

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



|  |   |  |                           |          |
|--|---|--|---------------------------|----------|
| Customer :   |   |  |                           |          |
| Product line   | : JM Pump NEMA Premium Efficiency Three-Phase           | Product code :   | 13440285                  |          |
| Frame  | : 213/5JM   | 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>2</sup>  | : 70.2 kg                 |          |
| Protection degree  | : IP55  | Moment of inertia (J)  | : 0.0531 kgm <sup>2</sup> |          |
| Design   | : B   |  |                           |          |
| Output [HP]  | 5   | 5  | 5                         |          |
| Poles  | 6   | 6  | 6                         |          |
| Frequency [Hz]   | 60  | 50   | 50                        |          |
| Rated voltage [V]  | 230/460   | 190/380  | 220/415                   |          |
| Rated current [A]  | 13.5/6.74   | 16.3/8.13  | 14.6/7.74                 |          |
| L. R. Amperes [A]  | 80.9/40.4   | 74.8/37.4  | 75.9/40.2                 |          |
| LRC [A]  | 6.0x(Code H)  | 4.6x(Code E)   | 5.2x(Code F)              |          |
| No load current [A]  | 6.84/3.42   | 6.75/3.38  | 6.86/3.64                 |          |
| Rated speed [RPM]  | 1175  | 960  | 965                       |          |
| Slip [%]   | 2.08  | 4.00   | 3.50                      |          |
| Rated torque [kgfm]  | 3.09  | 3.78   | 3.76                      |          |
| Locked rotor torque [%]  | 220   | 160  | 190                       |          |
| Breakdown torque [%]   | 250   | 190  | 210                       |          |
| Service factor   | 1.15  | 1.00   | 1.00                      |          |
| Temperature rise   | 80 K  | 105 K  | 105 K                     |          |
| Locked rotor time  | 54s (cold) 30s (hot)                                    | 0s (cold) 0s (hot)   | 0s (cold) 0s (hot)        |          |
| Noise level <sup>2</sup>   | 55.0 dB(A)  | 53.0 dB(A)   | 53.0 dB(A)                |          |
| Efficiency (%)   | 25%   | 86.4   | 88.7                      |          |
|  | 50%   | 87.5   | 87.6                      |          |
|  | 75%   | 88.5   | 87.8                      |          |
|  | 100%  | 89.5   | 86.3                      |          |
| Power Factor   | 25%   | 0.35   | 0.37                      |          |
|  | 50%   | 0.59   | 0.62                      |          |
|  | 75%   | 0.71   | 0.74                      |          |
|  | 100%  | 0.77   | 0.80                      |          |
| Bearing type   | : <u>Drive end</u> 6209 ZZ <u>Non drive end</u> 6206 ZZ | Foundation loads   |                           |          |
| Sealing  | : V'Ring Without Bearing Seal                           | Max. traction  | : 111 kgf                 |          |
|  |   | Max. compression   | : 181 kgf                 |          |
| Lubrication interval   | : -   |  |                           |          |
| Lubricant amount   | : -   |  |                           |          |
| Lubricant type   | : Mobil Polyrex EM                                      |  |                           |          |
| Notes<br>USABLE @208V 14.9A SF 1.00 SFA 14.9A  |   |  |                           |          |
| 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   | 16/05/2022  |  | 1 / 4                     |          |

