

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 P Base NEMA Premium Efficiency Three-Phase Product code : 13129046

|                                      |                                                 |
|--------------------------------------|-------------------------------------------------|
| Frame : 213HP                        | Cooling method : IC411 - TEFC                   |
| Insulation class : F                 | Mounting : W-6                                  |
| 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> : 72.3 kg           |
| Protection degree : IP55             | Moment of inertia (J) : 0.0504 kgm <sup>2</sup> |
| Design : B                           |                                                 |

|                          |                       |                      |                      |                      |
|--------------------------|-----------------------|----------------------|----------------------|----------------------|
| Output [HP]              | 3                     | 3                    | 3                    | 3                    |
| Poles                    | 6                     | 6                    | 6                    | 6                    |
| Frequency [Hz]           | 60                    | 50                   | 50                   | 50                   |
| Rated voltage [V]        | 230/460               | 380                  | 400                  | 415                  |
| Rated current [A]        | 8.82/4.41             | 5.09                 | 4.97                 | 4.93                 |
| L. R. Amperes [A]        | 61.7/30.9             | 29.5                 | 31.8                 | 33.5                 |
| LRC [A]                  | 7.0x(Code K)          | 5.8x(Code H)         | 6.4x(Code J)         | 6.8x(Code K)         |
| No load current [A]      | 5.10/2.55             | 2.45                 | 2.60                 | 2.75                 |
| Rated speed [RPM]        | 1175                  | 965                  | 970                  | 970                  |
| Slip [%]                 | 2.08                  | 3.50                 | 3.00                 | 3.00                 |
| Rated torque [kgfm]      | 1.85                  | 2.26                 | 2.24                 | 2.24                 |
| Locked rotor torque [%]  | 190                   | 170                  | 180                  | 200                  |
| Breakdown torque [%]     | 270                   | 229                  | 240                  | 250                  |
| Service factor           | 1.25                  | 1.00                 | 1.00                 | 1.00                 |
| Temperature rise         | 80 K                  | 80 K                 | 80 K                 | 80 K                 |
| Locked rotor time        | 104s (cold) 58s (hot) | 72s (cold) 40s (hot) | 72s (cold) 40s (hot) | 72s (cold) 40s (hot) |
| Noise level <sup>2</sup> | 55.0 dB(A)            | 53.0 dB(A)           | 53.0 dB(A)           | 53.0 dB(A)           |
| Efficiency (%)           | 25%                   |                      |                      |                      |
|                          | 50%                   | 86.5                 | 87.0                 | 87.0                 |
|                          | 75%                   | 88.5                 | 88.0                 | 88.0                 |
|                          | 100%                  | 89.5                 | 87.5                 | 87.5                 |
| Power Factor             | 25%                   |                      |                      |                      |
|                          | 50%                   | 0.50                 | 0.57                 | 0.53                 |
|                          | 75%                   | 0.63                 | 0.70                 | 0.66                 |
|                          | 100%                  | 0.70                 | 0.75                 | 0.73                 |

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

|            |                |      |      |      |      |
|------------|----------------|------|------|------|------|
| Losses (%) | P1 (0,9;1,0)   | 11.0 | 13.4 | 13.4 | 13.4 |
|            | P2 (0,5;1,0)   | 8.6  | 10.5 | 10.5 | 10.5 |
|            | P3 (0,25;1,0)  | 8.0  | 9.7  | 9.7  | 9.7  |
|            | P4 (0,9;0,5)   | 6.6  | 8.0  | 8.0  | 8.0  |
|            | P5 (0,5;0,5)   | 4.3  | 5.3  | 5.3  | 5.3  |
|            | P6 (0,5;0,25)  | 3.4  | 4.1  | 4.1  | 4.1  |
|            | P7 (0,25;0,25) | 2.4  | 3.0  | 3.0  | 3.0  |

|                        |                  |                      |                  |
|------------------------|------------------|----------------------|------------------|
|                        | <u>Drive end</u> | <u>Non drive end</u> | Foundation loads |
| Bearing type :         | 6309 ZZ          | 6207 ZZ              | Max. traction    |
| Sealing :              | V'Ring           | V'Ring               | Max. compression |
| 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     |
|--------------|-----------------|-----------|---------------|----------|
|              |                 |           |               |          |
| Performed by |                 |           |               |          |
| Checked by   |                 |           |               |          |
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# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Notes  
USABLE @208V 9.76A SF 1.15 SFA 11.2A

