

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



|  |   |  |  |                      |          |
|--|---|--|--|----------------------|----------|
| Customer :   |   |  |  |                      |          |
| Product line   |   | : W40 NEMA Premium Efficiency<br>Three-Phase | Product code :   | 14865595             |          |
| Frame  | : 404/5TSD  | 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>                  | : 427 kg   |                      |          |
| Protection degree  | : IP23  | Moment of inertia (J)                        | : 0.3708 kgm <sup>2</sup>  |                      |          |
| Design   | : B   |  |  |                      |          |
| Output [HP]  | 150   | 100  | 100  | 100                  |          |
| Poles  | 2   | 2  | 2  | 2                    |          |
| Frequency [Hz]   | 60  | 50   | 50   | 50                   |          |
| Rated voltage [V]  | 230/460   | 380  | 400  | 415                  |          |
| Rated current [A]  | 334/167   | 137  | 133  | 133                  |          |
| L. R. Amperes [A]  | 2204/1102   | 986  | 1051   | 1117                 |          |
| LRC [A]  | 6.6x(Code G)  | 7.2x(Code H)                                 | 7.9x(Code J)   | 8.4x(Code K)         |          |
| No load current [A]  | 80.0/40.0   | 43.8   | 43.7   | 48.9                 |          |
| Rated speed [RPM]  | 3552  | 2960   | 2965   | 2965                 |          |
| Slip [%]   | 1.33  | 1.33   | 1.17   | 1.17                 |          |
| Rated torque [kgfm]  | 30.7  | 24.5   | 24.5   | 24.5                 |          |
| Locked rotor torque [%]  | 200   | 229  | 250  | 270                  |          |
| Breakdown torque [%]   | 250   | 290  | 330  | 360                  |          |
| Service factor   | 1.25  | 1.00   | 1.00   | 1.00                 |          |
| Temperature rise   | 80 K  | 80 K   | 80 K   | 80 K                 |          |
| Locked rotor time  | 16s (cold) 9s (hot)                                       | 21s (cold) 12s (hot)                         | 19s (cold) 11s (hot)   | 18s (cold) 10s (hot) |          |
| Noise level <sup>2</sup>   | 84.0 dB(A)  |  |  |                      |          |
| Efficiency (%)   | 25%   |  |  |                      |          |
|  | 50%   | 93.6   | 93.7   | 93.2                 |          |
|  | 75%   | 94.1   | 94.4   | 94.2                 |          |
|  | 100%  | 94.1   | 94.7   | 94.7                 |          |
| Power Factor   | 25%   |  |  |                      |          |
|  | 50%   | 0.79   | 0.76   | 0.70                 |          |
|  | 75%   | 0.86   | 0.85   | 0.81                 |          |
|  | 100%  | 0.88   | 0.88   | 0.86                 |          |
| Bearing type   | : <u>Drive end</u> 6314 C3 <u>Non drive end</u> 6212 Z C3 | Foundation loads                             |  |                      |          |
| Sealing  | : Without Without<br>Bearing Seal Bearing Seal            | Max. traction                                | : 653 kgf  |                      |          |
| Lubrication interval   | : 14418 h 20000 h   | Max. compression                             | : 1080 kgf   |                      |          |
| Lubricant amount   | : 27 g 13 g   |  |  |                      |          |
| Lubricant type   | : Mobil Polyrex EM  |  |  |                      |          |
| Notes<br>USABLE @208V 369A SF 1.15 SFA 425A  |   |  |  |                      |          |
| 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   | 29/10/2024  |  |  | 1 / 5                |          |

