

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

|  |   |   |                           |  |                         |                         |                         |
|--|---|---|---------------------------|--|-------------------------|-------------------------|-------------------------|
| Customer :   |   |   |                           |  |                         |                         |                         |
| Product line   | : Close Coupled Pump NEMA Premium<br>Efficiency Three-Phase | Product code :  | 11169353                  |  |                         |                         |                         |
| 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>                           | : 171 kg                  |  |                         |                         |                         |
| Protection degree  | : IP23  | Moment of inertia (J)                                 | : 0.1435 kgm <sup>2</sup> |  |                         |                         |                         |
| Design   | : B   |   |                           |  |                         |                         |                         |
| Output [HP]  | 25  | 20  | 20                        | 20   | 25                      | 25                      | 25                      |
| Poles  | 4   | 4   | 4                         | 4  | 4                       | 4                       | 4                       |
| Frequency [Hz]   | 60  | 50  | 50                        | 50   | 50                      | 50                      | 50                      |
| Rated voltage [V]  | 230/460   | 380   | 400                       | 415  | 380                     | 400                     | 415                     |
| Rated current [A]  | 59.8/29.9   | 29.8  | 29.4                      | 28.6   | 36.1                    | 35.1                    | 34.0                    |
| L. R. Amperes [A]  | 401/200   | 197   | 194                       | 186  | 195                     | 193                     | 187                     |
| LRC [A]  | 6.7x(Code H)  | 6.6x(Code H)  | 6.6x(Code H)              | 6.5x(Code H)   | 5.4x(Code F)            | 5.5x(Code F)            | 5.5x(Code F)            |
| No load current [A]  | 24.0/12.0   | 11.9  | 12.9                      | 13.8   | 11.9                    | 12.9                    | 13.8                    |
| Rated speed [RPM]  | 1770  | 1470  | 1470                      | 1475   | 1460                    | 1465                    | 1470                    |
| Slip [%]   | 1.67  | 2.00  | 2.00                      | 1.67   | 2.67                    | 2.33                    | 2.00                    |
| Rated torque [kgfm]  | 10.3  | 9.87  | 9.87                      | 9.84   | 12.4                    | 12.4                    | 12.3                    |
| Locked rotor torque [%]  | 250   | 290   | 300                       | 330  | 229                     | 240                     | 260                     |
| Breakdown torque [%]   | 280   | 300   | 330                       | 360  | 240                     | 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  | 27s (cold)<br>15s (hot)                                     | 36s (cold)<br>20s (hot)                               | 37s (cold)<br>21s (hot)   | 41s (cold)<br>23s (hot)  | 36s (cold)<br>20s (hot) | 37s (cold)<br>21s (hot) | 41s (cold)<br>23s (hot) |
| Noise level <sup>2</sup>   | 62.0 dB(A)  |   |                           |  |                         |                         |                         |
| Efficiency (%)   | 25%   |   |                           |  |                         |                         |                         |
|  | 50%   | 92.4  | 89.6                      | 89.4   | 88.8                    | 91.0                    | 91.0                    |
|  | 75%   | 93.0  | 91.5                      | 91.5   | 91.4                    | 91.7                    | 91.7                    |
|  | 100%  | 93.6  | 92.1                      | 92.1   | 92.3                    | 91.7                    | 91.7                    |
| Power Factor   | 25%   |   |                           |  |                         |                         |                         |
|  | 50%   | 0.67  | 0.66                      | 0.62   | 0.59                    | 0.73                    | 0.69                    |
|  | 75%   | 0.78  | 0.78                      | 0.74   | 0.71                    | 0.82                    | 0.79                    |
|  | 100%  | 0.83  | 0.83                      | 0.80   | 0.78                    | 0.85                    | 0.83                    |
| Bearing type   | : Drive end : 6311 Z C3<br>Non drive end : 6211 Z C3        | Foundation loads                                      |                           |  |                         |                         |                         |
| Sealing  | : Without<br>Bearing Seal                                   | Max. traction : 426 kgf<br>Max. compression : 597 kgf |                           |  |                         |                         |                         |
| Lubrication interval   | : 20000 h   | 20000 h   |                           |  |                         |                         |                         |
| Lubricant amount   | : 18 g  | 11 g  |                           |  |                         |                         |                         |
| Lubricant type   | : Mobil Polyrex EM  |   |                           |  |                         |                         |                         |
| Notes<br>USABLE @208V 66.1A SF 1.15 SFA 76.0A  |   |   |                           |  |                         |                         |                         |
| This revision replaces and cancel the previous one, which must be eliminated.<br>(1) Looking the motor from the shaft end.<br>(2) Measured at 1m and with tolerance of +3dB(A).<br>(3) Approximate weight subject to changes after manufacturing process.<br>(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   |   |   |                           |  | Page                    | Revision                |                         |
| Date   | 14/01/2024  |   |                           |  | 1 / 8                   |                         |                         |

