

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

| | | | | | |
|---|------------------------|---|--|----------------------|----------------------|
| Customer : | | | | | |
| Product line | | : W21 Explosion Proof NEMA Premium Efficiency Three-Phase | | Product code : | 16202761 |
| Frame | : 182/4TC | 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 | : 56.8 kg | | |
| Protection degree | : IP55 | Moment of inertia (J) | : 0.0178 kgm ² | | |
| Design | : B | | | | |
| Output [HP] | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Poles | 6 | 6 | 6 | 6 | 6 |
| Frequency [Hz] | 60 | 50 | 50 | 50 | 50 |
| Rated voltage [V] | 230/460 | 380 | 400 | 415 | 415 |
| Rated current [A] | 4.64/2.32 | 2.68 | 2.62 | 2.64 | 2.64 |
| L. R. Amperes [A] | 30.6/15.3 | 14.5 | 16.0 | 16.9 | 16.9 |
| LRC [A] | 6.6x(Code K) | 5.4x(Code H) | 6.1x(Code J) | 6.4x(Code K) | 6.4x(Code K) |
| No load current [A] | 2.80/1.40 | 1.40 | 1.50 | 1.60 | 1.60 |
| Rated speed [RPM] | 1165 | 960 | 960 | 965 | 965 |
| Slip [%] | 2.92 | 4.00 | 4.00 | 3.50 | 3.50 |
| Rated torque [kgfm] | 0.934 | 1.13 | 1.13 | 1.13 | 1.13 |
| Locked rotor torque [%] | 260 | 190 | 220 | 250 | 250 |
| Breakdown torque [%] | 330 | 250 | 250 | 290 | 290 |
| Service factor | 1.15 | 1.00 | 1.00 | 1.00 | 1.00 |
| Temperature rise | 80 K | 80 K | 80 K | 80 K | 80 K |
| Locked rotor time | 63s (cold) 35s (hot) | 25s (cold) 14s (hot) | 25s (cold) 14s (hot) | 25s (cold) 14s (hot) | 25s (cold) 14s (hot) |
| Noise level ² | 52.0 dB(A) | 49.0 dB(A) | 49.0 dB(A) | 49.0 dB(A) | 49.0 dB(A) |
| Efficiency (%) | 25% | | | | |
| | 50% | 84.5 | 85.5 | 84.5 | 84.0 |
| | 75% | 86.5 | 86.5 | 86.5 | 85.5 |
| | 100% | 87.5 | 85.5 | 86.5 | 86.5 |
| Power Factor | 25% | | | | |
| | 50% | 0.47 | 0.52 | 0.48 | 0.45 |
| | 75% | 0.59 | 0.63 | 0.60 | 0.57 |
| | 100% | 0.68 | 0.73 | 0.70 | 0.67 |
| Losses at normative operating points (speed;torque), in percentage of rated output power | | | | | |
| Losses (%) | P1 (0,9;1,0) | 13.4 | 15.9 | 14.7 | 14.7 |
| | P2 (0,5;1,0) | 10.7 | 12.7 | 11.7 | 11.7 |
| | P3 (0,25;1,0) | 10.0 | 11.9 | 11.0 | 11.0 |
| | P4 (0,9;0,5) | 8.2 | 9.7 | 9.0 | 9.0 |
| | P5 (0,5;0,5) | 5.5 | 6.6 | 6.0 | 6.0 |
| | P6 (0,5;0,25) | 4.4 | 5.2 | 4.8 | 4.8 |
| | P7 (0,25;0,25) | 3.2 | 3.8 | 3.5 | 3.5 |
| Bearing type | : Drive end : 6307 2RS | Non drive end : 6206 2RS | Foundation loads | | |
| Sealing | : Oil Seal | Lip Seal | Max. traction | : 40 kgf | |
| Lubrication interval | : - | - | Max. compression | : 97 kgf | |
| Lubricant amount | : - | - | | | |
| 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. (2) Measured at 1m and with tolerance of +3dB(A). (3) Approximate weight subject to changes after manufacturing process. | | | 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 |
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DATA SHEET

Three Phase Induction Motor - Squirrel Cage



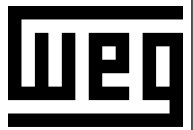
Customer : _____

Notes

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DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer : _____

