



elecsoft

visual factory



Version 25

(September 2025)

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

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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.
- ✓ Comprehensive dashboard for defining KPIs and monitoring objectives.
- ✓ Quickly obtain predefined reports, certificates and labels.
- ✓ Complete report generator to extend the already defined formats. Includes barcodes and graphics
- ✓ Comply 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.

- ✓ Easy-to-configure and user-friendly Calibration Software.
- ✓ User interface in English, Spanish, French and Portuguese.
- ✓ 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

Equipment - uncertaintyand

File Home View Tools

New Clone Delete Open Related Record Refresh Define View Default Full Expand Full Collapse Show in Report Previous Record Next Record Text to search... Close

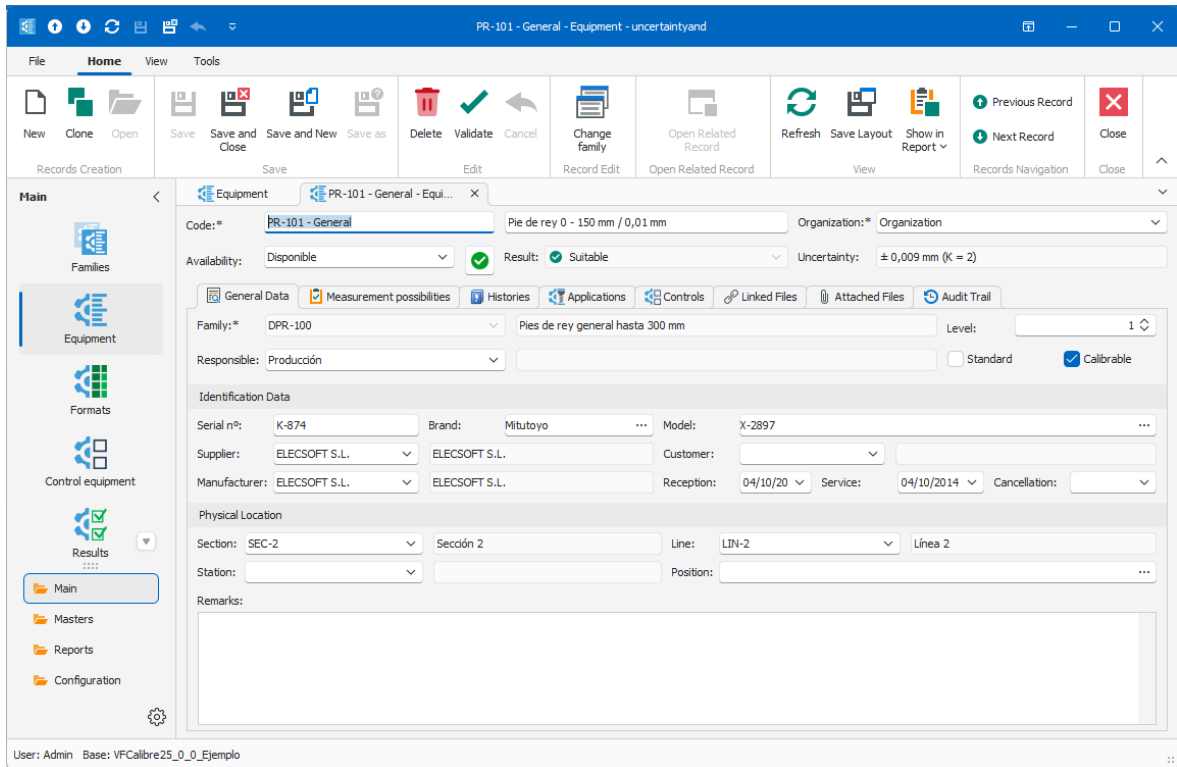
Records Creation Edit Open Related Record View Full Text Search Close

Main

Families Equipment Formats Control equipment Results Main Masters Reports Configuration

