



Version 25

The standard for the complete management of measurement equipment and systems.

#### **ELECSOFT S.L**

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#### Main characteristics.

Visual Factory Calibre is a software application that fully manages the metrological conformity of measurement equipment and systems.

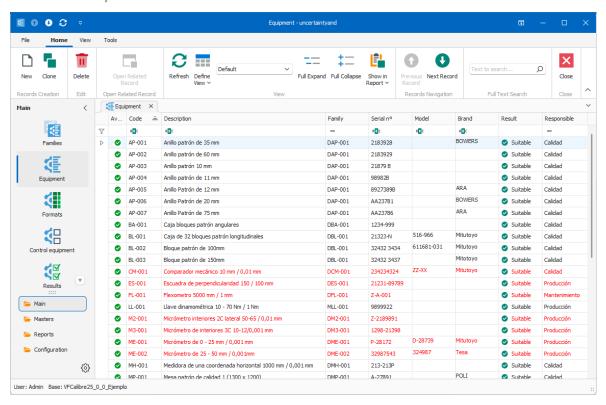
The main features of the system are:

- ✓ Complete inventory management of measurement equipment.
- ✓ Grouping of the teams by families.
- ✓ Designed for any type of measuring equipment.
- ✓ In addition to calibration, multiple control processes can be defined: verification, MSA4, maintenance, ...
- ✓ Wide range of ready-to-use calibration procedures.
- ✓ Configurable input formats for calibration and verification.
- ✓ For special calibration processes it includes complete integration with Excel.
- ✓ Scheduled and unscheduled testing of equipment.
- ✓ Guarantees traceability of results.
- ✓ Calibration target tracking.
- ✓ Quickly obtain predefined reports, certificates and labels.
- ✓ Complete report generator to extend the already defined formats. Includes barcodes and graphics
- ✓ Complies with current ISO, IATF, FDA and MSA 4 standards.
- ✓ ISO 17025 ready. Professional and FDA version incorporates advanced security and auditing features.
- ✓ Different options to suit your needs.
- ✓ Integration of several organizations in the same database.
- ✓ Works with MS SQL Server databases.
- ✓ Calibration software easy to set up and use.

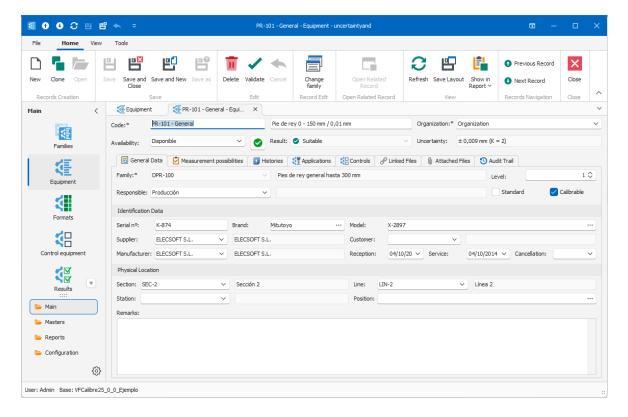


- ✓ User interface in English, Spanish and French.
- ✓ Training and consulting for rapid implementation.
- ✓ Our technical team will review your current data to implement a migration solution.
- ✓ Support from the support team before, during and after implementation.

## Inventory







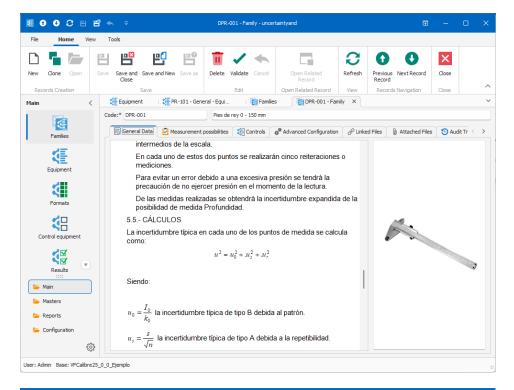
The inventory of measuring equipment is one of the fundamental pillars of metrological conformity. Visual Factory Calibre allows you to document the characteristics of the equipment, associate it to a family of equipment and assign it to the systematic checks to be performed. The equipment record contains all relevant information about the measuring equipment, including documentation and the checks performed.

