

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : Close Coupled Pump NEMA Premium Efficiency Three-Phase Product code : 11080333

| | |
|--------------------------------------|---|
| Frame : 254JM | 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 : 94.9 kg |
| Protection degree : IP23 | Moment of inertia (J) : 0.0309 kgm ² |
| Design : B | |

| | | | | | | | |
|--------------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Output [HP] | 20 | 15 | 15 | 15 | 20 | 20 | 20 |
| Poles | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Frequency [Hz] | 60 | 50 | 50 | 50 | 50 | 50 | 50 |
| Rated voltage [V] | 230/460 | 380 | 400 | 415 | 380 | 400 | 415 |
| Rated current [A] | 49.2/24.6 | 22.1 | 22.0 | 22.0 | 30.3 | 29.5 | 28.8 |
| L. R. Amperes [A] | 276/138 | 126 | 132 | 143 | 133 | 142 | 150 |
| LRC [A] | 5.6x(Code F) | 5.7x(Code F) | 6.0x(Code G) | 6.5x(Code H) | 4.4x(Code D) | 4.8x(Code E) | 5.2x(Code F) |
| No load current [A] | 18.2/9.10 | 9.00 | 10.0 | 11.5 | 9.00 | 10.0 | 11.5 |
| Rated speed [RPM] | 3520 | 2935 | 2940 | 2945 | 2900 | 2910 | 2920 |
| Slip [%] | 2.22 | 2.17 | 2.00 | 1.83 | 3.33 | 3.00 | 2.67 |
| Rated torque [kgfm] | 4.12 | 3.71 | 3.70 | 3.70 | 5.01 | 4.99 | 4.97 |
| Locked rotor torque [%] | 160 | 180 | 200 | 220 | 130 | 140 | 150 |
| Breakdown torque [%] | 250 | 270 | 300 | 320 | 180 | 220 | 240 |
| Service factor | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 |
| Temperature rise | 80 K | 80 K | 80 K | 80 K | 80 K | 80 K | 80 K |
| Locked rotor time | 21s (cold) 12s (hot) | 16s (cold) 9s (hot) | 14s (cold) 8s (hot) | 14s (cold) 8s (hot) | 16s (cold) 9s (hot) | 14s (cold) 8s (hot) | 14s (cold) 8s (hot) |
| Noise level ² | 66.0 dB(A) | | | | | | |
| Efficiency (%) | 25% | 88.6 | 81.1 | 80.8 | 81.9 | 86.2 | 87.2 |
| | 50% | 89.5 | 84.7 | 84.4 | 85.0 | 86.5 | 87.5 |
| | 75% | 90.2 | 86.9 | 86.9 | 87.9 | 87.5 | 88.5 |
| | 100% | 91.0 | 91.2 | 91.2 | 91.4 | 87.5 | 88.5 |
| Power Factor | 25% | 0.46 | 0.43 | 0.39 | 0.34 | 0.51 | 0.41 |
| | 50% | 0.71 | 0.65 | 0.60 | 0.55 | 0.74 | 0.64 |
| | 75% | 0.80 | 0.77 | 0.72 | 0.68 | 0.83 | 0.76 |
| | 100% | 0.84 | 0.83 | 0.79 | 0.76 | 0.86 | 0.82 |

| | | | |
|----------------------|--------------------|---------------|----------------------------|
| Bearing type | Drive end | Non drive end | Foundation loads |
| | : 6309 Z C3 | : 6209 Z C3 | |
| Sealing | Without | Without | Max. compression : 235 kgf |
| | Bearing Seal | Bearing Seal | |
| Lubrication interval | : 20000 h | | |
| Lubricant amount | : 13 g | | |
| Lubricant type | : Mobil Polyrex EM | | |

