

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



| | |
|--|--|
| Customer : | |
| Product line : IE3 Three-Phase | Product code : 12868103 |
| Frame : 90L Insulation class : F Duty cycle : S1 Ambient temperature : -20°C to +40°C Altitude : 1000 m.a.s.l. Protection degree : IP55 Design : N | Cooling method : IC411 - TEFC Mounting : B5T Rotation ¹ : Both (CW and CCW) Starting method : Direct On Line Approx. weight ² : 24.2 kg Moment of inertia (J) : 0.0026 kgm ² |
| Output [kW] | 2.2 |
| Poles | 2 |
| Frequency [Hz] | 50 |
| Rated voltage [V] | 220/380 |
| Rated current [A] | 7.91/4.58 |
| L. R. Amperes [A] | 55.4/32.1 |
| LRC [A] | 7.0 |
| No load current [A] | 3.45/2.00 |
| Rated speed [RPM] | 2870 |
| Slip [%] | 4.33 |
| Rated torque [kgfm] | 0.747 |
| Locked rotor torque [%] | 310 |
| Breakdown torque [%] | 300 |
| Service factor | 1.00 |
| Temperature rise | 80 K |
| Locked rotor time | 18s (cold) 10s (hot) |
| Noise level ² | 62.0 dB(A) |
| Efficiency (%) | 25% |
| | 50% |
| | 75% |
| | 100% |
| Power Factor | 25% |
| | 50% |
| | 75% |
| | 100% |
| Losses at normative operating points (speed;torque), in percentage of rated output power | |
| Losses (%) | P1 (0,9;1,0) |
| | P2 (0,5;1,0) |
| | P3 (0,25;1,0) |
| | P4 (0,9;0,5) |
| | P5 (0,5;0,5) |
| | P6 (0,5;0,25) |
| | P7 (0,25;0,25) |
| Bearing type : Drive end 6205 ZZ Non drive end 6204 ZZ Sealing : Oil Seal Lip Seal Lubrication interval : - - Lubricant amount : - - Lubricant type : Mobil Polyrex EM | Foundation loads Max. traction : 64 kgf Max. compression : 89 kgf |
| 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. | |
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Three Phase Induction Motor - Squirrel Cage



Customer : _____

Notes

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Customer : _____

Thermal protection

| ID | Application | Type | Quantity | Sensing Temperature |
|----|-------------|----------------------|-----------|---------------------|
| 1 | Winding | Thermistor - 2 wires | 1 x Phase | 155 °C |

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TORQUE AND CURRENT VS SPEED CURVE

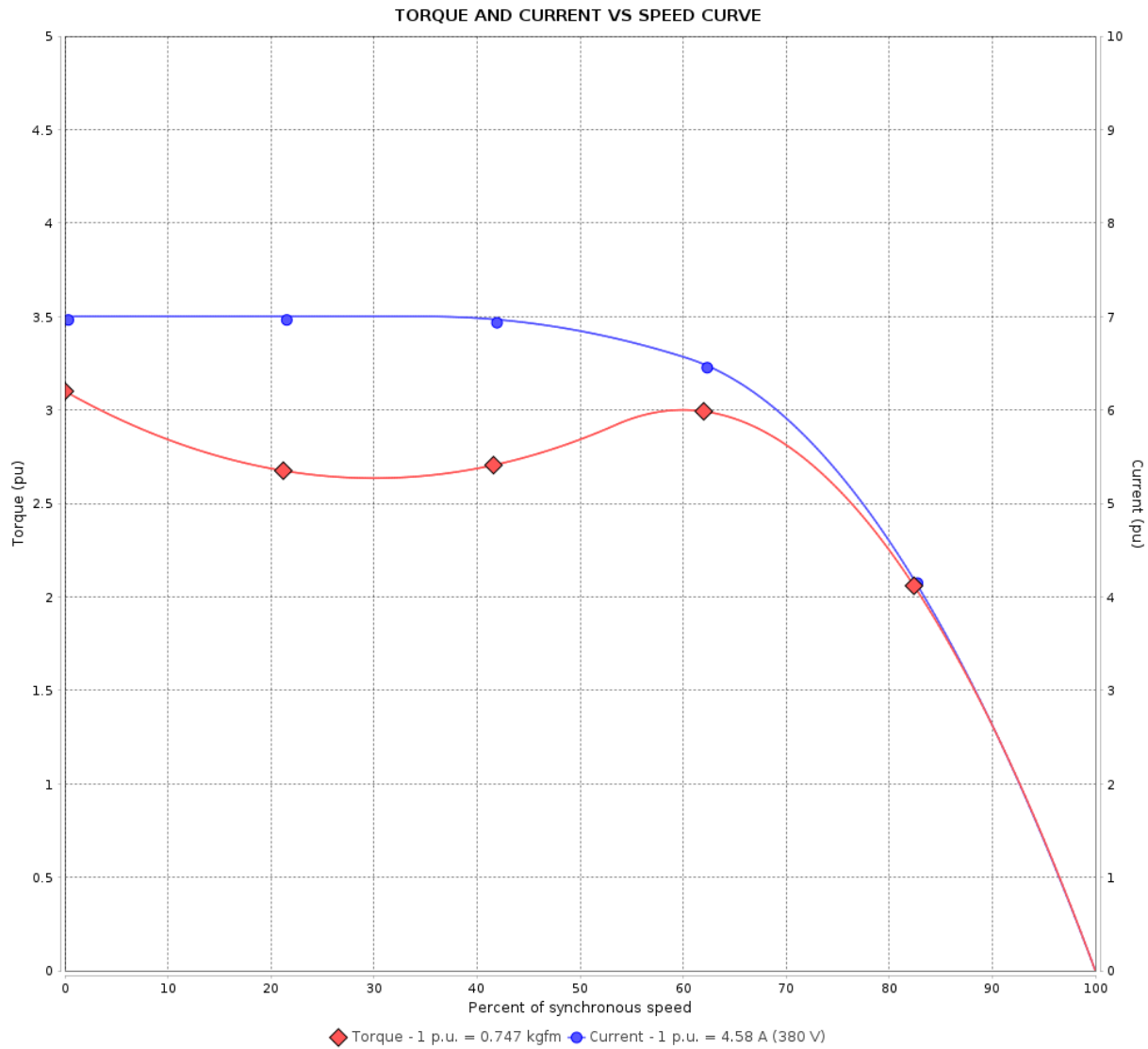
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12868103



Performance : 220/380 V 50 Hz 2P

| | | | |
|---------------------|---------------|-----------------------|---------------------------|
| Rated current | : 7.91/4.58 A | Moment of inertia (J) | : 0.0026 kgm ² |
| LRC | : 7.0 | Duty cycle | : S1 |
| Rated torque | : 0.747 kgfm | Insulation class | : F |
| Locked rotor torque | : 310 % | Service factor | : 1.00 |
| Breakdown torque | : 300 % | Temperature rise | : 80 K |
| Rated speed | : 2870 rpm | Design | : N |

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

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TORQUE AND CURRENT VS SPEED CURVE