Thermal protection

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

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| | | | | Revision |

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

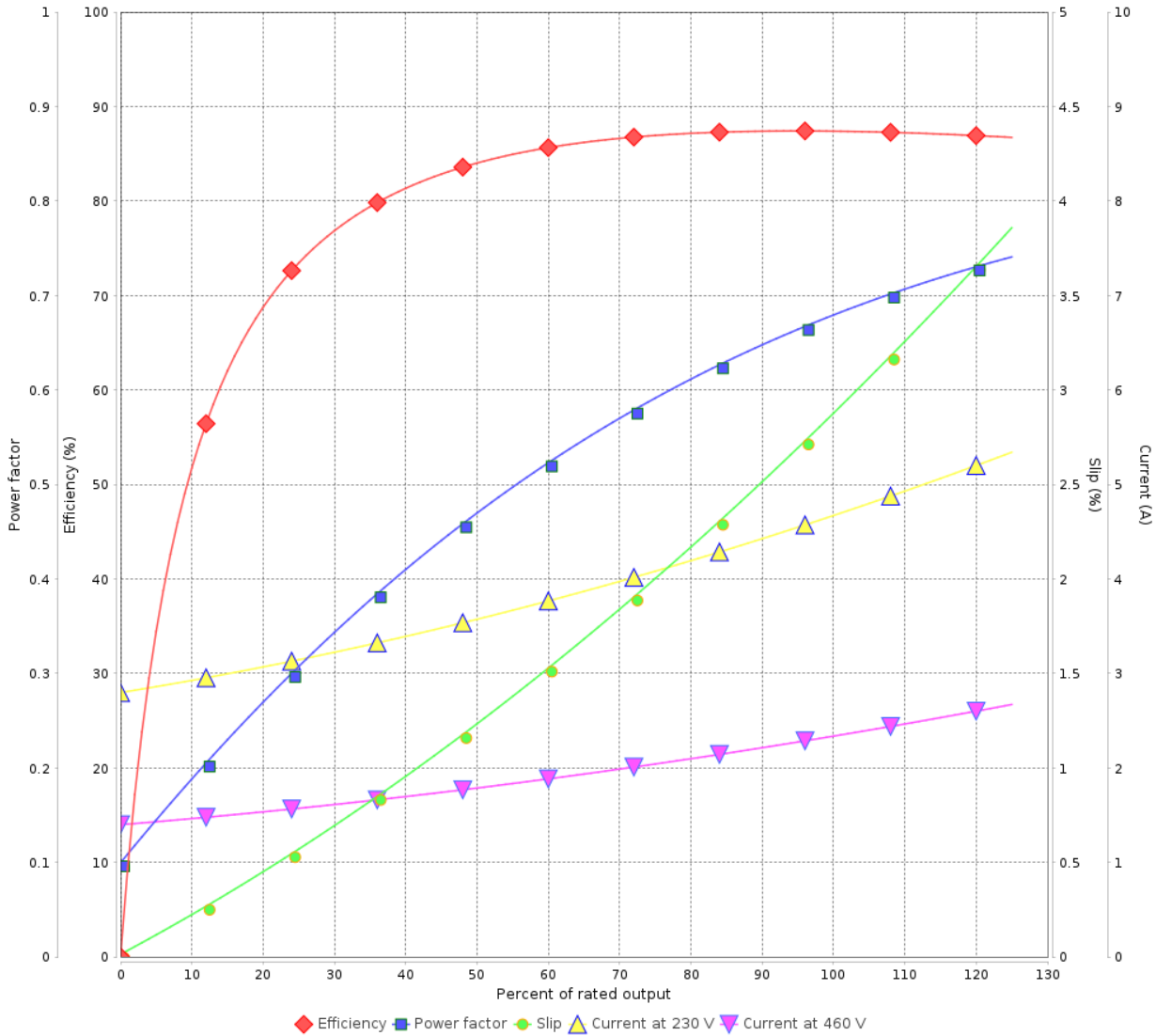


Customer : _____

Product line : W21 Explosion Proof NEMA Premium
Efficiency Three-Phase

Product code : 16202761

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 4.64/2.32 A
 LRC : 6.6
 Rated torque : 0.934 kgfm
 Locked rotor torque : 260 %
 Breakdown torque : 330 %
 Rated speed : 1165 rpm

