

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Close Coupled Pump NEMA Premium Efficiency Three-Phase Product code : 11833190

|                                      |                                                 |
|--------------------------------------|-------------------------------------------------|
| Frame : 284JM                        | 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> : 144 kg            |
| Protection degree : IP23             | Moment of inertia (J) : 0.0795 kgm <sup>2</sup> |
| Design : B                           |                                                 |

|                          |                         |                         |                         |                         |                         |                         |                         |
|--------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Output [HP]              | 30                      | 25                      | 25                      | 25                      | 30                      | 30                      | 30                      |
| 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]        | 70.0/35.0               | 35.0                    | 34.0                    | 33.6                    | 42.4                    | 40.9                    | 40.2                    |
| L. R. Amperes [A]        | 441/221                 | 231                     | 238                     | 225                     | 225                     | 237                     | 261                     |
| LRC [A]                  | 6.3x(Code G)            | 6.6x(Code G)            | 7.0x(Code H)            | 6.7x(Code H)            | 5.3x(Code E)            | 5.8x(Code F)            | 6.5x(Code G)            |
| No load current [A]      | 25.8/12.9               | 12.0                    | 13.0                    | 14.0                    | 11.5                    | 12.5                    | 14.0                    |
| Rated speed [RPM]        | 3550                    | 2945                    | 2950                    | 2955                    | 2925                    | 2935                    | 2945                    |
| Slip [%]                 | 1.39                    | 1.83                    | 1.67                    | 1.50                    | 2.50                    | 2.17                    | 1.83                    |
| Rated torque [kgfm]      | 6.13                    | 6.16                    | 6.15                    | 6.14                    | 7.44                    | 7.42                    | 7.39                    |
| Locked rotor torque [%]  | 180                     | 170                     | 190                     | 200                     | 160                     | 180                     | 200                     |
| Breakdown torque [%]     | 260                     | 240                     | 260                     | 270                     | 180                     | 200                     | 220                     |
| 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        | 18s (cold)<br>10s (hot) | 23s (cold)<br>13s (hot) | 21s (cold)<br>12s (hot) | 19s (cold)<br>11s (hot) | 23s (cold)<br>13s (hot) | 21s (cold)<br>12s (hot) | 19s (cold)<br>11s (hot) |
| Noise level <sup>2</sup> | 72.0 dB(A)              |                         |                         |                         |                         |                         |                         |
| Efficiency (%)           | 25%                     |                         |                         |                         |                         |                         |                         |
|                          | 50%                     | 90.2                    | 89.7                    | 89.8                    | 89.8                    | 90.8                    | 91.0                    |
|                          | 75%                     | 91.7                    | 90.7                    | 90.8                    | 90.8                    | 90.8                    | 91.0                    |
|                          | 100%                    | 91.7                    | 92.4                    | 92.4                    | 92.4                    | 89.5                    | 90.7                    |
| Power Factor             | 25%                     |                         |                         |                         |                         |                         |                         |
|                          | 50%                     | 0.73                    | 0.75                    | 0.70                    | 0.66                    | 0.80                    | 0.71                    |
|                          | 75%                     | 0.82                    | 0.83                    | 0.80                    | 0.77                    | 0.86                    | 0.81                    |
|                          | 100%                    | 0.86                    | 0.87                    | 0.85                    | 0.83                    | 0.88                    | 0.84                    |

|                        |                  |                      |                            |
|------------------------|------------------|----------------------|----------------------------|
|                        | <u>Drive end</u> | <u>Non drive end</u> | Foundation loads           |
| Bearing type :         | 6311 Z C3        | 6211 Z C3            | Max. traction : 160 kgf    |
| Sealing :              | Without          | Without              | Max. compression : 304 kgf |
|                        | Bearing Seal     | Bearing Seal         |                            |
| Lubrication interval : | 20000 h          | 20000 h              |                            |
| Lubricant amount :     | 18 g             | 11 g                 |                            |
| Lubricant type :       | Mobil Polyrex EM |                      |                            |

### Notes

USABLE @208V 76.7A SF 1.15 SFA 88.2A

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         | 24/10/2024      |           |         |      |