# LOAD PERFORMANCE CURVE

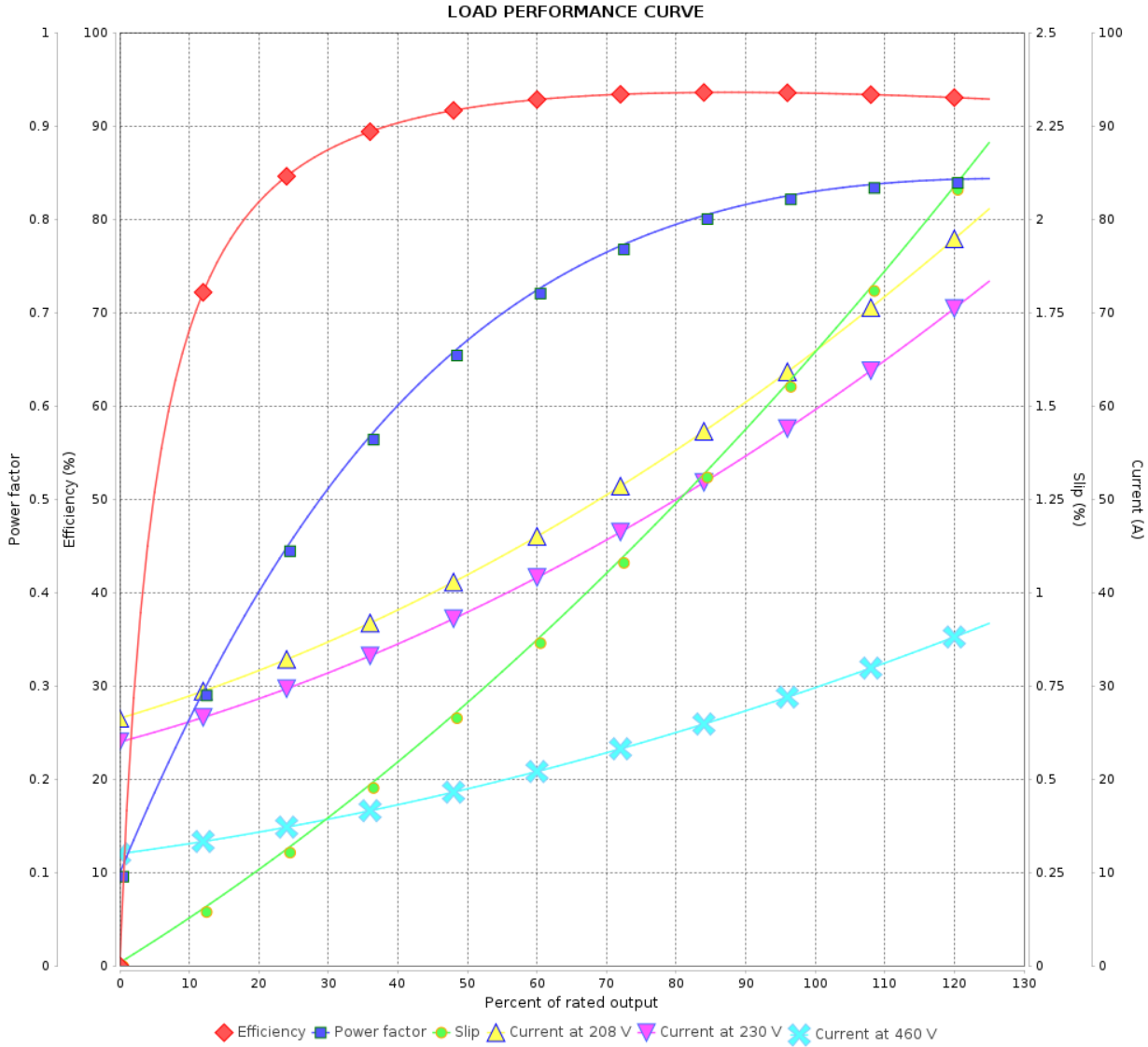
Three Phase Induction Motor - Squirrel Cage