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

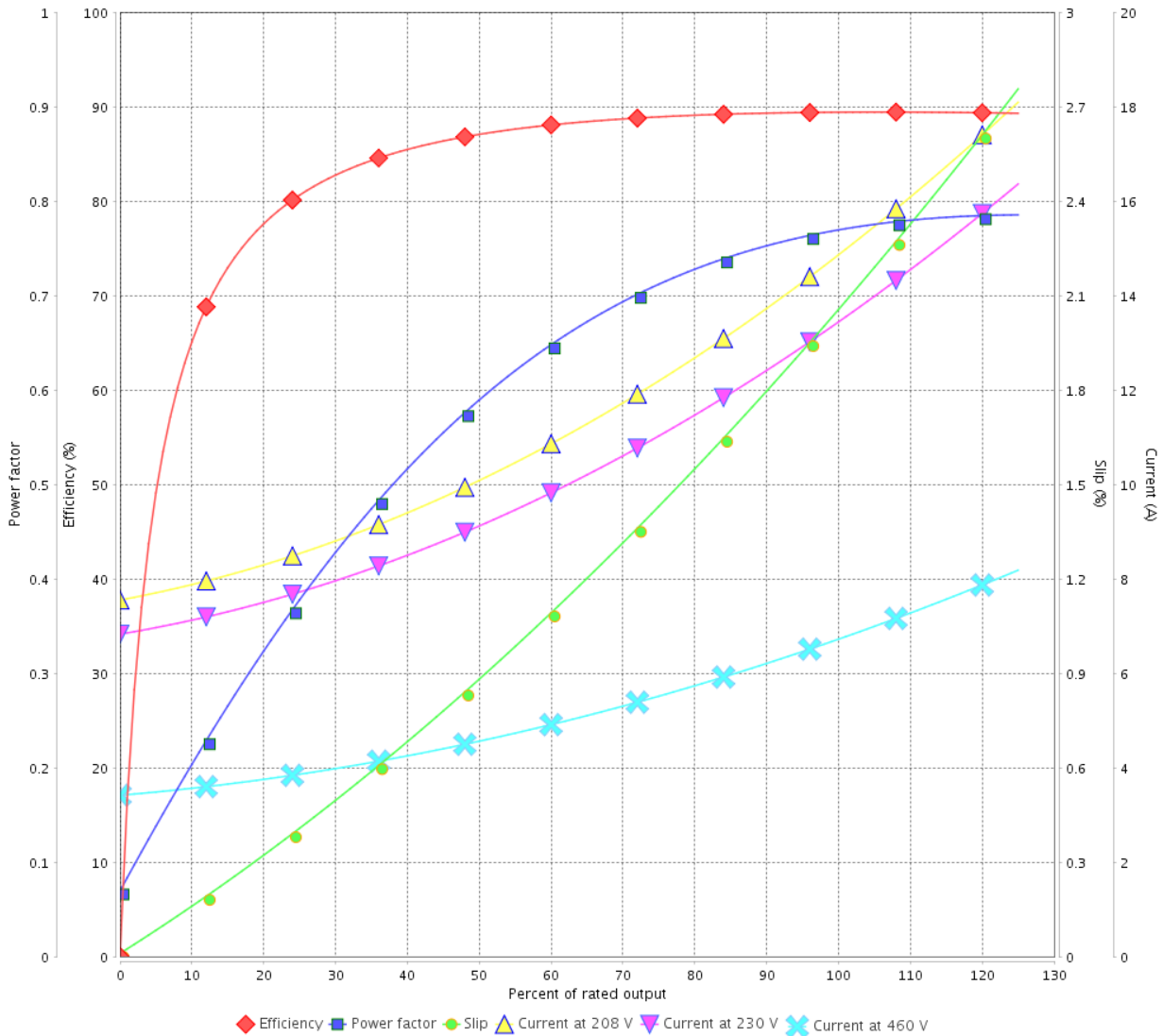


Customer : \_\_\_\_\_

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 13440285

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 13.5/6.74 A  
 LRC : 6.0  
 Rated torque : 3.09 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 250 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 0.0531 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

