

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 12424294

|                                      |                                                 |
|--------------------------------------|-------------------------------------------------|
| Frame : 284/6TC                      | 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> : 184 kg            |
| Protection degree : IP56             | Moment of inertia (J) : 0.2153 kgm <sup>2</sup> |
| Design : B                           |                                                 |

|                          |                      |                      |                      |                      |
|--------------------------|----------------------|----------------------|----------------------|----------------------|
| Output [HP]              | 25                   | 25                   | 25                   | 25                   |
| Poles                    | 4                    | 4                    | 4                    | 4                    |
| Frequency [Hz]           | 60                   | 50                   | 50                   | 50                   |
| Rated voltage [V]        | 460                  | 380                  | 400                  | 415                  |
| Rated current [A]        | 29.5                 | 35.9                 | 34.3                 | 33.2                 |
| L. R. Amperes [A]        | 183                  | 190                  | 189                  | 196                  |
| LRC [A]                  | 6.2x(Code G)         | 5.3x(Code F)         | 5.5x(Code F)         | 5.9x(Code G)         |
| No load current [A]      | 11.0                 | 11.0                 | 11.7                 | 12.4                 |
| Rated speed [RPM]        | 1770                 | 1455                 | 1460                 | 1465                 |
| Slip [%]                 | 1.67                 | 3.00                 | 2.67                 | 2.33                 |
| Rated torque [kgfm]      | 10.3                 | 12.5                 | 12.4                 | 12.4                 |
| Locked rotor torque [%]  | 240                  | 180                  | 200                  | 220                  |
| Breakdown torque [%]     | 270                  | 210                  | 240                  | 260                  |
| Service factor           | 1.25                 | 1.00                 | 1.00                 | 1.00                 |
| Temperature rise         | 80 K                 | 105 K                | 105 K                | 105 K                |
| Locked rotor time        | 43s (cold) 24s (hot) | 25s (cold) 14s (hot) | 25s (cold) 14s (hot) | 25s (cold) 14s (hot) |
| Noise level <sup>2</sup> | 63.0 dB(A)           | 61.0 dB(A)           | 61.0 dB(A)           | 61.0 dB(A)           |
| Efficiency (%)           | 25%                  |                      |                      |                      |
|                          | 50%                  | 92.4                 | 92.4                 | 92.4                 |
|                          | 75%                  | 93.0                 | 91.7                 | 92.4                 |
|                          | 100%                 | 93.6                 | 91.0                 | 92.4                 |
| Power Factor             | 25%                  |                      |                      |                      |
|                          | 50%                  | 0.70                 | 0.76                 | 0.70                 |
|                          | 75%                  | 0.80                 | 0.84                 | 0.80                 |
|                          | 100%                 | 0.84                 | 0.86                 | 0.85                 |

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

|            |                |     |     |     |     |
|------------|----------------|-----|-----|-----|-----|
| Losses (%) | P1 (0,9;1,0)   | 6.8 | 6.8 | 6.8 | 6.8 |
|            | P2 (0,5;1,0)   | 5.8 | 5.8 | 5.8 | 5.8 |
|            | P3 (0,25;1,0)  | 5.3 | 5.3 | 5.3 | 5.3 |
|            | P4 (0,9;0,5)   | 3.1 | 3.1 | 3.1 | 3.1 |
|            | P5 (0,5;0,5)   | 2.2 | 2.2 | 2.2 | 2.2 |
|            | P6 (0,5;0,25)  | 1.4 | 1.4 | 1.4 | 1.4 |
|            | P7 (0,25;0,25) | 1.0 | 1.0 | 1.0 | 1.0 |

|                        |                  |                      |                            |
|------------------------|------------------|----------------------|----------------------------|
|                        | <u>Drive end</u> | <u>Non drive end</u> | Foundation loads           |
| Bearing type :         | 6311 C3          | 6211 C3              | Max. traction : 368 kgf    |
| Sealing :              | Inpro/Seal       | Inpro/Seal           | Max. compression : 553 kgf |
| Lubrication interval : | 20000 h          | 20000 h              |                            |
| Lubricant amount :     | 18 g             | 11 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.  
 (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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| Checked by   |                 |           |         |      |
| Date         | 22/10/2024      |           |         |      |

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Revision

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## Three Phase Induction Motor - Squirrel Cage



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

Notes

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| Date         | 22/10/2024      |  |               |         |          |

