What's New in Visual Factory Caliber 23

Visual Factory Calibre 23

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Objective

The purpose of this document is to provide a detailed review of Visual Factory Calibre version 23, highlighting all the new features and differences compared to the previous version 7.6. This document is designed to help users understand and adapt to changes in the software, and to make the most of new features and enhancements.

Visual Factory Calibre 23 is a completely remade version that uses the latest technologies to help users manage their measuring equipment. This document will explain in detail the differences between the new version and the previous version, and provide alternatives for the functionalities that have changed.

For each of the features that have changed, the differences between the new version and the previous version will be explained. If the way of doing something is no longer the same, different alternatives will be explained to be able to do the same or similar thing.

In addition, the new capabilities introduced in Visual Factory Calibre version 23 will be explained. These new functionalities have been designed to improve efficiency and ease of use, and to provide users with more control and flexibility in the management of their measurement equipment.

If any functionality from the previous version is no longer available, the reason for this decision will be explained and information will be provided on alternatives for performing similar functionality, if any.

It is important for users of the current version to review this document carefully before beginning the migration to Visual Factory Calibre version 23. Some of the modifications may affect your day-to-day work, and it is essential that users are fully informed and prepared for these changes.

This document is designed to be a comprehensive and accessible guide to the transition to Visual Factory Calibre version 23. Our goal is to ensure that all users can take full advantage of new features and enhancements, and that the transition is as smooth and seamless as possible.

Scope

This document is intended for users of the SME and Professional editions of Visual Factory Calibre, covering what's new and what's different between version 23 and version 7.6. Visual Factory Calibre add-on modules are not included. Its goal is to ease the transition to version 23 and maximize the use of new features and enhancements.

General

Rewriting the Application in C# under .NET 6

Visual Factory Calibre 23 has been completely rewritten in C# using .NET 6, Microsoft's most current long-running framework. This change provides a number of significant benefits, including increased efficiency, performance, and safety.

Using the DevExpress XAF Framework

Version 23 of Visual Factory Calibre has been developed using the DevExpress XAF framework. This robust framework provides support for the basics of an application, including navigation, form management, views, reports, and dashboards.

The use of XAF allows for greater flexibility and customization in the design and functionality of the application. Users can expect an improved user experience, with a more intuitive and user-friendly interface. In addition, XAF makes it easy to create and manage reports and dashboards, allowing users to gain deeper and more useful insights from their data.

These changes to the working environment not only improve the functionality and efficiency of Visual Factory Calibre, but also provide a solid foundation for future updates and improvements.

Using MS SQL Server Databases

In version 23 of Visual Factory Calibre, the only database engine available is MS SQL Server, and it is no longer possible to use MS Access. This decision was made for several reasons:

Robustness and Reliability

MS SQL Server is much more robust and reliable for enterprise applications, especially when there are multiple users working simultaneously. It provides superior performance and can handle a large amount of data without slowing down or causing performance issues.

Safety

Data access with MS SQL Server is more secure. MS SQL Server has a number of built-in security features that help protect data, including data encryption, user authentication, and security auditing.

Data Capacity

The data capacity, even for the Express version, is much higher in MS SQL Server. This means that users can store and manage a significantly larger amount of data without worrying about space limitations.

Integration with Other Systems

MS SQL Server makes it easy to integrate with other systems. This is especially useful for businesses that use a variety of different applications and systems and need to share data between them.

In summary, the move to MS SQL Server in Visual Factory Calibre 23 provides a number of significant benefits, including increased robustness, security, data capacity, and integration with other systems.

Safety

Access to the Application

Version 23 of Visual Factory Calibre will also allow you to work with various types of security. By default, the one that already existed in 7.6 will be maintained, only now it will be controlled by the XAF framework itself. Aware that security integrated with Active Directory or LDAP provides a number of significant benefits, including increased security, more efficient user management, and better integration with other systems and applications, it will also be possible to access the application using this security integrated with Active Directory or LDAP.

Definition of User Roles

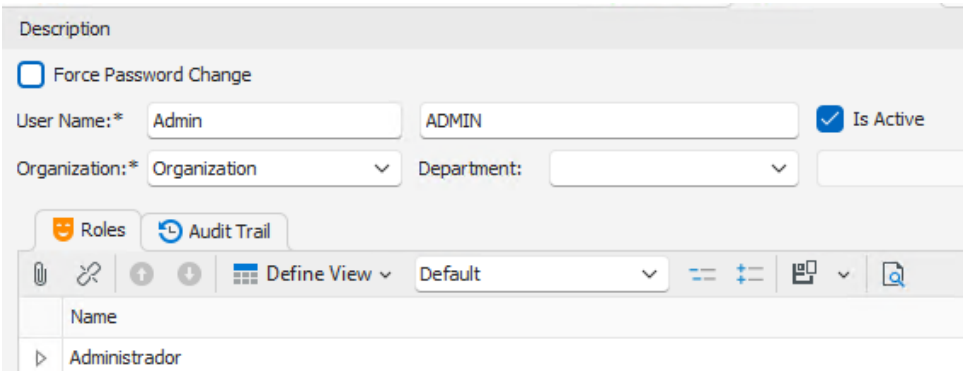
In version 23 of Visual Factory Calibre, the definition of user roles (profiles) has been improved. Information access configuration possibilities are much more flexible, allowing administrators to precisely control who has access to what information.

Not only does this improve data security, but it also allows users to access the information they need more efficiently. Administrators can configure user roles to fit their organization's specific needs, making it easier to manage users and improve overall efficiency.

In summary, the security changes in Visual Factory Calibre 23 provide greater data protection, more efficient user management, and greater flexibility in information access settings.

Users

The Organization and Department fields are added.



The Organization is a new level above the section and line of the teams and serves to indicate the different headquarters that the company may have or directly the company in question if it does not work with different headquarters. This field must be filled in.

