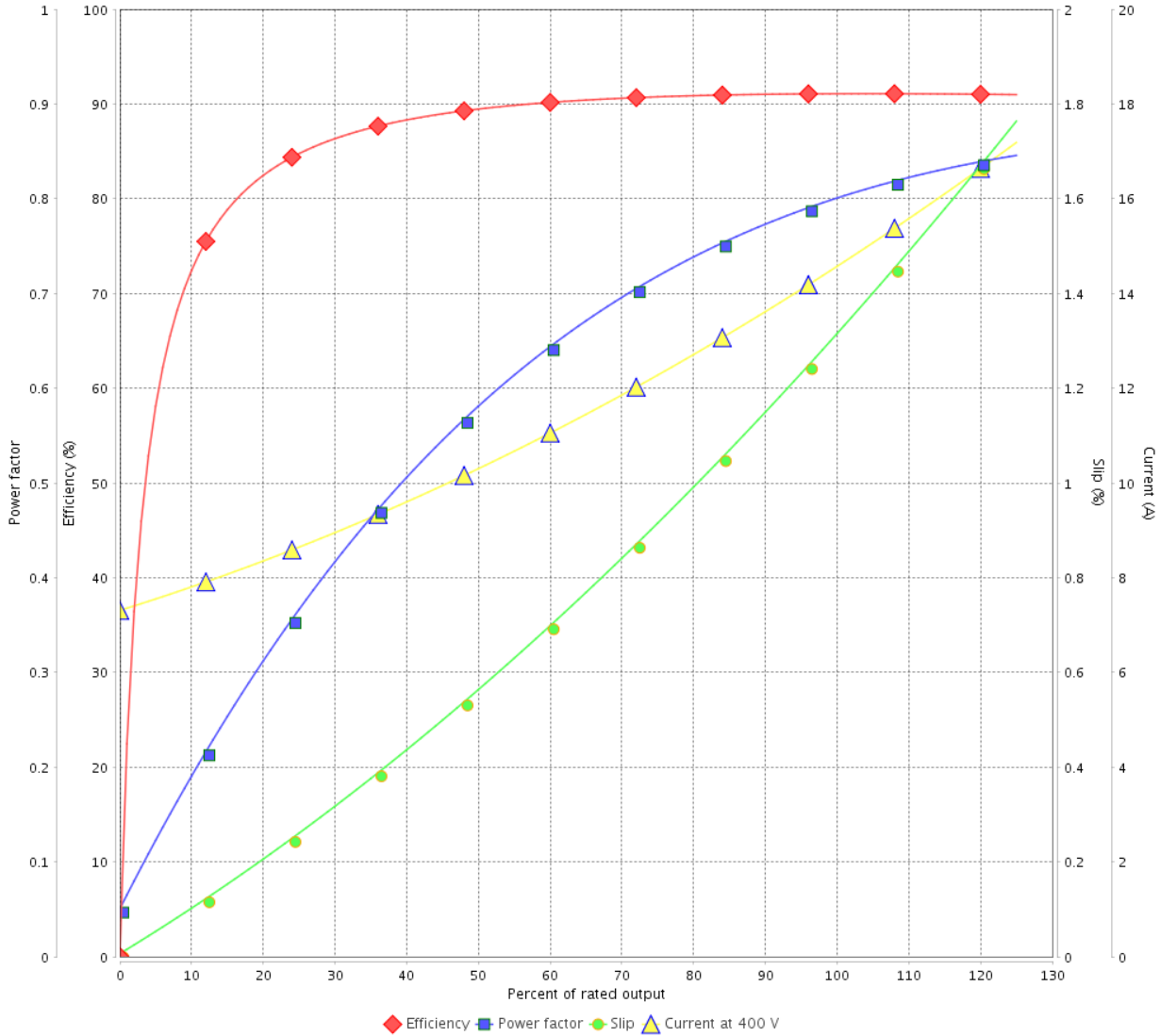
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14366964

Catalog # : 01518OT3E254T-W40

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 14.9 A
LRC : 6.8
Rated torque : 35.5 ft.lb
Locked rotor torque : 280 %
Breakdown torque : 330 %
Rated speed : 1480 rpm

Moment of inertia (J) : 2.72 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|---------|----------|
| | | | | |
| Performed by | | | Page | Revision |
| Checked by | | | 8 / 21 | |
| Date | 13/04/2022 | | | |

