

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Close Coupled Pump NEMA Premium Efficiency Three-Phase Product code : 11083242

|                                      |                                                 |
|--------------------------------------|-------------------------------------------------|
| Frame : 213/5JM                      | Cooling method : IC01 - ODP                     |
| 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> : 58.9 kg           |
| Protection degree : IP21             | Moment of inertia (J) : 0.0243 kgm <sup>2</sup> |
| Design : B                           |                                                 |

|                          |                        |                        |                        |                        |                        |                        |                        |
|--------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Output [HP]              | 15                     | 10                     | 10                     | 10                     | 15                     | 15                     | 15                     |
| 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]        | 34.8/17.4              | 14.3                   | 13.7                   | 13.4                   | 21.5                   | 20.6                   | 19.9                   |
| L. R. Amperes [A]        | 251/125                | 93.0                   | 95.9                   | 93.8                   | 112                    | 122                    | 127                    |
| LRC [A]                  | 7.2x(Code H)           | 6.5x(Code J)           | 7.0x(Code K)           | 7.0x(Code K)           | 5.2x(Code F)           | 5.9x(Code G)           | 6.4x(Code G)           |
| No load current [A]      | 11.6/5.80              | 5.50                   | 5.60                   | 5.70                   | 5.12                   | 5.90                   | 6.68                   |
| Rated speed [RPM]        | 3515                   | 2930                   | 2935                   | 2935                   | 2885                   | 2900                   | 2910                   |
| Slip [%]                 | 2.36                   | 2.33                   | 2.17                   | 2.17                   | 3.83                   | 3.33                   | 3.00                   |
| Rated torque [kgfm]      | 3.10                   | 2.47                   | 2.47                   | 2.46                   | 3.79                   | 3.76                   | 3.74                   |
| Locked rotor torque [%]  | 210                    | 210                    | 229                    | 250                    | 170                    | 190                    | 210                    |
| Breakdown torque [%]     | 270                    | 280                    | 310                    | 330                    | 229                    | 260                    | 290                    |
| 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        | 16s (cold)<br>9s (hot) | 12s (cold)<br>7s (hot) | 12s (cold)<br>7s (hot) | 12s (cold)<br>7s (hot) | 12s (cold)<br>7s (hot) | 12s (cold)<br>7s (hot) | 12s (cold)<br>7s (hot) |
| Noise level <sup>2</sup> | 69.0 dB(A)             |                        |                        |                        |                        |                        |                        |
| Efficiency (%)           | 25%                    |                        |                        |                        |                        |                        |                        |
|                          | 50%                    | 90.2                   | 88.0                   | 88.0                   | 89.0                   | 86.5                   | 86.5                   |
|                          | 75%                    | 91.0                   | 90.0                   | 90.0                   | 90.0                   | 86.5                   | 86.5                   |
|                          | 100%                   | 91.0                   | 90.5                   | 90.5                   | 90.7                   | 86.5                   | 86.5                   |
| Power Factor             | 25%                    |                        |                        |                        |                        |                        |                        |
|                          | 50%                    | 0.73                   | 0.75                   | 0.74                   | 0.70                   | 0.84                   | 0.80                   |
|                          | 75%                    | 0.82                   | 0.85                   | 0.83                   | 0.81                   | 0.89                   | 0.86                   |
|                          | 100%                   | 0.87                   | 0.88                   | 0.87                   | 0.86                   | 0.90                   | 0.89                   |

|                        |                  |                      |                            |
|------------------------|------------------|----------------------|----------------------------|
|                        | <u>Drive end</u> | <u>Non drive end</u> | Foundation loads           |
| Bearing type :         | 6209 ZZ          | 6206 ZZ              | Max. traction : 171 kgf    |
| Sealing :              | Without          | Without              | Max. compression : 230 kgf |
|                        | Bearing Seal     | Bearing Seal         |                            |
| Lubrication interval : | -                | -                    |                            |
| Lubricant amount :     | -                | -                    |                            |
| Lubricant type :       | Mobil Polyrex EM |                      |                            |

Notes  
USABLE @208V 38.5A SF 1.15 SFA 44.3A

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.

| Rev.         | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|---------|------|
|              |                 |           |         |      |
| Performed by |                 |           |         |      |
| Checked by   |                 |           |         |      |
| Date         | 23/10/2024      |           |         |      |