Moment of inertia (J) : 0.0178 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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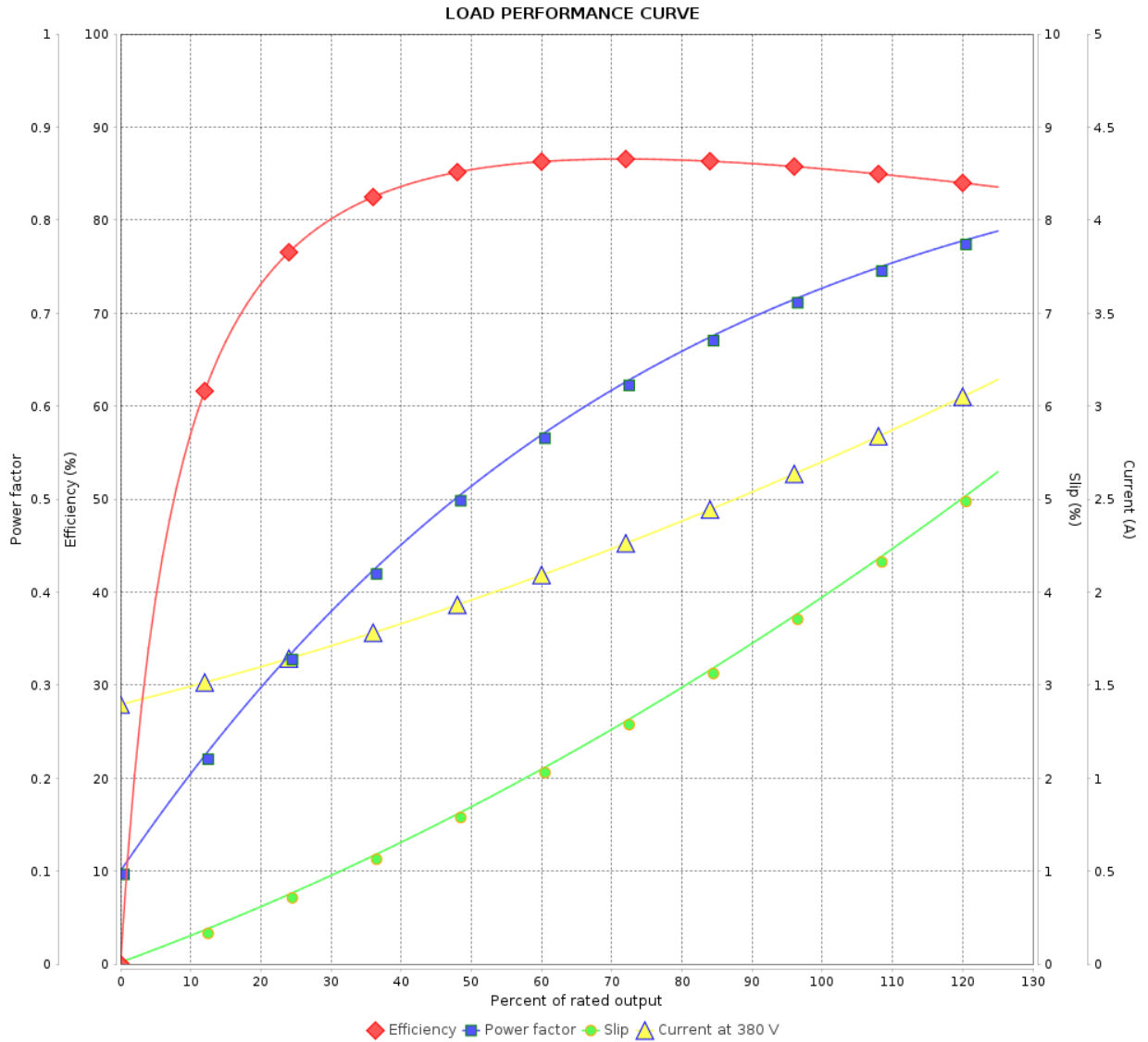
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium
Efficiency Three-Phase

Product code : 16202761



Performance : 380 V 50 Hz 6P IE4

Rated current : 2.68 A
 LRC : 5.4
 Rated torque : 1.13 kgfm
 Locked rotor torque : 190 %
 Breakdown torque : 250 %
 Rated speed : 960 rpm