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

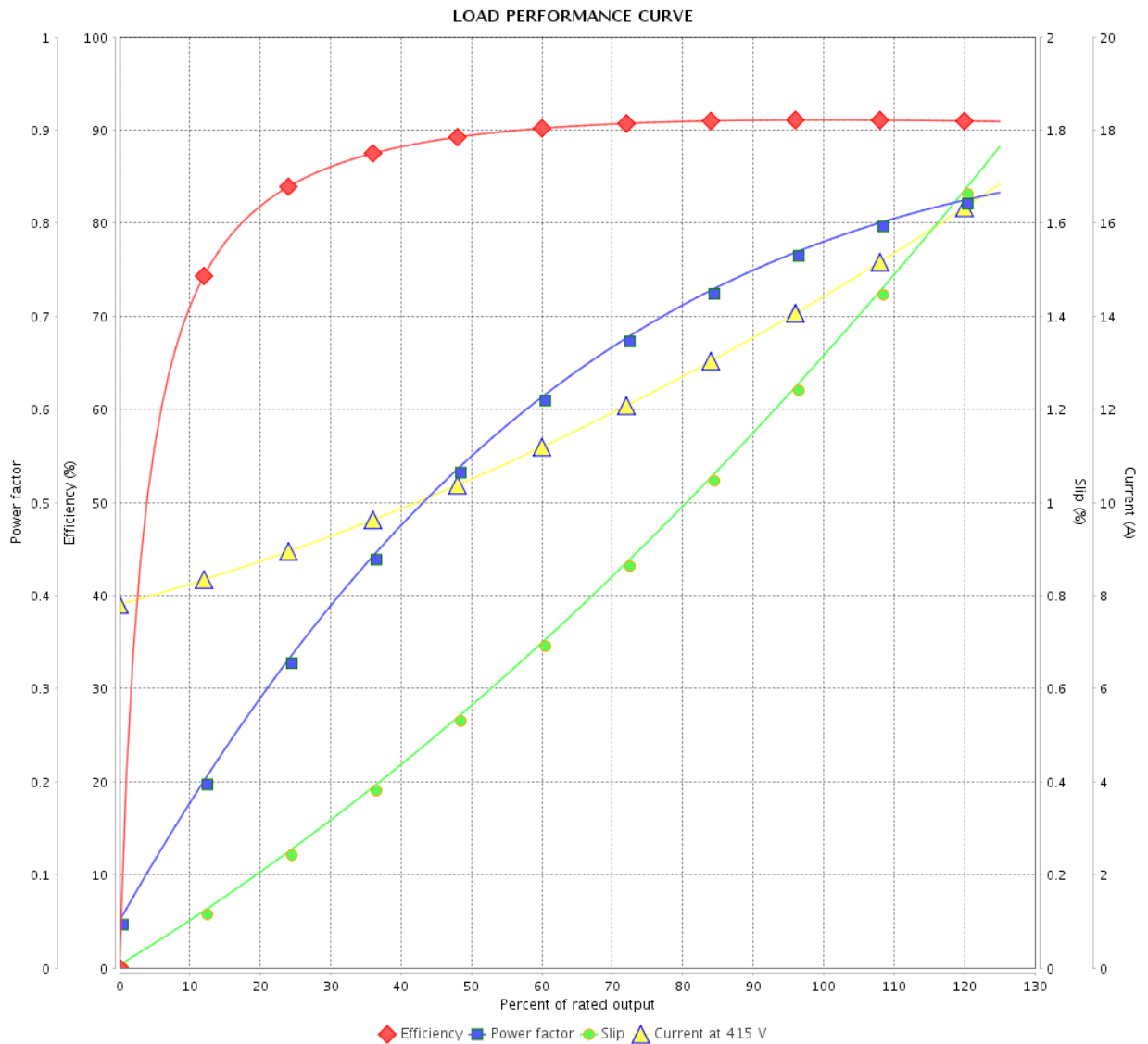


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14366964

Catalog # : 01518OT3E254T-W40



Performance : 415 V 50 Hz 4P IE3

Rated current : 14.7 A
 LRC : 7.0
 Rated torque : 35.5 ft.lb
 Locked rotor torque : 310 %
 Breakdown torque : 360 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 2.72 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|---------|----------|
| | | | | |
| Performed by | | | Page | Revision |
| Checked by | | | 9 / 21 | |
| Date | 13/04/2022 | | | |

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14366964

Catalog # : 01518OT3E254T-W40

Performance : 230/460 V 60 Hz 4P

Rated current : 35.0/17.5 A
LRC : 6.4
Rated torque : 44.4 ft.lb
Locked rotor torque : 220 %
Breakdown torque : 260 %
Rated speed : 1775 rpm

Moment of inertia (J) : 2.72 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

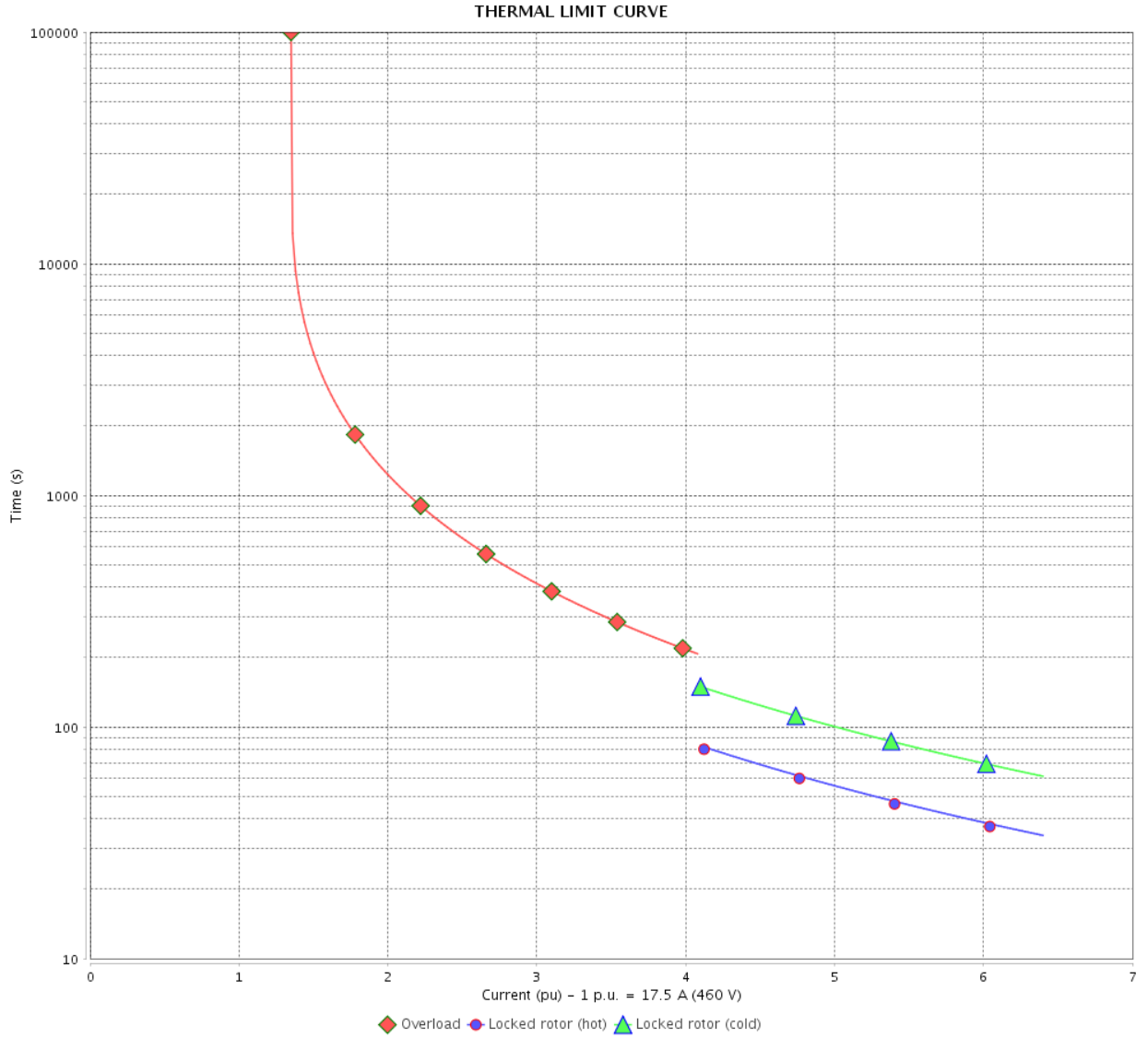
| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|---------|----------|
| | | | | |
| Performed by | | | | |
| Checked by | | | Page | Revision |
| Date | 13/04/2022 | | 10 / 21 | |

