# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage

| | |
|---|---|
| Customer | : |

| | |
|---|---|
| Product line | : W22 Jet Pump Motors JM - Nema Premium Efficiency - Derating |
| Product code | : 11642183 |

| | | | |
|---|---|---|---|
| Frame | : 143/5JM | Cooling method | : IC411 - TEFC |
| Insulation class | : F | Mounting | : B34R(D) |
| Duty cycle | : S1 | Rotation | : Both |
| Ambient temperature | : -20 °C to +40 °C | Starting method | : Direct On Line |
| Altitude | : 1000 m | Approx. weight | : 23.5 kg |
| Protection degree | : IP55 | Moment of inertia (J) | : 0.0026 kgm² |
| Design | : B | | |

| Output | | 2 HP (1.5 | 2 HP (1.5 | 1.5 HP (1.1 | 1.5 HP (1.1 | 1.5 HP (1.1 | 2 HP (1.5 | 2 HP (1.5 | 2 HP (1.5 |
|---|---|---|---|---|---|---|---|---|---|
| Poles | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Frequency | | 60 Hz | 60 Hz | 50 Hz | 50 Hz | 50 Hz | 50 Hz | 50 Hz | 50 Hz |
| Rated voltage | | 230/460 V | 208 V | 380 V | 400 V | 415 V | 380 V | 400 V | 415 V |
| Rated current | | 5.38/2.69 A | 5.60 A | 2.47 A | 2.42 A | 2.43 A | 3.18 A | 3.03 A | 2.99 A |
| L. R. Amperes | | 47.9/23.9 A | 49.8 A | 21.2 A | 22.5 A | 22.6 A | 21.0 A | 21.8 A | 23.3 A |
| LRC | | 8.9 Code L | 8.9 Code K | 8.6 Code L | 9.3 Code M | 9.3 Code M | 6.6 Code H | 7.2 Code J | 7.8 Code K |
| No load current | | 2.40/1.20 A | 2.07 A | 1.20 A | 1.30 A | 1.40 A | 1.20 A | 1.30 A | 1.50 A |
| Rated speed | | 3500 rpm | 3500 rpm | 2915 rpm | 2920 rpm | 2930 rpm | 2855 rpm | 2880 rpm | 2890 rpm |
| Slip | | 2.78 % | 2.78 % | 2.83 % | 2.67 % | 2.33 % | 4.83 % | 4.00 % | 3.67 % |
| Rated torque | | 0.415 kgfm | 0 kgfm | 0.373 kgfm | 0.373 kgfm | 0.372 kgfm | 0.508 kgfm | 0.504 kgfm | 0.502 kgfm |
| Locked rotor torque | | 270 % | 270 % | 280 % | 310 % | 340 % | 200 % | 230 % | 250 % |
| Breakdown torque | | 380 % | 380 % | 370 % | 420 % | 440 % | 250 % | 300 % | 300 % |
| Service factor | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Temperature rise | | 80 K | 80 K | 80 K | 80 K | 80 K | 80 K | 80 K | 80 K |
| Noise level | | 68 dB(A) | 68.0 dB(A) | 62 dB(A) | 62 dB(A) | 62 dB(A) | 62 dB(A) | 62 dB(A) | 62 dB(A) |
| Locked rotor time | | 12 s (hot) 22 s (cold) | 12 s (hot) 22 s (cold) | 14 s (hot) 25 s (cold) | 14 s (hot) 25 s (cold) | 13 s (hot) 23 s (cold) | 11 s (hot) 20 s (cold) | 12 s (hot) 22 s (cold) | 10 s (hot) 18 s (cold) |
| Efficiency (%) | 50% | 82.5 | 82.5 | 81.4 | 80.3 | 80.1 | 82.5 | 82.5 | 82.5 |
| | 75% | 85.5 | 85.5 | 83.3 | 83.1 | 83.1 | 84.0 | 84.0 | 84.0 |
| | 100% | 85.5 | 85.5 | 83.5 | 84.0 | 84.0 | 82.5 | 84.0 | 84.0 |
| Power Factor | Start | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 |
| | 50% | 0.64 | 0.64 | 0.61 | 0.60 | 0.52 | 0.71 | 0.68 | 0.65 |
| | 75% | 0.76 | 0.76 | 0.73 | 0.69 | 0.65 | 0.82 | 0.79 | 0.77 |
| | 100% | 0.82 | 0.82 | 0.81 | 0.78 | 0.75 | 0.87 | 0.85 | 0.83 |
| Losses at normative operating points (speed;torque), in percentage of rated output power | | | | | | | | | |
| P1 (0,9;1,0) | | 15.70 | 15.70 | 18.29 | 17.63 | 17.63 | 19.64 | 17.63 | 17.63 |
| P2 (0,5;1,0) | | 12.30 | 12.30 | 14.34 | 13.82 | 13.82 | 15.39 | 13.82 | 13.82 |
| P3 (0,25;1,0) | | 11.61 | 11.61 | 13.53 | 13.04 | 13.04 | 14.53 | 13.04 | 13.04 |
| P4 (0,9;0,5) | | 8.82 | 8.82 | 10.28 | 9.90 | 9.90 | 11.03 | 9.90 | 9.90 |
| P5 (0,5;0,5) | | 5.42 | 5.42 | 6.32 | 6.09 | 6.09 | 6.78 | 6.09 | 6.09 |
| P6 (0,5;0,25) | | 3.93 | 3.93 | 4.58 | 4.41 | 4.41 | 4.92 | 4.41 | 4.41 |
| P7 (0,25;0,25) | | 2.69 | 2.69 | 3.13 | 3.02 | 3.02 | 3.36 | 3.02 | 3.02 |

| | Drive end | Non drive end |
|---|---|---|
| Bearing type | 6206-ZZ | 6204-ZZ |
| Lubrication interval | - | - |
| Lubricant amount | - | - |
| Lubricant type | POLYUREA BASED GREASE | |