Av...	Code	Description	Family	Serial nº	Model	Brand	Result	Responsible
✓	AP-001	Anillo patrón de 35 mm	DAP-001	2183928		BOWERS	✓ Suitable	Calidad
✓	AP-002	Anillo patrón de 60 mm	DAP-001	2183929			✓ Suitable	Calidad
✓	AP-003	Anillo patrón 10 mm	DAP-001	21879 B			✓ Suitable	Calidad
✓	AP-004	Anillo patrón de 11 mm	DAP-001	98982B			✓ Suitable	Calidad
✓	AP-005	Anillo Patrón de 12 mm	DAP-001	89273898		ARA	✓ Suitable	Calidad
✓	AP-006	Anillo Patrón de 20 mm	DAP-001	AA23781		BOWERS	✓ Suitable	Calidad
✓	AP-007	Anillo Patrón de 75 mm	DAP-001	AA23786		ARA	✓ Suitable	Calidad
✓	BA-001	Caja bloques patrón angulares	DBA-001	1234-999			✓ Suitable	Calidad
✓	BL-001	Caja de 32 bloques patrón longitudinales	DBL-001	21323-N	516-966	Mitutoyo	✓ Suitable	Calidad
✓	BL-002	Bloque patrón de 100mm	DBL-001	32432 3434	611681-031	Mitutoyo	✓ Suitable	Calidad
✓	BL-003	Bloque patrón de 150mm	DBL-001	32432 3437		Mitutoyo	✓ Suitable	Calidad
✓	CM-001	Comparador mecánico 10 mm / 0,01 mm	DCM-001	234234324	ZZ-XX	Mitutoyo	✓ Suitable	Calidad
✓	ES-001	Escuadra de perpendicularidad 150 / 100 mm	DES-001	21231-89789			✓ Suitable	Producción
✓	FL-001	Flexometro 5000 mm / 1 mm	DFL-001	Z-A-001			✓ Suitable	Mantenimiento
✓	LI-001	Llave dinamométrica 10 - 70 Nm / 1 Nm	MLL-001	9899922			✓ Suitable	Producción
✓	M2-001	Micrómetro interiores 2C lateral 50-65 / 0,01 mm	DM2-001	Z-2189891			✓ Suitable	Producción
✓	M3-001	Micrómetro de interiores 3C 10-12/0,001 mm	DM3-001	1298-21398			✓ Suitable	Producción
✓	ME-001	Micrómetro de 0 - 25 mm / 0,001 mm	DME-001	P-28172	D-28739	Mitutoyo	✓ Suitable	Producción
✓	ME-002	Micrómetro de 25 - 50 mm / 0,001 mm	DME-002	32987543	324987	Tesa	✓ Suitable	Producción
✓	MH-001	Medidora de una coordenada horizontal 1000 mm / 0,001 mm	DMH-001	213-213P			✓ Suitable	Calidad
✓	MP-001	Mesa patrón de calidad 1 (1300 x 1200)	DMP-001	A-27891		POLI	✓ Suitable	Calidad

User: Admin Base: VFCalibre25_0_0_Ejemplo



The screenshot displays the 'Equipment' record for 'PR-101-General-Equipment' in the Visual Factory Calibre software. The interface includes a top menu bar with 'File', 'Home', 'View', and 'Tools'. Below this is a toolbar with various icons for file operations (New, Clone, Open, Save, Save and Close, Save and New, Save as, Delete, Validate, Cancel, Change family, Open Related Record, Refresh, Save Layout, Show in Report) and record navigation (Previous Record, Next Record, Close). The main area is divided into a left sidebar with 'Main', 'Families', 'Equipment', 'Formats', 'Control equipment', and 'Results' sections. The 'Equipment' section is active, showing a form with the following fields:

- Code:** PR-101-General
- Availability:** Disponible
- Result:** Suitable
- Uncertainty:** ± 0,009 mm (K = 2)
- General Data:**
 - Family:** DPR-100
 - Responsible:** Producción
 - Level:** 1
 - Standard:** ☐ Standard, ☒ Calibrable
- Identification Data:**
 - Serial n°:** K-874
 - Brand:** Mitutoyo
 - Model:** X-2897
 - Supplier:** ELECSOFT S.L.
 - Manufacturer:** ELECSOFT S.L.
 - Customer:**
 - Reception:** 04/10/20
 - Service:** 04/10/2014
 - Cancellation:**
- Physical Location:**
 - Section:** SEC-2
 - Station:**
 - Line:** LIN-2
 - Position:**
- Remarks:**

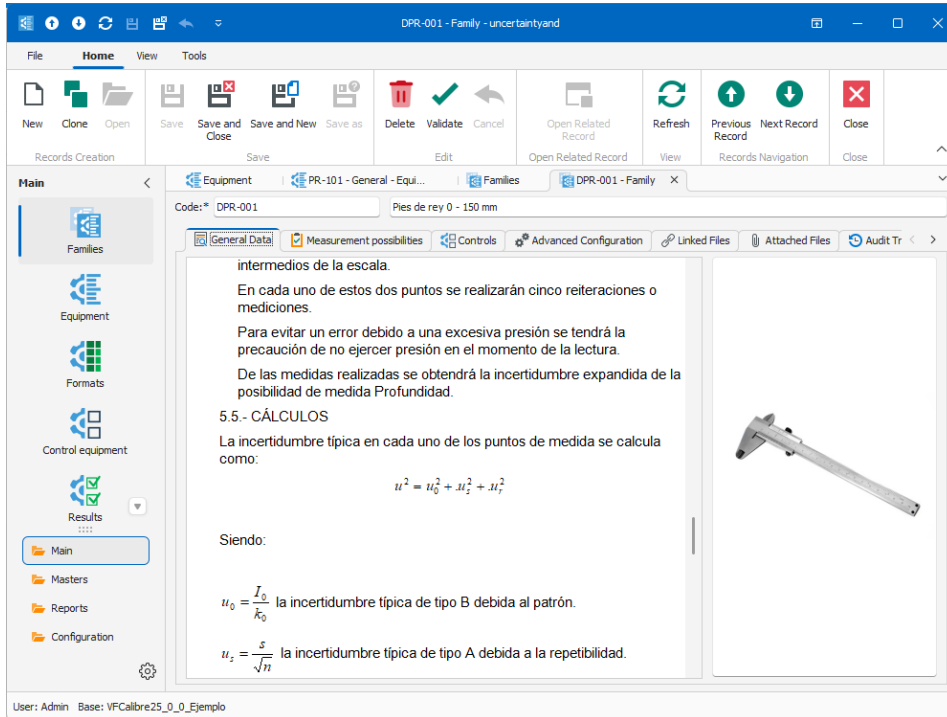
The bottom status bar shows 'User: Admin' and 'Base: VFCalibre25_0_0_Ejemplo'.

