

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



|                                                                                                                                                                                                                                                                                        |                                      |                                           |                                                                                                                          |            |          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|------------|----------|
| Customer :                                                                                                                                                                                                                                                                             |                                      |                                           |                                                                                                                          |            |          |
| Product line : Three-Phase                                                                                                                                                                                                                                                             |                                      | Product code : 13997238                   |                                                                                                                          |            |          |
| Frame : 56HC                                                                                                                                                                                                                                                                           | Insulation class : F                 | Cooling method : IC01 - ODP               | Mounting : F-1                                                                                                           |            |          |
| Duty cycle : Cont.(S1)                                                                                                                                                                                                                                                                 | Ambient temperature : -20°C to +40°C | Rotation <sup>1</sup> : Both (CW and CCW) | Starting method : Direct On Line                                                                                         |            |          |
| Altitude : 1000 m.a.s.l.                                                                                                                                                                                                                                                               | Design : A                           | Approx. weight <sup>3</sup> : 16.3 kg     | Moment of inertia (J) : 0.0049 kgm <sup>2</sup>                                                                          |            |          |
| Output [HP]                                                                                                                                                                                                                                                                            | 2                                    |                                           |                                                                                                                          |            |          |
| Poles                                                                                                                                                                                                                                                                                  | 2                                    |                                           |                                                                                                                          |            |          |
| Frequency [Hz]                                                                                                                                                                                                                                                                         | 60                                   |                                           |                                                                                                                          |            |          |
| Rated voltage [V]                                                                                                                                                                                                                                                                      | 575                                  |                                           |                                                                                                                          |            |          |
| Rated current [A]                                                                                                                                                                                                                                                                      | 1.94                                 |                                           |                                                                                                                          |            |          |
| L. R. Amperes [A]                                                                                                                                                                                                                                                                      | 17.2                                 |                                           |                                                                                                                          |            |          |
| LRC [A]                                                                                                                                                                                                                                                                                | 8.9x(Code K)                         |                                           |                                                                                                                          |            |          |
| No load current [A]                                                                                                                                                                                                                                                                    | 0.734                                |                                           |                                                                                                                          |            |          |
| Rated speed [RPM]                                                                                                                                                                                                                                                                      | 3510                                 |                                           |                                                                                                                          |            |          |
| Slip [%]                                                                                                                                                                                                                                                                               | 2.50                                 |                                           |                                                                                                                          |            |          |
| Rated torque [kgfm]                                                                                                                                                                                                                                                                    | 0.414                                |                                           |                                                                                                                          |            |          |
| Locked rotor torque [%]                                                                                                                                                                                                                                                                | 220                                  |                                           |                                                                                                                          |            |          |
| Breakdown torque [%]                                                                                                                                                                                                                                                                   | 330                                  |                                           |                                                                                                                          |            |          |
| Service factor                                                                                                                                                                                                                                                                         | 1.15                                 |                                           |                                                                                                                          |            |          |
| Temperature rise                                                                                                                                                                                                                                                                       | 80 K                                 |                                           |                                                                                                                          |            |          |
| Locked rotor time                                                                                                                                                                                                                                                                      | 25s (cold) 14s (hot)                 |                                           |                                                                                                                          |            |          |
| Noise level <sup>2</sup>                                                                                                                                                                                                                                                               | 62.0 dB(A)                           |                                           |                                                                                                                          |            |          |
| Efficiency (%)                                                                                                                                                                                                                                                                         | 25%                                  |                                           |                                                                                                                          |            |          |
|                                                                                                                                                                                                                                                                                        | 50%                                  | 84.0                                      |                                                                                                                          |            |          |
|                                                                                                                                                                                                                                                                                        | 75%                                  | 85.5                                      |                                                                                                                          |            |          |
|                                                                                                                                                                                                                                                                                        | 100%                                 | 85.5                                      |                                                                                                                          |            |          |
| Power Factor                                                                                                                                                                                                                                                                           | 25%                                  |                                           |                                                                                                                          |            |          |
|                                                                                                                                                                                                                                                                                        | 50%                                  | 0.77                                      |                                                                                                                          |            |          |
|                                                                                                                                                                                                                                                                                        | 75%                                  | 0.86                                      |                                                                                                                          |            |          |
|                                                                                                                                                                                                                                                                                        | 100%                                 | 0.91                                      |                                                                                                                          |            |          |
| Bearing type : 6204 ZZ                                                                                                                                                                                                                                                                 | Drive end                            | Non drive end                             | Foundation loads                                                                                                         |            |          |
| Sealing : Without                                                                                                                                                                                                                                                                      |                                      |                                           | Max. traction : 35 kgf                                                                                                   |            |          |
|                                                                                                                                                                                                                                                                                        | Bearing Seal                         | Bearing Seal                              | Max. compression : 52 kgf                                                                                                |            |          |
| Lubrication interval : -                                                                                                                                                                                                                                                               | -                                    | -                                         |                                                                                                                          |            |          |
| Lubricant amount : -                                                                                                                                                                                                                                                                   | -                                    | -                                         |                                                                                                                          |            |          |
| Lubricant type : Mobil Polyrex EM                                                                                                                                                                                                                                                      |                                      |                                           |                                                                                                                          |            |          |
| Notes                                                                                                                                                                                                                                                                                  |                                      |                                           |                                                                                                                          |            |          |
| 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                                                                                                                                                                                                                                                                             |                                      |                                           |                                                                                                                          |            |          |
| Date                                                                                                                                                                                                                                                                                   | 11/05/2022                           |                                           |                                                                                                                          | Page 1 / 2 | Revision |