Foundation loads
Max. traction : 34 kgf
Max. compression : 58 kgf

Notes:

| Rev. | Changes Summary | Performed | Checked | Date |
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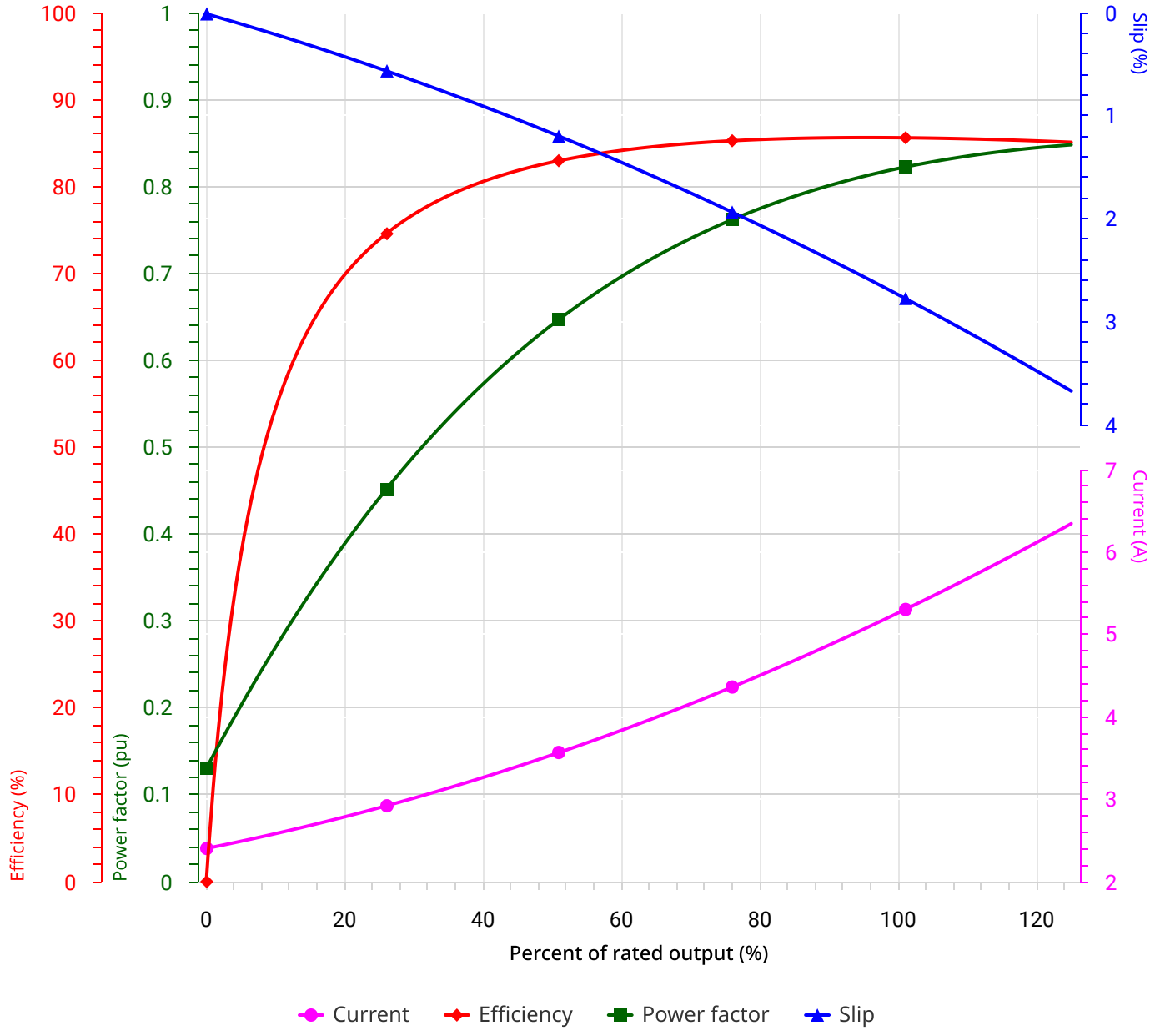
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## LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

| | |
|---|---|
| Customer | : |
| Product line | : W22 Jet Pump Motors JM - Nema Premium Efficiency - Derating |
| Product code | : 11642183 |




| | |
|---|---|
| Performance | : 2 HP (1.5 kW) 230/460V 60Hz 2P 143/5JM |

| | | | |
|---|---|---|---|
| Rated current | : 5.38/2.69 A | Moment of inertia (J) | : 0.0026 kgm² |
| LRC | : 8.9 Code L | Duty cycle | : Cont.(S1) |
| Rated torque | : 0.415 kgfm | Insulation class | : F |
| Locked rotor torque | : 270 % | Service factor | : 1.25 |
| Breakdown torque | : 380 % | Temperature rise | : 80 K |
| Rated speed | : 3500 rpm | Design | : B |

