

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



|  |   |  |                           |          |
|--|---|--|---------------------------|----------|
| Customer :   |   |  |                           |          |
| Product line   | : JM Pump NEMA Premium Efficiency Three-Phase           | Product code :   | 13180600                  |          |
| Frame  | : 143/5JM   | 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>  | : 18.3 kg                 |          |
| Protection degree  | : IP55  | Moment of inertia (J)  | : 0.0046 kgm <sup>2</sup> |          |
| Design   | : B   |  |                           |          |
| Output [HP]  | 1.5   | 1.5  | 1.5                       |          |
| Poles  | 4   | 4  | 4                         |          |
| Frequency [Hz]   | 60  | 50   | 50                        |          |
| Rated voltage [V]  | 230/460   | 190/380  | 220/415                   |          |
| Rated current [A]  | 4.04/2.02   | 4.82/2.41  | 4.38/2.32                 |          |
| L. R. Amperes [A]  | 33.1/16.6   | 29.4/14.7  | 29.3/15.5                 |          |
| LRC [A]  | 8.2x(Code K)  | 6.1x(Code H)   | 6.7x(Code J)              |          |
| No load current [A]  | 2.17/1.08   | 2.13/1.07  | 2.20/1.17                 |          |
| Rated speed [RPM]  | 1750  | 1420   | 1430                      |          |
| Slip [%]   | 2.78  | 5.33   | 4.67                      |          |
| Rated torque [kgfm]  | 0.622   | 0.767  | 0.761                     |          |
| Locked rotor torque [%]  | 270   | 210  | 240                       |          |
| Breakdown torque [%]   | 300   | 250  | 280                       |          |
| Service factor   |   | 1.15   | 1.15                      |          |
| Temperature rise   | 80 K  | 105 K  | 80 K                      |          |
| Locked rotor time  | 37s (cold) 21s (hot)                                    | 0s (cold) 0s (hot)   | 0s (cold) 0s (hot)        |          |
| Noise level <sup>2</sup>   | 52.0 dB(A)  | 49.0 dB(A)   | 49.0 dB(A)                |          |
| Efficiency (%)   | 25%   | 85.2   | 85.0                      |          |
|  | 50%   | 85.5   | 84.2                      |          |
|  | 75%   | 86.5   | 84.9                      |          |
|  | 100%  | 86.5   | 83.6                      |          |
| Power Factor   | 25%   | 0.35   | 0.37                      |          |
|  | 50%   | 0.59   | 0.62                      |          |
|  | 75%   | 0.72   | 0.75                      |          |
|  | 100%  | 0.79   | 0.82                      |          |
| Bearing type   | : <u>Drive end</u> 6206 ZZ <u>Non drive end</u> 6203 ZZ | Foundation loads   |                           |          |
| Sealing  | : V'Ring Without Bearing Seal                           | Max. traction  | : 51 kgf                  |          |
| Lubrication interval   | : - -   | Max. compression   | : 70 kgf                  |          |
| Lubricant amount   | : - -   |  |                           |          |
| Lubricant type   | : Mobil Polyrex EM                                      |  |                           |          |
| Notes<br>USABLE @208V 4.47A SF 1.00 SFA 4.47A  |   |  |                           |          |
| 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

