

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 11723875

|                                      |                                                 |
|--------------------------------------|-------------------------------------------------|
| Frame : 213/5T                       | Cooling method : IC411 - TEFC                   |
| Insulation class : F                 | Mounting : F-1                                  |
| Duty cycle : Cont.(S1)               | Rotation <sup>1</sup> : Both (CW and CCW)       |
| Ambient temperature : -20°C to +40°C | Starting method : Direct On Line                |
| Altitude : 1000 m.a.s.l.             | Approx. weight <sup>3</sup> : 75.2 kg           |
| Protection degree : IP55             | Moment of inertia (J) : 0.0566 kgm <sup>2</sup> |
| Design : B                           |                                                 |

|                          |                      |                      |                      |                      |
|--------------------------|----------------------|----------------------|----------------------|----------------------|
| Output [HP]              | 7.5                  | 7.5                  | 7.5                  | 7.5                  |
| Poles                    | 4                    | 4                    | 4                    | 4                    |
| Frequency [Hz]           | 60                   | 50                   | 50                   | 50                   |
| Rated voltage [V]        | 230/460              | 380                  | 400                  | 415                  |
| Rated current [A]        | 18.4/9.18            | 11.0                 | 10.6                 | 10.3                 |
| L. R. Amperes [A]        | 130/65.2             | 61.6                 | 65.7                 | 69.0                 |
| LRC [A]                  | 7.1x(Code H)         | 5.6x(Code F)         | 6.2x(Code G)         | 6.7x(Code H)         |
| No load current [A]      | 8.40/4.20            | 4.10                 | 4.40                 | 4.70                 |
| Rated speed [RPM]        | 1765                 | 1455                 | 1460                 | 1465                 |
| Slip [%]                 | 1.94                 | 3.00                 | 2.67                 | 2.33                 |
| Rated torque [kgfm]      | 3.08                 | 3.74                 | 3.73                 | 3.72                 |
| Locked rotor torque [%]  | 220                  | 170                  | 190                  | 210                  |
| Breakdown torque [%]     | 310                  | 240                  | 270                  | 290                  |
| Service factor           | 1.25                 | 1.25                 | 1.25                 | 1.25                 |
| Temperature rise         | 80 K                 | 80 K                 | 80 K                 | 80 K                 |
| Locked rotor time        | 36s (cold) 20s (hot) | 27s (cold) 15s (hot) | 27s (cold) 15s (hot) | 27s (cold) 15s (hot) |
| Noise level <sup>2</sup> | 58.0 dB(A)           | 56.0 dB(A)           | 56.0 dB(A)           | 56.0 dB(A)           |
| Efficiency (%)           | 25%                  |                      |                      |                      |
|                          | 50%                  | 89.5                 | 89.5                 | 89.5                 |
|                          | 75%                  | 91.0                 | 89.5                 | 90.2                 |
|                          | 100%                 | 91.7                 | 89.6                 | 90.2                 |
| Power Factor             | 25%                  |                      |                      |                      |
|                          | 50%                  | 0.66                 | 0.72                 | 0.69                 |
|                          | 75%                  | 0.76                 | 0.81                 | 0.78                 |
|                          | 100%                 | 0.82                 | 0.85                 | 0.83                 |

Losses at normative operating points (speed;torque), in percentage of rated output power

|            |                |     |     |     |     |
|------------|----------------|-----|-----|-----|-----|
| Losses (%) | P1 (0,9;1,0)   | 8.8 | 8.8 | 8.8 | 8.8 |
|            | P2 (0,5;1,0)   | 7.0 | 7.0 | 7.0 | 7.0 |
|            | P3 (0,25;1,0)  | 6.5 | 6.5 | 6.5 | 6.5 |
|            | P4 (0,9;0,5)   | 4.9 | 4.9 | 4.9 | 4.9 |
|            | P5 (0,5;0,5)   | 3.3 | 3.3 | 3.3 | 3.3 |
|            | P6 (0,5;0,25)  | 2.4 | 2.4 | 2.4 | 2.4 |
|            | P7 (0,25;0,25) | 1.6 | 1.6 | 1.6 | 1.6 |

|                        |                  |                      |                            |
|------------------------|------------------|----------------------|----------------------------|
|                        | <u>Drive end</u> | <u>Non drive end</u> | Foundation loads           |
| Bearing type :         | 6308 ZZ          | 6207 ZZ              | Max. traction : 162 kgf    |
| Sealing :              | V'Ring           | V'Ring               | Max. compression : 237 kgf |
| Lubrication interval : | -                | -                    |                            |
| 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     |
|--------------|-----------------|-----------|---------------|----------|
|              |                 |           |               |          |
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## Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