# LOAD PERFORMANCE CURVE

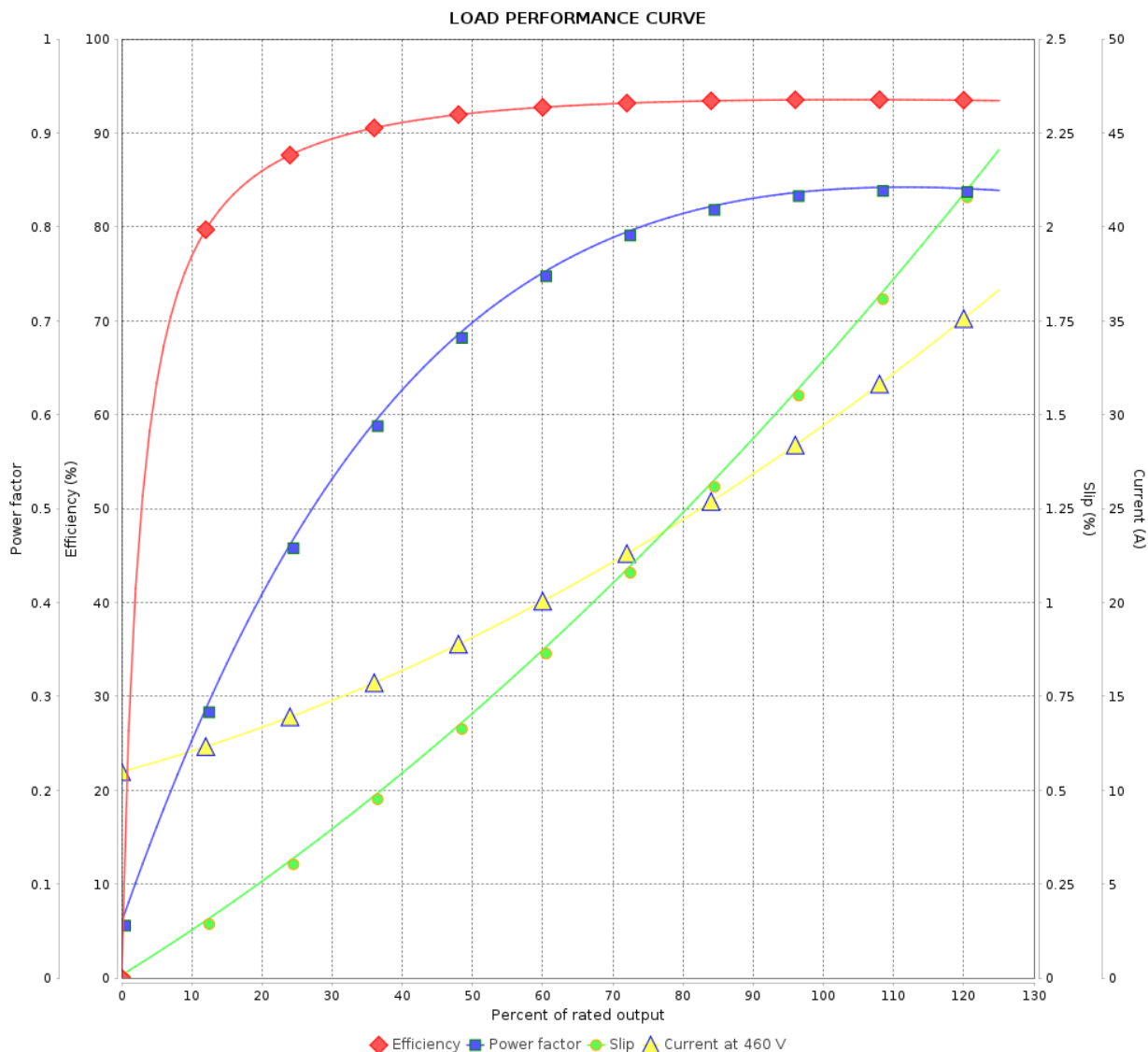
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium  
Efficiency Three-Phase

Product code : 12424294



Performance : 460 V 60 Hz 4P

Rated current : 29.5 A  
LRC : 6.2  
Rated torque : 10.3 kgfm  
Locked rotor torque : 240 %  
Breakdown torque : 270 %  
Rated speed : 1770 rpm