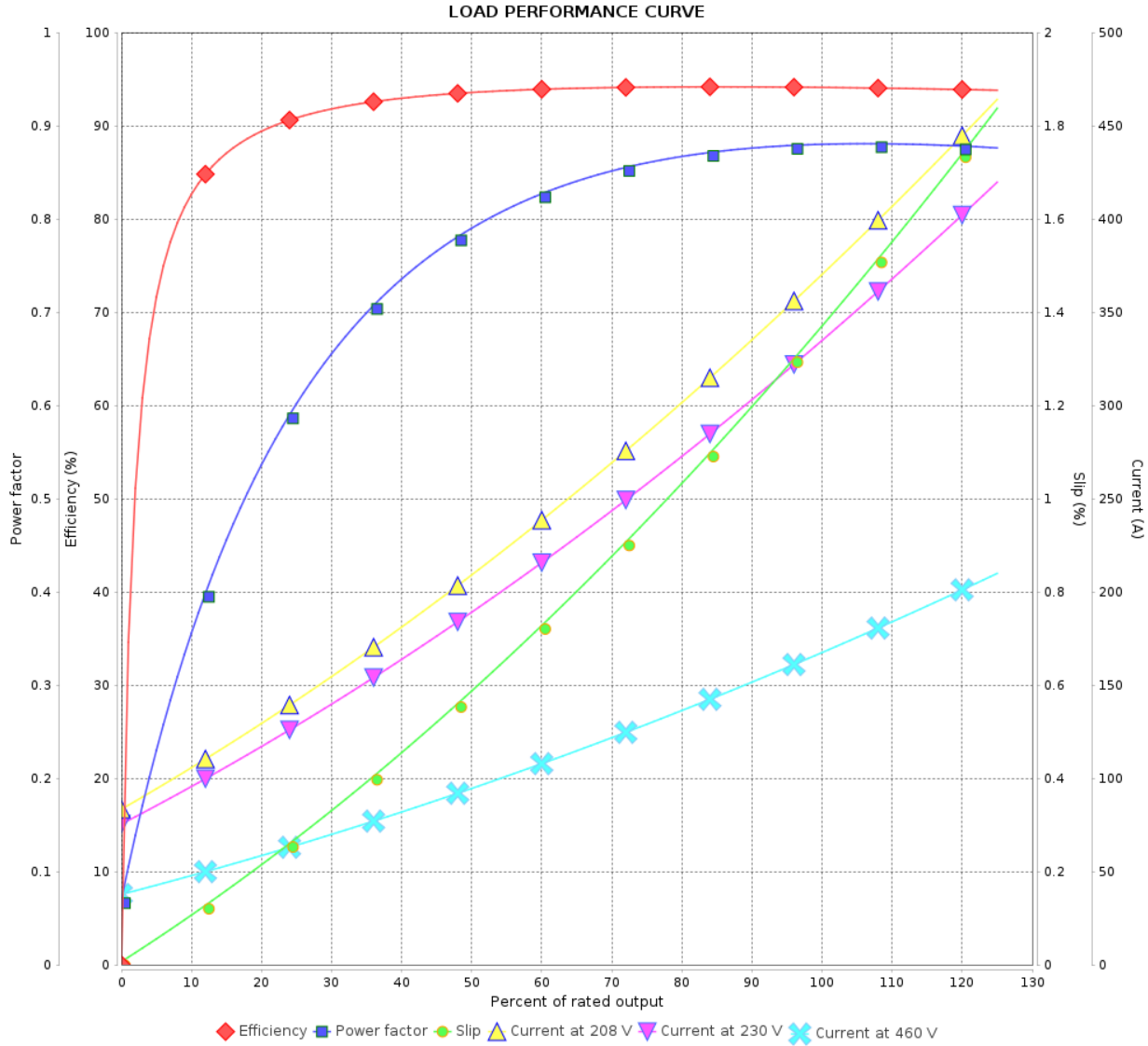
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



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

Product line : W40 NEMA Premium Efficiency Three-Phase      Product code : 14865595



Performance : 230/460 V 60 Hz 2P

Rated current : 334/167 A  
 LRC : 6.6  
 Rated torque : 30.7 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 250 %  
 Rated speed : 3552 rpm

Moment of inertia (J) : 0.3708 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     |
|--------------|-----------------|-----------|---------|----------|
|              |                 |           |         |          |
| Performed by |                 |           | Page    | Revision |
| Checked by   |                 |           |         |          |
| Date         |                 |           |         |          |

