

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

| | | | | | | | |
|--|---|-----------------------------|-----------------------------|--|------------------------|------------------------|------------------------|
| Customer : | | | | | | | |
| Product line | : W22 NEMA Premium Efficiency Three-Phase | Product code : | 11569386 | | | | |
| Frame | : 404/5TS | Cooling method | : IC411 - TEFC | | | | |
| 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 ³ | : 524 kg | | | | |
| Protection degree | : IP55 | Moment of inertia (J) | : 1.26 kgm ² | | | | |
| Design | : B | | | | | | |
| Output [HP] | 100 | 75 | 75 | 75 | 100 | 100 | 100 |
| Poles | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Frequency [Hz] | 60 | 50 | 50 | 50 | 50 | 50 | 50 |
| Rated voltage [V] | 230/460 | 380 | 400 | 415 | 380 | 400 | 415 |
| Rated current [A] | 226/113 | 102 | 98.3 | 95.9 | 138 | 131 | 127 |
| L. R. Amperes [A] | 1650/825 | 785 | 826 | 854 | 814 | 852 | 902 |
| LRC [A] | 7.3x(Code H) | 7.7x(Code H) | 8.4x(Code J) | 8.9x(Code K) | 5.9x(Code F) | 6.5x(Code G) | 7.1x(Code H) |
| No load current [A] | 76.0/38.0 | 37.6 | 40.1 | 42.0 | 37.6 | 40.1 | 42.0 |
| Rated speed [RPM] | 1780 | 1485 | 1485 | 1485 | 1470 | 1475 | 1475 |
| Slip [%] | 1.11 | 1.00 | 1.00 | 1.00 | 2.00 | 1.67 | 1.67 |
| Rated torque [kgfm] | 40.8 | 36.7 | 36.7 | 36.7 | 49.4 | 49.2 | 49.2 |
| Locked rotor torque [%] | 240 | 260 | 280 | 290 | 190 | 210 | 220 |
| Breakdown torque [%] | 260 | 280 | 310 | 330 | 210 | 229 | 250 |
| Service factor | 1.25 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Temperature rise | 80 K | 80 K | 80 K | 80 K | 105 K | 105 K | 105 K |
| Locked rotor time | 23s (cold) 13s (hot) | 16s (cold) 9s (hot) | 16s (cold) 9s (hot) | 16s (cold) 9s (hot) | 16s (cold) 9s (hot) | 16s (cold) 9s (hot) | 16s (cold) 9s (hot) |
| Noise level ² | 68.0 dB(A) | 64.0 dB(A) | 64.0 dB(A) | 64.0 dB(A) | 64.0 dB(A) | 64.0 dB(A) | 64.0 dB(A) |
| Efficiency (%) | 25% | 94.6 | 93.4 | 93.3 | 93.0 | 94.8 | 94.4 |
| | 50% | 95.0 | 94.0 | 93.9 | 93.6 | 94.5 | 94.5 |
| | 75% | 95.0 | 94.4 | 94.5 | 94.5 | 94.1 | 94.5 |
| | 100% | 95.4 | 95.0 | 95.0 | 95.0 | 93.6 | 94.1 |
| Power Factor | 25% | 0.51 | 0.47 | 0.44 | 0.41 | 0.57 | 0.51 |
| | 50% | 0.77 | 0.72 | 0.69 | 0.66 | 0.82 | 0.79 |
| | 75% | 0.84 | 0.83 | 0.81 | 0.79 | 0.86 | 0.85 |
| | 100% | 0.87 | 0.86 | 0.85 | 0.84 | 0.88 | 0.88 |
| Losses at normative operating points (speed;torque), in percentage of rated output power | | | | | | | |
| Losses (%) | P1 (0,9;1,0) | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 |
| | P2 (0,5;1,0) | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 |
| | P3 (0,25;1,0) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| | P4 (0,9;0,5) | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| | P5 (0,5;0,5) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| | P6 (0,5;0,25) | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| | P7 (0,25;0,25) | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| Bearing type | : Drive end 6314 C3 | Non drive end 6314 C3 | Foundation loads | | | | |
| Sealing | : WSeal | WSeal | Max. traction : 949 kgf | | | | |
| Lubrication interval | : 12000 h | 12000 h | Max. compression : 1474 kgf | | | | |
| Lubricant amount | : 27 g | 27 g | | | | | |
| Lubricant type | : Mobil Polyrex EM | | | | | | |
| This revision replaces and cancel the previous one, which must be eliminated. (1) Looking the motor from the shaft end. | | | | 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 | |
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Three Phase Induction Motor - Squirrel Cage