Moment of inertia (J) : 0.2153 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

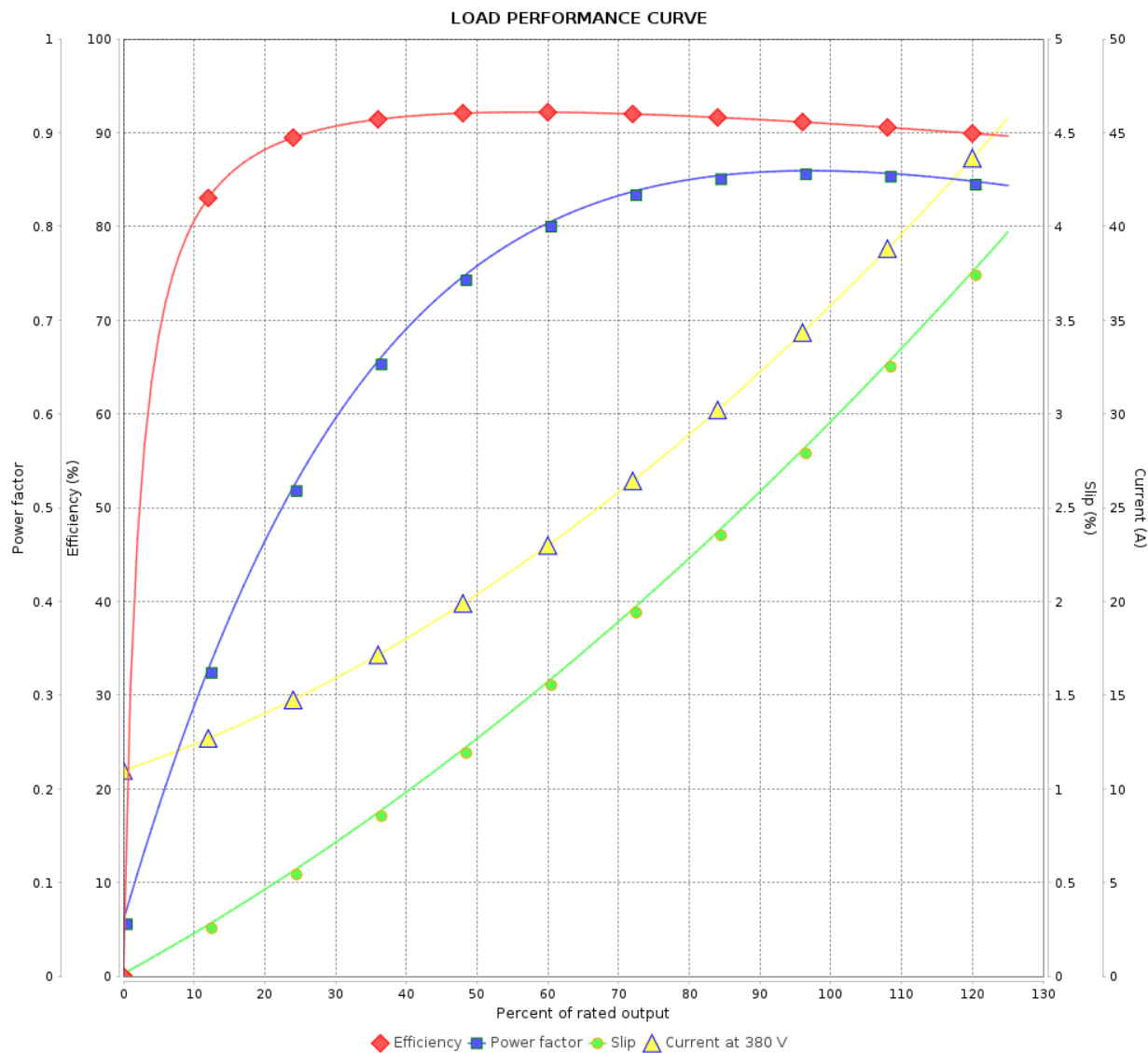
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium  
Efficiency Three-Phase

Product code : 12424294



Performance : 380 V 50 Hz 4P IE1

Rated current : 35.9 A  
LRC : 5.3  
Rated torque : 12.5 kgfm  
Locked rotor torque : 180 %  
Breakdown torque : 210 %  
Rated speed : 1455 rpm

Moment of inertia (J) : 0.2153 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 105 K  
Design : B