Notes
USABLE @208V 53.0A SF 1.15 SFA 60.9A

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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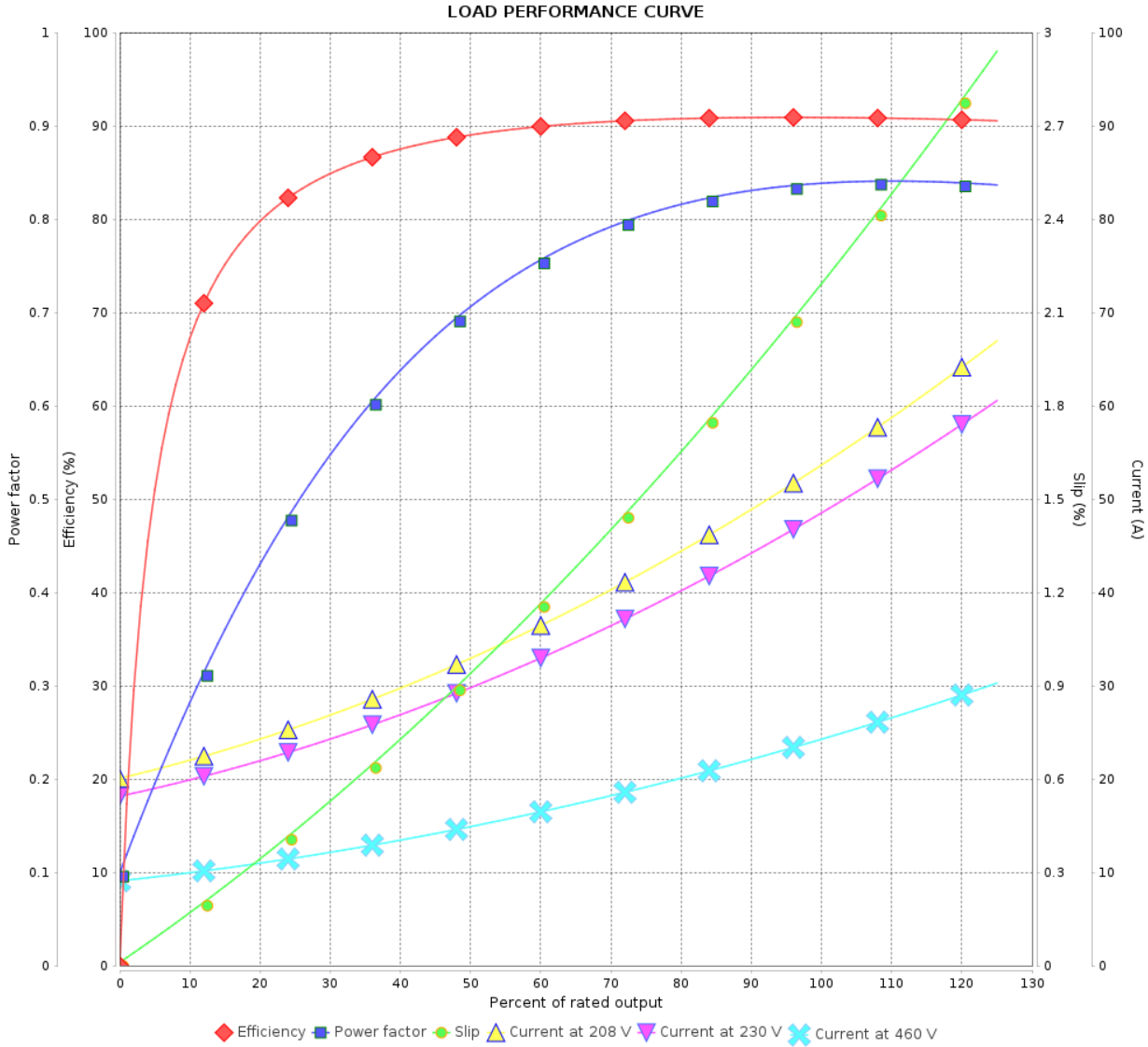
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Close Coupled Pump NEMA Premium
Efficiency Three-Phase

Product code : 11080333



Performance : 230/460 V 60 Hz 2P

Rated current : 49.2/24.6 A
LRC : 5.6
Rated torque : 4.12 kgfm
Locked rotor torque : 160 %
Breakdown torque : 250 %
Rated speed : 3520 rpm