Customer : _____

Notes
USABLE @208V 245A SF 1.10 SFA 270A

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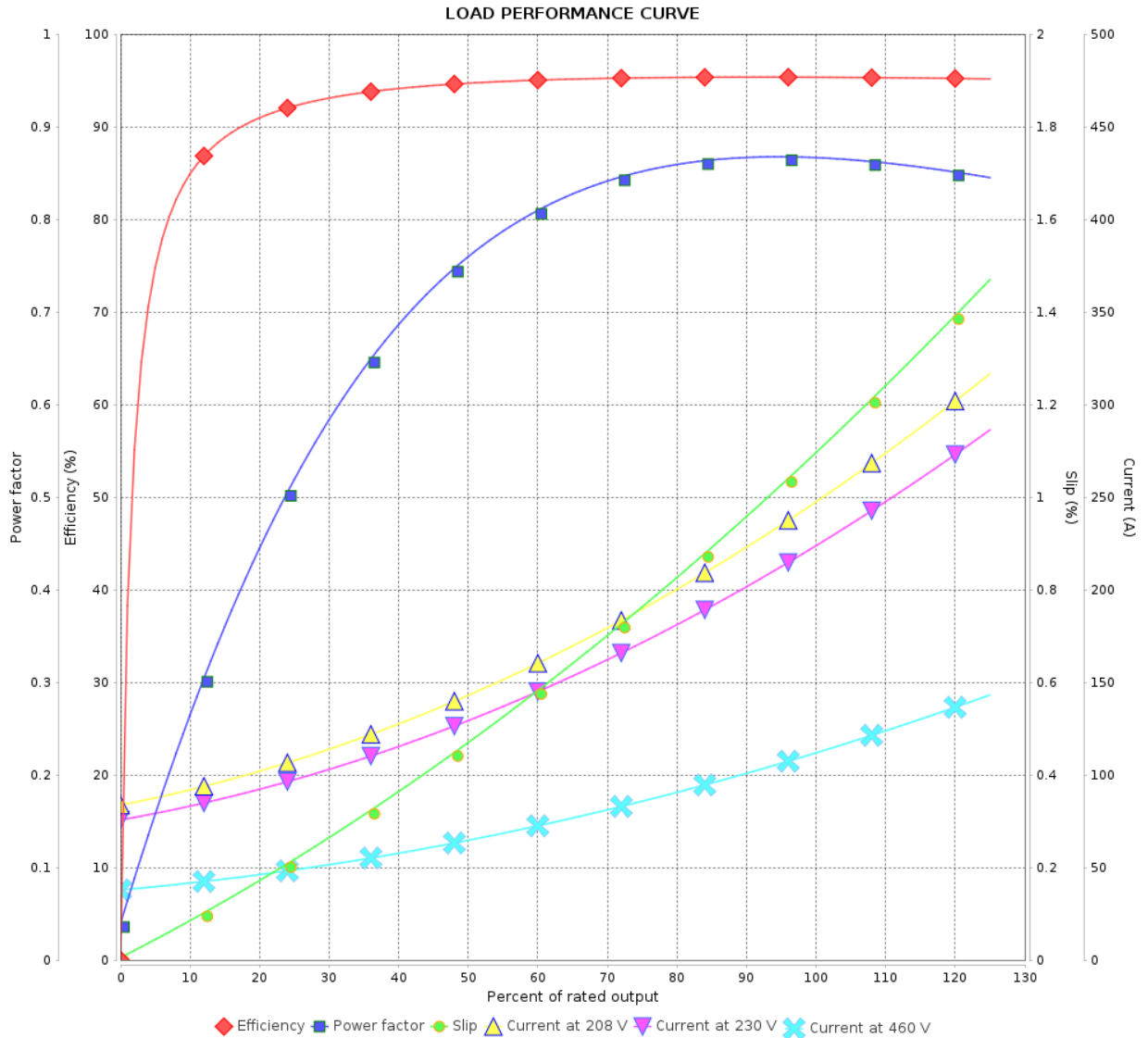
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11569386