Page 1 / 8  
Revision

# LOAD PERFORMANCE CURVE

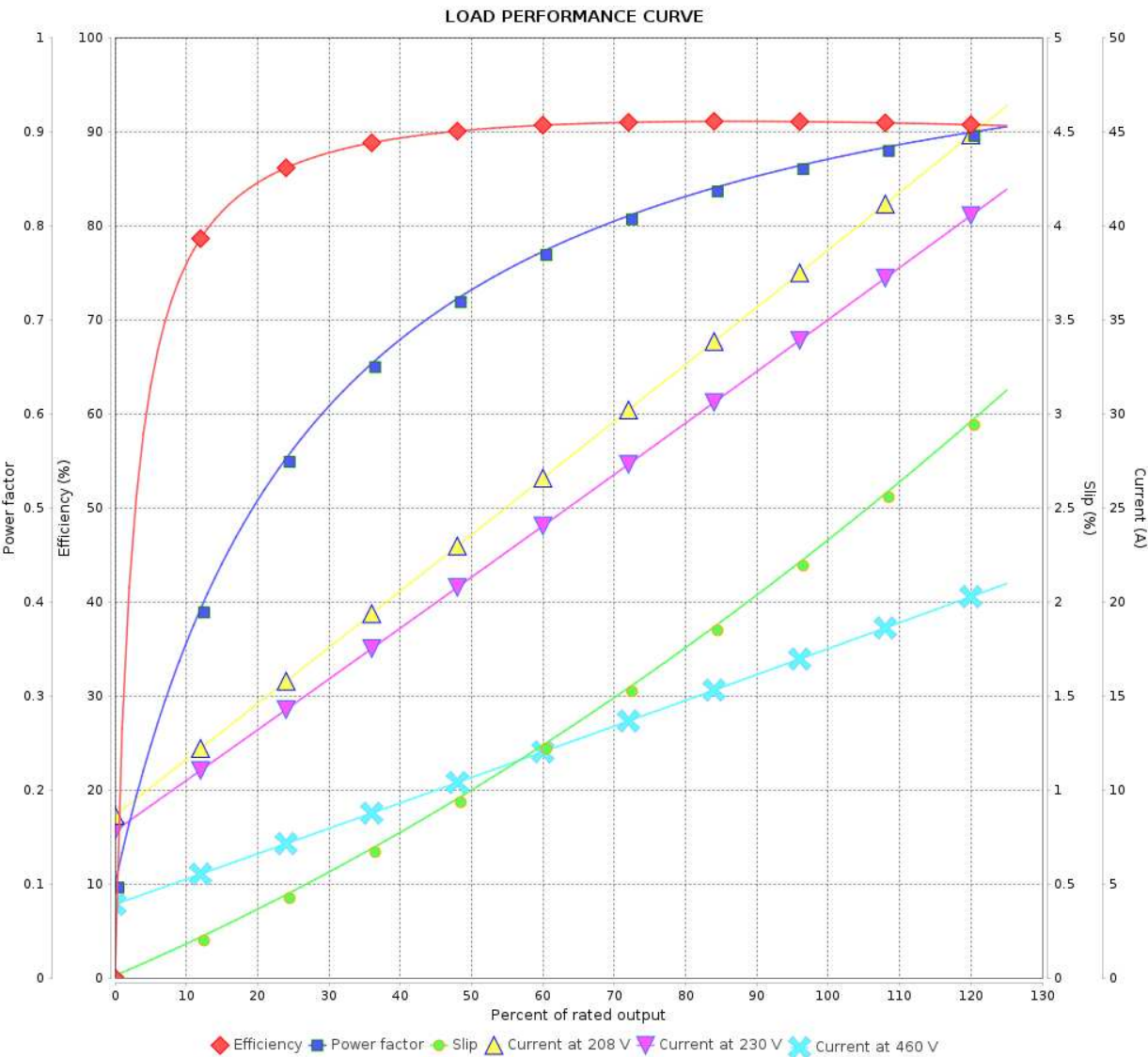
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11083242



Performance : 230/460 V 60 Hz 2P

Rated current : 34.8/17.4 A  
LRC : 7.2  
Rated torque : 3.10 kgfm  
Locked rotor torque : 210 %  
Breakdown torque : 270 %  
Rated speed : 3515 rpm

Moment of inertia (J) : 0.0243 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

| Rev.         | Changes Summary |  | Performed | Checked       | Date     |
|--------------|-----------------|--|-----------|---------------|----------|
|              |                 |  |           |               |          |
| Performed by |                 |  |           | Page<br>2 / 8 | Revision |
| Checked by   |                 |  |           |               |          |
| Date         | 23/10/2024      |  |           |               |          |