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



The screenshot shows the 'DPR-001 - Family - uncertaintyand' window. The 'General Data' tab is active, displaying the following text:

intermedios de la escala.
En cada uno de estos dos puntos se realizarán cinco reiteraciones o mediciones.
Para evitar un error debido a una excesiva presión se tendrá la precaución de no ejercer presión en el momento de la lectura.
De las medidas realizadas se obtendrá la incertidumbre expandida de la posibilidad de medida Profundidad.

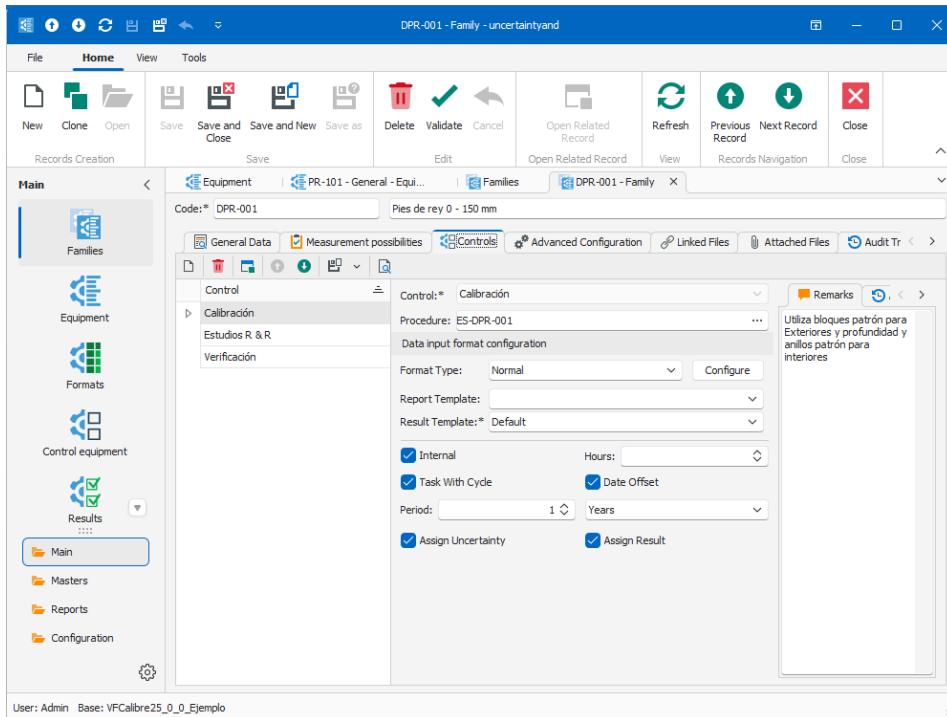
5.5 - CÁLCULOS
La incertidumbre típica en cada uno de los puntos de medida se calcula como:

$$u^2 = u_0^2 + u_z^2 + u_r^2$$

Siendo:

$u_0 = \frac{I_0}{k_0}$ la incertidumbre típica de tipo B debida al patrón.
 $u_z = \frac{s}{\sqrt{n}}$ la incertidumbre típica de tipo A debida a la repetibilidad.

On the right side of the window, there is an image of a depth gauge.



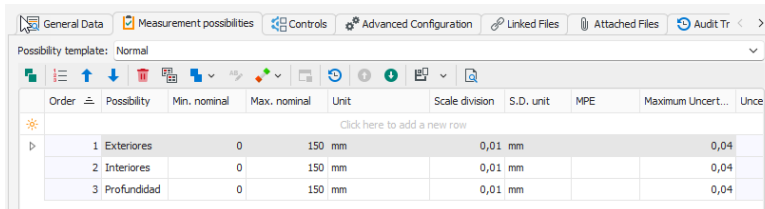
The screenshot shows the same 'DPR-001 - Family - uncertaintyand' window, but with the 'Controls' tab active. The 'Control' dropdown is set to 'Calibración'. The 'Procedure' is 'ES-DPR-001'. The 'Data input format configuration' section shows 'Format Type' as 'Normal', 'Report Template' as 'Default', and 'Result Template' as 'Default'. The 'Internal' checkbox is checked, and the 'Task With Cycle' checkbox is also checked. The 'Period' is set to '1' and 'Years'. The 'Assign Uncertainty' and 'Assign Result' checkboxes are both checked. On the right side, there is a 'Remarks' section with the text: 'Utiliza bloques patrón para Exteriores y profundidad y anillos patrón para interiores'.