Notes  
USABLE @208V 19.9A SF 1.15 SFA 22.9A

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# LOAD PERFORMANCE CURVE

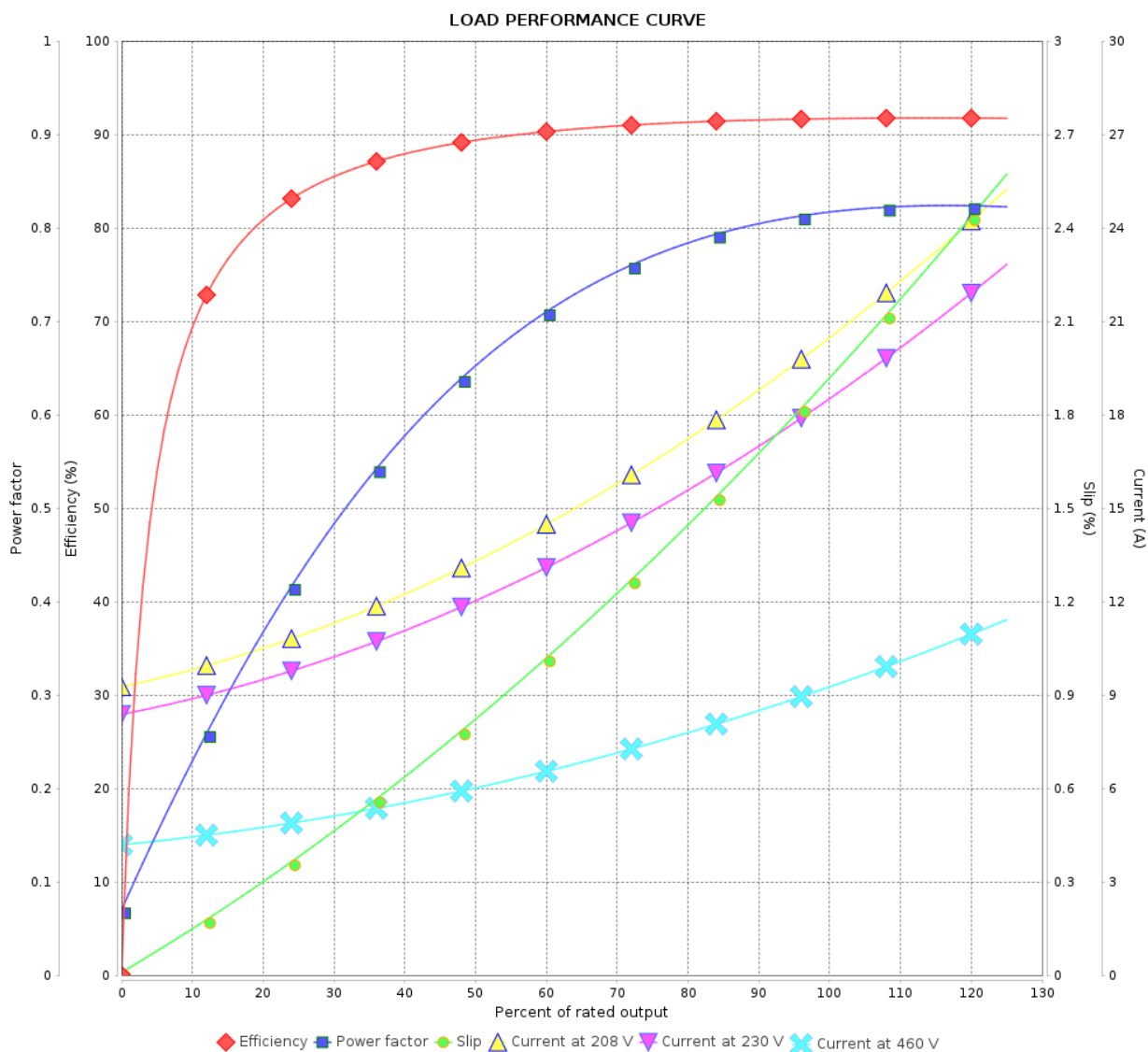
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11723875