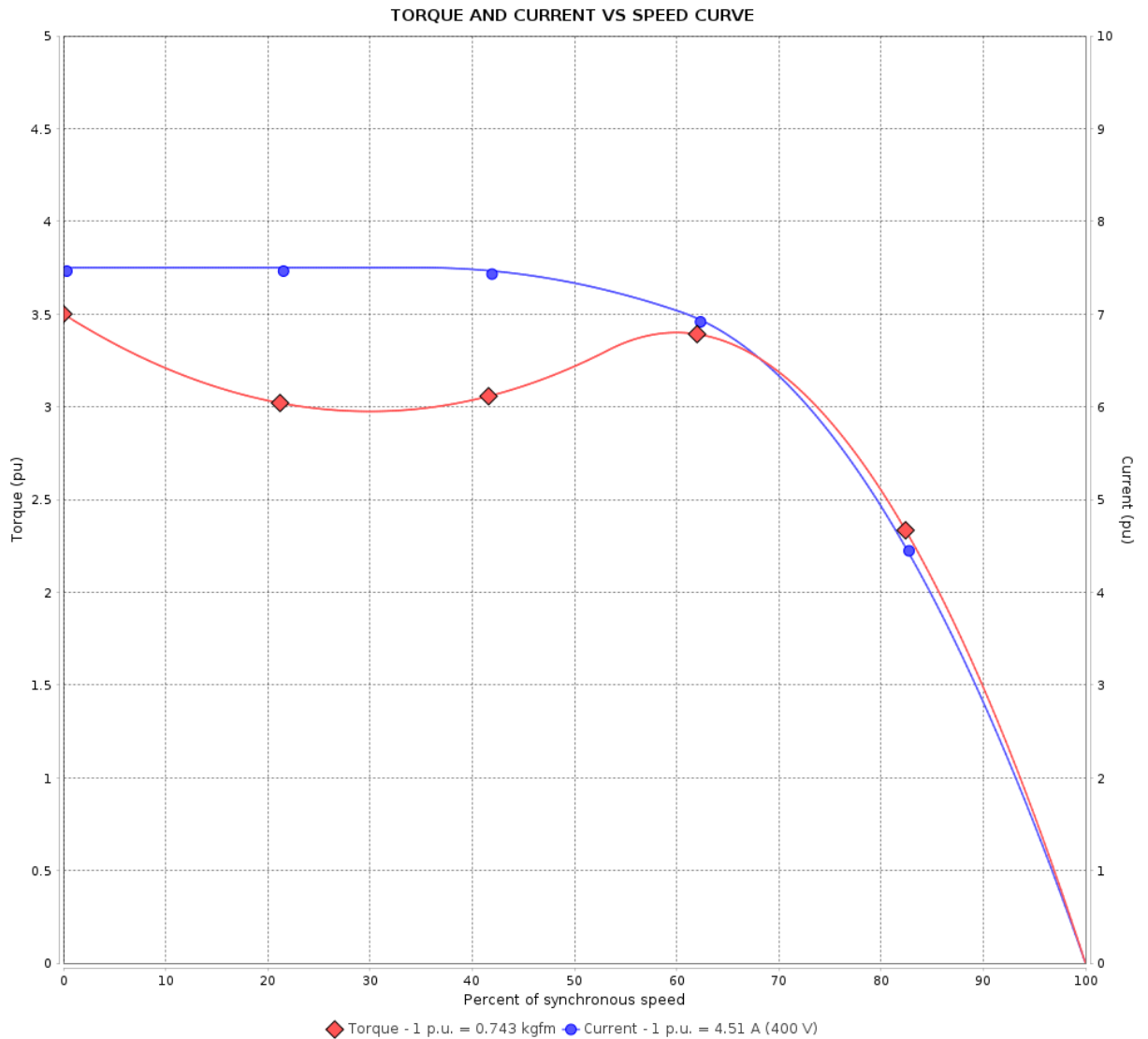
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : IE3 Three-Phase

Product code : 12868103



Performance : 230/400 V 50 Hz 2P

| | | | |
|---------------------|---------------|-----------------------|---------------------------|
| Rated current | : 7.84/4.51 A | Moment of inertia (J) | : 0.0026 kgm ² |
| LRC | : 7.5 | Duty cycle | : S1 |
| Rated torque | : 0.743 kgfm | Insulation class | : F |
| Locked rotor torque | : 350 % | Service factor | : 1.00 |
| Breakdown torque | : 340 % | Temperature rise | : 80 K |
| Rated speed | : 2885 rpm | Design | : N |

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

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TORQUE AND CURRENT VS SPEED CURVE

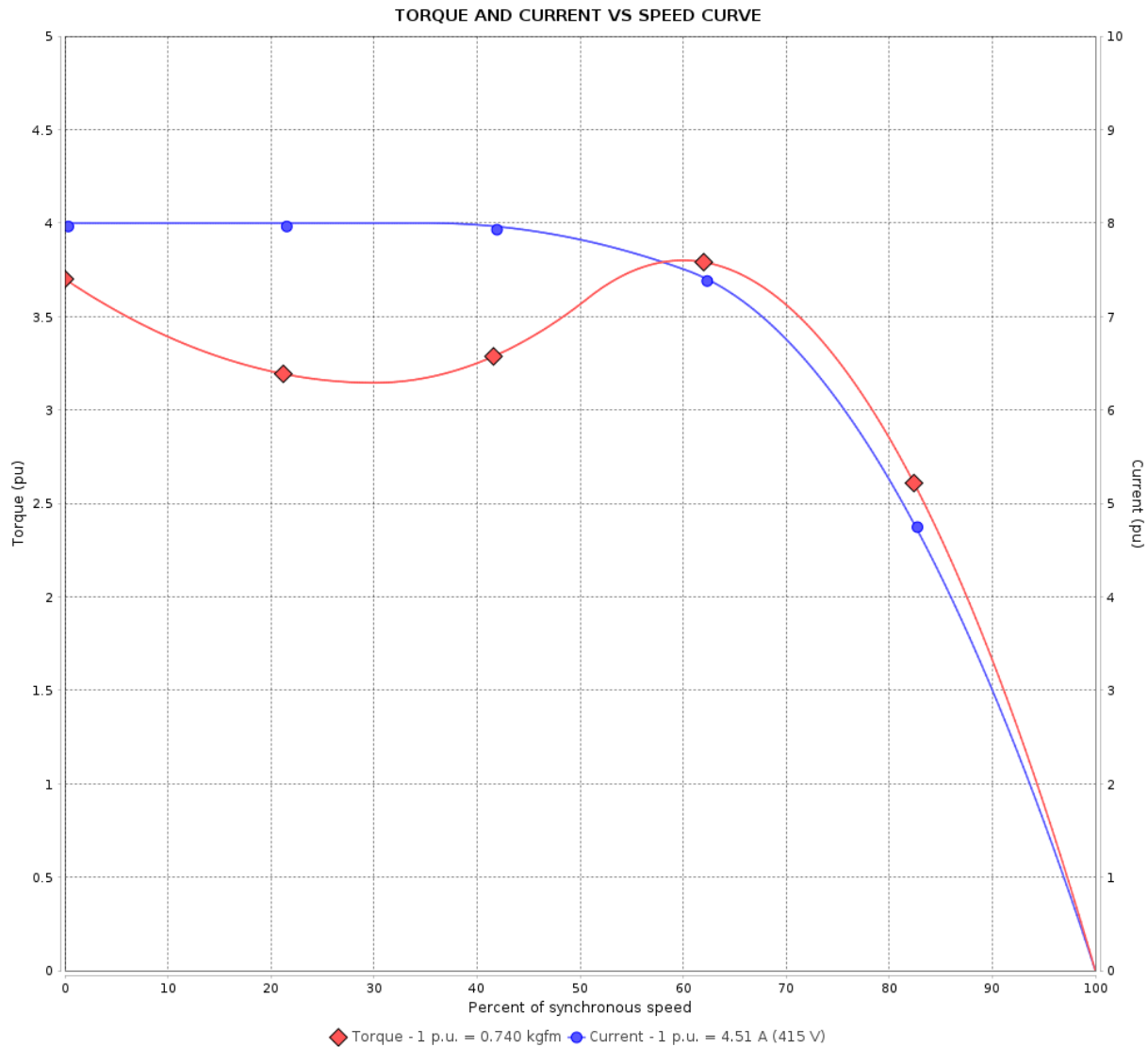
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12868103



Performance : 240/415 V 50 Hz 2P

| | | | |
|---------------------|---------------|-----------------------|---------------------------|
| Rated current | : 7.80/4.51 A | Moment of inertia (J) | : 0.0026 kgm ² |
| LRC | : 8.0 | Duty cycle | : S1 |
| Rated torque | : 0.740 kgfm | Insulation class | : F |
| Locked rotor torque | : 370 % | Service factor | : 1.00 |
| Breakdown torque | : 380 % | Temperature rise | : 80 K |
| Rated speed | : 2895 rpm | Design | : N |

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

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TORQUE AND CURRENT VS SPEED CURVE