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

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

Product code : 11169353



Performance : 230/460 V 60 Hz 4P

Rated current : 59.8/29.9 A  
LRC : 6.7  
Rated torque : 10.3 kgfm  
Locked rotor torque : 250 %  
Breakdown torque : 280 %  
Rated speed : 1770 rpm

Moment of inertia (J) : 0.1435 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     |
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| Checked by   |                 |           |               |          |
| Date         | 14/01/2024      |           |               |          |

# LOAD PERFORMANCE CURVE

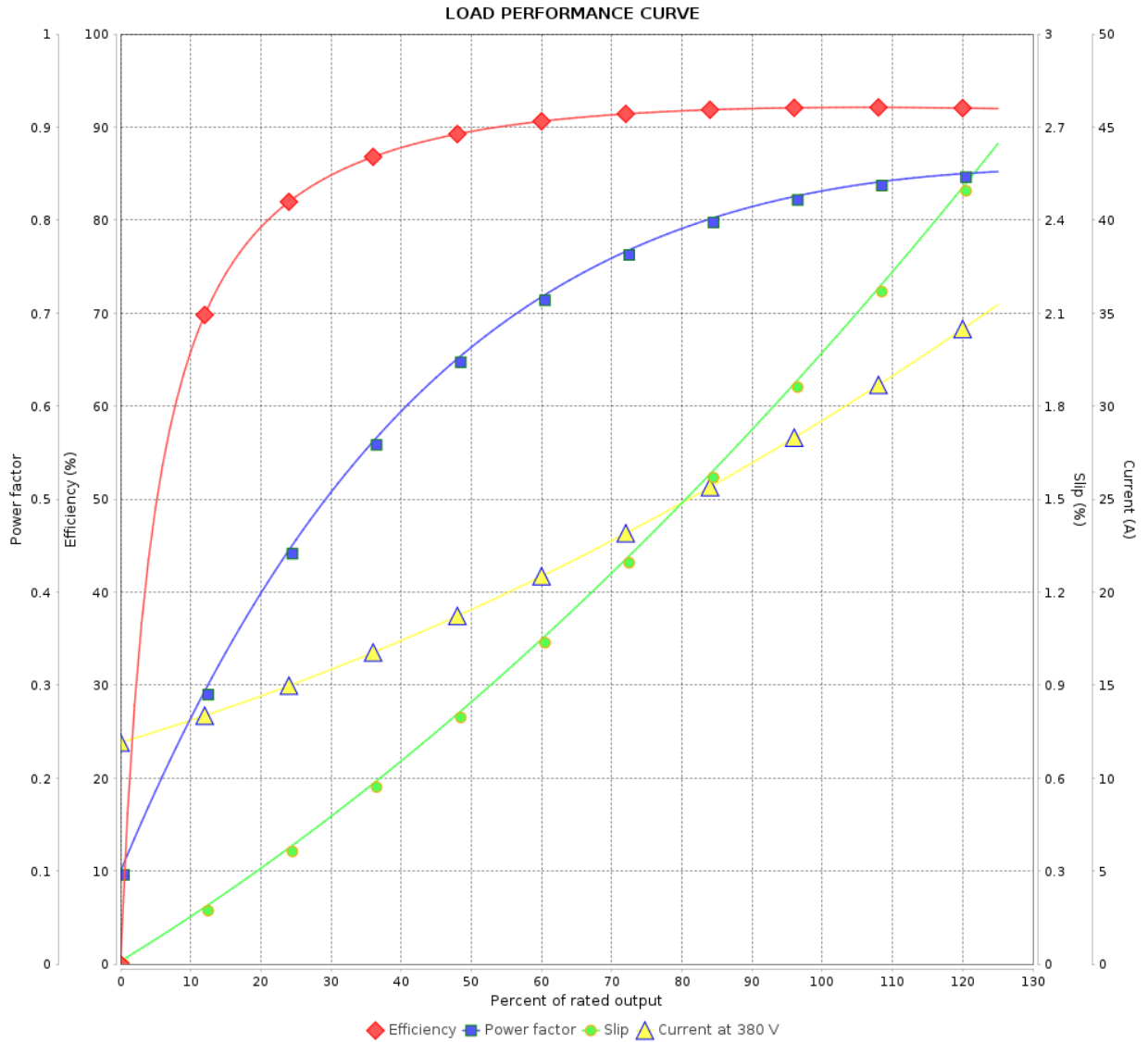
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11169353