Moment of inertia (J) : 0.0309 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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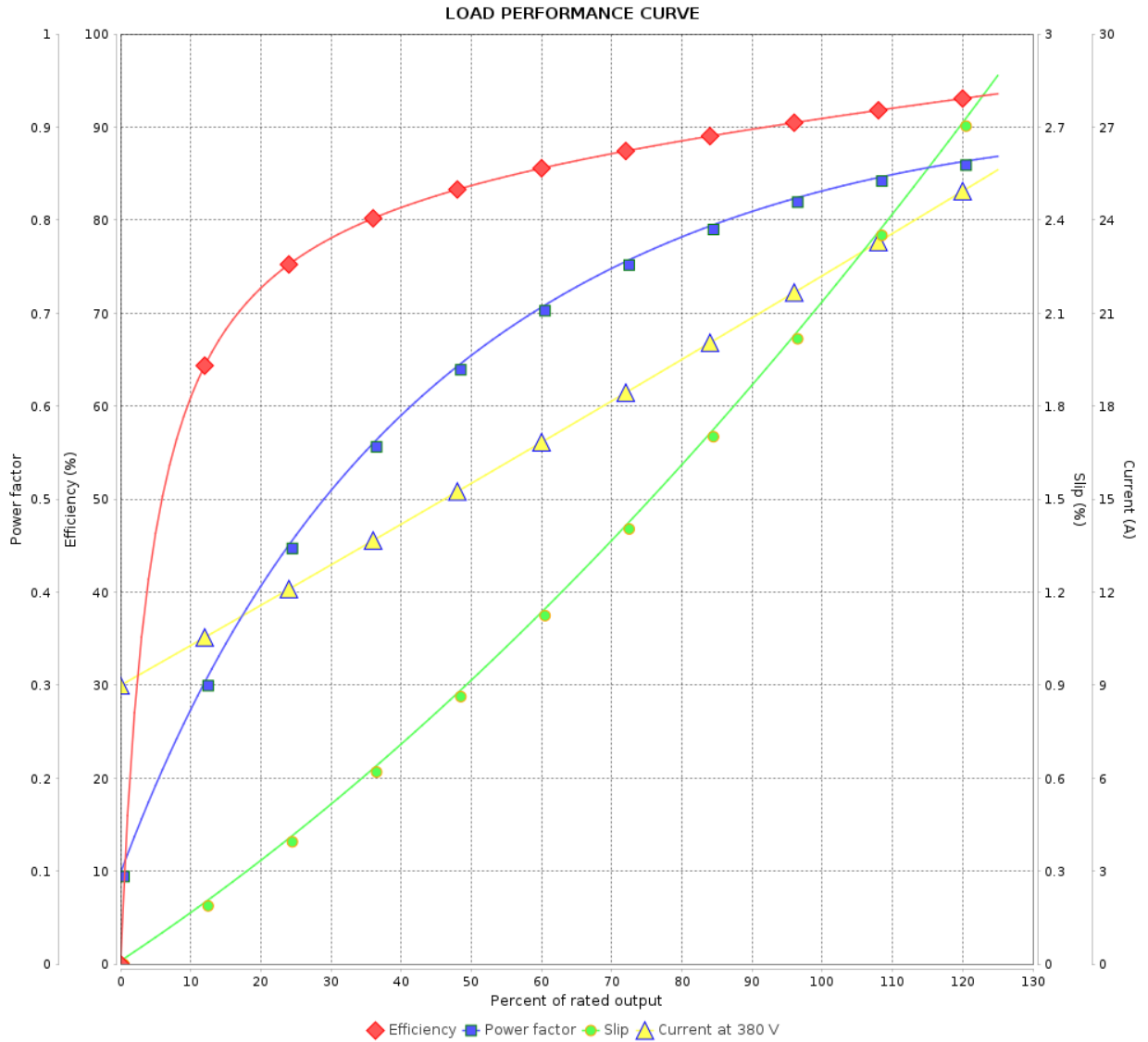
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : Close Coupled Pump NEMA Premium
Efficiency Three-Phase

Product code : 11080333



Performance : 380 V 50 Hz 2P IE3

Rated current : 22.1 A
 LRC : 5.7
 Rated torque : 3.71 kgfm
 Locked rotor torque : 180 %
 Breakdown torque : 270 %
 Rated speed : 2935 rpm