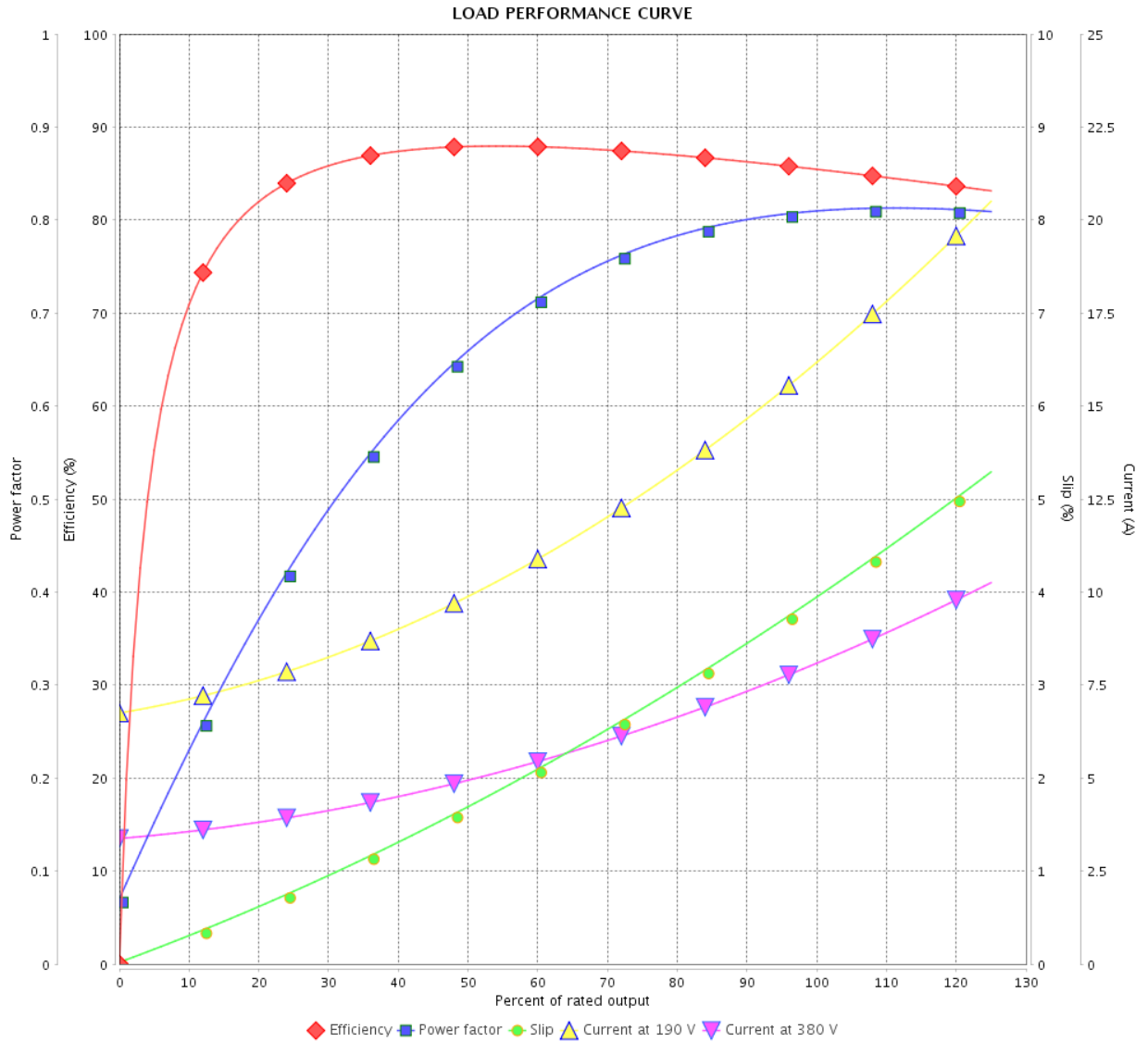
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13440285



Performance : 190/380 V 50 Hz 6P

Rated current : 16.3/8.13 A  
 LRC : 4.6  
 Rated torque : 3.78 kgfm  
 Locked rotor torque : 160 %  
 Breakdown torque : 190 %  
 Rated speed : 960 rpm

Moment of inertia (J) : 0.0531 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         |                 |           |         |          |
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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