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|------------|---------|----------|
| | | | | |
| Performed by | | Page | | Revision |
| Checked by | | 11 / 21 | | |
| Date | | 13/04/2022 | | |

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14366964

Catalog # : 01518OT3E254T-W40

Performance : 380 V 50 Hz 4P IE3

| | | | |
|---------------------|--------------|-----------------------|-----------------|
| Rated current | : 15.3 A | Moment of inertia (J) | : 2.72 sq.ft.lb |
| LRC | : 6.6 | Duty cycle | : Cont.(S1) |
| Rated torque | : 35.6 ft.lb | Insulation class | : F |
| Locked rotor torque | : 240 % | Service factor | : 1.00 |
| Breakdown torque | : 300 % | Temperature rise | : 80 K |
| Rated speed | : 1475 rpm | Design | : B |

Heating constant

Cooling constant

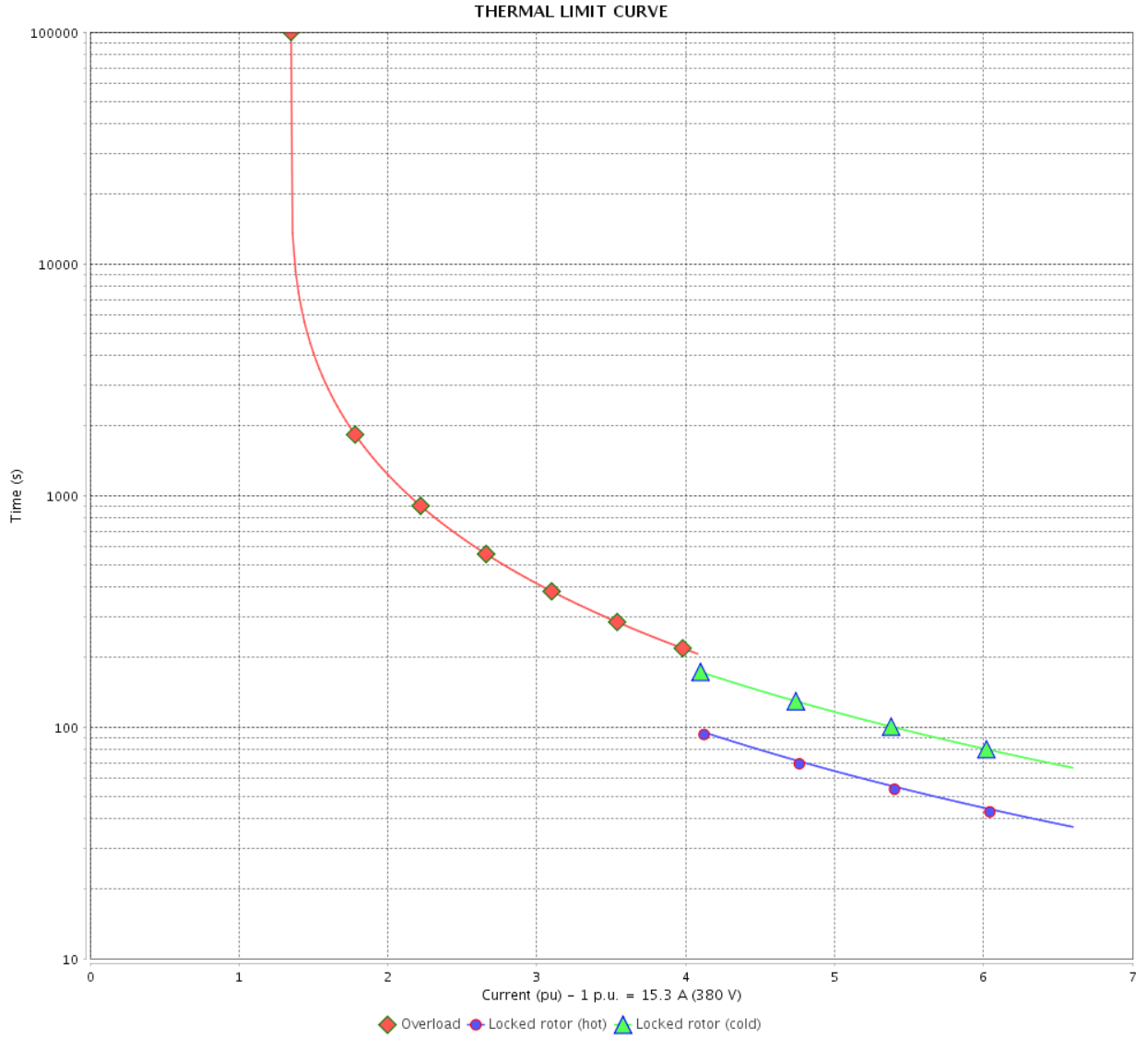
| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|---------|----------|
| Performed by | | | | |
| Checked by | | | Page | Revision |
| Date | 13/04/2022 | | 12 / 21 | |

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------------|---------|----------|
| | | | | |
| Performed by | | Page 13 / 21 | | Revision |
| Checked by | | | | |
| Date | | | | |

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14366964

Catalog # : 01518OT3E254T-W40

Performance : 400 V 50 Hz 4P IE3

| | | | |
|---------------------|--------------|-----------------------|-----------------|
| Rated current | : 14.9 A | Moment of inertia (J) | : 2.72 sq.ft.lb |
| LRC | : 6.8 | Duty cycle | : Cont.(S1) |
| Rated torque | : 35.5 ft.lb | Insulation class | : F |
| Locked rotor torque | : 280 % | Service factor | : 1.00 |
| Breakdown torque | : 330 % | Temperature rise | : 80 K |
| Rated speed | : 1480 rpm | Design | : B |