Application-specific changes

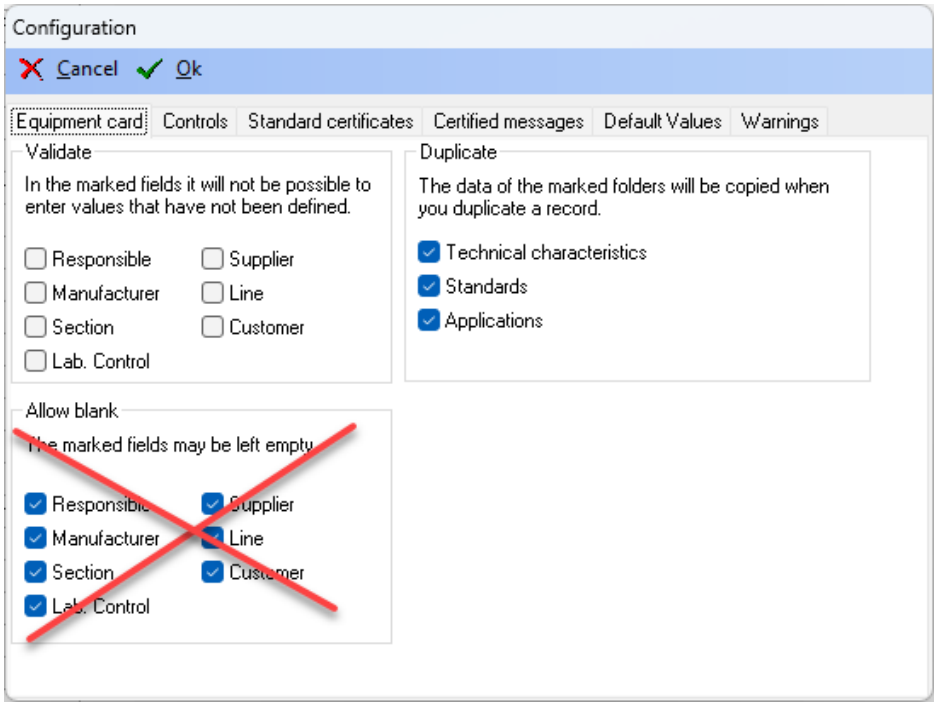
The most significant changes between the current version and version 7.6 will be detailed below, module by module.

Finally, the general changes of the programming environment will be explained: views, reports, ...

General Settings

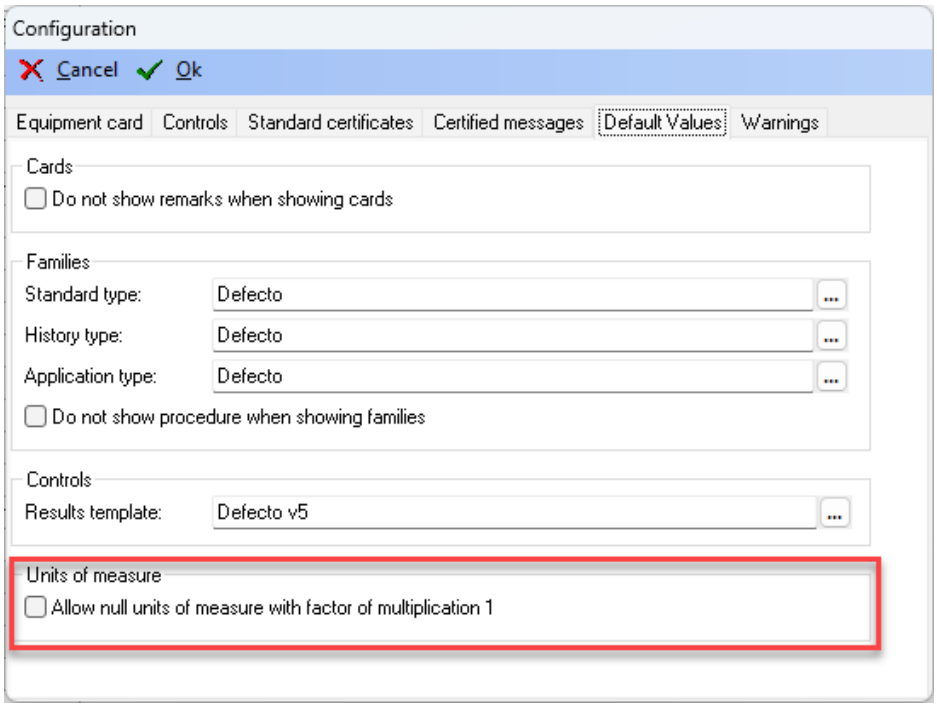
Team sheet

It is now required that fields on the team card related to masters have a masterr value. Typing freely in these fields is not allowed. Therefore, the option that existed in version 7.6 to allow you to freely type these fields has been removed.



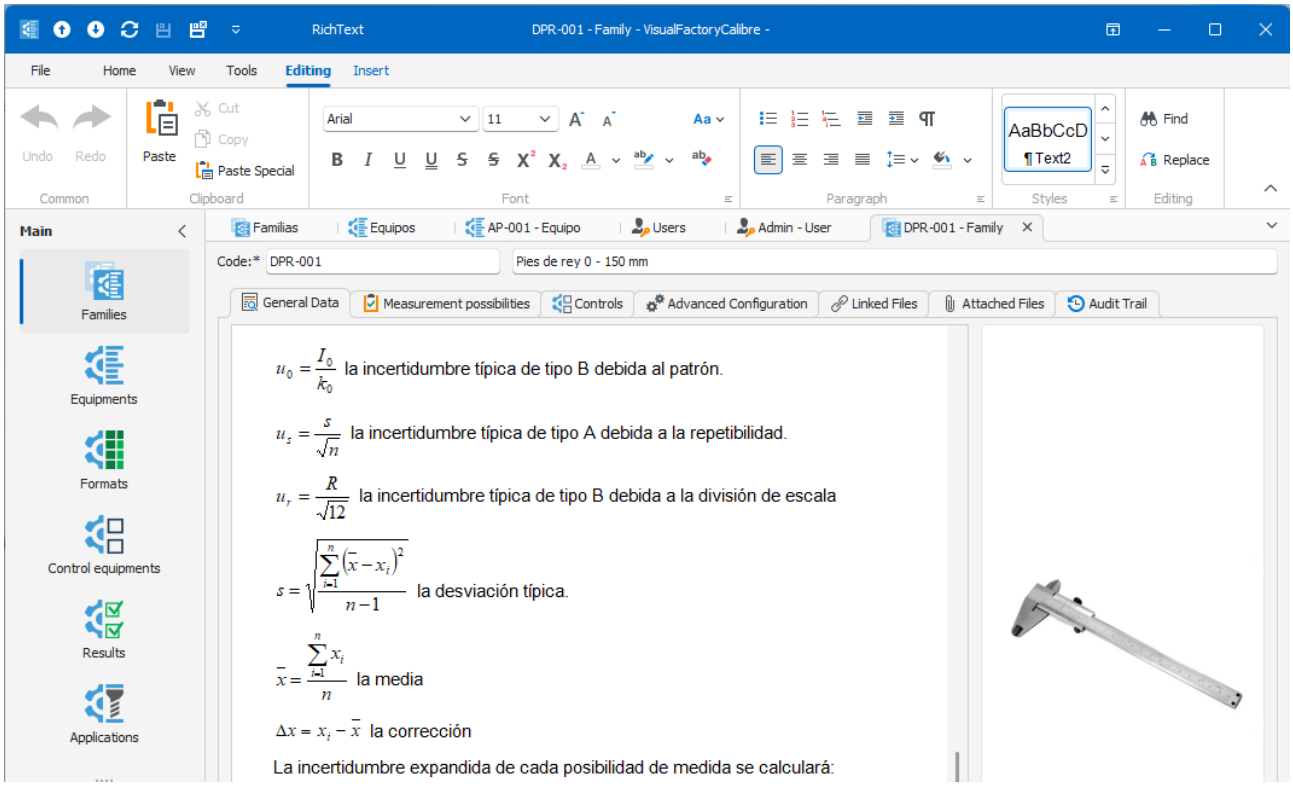
Default Values – Units of Measurement

The ability to allow null units of measurement has been removed. Any value must have a unit of measurement associated with it.