Performance : 380 V 50 Hz 4P IE3

Rated current : 29.8 A  
 LRC : 6.6  
 Rated torque : 9.87 kgfm  
 Locked rotor torque : 290 %  
 Breakdown torque : 300 %  
 Rated speed : 1470 rpm

Moment of inertia (J) : 0.1435 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 |
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# LOAD PERFORMANCE CURVE

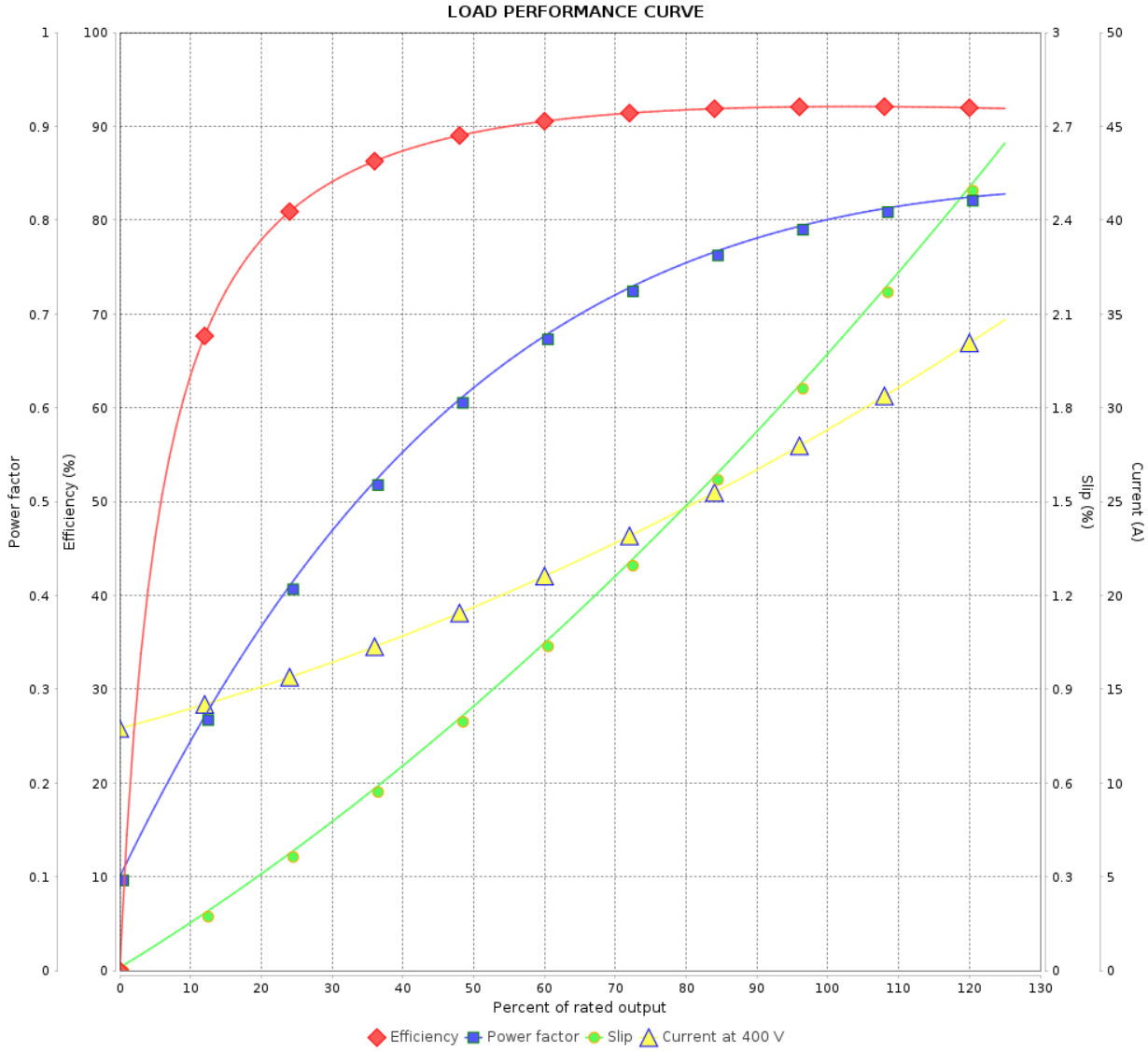
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11169353