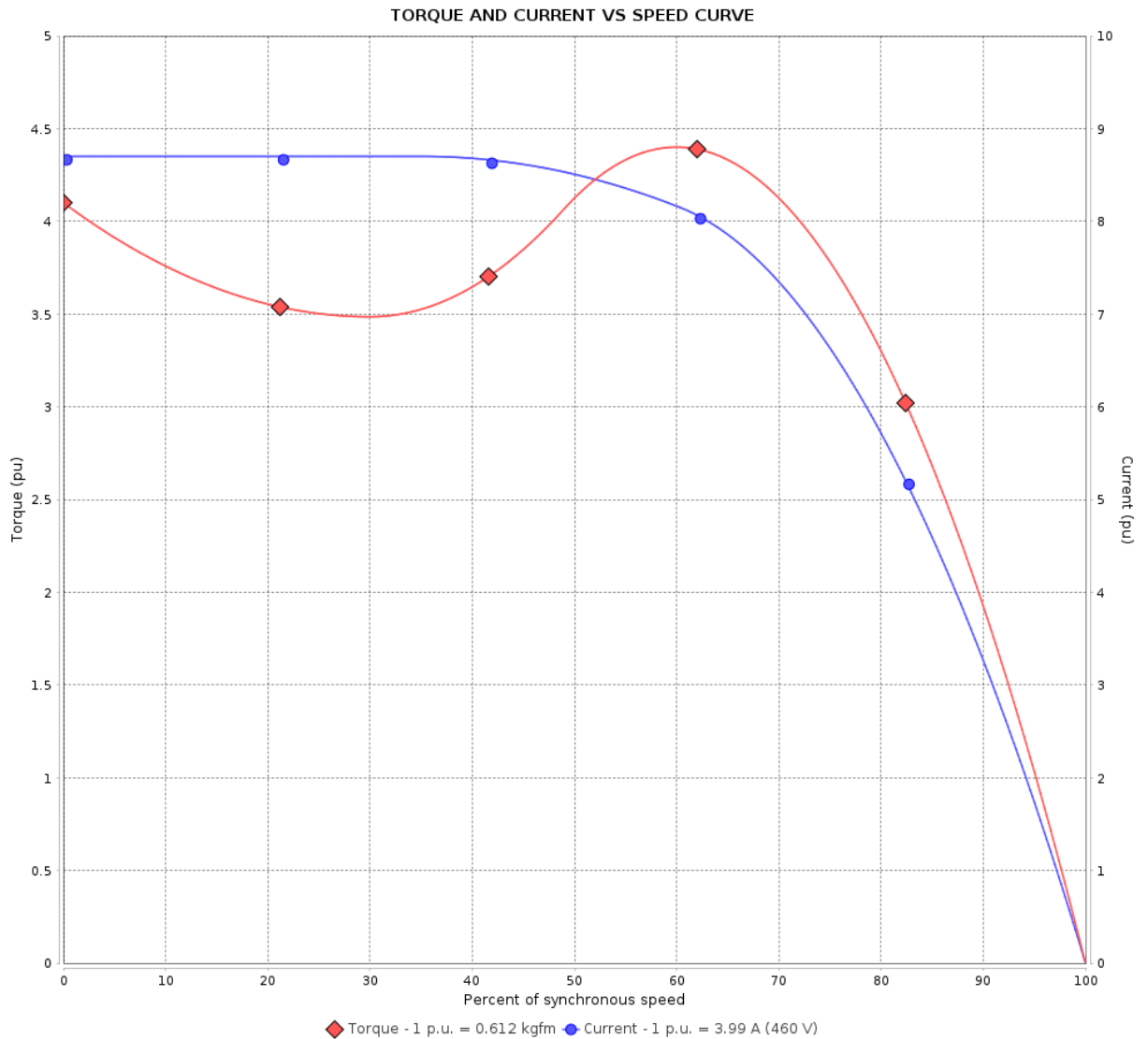
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12868103



Performance : 460 V 60 Hz 2P

| | | | |
|---------------------|--------------|-----------------------|---------------------------|
| Rated current | : 3.99 A | Moment of inertia (J) | : 0.0026 kgm ² |
| LRC | : 8.7 | Duty cycle | : S1 |
| Rated torque | : 0.612 kgfm | Insulation class | : F |
| Locked rotor torque | : 409 % | Service factor | : 1.00 |
| Breakdown torque | : 440 % | Temperature rise | : 80 K |
| Rated speed | : 3500 rpm | Design | : N |

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

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LOAD PERFORMANCE CURVE

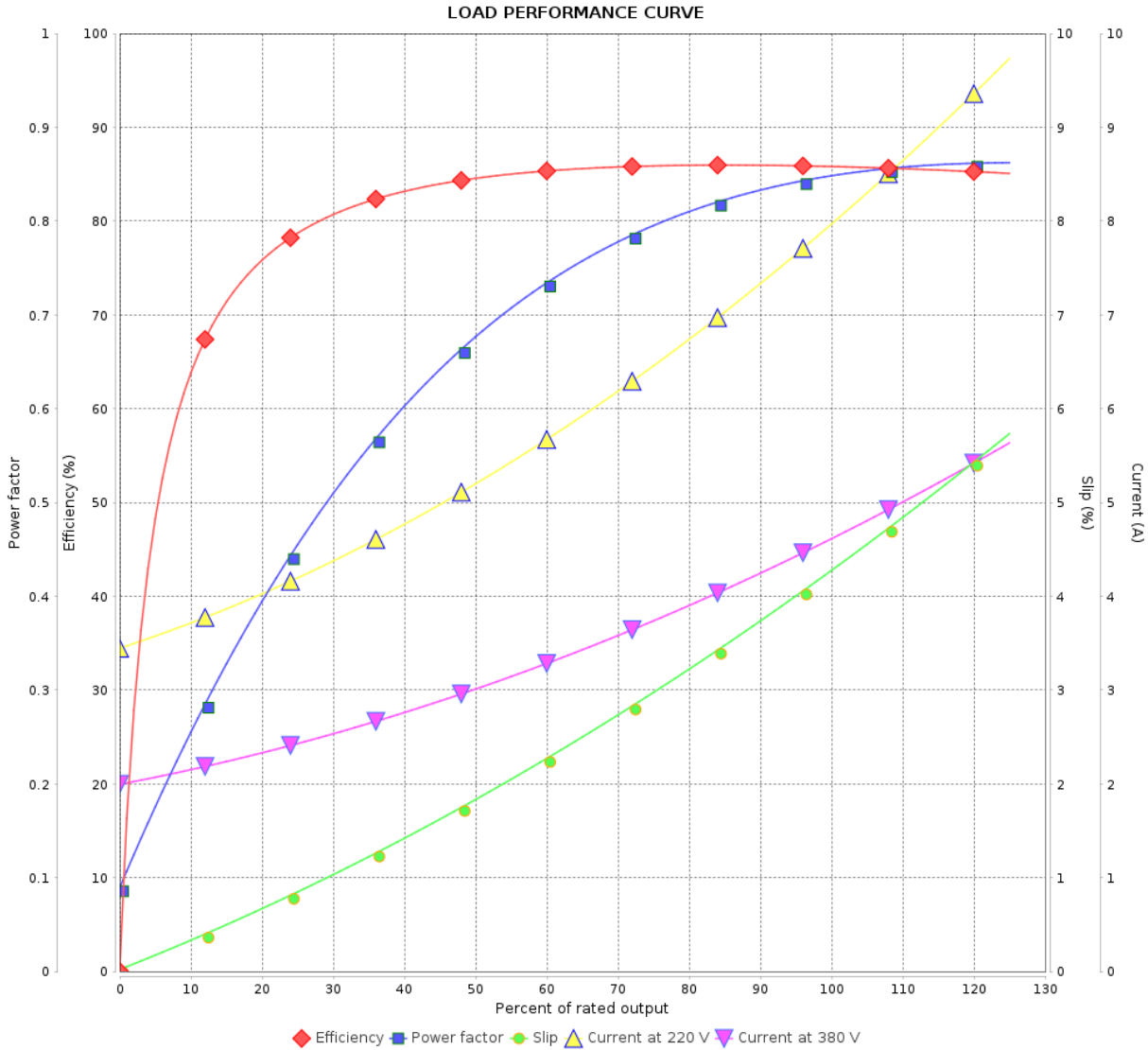
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12868103



Performance : 220/380 V 50 Hz 2P

Rated current : 7.91/4.58 A
 LRC : 7.0
 Rated torque : 0.747 kgfm
 Locked rotor torque : 310 %
 Breakdown torque : 300 %
 Rated speed : 2870 rpm

Moment of inertia (J) : 0.0026 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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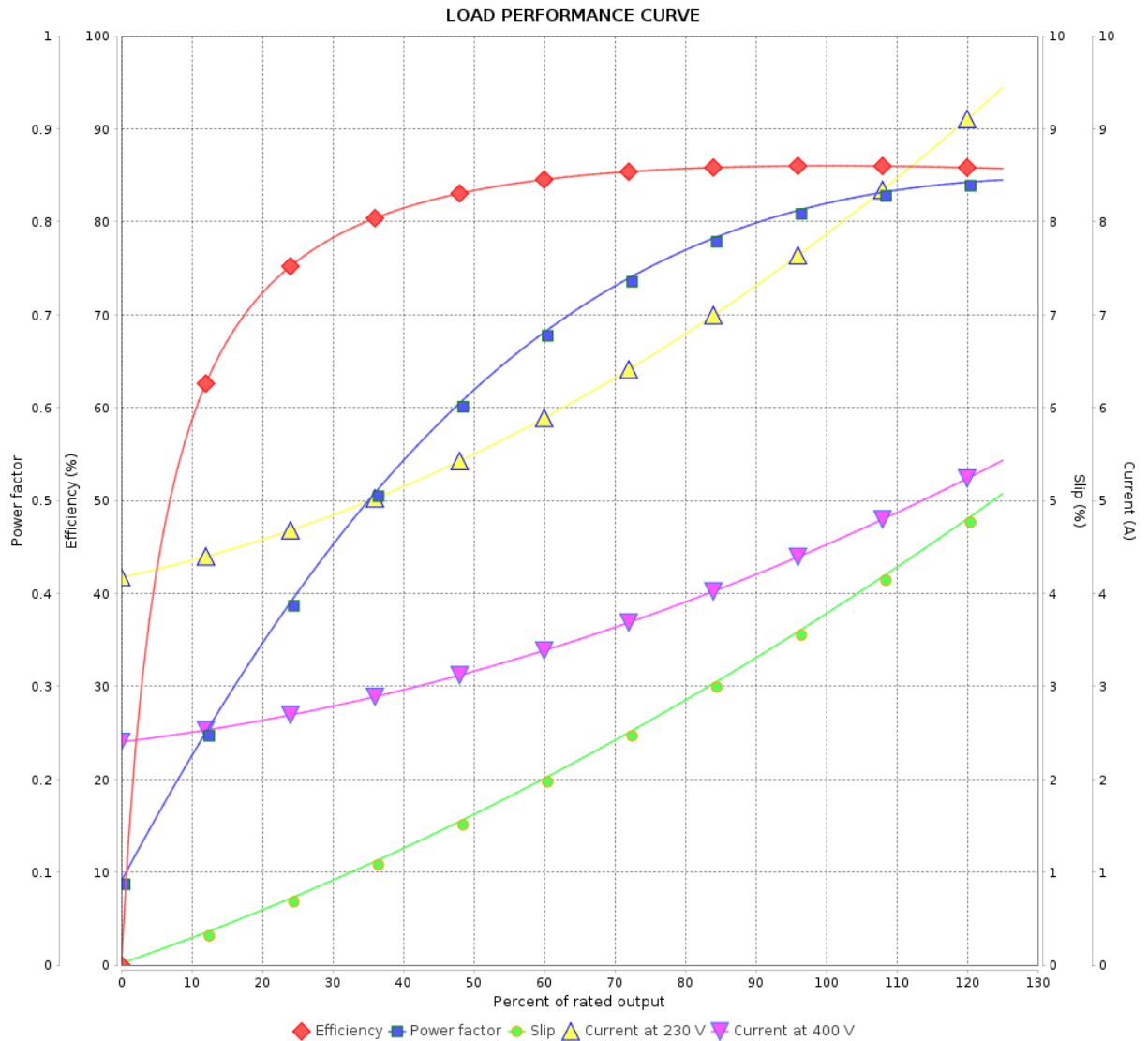
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : IE3 Three-Phase