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,

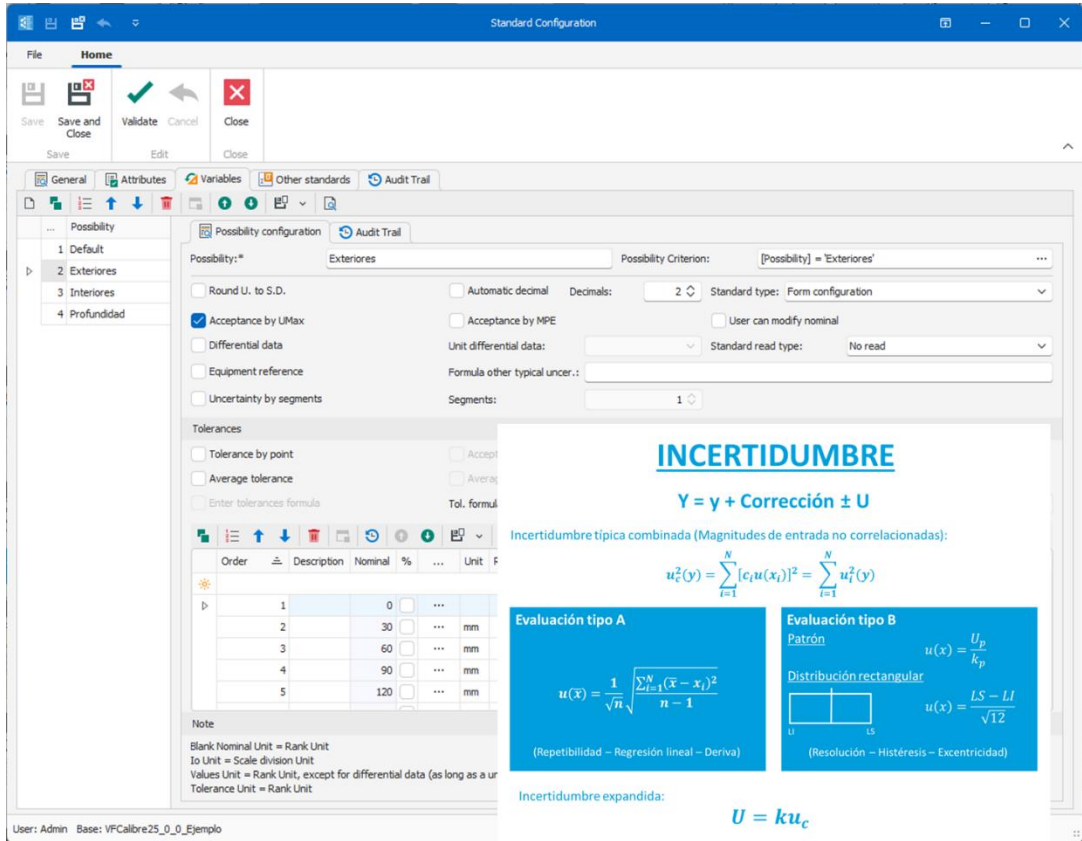
The application is delivered with a database containing predefined procedures validated by ELECSOFT, covering the most common measuring instruments. These procedures follow the recommendations of the GUM guide and are inspired by those proposed by CEM (Spanish Metrology Center).



Order	Possibility	Min. nominal	Max. nominal	Unit	Scale division	S.D. unit	MPE	Maximum Uncert...	Unce
1	Exteriores	0	150 mm		0,01 mm			0,04	
2	Interiores	0	150 mm		0,01 mm			0,04	
3	Profundidad	0	150 mm		0,01 mm			0,04	

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)



INCERTIDUMBRE

$Y = y + \text{Corrección} \pm U$

Incertidumbre típica combinada (Magnitudes de entrada no correlacionadas):

$$u_c^2(y) = \sum_{i=1}^N [c_i u(x_i)]^2 = \sum_{i=1}^N u_i^2(y)$$

Evaluación tipo A

$$u(\bar{x}) = \frac{1}{\sqrt{n}} \sqrt{\frac{\sum_{i=1}^N (\bar{x} - x_i)^2}{n-1}}$$

(Repetibilidad – Regresión lineal – Deriva)

Evaluación tipo B

Patrón: $u(x) = \frac{U_p}{k_p}$

Distribución rectangular: $u(x) = \frac{LS - LI}{\sqrt{12}}$

(Resolución – Histéresis – Excentricidad)

Incertidumbre expandida:

$$U = k u_c$$

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

CALIBRACIÓN

$Y = y + \text{Corrección} \pm U$

(Características metrológicas del equipo)