Families

Word Processor



Visual Factory Calibre 23 incorporates a complete word processor to include procedures or relevant information (text, images, links, ...) in the family.

Advantages

- Much more powerful editor. Very similar to Word

Problems Detected

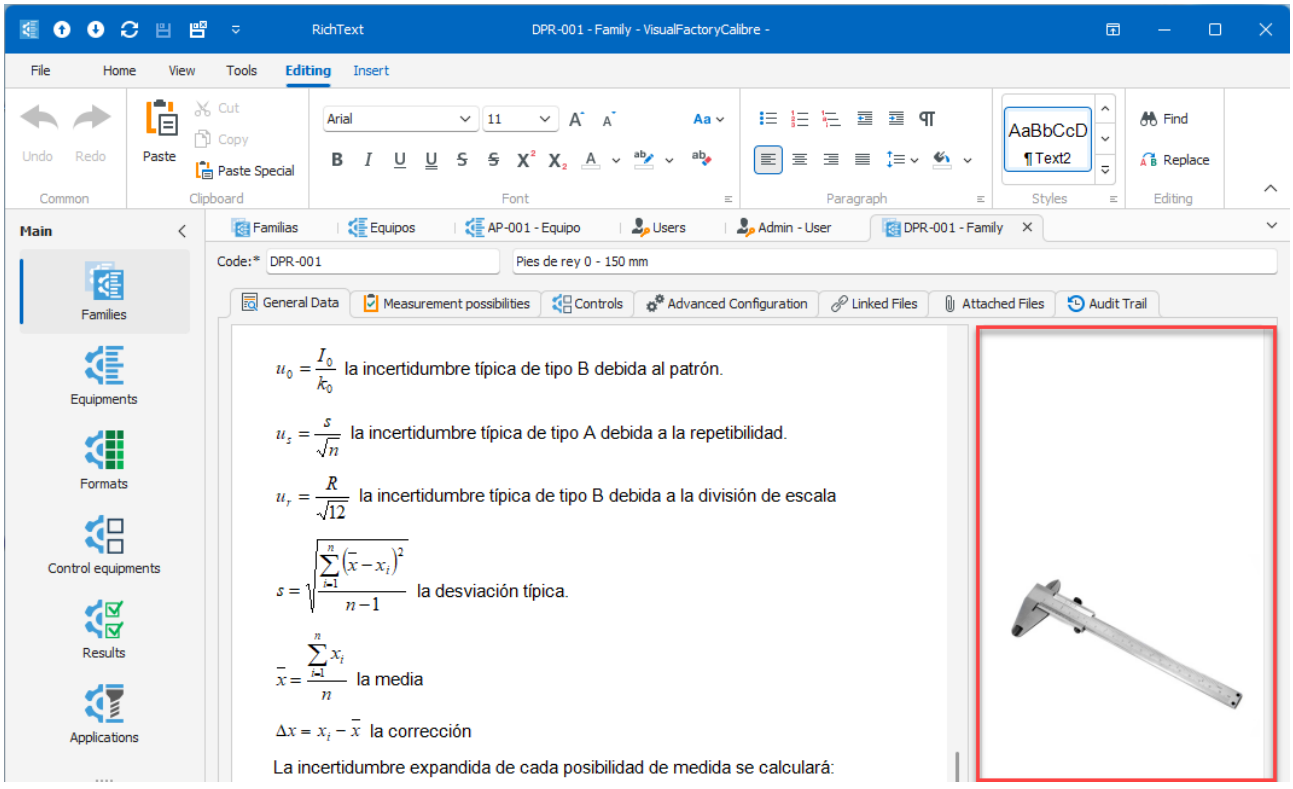
- It does not allow you to include embedded objects. For example, a Word document or an Excel document.

Problem solving

- Added Attach and Link Files options.
- On import, if the 7.6 text field includes an embedded object, it is migrated as a Word file within the attachment list. In cases where there are no embedded objects, the document will be presented in the rich text field, just as in version 7.6.

Associated image

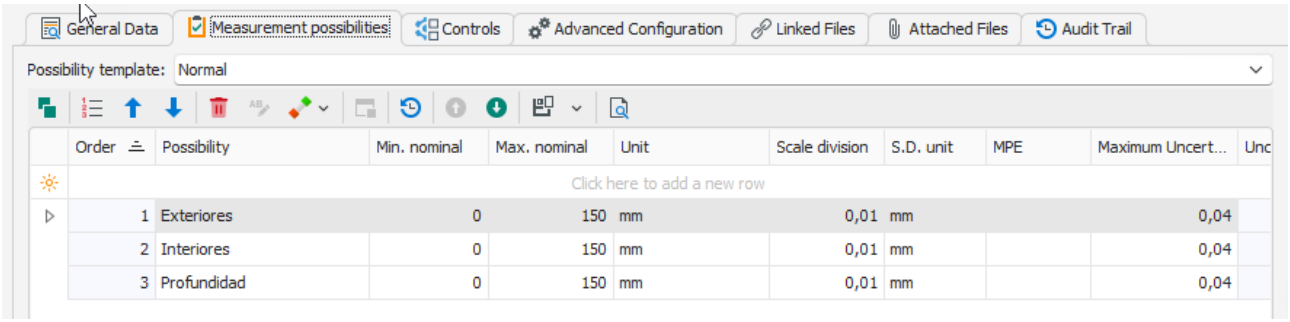
It is now possible to assign a representative image of each family.



Linked Files and Attachments

These new options allow you to link and attach files to the family.