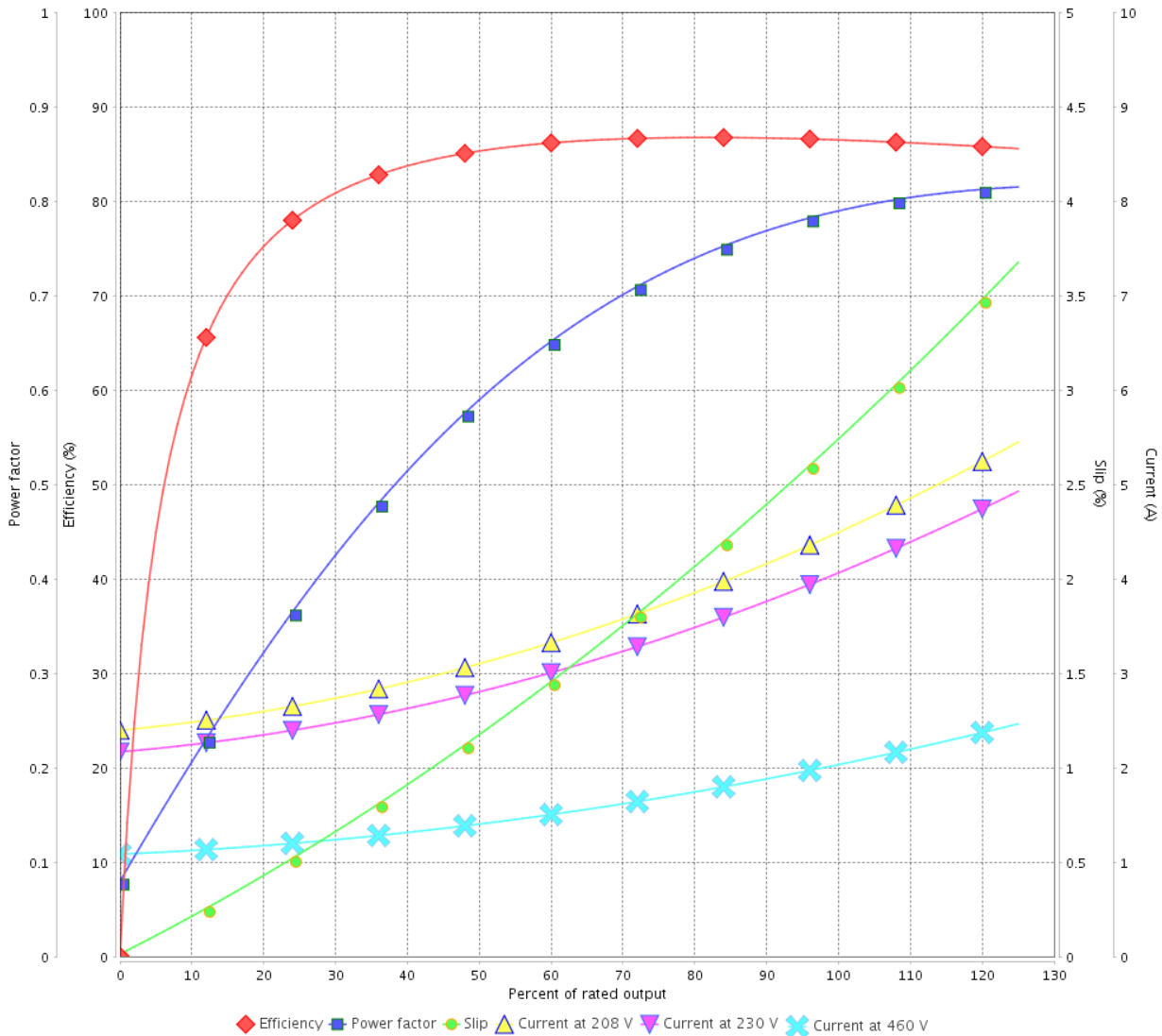


Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 13180600

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 4.04/2.02 A  
LRC : 8.2  
Rated torque : 0.622 kgfm  
Locked rotor torque : 270 %  
Breakdown torque : 300 %  
Rated speed : 1750 rpm

Moment of inertia (J) : 0.0046 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor :  
Temperature rise : 80 K  
Design : B

| Rev.         | Changes Summary | Performed | Checked       | Date     |
|--------------|-----------------|-----------|---------------|----------|
|              |                 |           |               |          |
| Performed by |                 |           | Page<br>2 / 4 | Revision |
| Checked by   |                 |           |               |          |
| Date         | 16/05/2022      |           |               |          |