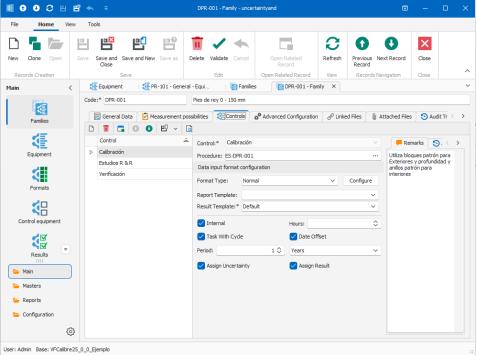
In the equipment tab we will find all the necessary fields to identify each equipment. In addition, the user will be able to remove or add fields from the tab.

With Visual Factory Calibre it is very easy to define Views to filter, group, sort and present the information of each of the application modules. You also have several search options to locate the information quickly.



## **Families**





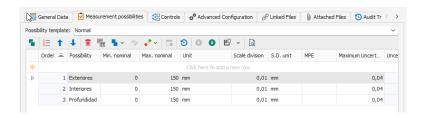


By means of the families, a logical grouping of the measuring equipment is made depending on their technical characteristics and control procedures. The families serve as templates to facilitate the creation of the measuring equipment data sheets.

In the family we define how we will enter the data and perform the calculations of the controls. For example, the uncertainty calculation for calibration, R & R for MSA 4, ...

It is possible to parameterize the controls to be performed for any type of equipment: dimensional, force or mass, temperature, pressure, electrical, .....

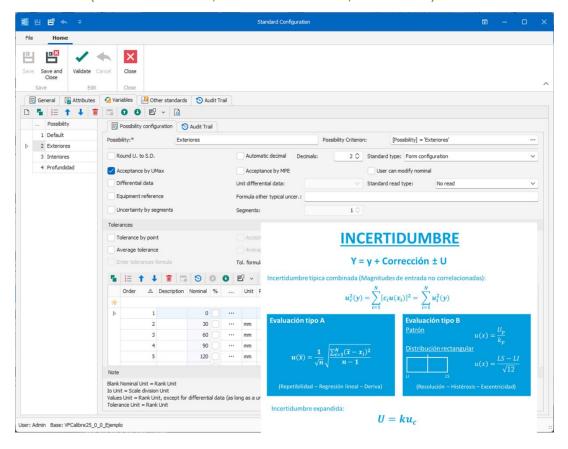
The application is delivered with a database containing predefined procedures validated by ELECSOFT, covering the most common measuring instruments. These procedures follow the recommendations of the GUM guide and are inspired by those proposed by CEM (Spanish Metrology Center).



The application incorporates several predefined templates to indicate the measurement possibilities of the equipment. In addition, the user can define new templates.



# Controls (Calibration, Verification, MSA 4)



The controls defined for each equipment allow the application of different procedures to ensure metrological confirmation. Different types of controls can be configured and planned: Verification, Calibration, Maintenance, Reception, MSA 4, Validation,...

#### **CONFIRMACIÓN METROLÓGICA**



Visual Factory Calibre integrates the calculations of the most common parameters in calibration and verification. It also allows the selection of different acceptance criteria.

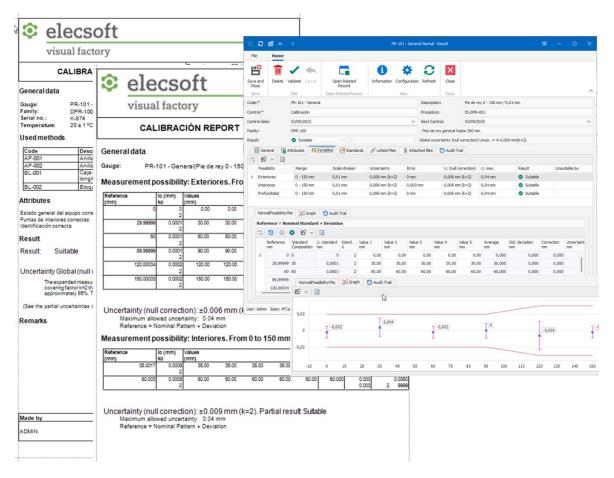
It is also possible to perform calculations using Excel workbooks that are integrated into the Visual Factory Calibre database.