Measurement possibilities

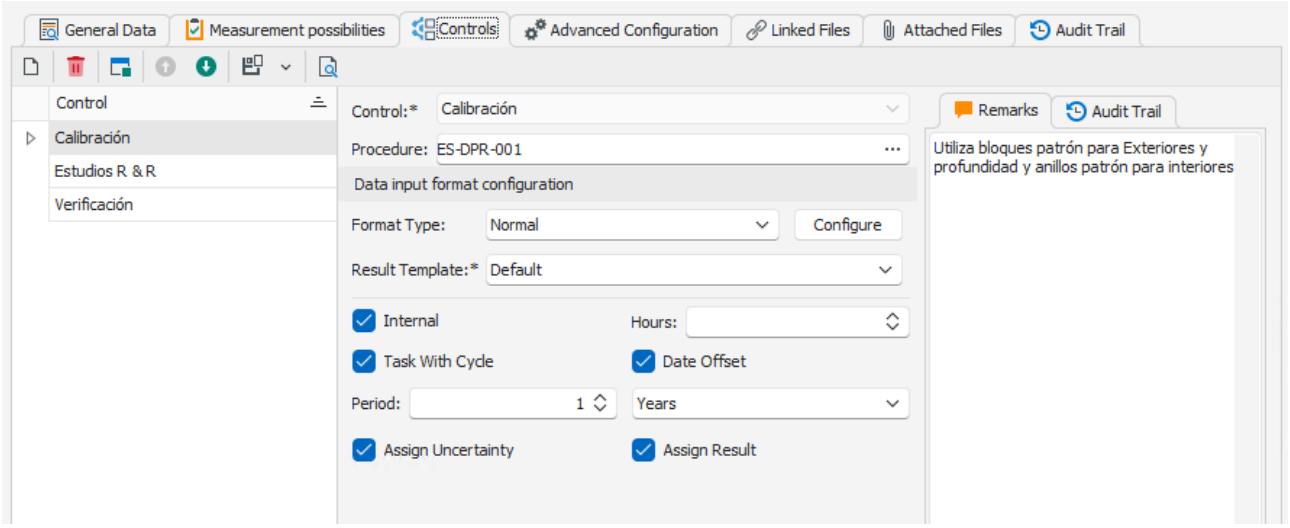


Within this functionality of the application there have been quite a few important changes:

- It is possible to easily duplicate and sort the measurement possibilities.
- A new, much more effective and simpler approach has been made for the definition of smooth and threaded Go – No Go gauges.
- Added calculation of average diameter tolerances for gauges threaded with American standard unifies UN.
- The way in which the tolerances of the Go – No Go gauges are expressed is the same as that used in the Tool type possibilities. This allows you to unify the Go – No Go formats with the Tool format and thus make better use of the computing power of the Tool format.

Note: Given the importance of the changes made to the possibility templates and format types, they will be discussed in a separate section.

Controls



The most important changes:

- Unification of Go – No Go caliber formats with the Tool format. Since it is an important aspect within the application, this topic will be covered in detail for one of the formats later.
- Reports compatible with version 7.6 have been defined.

Predefined Possibilities Template for Go – No Go Calibers

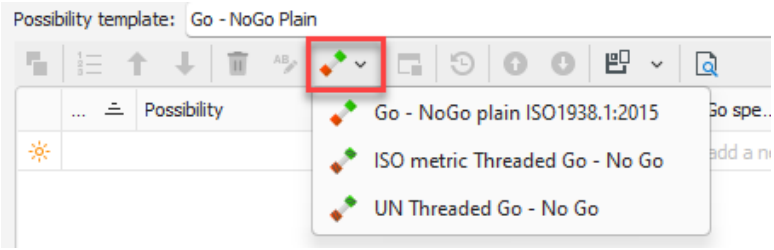
All possibility templates, except those related to Go – No Go calibers, have remained the same as in version 7.6. We're talking about the templates that are offered by default in the empty base and as an example.

We focus only on the templates for Go – No Go caliber.

To enter the specifications of this type of caliber, we first have to select the most suitable template:

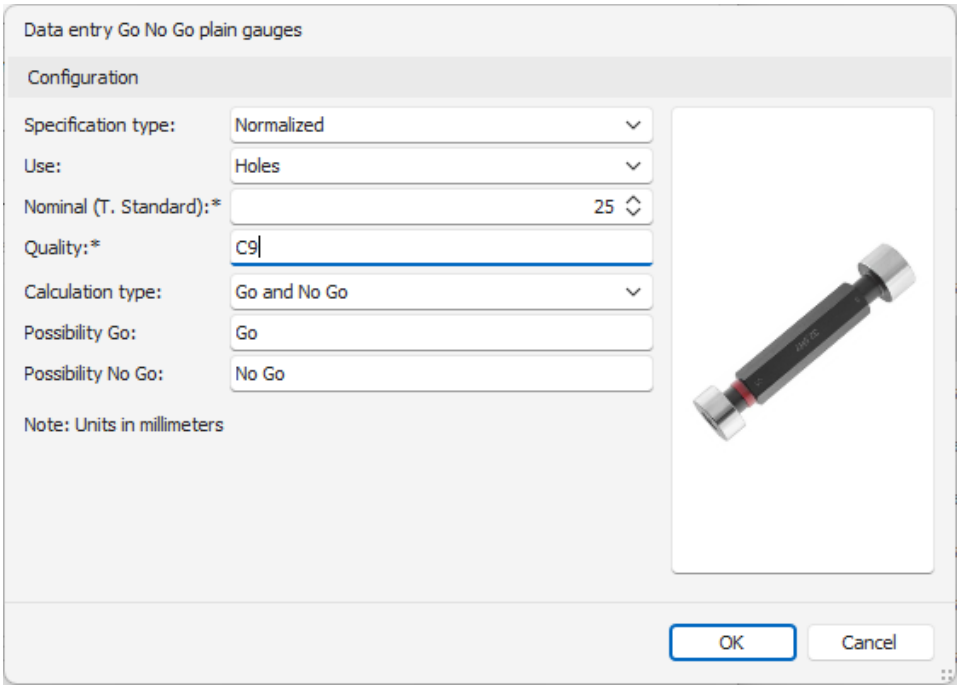
- Plain Go – No Go
- ISO Metric Threaded Go – No Go
- UN ANSI/ASME Threaded Go – No Go

Next, we'll select the configuration module:

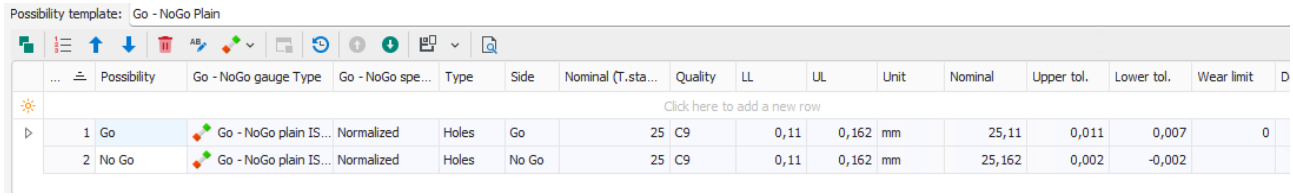


Note: Since the user can define his own possibility templates, and because he maintains compatibility with version 7.6, the possibility definition operation of this type still has two steps: selecting the template and entering data to obtain the tolerances.