# LOAD PERFORMANCE CURVE

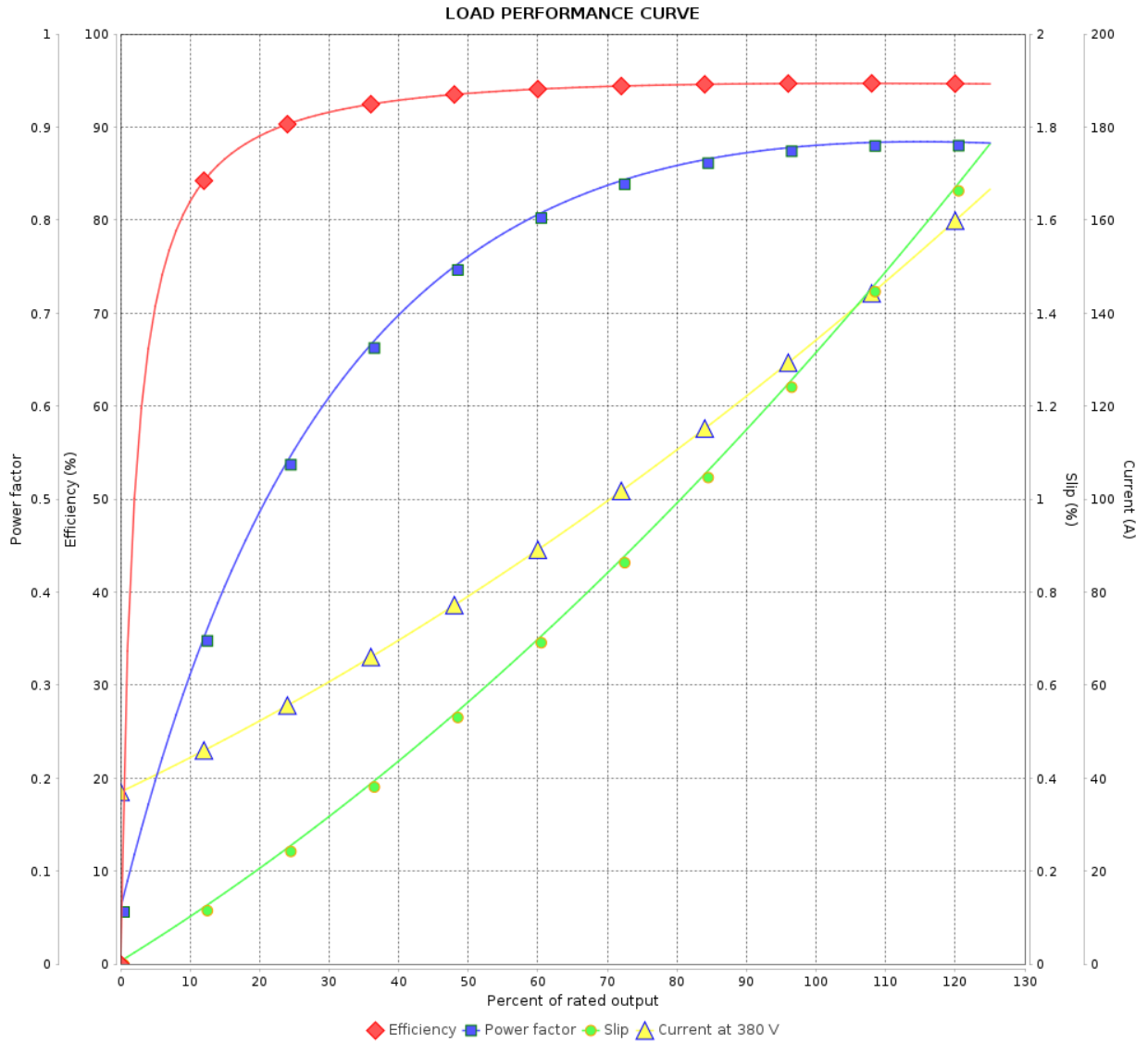
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14865595



Performance : 380 V 50 Hz 2P IE3

Rated current : 137 A  
 LRC : 7.2  
 Rated torque : 24.5 kgfm  
 Locked rotor torque : 229 %  
 Breakdown torque : 290 %  
 Rated speed : 2960 rpm