Performance : 230/460 V 60 Hz 4P

Rated current : 226/113 A
 LRC : 7.3
 Rated torque : 40.8 kgfm
 Locked rotor torque : 240 %
 Breakdown torque : 260 %
 Rated speed : 1780 rpm

Moment of inertia (J) : 1.26 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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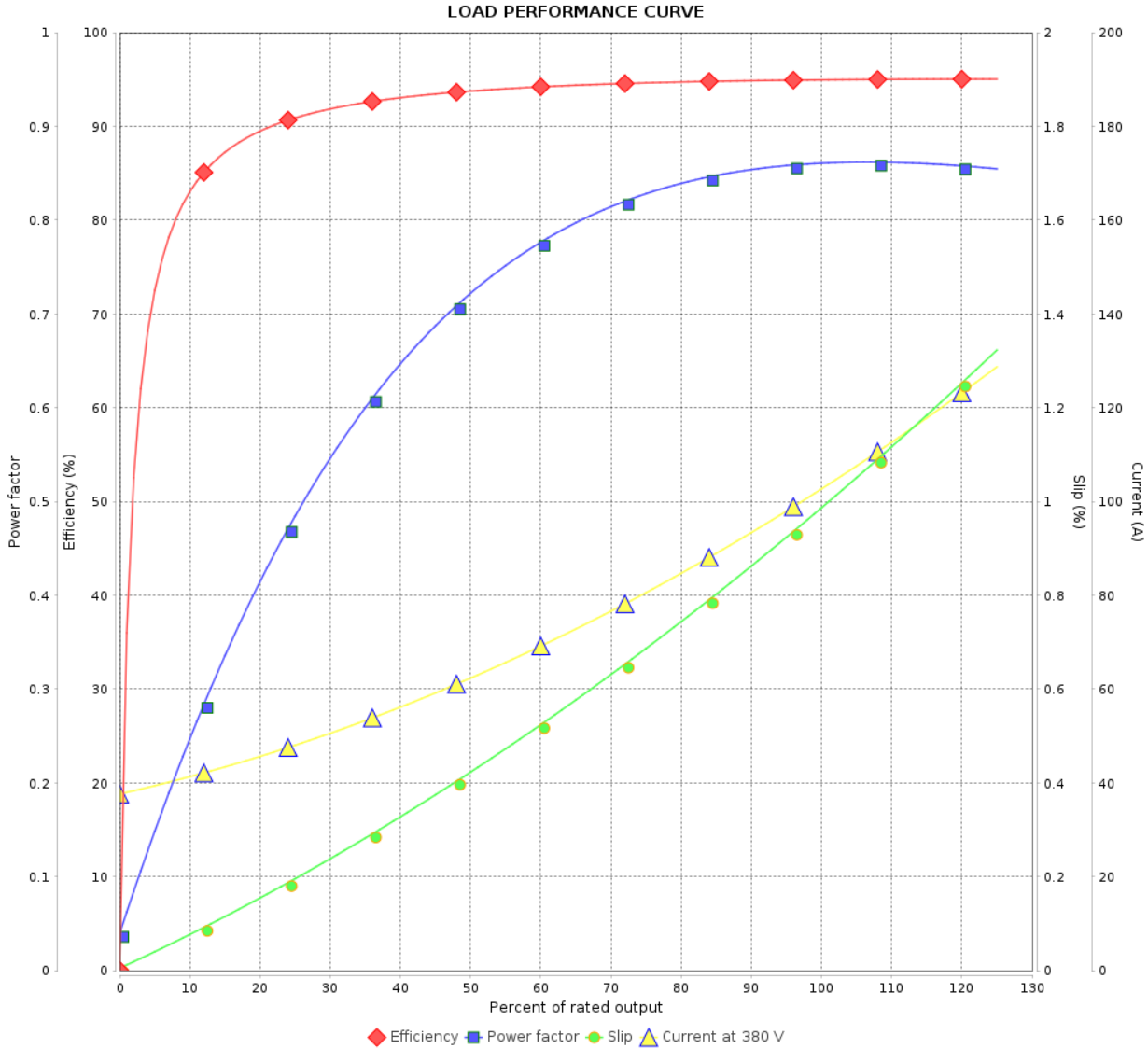
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11569386



