

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



|  |                                       |                              |  |           |          |
|--|---------------------------------------|------------------------------|--|-----------|----------|
| Customer :   |                                       |                              |  |           |          |
| Product line   | : NEMA Premium Efficiency Three-Phase | Product code :               | 12675405   |           |          |
| Frame  | : 213/5T                              | 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>  | : 54.4 kg  |           |          |
| Protection degree  | : IP55                                | Moment of inertia (J)        | : 0.0395 kgm <sup>2</sup>  |           |          |
| Design   | : B                                   |                              |  |           |          |
| Output [HP]  | 7.5                                   | 7.5                          | 7.5  |           |          |
| Poles  | 4                                     | 4                            | 4  |           |          |
| Frequency [Hz]   | 60                                    | 50                           | 50   |           |          |
| Rated voltage [V]  | 230/460                               | 190/380                      | 220/415  |           |          |
| Rated current [A]  | 18.1/9.07                             | 22.0/11.0                    | 20.0/10.6  |           |          |
| L. R. Amperes [A]  | 132/66.2                              | 136/68.2                     | 136/72.1   |           |          |
| LRC [A]  | 7.3x(Code H)                          | 6.2x(Code G)                 | 6.8x(Code H)   |           |          |
| No load current [A]  | 8.81/4.41                             | 8.65/4.33                    | 8.93/4.73  |           |          |
| Rated speed [RPM]  | 1770                                  | 1455                         | 1460   |           |          |
| Slip [%]   | 1.67                                  | 3.00                         | 2.67   |           |          |
| Rated torque [kgfm]  | 3.08                                  | 3.74                         | 3.73   |           |          |
| Locked rotor torque [%]  | 260                                   | 190                          | 220  |           |          |
| Breakdown torque [%]   | 300                                   | 250                          | 280  |           |          |
| Service factor   | 1.15                                  | 1.00                         | 1.00   |           |          |
| Temperature rise   | 80 K                                  | 105 K                        | 80 K   |           |          |
| Locked rotor time  | 39s (cold) 22s (hot)                  | 0s (cold) 0s (hot)           | 0s (cold) 0s (hot)   |           |          |
| Noise level <sup>2</sup>   | 60.0 dB(A)                            | 57.0 dB(A)                   | 57.0 dB(A)   |           |          |
| Efficiency (%)   | 25%                                   | 89.4                         | 91.3   | 90.4      |          |
|  | 50%                                   | 90.2                         | 90.2   | 89.8      |          |
|  | 75%                                   | 91.0                         | 90.0   | 90.1      |          |
|  | 100%                                  | 91.7                         | 88.6   | 89.2      |          |
| Power Factor   | 25%                                   | 0.39                         | 0.45   | 0.41      |          |
|  | 50%                                   | 0.64                         | 0.71   | 0.67      |          |
|  | 75%                                   | 0.76                         | 0.82   | 0.79      |          |
|  | 100%                                  | 0.82                         | 0.86   | 0.84      |          |
| Bearing type   | : <u>Drive end</u> 6208 ZZ            | <u>Non drive end</u> 6206 ZZ | Foundation loads   |           |          |
| Sealing  | : V'Ring                              | Without Bearing Seal         | Max. traction  | : 166 kgf |          |
|  |                                       |                              | Max. compression   | : 220 kgf |          |
| Lubrication interval   | : -                                   | -                            |  |           |          |
| Lubricant amount   | : -                                   | -                            |  |           |          |
| Lubricant type   | : Mobil Polyrex EM                    |                              |  |           |          |
| Notes<br>USABLE @208V 20.1A SF 1.00 SFA 20.1A  |                                       |                              |  |           |          |
| 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   | 13/05/2022                            |                              |  | 1 / 4     |          |