Performance : 230/460 V 60 Hz 4P

Rated current : 18.4/9.18 A  
LRC : 7.1  
Rated torque : 3.08 kgfm  
Locked rotor torque : 220 %  
Breakdown torque : 310 %  
Rated speed : 1765 rpm

Moment of inertia (J) : 0.0566 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

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

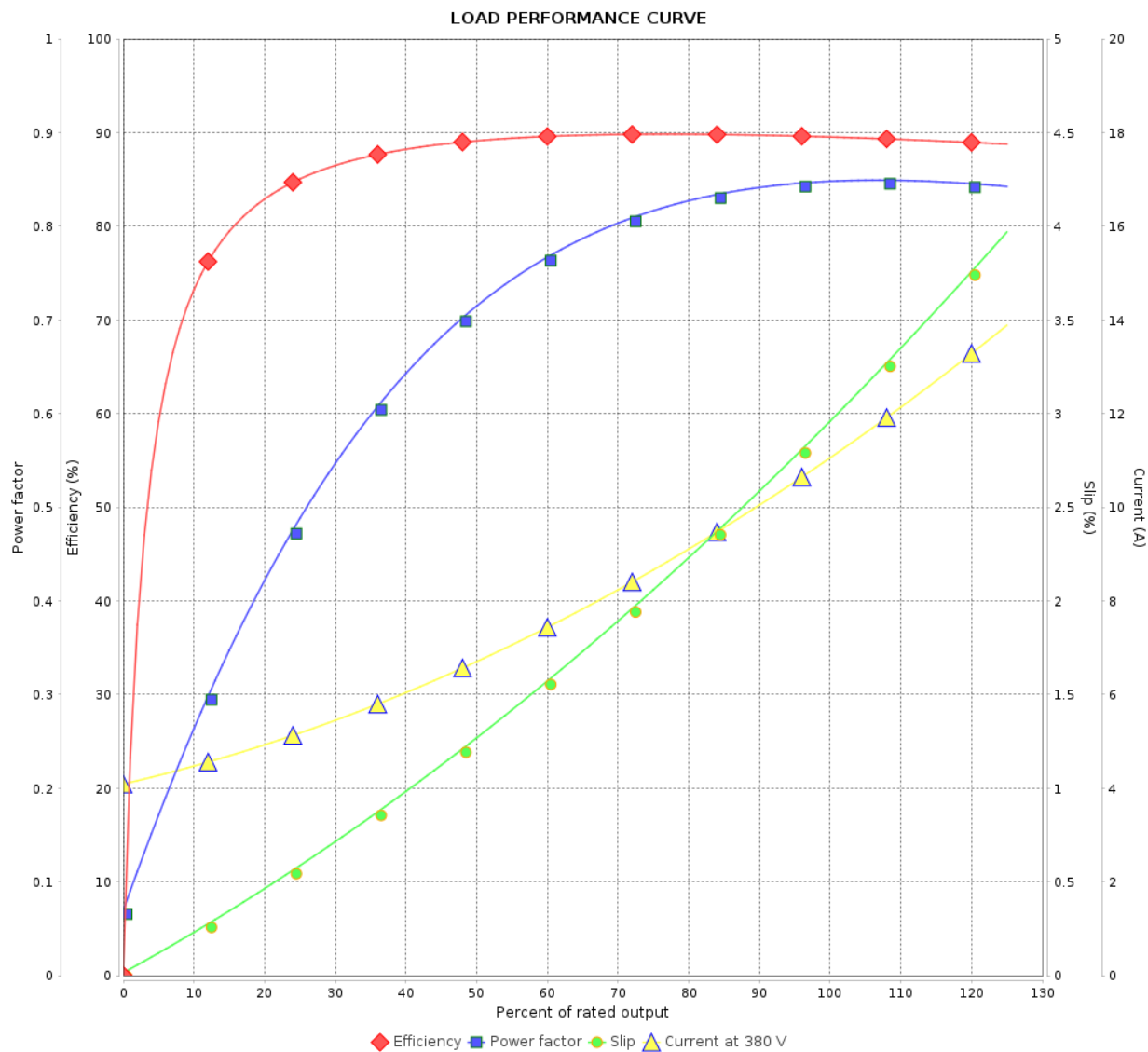
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11723875



Performance : 380 V 50 Hz 4P IE3

Rated current : 11.0 A  
LRC : 5.6  
Rated torque : 3.74 kgfm  
Locked rotor torque : 170 %  
Breakdown torque : 240 %  
Rated speed : 1455 rpm