Moment of inertia (J) : 0.0178 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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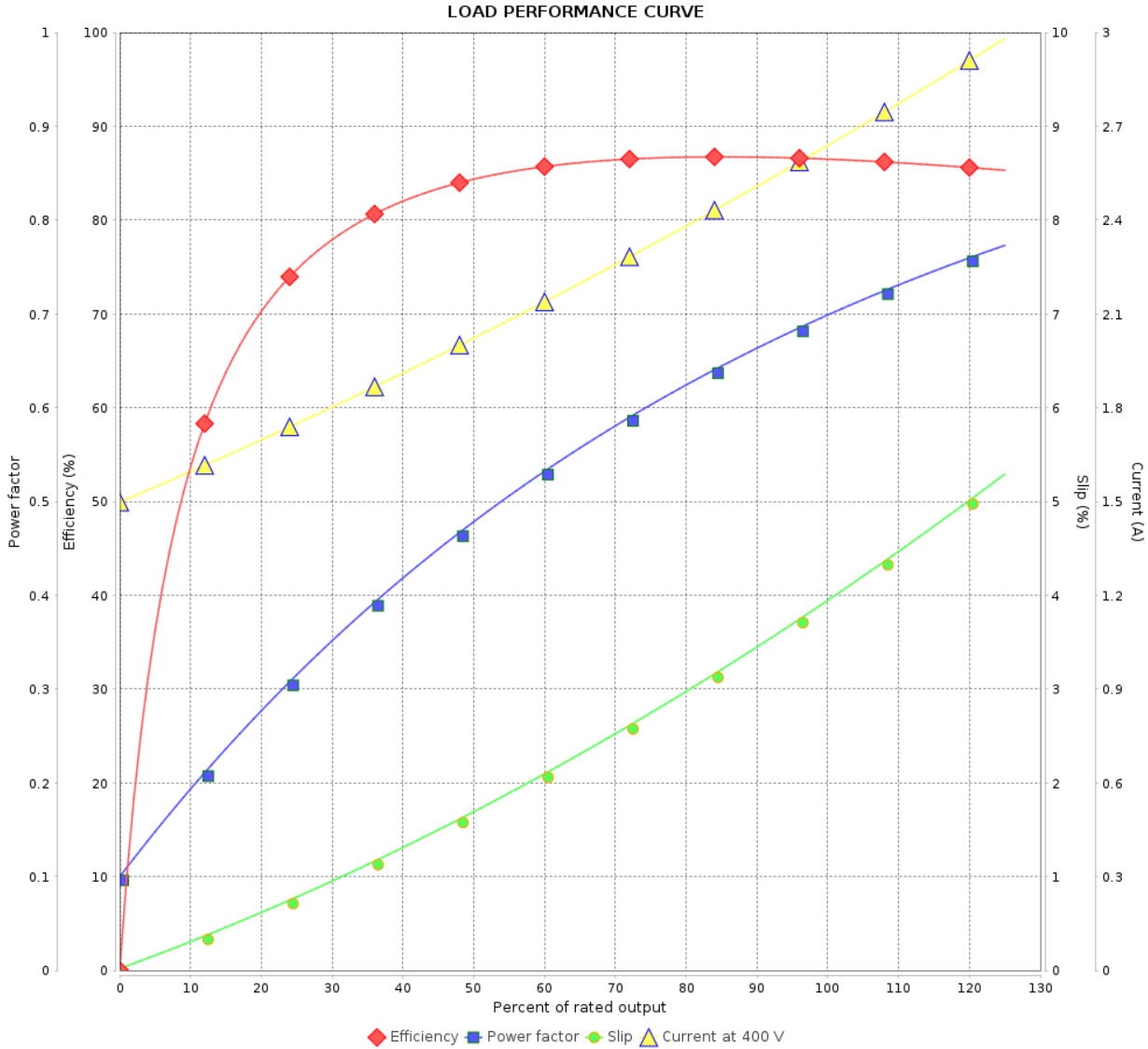
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium
Efficiency Three-Phase

Product code : 16202761



Performance : 400 V 50 Hz 6P IE4

Rated current : 2.62 A
LRC : 6.1
Rated torque : 1.13 kgfm
Locked rotor torque : 220 %
Breakdown torque : 250 %
Rated speed : 960 rpm