ISO 1938.1:2015 plain Go – No Go calibres

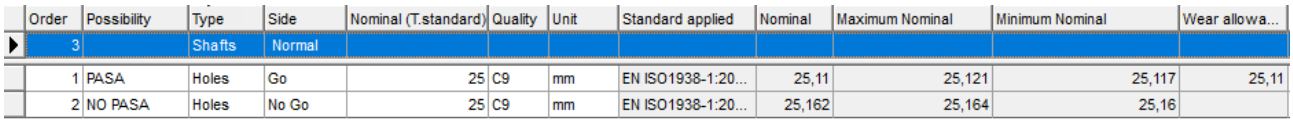


With the data entered, it automatically generates the measurement possibilities:


Possibility template: Go - NoGo Plain

	Possibility	Go - NoGo gauge Type	Go - NoGo spe...	Type	Side	Nominal (T.sta...	Quality	LL	UL	Unit	Nominal	Upper tol.	Lower tol.	Wear limit	D
						Click here to add a new row									
1	Go	Go - NoGo plain IS...	Normalized	Holes	Go	25	C9	0,11	0,162	mm	25,11	0,011	0,007	0	
2	No Go	Go - NoGo plain IS...	Normalized	Holes	No Go	25	C9	0,11	0,162	mm	25,162	0,002	-0,002		

In version 7.6 we had the following template:



Order	Possibility	Type	Side	Nominal (T.standard)	Quality	Unit	Standard applied	Nominal	Maximum Nominal	Minimum Nominal	Wear allowa...
3		Shafts	Normal								
1	PASA	Holes	Go	25	C9	mm	EN ISO1938-1:20...	25,11	25,121	25,117	25,11
2	NO PASA	Holes	No Go	25	C9	mm	EN ISO1938-1:20...	25,162	25,164	25,16	

It should be noted that the tolerances and wear limit are referenced to the Nominal.

Advantages of the new version

- Unification with Tool type formats.
- More compact and easier editing. For example, in one go you define the side that passes and does not pass. By entering data using a specific form, you avoid errors.
- It allows you to mix data calculated according to standard with other data entered directly.

Disadvantages

- Format change when expressing tolerances and wear limit. Especially, if the user was used to seeing the format of absolute limits.

Note: Possibly in later versions the user will be allowed to choose how to represent the tolerances and wear limits.

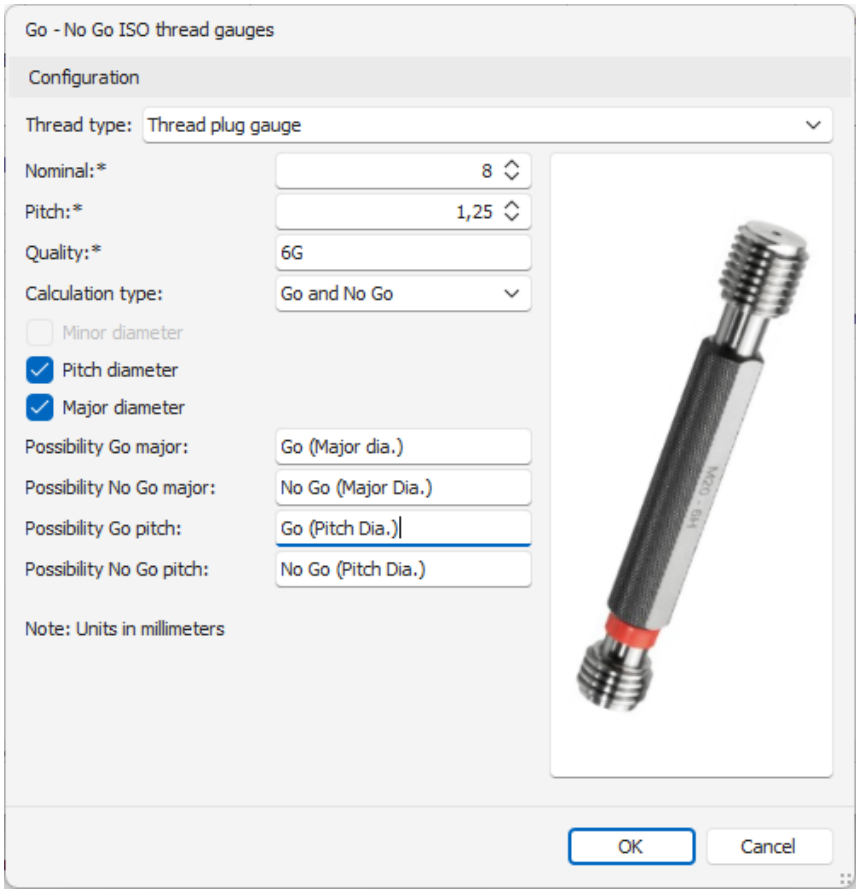
- Unification with the standard format is a great advantage, but it can also be a disadvantage in that the control certificates change from version 7.6

Note: If the fact that the controls certificates are somewhat different from those generated in version 7.6 may be a problem, please consult with Elecsoft for possible alternatives before migrating.

Importing Data from Version 7.6

Despite the differences mentioned above, all data will be imported from version 7.6

ISO Metric Threaded Go – No Go Gauges



With the data entered, it automatically generates the measurement possibilities:

Order	Possibility	Go - NoGo gauge Type	Thread type	Nominal (T.stand...	Pitch	Unit	Quality	Side	Thread Diameter	Nomi...	Upper tol.	Lower tol.	Wear limit
	Click here to add a new row												
1	Go (Pitch Dia.)	ISO metric Threade...	Thread plug gauge	8	1,25	mm	6G	Go	Pitch diameter	7,228	0,0055	-0,0055	-0,0175
2	Go (Major dia.)	ISO metric Threade...	Thread plug gauge	8	1,25	mm	6G	Go	Major diameter	8,04	0,011	-0,011	
3	No Go (Pitch Dia.)	ISO metric Threade...	Thread plug gauge	8	1,25	mm	6G	No Go	Pitch diameter	7,3815	0,0055	-0,0055	-0,0115
4	No Go (Major Dia.)	ISO metric Threade...	Thread plug gauge	8	1,25	mm	6G	No Go	Major diameter	7,6315	0,011	-0,011	

In version 7.6 we had the following template:

Order	Possibility	Thread Type	Side	Quality	Nominal	Pitch	Unit	Nom. Out...	Tol. Outside ...	Nom. Med. D.	Tol. Med.D. (±)	Med. D. Wear A.	Nom. Insi...	Tol. Int. D. (±)	Pitch Tol. (±)	R
1	GO	Thread plug gauge	Go	6g	8	1,25	mm	8,04	0,011	7,228	0,0055	7,2105	6,494578	0	0,005	
2	NO GO	Thread plug gauge	No Go	6g	8	1,25	mm	7,6315	0,011	7,3815	0,0055	7,37	6,494578	0	0,005	

It should be noted that the tolerances and wear limit are referenced to the Nominal.

Advantages of the new version

- Unification with Tool type formats.
- More compact and easier editing. For example, in one go you define the side that passes and does not pass. By entering data using a specific form, you avoid errors.
- Selection of the diameters of interest from the beginning.
- It allows you to mix data calculated according to standard with other data entered directly.

Disadvantages

- Format change when expressing tolerances and wear limit. Especially, if the user was used to seeing the format of absolute limits.

Note: Possibly in later versions the user will be allowed to choose how to represent the tolerances and wear limits.

- What used to be a single line in version 7.6 with specifications for all diameters (outer, middle, and internal) is now a line for each diameter.
- Pitch tolerance is not taken into account.

Note: If you think that not having the step tolerances may be a problem, please contact Elecsoft before importing.