# LOAD PERFORMANCE CURVE

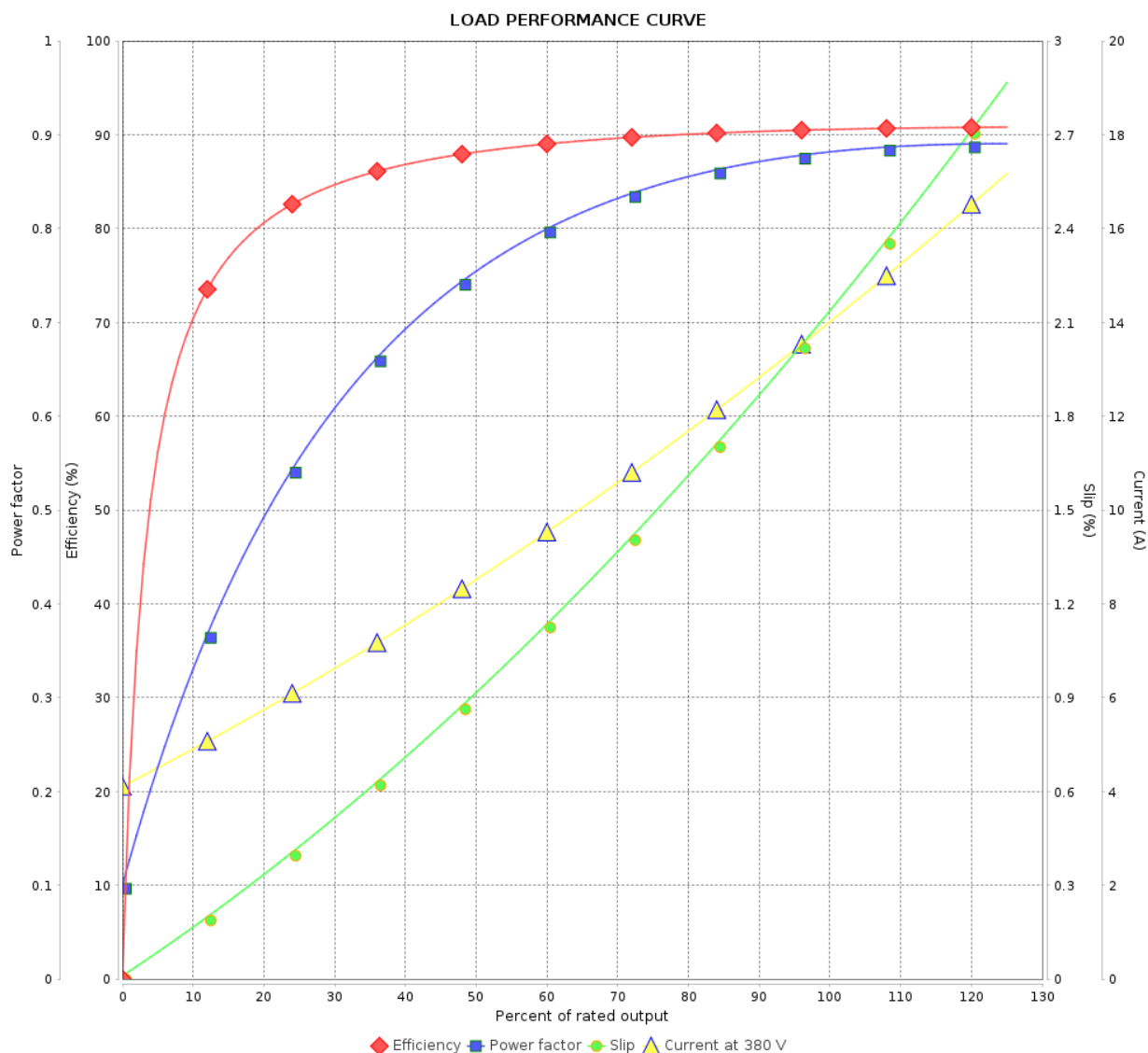
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11083242



Performance : 380 V 50 Hz 2P IE3

Rated current : 14.3 A  
LRC : 6.5  
Rated torque : 2.47 kgfm  
Locked rotor torque : 210 %  
Breakdown torque : 280 %  
Rated speed : 2930 rpm

Moment of inertia (J) : 0.0243 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

| Rev.         | Changes Summary | Performed             | Checked | Date |
|--------------|-----------------|-----------------------|---------|------|
|              |                 |                       |         |      |
| Performed by |                 | Page<br>3 / 8Revision |         |      |
| Checked by   |                 |                       |         |      |
| Date         | 23/10/2024      |                       |         |      |

