



## CERTIFICADO DE CALIBRACIÓN / CALIBRATION CERTIFICATE

**INNOVATECIS CIA LTDA**

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**Certificado No. (Certificate #):** 64350

**Fecha de Recepción (Reception Date):** 2025-12-12

**Fecha de Calibración (Calibration Date):** 2026-01-06

**Próxima Fecha de Calibración (Calibration Due):** 2027-01-06

**Fecha de Emisión (Emission Date):** 2026-01-06

**Cliente (Client):** AVIANCA - ECUADOR S.A.  
Luis Tamayo N24-33 Y Baquerizo Moreno (SEDE PRINCIPAL)

**Información del Instrumento (Instrument Information)**

|                                             |                                             |                                                 |
|---------------------------------------------|---------------------------------------------|-------------------------------------------------|
| <b>Equipo (Instrument):</b> Juego de Galgas | <b>Int. de Medición:</b> (0.038 a 0.889) mm | <b>Ubicación (Location):</b> *****              |
| <b>Marca (Brand):</b> SURTEK                | <b>(Measurement Range)</b>                  | <b>Lugar de Calibración</b> Lab. Innovatec /    |
| <b>Modelo (Model):</b> 950-251              | <b>Serie / Código:</b> 0025-GLG / *****     | <b>(Place of Calibration):</b> Innovatec's Lab. |

**Datos de Calibración (Calibration Info)**
**Procedimiento (Procedure):** INN-PC-34

**Condiciones Ambientales (Environmental Conditions)**
**Temperatura (Temp):** (21.5 °C a 21.7 °C)

**Humedad (Humidity):** (58.9 %HR a 58.8 %HR)

**Trazabilidad (Traceability Info)**

| Patrón (Standard) | Marca (Brand) | Cert. # | Última Calibración (Last Cal.) | Período (Period) |
|-------------------|---------------|---------|--------------------------------|------------------|
| Micrómetro        | Pantec        | 56327   | 2025-04-24                     | 2 años           |
| Pie de Rey        | Starret       | 56647   | 2025-05-06                     | 2 años           |

**Resultados (Results)**

Ver resultados en Hoja adjuntada

See results on attached sheet

El presente Certificado de Calibración posee la trazabilidad en esta magnitud hacia el Patrón Nacional, a través de la realización de la unidad de medida en el NPL, NIST, u otro Laboratorio Nacional reconocido al Sistema Internacional de Medidas. La calibración fue realizada bajo un Sistema de Gestión de Laboratorio conforme a la Norma ISO/IEC 17025:2017. Los resultados y su incertidumbre reportada con un nivel de confianza de K=2, 95% son relacionados a este instrumento y en el tiempo que se realizó las medidas. Este Laboratorio no se responsabiliza de los perjuicios que pueda ocasionar el uso inadecuado del instrumento calibrado. La reproducción parcial es prohibida, la reproducción total deberá hacerse con la autorización escrita aprobada por INNOVATEC Industrial Solutions. This Certificate of Calibration provides traceability of measurement to the National Standard, through units of measurement realized at the NPL, NIST or other recognized National Standard Laboratories to the International System of Units. The calibration was performed under a Laboratory Management System in accordance with the ISO/IEC 17025:2017 Standard. The results and the reported uncertainty at a confidence level of K=2, 95% are related only to this instrument and at the time of measurement. This Laboratory is not responsible for any damages that may result from improper use of the calibrated instrument. Partial reproduction is forbidden, the total reproduction must have an approved written authorization by INNOVATEC Industrial Solutions.

**Comentarios:**

PartNumber: 950-251 - R6066025  
As Received Condition: In Tolerance with MFG Specification.  
Incoming Condition: Good Condition.  
As Left Condition: In Tolerance with Technical Standard.  
"In Tolerance" condition is based on a Simple Decision Rule and does not take into account Uncertainty Evaluation.