| Rev. | Changes Summary | Performed | Checked | Date |
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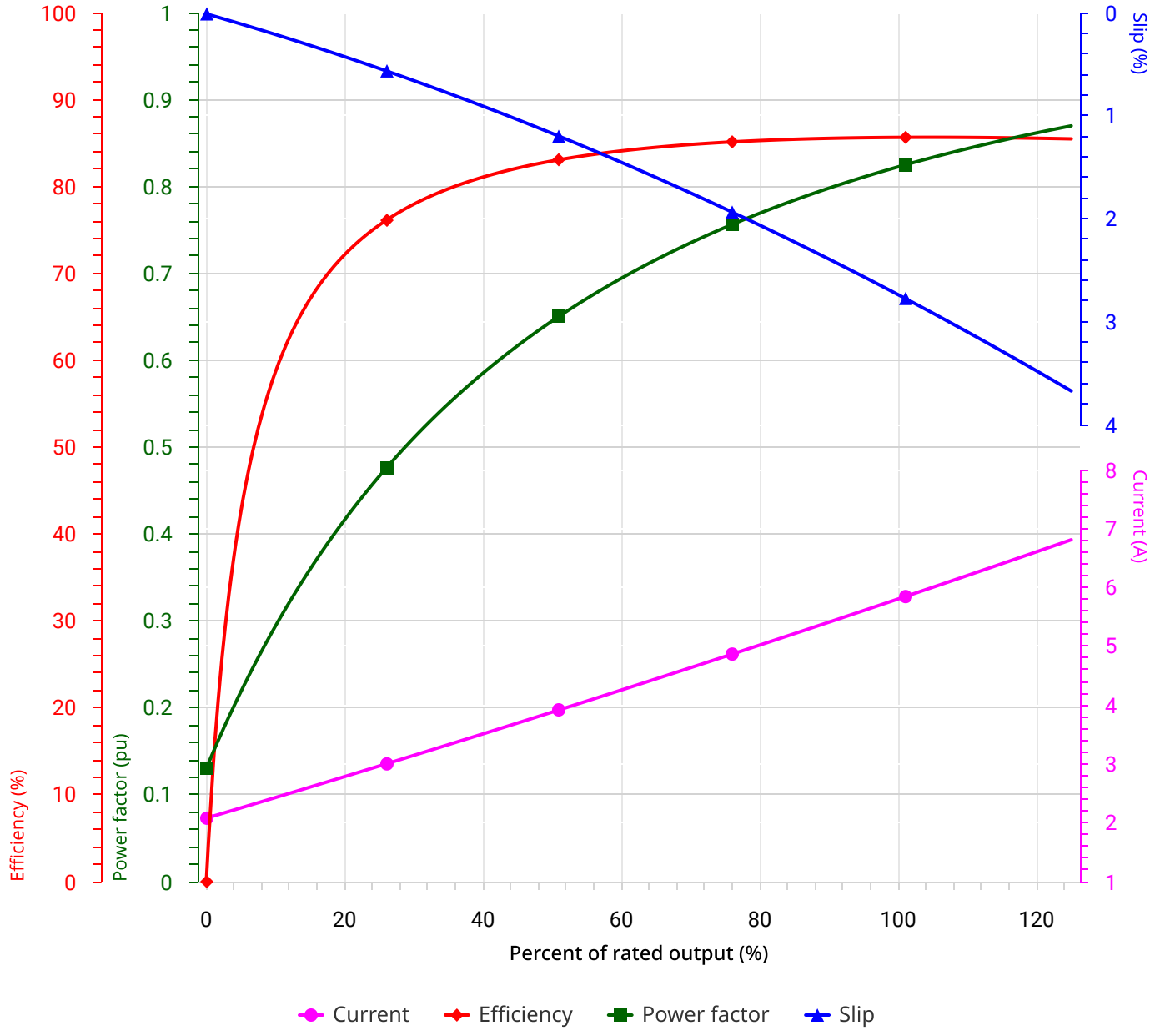
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## LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

| | |
|---|---|
| Customer | : |
| Product line | : W22 Jet Pump Motors JM - Nema Premium Efficiency - Derating |
| Product code | : 11642183 |




| | |
|---|---|
| Performance | : 2 HP (1.5 kW) 208V 60Hz 2P 143/5JM |

| | | | |
|---|---|---|---|
| Rated current | : 5.60 A | Moment of inertia (J) | : 0.0026 kgm² |
| LRC | : 8.9 Code K | Duty cycle | : Cont.(S1) |
| Rated torque | : 0 kgfm | Insulation class | : F |
| Locked rotor torque | : 270 % | Service factor | : 1.25 |
| Breakdown torque | : 380 % | Temperature rise | : 80 K |
| Rated speed | : 3500 rpm | Design | : 00002 |