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

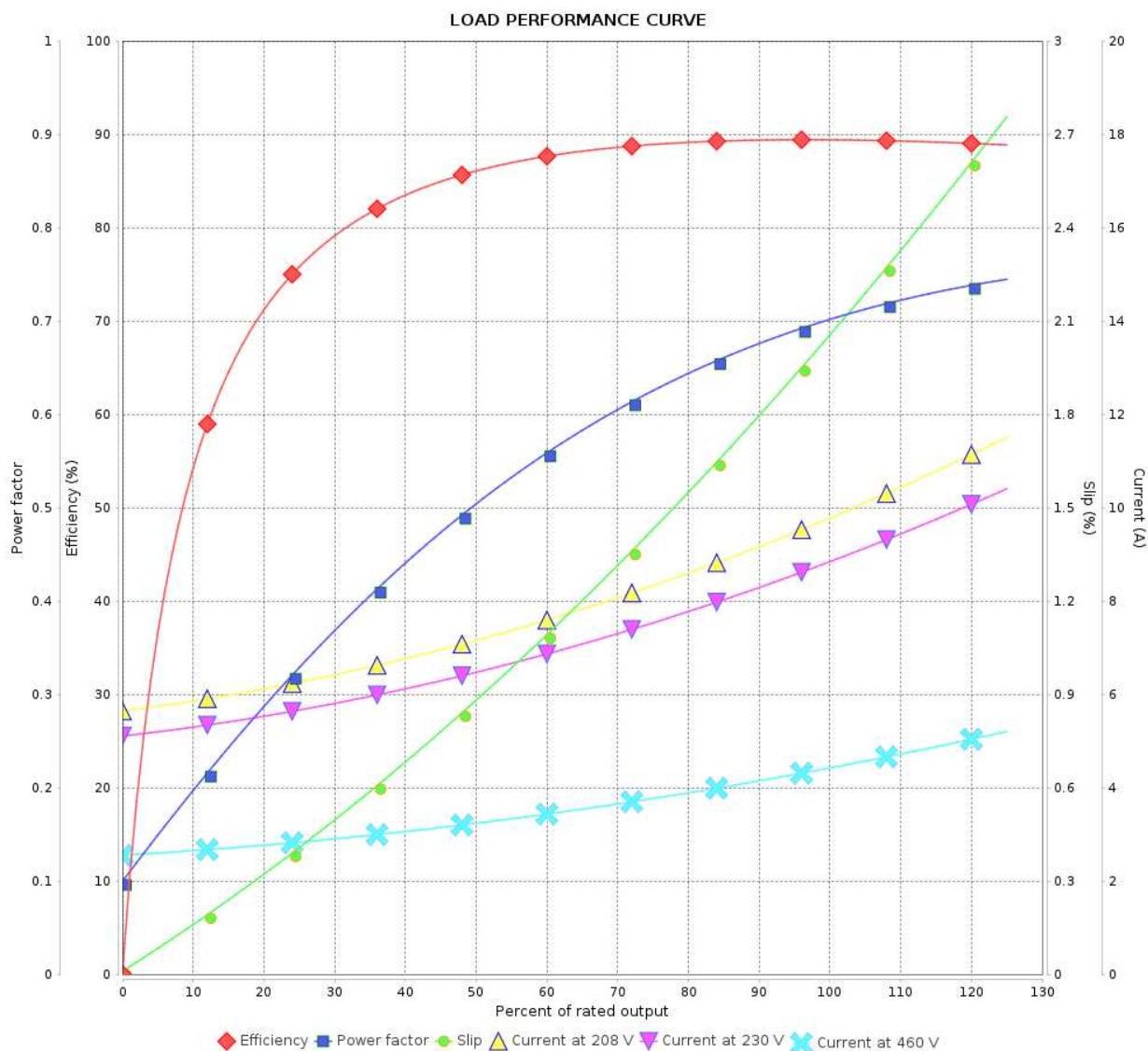
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 P Base NEMA Premium  
Efficiency Three-Phase