Page 1 / 8  
Revision

LOAD PERFORMANCE CURVE

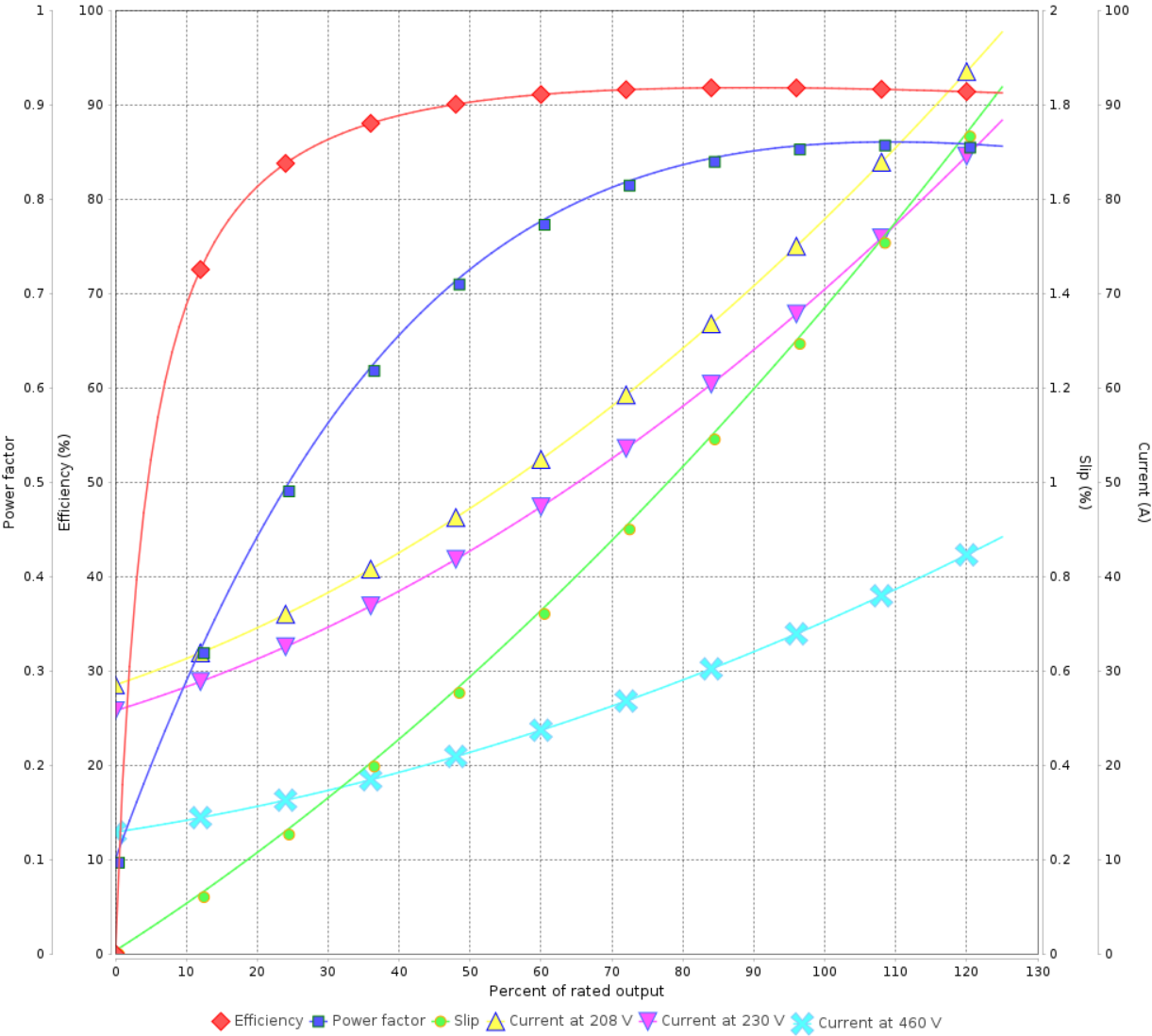
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Close Coupled Pump NEMA Premium Efficiency Three-Phase      Product code : 11833190

LOAD PERFORMANCE CURVE



|                                  |               |                       |                           |
|----------------------------------|---------------|-----------------------|---------------------------|
| Performance : 230/460 V 60 Hz 2P |               |                       |                           |
| Rated current                    | : 70.0/35.0 A | Moment of inertia (J) | : 0.0795 kgm <sup>2</sup> |
| LRC                              | : 6.3         | Duty cycle            | : Cont.(S1)               |
| Rated torque                     | : 6.13 kgfm   | Insulation class      | : F                       |
| Locked rotor torque              | : 180 %       | Service factor        | : 1.15                    |
| Breakdown torque                 | : 260 %       | Temperature rise      | : 80 K                    |
| Rated speed                      | : 3550 rpm    | Design                | : B                       |

|              |                 |  |           |               |          |
|--------------|-----------------|--|-----------|---------------|----------|
| Rev.         | Changes Summary |  | Performed | Checked       | Date     |
|              |                 |  |           |               |          |
| Performed by |                 |  |           | Page<br>2 / 8 | Revision |
| Checked by   |                 |  |           |               |          |
| Date         | 24/10/2024      |  |           |               |          |