# LOAD PERFORMANCE CURVE

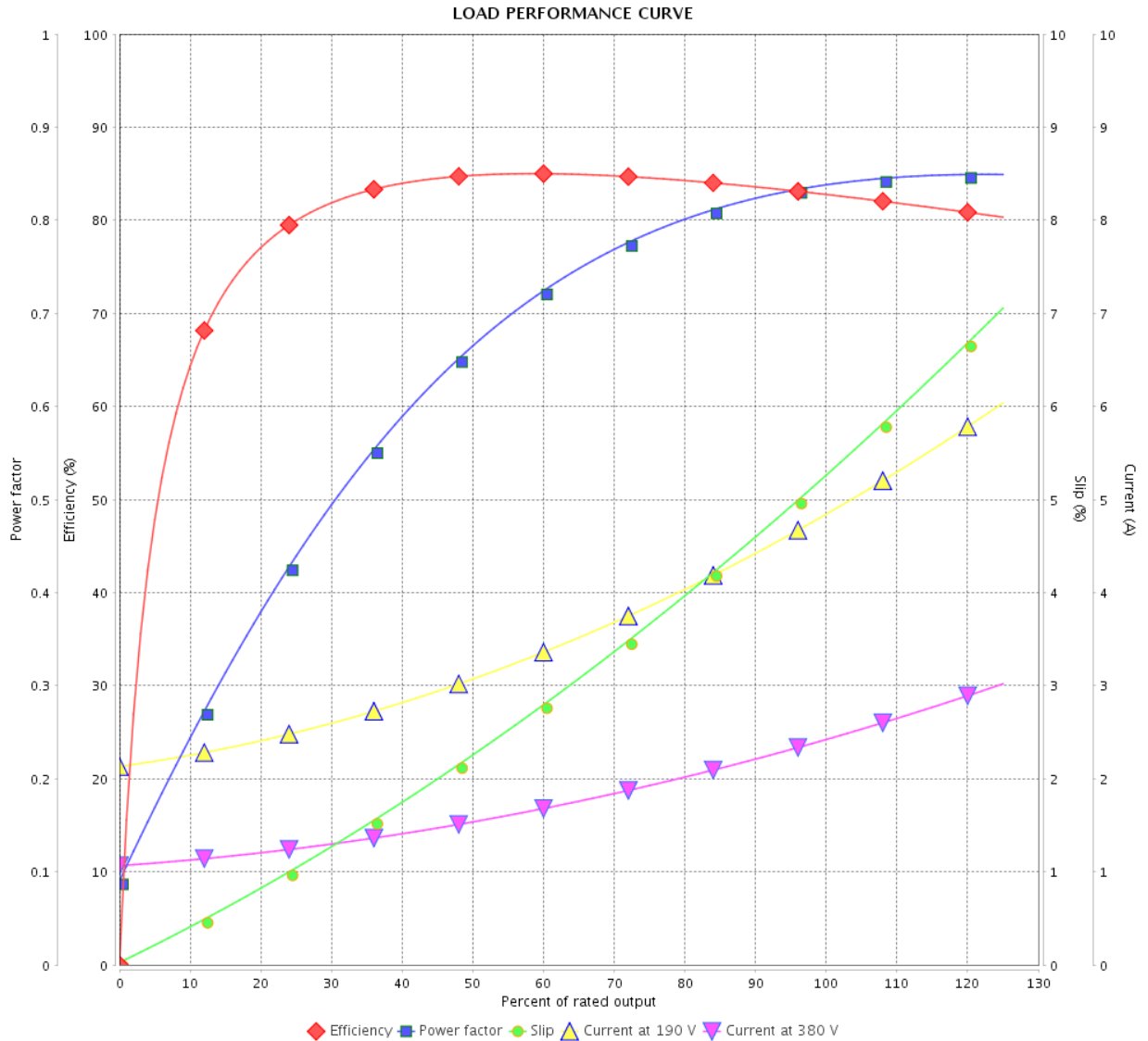
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 13180600