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Visual Factory Calibre



## Data and certificates



One of the important parts of the Calibration Plan is to systematically check the measuring equipment to verify its condition and, if necessary, make the appropriate adjustments to meet the established acceptance criteria.

Visual Factory Calibre has two ways to enter data and perform calculations: through predefined and parameterizable standard processes and Excel workbook formats that the user can define from the application itself and link to the database.



Since the application allows to pre-define the controls, indicating the tests to be performed and linking with the results of the patterns and/or other equipment, the user will only have to worry about completing the form presented on the screen to complete the control.

Visual Factory Calibre allows data to be entered directly from measuring equipment.

# R & R Atributos Kappa-0001 elecsoft visual factory R&R por el método de la Media y el Range R&R = $\sqrt{(EV^2 + AV^2)}$ $TV = \sqrt{(R \& R^2 + PV^2)}$ Resultado del estudio $|ación| - \left[\sigma_s\left(t_{r,1+\sigma_{f_2}}\right)\right] \le cero \le Desviac$ -0,11075 ≤ 0 ≤ 0,1241 APTO CON RESERVAS

# MSA 4 (Measurement System Analysis)

Visual Factory Calibre incorporates different studies defined in MSA 4:

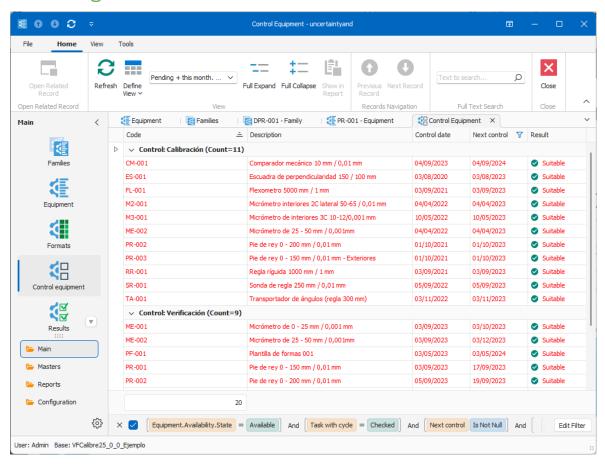
- R & R by variables by the mean and path method.
- R & R by variables by ANOVA.
- R & R without operator influence.
- Attributes by the method of concordance tables (Kappa).



- Attributes by the detection signal method.
- Linearity.
- Bias.
- Stability.
- Cg and Cgk capacity

All MSA 4 formats are reviewed and validated by Elecsoft.

# **Planning**



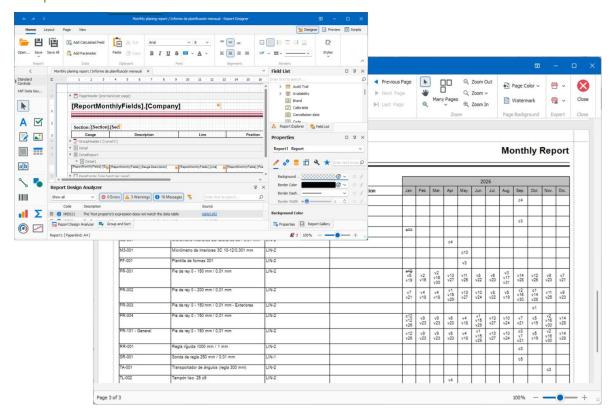
The application allows the user to plan the different controls to be performed according to different criteria. In this way, the user controls at all times the times of calibration, verification or any other control of all the measuring equipment.

It should be noted that the user can define views to organize the data according to his needs. Applying filters, grouping, sorting and formatting the data of each of the modules. The views can be public for all users or private.



The Controls module allows you to quickly visualize the controls to be performed. It allows you to define different color codes that indicate which controls have been completed or are about to be completed.

## Reports



Visual Factory incorporates a powerful integrated report designer that will allow you to adapt the printing formats to the requirements of each company.

The report designer allows the generation of barcodes and graphs and the generated reports are seamlessly integrated with the different modules of the application.

The information presented in the reports can be exported to different formats.