Moment of inertia (J) : 0.3708 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 |                 |           |         |          |
| Checked by   |                 |           |         |          |
| Date         |                 |           |         |          |
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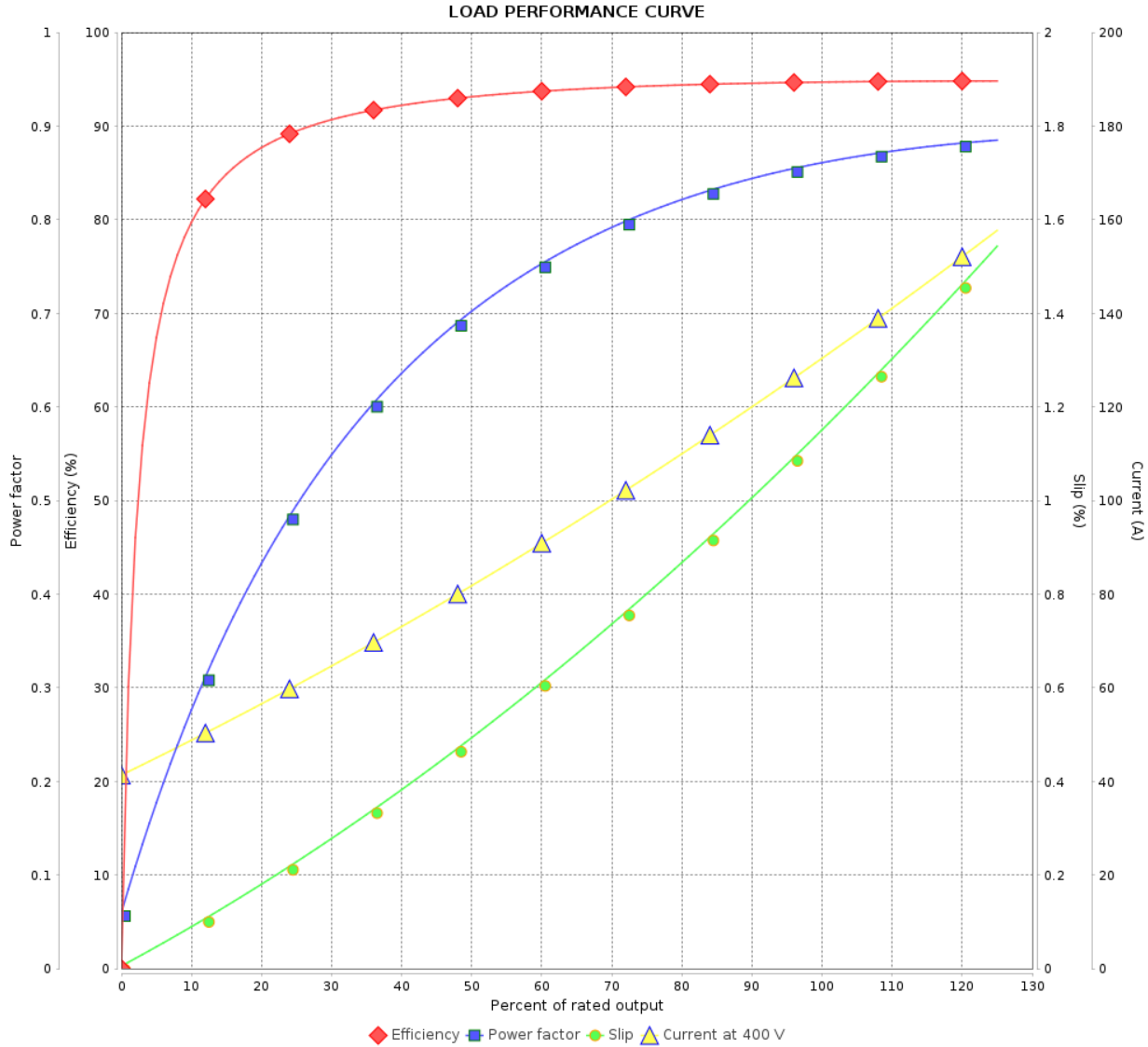
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase      Product code : 14865595