Product code : 13129046



Performance : 230/460 V 60 Hz 6P

Rated current : 8.82/4.41 A  
LRC : 7.0  
Rated torque : 1.85 kgfm  
Locked rotor torque : 190 %  
Breakdown torque : 270 %  
Rated speed : 1175 rpm

Moment of inertia (J) : 0.0504 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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| Checked by   |                 |  |           |               |          |
| Date         | 27/10/2024      |  |           |               |          |

# LOAD PERFORMANCE CURVE

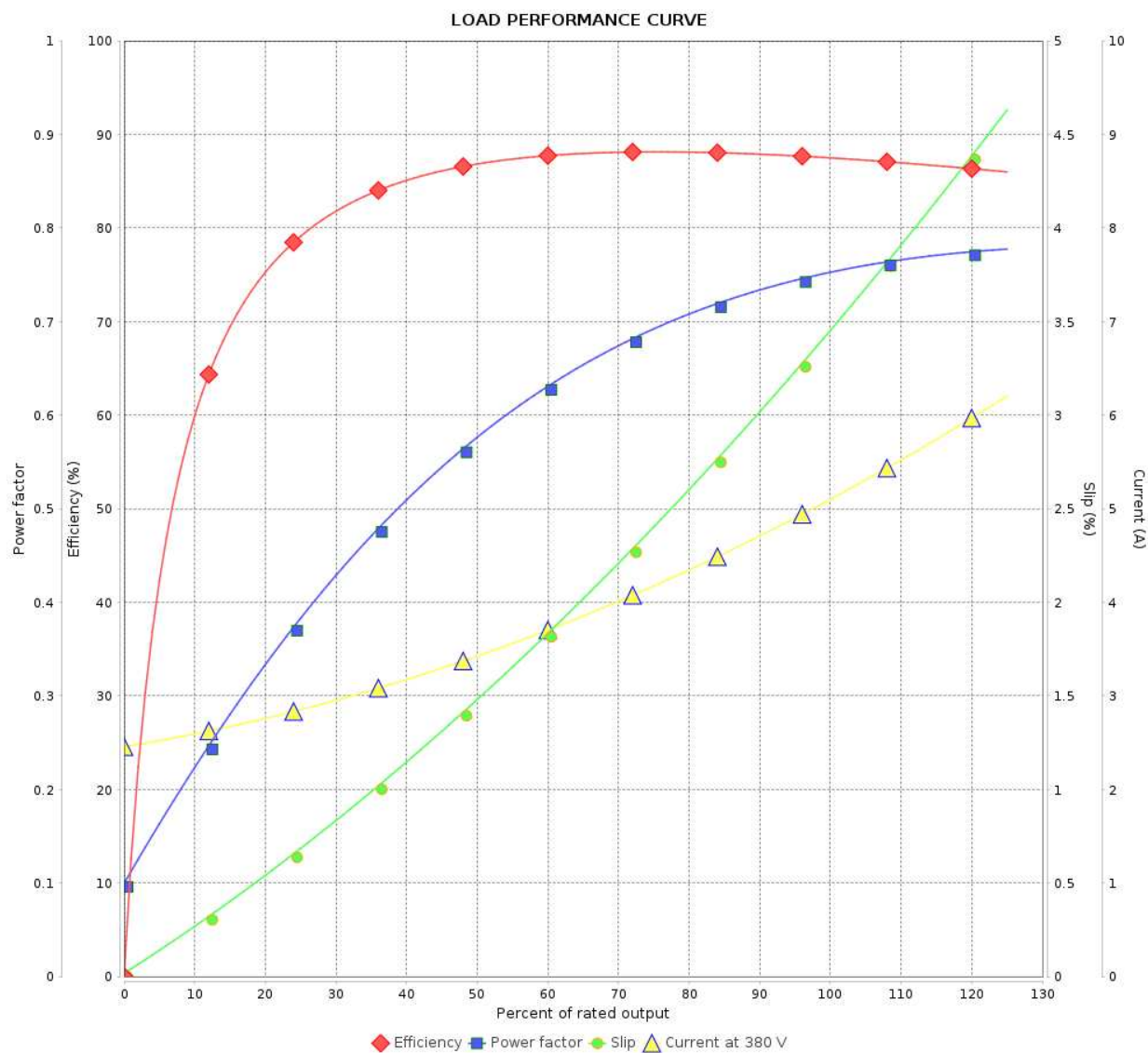
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 P Base NEMA Premium  
Efficiency Three-Phase