Performance : 190/380 V 50 Hz 4P

Rated current : 4.82/2.41 A  
LRC : 6.1  
Rated torque : 0.767 kgfm  
Locked rotor torque : 210 %  
Breakdown torque : 250 %  
Rated speed : 1420 rpm

Moment of inertia (J) : 0.0046 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 105 K  
Design : B

| Rev.         | Changes Summary | Performed | Checked | Date     |
|--------------|-----------------|-----------|---------|----------|
|              |                 |           |         |          |
| Performed by |                 |           | Page    | Revision |
| Checked by   |                 |           | 3 / 4   |          |
| Date         | 16/05/2022      |           |         |          |

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

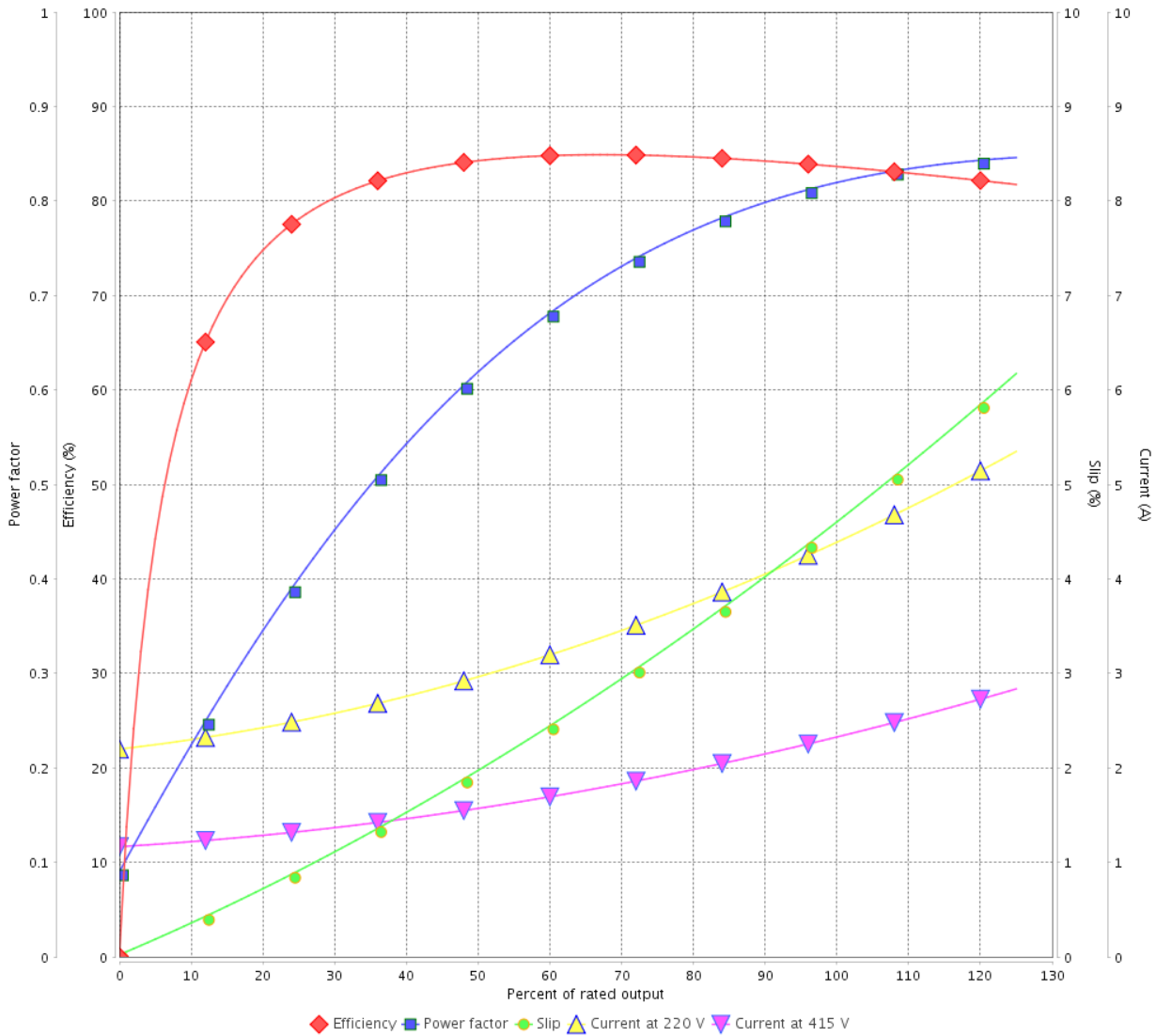


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Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 13180600