- Unification with the standard format is a big plus, but it's also a downside, as the controllers' certificates change from version 7.6

Note: If the fact that the controls certificates are somewhat different from those generated in version 7.6 may be a problem, please consult with Elecsoft for possible alternatives before migrating.

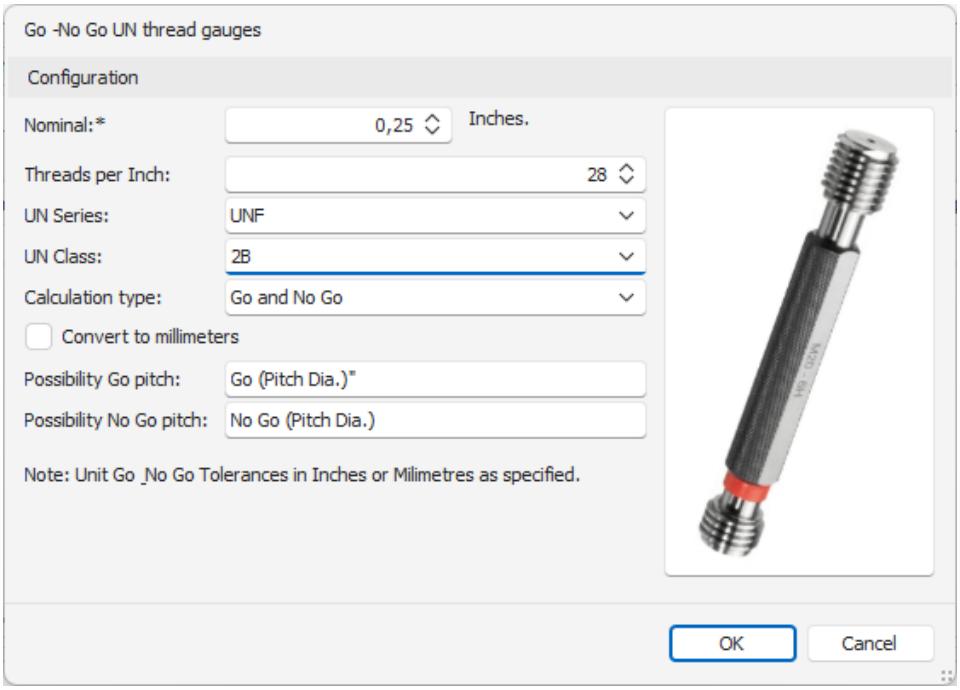
Importing Data from Version 7.6

Despite the differences mentioned above, all data will be imported from version 7.6 with the following caveats:

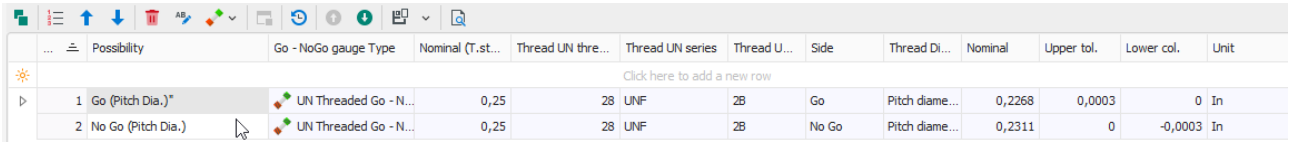
- Only the diameters configured in the control will be imported into the data. If you indicated in version 7.6 to only control the average diameter, only the limits of the average diameter will be imported.
- No information regarding the step tolerances is imported.

UN Threaded Go – No Go Gauges

This functionality is new in version 23 and works in a similar way to ISO threaded gauges.



With the data entered, it automatically generates the measurement possibilities:



	Possibility	Go - NoGo gauge Type	Nominal (T.st...	Thread UN thre...	Thread UN series	Thread U...	Side	Thread Di...	Nominal	Upper tol.	Lower col.	Unit
	Click here to add a new row											
1	Go (Pitch Dia.)"	UN Threaded Go - N...	0,25	28	UNF	2B	Go	Pitch diame...	0,2268	0,0003	0	In
2	No Go (Pitch Dia.)	UN Threaded Go - N...	0,25	28	UNF	2B	No Go	Pitch diame...	0,2311	0	-0,0003	In

Considerations to highlight:

- Only manufactured plug gauges and threaded rings are available.
- Only the calculation of pass-through and non-pass-throughs tolerances is available for the average diameter.
- It is possible to express the result in inches or millimeters.

Types of formats to perform control

The formats that have been retained from version 7.6 are as follows:

- Raw
- Excel Sheet
- External
- Normal
- Tool
- Attributes
- Normal Verification

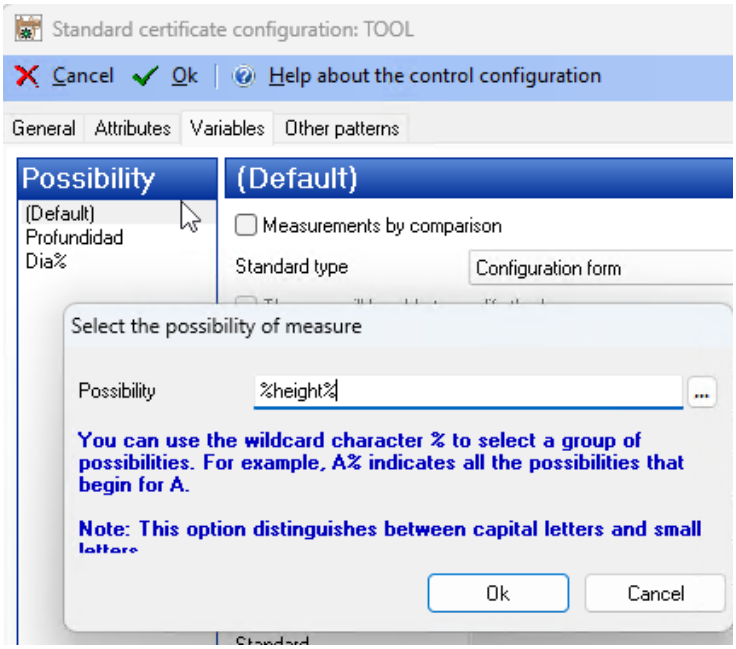
The formats: Go – No Go Plain Pads, Threaded plug gauges and verification - tool have been unified into the Tool Format.

The Normal RH format, which is a very special format used in the migration of a specific software has been disabled by default.

Note:	In the release of Visual Factory Calibre 23, Normal RH will not be available, but it will be able to be activated in later versions.