Performance : 400 V 50 Hz 2P IE3

|                     |             |                       |                           |
|---------------------|-------------|-----------------------|---------------------------|
| Rated current       | : 133 A     | Moment of inertia (J) | : 0.3708 kgm <sup>2</sup> |
| LRC                 | : 7.9       | Duty cycle            | : Cont.(S1)               |
| Rated torque        | : 24.5 kgfm | Insulation class      | : F                       |
| Locked rotor torque | : 250 %     | Service factor        | : 1.00                    |
| Breakdown torque    | : 330 %     | Temperature rise      | : 80 K                    |
| Rated speed         | : 2965 rpm  | Design                | : B                       |

| Rev.         | Changes Summary | Performed | Checked       | Date     |
|--------------|-----------------|-----------|---------------|----------|
|              |                 |           |               |          |
| Performed by |                 |           | Page<br>4 / 5 | Revision |
| Checked by   |                 |           |               |          |
| Date         | 29/10/2024      |           |               |          |

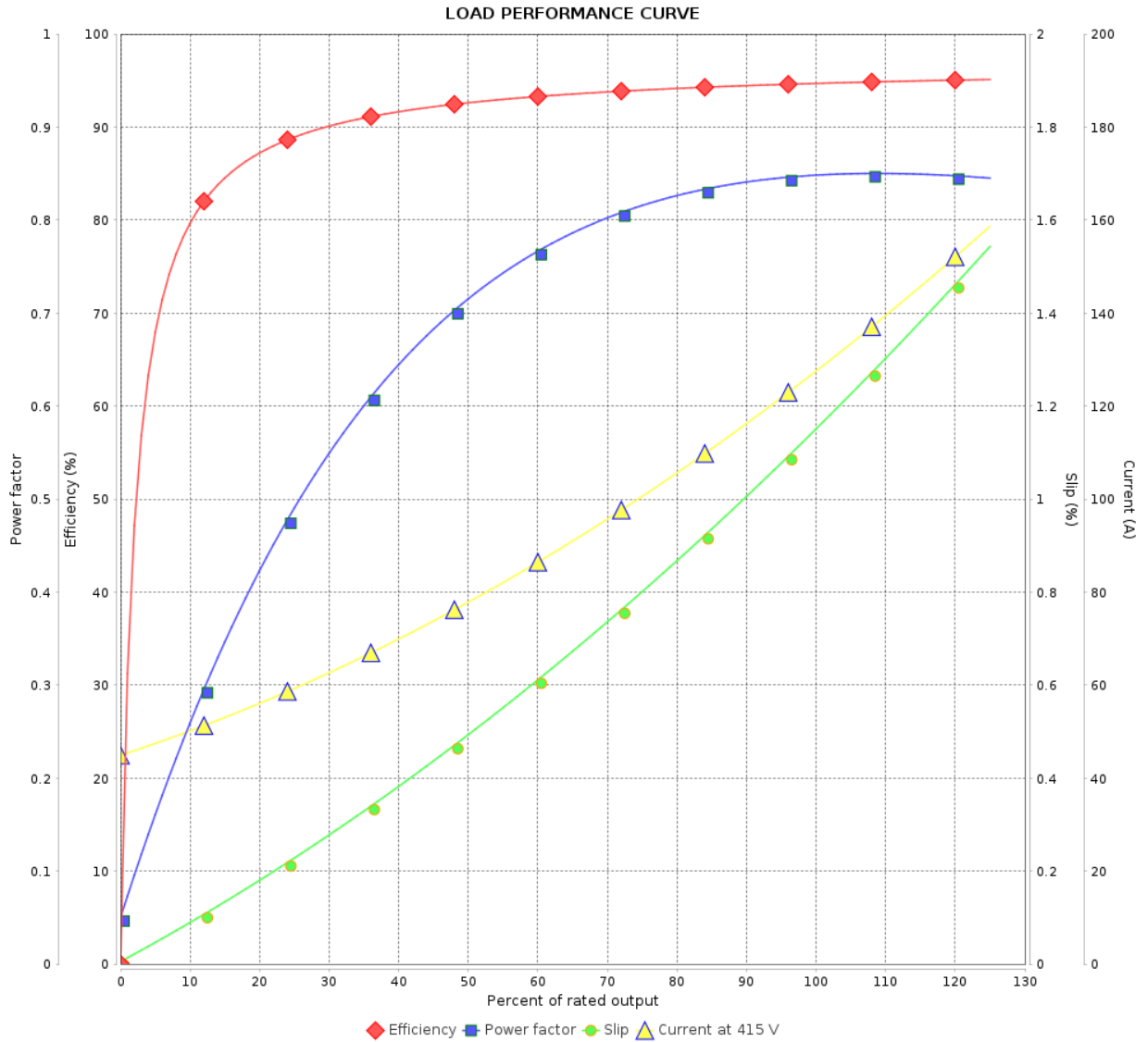
# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