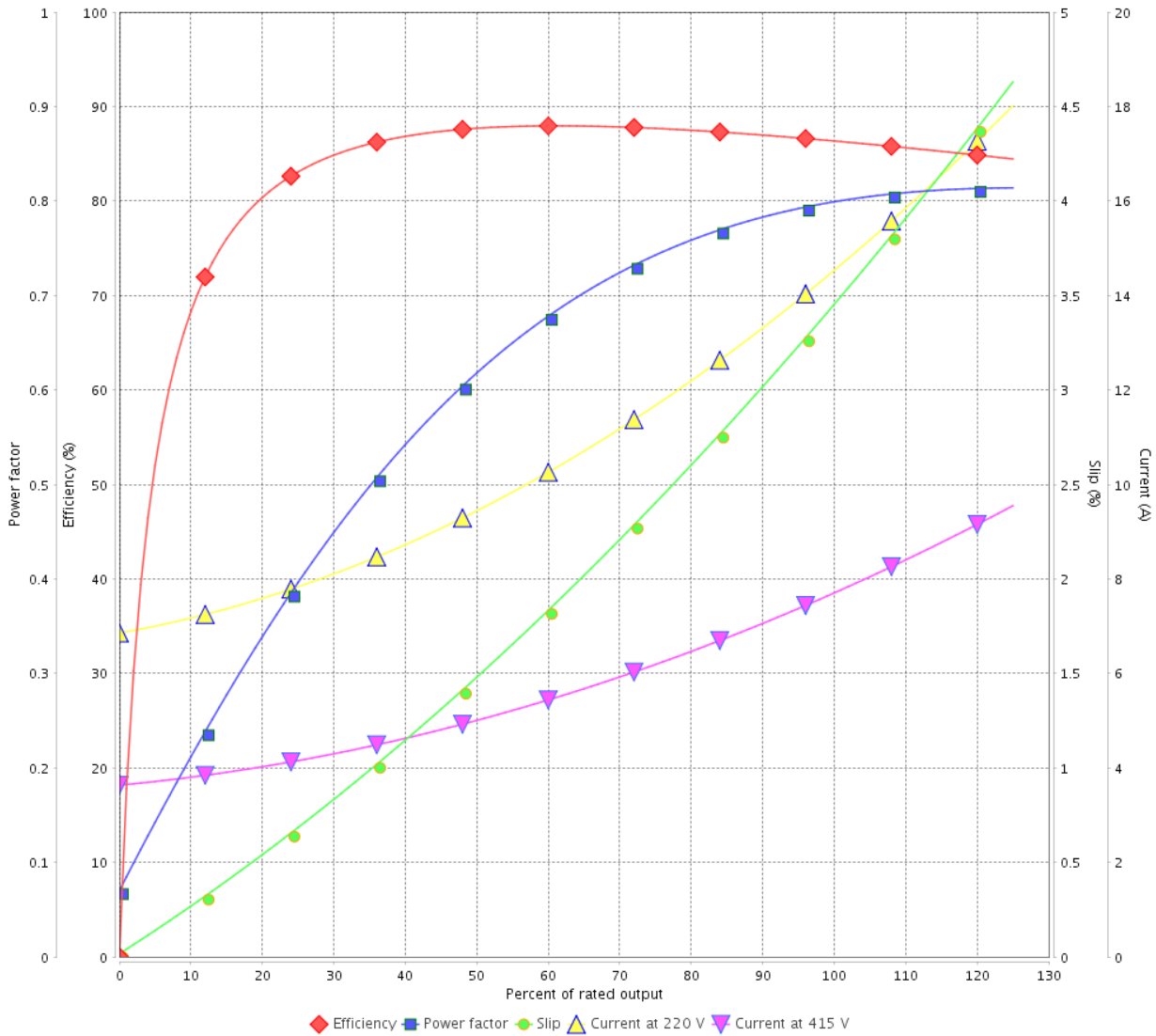


Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 13440285

LOAD PERFORMANCE CURVE



Performance : 220/415 V 50 Hz 6P

Rated current : 14.6/7.74 A  
LRC : 5.2  
Rated torque : 3.76 kgfm  
Locked rotor torque : 190 %  
Breakdown torque : 210 %  
Rated speed : 965 rpm

Moment of inertia (J) : 0.0531 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<br>4 / 4 | Revision |
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