Product code : 12868103



Performance : 230/400 V 50 Hz 2P

Rated current : 7.84/4.51 A
 LRC : 7.5
 Rated torque : 0.743 kgfm
 Locked rotor torque : 350 %
 Breakdown torque : 340 %
 Rated speed : 2885 rpm

Moment of inertia (J) : 0.0026 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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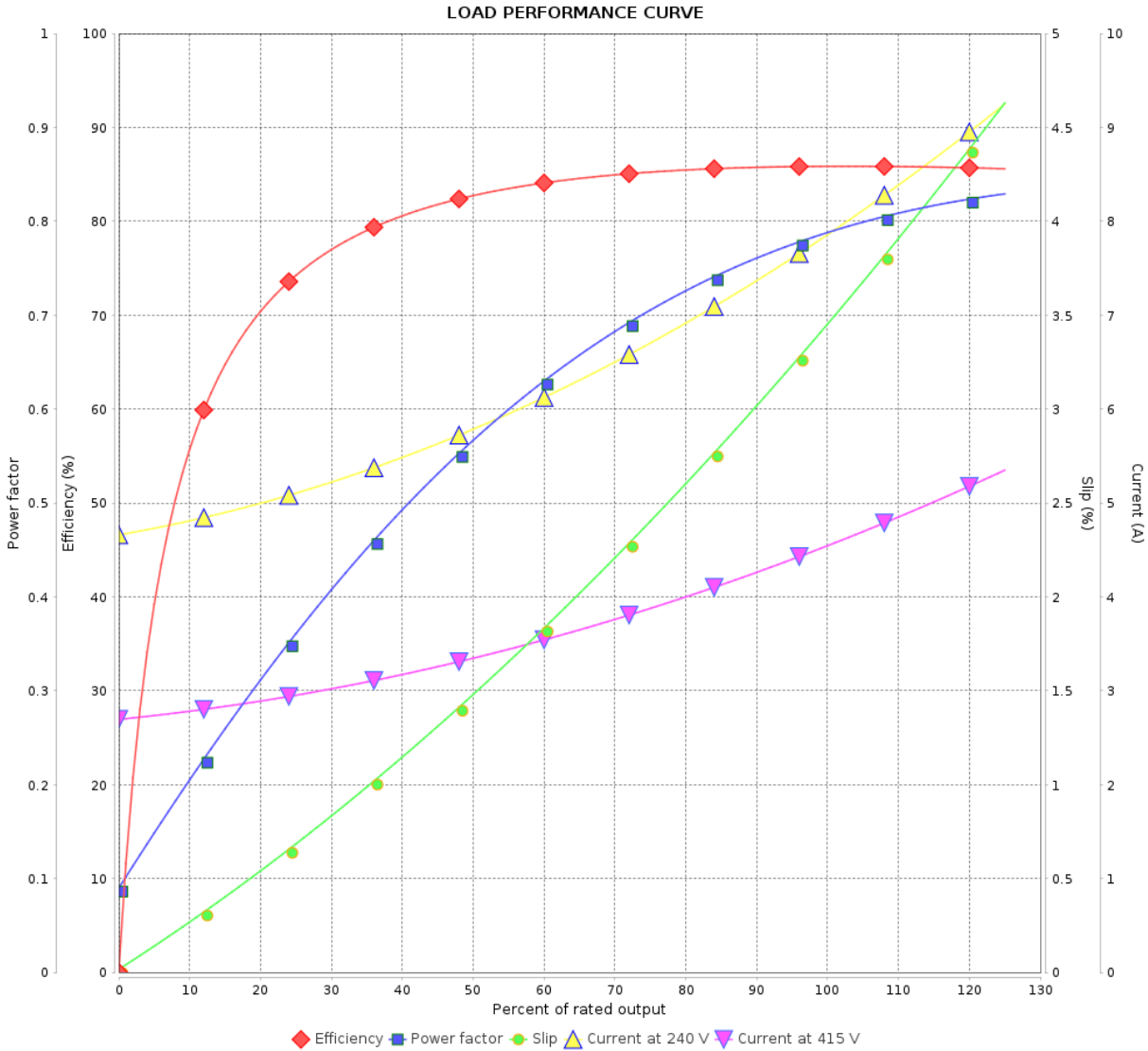
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12868103



Performance : 240/415 V 50 Hz 2P

Rated current : 7.80/4.51 A
 LRC : 8.0
 Rated torque : 0.740 kgfm
 Locked rotor torque : 370 %
 Breakdown torque : 380 %
 Rated speed : 2895 rpm

Moment of inertia (J) : 0.0026 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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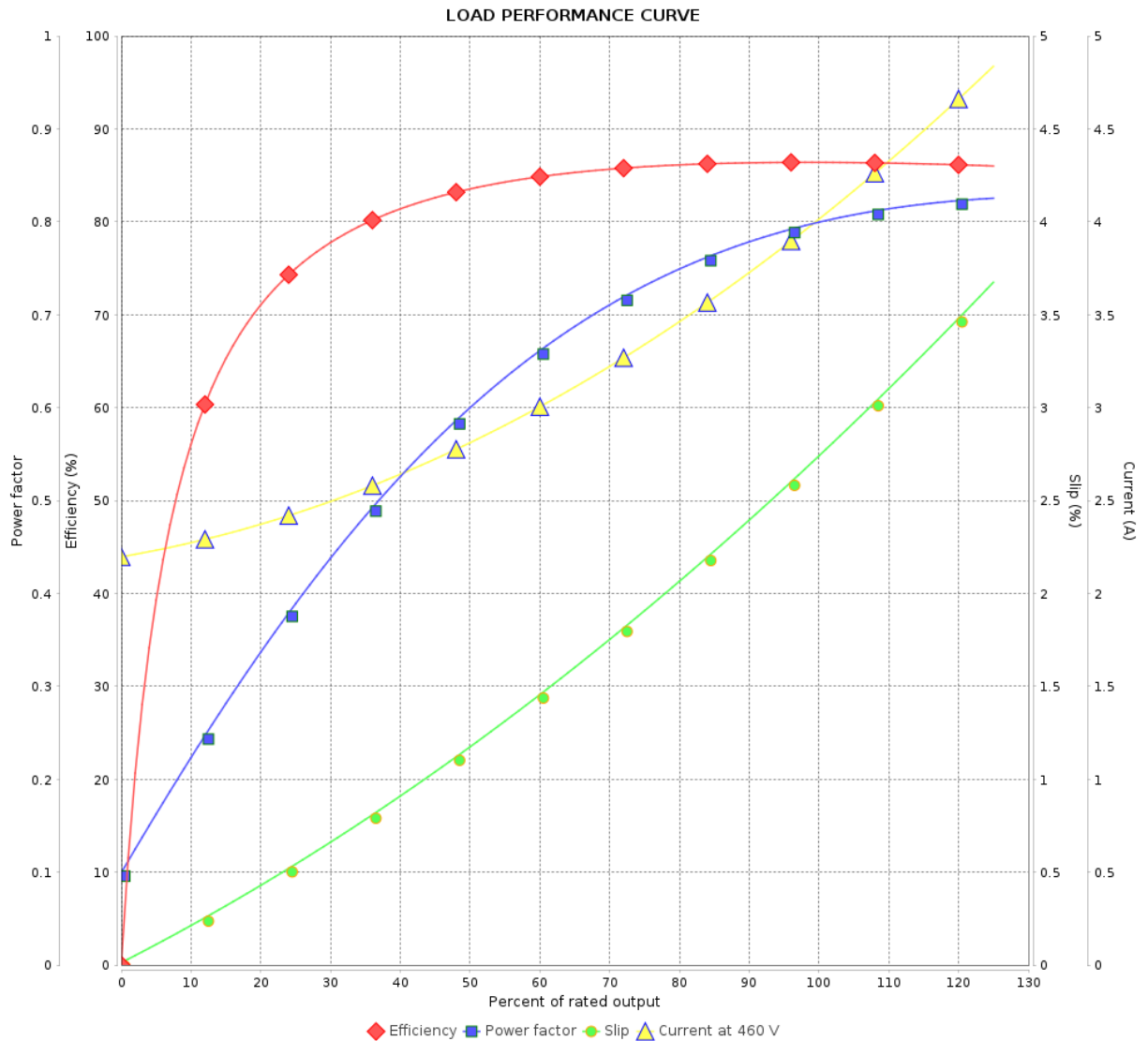
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : IE3 Three-Phase