Performance : 380 V 50 Hz 4P IE3

| | | | |
|---------------------|-------------|-----------------------|-------------------------|
| Rated current | : 102 A | Moment of inertia (J) | : 1.26 kgm ² |
| LRC | : 7.7 | Duty cycle | : Cont.(S1) |
| Rated torque | : 36.7 kgfm | Insulation class | : F |
| Locked rotor torque | : 260 % | Service factor | : 1.00 |
| Breakdown torque | : 280 % | Temperature rise | : 80 K |
| Rated speed | : 1485 rpm | Design | : B |

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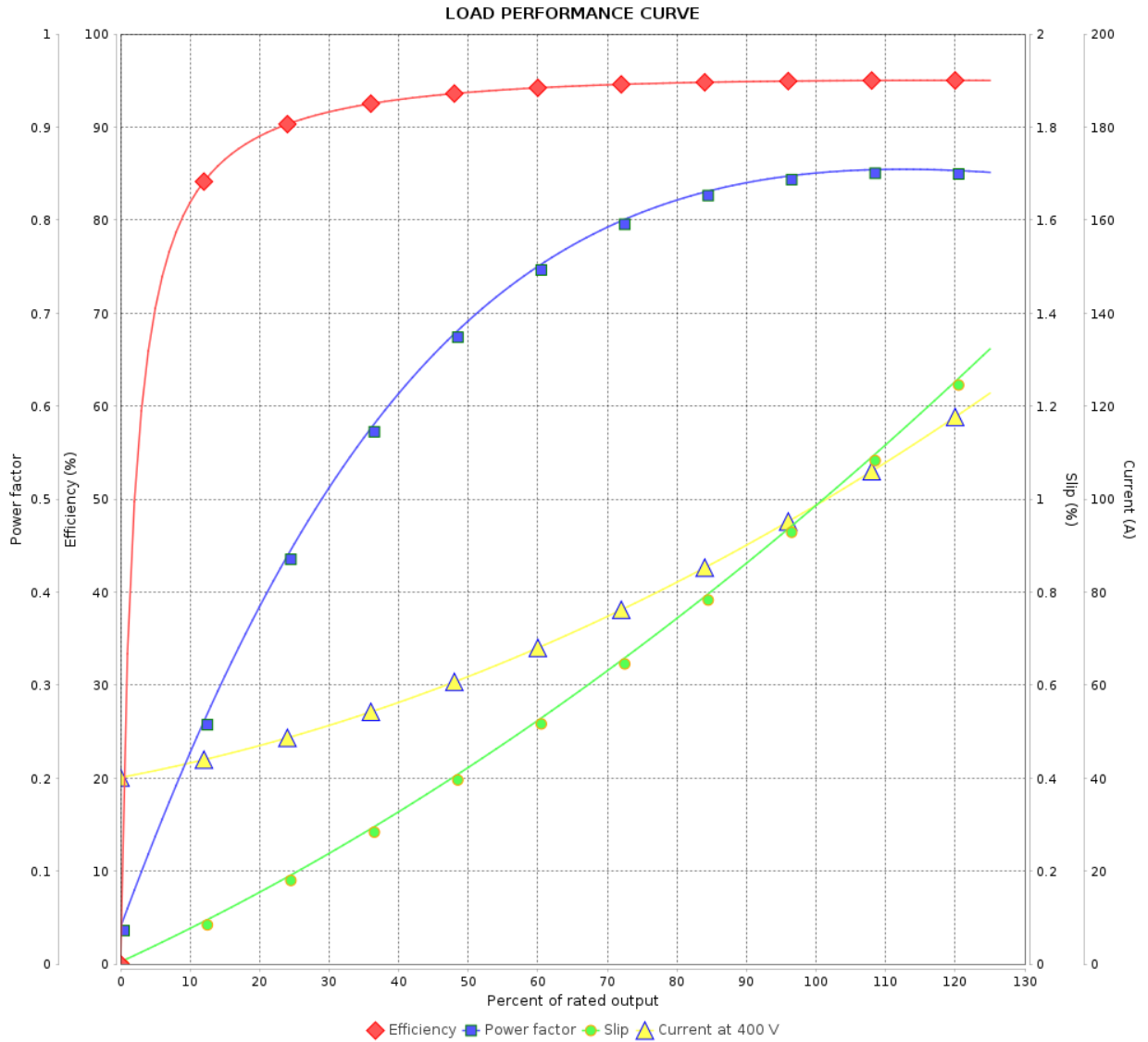
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11569386