Moment of inertia (J) : 0.0309 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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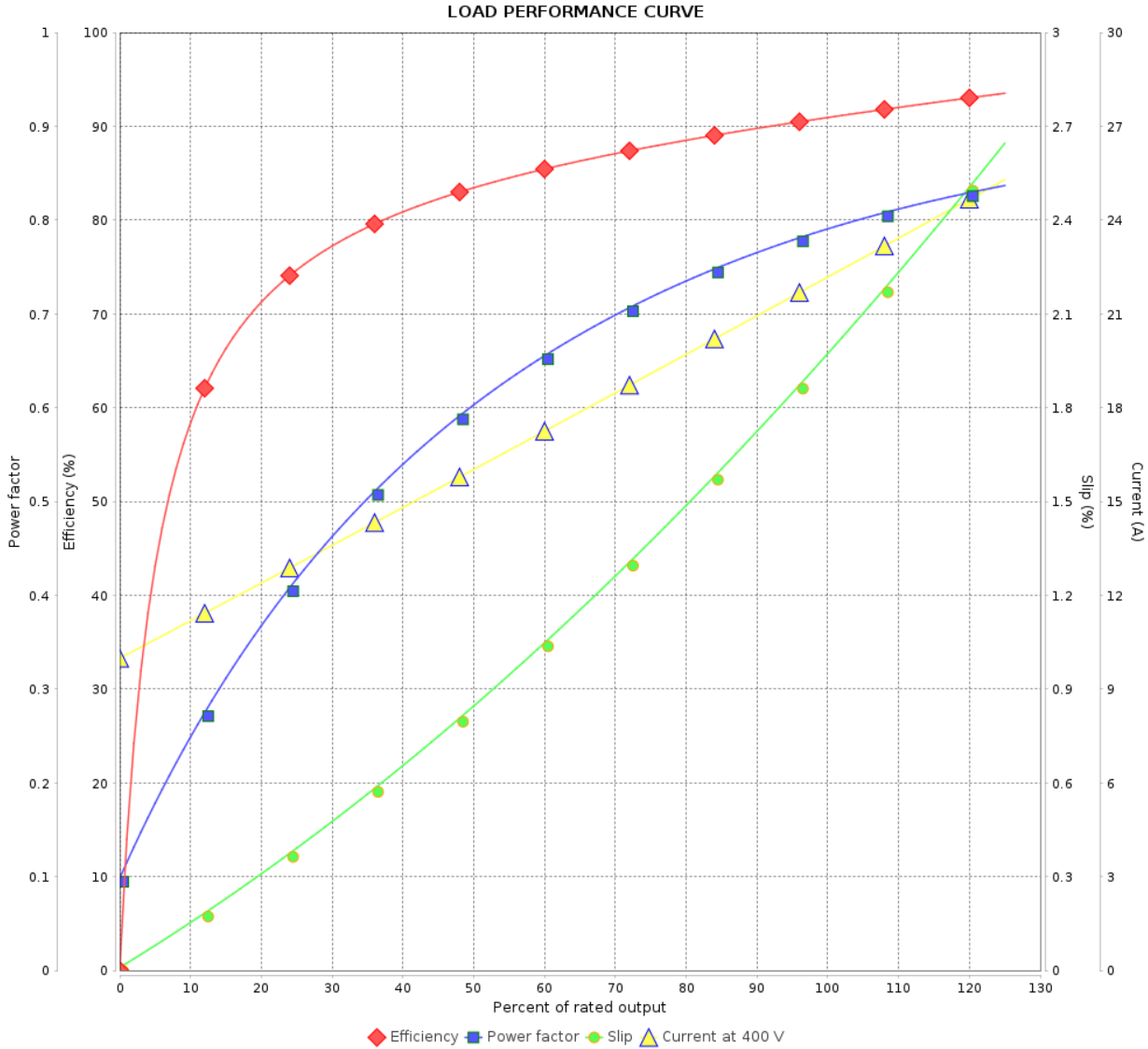
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Close Coupled Pump NEMA Premium
Efficiency Three-Phase

Product code : 11080333



Performance : 400 V 50 Hz 2P IE3

Rated current : 22.0 A
LRC : 6.0
Rated torque : 3.70 kgfm
Locked rotor torque : 200 %
Breakdown torque : 300 %
Rated speed : 2940 rpm