| Rev. | Changes Summary | Performed | Checked | Date |
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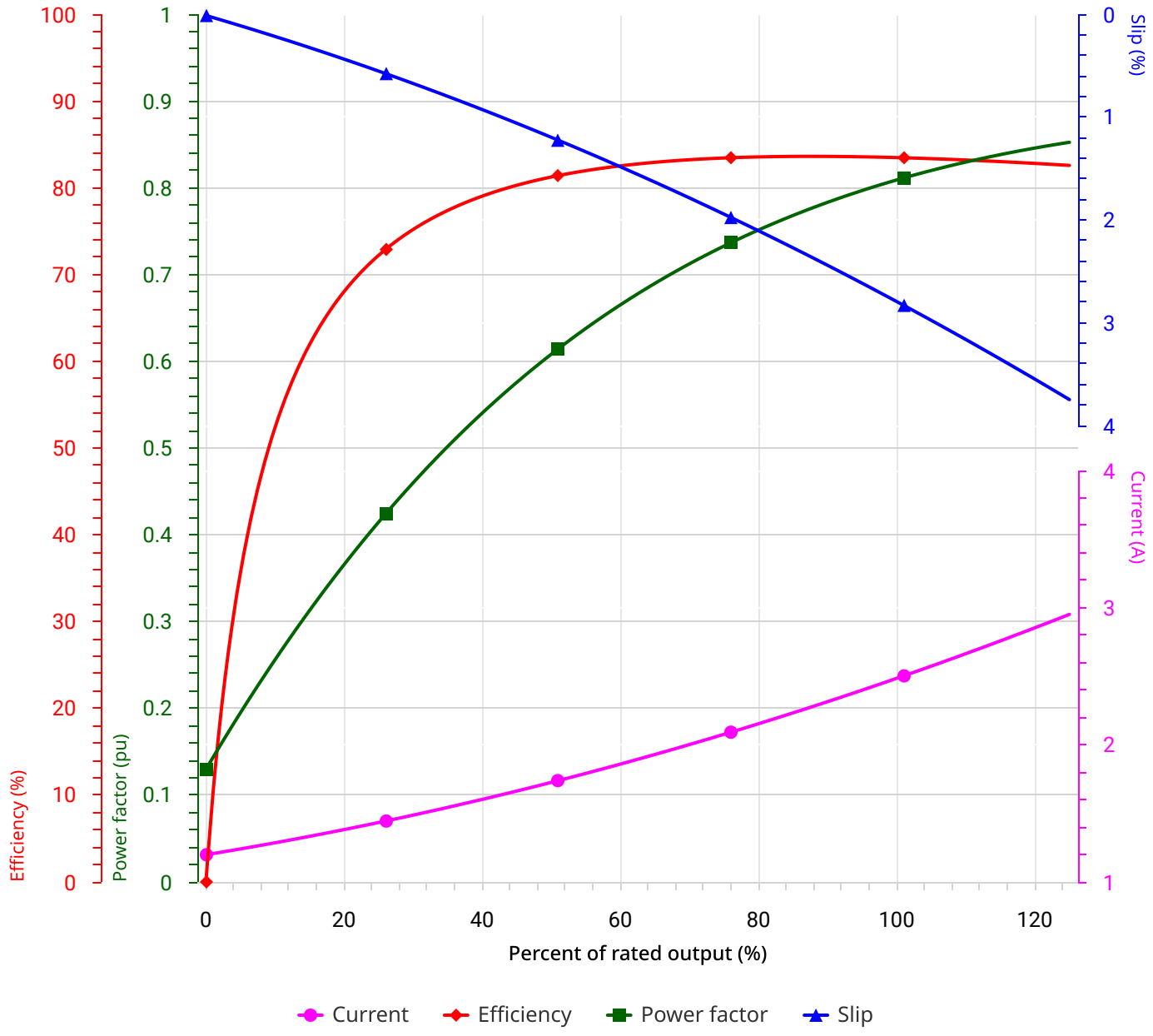
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## LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

| | |
|---|---|
| Customer | : |
| Product line | : W22 Jet Pump Motors JM - Nema Premium Efficiency - Derating |
| Product code | : 11642183 |




| | |
|---|---|
| Performance | : 1.5 HP (1.1 kW) 380V 50Hz 2P 143/5JM |

| | | | |
|---|---|---|---|
| Rated current | : 2.47 A | Moment of inertia (J) | : 0.0026 kgm² |
| LRC | : 8.6 Code L | Duty cycle | : Cont.(S1) |
| Rated torque | : 0.373 kgfm | Insulation class | : F |
| Locked rotor torque | : 280 % | Service factor | : 1.25 |
| Breakdown torque | : 370 % | Temperature rise | : 80 K |
| Rated speed | : 2915 rpm | Design | : B |