CONFIRMACIÓN

$|\text{Corrección}| + U \leq \text{EMP}$

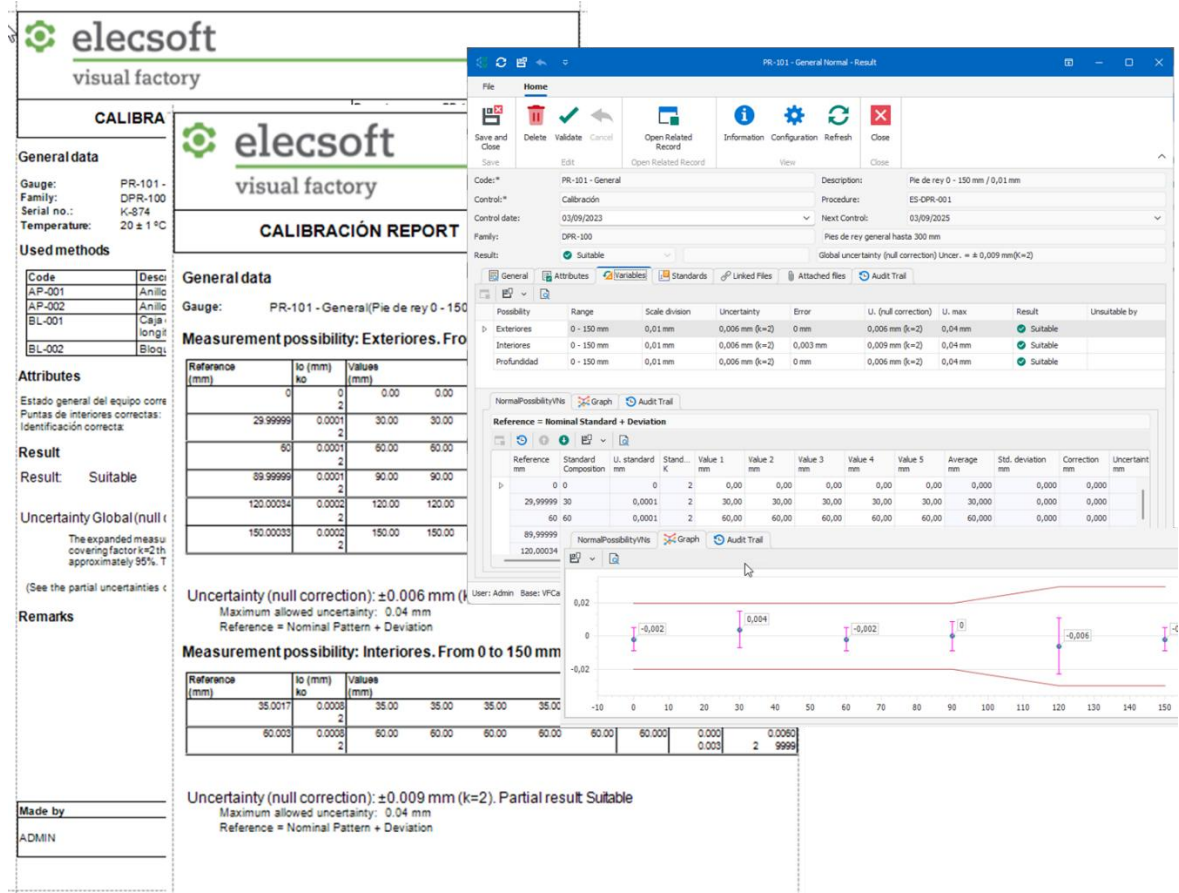
(Requisitos metrológicos del cliente)



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.

Data and certificates



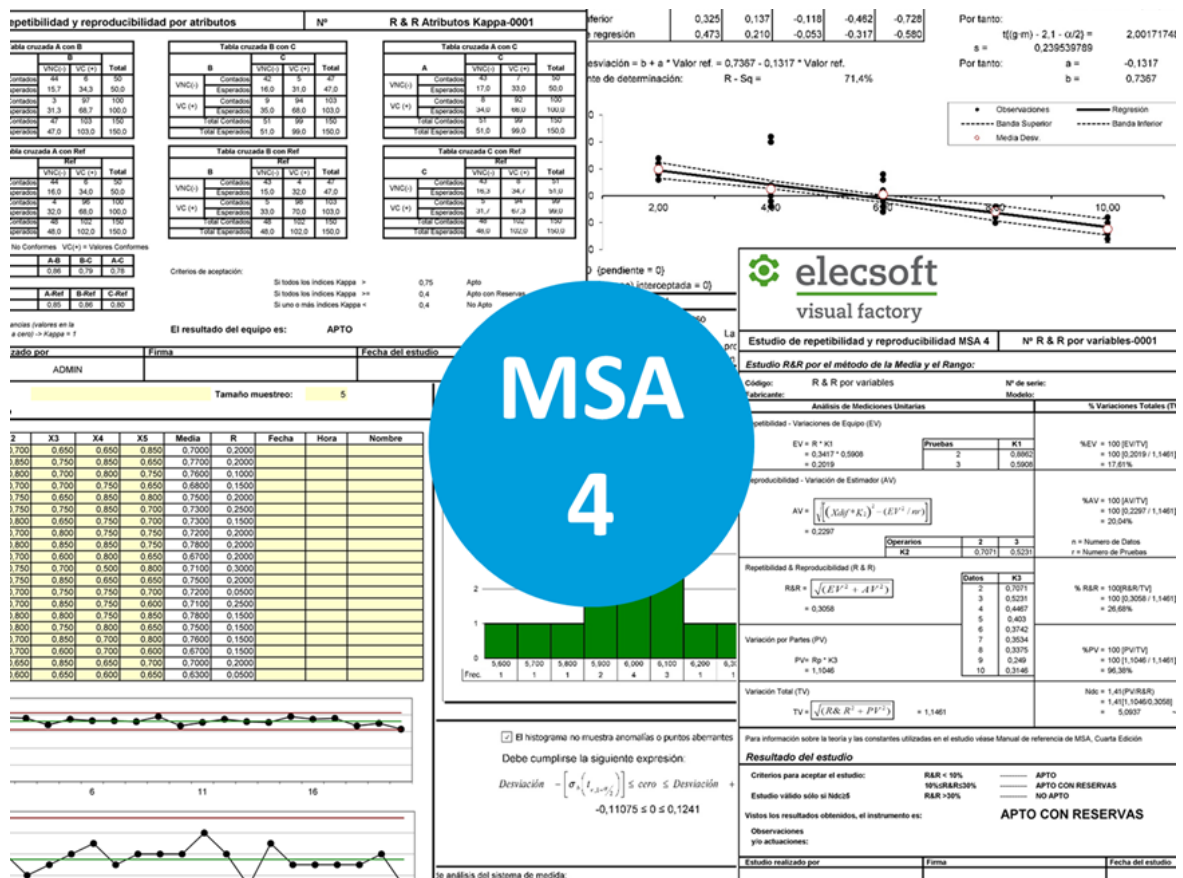
One of the important parts of the Calibration Plan is to systematically check the measuring equipment to verify its condition and, if necessary, make the appropriate adjustments to meet the established acceptance criteria.