Performance : 400 V 50 Hz 4P IE3

Rated current : 98.3 A
 LRC : 8.4
 Rated torque : 36.7 kgfm
 Locked rotor torque : 280 %
 Breakdown torque : 310 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 1.26 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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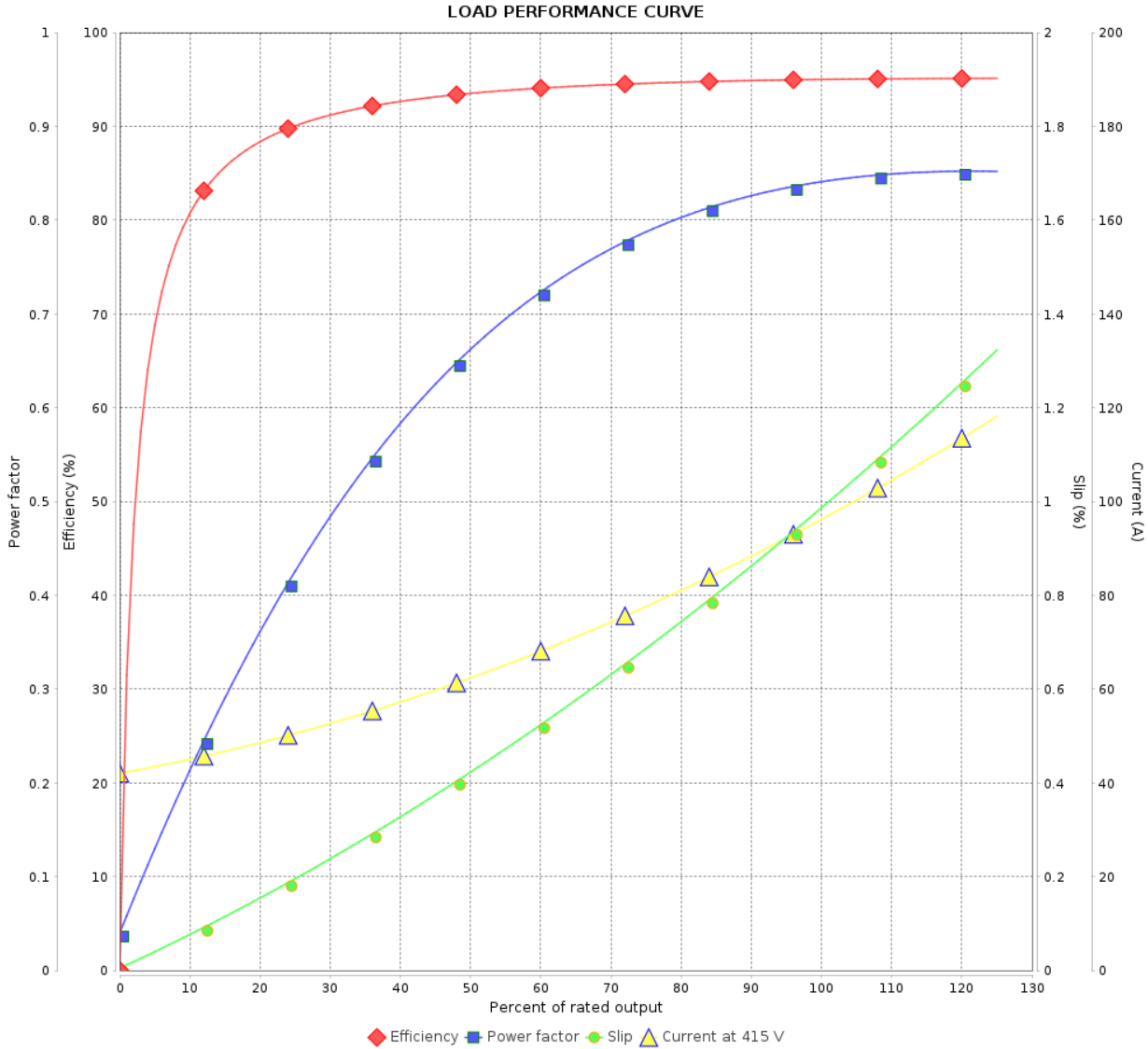
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11569386