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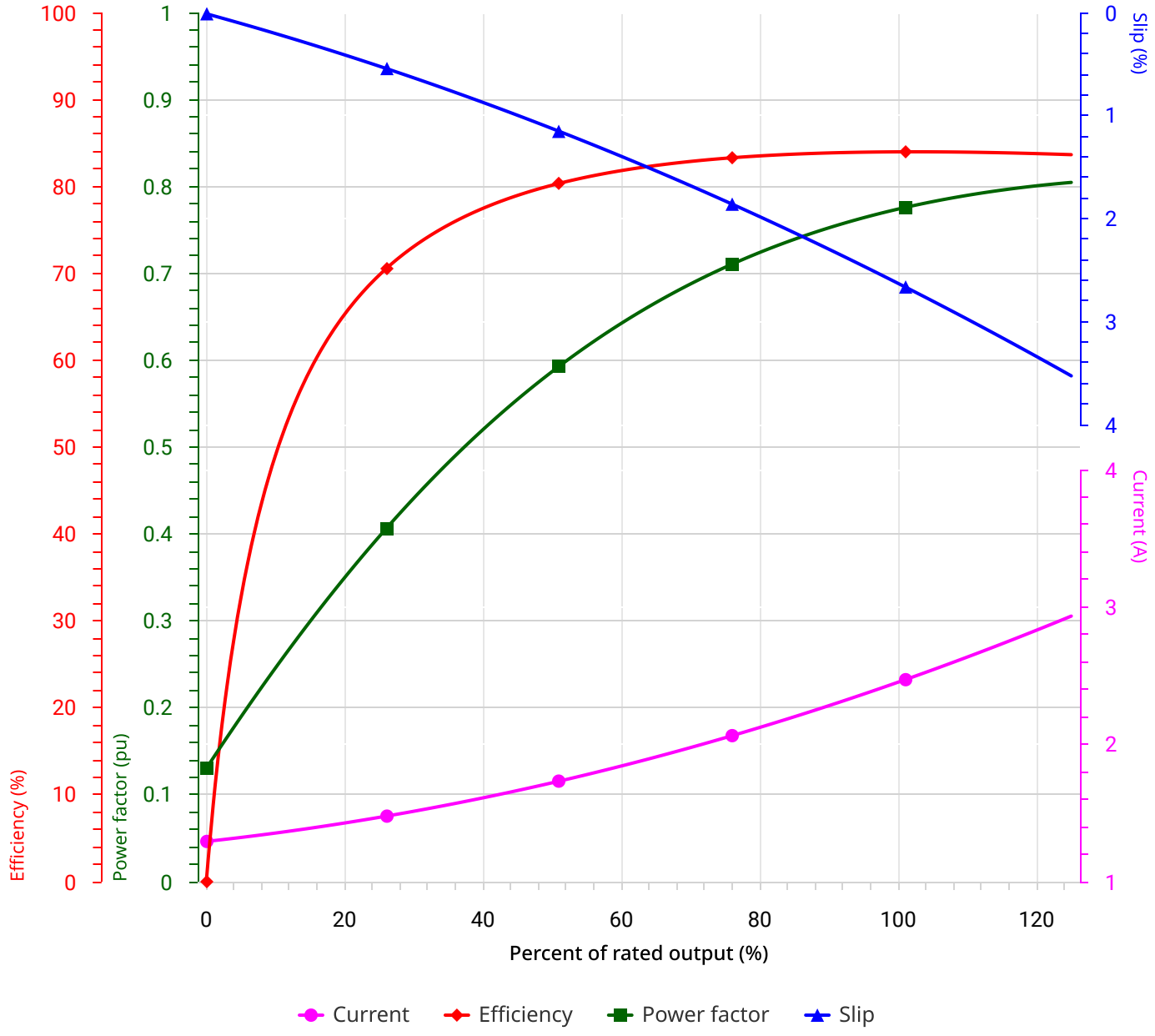
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## LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

| | |
|---|---|
| Customer | : |
| Product line | : W22 Jet Pump Motors JM - Nema Premium Efficiency - Derating |
| Product code | : 11642183 |




| | |
|---|---|
| Performance | : 1.5 HP (1.1 kW) 400V 50Hz 2P 143/5JM |

| | | | |
|---|---|---|---|
| Rated current | : 2.42 A | Moment of inertia (J) | : 0.0026 kgm² |
| LRC | : 9.3 Code M | Duty cycle | : Cont.(S1) |
| Rated torque | : 0.373 kgfm | Insulation class | : F |
| Locked rotor torque | : 310 % | Service factor | : 1.25 |
| Breakdown torque | : 420 % | Temperature rise | : 80 K |
| Rated speed | : 2920 rpm | Design | : B |

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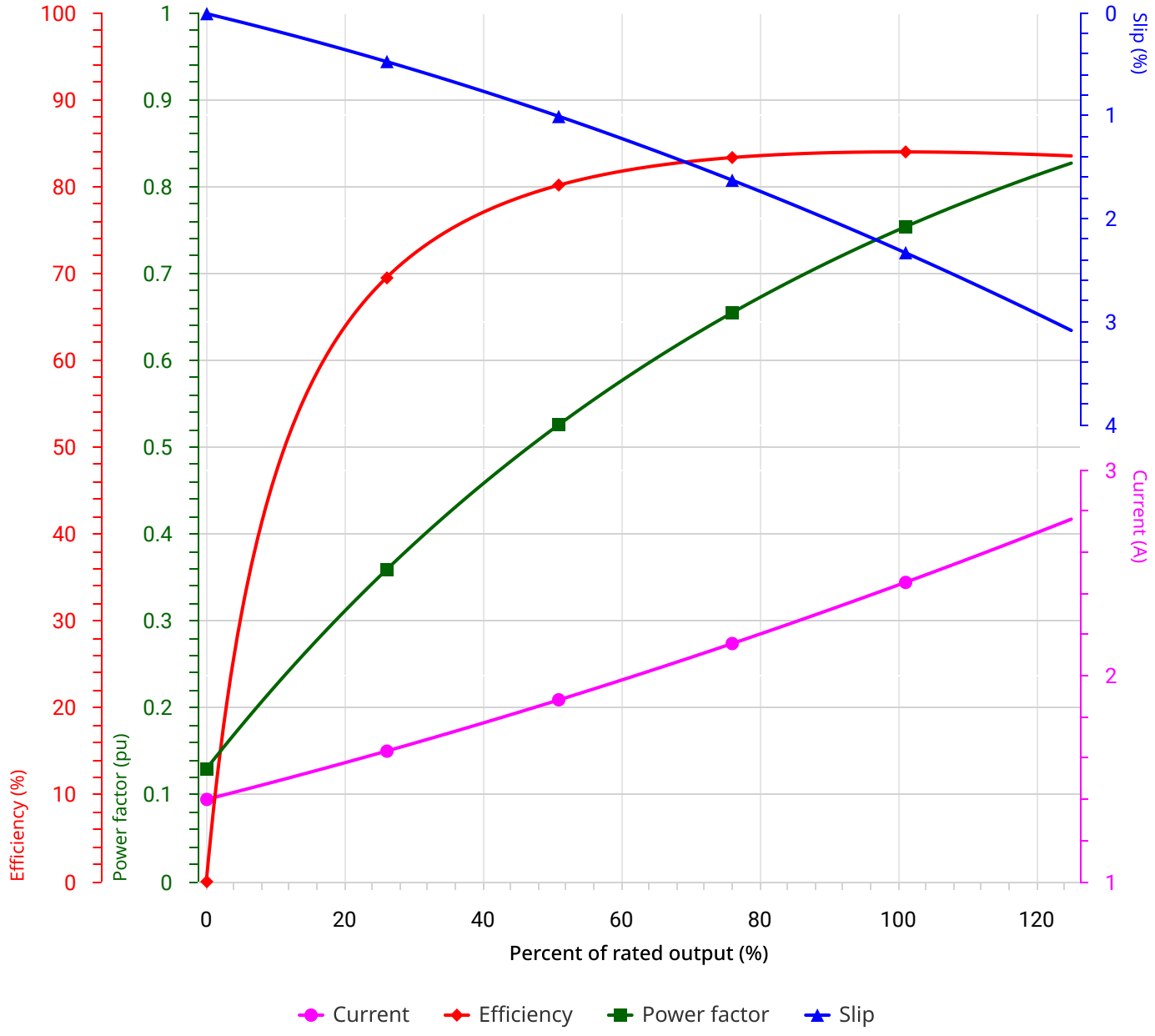
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## LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

