

## Orbit® Gauge Software 4.0



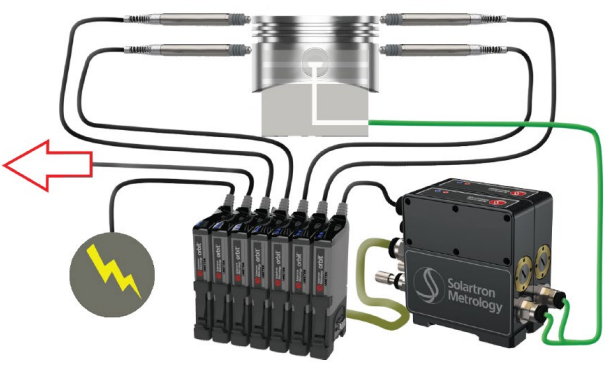
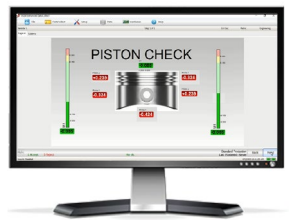
Orbit® Gauge Software 4.0 (OGS4) is a redesigned standard off the shelf software package from Solartron Metrology. Based off the success from its predecessor Orbit® Gauge Software 3.0 (OGS3), OGS4 allows for a generic platform that can be used by process engineers, gauge technicians, and gauge OEMs to create MS Windows computer based inspection systems using standard Solartron Metrology hardware integrated with your gauge fixture.

The user can not just integrate Solartron products, but also third party measurement instrumentation through its Hardware Interface Module (HIM). This eliminates the need for multiple software packages. OGS4 is an intuitive complete software package for both simple and complex gauging stations...maximizing the users quality process.



### KEY FEATURES

- Easy to program
- Supports manual, semi-automatic and automatic gauges/fixtures
- Guided Sequences
- Variable & Attribute Measurements
- Probe Verification
- Measurement Visualisation
- Recent Part History
- Data Export to Microsoft Excel, Q-Stat, QC-Calc, PLEX, and others
- Mastering for Measurement Integrity
- Customization Service
- **Now available in Spanish and Chinese languages.**

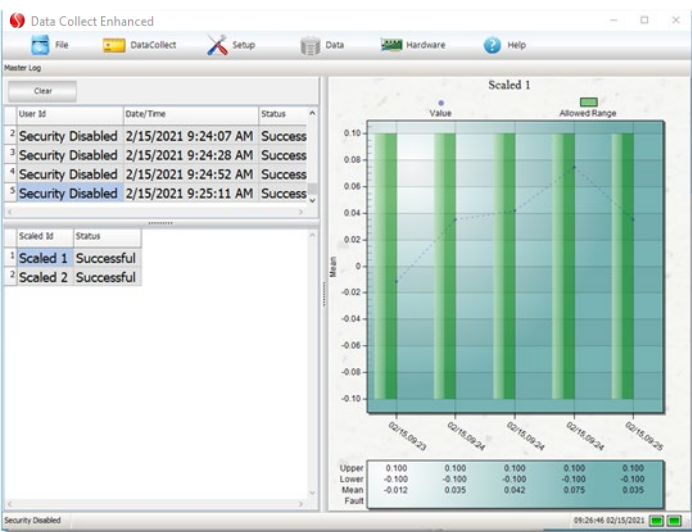


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## MEASUREMENT INTEGRITY

Measurement integrity is critical to accurate manufacturing of parts. OGS4 has the ability to monitor aspects of the process and alert users to any process changes that may lead to poor part quality. This includes mastering which is key to the measurement process



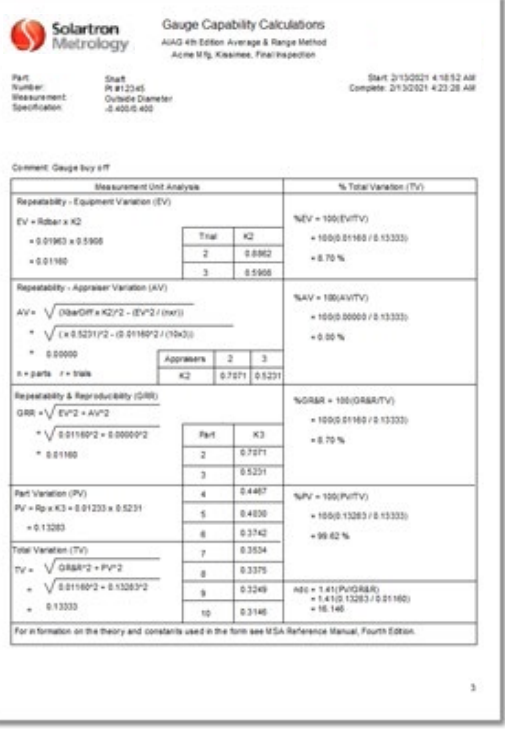
## MASTERING (INTEGRITY)