Moment of inertia (J) : 0.0309 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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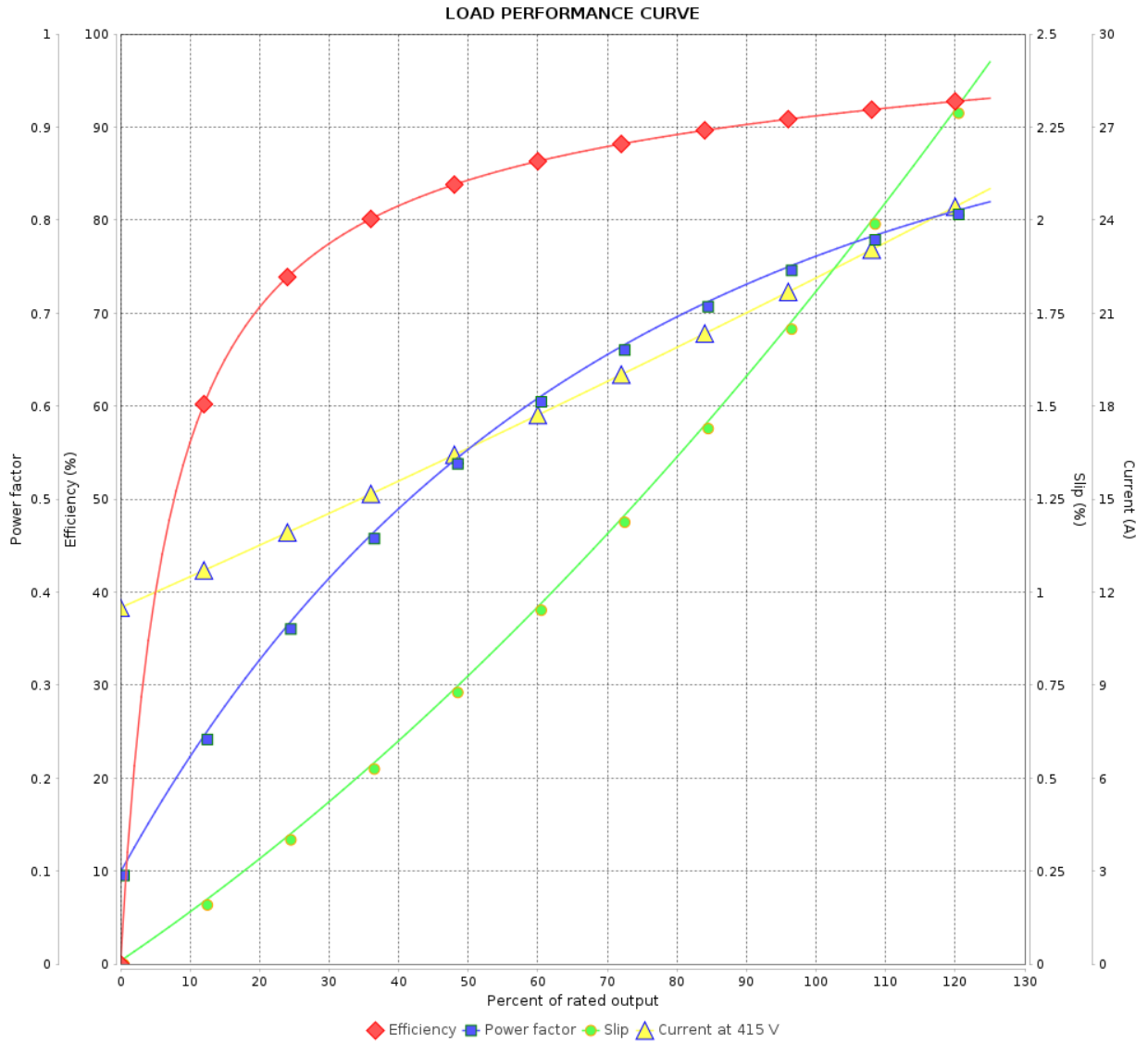
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : Close Coupled Pump NEMA Premium
Efficiency Three-Phase

Product code : 11080333



Performance : 415 V 50 Hz 2P IE3

Rated current : 22.0 A
LRC : 6.5
Rated torque : 3.70 kgfm
Locked rotor torque : 220 %
Breakdown torque : 320 %
Rated speed : 2945 rpm