# LOAD PERFORMANCE CURVE

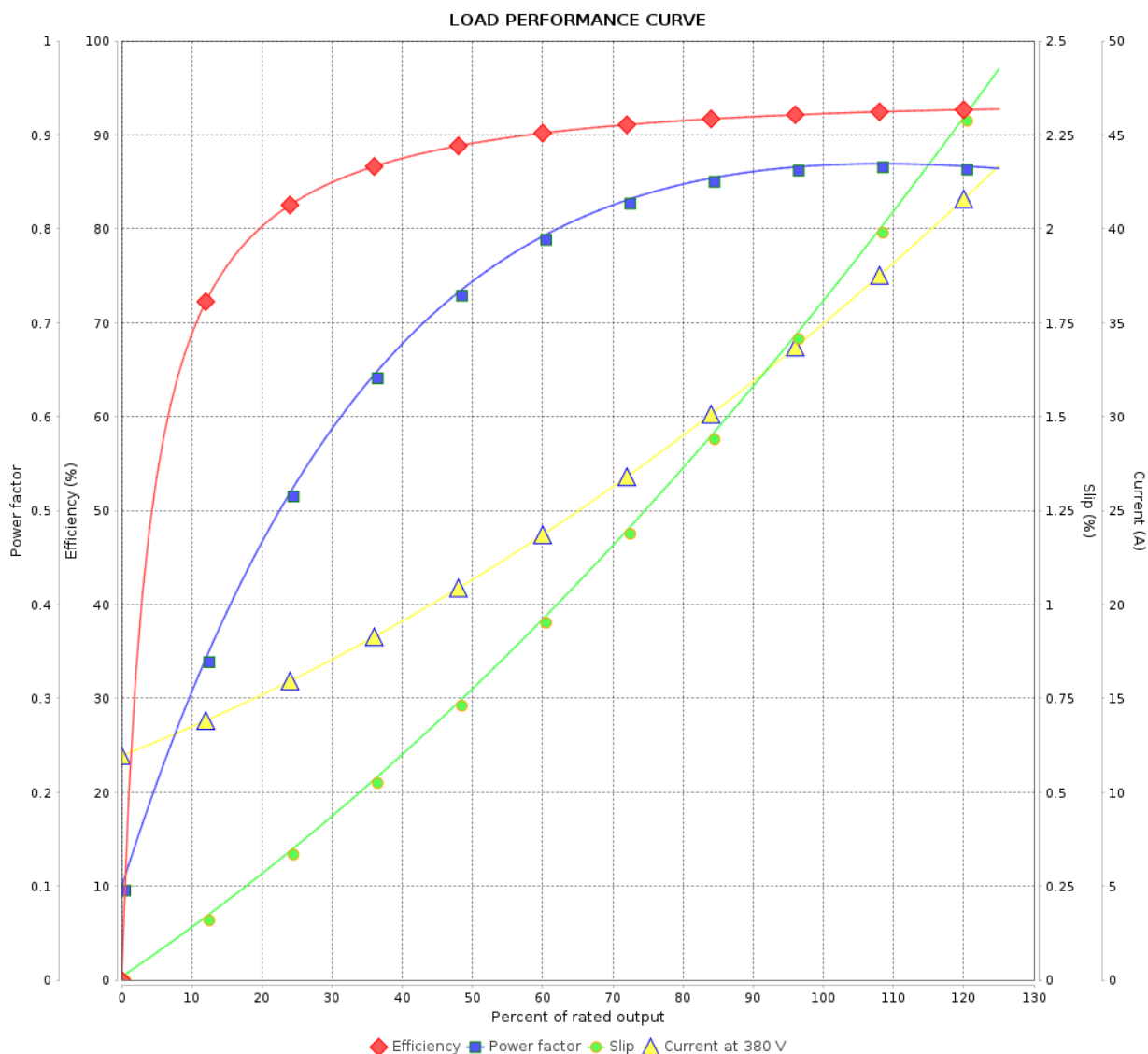
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11833190