# LOAD PERFORMANCE CURVE

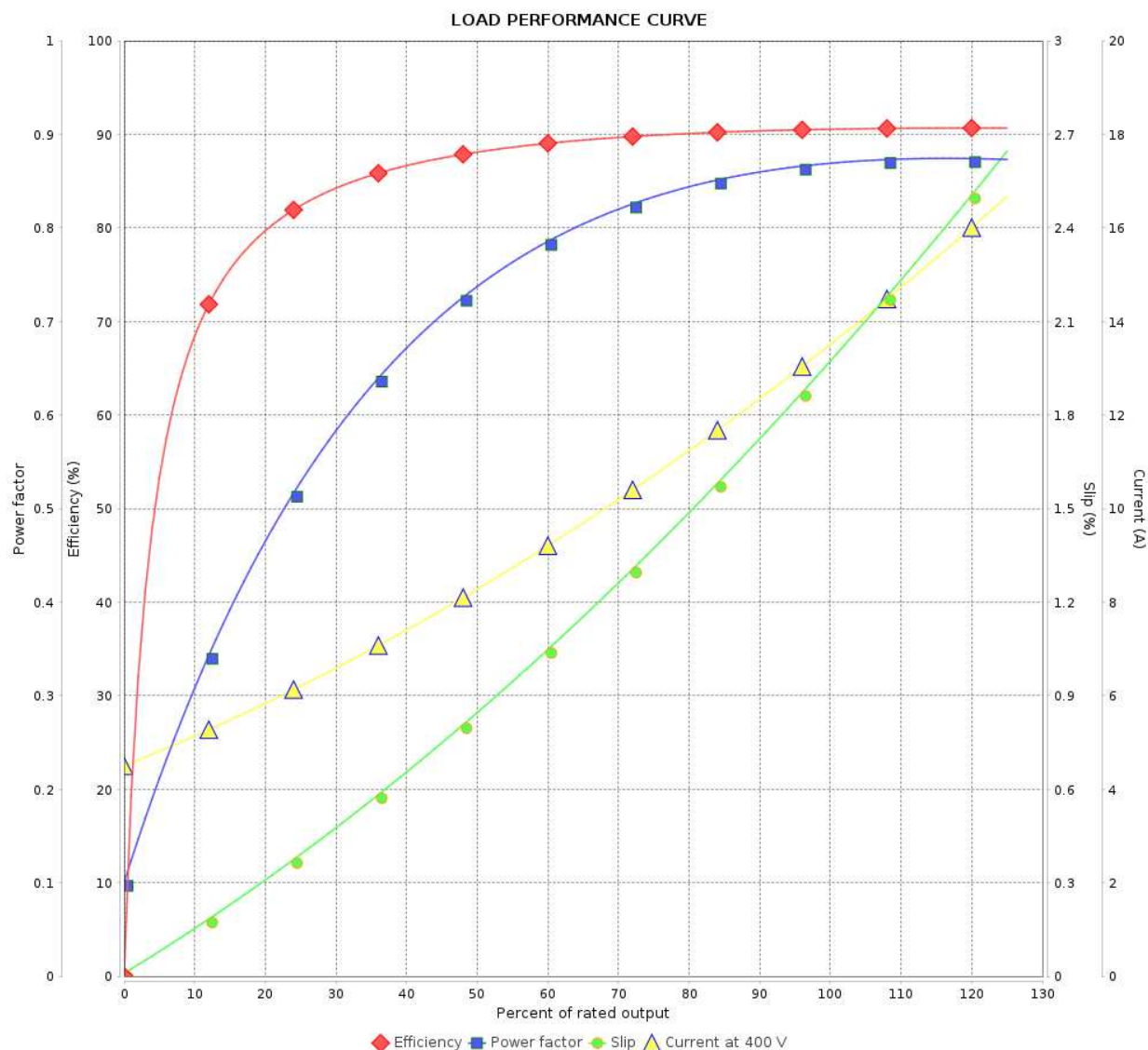
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11083242



Performance : 400 V 50 Hz 2P IE3

Rated current : 13.7 A  
LRC : 7.0  
Rated torque : 2.47 kgfm  
Locked rotor torque : 229 %  
Breakdown torque : 310 %  
Rated speed : 2935 rpm

Moment of inertia (J) : 0.0243 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

| Rev.         | Changes Summary | Performed              | Checked | Date |
|--------------|-----------------|------------------------|---------|------|
|              |                 |                        |         |      |
| Performed by |                 | Page Revision<br>4 / 8 |         |      |
| Checked by   |                 |                        |         |      |
| Date         | 23/10/2024      |                        |         |      |