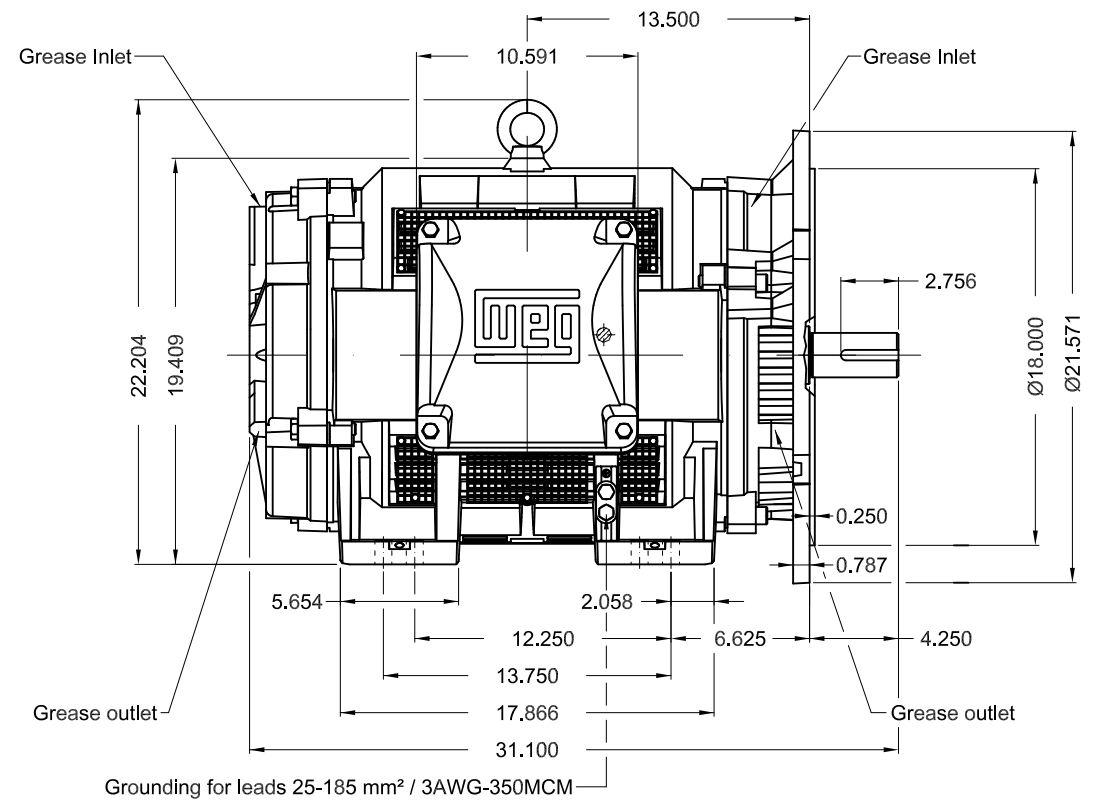
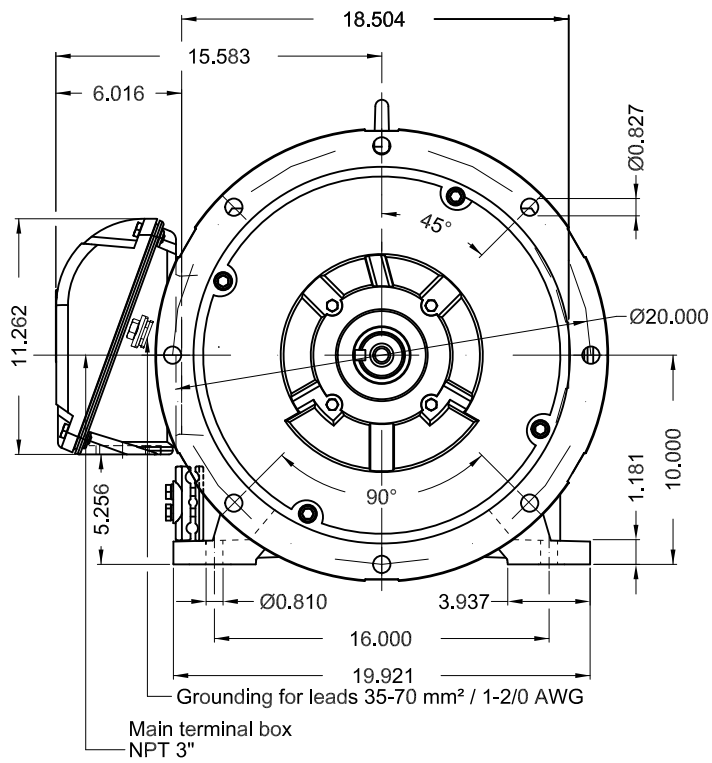
Product line : W40 NEMA Premium Efficiency Three-Phase      Product code : 14865595