Performance : 380 V 50 Hz 2P IE3

Rated current : 35.0 A  
LRC : 6.6  
Rated torque : 6.16 kgfm  
Locked rotor torque : 170 %  
Breakdown torque : 240 %  
Rated speed : 2945 rpm

Moment of inertia (J) : 0.0795 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         | 24/10/2024      |                       |         |      |

# LOAD PERFORMANCE CURVE

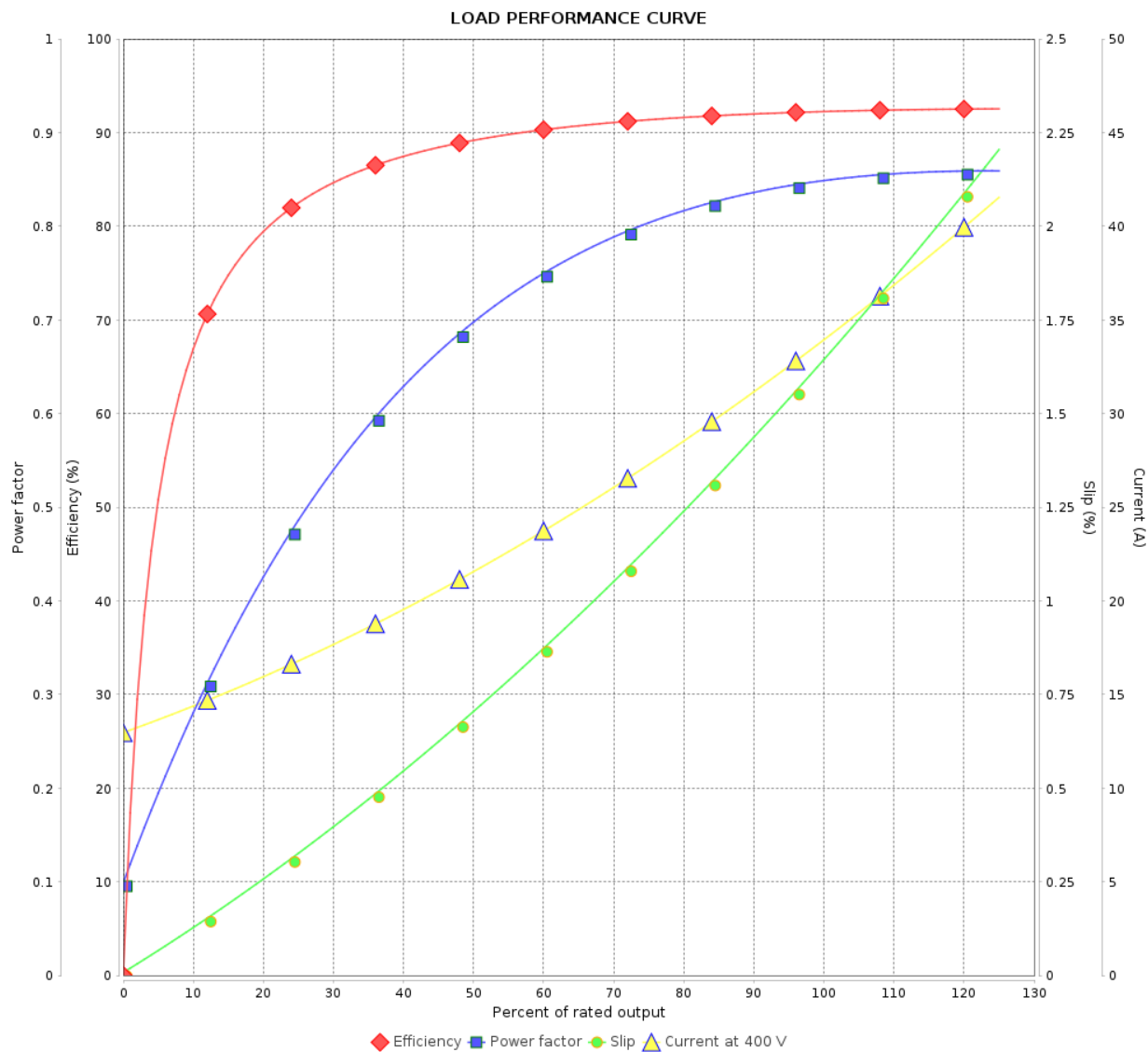
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11833190



Performance : 400 V 50 Hz 2P IE3

Rated current : 34.0 A  
LRC : 7.0  
Rated torque : 6.15 kgfm  
Locked rotor torque : 190 %  
Breakdown torque : 260 %  
Rated speed : 2950 rpm