Moment of inertia (J) : 0.0309 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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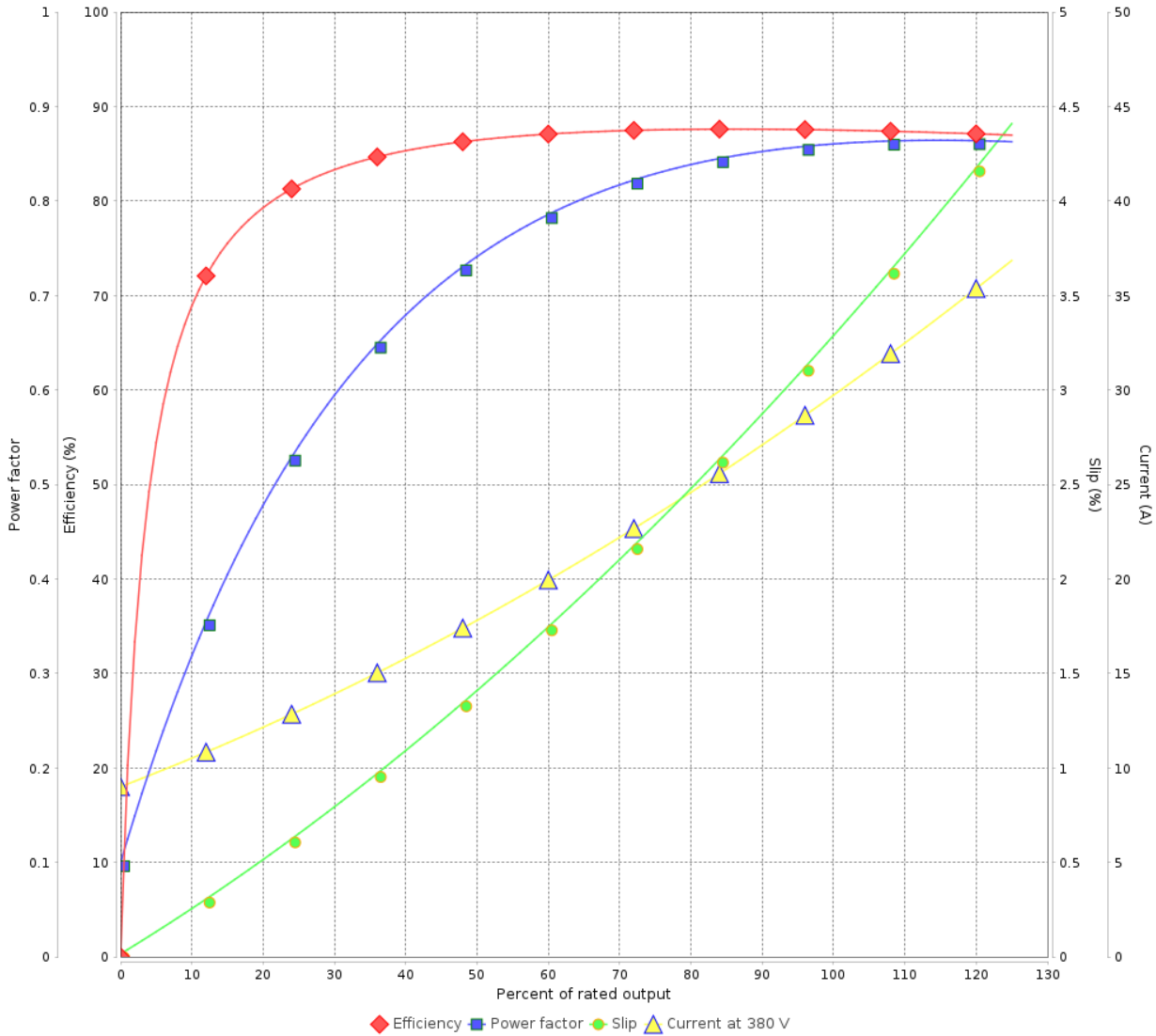


Customer :

Product line : Close Coupled Pump NEMA Premium
Efficiency Three-Phase

Product code : 11080333

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 2P

Rated current : 30.3 A
LRC : 4.4
Rated torque : 5.01 kgfm
Locked rotor torque : 130 %
Breakdown torque : 180 %
Rated speed : 2900 rpm

Moment of inertia (J) : 0.0309 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