- Verification of sensor position
- Spread of mastering values
- Order of mastering process.
- Recording of Mastering Log
- Forced Mastering based on time, number of parts measured or upon startup

## QUALIFICATION OF MEASUREMENT SYSTEMS

To assist the user in qualification of the measurement system a Gauge Repeatability and Reproducibility (GR&R) feature is available and supports

- AIAG 4<sup>th</sup> Edition Average and Range method compliance.
- Operator, Trial, Part inspection order is selectable.
- Maintains history of all GR&R's performed.

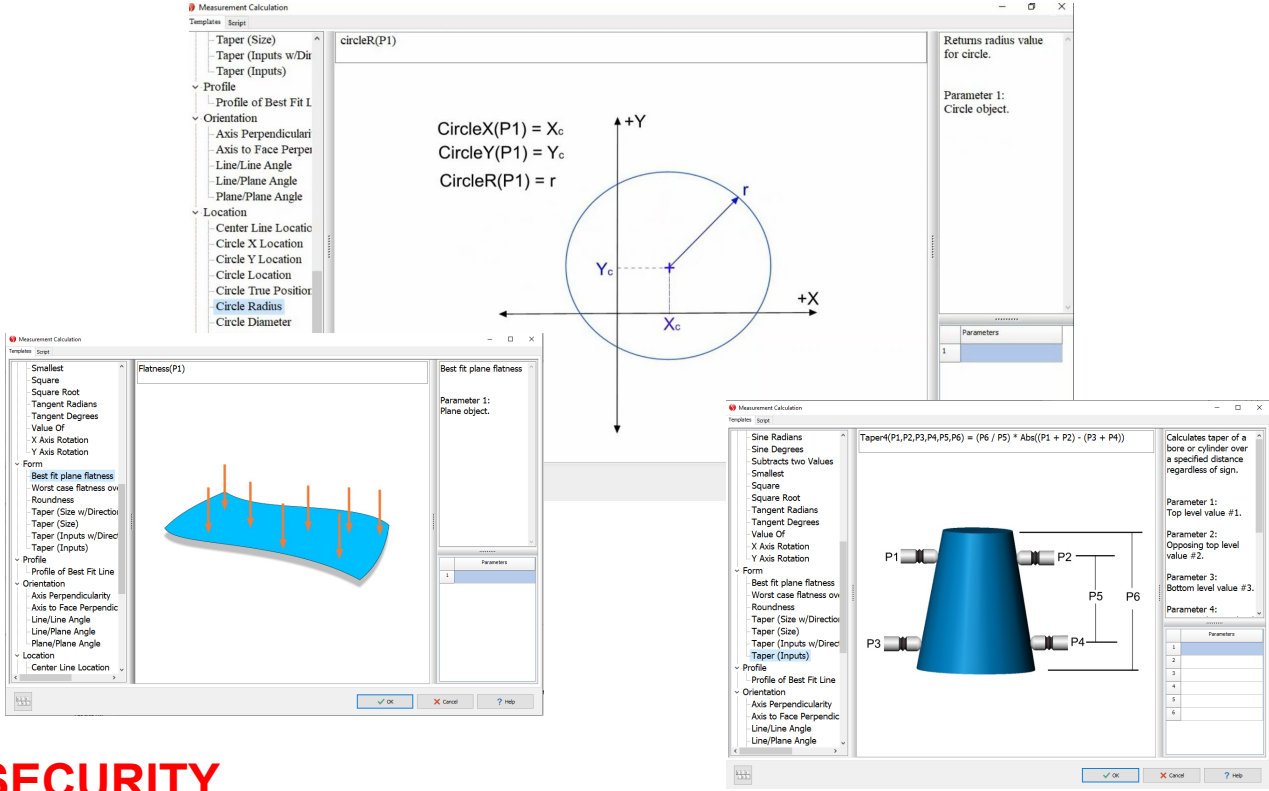


## PRE-LOADED MEASUREMENT TEMPLATES



### Preset Formulas

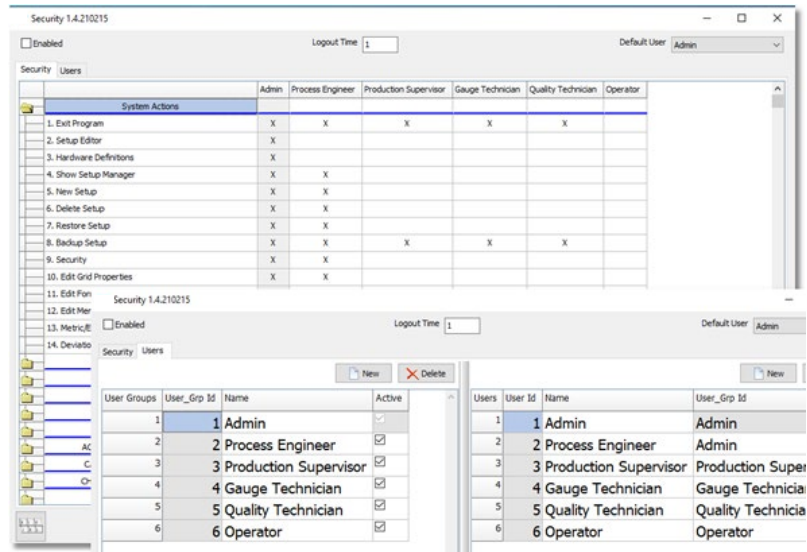
- Multiple categories of Formulas results from one template can be used as inputs to another template to build complex measurement system.



The image displays several screenshots of the measurement calculation software interface. One window shows a 'circle(P1)' template with a diagram of a circle in a 2D coordinate system. The center is labeled  $X_c$  and  $Y_c$ , and the radius is labeled  $r$ . The formulas are:  $CircleX(P1) = X_c$ ,  $CircleY(P1) = Y_c$ , and  $CircleR(P1) = r$ . Another window shows a 'Fitnes(P1)' template with a diagram of a blue tapered part and arrows indicating measurement points. A third window shows a 'Taper(P1,P2,P3,P4,P5,P6)' template with a diagram of a blue tapered part and measurement points labeled P1 through P6. The formula for this template is  $Taper=(P1,P2,P3,P4,P5,P6) = (P6 / P5) * Abs((P1 + P2) - (P3 + P4))$ . A fourth window shows a 'Parameters' list for the taper template, including 'Top level value #1', 'Opposing top level value #2', 'Bottom level value #3', and 'Parameter 4'.

### SECURITY

A security module within OGS4 provides protection of the software, preventing unauthorised changes to the program settings and specification limits.



The screenshot shows the 'Security 1.4.210215' interface. It includes a 'System Actions' table with columns for Admin, Process Engineer, Production Supervisor, Gauge Technician, Quality Technician, and Operator. Below this are two tables for 'Users' and 'User Groups'.

| System Actions           | Admin | Process Engineer | Production Supervisor | Gauge Technician | Quality Technician | Operator |
|--------------------------|-------|------------------|-----------------------|------------------|--------------------|----------|
| 1. Exit Program          | X     | X                | X                     | X                | X                  |          |
| 2. Setup Editor          | X     |                  |                       |                  |                    |          |
| 3. Hardware Definitions  | X     |                  |                       |                  |                    |          |
| 4. Show Setup Manager    | X     | X                |                       |                  |                    |          |
| 5. New Setup             | X     | X                |                       |                  |                    |          |
| 6. Delete Setup          | X     | X                |                       |                  |                    |          |
| 7. Restore Setup         | X     | X                |                       |                  |                    |          |
| 8. Backup Setup          | X     | X                | X                     | X                | X                  |          |
| 9. Security              | X     | X                |                       |                  |                    |          |
| 10. Edit Grid Properties | X     | X                |                       |                  |                    |          |