Moment of inertia (J) : 0.0795 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>4 / 8 | Revision |
| Checked by   |                 |  |           |               |          |
| Date         | 24/10/2024      |  |           |               |          |

# LOAD PERFORMANCE CURVE

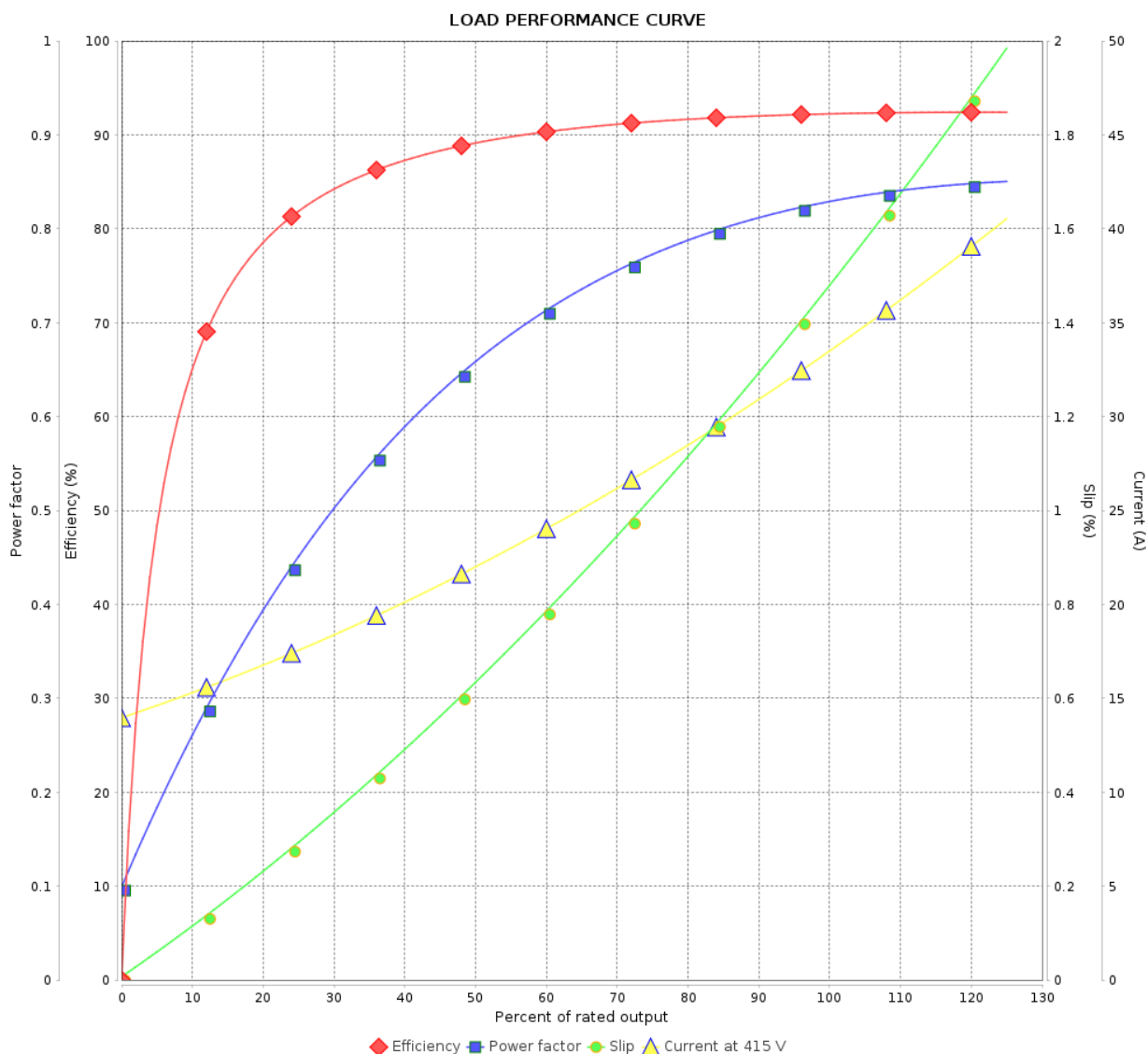
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11833190



Performance : 415 V 50 Hz 2P IE3

Rated current : 33.6 A  
LRC : 6.7  
Rated torque : 6.14 kgfm  
Locked rotor torque : 200 %  
Breakdown torque : 270 %  
Rated speed : 2955 rpm