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.

MSA 4 (Measurement System Analysis)



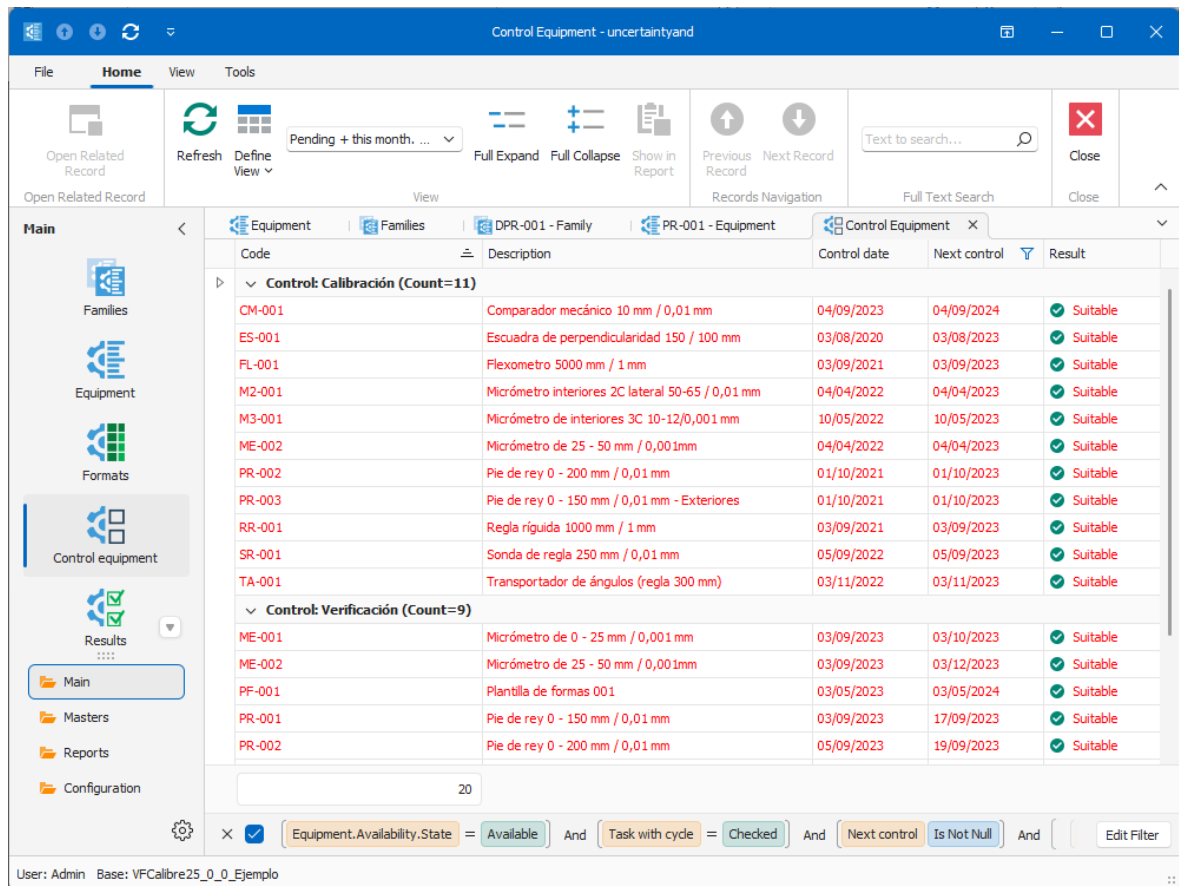
Visual Factory Calibre incorporates different studies defined in MSA 4:

- 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



Code	Description	Control date	Next control	Result
Control: Calibración (Count=11)				
CM-001	Comparador mecánico 10 mm / 0,01 mm	04/09/2023	04/09/2024	✓ Suitable
ES-001	Escuadra de perpendicularidad 150 / 100 mm	03/08/2020	03/08/2023	✓ Suitable
FL-001	Flexometro 5000 mm / 1 mm	03/09/2021	03/09/2023	✓ Suitable
M2-001	Micrómetro interiores 2C lateral 50-65 / 0,01 mm	04/04/2022	04/04/2023	✓ Suitable
M3-001	Micrómetro de interiores 3C 10-12/0,001 mm	10/05/2022	10/05/2023	✓ Suitable
ME-002	Micrómetro de 25 - 50 mm / 0,001mm	04/04/2022	04/04/2023	✓ Suitable
PR-002	Pie de rey 0 - 200 mm / 0,01 mm	01/10/2021	01/10/2023	✓ Suitable
PR-003	Pie de rey 0 - 150 mm / 0,01 mm - Exteriores	01/10/2021	01/10/2023	✓ Suitable
RR-001	Regla rígida 1000 mm / 1 mm	03/09/2021	03/09/2023	✓ Suitable
SR-001	Sonda de regla 250 mm / 0,01 mm	05/09/2022	05/09/2023	✓ Suitable
TA-001	Transportador de ángulos (regla 300 mm)	03/11/2022	03/11/2023	✓ Suitable
Control: Verificación (Count=9)				
ME-001	Micrómetro de 0 - 25 mm / 0,001 mm	03/09/2023	03/10/2023	✓ Suitable
ME-002	Micrómetro de 25 - 50 mm / 0,001mm	03/09/2023	03/12/2023	✓ Suitable
PF-001	Plantilla de formas 001	03/05/2023	03/05/2024	✓ Suitable
PR-001	Pie de rey 0 - 150 mm / 0,01 mm	03/09/2023	17/09/2023	✓ Suitable
PR-002	Pie de rey 0 - 200 mm / 0,01 mm	05/09/2023	19/09/2023	✓ Suitable