#### Other functionalities

- ✓ User creation. It is possible to use user security integrated in the application itself or to use Windows and Active Directory security.
- ✓ Permissions manager. The application has a powerful permissions manager that will allow the creation of user groups with differentiated access to the different functionalities of the application.
- ✓ Master to support the creation of the record: suppliers, manufacturers, laboratories, customers (intended for calibration laboratories), responsible departments, equipment status (organization, sections, lines and stations), measurement units, controls and incidents.
- ✓ Definition of application literals. It is possible to define the literals that appear in the application screens. It is also possible to add and remove fields from the equipment tab.

# Easy to install and use

- ✓ Standard calibration application easy to install and update.
- ✓ Easy to learn and configure: Uses Elecsoft Application Framework technology: user interface based on Microsoft Outlook philosophy, with the possibility of configuring reports and views, as well as performing powerful searches.
- ✓ Compatible with Windows 10 and 11 64 bits.
- ✓ WEB version for consultation.
- ✓ Compatible Office 2016 or higher 32-bit and 64-bit.
- ✓ Uses MS SQL Server 2012 or higher databases.
- ✓ Possibility of data migration from other applications.
- ✓ User interface available in English and Spanish.
- ✓ Tailor-made training courses and consulting



#### References used

- ✓ ISO 9001:2015. Quality management systems. Requirements.
- ✓ ISO 10012:2003. Measurement management systems. Requirements for measurement processes and measurement equipment.
- ✓ IATF 16949: 2016. Automotive quality management system standard.
- ✓ JCGM 100:2008. Evaluation of measurement data Guide to the expression of uncertainty in measurement.
- ✓ EA-4/02 M:2022. Evaluation of measurement uncertainty in calibrations.
- ✓ CEM Procedures (Spanish Metrology Center).
- ✓ MSA (Measurement Systems Analysis). It includes, among others, the benchmark developed by AIAG (Automotive Industry Action Group). Incorporates data entry formats:
  - R & R by variables by the mean and path method.
  - o R & R by variables by ANOVA
  - o R & R without operator influence.
  - Attributes by the method of concordance tables (Kappa).
  - o Attributes by the detection signal method.
  - o Linearity.
  - o Bias
  - o Stability.
  - Calculation of the capacity indexes Cg and Cgk
- ✓ ISO 17025
- ✓ FDA 21 CFR Part 11
- ✓ Calculation of standardized tolerances for smooth and threaded plugs according to UNE 17704-2002, UNE 17-707-78, UNE 17-710-78, UNE EN ISO 286-2:2011, EN ISO 1938-1:2015, ANSI ASME B1.1 2019 and ANSI ASME B1.2 1983 standards.
- ✓ Various UNE and ISO standards for specific equipment.



# Visual Factory Calibre Editions

#### Visual Factory Calibre Pyme

Ideal for small and medium-sized companies with a not very large fleet of measuring equipment. Designed to use external and internal calibrations with standard calibration or verification processes included in the application itself.

#### Visual Factory Calibre Professional

Designed for those companies with a larger volume of equipment and where it is necessary for several metrology technicians to access simultaneously.

This edition has specific functionalities such as exporting data to different formats, importing from other Visual Factory Calibre databases, possibility of incorporating additional modules, ...

#### Visual Factory Calibre FDA

With this edition, pharmacy companies will be able to meet the requirements specified in FDA 21 CFR Part 11. It is also ideal for laboratories or companies that want to become ISO 17025 accredited or simply for those organizations that require greater security in their data, auditing of the data entered, management of the approval cycle and electronic signature.

This edition includes the Extended Audit Trail, Approval Cycle, Equipment Management, Instruments and Loops modules and services related to product validation such as FAT (Factory Acceptance Test), in addition to some specific functionalities.

#### Visual Factory Calibre WEB Viewer

This application works in a WEB environment, so it is possible to consult the information from the PC, tablet or Smart pone.

Only the Equipment, Equipment Controls and Results modules can be accessed in read mode.

Licensing is on a per-user basis and is offered in packages of 50 users at a very affordable price.

It is necessary to have, at least, a Professional or FDA license.