Heating constant

Cooling constant

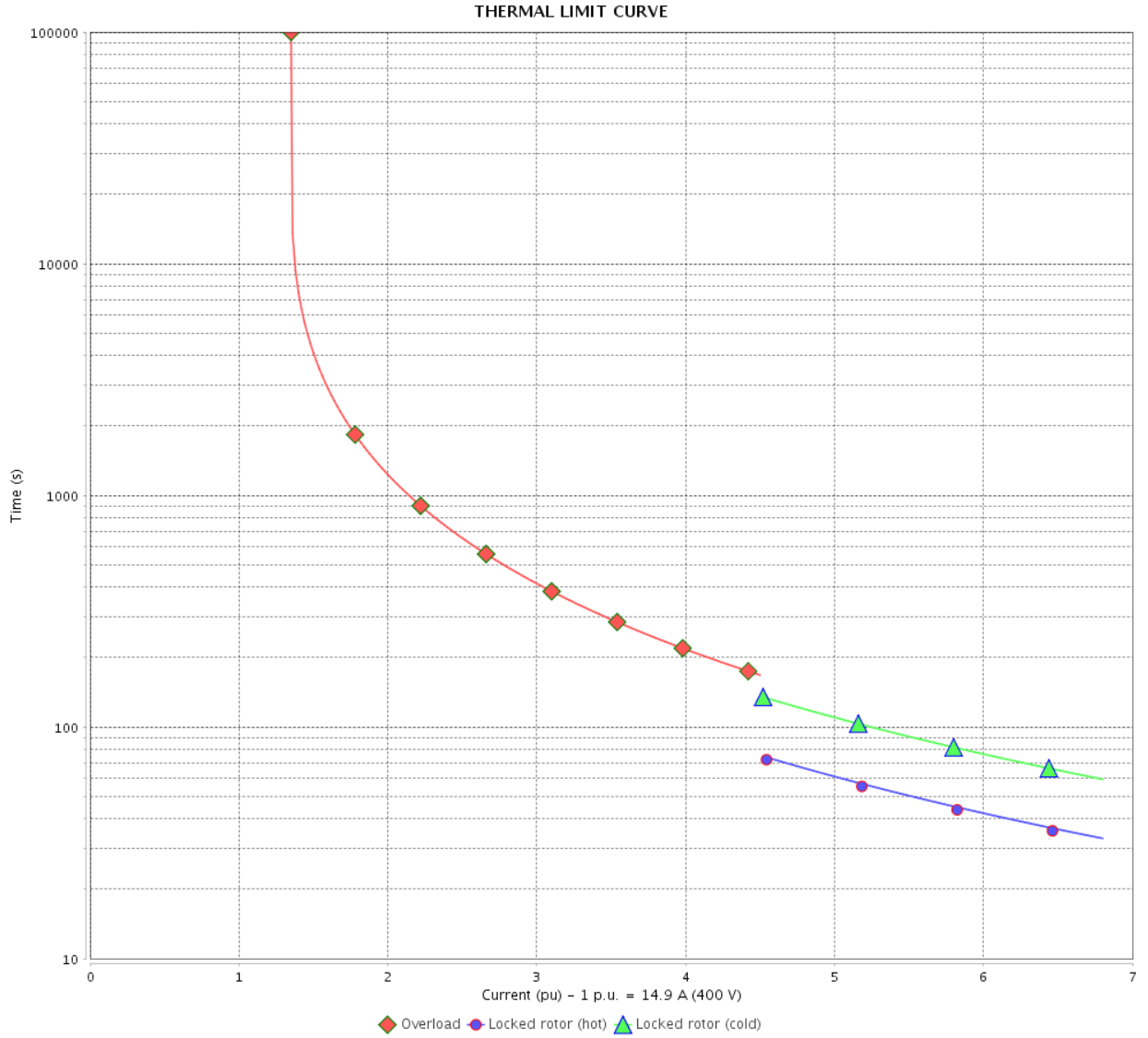
| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|---------|----------|
| | | | | |
| Performed by | | | | |
| Checked by | | | Page | Revision |
| Date | 13/04/2022 | | 14 / 21 | |

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|------------|---------|----------|
| | | | | |
| Performed by | | Page | | Revision |
| Checked by | | 15 / 21 | | |
| Date | | 13/04/2022 | | |

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14366964

Catalog # : 01518OT3E254T-W40

Performance : 415 V 50 Hz 4P IE3

Rated current : 14.7 A
LRC : 7.0
Rated torque : 35.5 ft.lb
Locked rotor torque : 310 %
Breakdown torque : 360 %
Rated speed : 1480 rpm

Moment of inertia (J) : 2.72 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

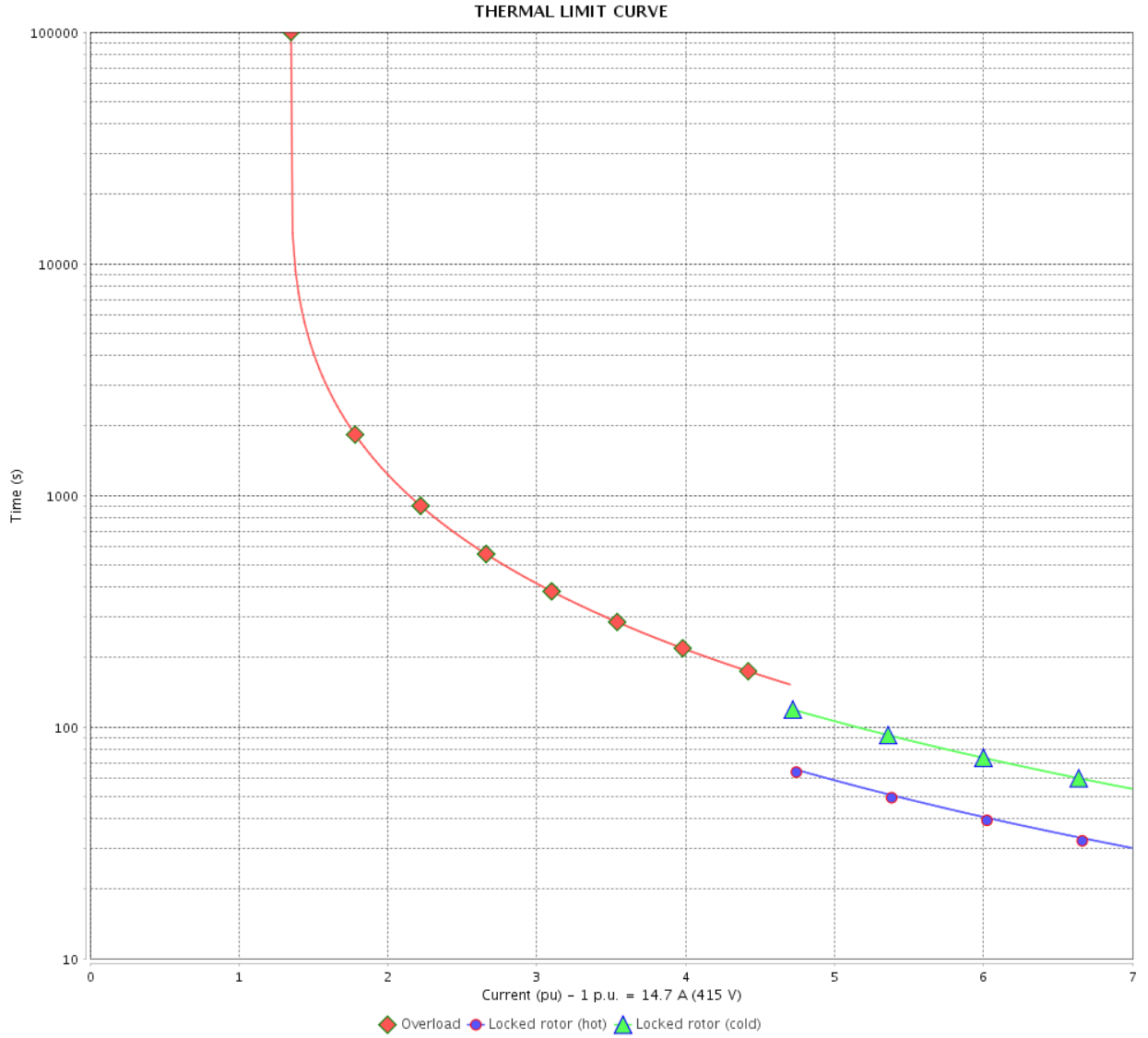
| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|---------|----------|
| | | | | |
| Performed by | | | | |
| Checked by | | | Page | Revision |
| Date | 13/04/2022 | | 16 / 21 | |