# LOAD PERFORMANCE CURVE

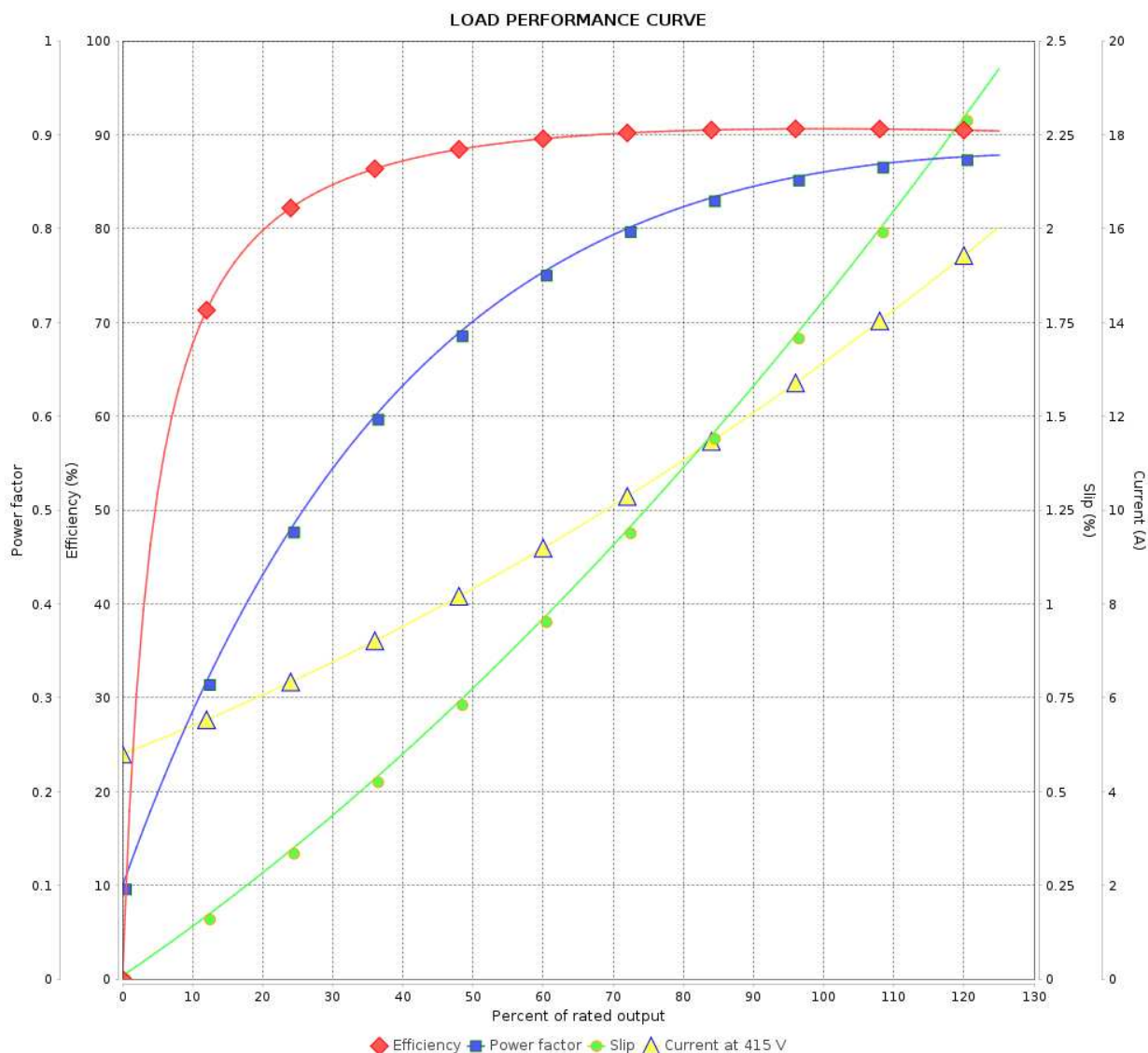
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11083242



Performance : 415 V 50 Hz 2P IE3

Rated current : 13.4 A  
LRC : 7.0  
Rated torque : 2.46 kgfm  
Locked rotor torque : 250 %  
Breakdown torque : 330 %  
Rated speed : 2935 rpm

Moment of inertia (J) : 0.0243 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

| Rev.         | Changes Summary | Performed              | Checked | Date |
|--------------|-----------------|------------------------|---------|------|
|              |                 |                        |         |      |
| Performed by |                 | Page 5 / 8<br>Revision |         |      |
| Checked by   |                 |                        |         |      |
| Date         | 23/10/2024      |                        |         |      |