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

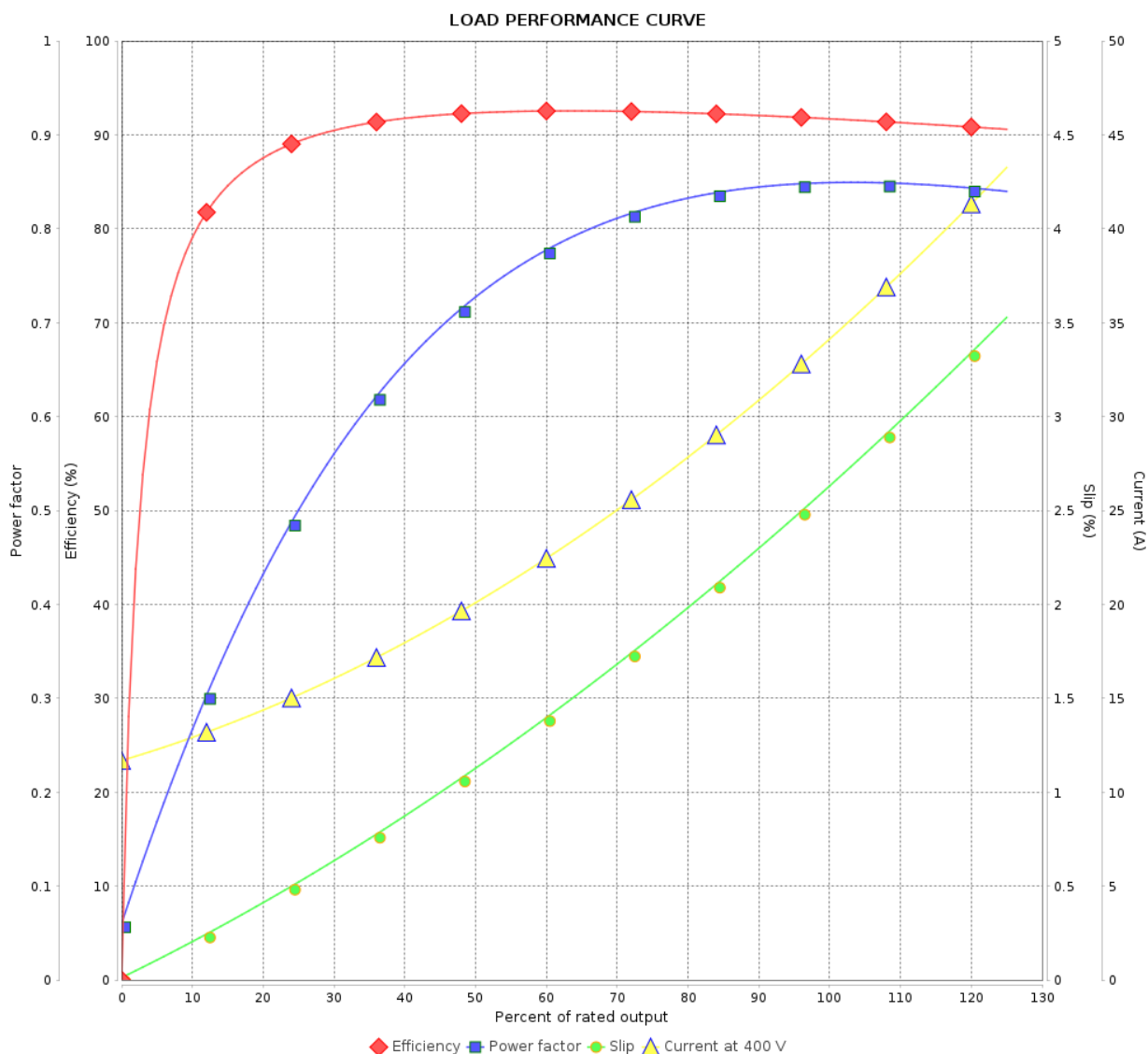
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium  
Efficiency Three-Phase

Product code : 12424294



Performance : 400 V 50 Hz 4P IE2

Rated current : 34.3 A  
LRC : 5.5  
Rated torque : 12.4 kgfm  
Locked rotor torque : 200 %  
Breakdown torque : 240 %  
Rated speed : 1460 rpm

Moment of inertia (J) : 0.2153 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 105 K  
Design : B