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------------|---------|----------|
| | | | | |
| Performed by | | Page 17 / 21 | | Revision |
| Checked by | | | | |
| Date | | | | |

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

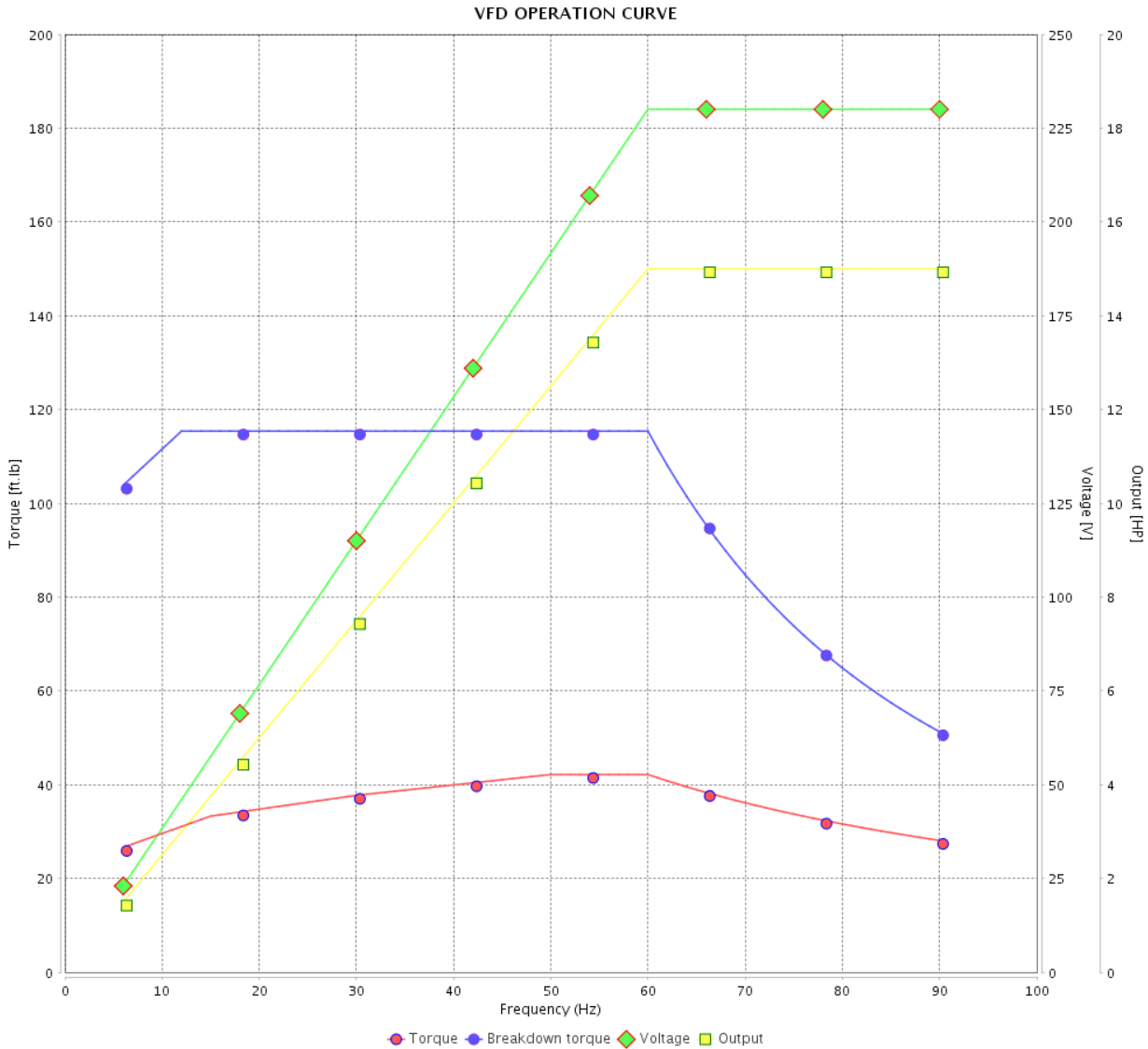


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14366964

Catalog # : 01518OT3E254T-W40



Performance : 230/460 V 60 Hz 4P

Rated current : 35.0/17.5 A
 LRC : 6.4
 Rated torque : 44.4 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 260 %
 Rated speed : 1775 rpm

Moment of inertia (J) : 2.72 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 |
|--------------|-----------------|-----------|-----------------|----------|
| | | | | |
| Performed by | | | Page 18 / 21 | Revision |
| Checked by | | | | |
| Date | 13/04/2022 | | | |