Performance : 400 V 50 Hz 4P IE3

Rated current : 29.4 A  
LRC : 6.6  
Rated torque : 9.87 kgfm  
Locked rotor torque : 300 %  
Breakdown torque : 330 %  
Rated speed : 1470 rpm

Moment of inertia (J) : 0.1435 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     |
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| Checked by   |                 |           |               |          |
| Date         | 14/01/2024      |           |               |          |

# LOAD PERFORMANCE CURVE

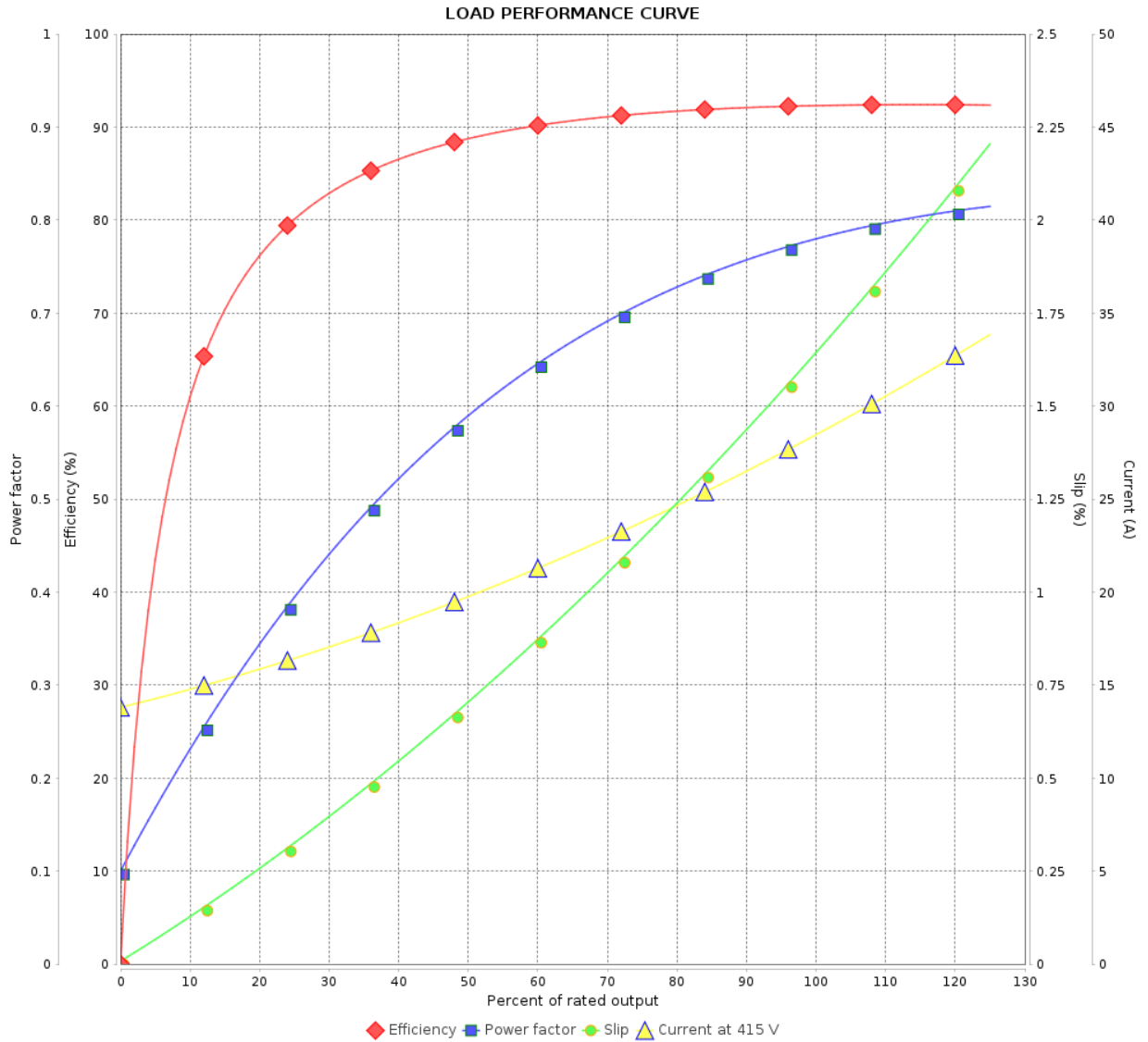
## Three Phase Induction Motor - Squirrel Cage