# LOAD PERFORMANCE CURVE

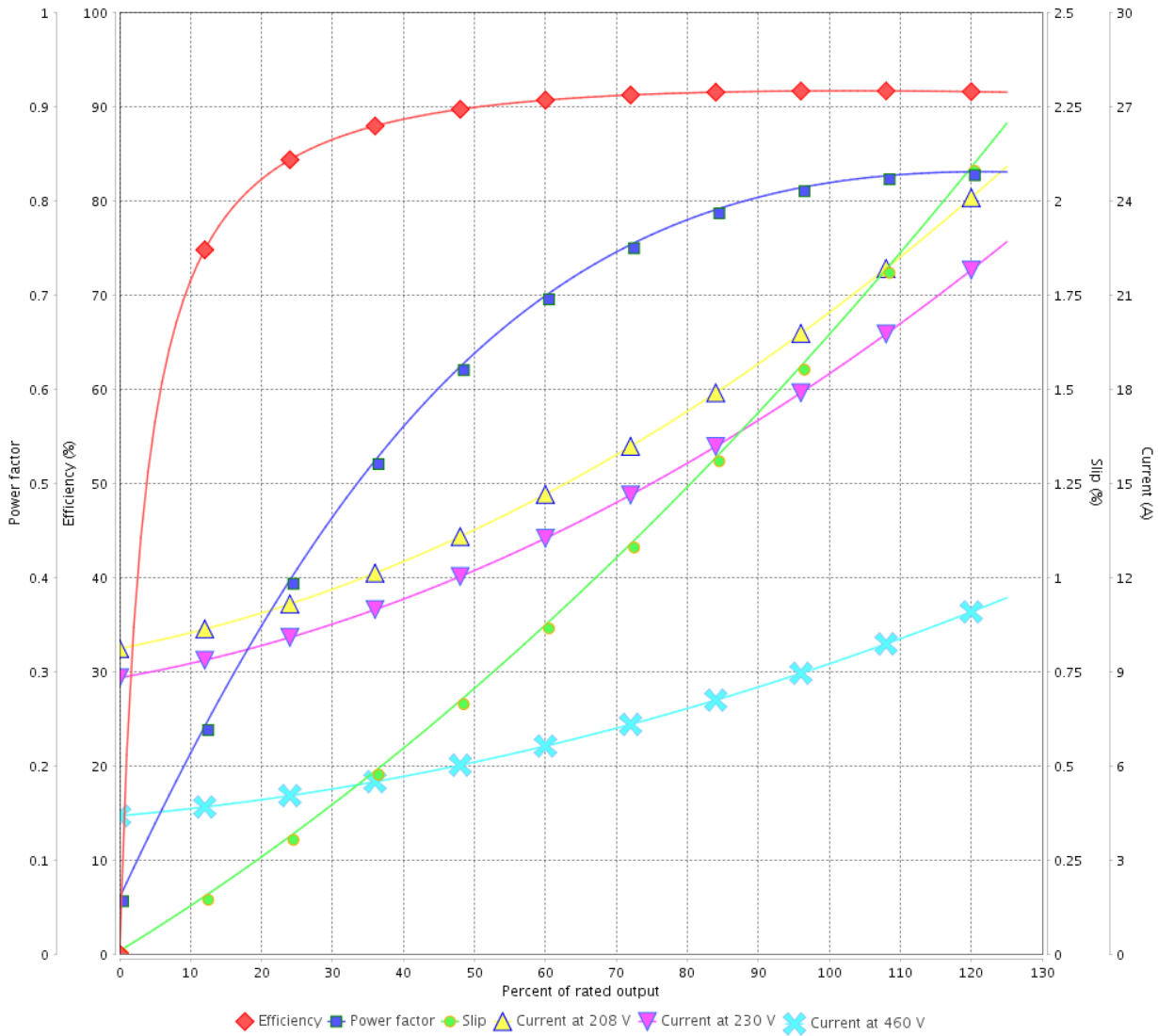
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase      Product code : 12675405

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 18.1/9.07 A  
 LRC : 7.3  
 Rated torque : 3.08 kgfm  
 Locked rotor torque : 260 %  
 Breakdown torque : 300 %  
 Rated speed : 1770 rpm

Moment of inertia (J) : 0.0395 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   |                 |           |         |          |
| Date         |                 |           |         |          |