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

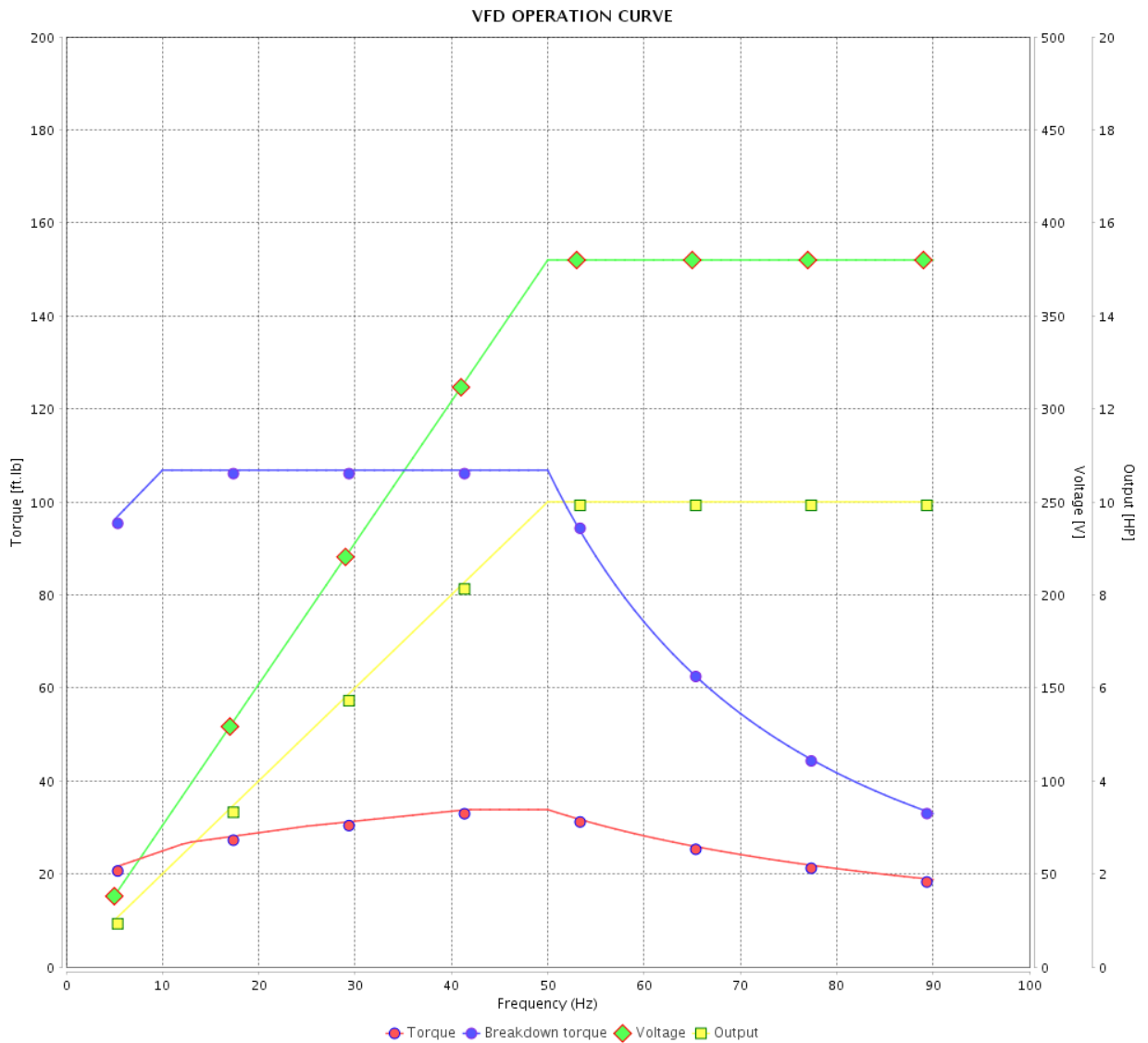


Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14366964

Catalog # : 01518OT3E254T-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 15.3 A
 LRC : 6.6
 Rated torque : 35.6 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 300 %
 Rated speed : 1475 rpm

Moment of inertia (J) : 2.72 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|---------|----------|
| | | | | |
| Performed by | | | Page | Revision |
| Checked by | | | | |
| Date | | | | |

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



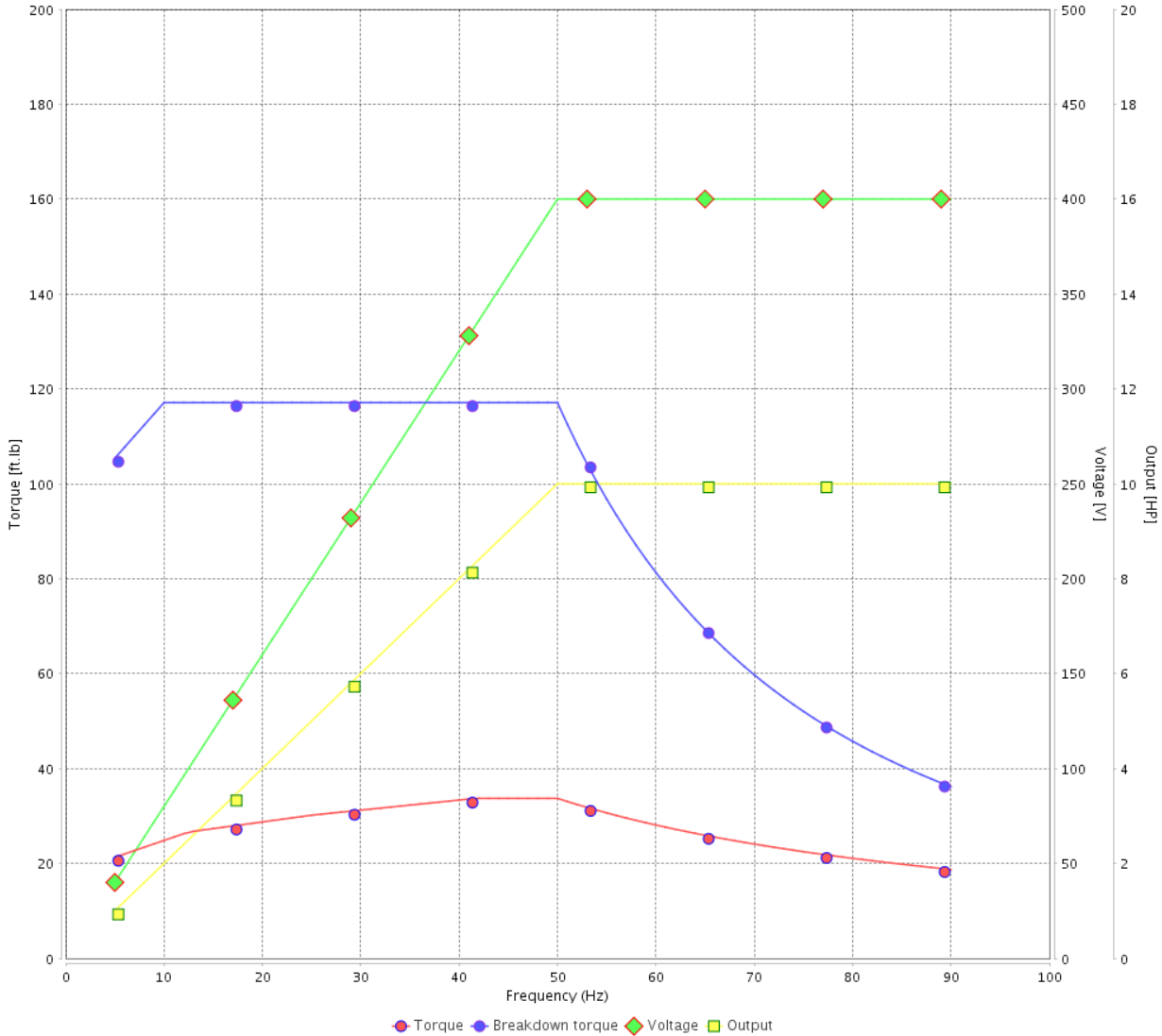
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14366964