Product code : 12868103



Performance : 460 V 60 Hz 2P

Rated current : 3.99 A
 LRC : 8.7
 Rated torque : 0.612 kgfm
 Locked rotor torque : 409 %
 Breakdown torque : 440 %
 Rated speed : 3500 rpm

Moment of inertia (J) : 0.0026 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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THERMAL LIMIT CURVE

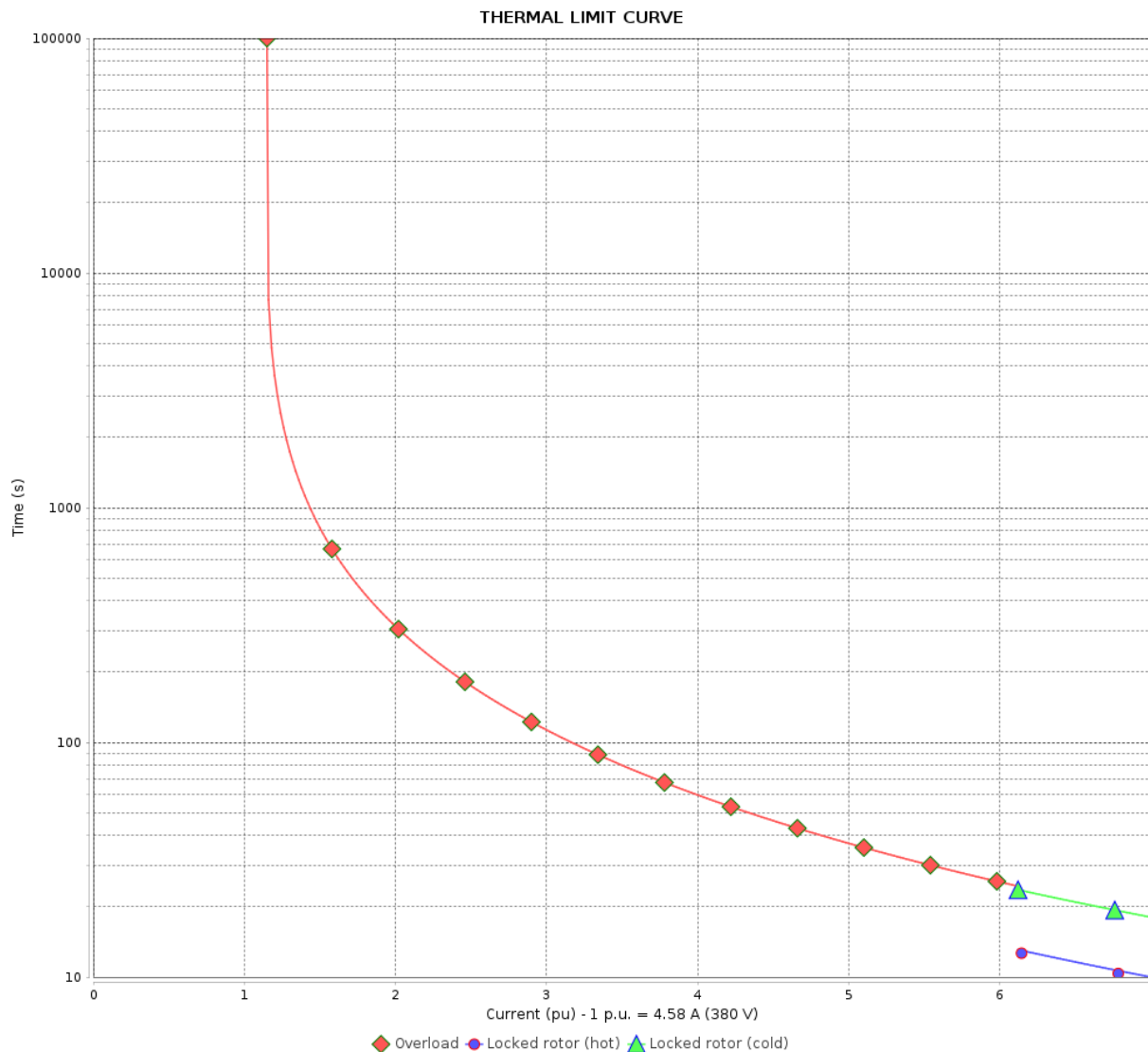
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12868103



Performance : 220/380 V 50 Hz 2P

Rated current : 7.91/4.58 A
 LRC : 7.0
 Rated torque : 0.747 kgfm
 Locked rotor torque : 310 %
 Breakdown torque : 300 %
 Rated speed : 2870 rpm

Moment of inertia (J) : 0.0026 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Heating constant
 Cooling constant

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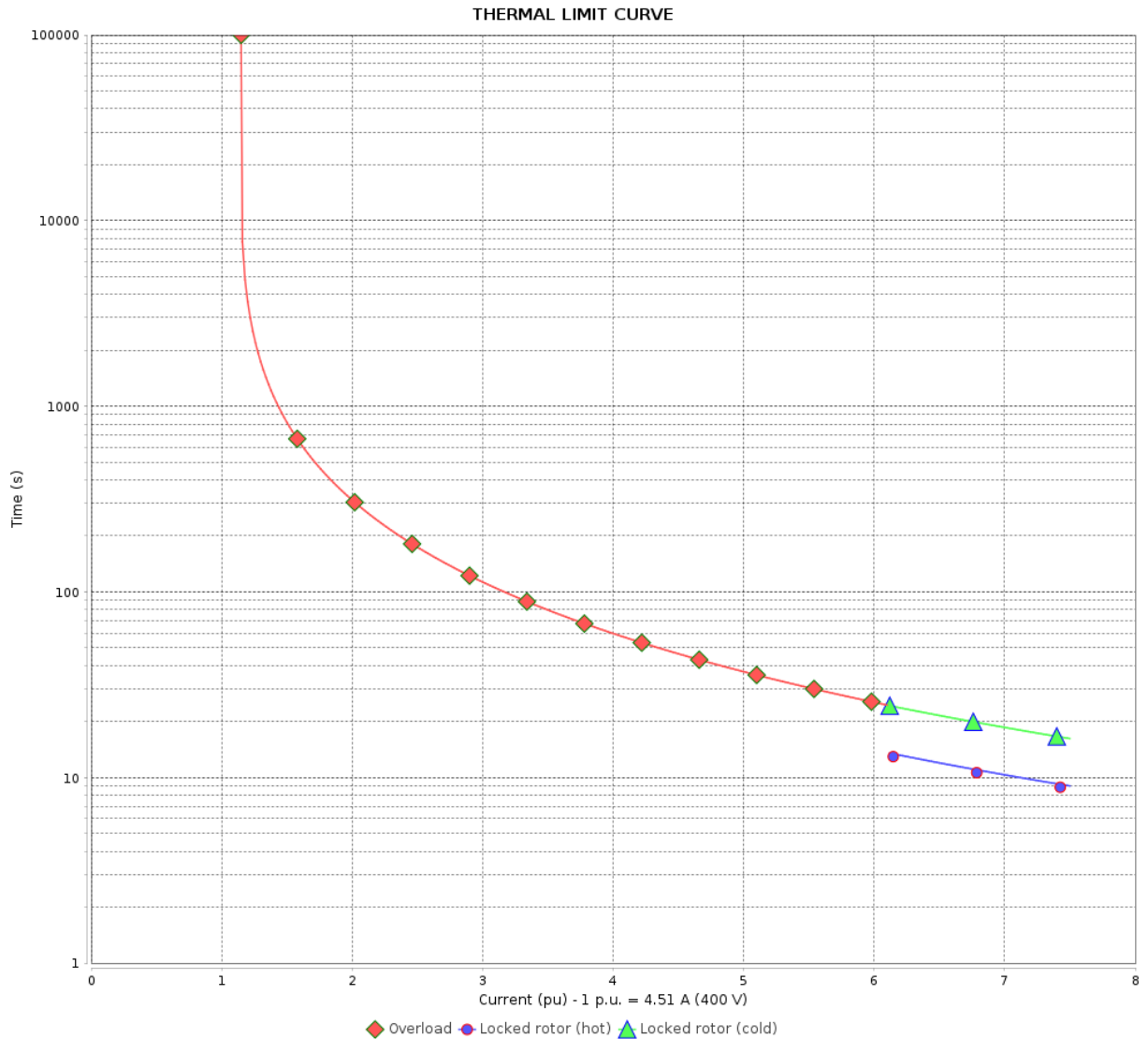
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : IE3 Three-Phase