Performance : 415 V 50 Hz 4P IE3

Rated current : 95.9 A
 LRC : 8.9
 Rated torque : 36.7 kgfm
 Locked rotor torque : 290 %
 Breakdown torque : 330 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 1.26 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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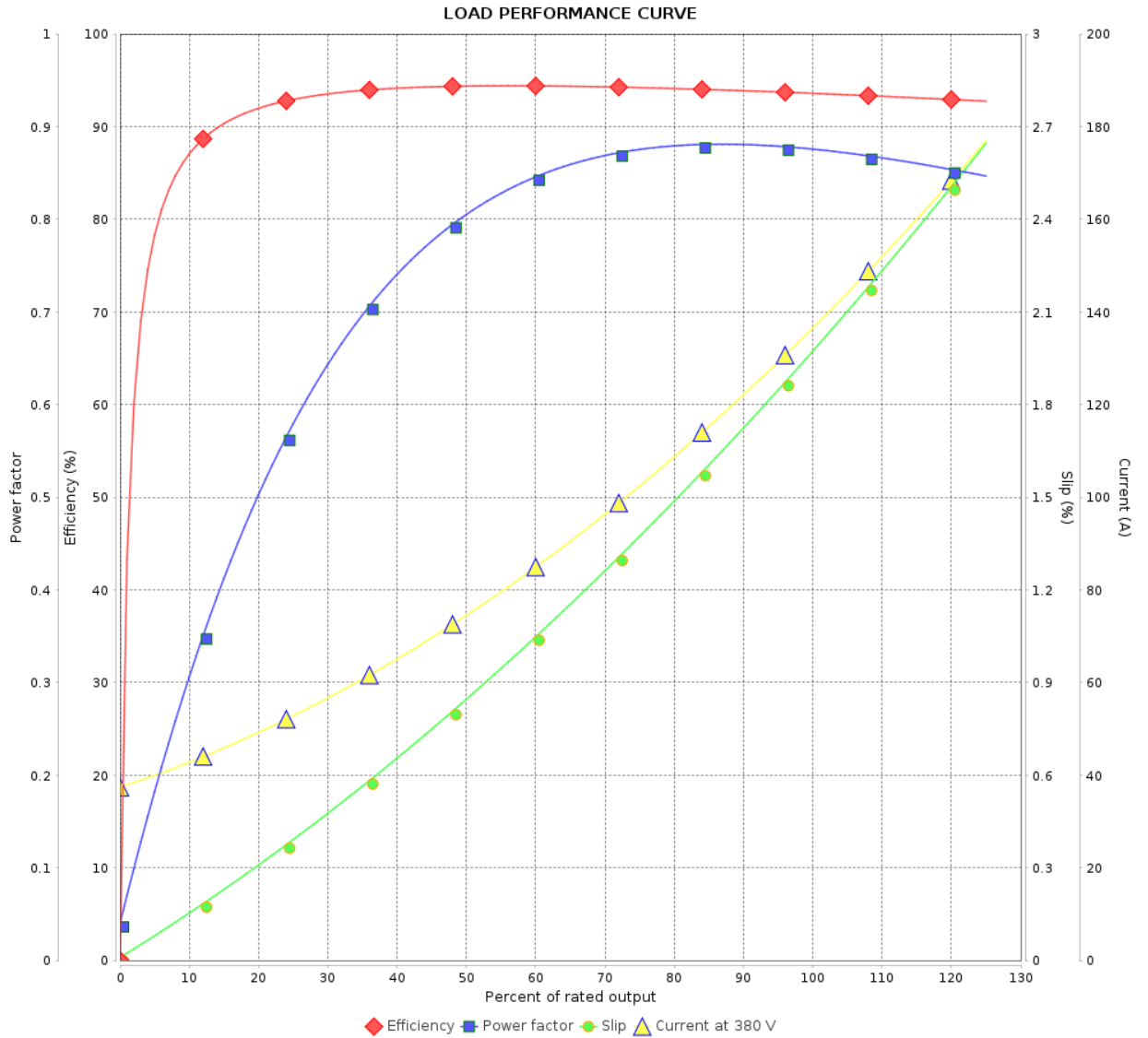
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11569386



Performance : 380 V 50 Hz 4P IE1

Rated current : 138 A
 LRC : 5.9
 Rated torque : 49.4 kgfm
 Locked rotor torque : 190 %
 Breakdown torque : 210 %
 Rated speed : 1470 rpm