# LOAD PERFORMANCE CURVE

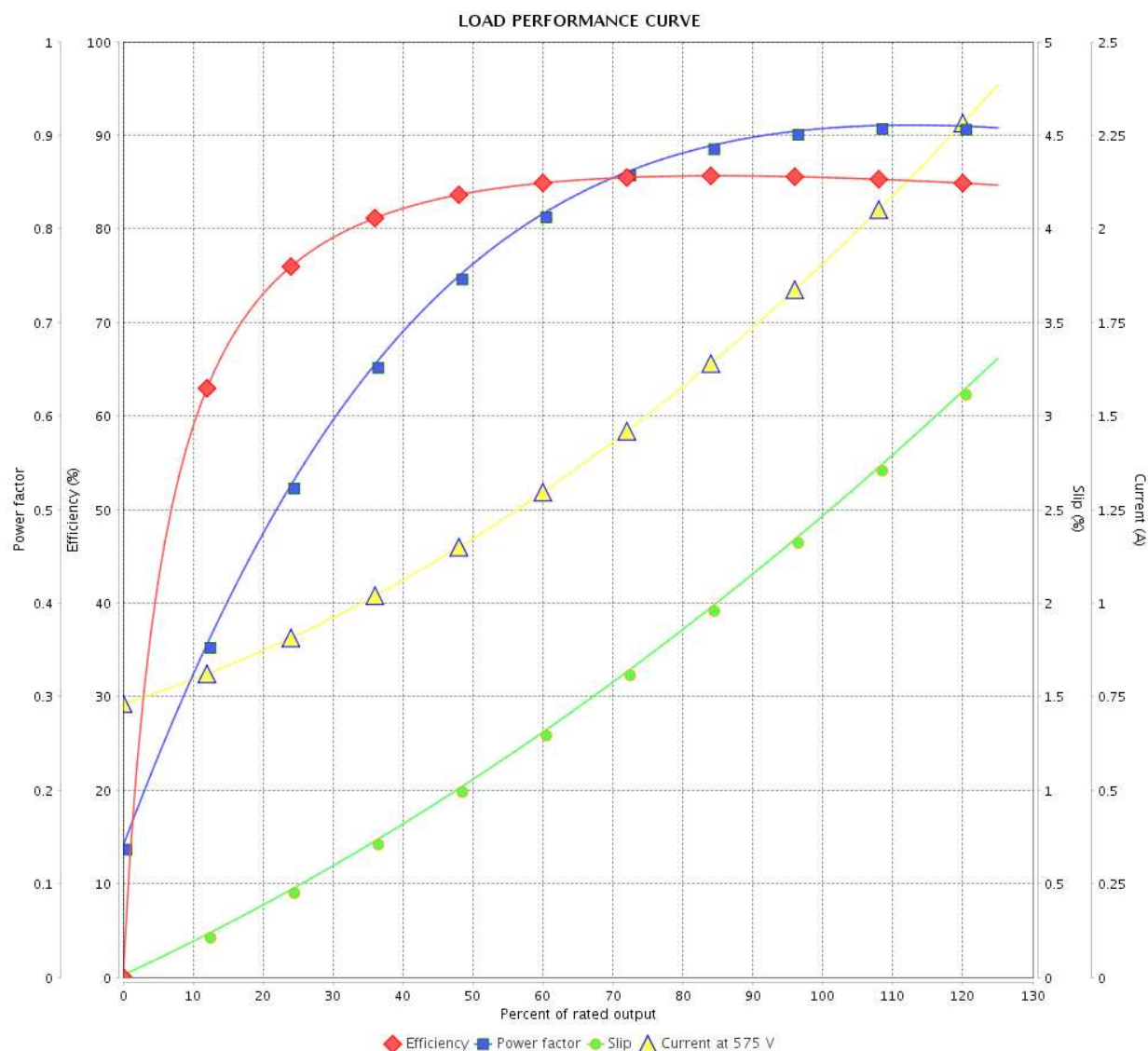
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Three-Phase