**Calibrado por:**

Calibrated by:

Jonathan Fonseca

**Aprobado por:**

Approved by:

**Fin de Certificado (End of Certificate)**

Certificado No.: 64350  
Fecha de Calibración: 2026-01-06

Equipo (Instrument): Juego de Galgas  
Marca (Brand): SURTEK

| Identificación<br>(Identification) |            | Patrón (Standard) | UBP (UUT) | Error (Error) | Incertidumbre (Uncertainty) |
|------------------------------------|------------|-------------------|-----------|---------------|-----------------------------|
| Galga                              | 0.038 mm   | 0.038 mm          | 0.039 mm  | 0.001 mm      | ± 0.59 µm                   |
| Galga                              | 0.051 mm   | 0.051 mm          | 0.052 mm  | 0.001 mm      | ± 0.59 µm                   |
| Galga                              | 0.064 mm   | 0.064 mm          | 0.065 mm  | 0.001 mm      | ± 0.59 µm                   |
| Galga                              | 0.076 mm   | 0.076 mm          | 0.076 mm  | 0.000 mm      | ± 0.59 µm                   |
| Galga                              | 0.102 mm   | 0.102 mm          | 0.104 mm  | 0.002 mm      | ± 0.59 µm                   |
| Galga                              | 0.127 mm   | 0.127 mm          | 0.126 mm  | -0.001 mm     | ± 0.59 µm                   |
| Galga                              | 0.152 mm   | 0.152 mm          | 0.152 mm  | 0.000 mm      | ± 0.59 µm                   |
| Galga                              | 0.203 mm   | 0.203 mm          | 0.201 mm  | -0.002 mm     | ± 0.59 µm                   |
| Galga                              | 0.229 mm   | 0.229 mm          | 0.229 mm  | 0.000 mm      | ± 0.59 µm                   |
| Galga                              | 0.254 mm   | 0.254 mm          | 0.255 mm  | 0.001 mm      | ± 0.59 µm                   |
| Galga                              | # 0.254 mm | 0.254 mm          | 0.253 mm  | -0.001 mm     | ± 0.59 µm                   |
| Galga                              | 0.279 mm   | 0.279 mm          | 0.280 mm  | 0.001 mm      | ± 0.59 µm                   |
| Galga                              | 0.305 mm   | 0.305 mm          | 0.305 mm  | 0.000 mm      | ± 0.59 µm                   |
| Galga                              | 0.330 mm   | 0.330 mm          | 0.330 mm  | 0.000 mm      | ± 0.59 µm                   |
| Galga                              | 0.356 mm   | 0.356 mm          | 0.357 mm  | 0.001 mm      | ± 0.59 µm                   |
| Galga                              | 0.381 mm   | 0.381 mm          | 0.382 mm  | 0.001 mm      | ± 0.59 µm                   |
| Galga                              | 0.406 mm   | 0.406 mm          | 0.407 mm  | 0.001 mm      | ± 0.59 µm                   |
| Galga                              | 0.432 mm   | 0.432 mm          | 0.433 mm  | 0.001 mm      | ± 0.59 µm                   |
| Galga                              | 0.457 mm   | 0.457 mm          | 0.457 mm  | 0.000 mm      | ± 0.59 µm                   |
| Galga                              | 0.483 mm   | 0.483 mm          | 0.485 mm  | 0.002 mm      | ± 0.59 µm                   |
| Galga                              | 0.508 mm   | 0.508 mm          | 0.509 mm  | 0.001 mm      | ± 0.59 µm                   |
| Galga                              | 0.533 mm   | 0.533 mm          | 0.533 mm  | 0.000 mm      | ± 0.59 µm                   |
| Galga                              | 0.559 mm   | 0.559 mm          | 0.560 mm  | 0.001 mm      | ± 0.59 µm                   |
| Galga                              | 0.584 mm   | 0.584 mm          | 0.584 mm  | 0.000 mm      | ± 0.59 µm                   |
| Galga                              | 0.610 mm   | 0.610 mm          | 0.610 mm  | 0.000 mm      | ± 0.59 µm                   |
| Galga                              | 0.635 mm   | 0.635 mm          | 0.636 mm  | 0.001 mm      | ± 0.59 µm                   |
| Galga                              | 0.660 mm   | 0.660 mm          | 0.661 mm  | 0.001 mm      | ± 0.59 µm                   |
| Galga                              | 0.711 mm   | 0.711 mm          | 0.712 mm  | 0.001 mm      | ± 0.59 µm                   |
| Galga                              | 0.762 mm   | 0.762 mm          | 0.762 mm  | 0.000 mm      | ± 0.59 µm                   |
| Galga                              | 0.813 mm   | 0.813 mm          | 0.813 mm  | 0.000 mm      | ± 0.59 µm                   |
| Galga                              | 0.889 mm   | 0.889 mm          | 0.890 mm  | 0.001 mm      | ± 0.59 µm                   |
| -                                  | -          | -                 | -         | -             | -                           |
| -                                  | -          | -                 | -         | -             | -                           |
| -                                  | -          | -                 | -         | -             | -                           |

Fin de Certificado (End of Certificate)