Product code : 13129046



Performance : 380 V 50 Hz 6P IE4

Rated current : 5.09 A  
LRC : 5.8  
Rated torque : 2.26 kgfm  
Locked rotor torque : 170 %  
Breakdown torque : 229 %  
Rated speed : 965 rpm

Moment of inertia (J) : 0.0504 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
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

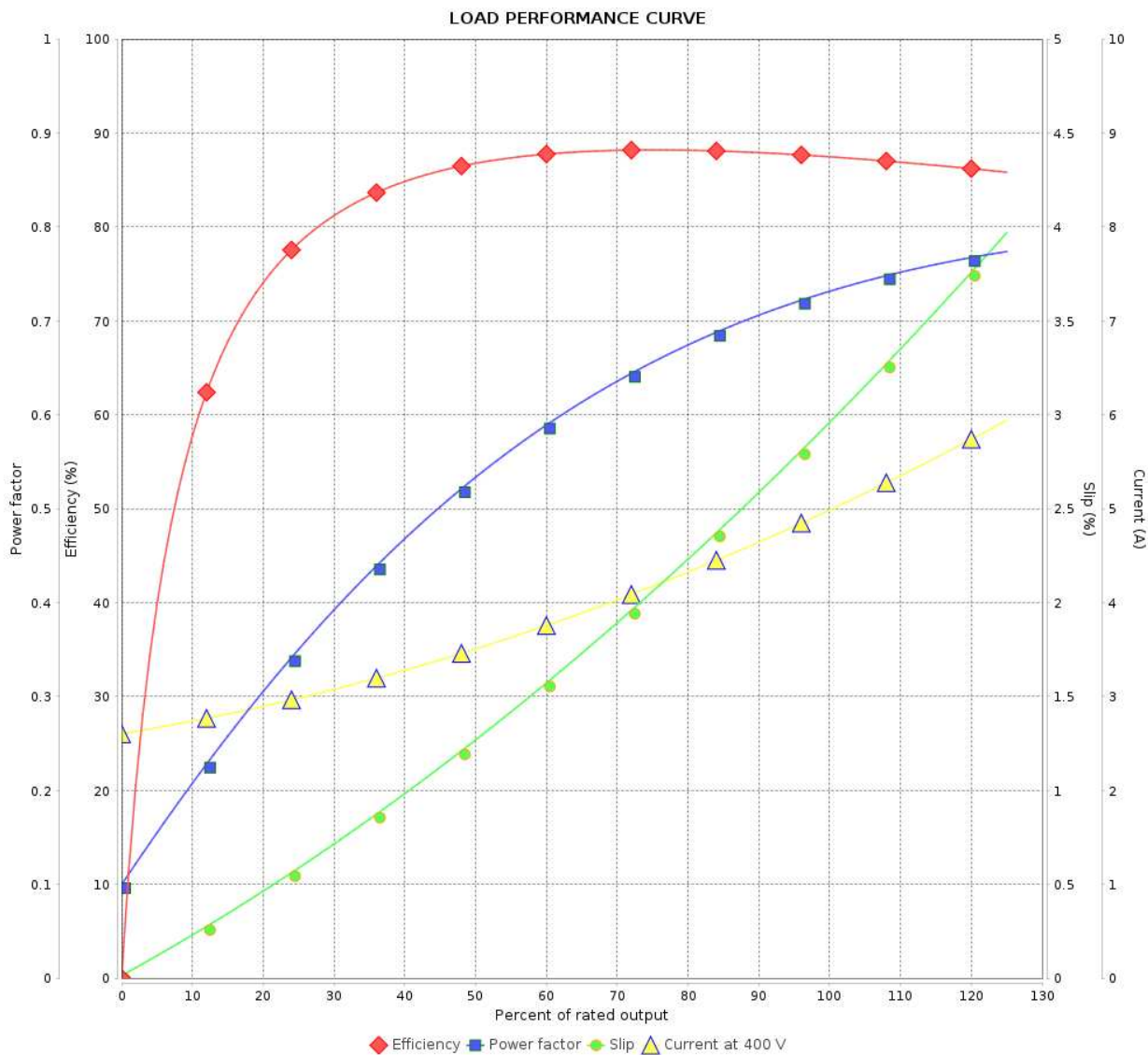
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 P Base NEMA Premium  
Efficiency Three-Phase