Moment of inertia (J) : 0.0566 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

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

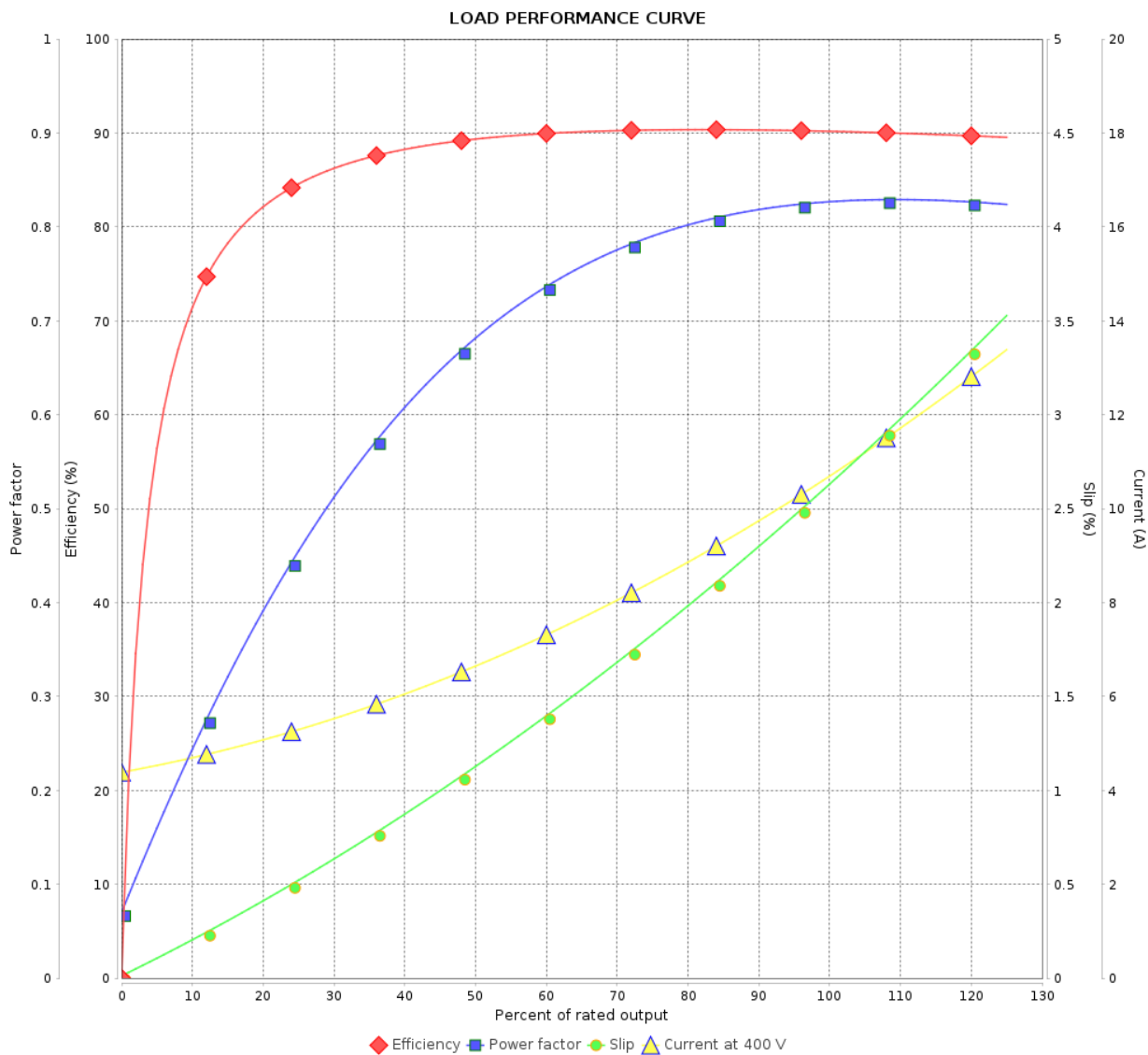
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11723875



Performance : 400 V 50 Hz 4P IE3

Rated current : 10.6 A  
LRC : 6.2  
Rated torque : 3.73 kgfm  
Locked rotor torque : 190 %  
Breakdown torque : 270 %  
Rated speed : 1460 rpm