Moment of inertia (J) : 1.26 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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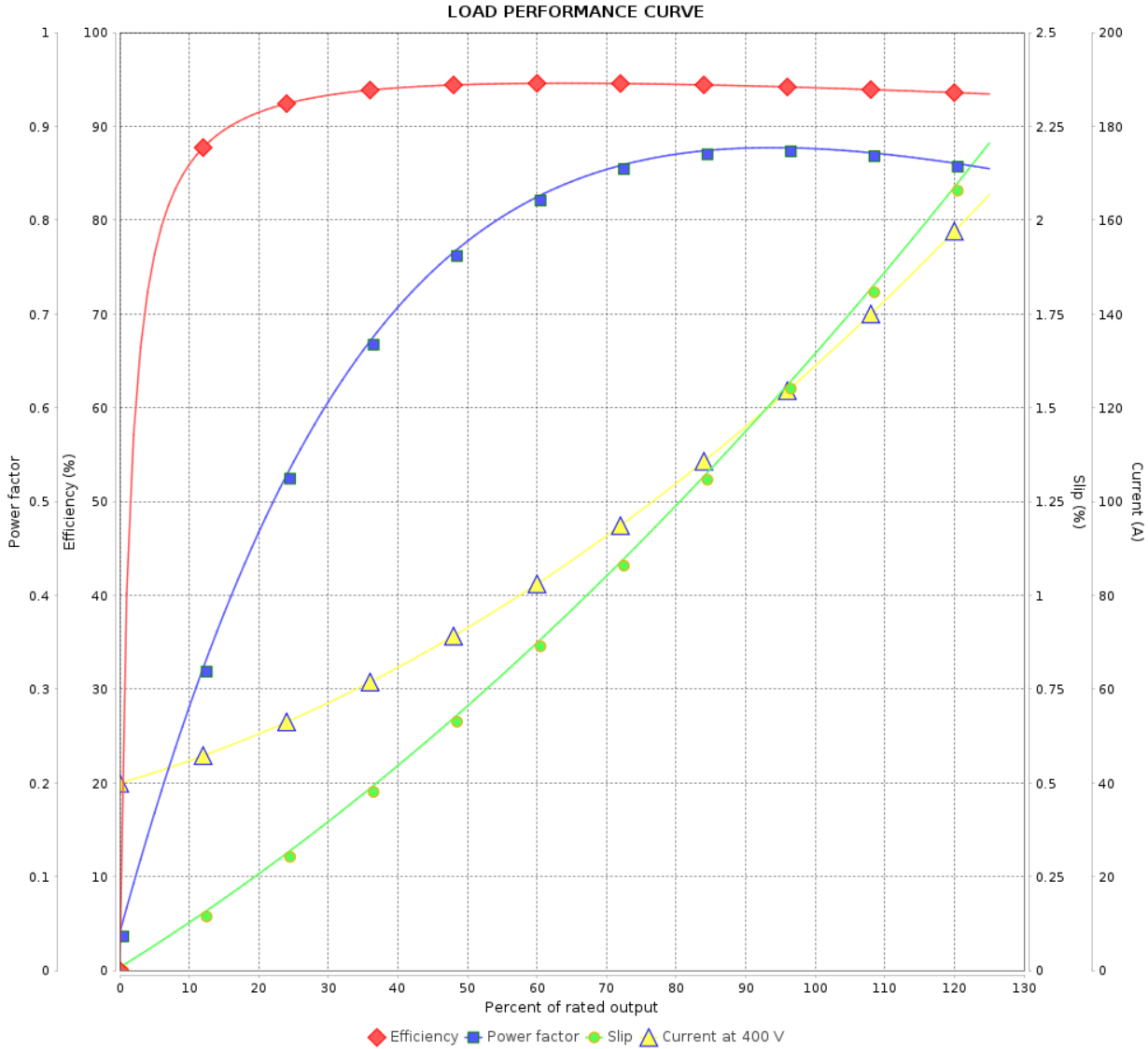
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11569386



Performance : 400 V 50 Hz 4P IE2

| | | | |
|---------------------|-------------|-----------------------|-------------------------|
| Rated current | : 131 A | Moment of inertia (J) | : 1.26 kgm ² |
| LRC | : 6.5 | Duty cycle | : Cont.(S1) |
| Rated torque | : 49.2 kgfm | Insulation class | : F |
| Locked rotor torque | : 210 % | Service factor | : 1.00 |
| Breakdown torque | : 229 % | Temperature rise | : 105 K |
| Rated speed | : 1475 rpm | Design | : B |