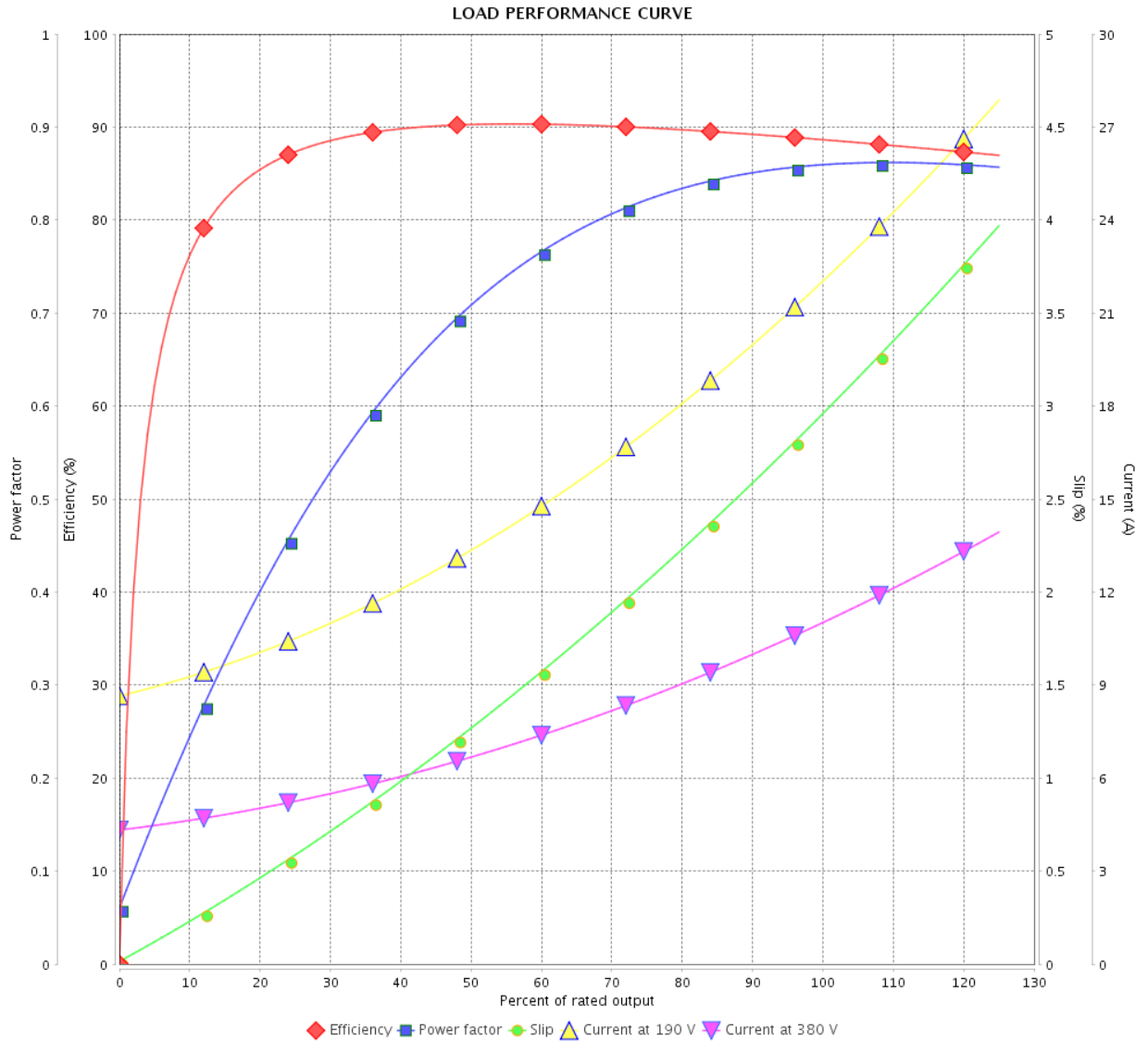
# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



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

Product line : NEMA Premium Efficiency Three-Phase      Product code : 12675405



Performance : 190/380 V 50 Hz 4P

Rated current : 22.0/11.0 A  
 LRC : 6.2  
 Rated torque : 3.74 kgfm  
 Locked rotor torque : 190 %  
 Breakdown torque : 250 %  
 Rated speed : 1455 rpm

Moment of inertia (J) : 0.0395 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     |
|--------------|-----------------|-----------|---------|----------|
|              |                 |           |         |          |
| Performed by |                 |           | Page    | Revision |
| Checked by   |                 |           |         |          |
| Date         |                 |           |         |          |