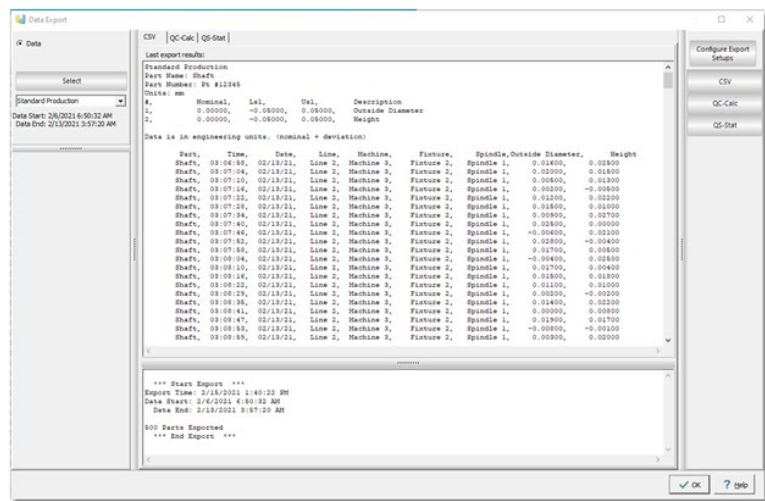
| User Groups | User_Grp Id | Name                  | Active |
|-------------|-------------|-----------------------|--------|
| 1           | 1           | Admin                 | ☑      |
| 2           | 2           | Process Engineer      | ☑      |
| 3           | 3           | Production Supervisor | ☑      |
| 4           | 4           | Gauge Technician      | ☑      |
| 5           | 5           | Quality Technician    | ☑      |
| 6           | 6           | Operator              | ☑      |

| Users | User Id | Name                  | User_Grp Id       |
|-------|---------|-----------------------|-------------------|
| 1     | 1       | Admin                 | Admin             |
| 2     | 2       | Process Engineer      | Admin             |
| 3     | 3       | Production Supervisor | Production Super  |
| 4     | 4       | Gauge Technician      | Gauge Technicia   |
| 5     | 5       | Quality Technician    | Quality Technicia |
| 6     | 6       | Operator              | Operator          |

- Multiple levels of security
- Configurable security features
- Security available at property level

## STATISTICAL PROCESS CONTROL (SPC)

OGS4 can output the measurement data into a number of established SPC systems enabling traceability of data which is often required by customers.



### Data Export Formats

- CSV
- QC-Calc
- Qs-Stat
- PLEX
- Mini-Tab
- Microsoft Excel
- Custom

Simple SPC charting so that the user will be able to understand the process behaviour and take any necessary corrective actions before a part is manufactured that is not within part limit specifications.

### SPC Reporting

- Xbar-R
- X-MR
- Xbar-s
- X
- Histogram
- Part Data



### Control Chart Rules

- Basic
- AIAG
- WECO

## CHANGES FROM OGS3

OGS4 is an upgrade to its predecessor OGS3, and the knowledge gained from our customers has been incorporated into OGS4.

OGS3, initially launched in 2007, has become widely used in North America. During this time, many new features and functions were added following the “**Voice of the Customer**” feedback. This allows OGS3 (formally known as Gagemate/GageMetrics) becoming the go to standard for “off the shelf “ software for gauging applications for many OEM gauge and fixture manufacturers.

The following list are some of the enhancements OGS4 offers over OGS3

- Designed for the latest Windows operating systems Windows 10 and Windows 11
- Much improved Graphical Users Interface (GUI)
- Easier configuration-the setup and data collection are one package
- The new Hardware Interface Module (HIM) allows selection of hardware devices that does not require modifications to the main software
- Enhanced scripting to allow customization by the user to add specific requirements that are not part of the standard software package

## SUPPORT MAINTENANCE AGREEMENTS (SMA's)

The initial investment in OGS4 can be protected by an annual Support Maintenance Agreement. This covers:

- Issues caused by Windows updates
- Telephone and other media technical support
- Bug fixes and enhancements

Not only do we offer SMA's, but we also offer other services such as, application programming, live remote support via remote connectivity software (internet connection required), and on-site support.



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(FACTORY & SALES OFFICE)**
-  **GLOBAL SALES OFFICES**
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Solartron Metrology also carries an extensive network of sales agents in all major countries. For a local contact, go to [www.solartronmetrology.com/contact](http://www.solartronmetrology.com/contact) or email at [sales.solartronmetrology@ametek.com](mailto:sales.solartronmetrology@ametek.com)