Catalog # : 01518OT3E254T-W40

VFD OPERATION CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 14.9 A
 LRC : 6.8
 Rated torque : 35.5 ft.lb
 Locked rotor torque : 280 %
 Breakdown torque : 330 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 2.72 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|-----------------|----------|
| | | | | |
| Performed by | | | Page 20 / 21 | Revision |
| Checked by | | | | |
| Date | 13/04/2022 | | | |

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

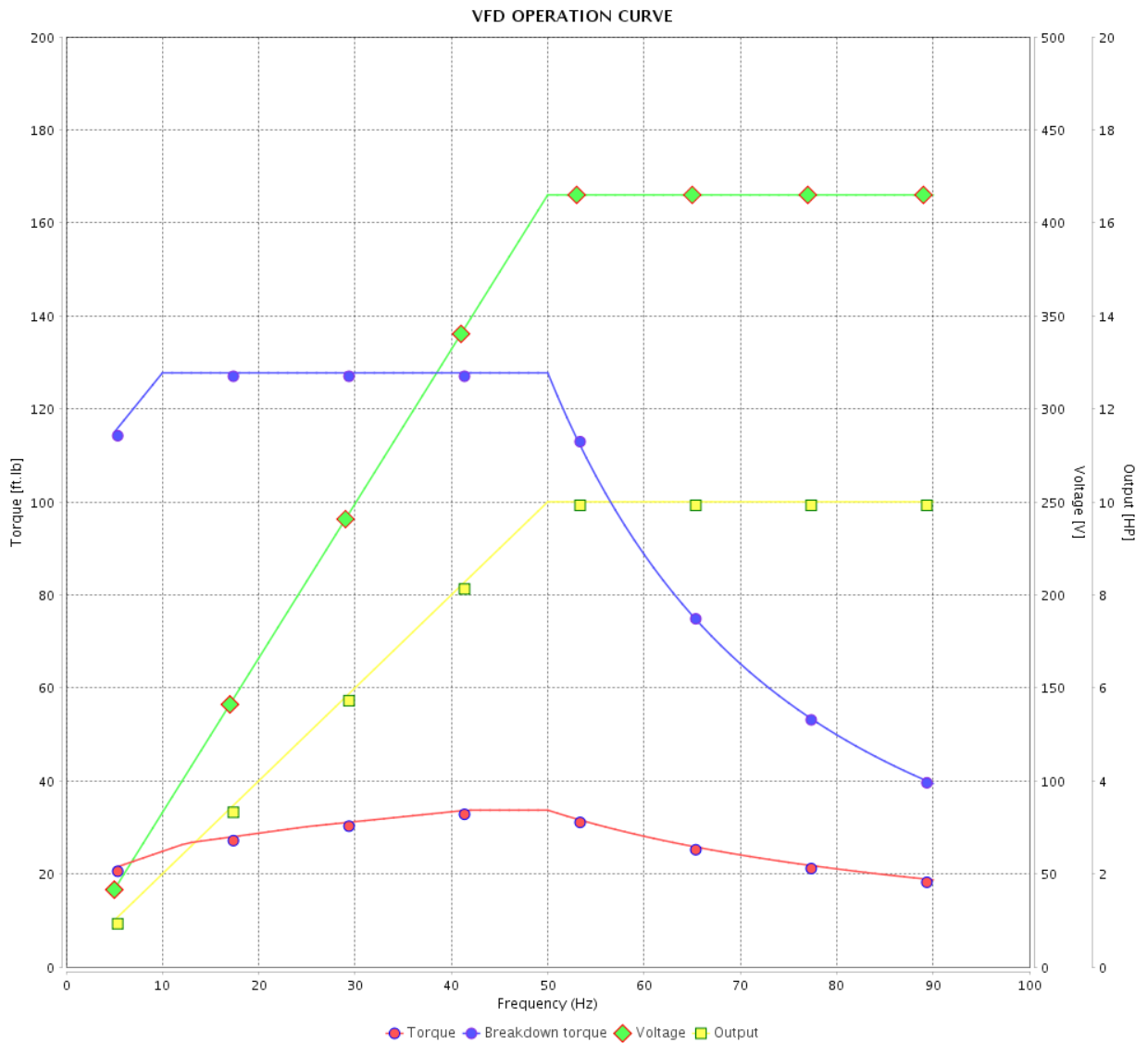


Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14366964

Catalog # : 01518OT3E254T-W40

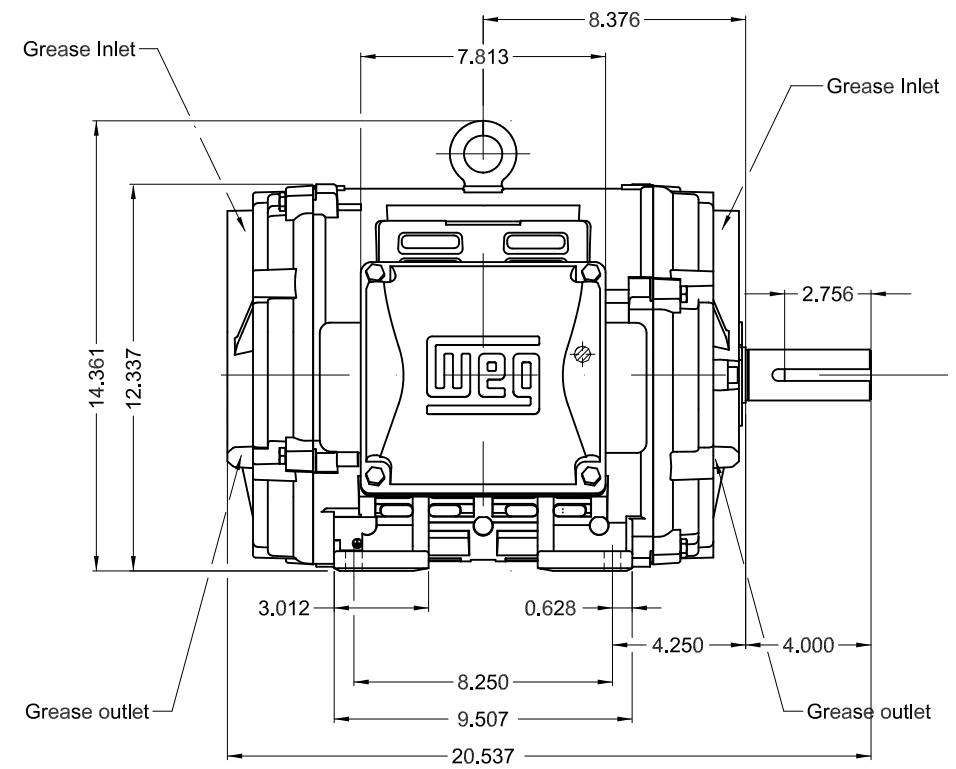
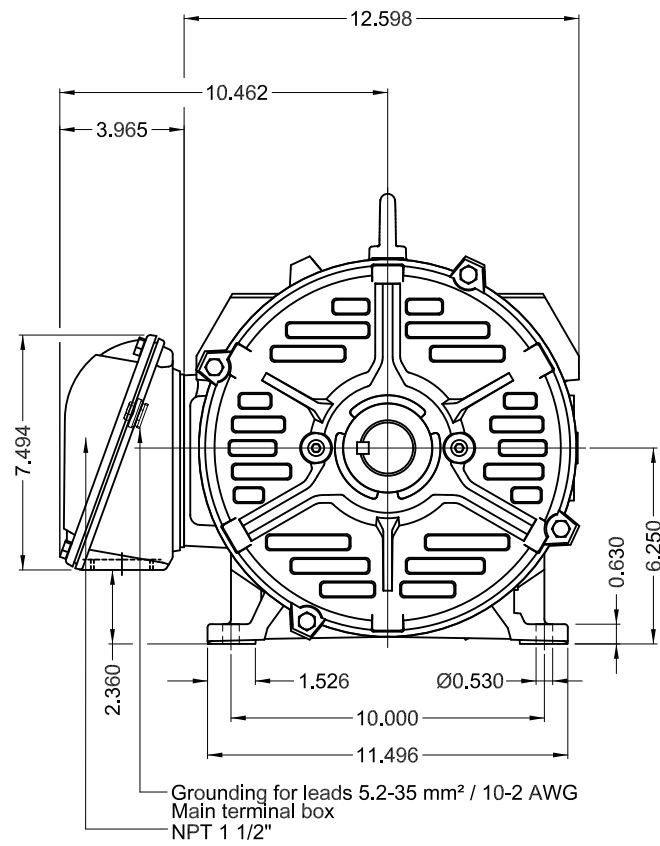


Performance : 415 V 50 Hz 4P IE3

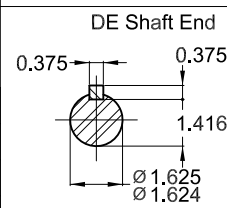
Rated current : 14.7 A
 LRC : 7.0
 Rated torque : 35.5 ft.lb
 Locked rotor torque : 310 %
 Breakdown torque : 360 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 2.72 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|---------|----------|
| | | | | |
| Performed by | | Page | | Revision |
| Checked by | | 21 / 21 | | |
| Date | 13/04/2022 | | | |



Color RAL 5009
Painting plan 203A
Mounting NEMA F-1
Mounting B3R(D)



15 HP 04 Poles 60 Hz

A

1:6