# LOAD PERFORMANCE CURVE

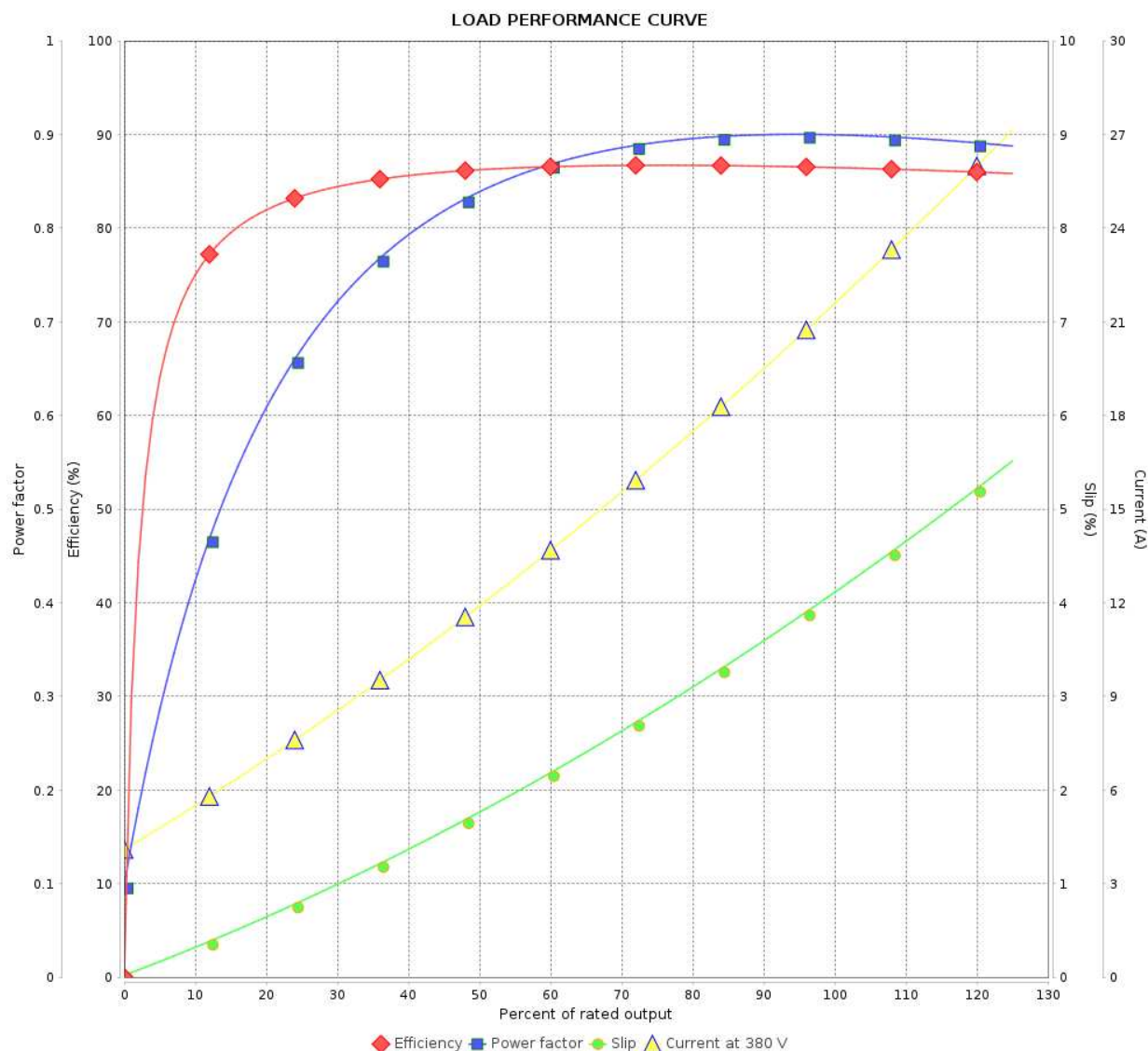
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11083242



Performance : 380 V 50 Hz 2P

Rated current : 21.5 A  
LRC : 5.2  
Rated torque : 3.79 kgfm  
Locked rotor torque : 170 %  
Breakdown torque : 229 %  
Rated speed : 2885 rpm

Moment of inertia (J) : 0.0243 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

| Rev.         | Changes Summary | Performed           | Checked | Date |
|--------------|-----------------|---------------------|---------|------|
|              |                 |                     |         |      |
| Performed by |                 | Page 6 / 8 Revision |         |      |
| Checked by   |                 |                     |         |      |
| Date         | 23/10/2024      |                     |         |      |