| | |
|---|---|
| Customer | : |
| Product line | : W22 Jet Pump Motors JM - Nema Premium Efficiency - Derating |
| Product code | : 11642183 |




| | |
|---|---|
| Performance | : 1.5 HP (1.1 kW) 415V 50Hz 2P 143/5JM |

| | | | |
|---|---|---|---|
| Rated current | : 2.43 A | Moment of inertia (J) | : 0.0026 kgm² |
| LRC | : 9.3 Code M | Duty cycle | : Cont.(S1) |
| Rated torque | : 0.372 kgfm | Insulation class | : F |
| Locked rotor torque | : 340 % | Service factor | : 1.25 |
| Breakdown torque | : 440 % | Temperature rise | : 80 K |
| Rated speed | : 2930 rpm | Design | : B |

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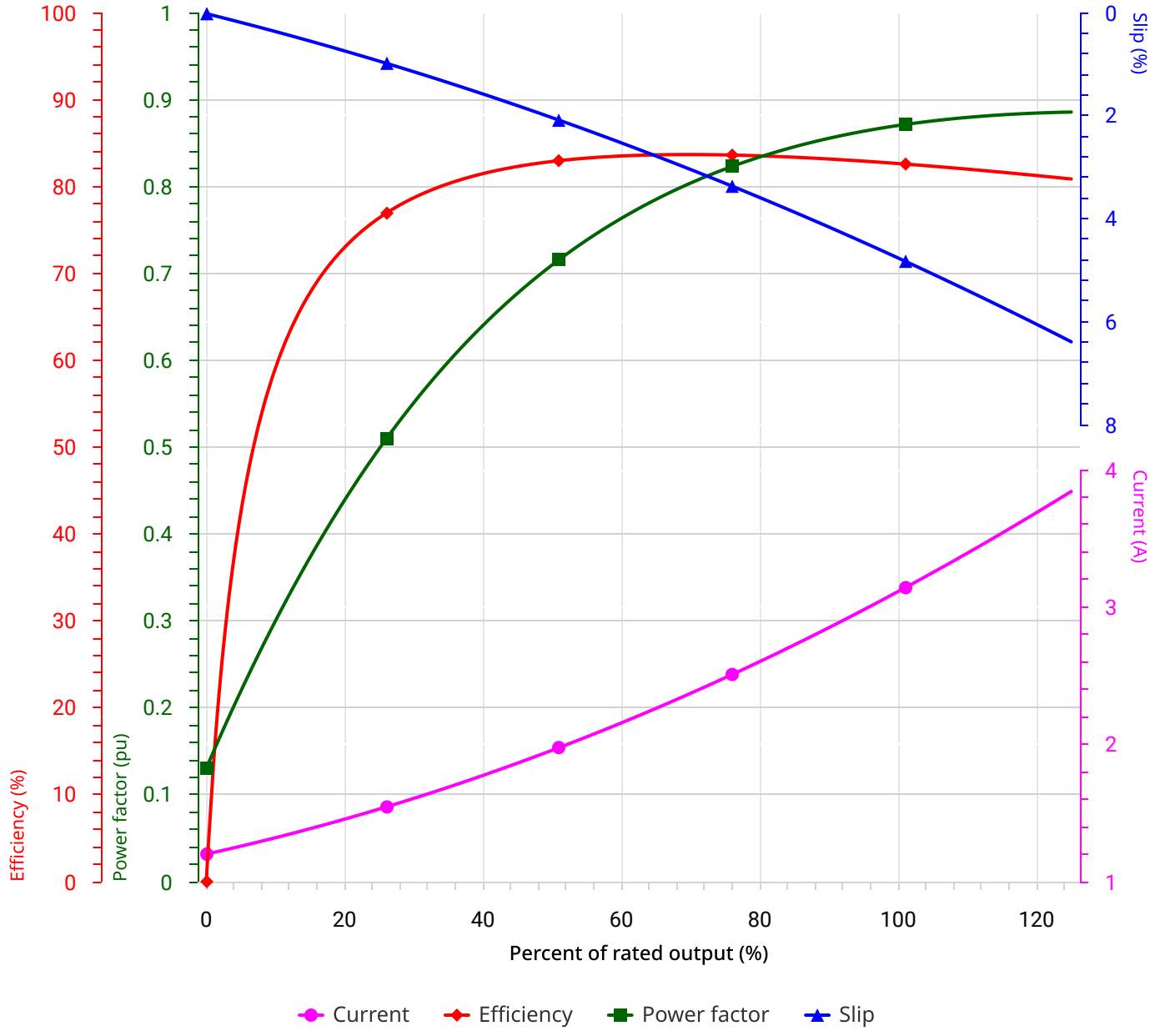
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## LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