| ECM | LOC | SUMMARY OF MODIFICATIONS | EXECUTED | CHECKED | RELEASED | DATE | VER |
|----------|-----------|--------------------------------|---------------------|---------|----------|------|-----|
| EXECUTED | PIRWBUSER | THREE PH. MOTOR W40 PREM. EFF. | | | | | |
| CHECKED | | FRAME 254T IP23 ODP | | | | | |
| RELEASED | | | | | | | |
| REL DT. | | WMO Jaragua do Sul | Product Engineering | SHEET | 1 / 1 | | |

PREVIEW
WDD



WEG **W40 NEMA**
CC029A Premium
Inverter Duty Motor



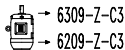
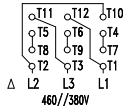
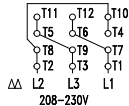
IEC 60034-1
 MOD.T01#FOXON



For 60Hz use on PWM, VT 1000:1, CT 3:1, 1.0SF

MODEL 015180T3E254T-W40
 MADE IN BRAZIL
 14366964

| | | | | | |
|---|---------|--------------------|---------------|-----------|----------|
| PH 3 | FR 254T | HP(kW) 15.0(11.0) | | Hz 60 | |
| V 230/460 | | A 35.0/17.5 | | RPM 1775 | DES B |
| NEMA NOM EFF 93.0 % | | INS. CL. F ΔT 80 K | | IP23 | |
| ENCL ODP | | DUTY CONT. | | AMB. 40°C | |
| CODE G | PF 0.85 | SF 1.25 | SFA 43.8/21.9 | | |
| USABLE @208V 38.7 A | | SF 1.15 | SFA 44.5 | | |
| 10HP 7.5kW 50Hz 380V 15.3A 1475RPM SF1.00 EFF 91.0% (IE3) | | | | ALT 1000 | m.a.s.l. |



MOBIL POLYREX EM
 13 g 20000 h

ALT 1000 m.a.s.l. 247 Lbs