# LOAD PERFORMANCE CURVE

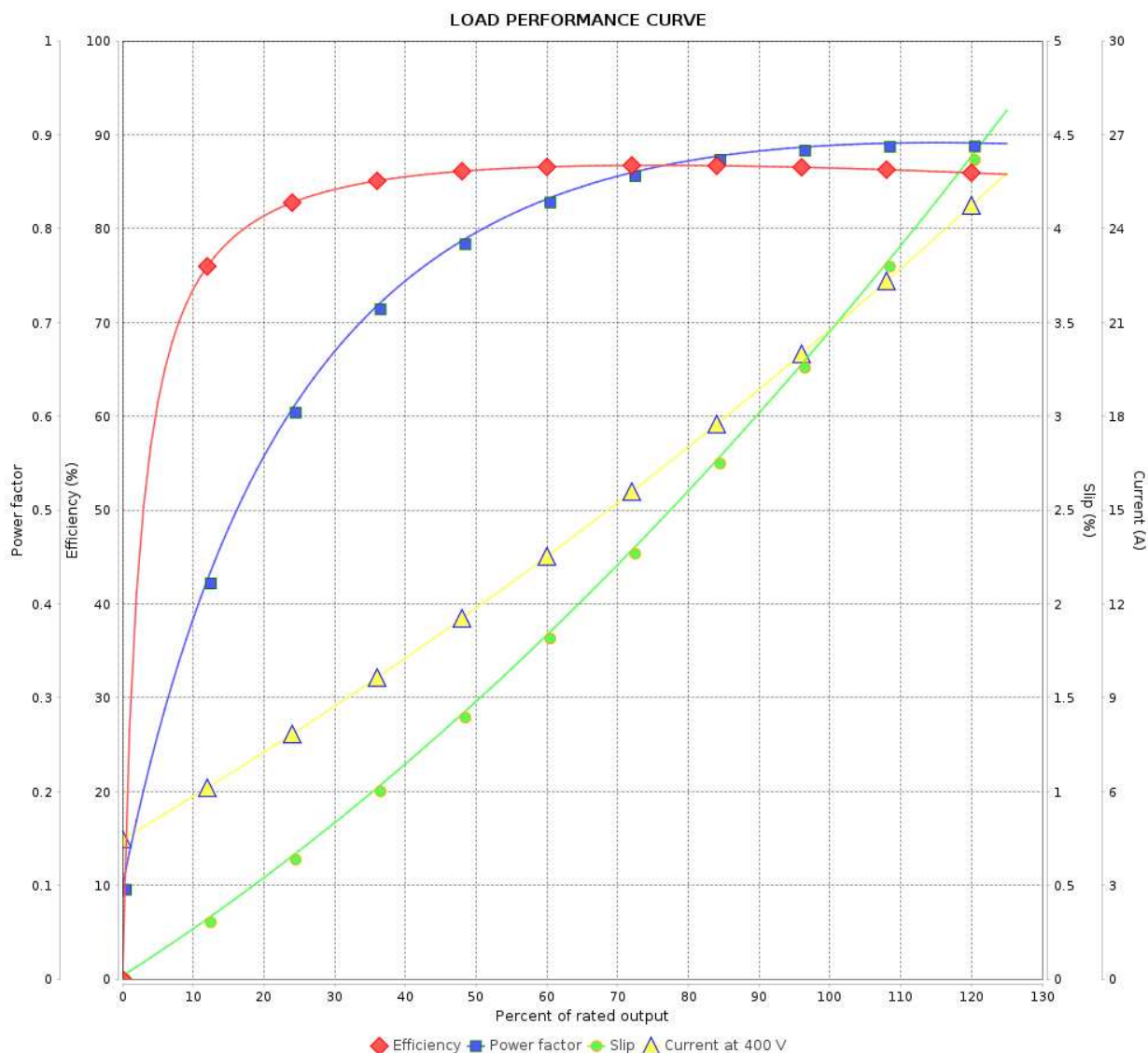
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11083242



Performance : 400 V 50 Hz 2P

Rated current : 20.6 A  
LRC : 5.9  
Rated torque : 3.76 kgfm  
Locked rotor torque : 190 %  
Breakdown torque : 260 %  
Rated speed : 2900 rpm

Moment of inertia (J) : 0.0243 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

| Rev.         | Changes Summary | Performed              | Checked | Date |
|--------------|-----------------|------------------------|---------|------|
|              |                 |                        |         |      |
| Performed by |                 | Page 7 / 8<br>Revision |         |      |
| Checked by   |                 |                        |         |      |
| Date         | 23/10/2024      |                        |         |      |