Product code : 12868103



Performance : 230/400 V 50 Hz 2P

| | | | |
|---------------------|---------------|-----------------------|---------------------------|
| Rated current | : 7.84/4.51 A | Moment of inertia (J) | : 0.0026 kgm ² |
| LRC | : 7.5 | Duty cycle | : S1 |
| Rated torque | : 0.743 kgfm | Insulation class | : F |
| Locked rotor torque | : 350 % | Service factor | : 1.00 |
| Breakdown torque | : 340 % | Temperature rise | : 80 K |
| Rated speed | : 2885 rpm | Design | : N |

Heating constant

Cooling constant

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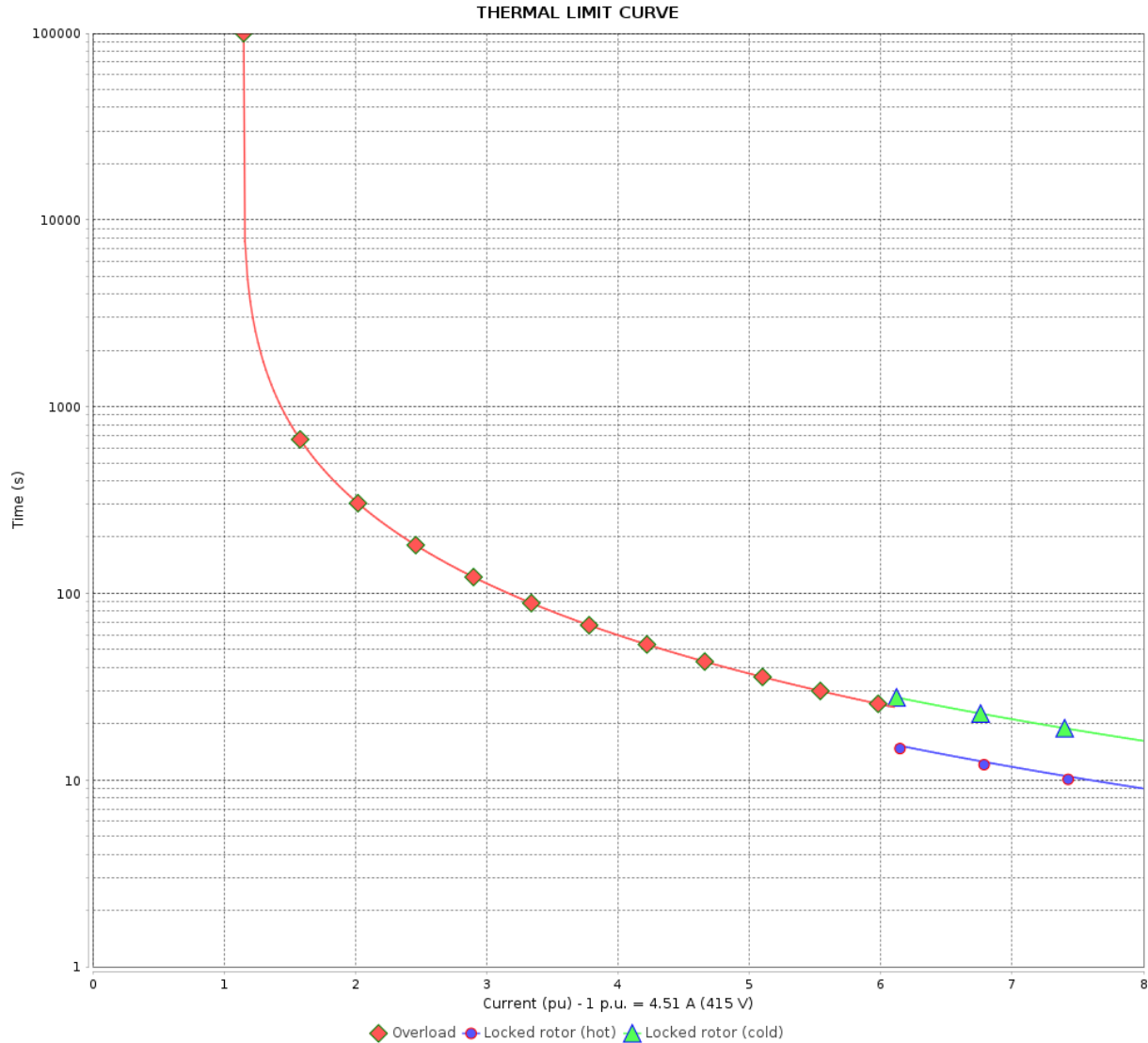
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12868103



Performance : 240/415 V 50 Hz 2P

Rated current : 7.80/4.51 A
 LRC : 8.0
 Rated torque : 0.740 kgfm
 Locked rotor torque : 370 %
 Breakdown torque : 380 %
 Rated speed : 2895 rpm

Moment of inertia (J) : 0.0026 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Heating constant

Cooling constant

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THERMAL LIMIT CURVE

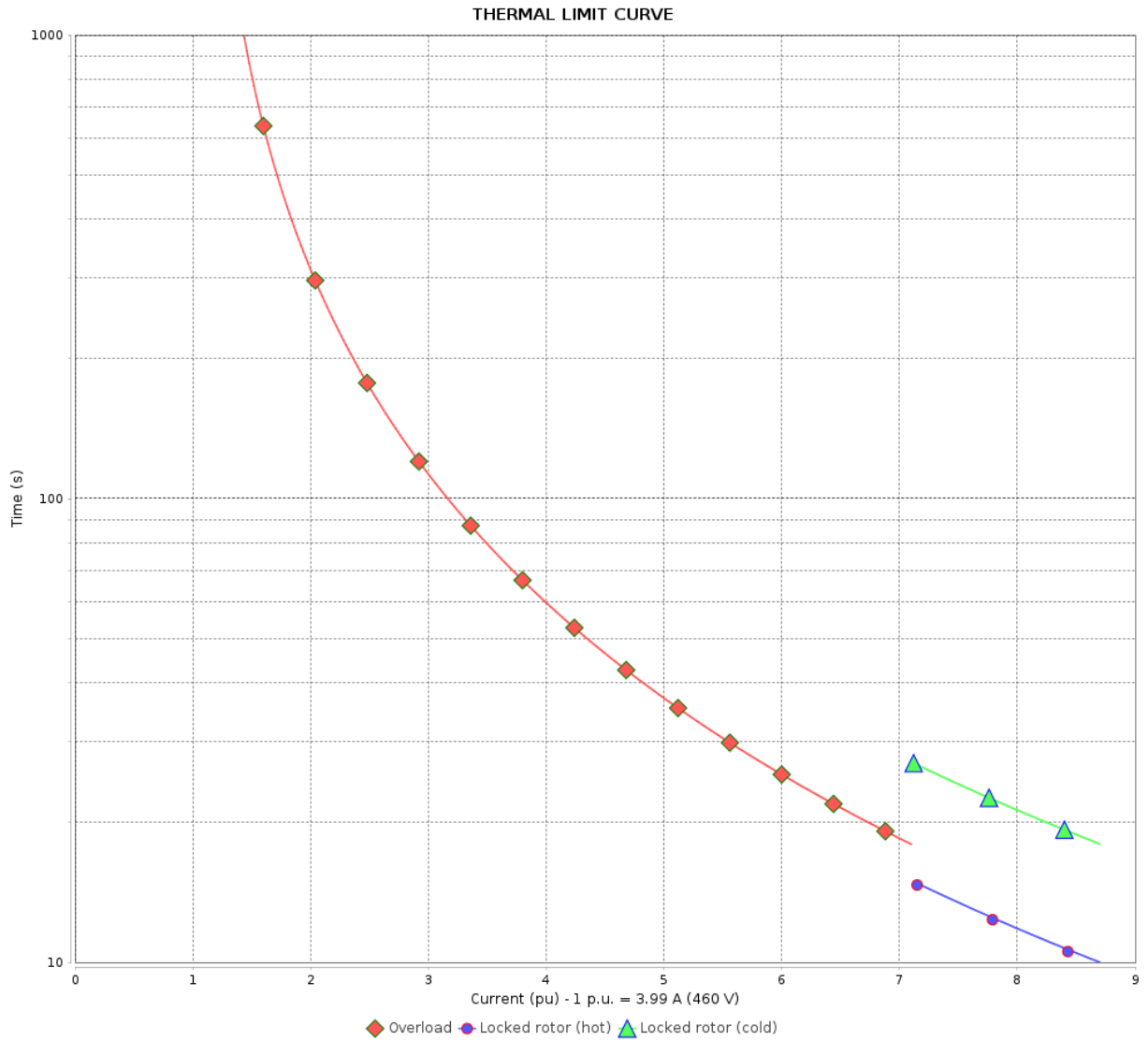
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : IE3 Three-Phase