LOAD PERFORMANCE CURVE

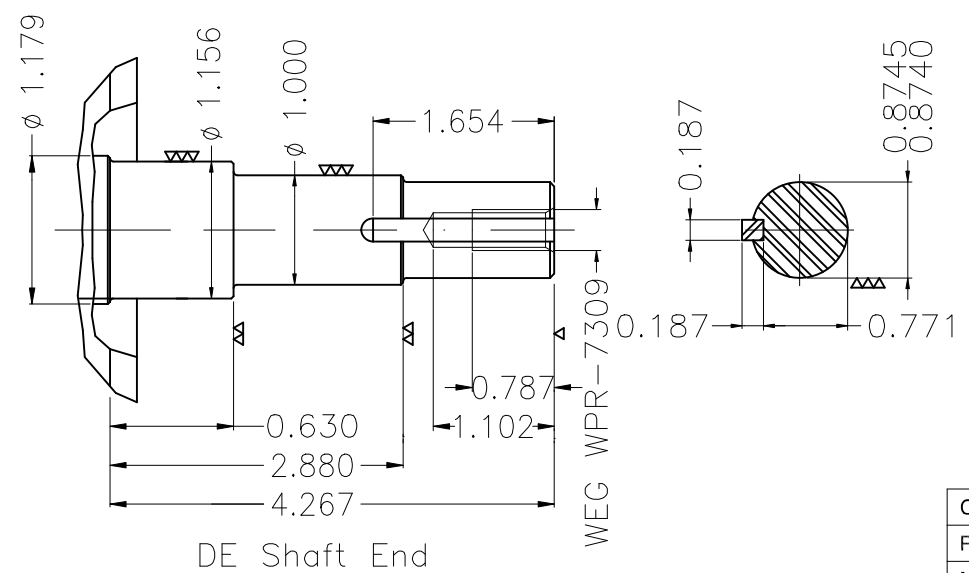
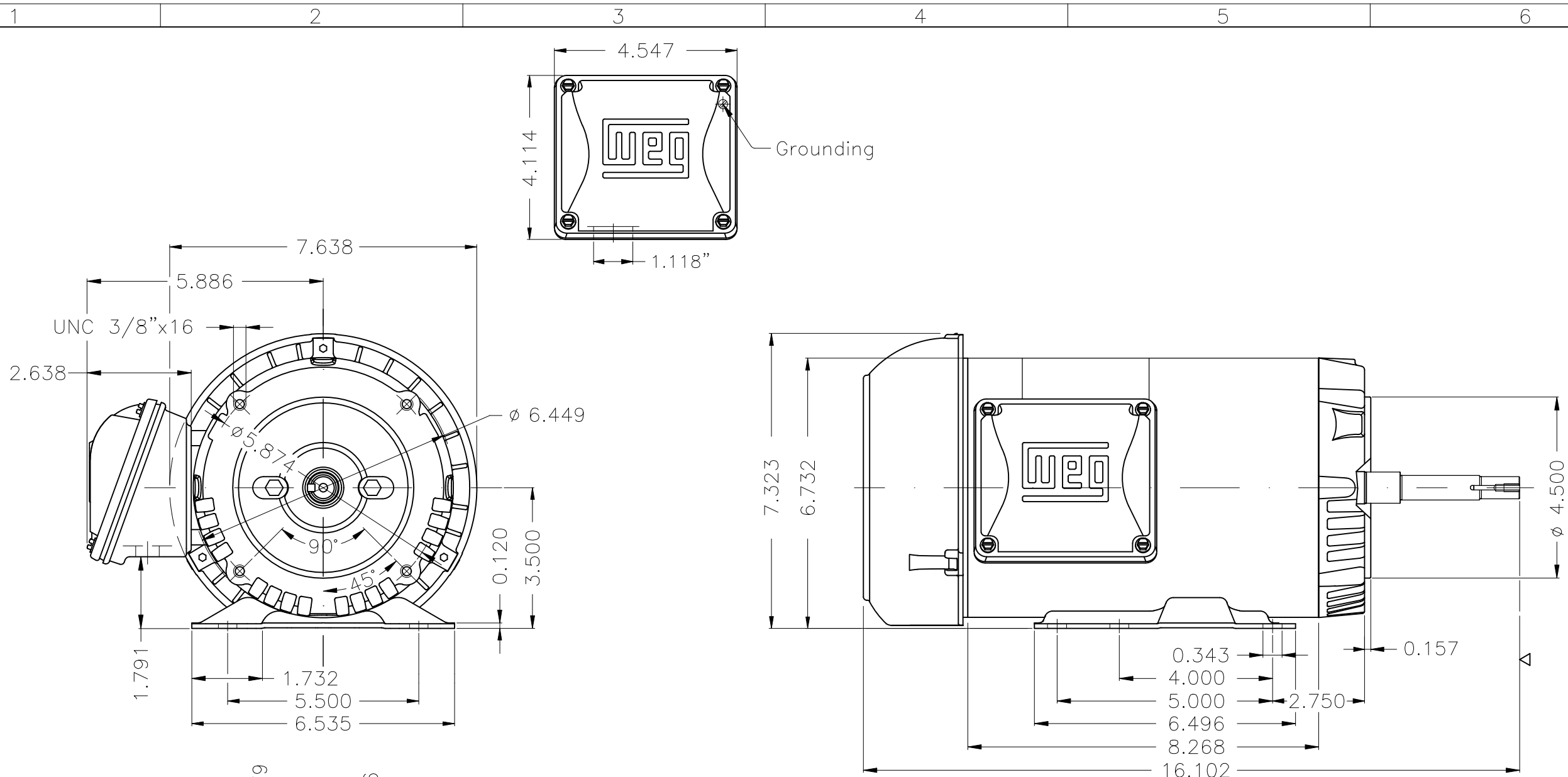