Product code : 13997238

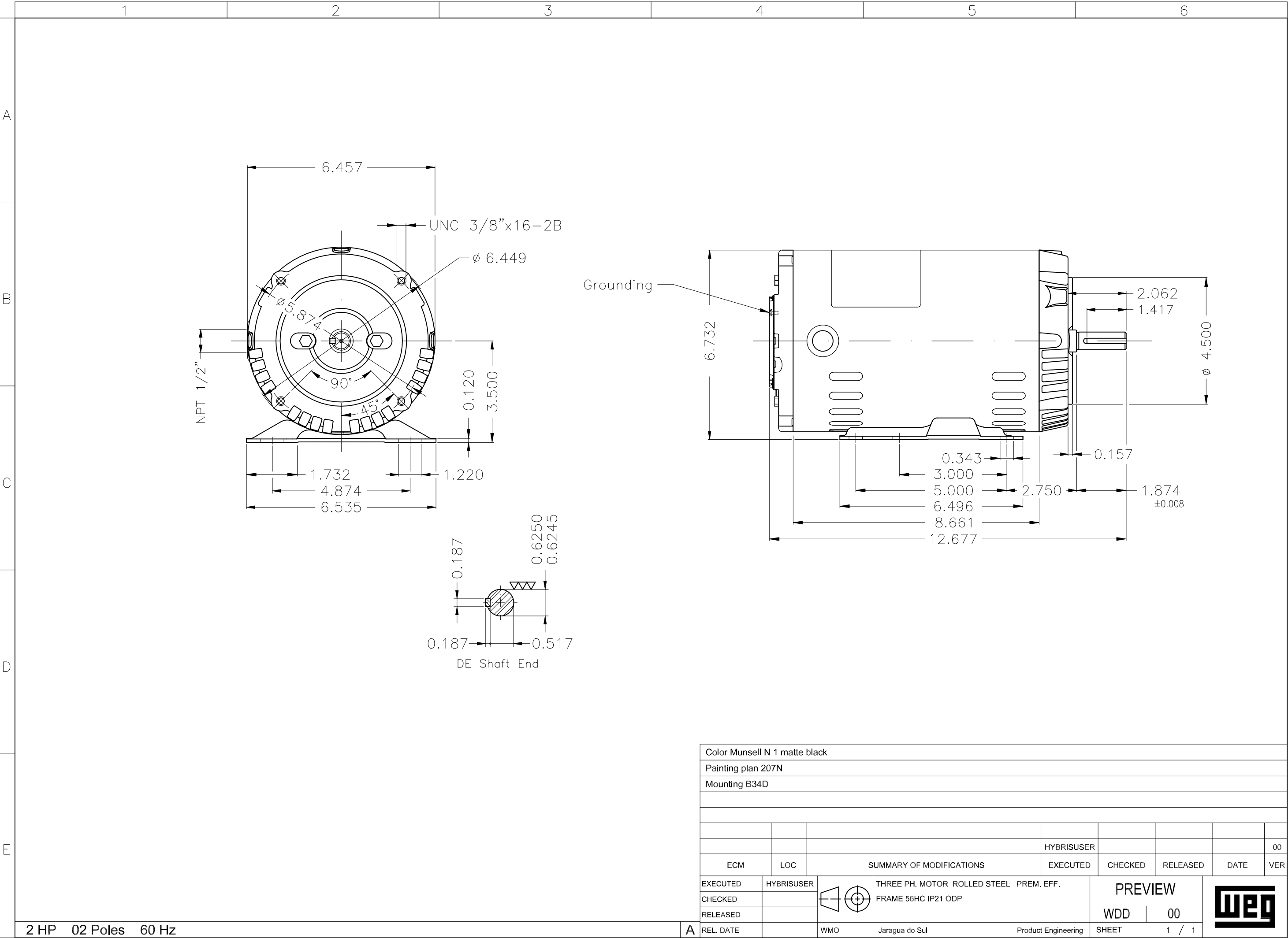


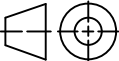
Performance : 575 V 60 Hz 2P

Rated current : 1.94 A  
 LRC : 8.9  
 Rated torque : 0.414 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 330 %  
 Rated speed : 3510 rpm

Moment of inertia (J) : 0.0049 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : A

| Rev.         | Changes Summary | Performed             | Checked | Date |
|--------------|-----------------|-----------------------|---------|------|
|              |                 |                       |         |      |
| Performed by |                 | Page<br>2 / 2Revision |         |      |
| Checked by   |                 |                       |         |      |
| Date         | 11/05/2022      |                       |         |      |



|                               |            |                                                                                                                                                      |                |                     |       |            |         |                                                                                       |          |
|-------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------|-------|------------|---------|---------------------------------------------------------------------------------------|----------|
| Color Munsell N 1 matte black |            |                                                                                                                                                      |                |                     |       |            |         |                                                                                       |          |
| Painting plan 207N            |            |                                                                                                                                                      |                |                     |       |            |         |                                                                                       |          |
| Mounting B34D                 |            |                                                                                                                                                      |                |                     |       |            |         |                                                                                       |          |
|                               |            |                                                                                                                                                      |                |                     |       |            |         |                                                                                       |          |
|                               |            |                                                                                                                                                      |                |                     |       |            |         |                                                                                       |          |
|                               |            |                                                                                                                                                      |                |                     |       |            |         |                                                                                       |          |
|                               |            |                                                                                                                                                      |                |                     |       | HYBRISUSER |         |                                                                                       | 00       |
| ECM                           | LOC        | SUMMARY OF MODIFICATIONS                                                                                                                             |                |                     |       | EXECUTED   | CHECKED | RELEASED                                                                              | DATE VER |
| EXECUTED                      | HYBRISUSER |  THREE PH. MOTOR ROLLED STEEL PREM. EFF.<br>FRAME 56HC IP21 ODP |                |                     |       | PREVIEW    |         |  |          |
| CHECKED                       |            |                                                                                                                                                      |                |                     |       |            |         |                                                                                       |          |
| RELEASED                      |            |                                                                                                                                                      |                |                     |       |            |         |                                                                                       |          |
| REL. DATE                     |            | WMO                                                                                                                                                  | Jaragua do Sul | Product Engineering | SHEET | 1          | /       | 1                                                                                     |          |