Moment of inertia (J) : 0.0566 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

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

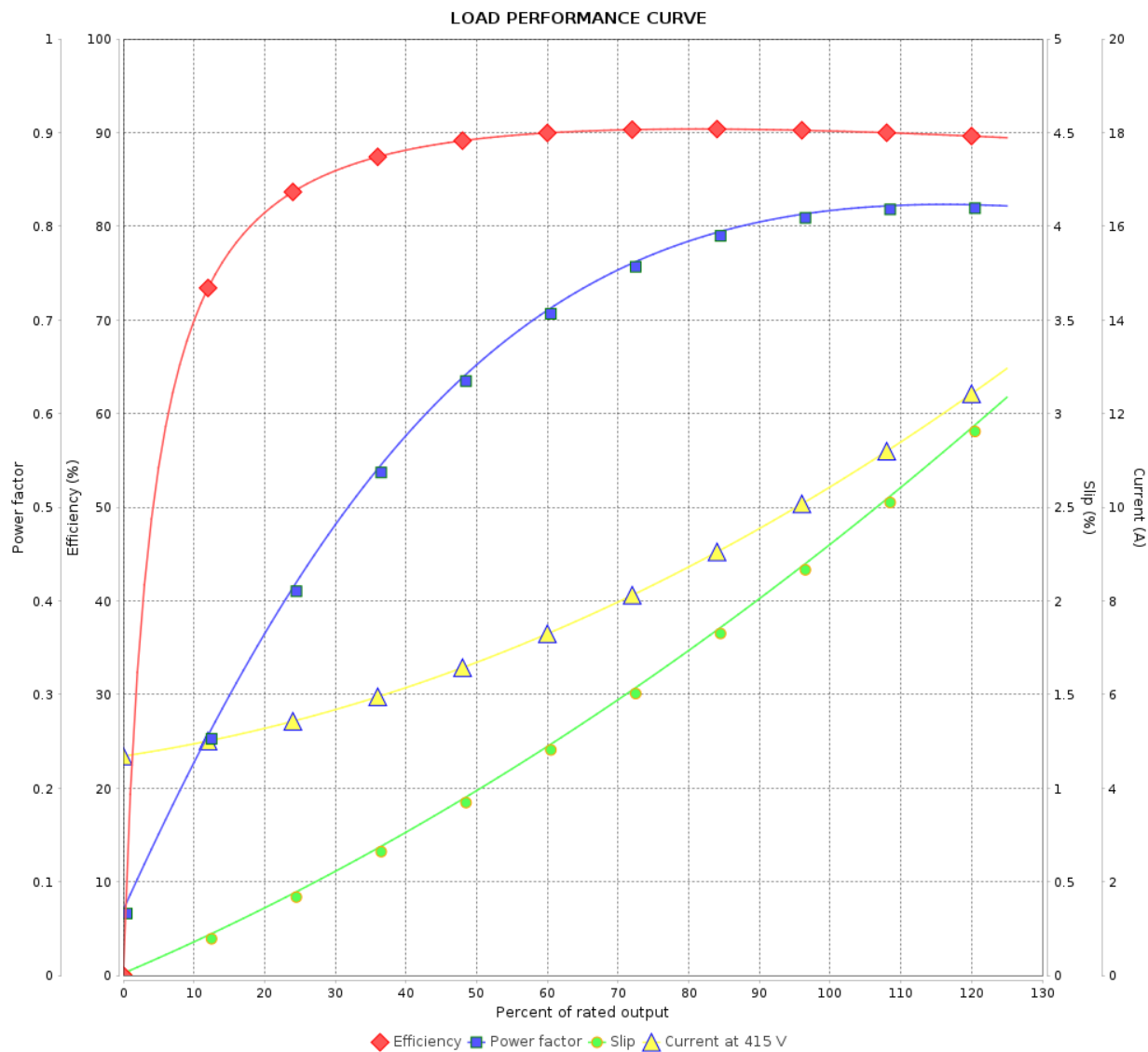
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11723875



Performance : 415 V 50 Hz 4P IE3

Rated current : 10.3 A  
LRC : 6.7  
Rated torque : 3.72 kgfm  
Locked rotor torque : 210 %  
Breakdown torque : 290 %  
Rated speed : 1465 rpm

Moment of inertia (J) : 0.0566 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

| Rev.         | Changes Summary |  | Performed | Checked       | Date     |
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