Performance : 220/415 V 50 Hz 4P

Rated current : 4.38/2.32 A  
 LRC : 6.7  
 Rated torque : 0.761 kgfm  
 Locked rotor torque : 240 %  
 Breakdown torque : 280 %  
 Rated speed : 1430 rpm

Moment of inertia (J) : 0.0046 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         |                 |           |         |          |



EUNC 3/8"-16 WEG WPR-7309

|                               |            |   |                     |            |          |
|-------------------------------|------------|---|---------------------|------------|----------|
| Color Munsell N 1 matte black |            |   |                     |            |          |
| Painting plan 207N            |            |   |                     |            |          |
| Mounting B34D                 |            |   |                     |            |          |
|                               |            |   |                     |            |          |
|                               |            |   |                     | HYBRISUSER | 00       |
| ECM                           | LOC        | SUMMARY OF MODIFICATIONS                        | EXECUTED            | CHECKED    | RELEASED |
| EXECUTED                      | HYBRISUSER | THREE PH. MOTOR ROLLED STEEL JM NEMA PREM. EFF. |                     |            |          |
| CHECKED                       |            | FRAME 143/5JM IP55 TEFC                         |                     |            |          |
| RELEASED                      |            |   |                     |            |          |
| REL. DATE                     |            | WMO Jaragua do Sul                              | Product Engineering | WDD        | 00       |
|                               |            |   | SHEET               | 1 / 1      |          |

1.5 HP 04 Poles 60 Hz



Dimensions in inches XME A3