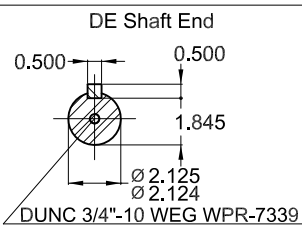
Performance : 415 V 50 Hz 2P IE3

|                     |             |                       |                           |
|---------------------|-------------|-----------------------|---------------------------|
| Rated current       | : 133 A     | Moment of inertia (J) | : 0.3708 kgm <sup>2</sup> |
| LRC                 | : 8.4       | Duty cycle            | : Cont.(S1)               |
| Rated torque        | : 24.5 kgfm | Insulation class      | : F                       |
| Locked rotor torque | : 270 %     | Service factor        | : 1.00                    |
| Breakdown torque    | : 360 %     | Temperature rise      | : 80 K                    |
| Rated speed         | : 2965 rpm  | Design                | : B                       |

| Rev.         | Changes Summary | Performed | Checked       | Date     |
|--------------|-----------------|-----------|---------------|----------|
|              |                 |           |               |          |
| Performed by |                 |           | Page<br>5 / 5 | Revision |
| Checked by   |                 |           |               |          |
| Date         | 29/10/2024      |           |               |          |



Color RAL 5009  
 Painting plan 203A  
 Mounting NEMA F-1  
 Mounting B35R(D)



150 HP 02 Poles 60 Hz A

1:9

|           |            |     |                                     |                     |            |         |          |      |     |    |
|-----------|------------|-----|-------------------------------------|---------------------|------------|---------|----------|------|-----|----|
| ECM       |            | LOC | SUMMARY OF MODIFICATIONS            |                     | HYBRISUSER |         |          |      |     | 00 |
| EXECUTED  | HYBRISUSER |     | THREE PH. MOTOR W40 NEMA PREM. EFF. |                     | EXECUTED   | CHECKED | RELEASED | DATE | VER |    |
| CHECKED   |            |     | FRAME 404/5TSD IP23 ODP             |                     |            |         |          |      |     |    |
| RELEASED  |            |     |                                     |                     |            |         |          |      |     |    |
| REL. DATE |            | WMO | Jaragua do Sul                      | Product Engineering |            |         |          |      |     |    |

**PREVIEW**  
 WDD 00



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