Moment of inertia (J) : 0.0795 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>5 / 8Revision |         |      |
| Checked by   |                 |                       |         |      |
| Date         | 24/10/2024      |                       |         |      |

# LOAD PERFORMANCE CURVE

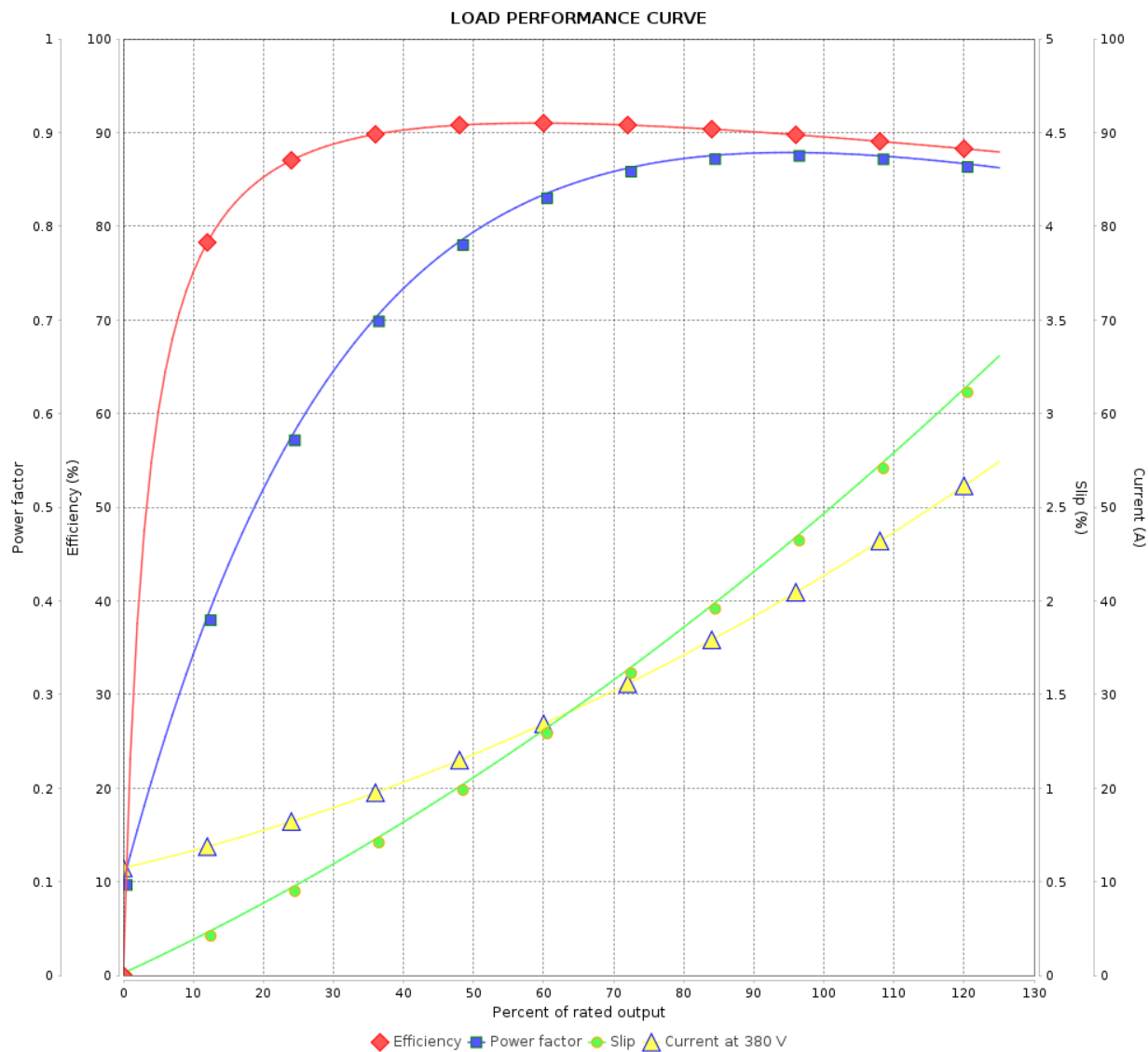
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11833190



Performance : 380 V 50 Hz 2P

Rated current : 42.4 A  
LRC : 5.3  
Rated torque : 7.44 kgfm  
Locked rotor torque : 160 %  
Breakdown torque : 180 %  
Rated speed : 2925 rpm