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

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

Product code : 11169353



Performance : 415 V 50 Hz 4P IE3

Rated current : 28.6 A  
 LRC : 6.5  
 Rated torque : 9.84 kgfm  
 Locked rotor torque : 330 %  
 Breakdown torque : 360 %  
 Rated speed : 1475 rpm

Moment of inertia (J) : 0.1435 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     |
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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

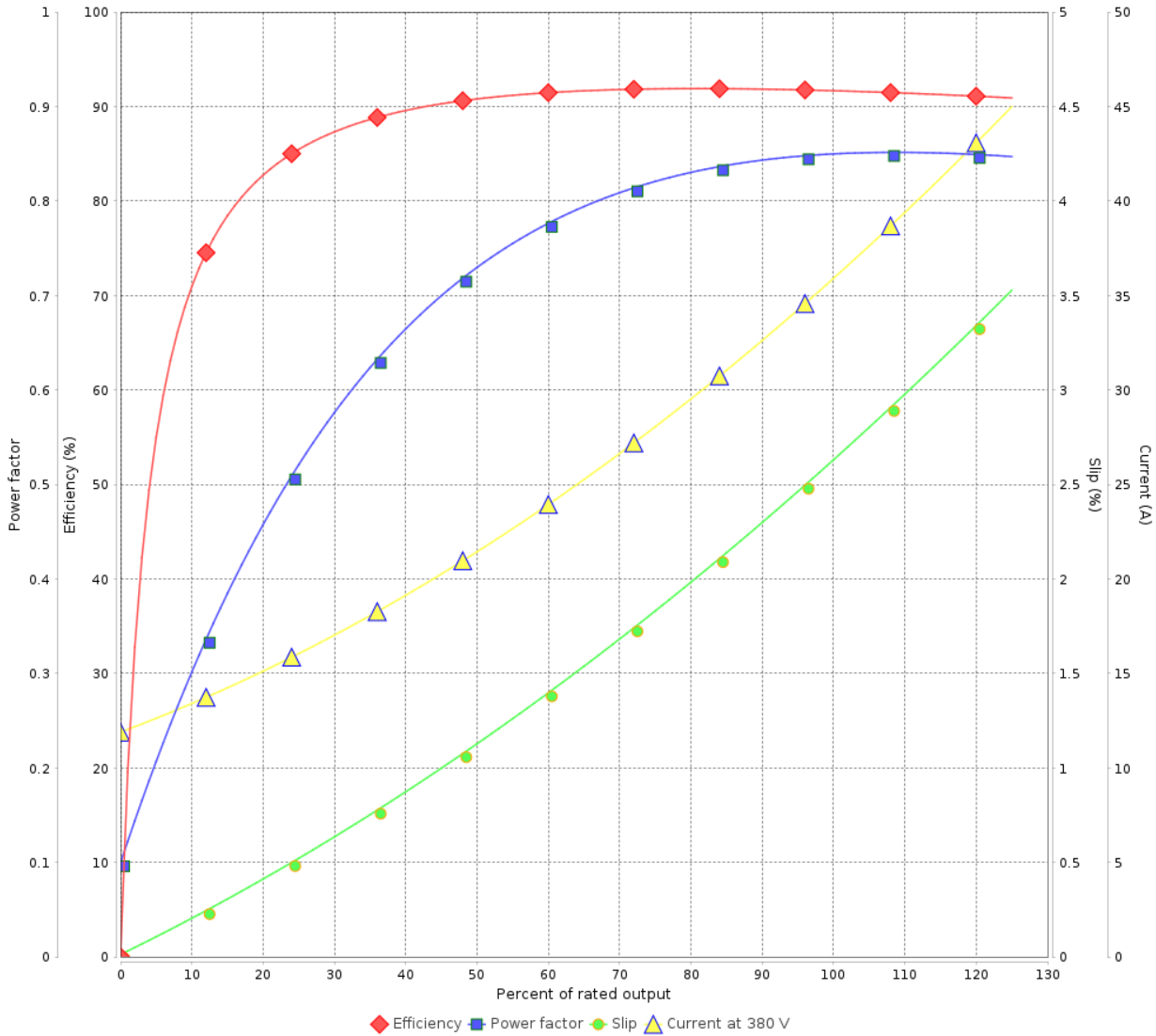


Customer :