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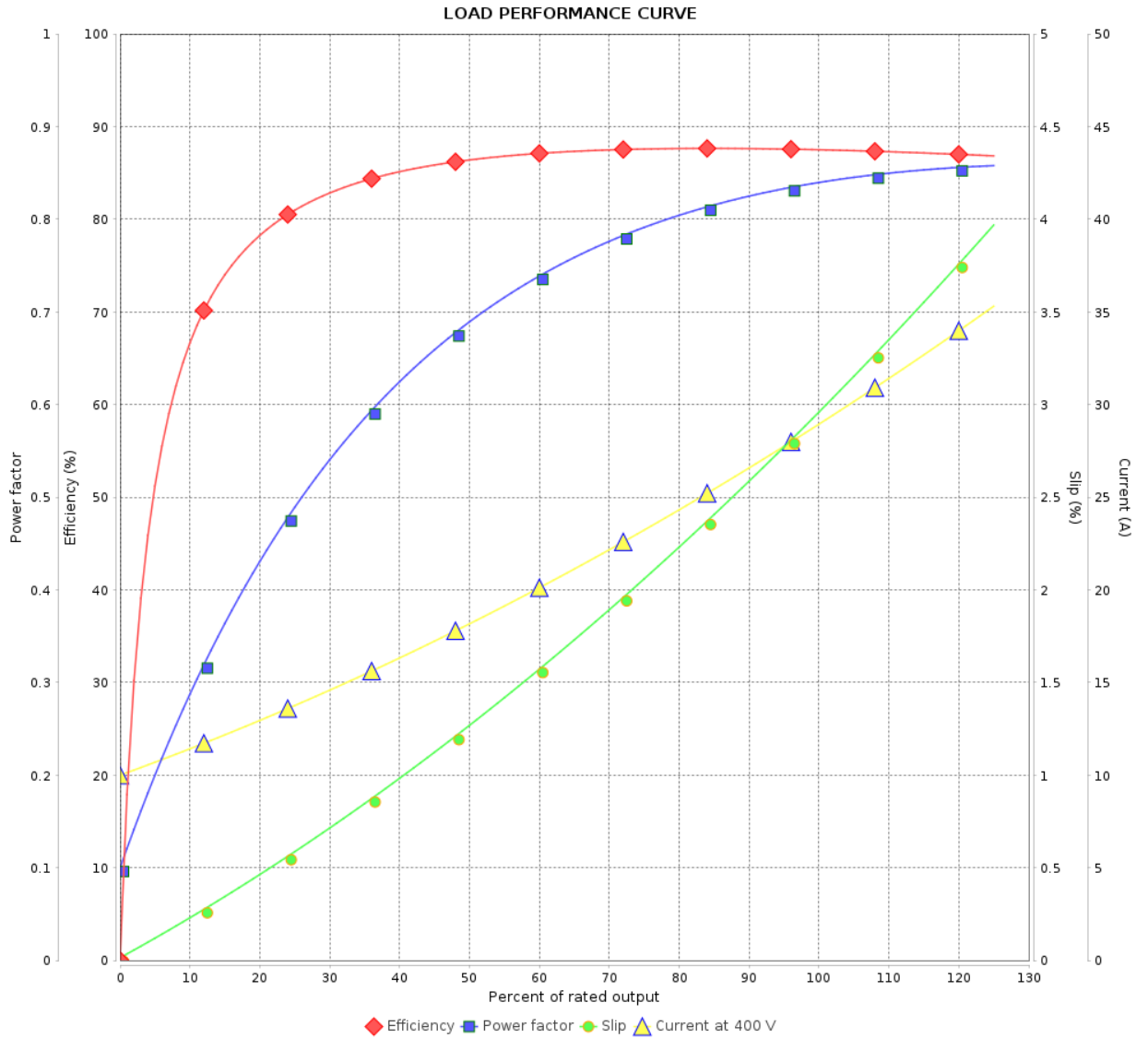
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : Close Coupled Pump NEMA Premium
Efficiency Three-Phase

Product code : 11080333



Performance : 400 V 50 Hz 2P

Rated current : 29.5 A
 LRC : 4.8
 Rated torque : 4.99 kgfm
 Locked rotor torque : 140 %
 Breakdown torque : 220 %
 Rated speed : 2910 rpm