Product code : 13129046



Performance : 400 V 50 Hz 6P IE4

Rated current : 4.97 A  
LRC : 6.4  
Rated torque : 2.24 kgfm  
Locked rotor torque : 180 %  
Breakdown torque : 240 %  
Rated speed : 970 rpm

Moment of inertia (J) : 0.0504 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

| Rev.         | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|---------|------|
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| Performed by |                 |           |         |      |
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Revision

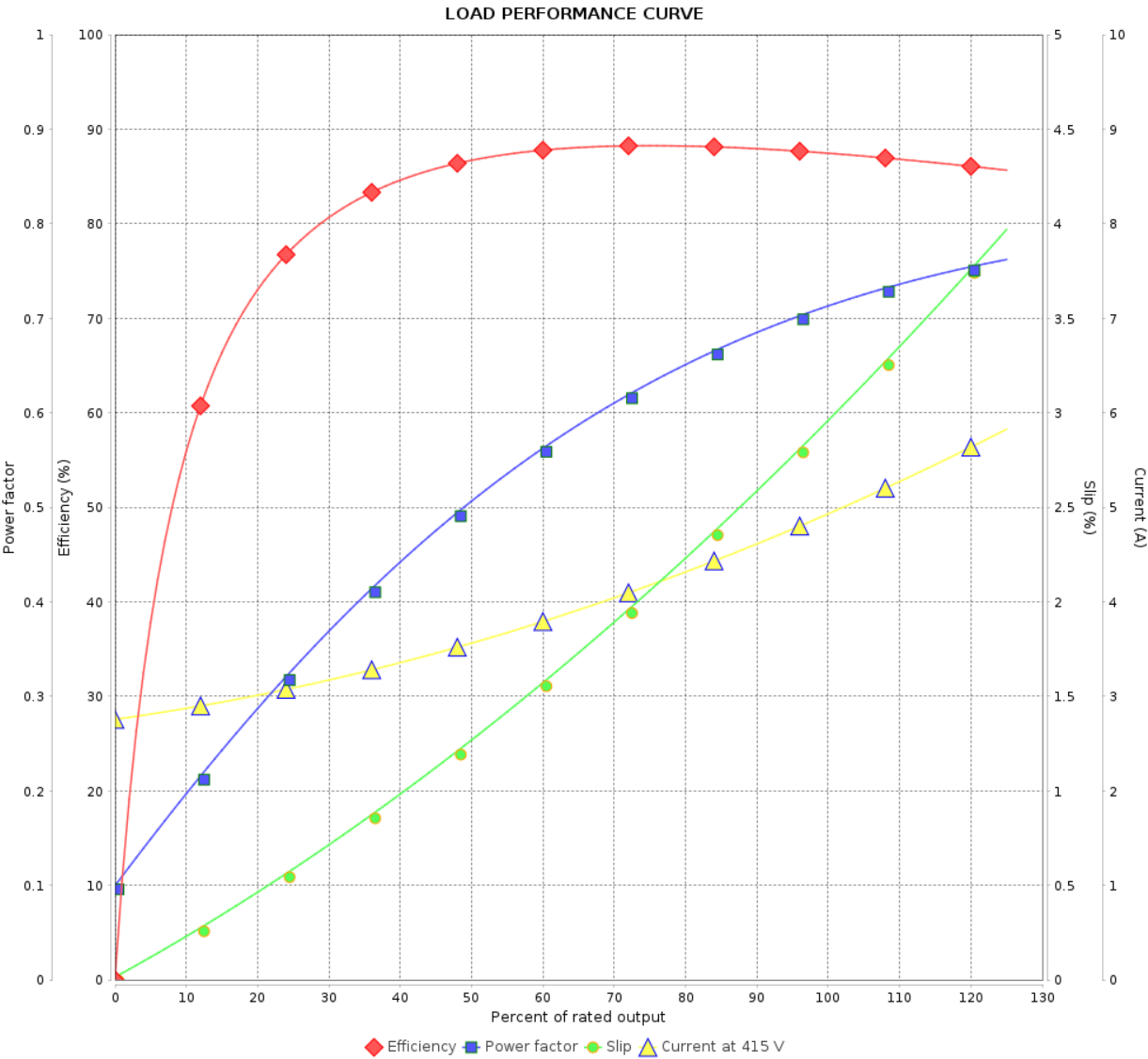
LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