Moment of inertia (J) : 0.0178 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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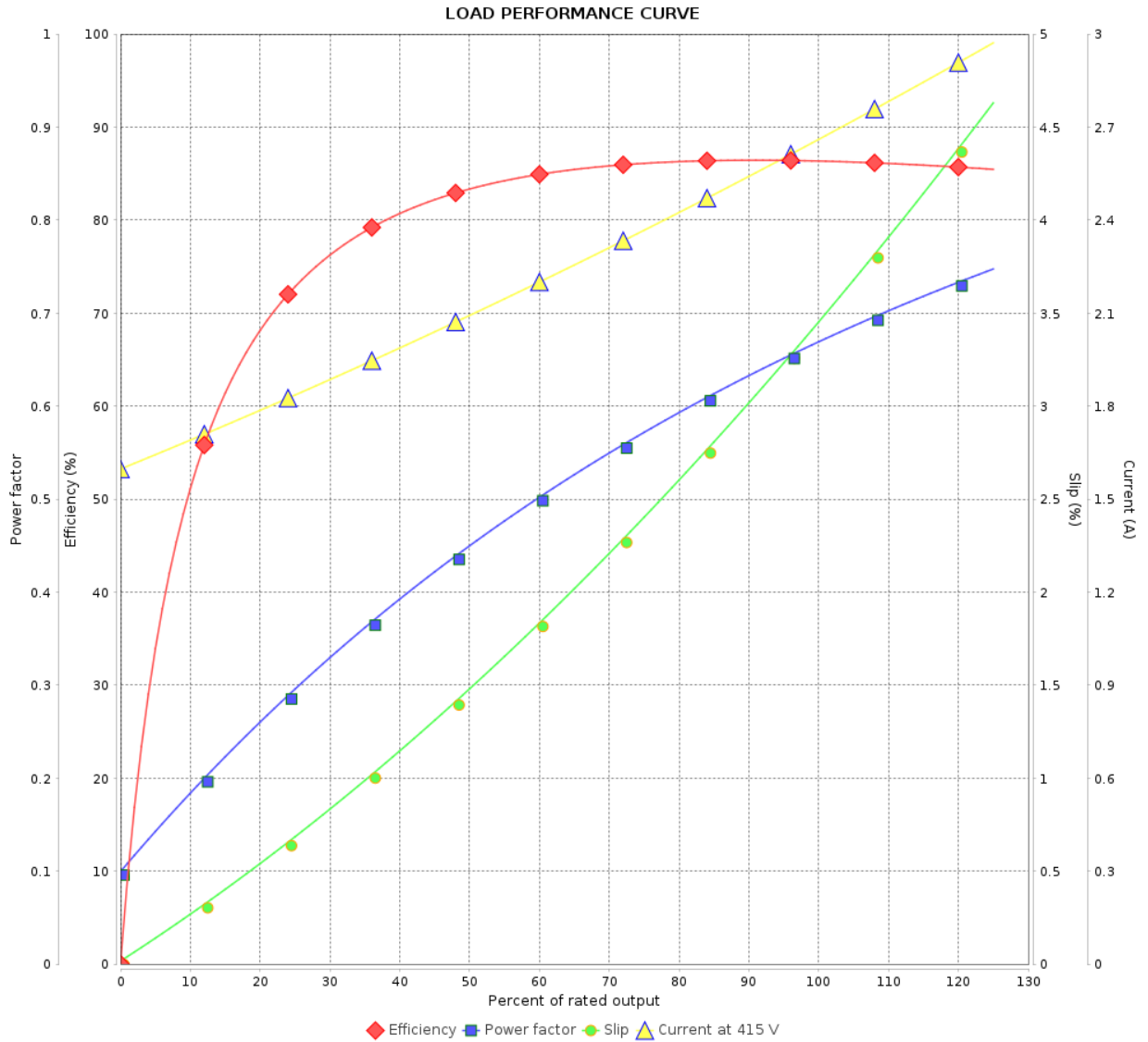
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : W21 Explosion Proof NEMA Premium
Efficiency Three-Phase

Product code : 16202761



Performance : 415 V 50 Hz 6P IE4

Rated current : 2.64 A
LRC : 6.4
Rated torque : 1.13 kgfm
Locked rotor torque : 250 %
Breakdown torque : 290 %
Rated speed : 965 rpm

Moment of inertia (J) : 0.0178 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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