#### Differences between options

Functionality	Viewer	SME	Profe.	FDA
Viewing application logs	V	<b>V</b>	V	√
Editing application records		<b>V</b>	V	√
Performance of controls with standard processes		<b>V</b>	V	√
Performing controls with previously defined MS Excel formats.		<b>V</b>	V	√
MS Excel format configuration			V	√
Report and label designer		<b>V</b>	V	√
Printing reports and labels		<b>V</b>	V	√
Sending reports by e-mail and exporting to PDF	V	<b>V</b>	V	√
Specific weekly/monthly long term planning report	V	<b>V</b>	V	√
Integrated security with Active Directory	V	<b>V</b>	V	√
Import between databases			V	
Export to PDF, MS Excel, MS Word, from views	V		V	√
Simultaneous access from several positions	V		V	√
MS SQL Server databases	V	<b>√</b>	V	√
Basic Audit Trail			V	√
Audit Trail with electronic signature capability				√
Approval cycle with electronic signature				√
Definition of time window for calibration performance				√
MSA 4. R & R by variables (Mean and Path Method)		$\sqrt{}$	V	√
MSA 4. R & R by variables (ANOVA), attributes, linearity, stability and variance.			V	√
Inter-equipment traceability	V	<b>V</b>	V	√
Calibration history	V	<b>V</b>	V	√
Linked files and/or attachments	V	<b>V</b>	V	√
Presentation of images in the family and in the team file	V	<b>√</b>	V	√
Customization of public and private views for filtering, grouping, sorting and formatting		ما	ما	ما
of displayed records		٧	V	V
Display of public and private views	V	<b>V</b>	V	√
Customization of fields and literals	<b>√</b>		<b>√</b>	<b>√</b>

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## Visual Factory Calibre extensions

Visual Factory Calibre can be extended with the following modules:

#### Access Module by department and location

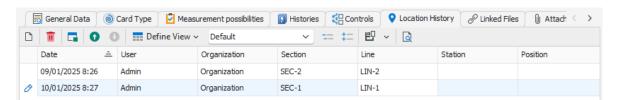
The functionality of access by department and location allows us to restrict or filter the equipment, equipment controls, results and applications to which the user can consult or access according to the organizations, sections or departments to which he/she has access/assigned.

#### Input and output management module

The objective of this module is to facilitate the input and output of equipment in the laboratory, as well as the dispatch and reception to external laboratories.

#### Location Registration Module

The location registration system developed to work with Visual Factory Calibre allows using a separate program, Location Registration, from where location changes can be made, but also allows using it directly from Visual Factory Calibre through the Location Registration module.



#### Control by use module

It allows to define, in addition to the periodic control, a control of equipment based on its utilization. This module is closely related to the Location Register module, which is the one that will tell us if a piece of equipment is in use or in storage. It is also possible to obtain information on whether a piece of equipment is being used or not through integration with automatic warehouses

#### **Email Notifications Module**

This module allows the administrator to configure notifications to the users responsible for the execution of the controls. The application will systematically check when calibrations and/or verifications or other controls are to be performed. The controls pending calibration will be sent by email to each user responsible for the execution of the controls in the corresponding Section or Department. The administrator can set the frequency, the due date and the list of users allowed to obtain the information.



#### Controls approval cycle module

It allows to establish a work cycle in the realization of the controls of the measuring equipment. In this way it is possible to edit, review and approve a calibration, verification, ..... Only for professional editing, as FDA already incorporates it.

#### PDF Certificate Generation Module

It automatically generates and stores a copy of the certificate in PDF format. The objectives of this module are the following:

- Ensure the consistency of the certificate obtained since the PDF format, in principle, is not modifiable.
- It is essential if we use Visual Factory Calibre WEB Viewer since it is the only way in which we can see the information of the certificates in the WEB environment.
- It is also necessary if we want to incorporate the digital signature module.

#### Signature Module

Allows signing PDF certificates with digital signatures and validated with certificates issued by a Certification Authority (CA).

#### FDA Extended Audit Trail Module.

This module allows:

- Generate a much more detailed audit report.
- Perform audit of deleted records.
- Allows electronic signature of the changes made.

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#### Equipment, instruments and loops management module

Allows to associate an equipment card to different concepts associated to the type of equipment.