Filter: ☒ Equipment.Availability.State = Available And ☒ Task with cycle = Checked And ☒ Next control Is Not Null Edit Filter

User: Admin Base: VFCalibre25_0_0_Ejemplo

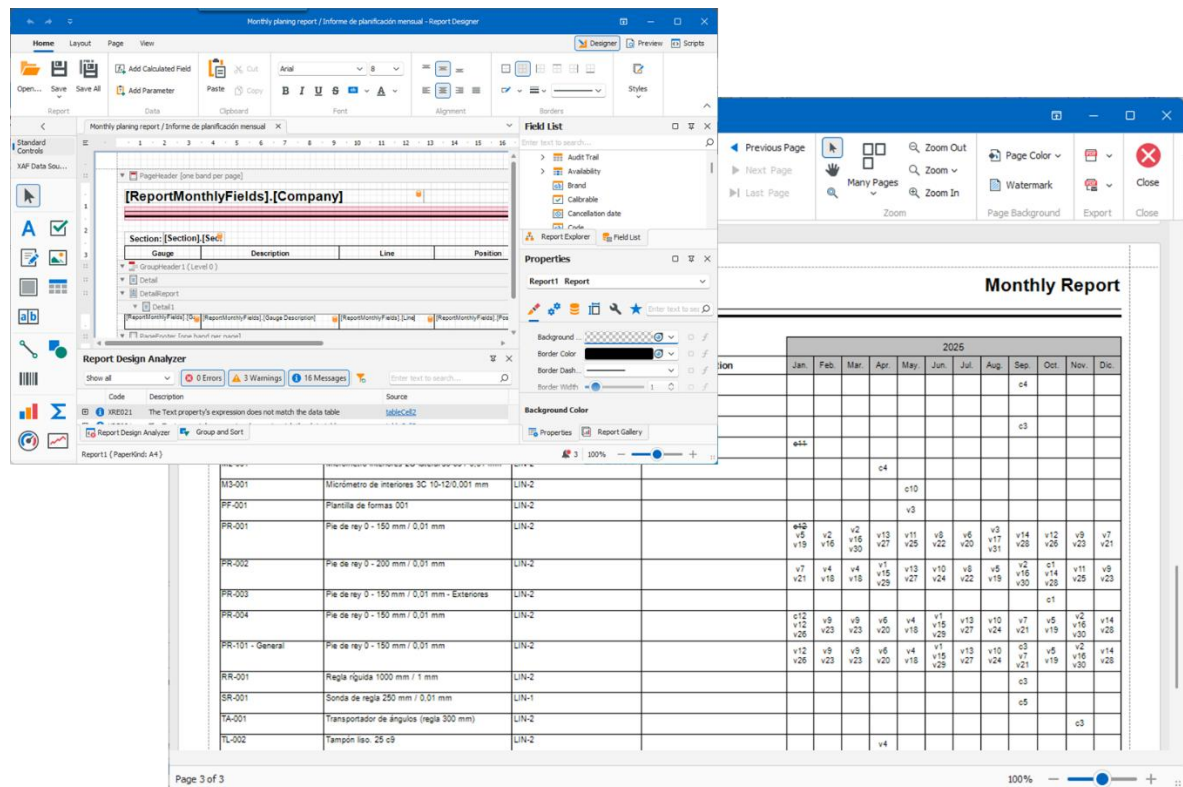
The application allows the user to plan the different controls to be performed according to different criteria. In this way, the user controls at all times the times of calibration, verification or any other control of all the measuring equipment.

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.