# LOAD PERFORMANCE CURVE

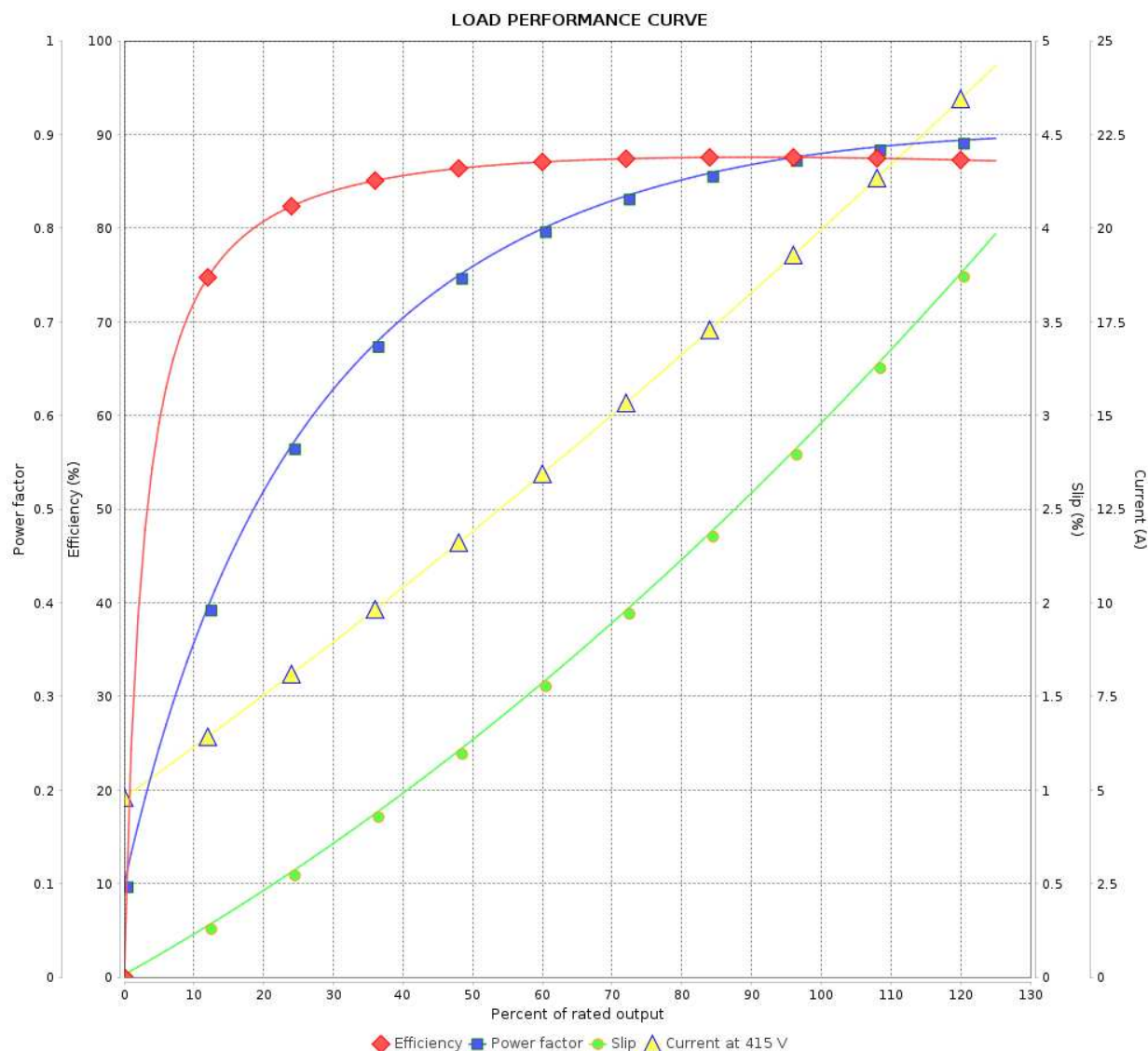
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11083242



Performance : 415 V 50 Hz 2P

Rated current : 19.9 A  
LRC : 6.4  
Rated torque : 3.74 kgfm  
Locked rotor torque : 210 %  
Breakdown torque : 290 %  
Rated speed : 2910 rpm

Moment of inertia (J) : 0.0243 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

| Rev.         | Changes Summary |  | Performed | Checked | Date     |
|--------------|-----------------|--|-----------|---------|----------|
|              |                 |  |           |         |          |
| Performed by |                 |  |           | Page    | Revision |
| Checked by   |                 |  |           | 8 / 8   |          |
| Date         |                 |  |           |         |          |