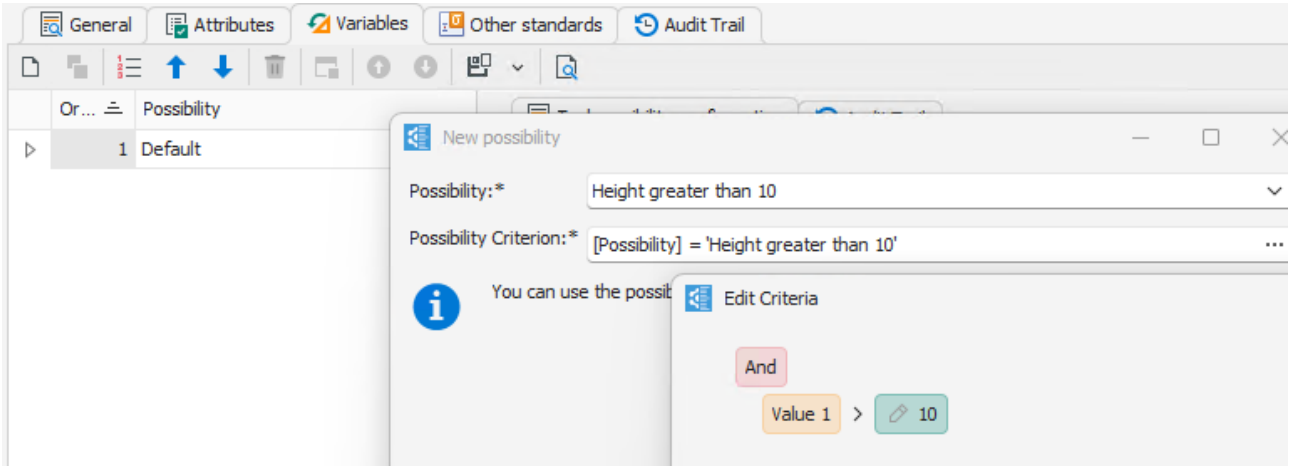
Possibility Groups in Normal and Tool Formats

In version 7.6 of Visual Factory Caliber, you can create possibility groups when configuring the toolbox or normal controls. For example:



This possibility of creating groups is very limited, basically it consists of indicating a specific possibility (e.g. Depth), a group of possibilities that start with a text (e.g. Dia%, would include all possibilities that start with Dia) or a group of possibilities that contain a text (e.g. %height%, would include all possibilities that contain the word height).

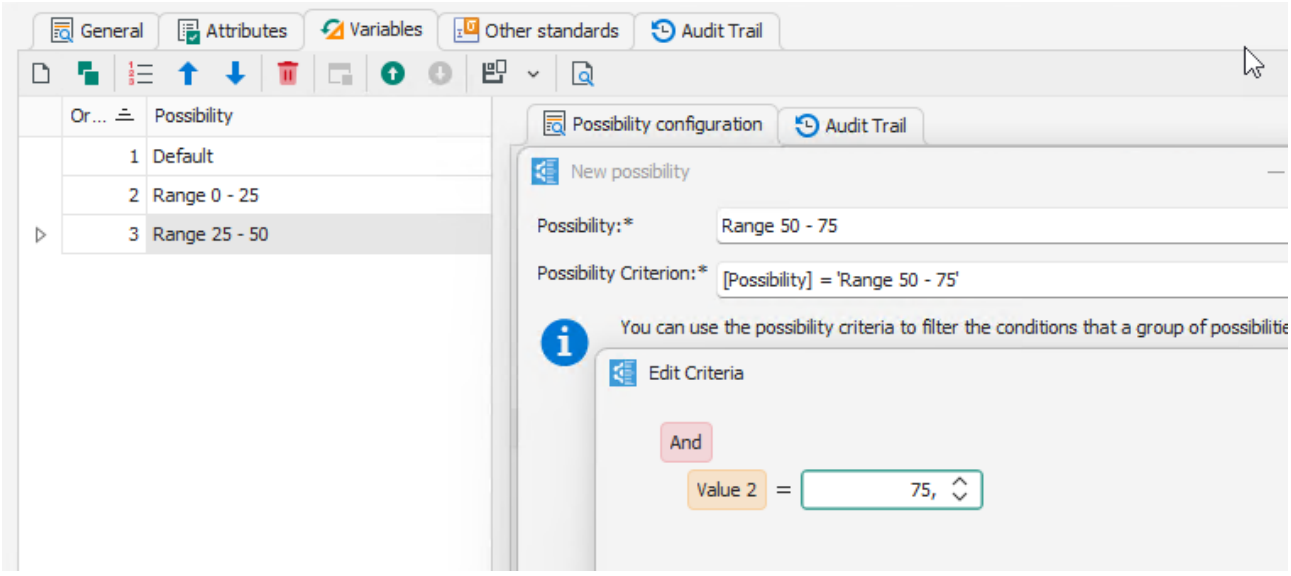
Visual Factory Calibre 23 incorporates a much more powerful system to generate a group of possibilities.



Now we have two fields to define the group of possibilities:

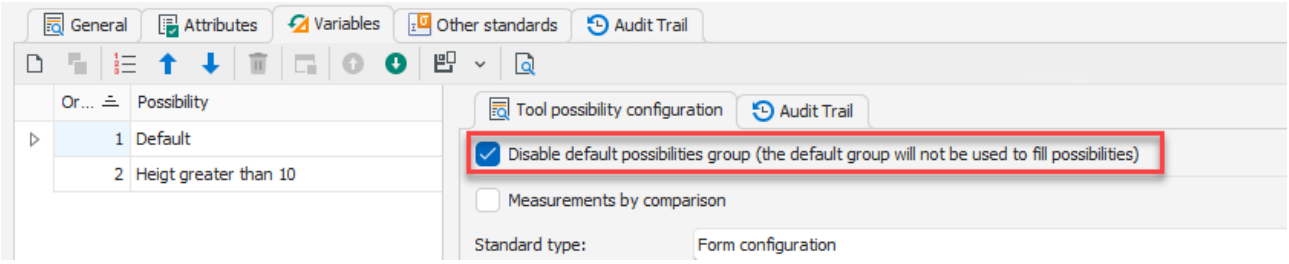
- Possibility: This is a text that identifies the group. It can be anyone, and simply descriptive.
- Possibility Filter: Defines a filter using any field or combination of fields in the possibility. Groups of AND or OR conditions can be made.

With this new functionality it would be very easy to manage the same family, for example, micrometers of different ranges:



Note: As you can see in the example, the Value2 field is used to perform the comparison. Importantly, the field names refer to the basic title within the database. For example, Value 1 refers to Nominal in Tool, but refers to Minimum Nominal in Normal. It is planned to see if it is technically possible for the titles of the fields to appear depending on the selected possibilities template.

Disable Default Possibility Group



In version 7.6, when a possibility that was defined within the list of possibilities of the computer was not in a group of possibilities of the format configuration, the default configuration was taken.

This always did it this way, but now we can turn this way off. In this way we can have more possibilities defined in the computer than we want to appear in a given control.

A practical example of using this new functionality would be the following:

Suppose we have defined the following possibilities:

Possibility	Group (user-defined field)
Feature A	Calibration
Feature B	Calibration
Feature C	Verification

The idea is that we want to do a calibration control with some characteristics and a verification control with other characteristics.