visual factory

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

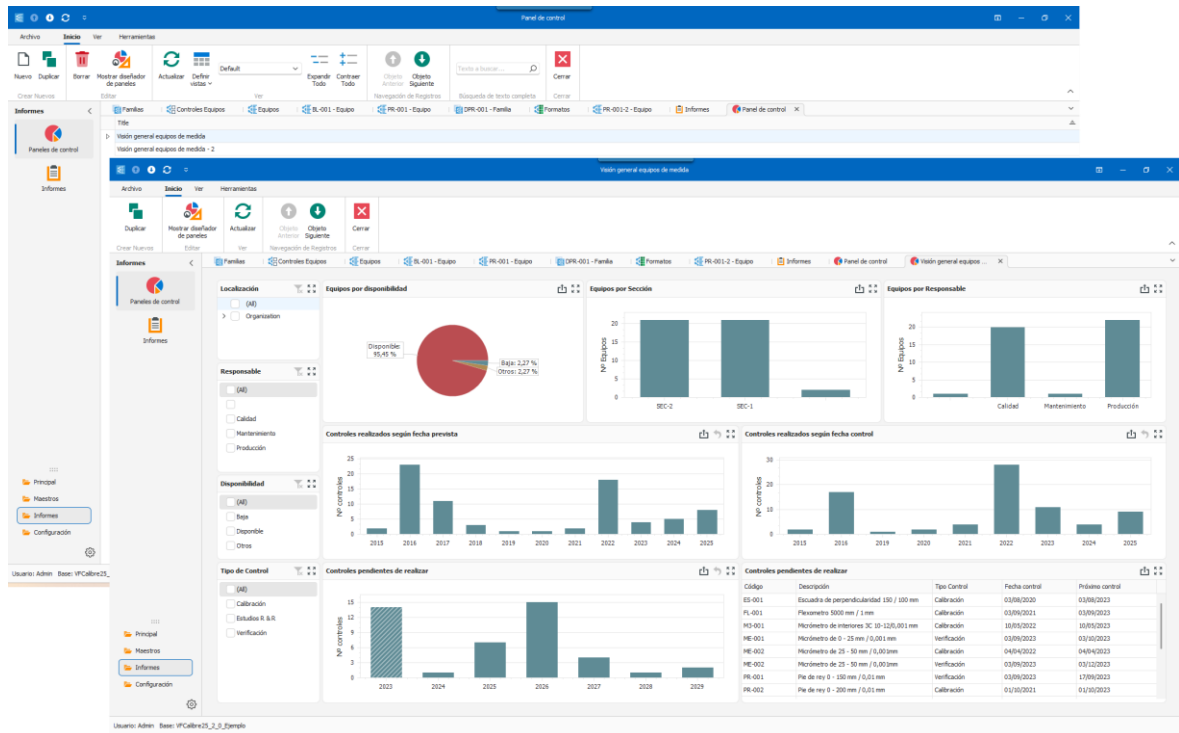


Visual Factory incorporates a powerful integrated report designer that will allow you to adapt the printing formats to the requirements of each company.

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.

Dashboard



Visual Factory Calibre includes, in the professional version, a module for designing and displaying Dashboards. Users can choose from a list of predefined dashboards or create their own from scratch, as well as duplicate existing dashboards to quickly adapt them to new requirements.

The dashboard designer is fully integrated into the application and allows the combination of different types of indicators within the same panel (charts, tables, counters, etc.). It is possible to link indicators together, apply common or specific filters, and more.

With Dashboards, managers can immediately monitor key KPIs such as equipment availability, schedule adherence, completed/pending inspections by section or supervisor, and any other indicator configurable by the organization.

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.
 - 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.
 - 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 phone.

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	√	√	√	√
Editing application records		√	√	√
Performance of controls with standard processes		√	√	√
Performing controls with previously defined MS Excel formats.		√	√	√
MS Excel format configuration			√	√
Report and label designer		√	√	√
Printing reports and labels		√	√	√
Dashboards	√		√	√
Sending reports by e-mail and exporting to PDF	√	√	√	√
Specific weekly/monthly long term planning report	√	√	√	√
Integrated security with Active Directory	√	√	√	√
Import between databases			√	
Export to PDF, MS Excel, MS Word, ... from views	√		√	√
Simultaneous access from several positions	√		√	√
MS SQL Server databases	√	√	√	√
Basic Audit Trail			√	√
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)		√	√	√
MSA 4. R & R by variables (ANOVA), attributes, linearity, stability and variance.			√	√
Inter-equipment traceability	√	√	√	√
Calibration history	√	√	√	√
Linked files and/or attachments	√	√	√	√
Presentation of images in the family and in the team file	√	√	√	√
Customization of public and private views for filtering, grouping, sorting and formatting of displayed records		√	√	√
Display of public and private views	√	√	√	√
Customization of fields and literals	√	√	√	√

Visual Factory Calibre extensions

Visual Factory Calibre can be extended with the following modules:

Access Module by department and location

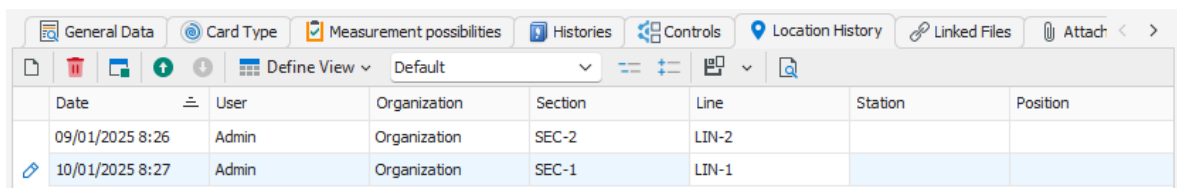
The functionality of access by department and location allows us to restrict or filter the equipment, equipment controls, results and applications to which the user can consult or access according to the organizations, sections or departments to which he/she has access/assigned.

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.



Date	User	Organization	Section	Line	Station	Position
09/01/2025 8:26	Admin	Organization	SEC-2	LIN-2		
10/01/2025 8:27	Admin	Organization	SEC-1	LIN-1		

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.

Equipment, instruments and loops management module

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

General Data | **Card Type** | Measurement possibilities | Histories | Controls | Location History | Linked Files | Attach < >

Card type

Type: Loop card

Equipment that belongs to the loop

System: AP-001 Description: Anillo patrón de 35 mm

Instruments belonging to the loop

Define View Default

Code	Description	Responsible...	Station	Original Str	Type
AP-003	Anillo patrón 10 mm				Instrument card belonging to l...