| | |
|---|---|
| Customer | : |
| Product line | : W22 Jet Pump Motors JM - Nema Premium Efficiency - Derating |
| Product code | : 11642183 |




| | |
|---|---|
| Performance | : 2 HP (1.5 kW) 380V 50Hz 2P 143/5JM |

| | | | |
|---|---|---|---|
| Rated current | : 3.18 A | Moment of inertia (J) | : 0.0026 kgm² |
| LRC | : 6.6 Code H | Duty cycle | : Cont.(S1) |
| Rated torque | : 0.508 kgfm | Insulation class | : F |
| Locked rotor torque | : 200 % | Service factor | : 1.25 |
| Breakdown torque | : 250 % | Temperature rise | : 80 K |
| Rated speed | : 2855 rpm | Design | : B |

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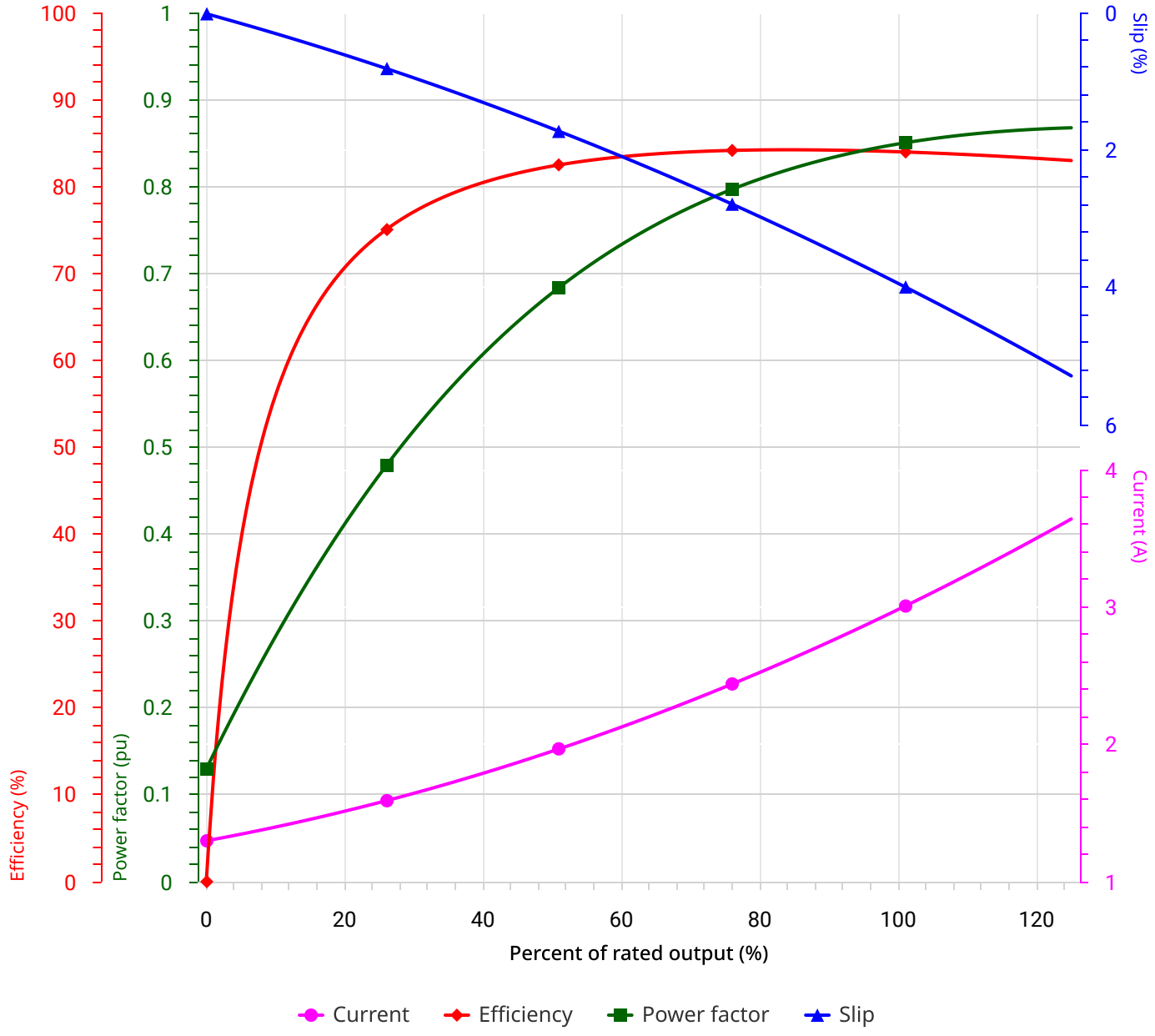
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## LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

| | |
|---|---|
| Customer | : |
| Product line | : W22 Jet Pump Motors JM - Nema Premium Efficiency - Derating |
| Product code | : 11642183 |




| | |
|---|---|
| Performance | : 2 HP (1.5 kW) 400V 50Hz 2P 143/5JM |

| | | | |
|---|---|---|---|
| Rated current | : 3.03 A | Moment of inertia (J) | : 0.0026 kgm² |
| LRC | : 7.2 Code J | Duty cycle | : Cont.(S1) |
| Rated torque | : 0.504 kgfm | Insulation class | : F |
| Locked rotor torque | : 230 % | Service factor | : 1.25 |
| Breakdown torque | : 300 % | Temperature rise | : 80 K |
| Rated speed | : 2880 rpm | Design | : B |