Moment of inertia (J) : 0.0795 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   |                 |  |           | 6 / 8   |          |
| Date         |                 |  |           |         |          |

# LOAD PERFORMANCE CURVE

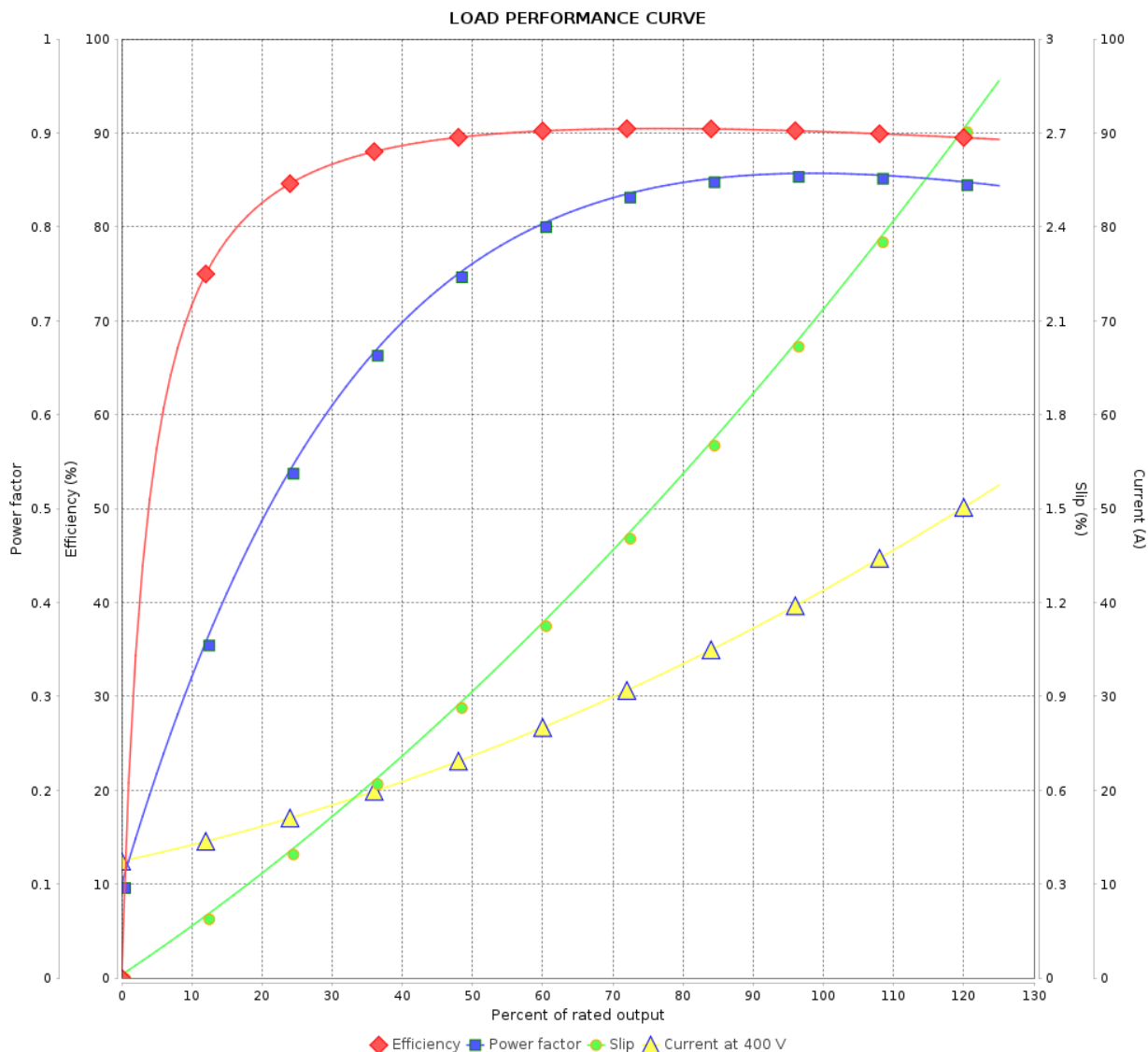
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11833190



Performance : 400 V 50 Hz 2P IE1

Rated current : 40.9 A  
LRC : 5.8  
Rated torque : 7.42 kgfm  
Locked rotor torque : 180 %  
Breakdown torque : 200 %  
Rated speed : 2935 rpm