Moment of inertia (J) : 0.0309 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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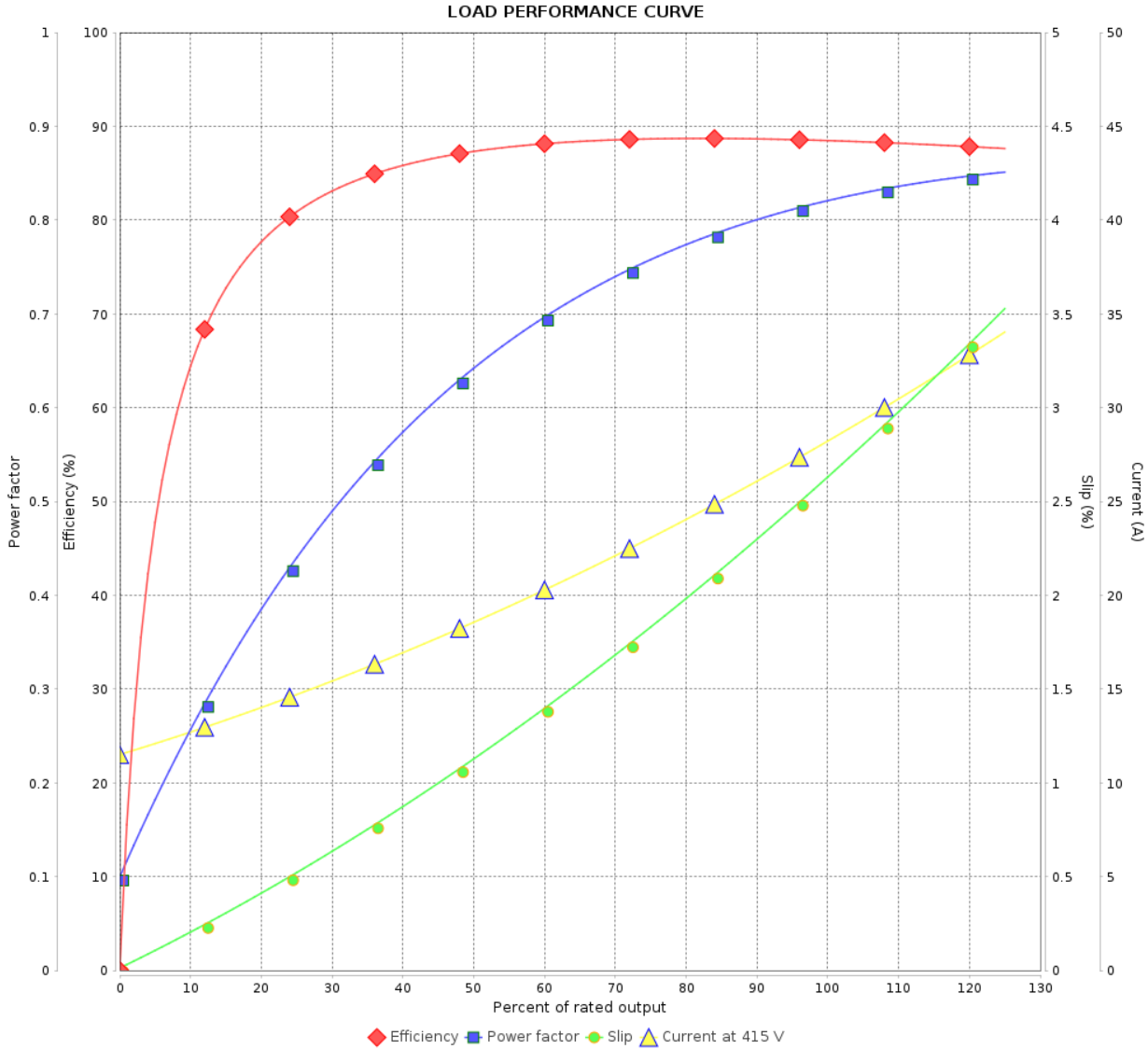
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : Close Coupled Pump NEMA Premium
Efficiency Three-Phase

Product code : 11080333



Performance : 415 V 50 Hz 2P

Rated current : 28.8 A
 LRC : 5.2
 Rated torque : 4.97 kgfm
 Locked rotor torque : 150 %
 Breakdown torque : 240 %
 Rated speed : 2920 rpm

Moment of inertia (J) : 0.0309 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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