Product code : 12868103



Performance : 460 V 60 Hz 2P

| | | | |
|---------------------|--------------|-----------------------|---------------------------|
| Rated current | : 3.99 A | Moment of inertia (J) | : 0.0026 kgm ² |
| LRC | : 8.7 | Duty cycle | : S1 |
| Rated torque | : 0.612 kgfm | Insulation class | : F |
| Locked rotor torque | : 409 % | Service factor | : 1.00 |
| Breakdown torque | : 440 % | Temperature rise | : 80 K |
| Rated speed | : 3500 rpm | Design | : N |

Heating constant

Cooling constant

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VFD OPERATION CURVE

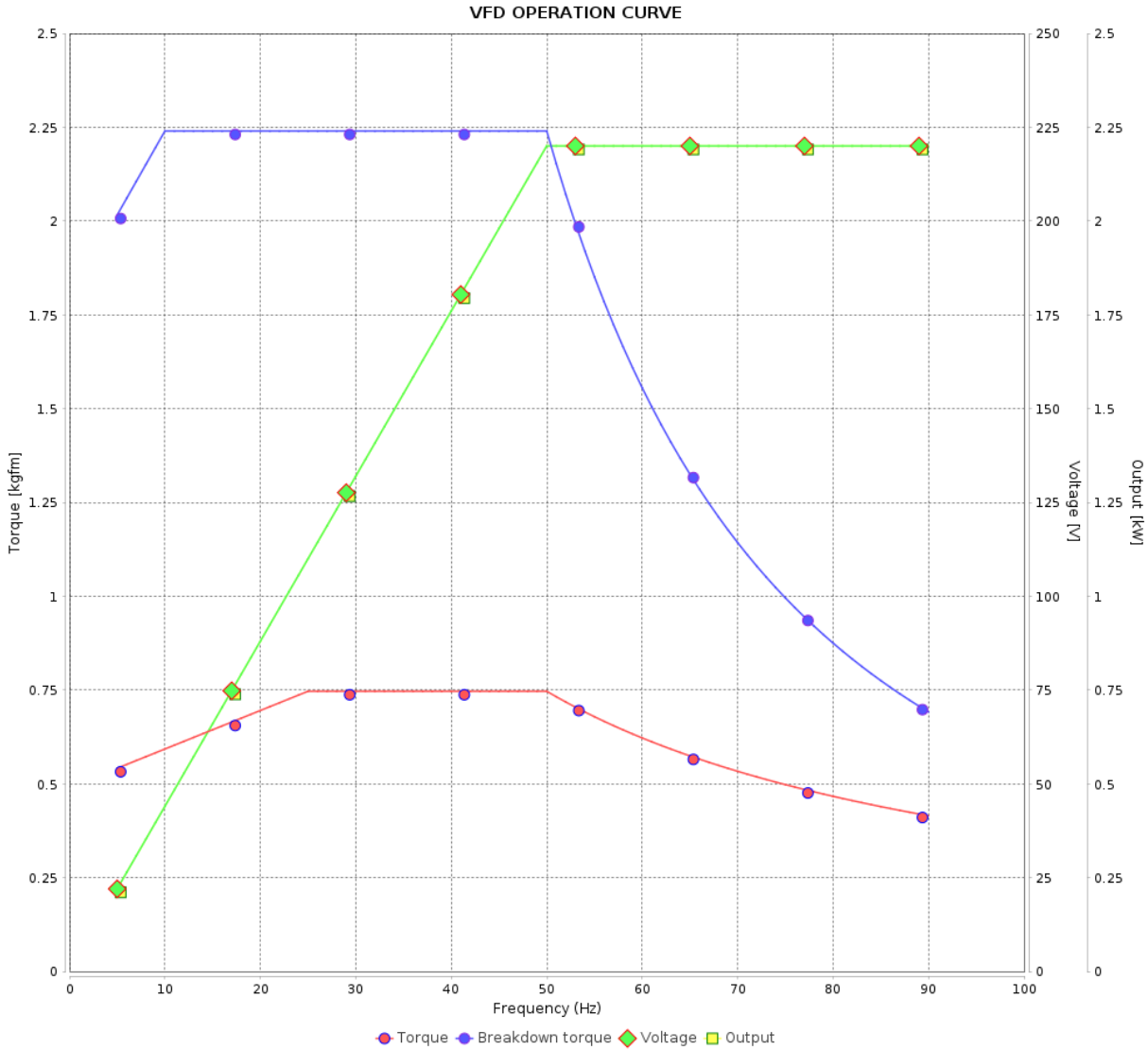
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : IE3 Three-Phase

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Performance : 220/380 V 50 Hz 2P

Rated current : 7.91/4.58 A
 LRC : 7.0
 Rated torque : 0.747 kgfm
 Locked rotor torque : 310 %
 Breakdown torque : 300 %
 Rated speed : 2870 rpm

Moment of inertia (J) : 0.0026 kgm²
 Duty cycle : S1
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

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VFD OPERATION CURVE

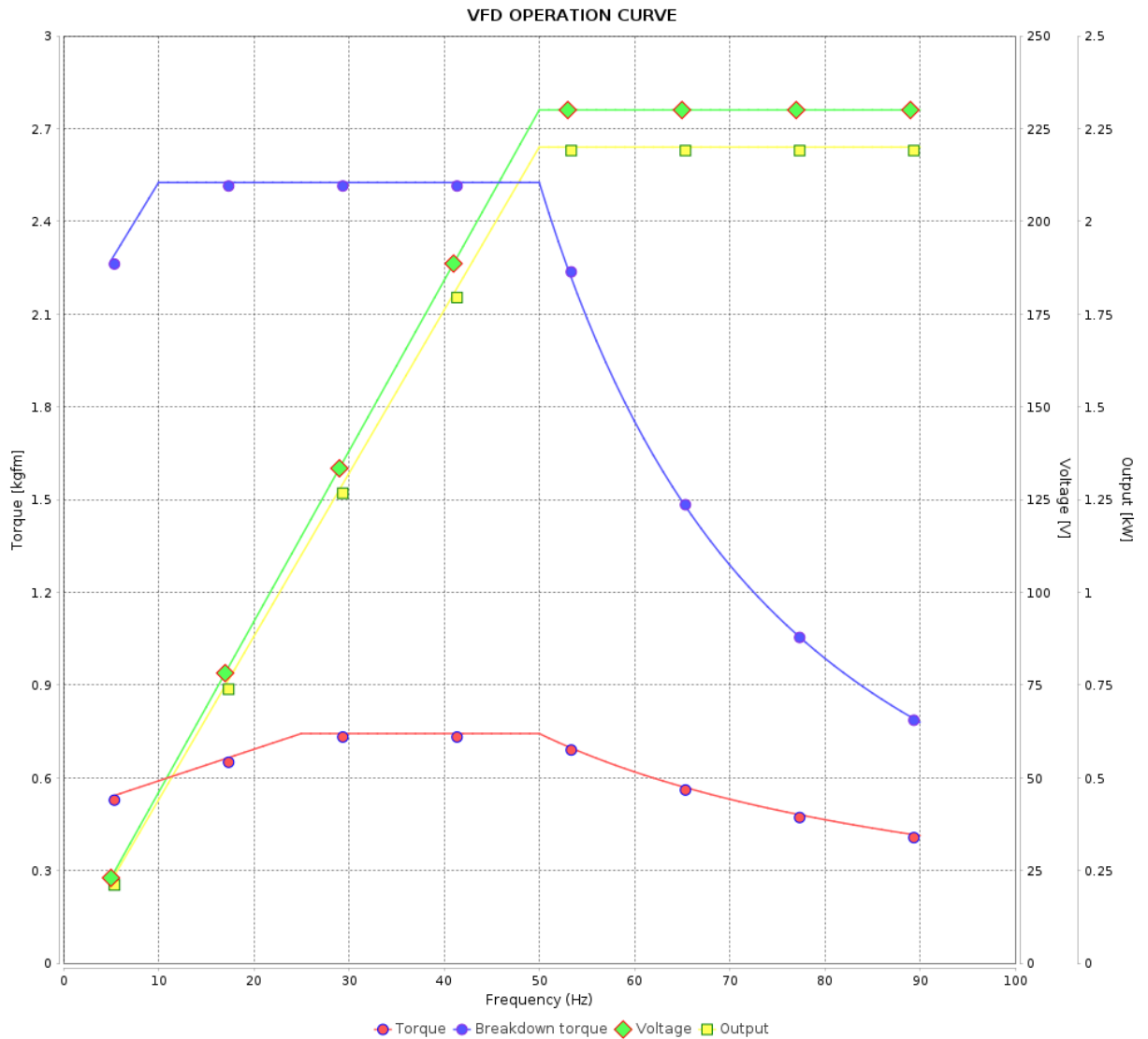
Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 230/400 V 50 Hz 2P