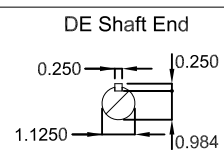
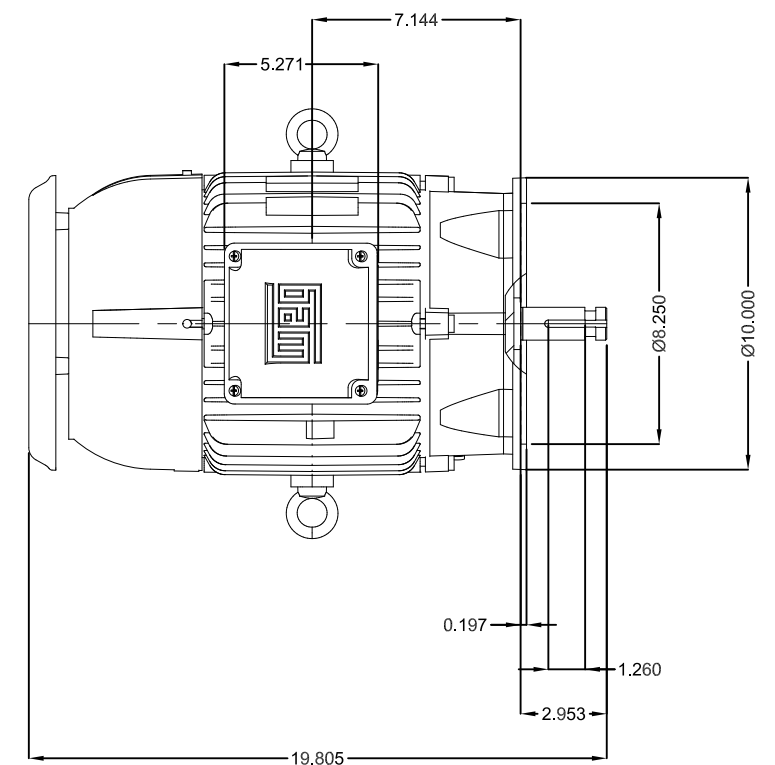
Product line : W22 P Base NEMA Premium Efficiency Three-Phase      Product code : 13129046



Performance : 415 V 50 Hz 6P IE4

|                     |             |                       |                           |
|---------------------|-------------|-----------------------|---------------------------|
| Rated current       | : 4.93 A    | Moment of inertia (J) | : 0.0504 kgm <sup>2</sup> |
| LRC                 | : 6.8       | Duty cycle            | : Cont.(S1)               |
| Rated torque        | : 2.24 kgfm | Insulation class      | : F                       |
| Locked rotor torque | : 200 %     | Service factor        | : 1.00                    |
| Breakdown torque    | : 250 %     | Temperature rise      | : 80 K                    |
| Rated speed         | : 970 rpm   | Design                | : B                       |

| Rev.         | Changes Summary | Performed                | Checked | Date |
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| Checked by   |                 |                          |         |      |
| Date         | 27/10/2024      |                          |         |      |



|                    |
|--------------------|
| Color RAL 5009     |
| Painting plan 207A |
| Mounting NEMA W-6  |
| Mounting V1        |