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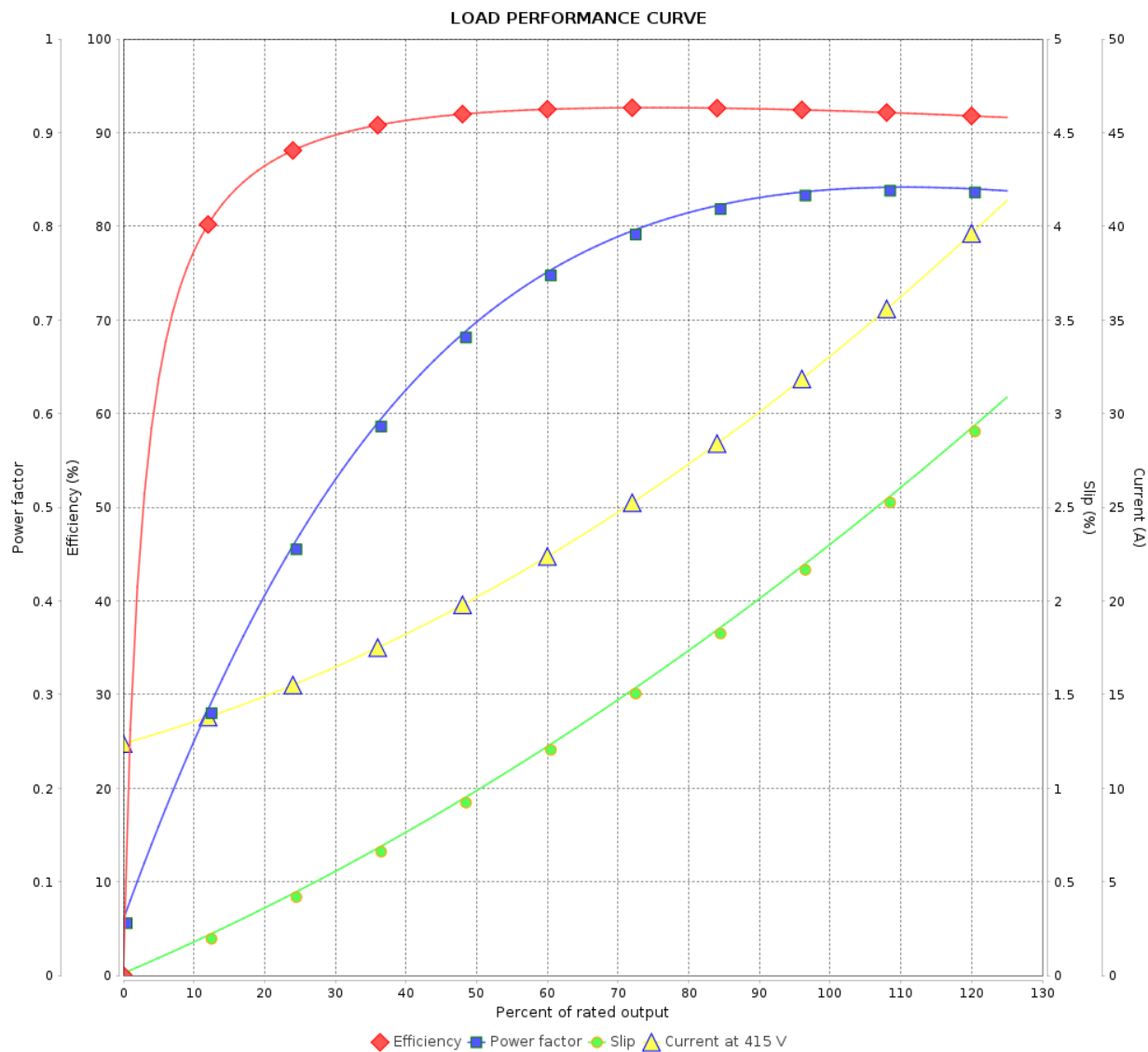
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium  
Efficiency Three-Phase

Product code : 12424294



Performance : 415 V 50 Hz 4P IE2

Rated current : 33.2 A  
LRC : 5.9  
Rated torque : 12.4 kgfm  
Locked rotor torque : 220 %  
Breakdown torque : 260 %  
Rated speed : 1465 rpm

Moment of inertia (J) : 0.2153 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 105 K  
Design : B

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