Rated current : 7.84/4.51 A
 LRC : 7.5
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 Duty cycle : S1
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 Service factor : 1.00
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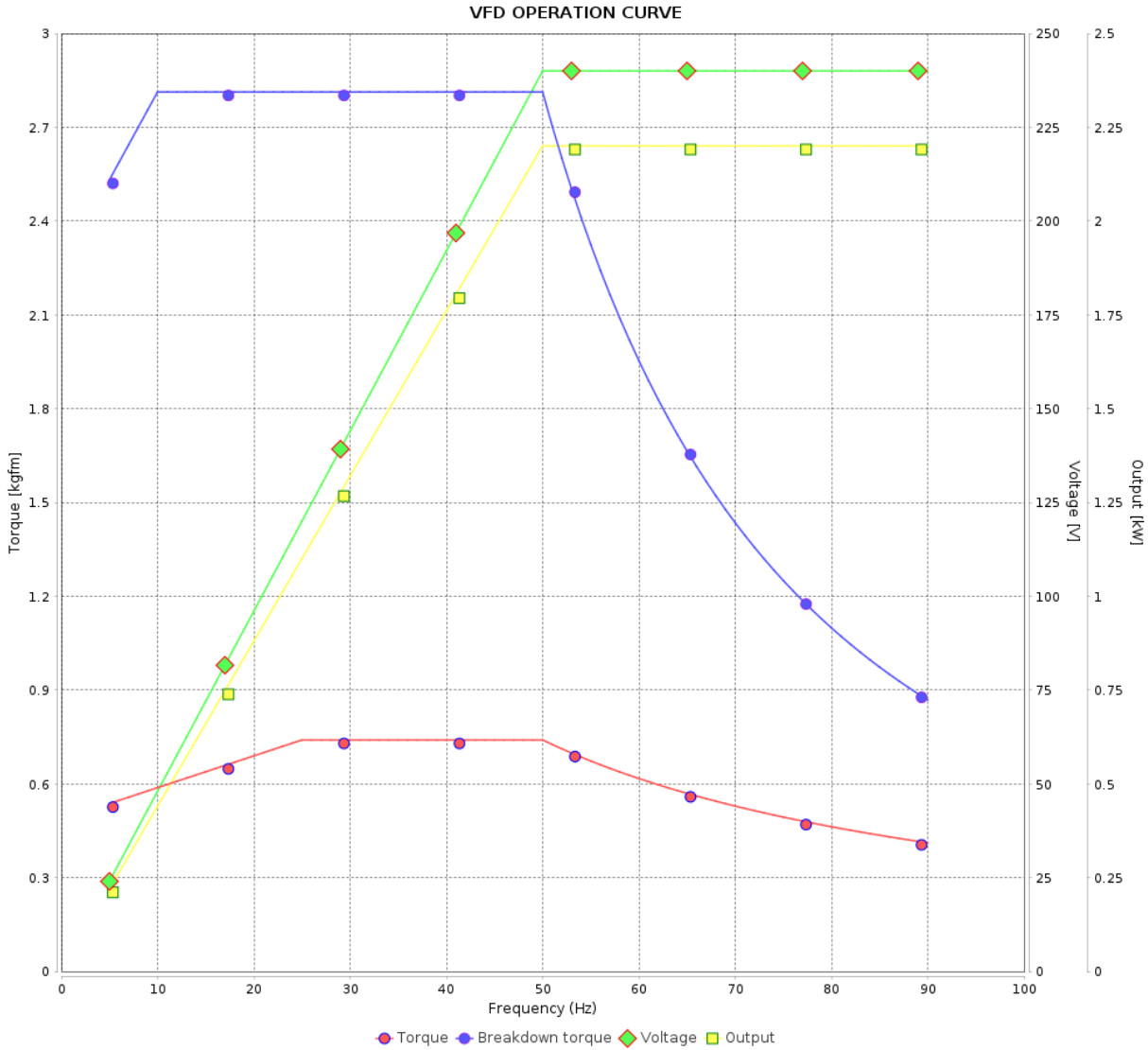
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VFD OPERATION CURVE

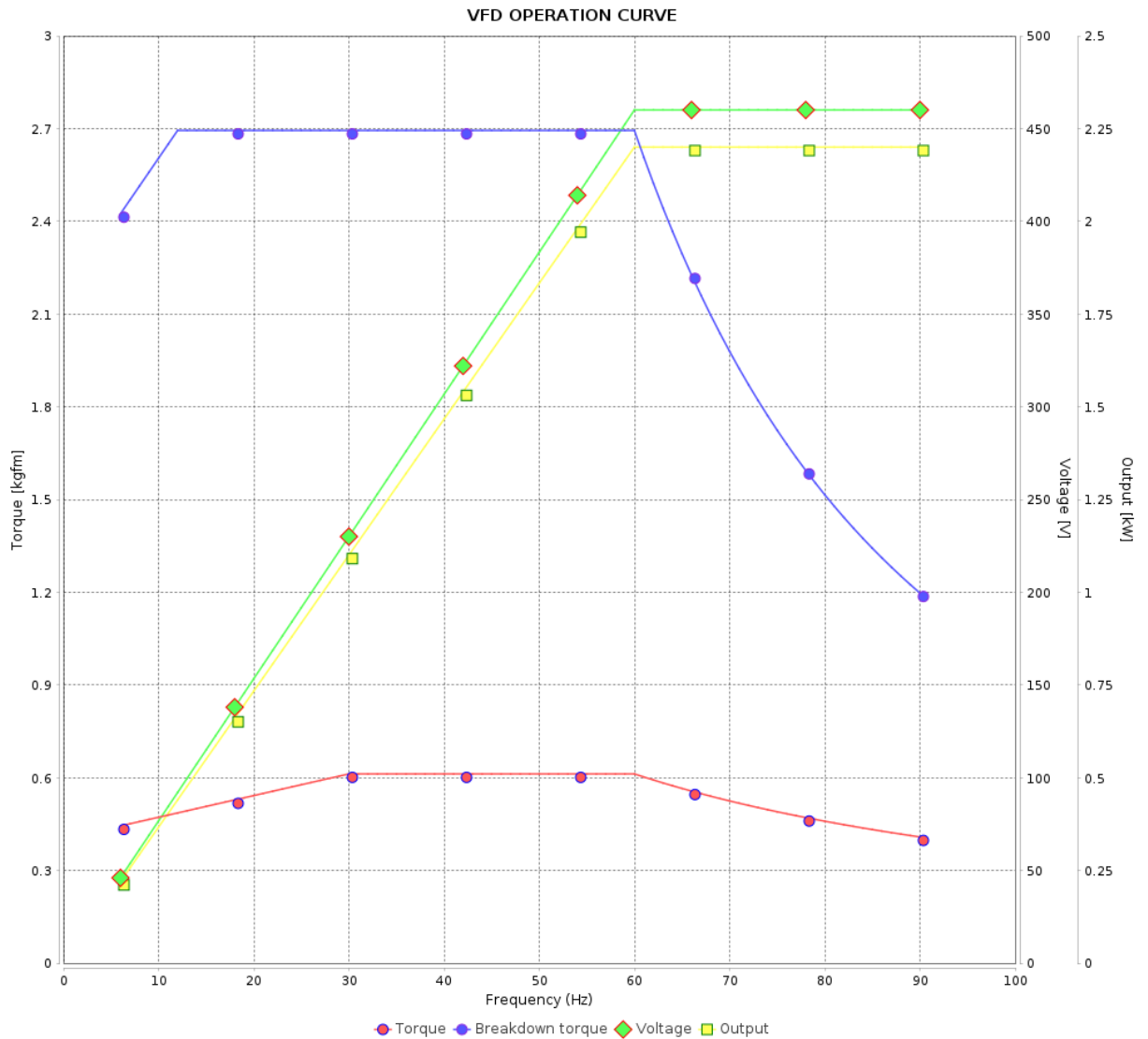
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Moment of inertia (J) : 0.0026 kgm²
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 Service factor : 1.00
 Temperature rise : 80 K
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