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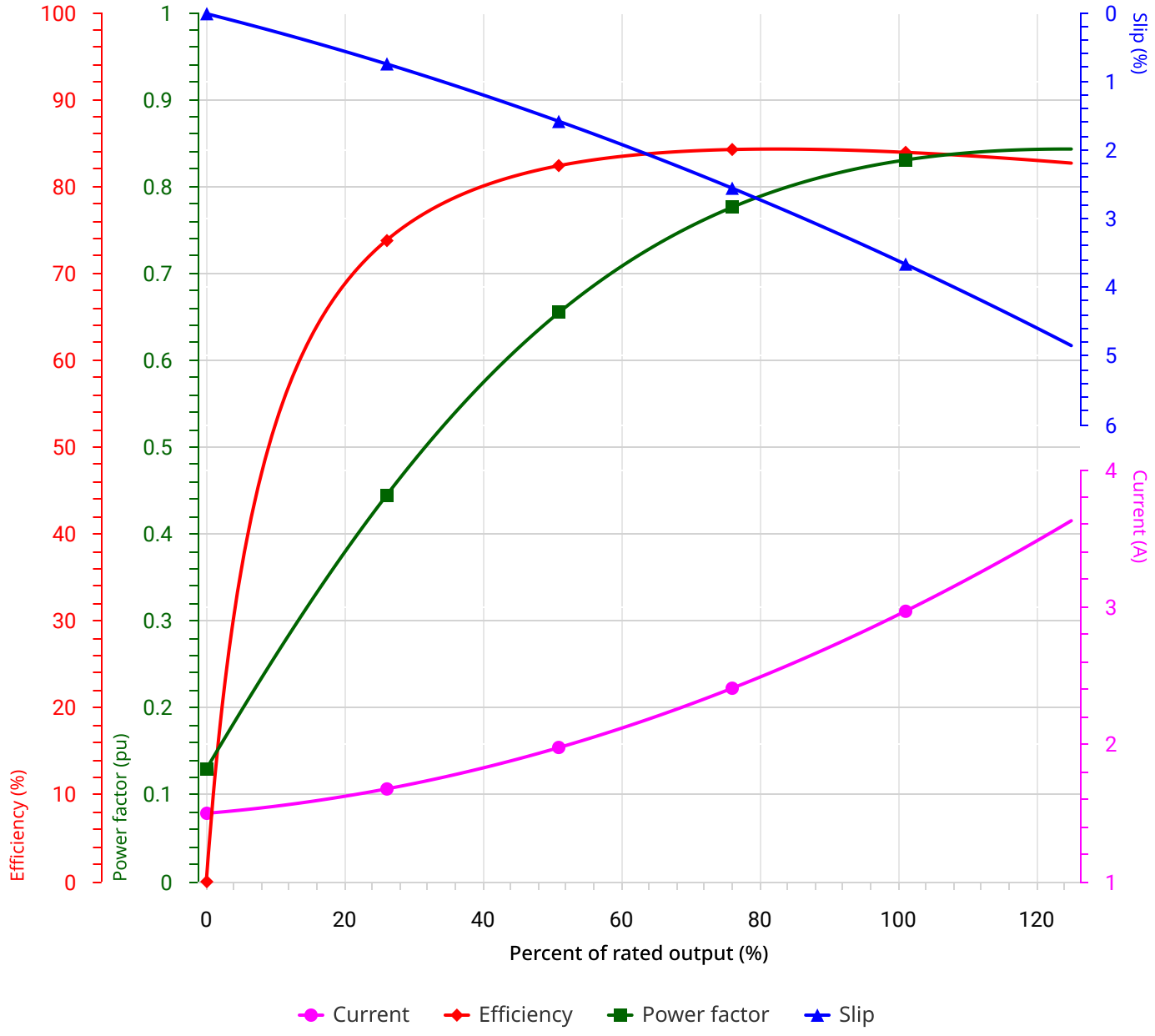
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## LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

| | |
|---|---|
| Customer | : |
| Product line | : W22 Jet Pump Motors JM - Nema Premium Efficiency - Derating |
| Product code | : 11642183 |




| | |
|---|---|
| Performance | : 2 HP (1.5 kW) 415V 50Hz 2P 143/5JM |

| | | | |
|---|---|---|---|
| Rated current | : 2.99 A | Moment of inertia (J) | : 0.0026 kgm² |
| LRC | : 7.8 Code K | Duty cycle | : Cont.(S1) |
| Rated torque | : 0.502 kgfm | Insulation class | : F |
| Locked rotor torque | : 250 % | Service factor | : 1.25 |
| Breakdown torque | : 300 % | Temperature rise | : 80 K |
| Rated speed | : 2890 rpm | Design | : B |

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