# LOAD PERFORMANCE CURVE

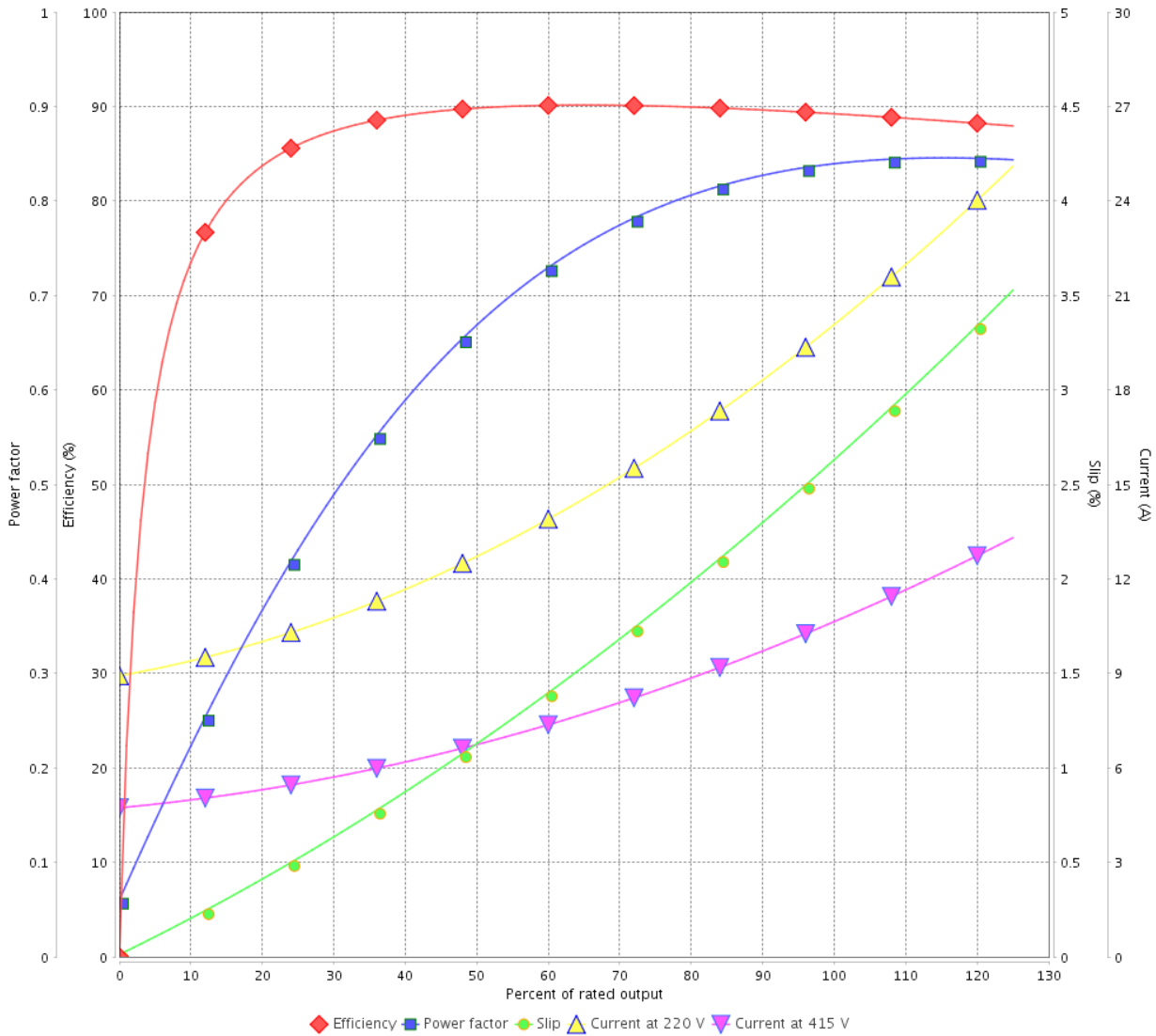
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase      Product code : 12675405

LOAD PERFORMANCE CURVE



Performance : 220/415 V 50 Hz 4P

Rated current : 20.0/10.6 A  
 LRC : 6.8  
 Rated torque : 3.73 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 280 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 0.0395 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     |
|--------------|-----------------|-----------|---------|----------|
|              |                 |           |         |          |
| Performed by |                 |           | Page    | Revision |
| Checked by   |                 |           |         |          |
| Date         |                 |           |         |          |