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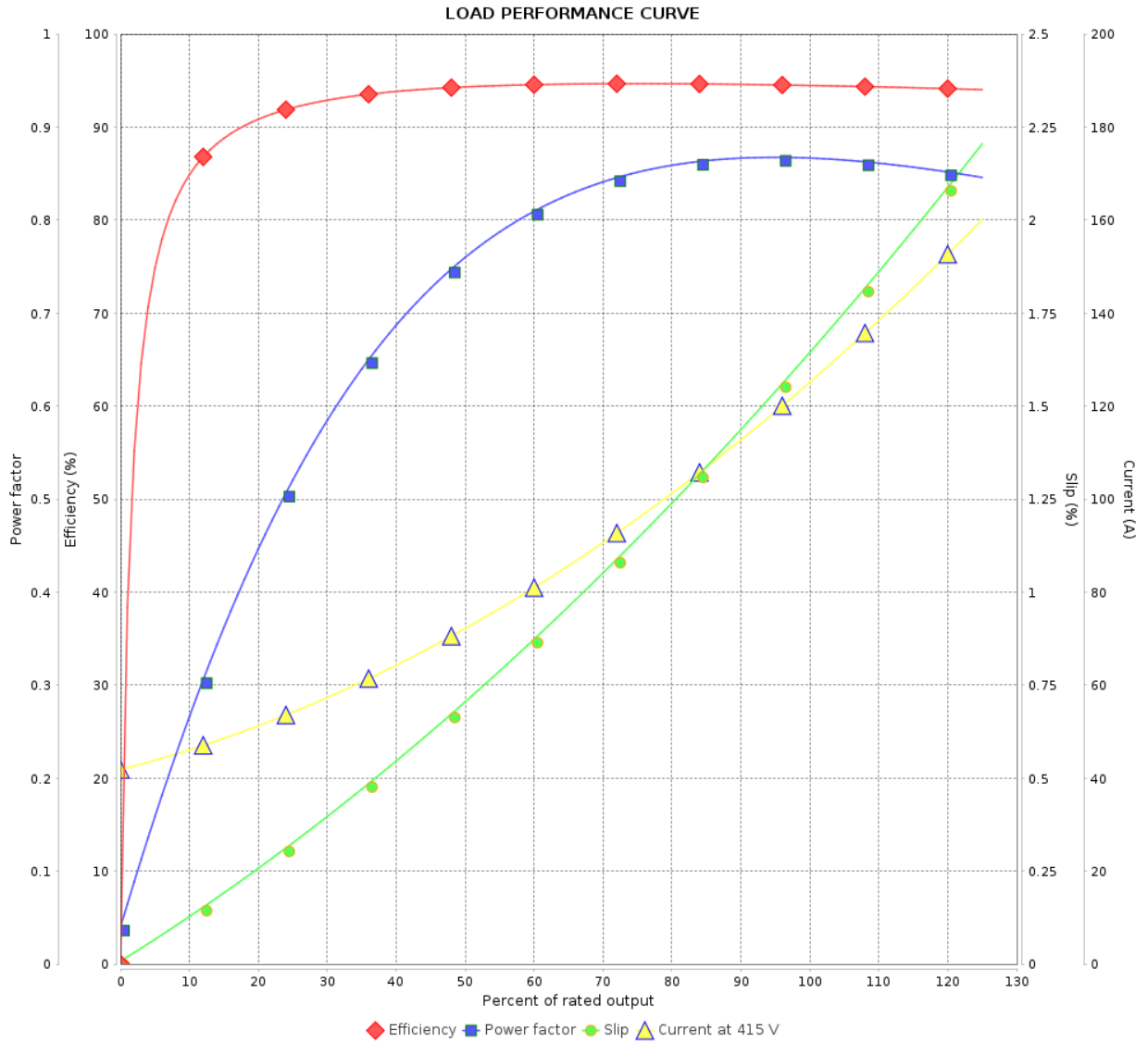
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11569386



Performance : 415 V 50 Hz 4P IE2

Rated current : 127 A
 LRC : 7.1
 Rated torque : 49.2 kgfm
 Locked rotor torque : 220 %
 Breakdown torque : 250 %
 Rated speed : 1475 rpm

Moment of inertia (J) : 1.26 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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