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

Product code : 11169353

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 4P IE2

Rated current : 36.1 A  
LRC : 5.4  
Rated torque : 12.4 kgfm  
Locked rotor torque : 229 %  
Breakdown torque : 240 %  
Rated speed : 1460 rpm

Moment of inertia (J) : 0.1435 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     |
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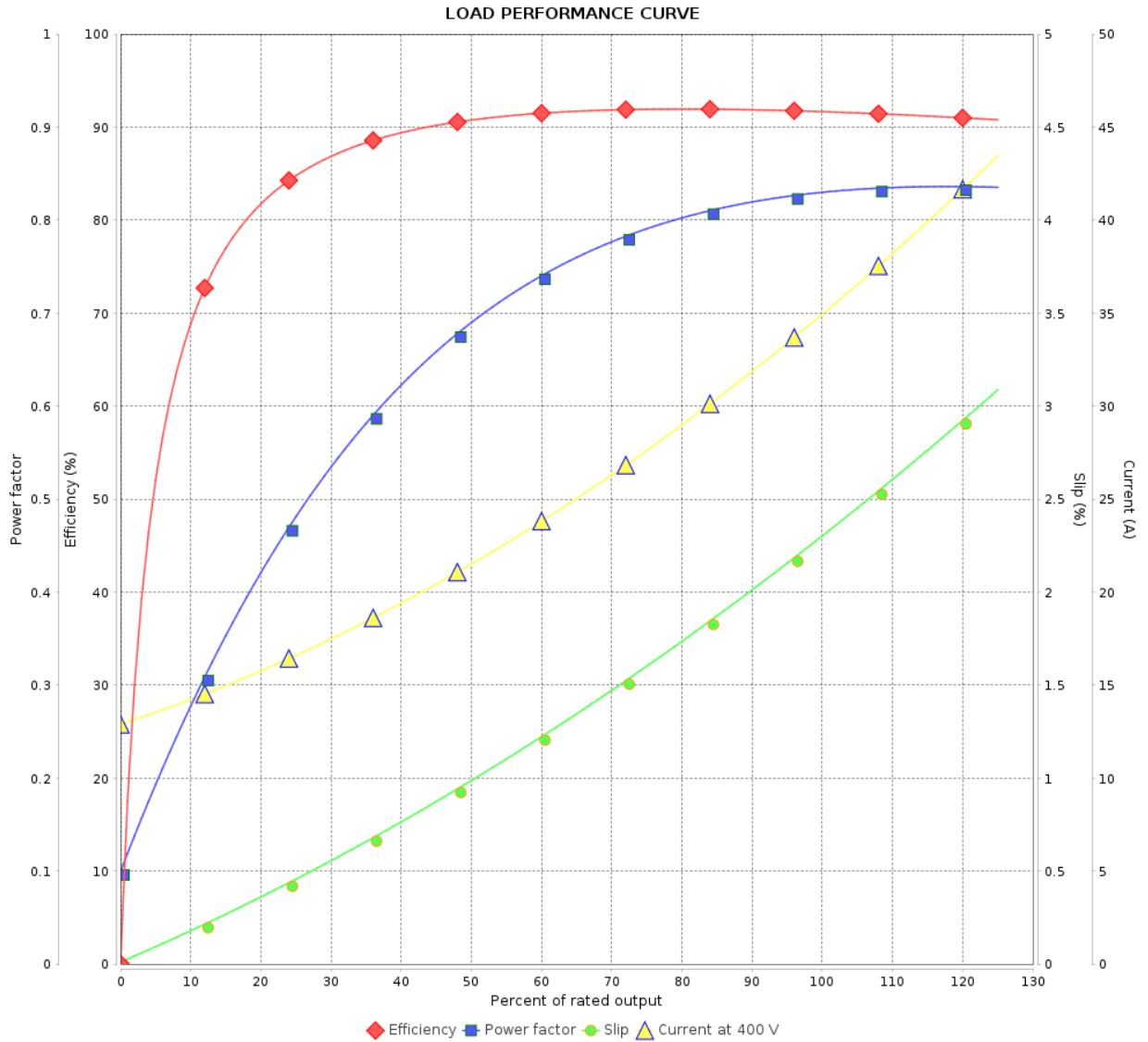
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11169353



Performance : 400 V 50 Hz 4P IE2

Rated current : 35.1 A  
LRC : 5.5  
Rated torque : 12.4 kgfm  
Locked rotor torque : 240 %  
Breakdown torque : 260 %  
Rated speed : 1465 rpm