Moment of inertia (J) : 0.0795 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>7 / 8 | Revision |
| Checked by   |                 |  |           |               |          |
| Date         | 24/10/2024      |  |           |               |          |

# LOAD PERFORMANCE CURVE

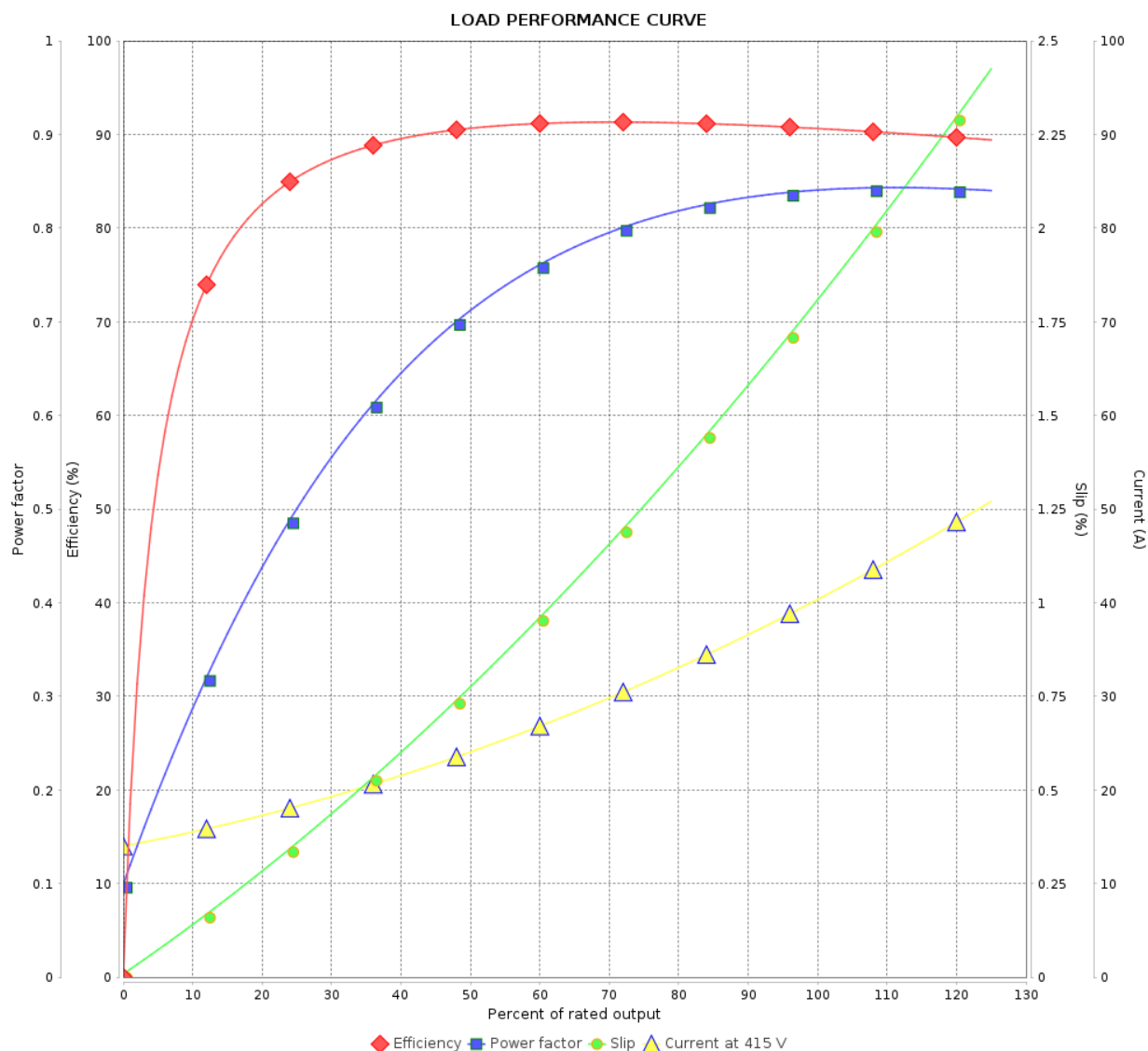
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11833190



Performance : 415 V 50 Hz 2P IE1

Rated current : 40.2 A  
LRC : 6.5  
Rated torque : 7.39 kgfm  
Locked rotor torque : 200 %  
Breakdown torque : 220 %  
Rated speed : 2945 rpm

Moment of inertia (J) : 0.0795 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         |                 |  |           |         |          |