Moment of inertia (J) : 0.1435 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     |
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| Checked by   |                 |           |         |          |
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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

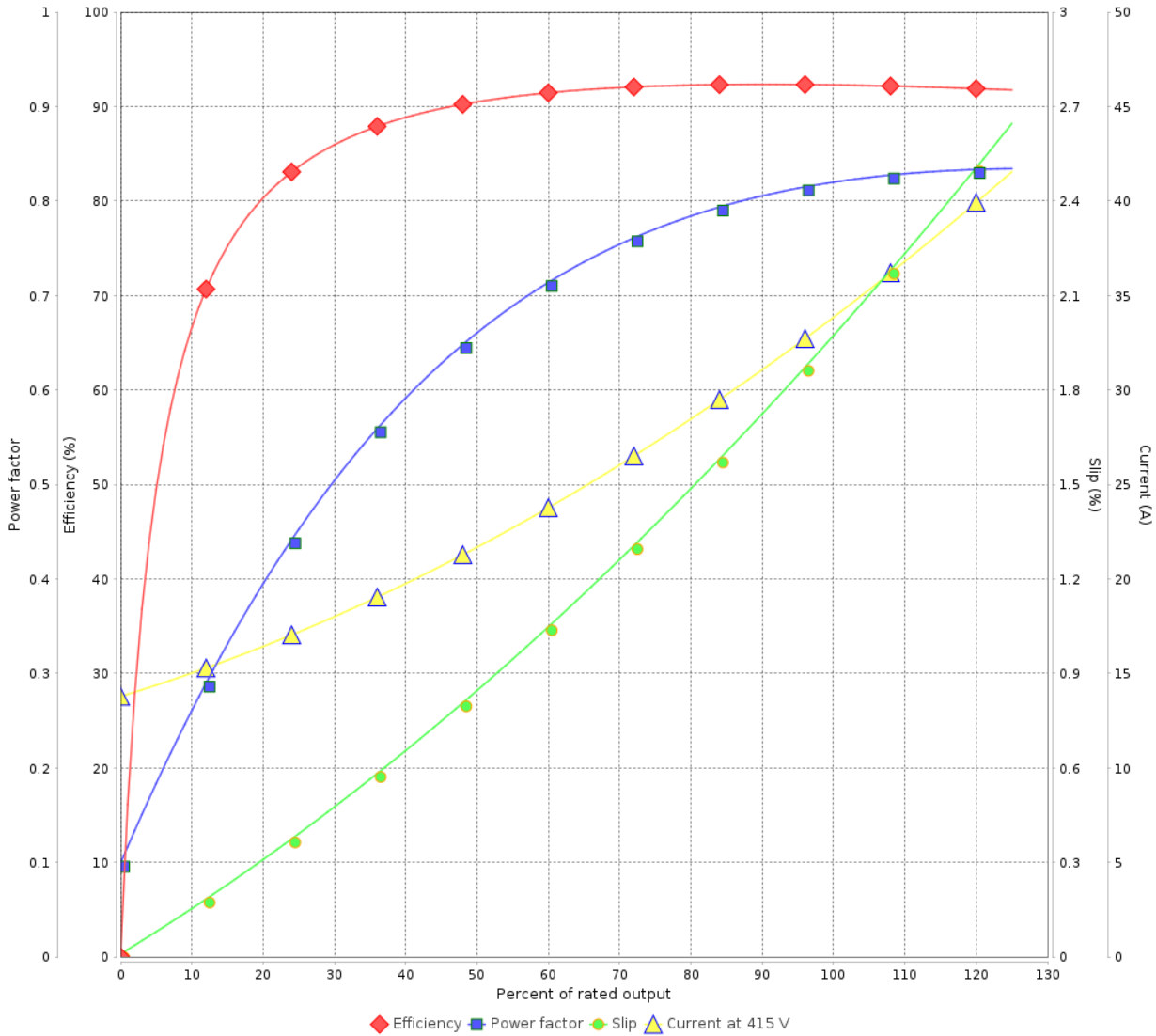


Customer :

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

Product code : 11169353

LOAD PERFORMANCE CURVE



Performance : 415 V 50 Hz 4P IE2

Rated current : 34.0 A  
LRC : 5.5  
Rated torque : 12.3 kgfm  
Locked rotor torque : 260 %  
Breakdown torque : 290 %  
Rated speed : 1470 rpm

Moment of inertia (J) : 0.1435 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     |
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