We can define the Calibration control as follows:

- Default Possibilities Group: Disable the default possibilities group.
- Add a group of possibilities named Calibration and filtered only those that Group = Calibration.

The Verification control would be defined by:

- Default Possibilities Group: Disable the default possibilities group.
- Add a group of possibilities named Calibration and filtered only those that Group = Verification.

Migration

- The Go – No Go and Verification Tool formats have been transferred to Tool formats in which the uncertainty calculation values have been parameterized as expected in version 7.6
- Possibility groups have migrated according to the following criteria:
    - There is no wildcard character in the possibility (e.g. Exteriors): The filter is Possibility = 'Exteriors'

- %Name: The filter is Possibility = Start with 'Name'
- Name%: The filter is Possibility = Ends with 'Name'
- %Name%: The filter is Possibility = Contains

Equipment

Remarks text field

Same considerations as those indicated in the Word Processor section in the Families section.

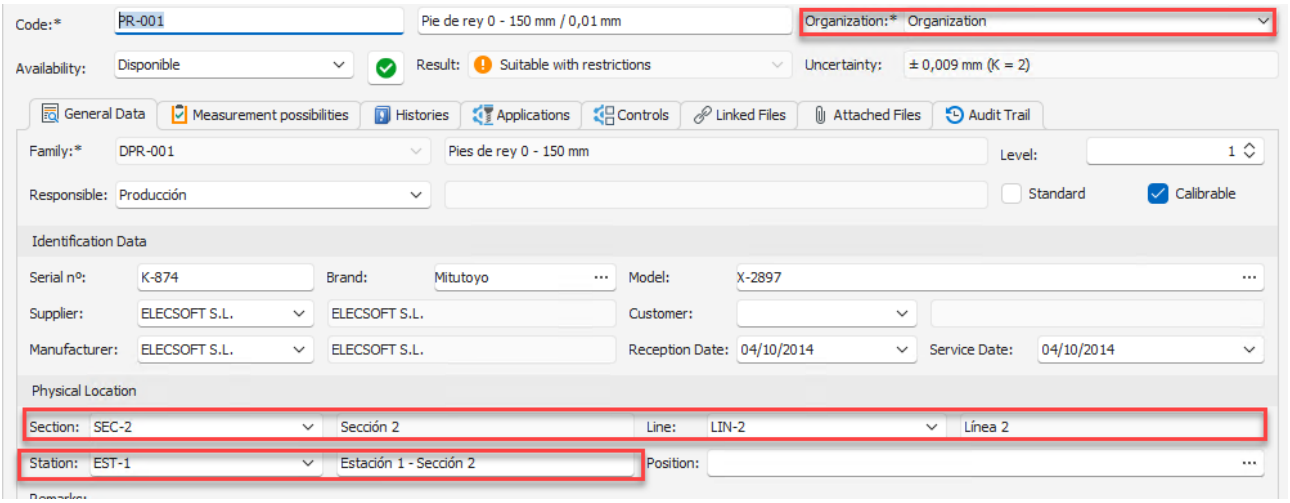
Linked Files and Attachments

These new options allow you to link and attach files to the family.

Location (Organization → → → , Section, Line, Station)

Location masters have been expanded by adding two new levels at the beginning of the hierarchy: the organization, and at the end: the station.

We are aware that most of our clients will only need to define a single organization, but we find cases where a business group needs this level of detail. The same is true for the Station.

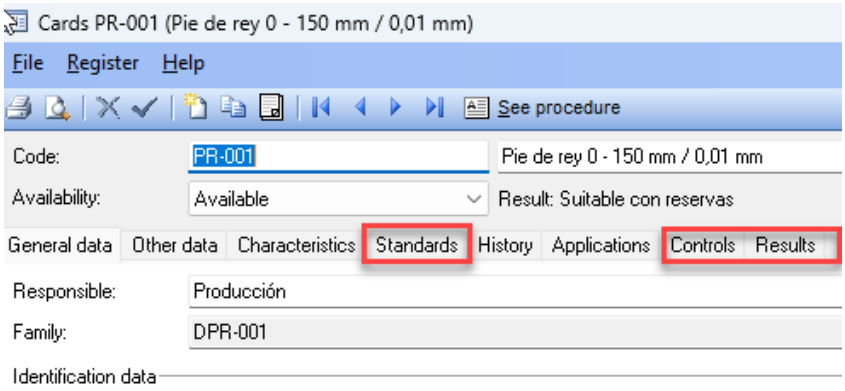


Note: In the data migration from version 7.6, a fixed organization will be assigned that can then be changed by the user.

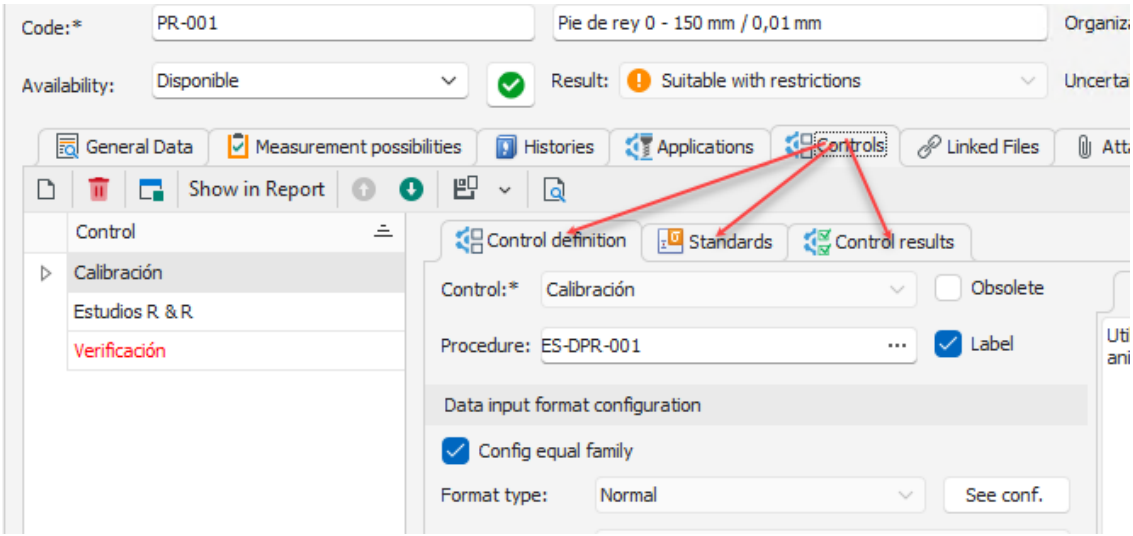
Patterns, Controls, and Results

It changes the structure of presenting this information, but the functionality is the same.

Before, this information was at the same level:



Now, we have a common controls tab and then it is detailed for each control its configuration, the patterns it uses and the results:



Advantages

- This provision conveys a more orderly way of presenting the information for each of the controls.

Disadvantages

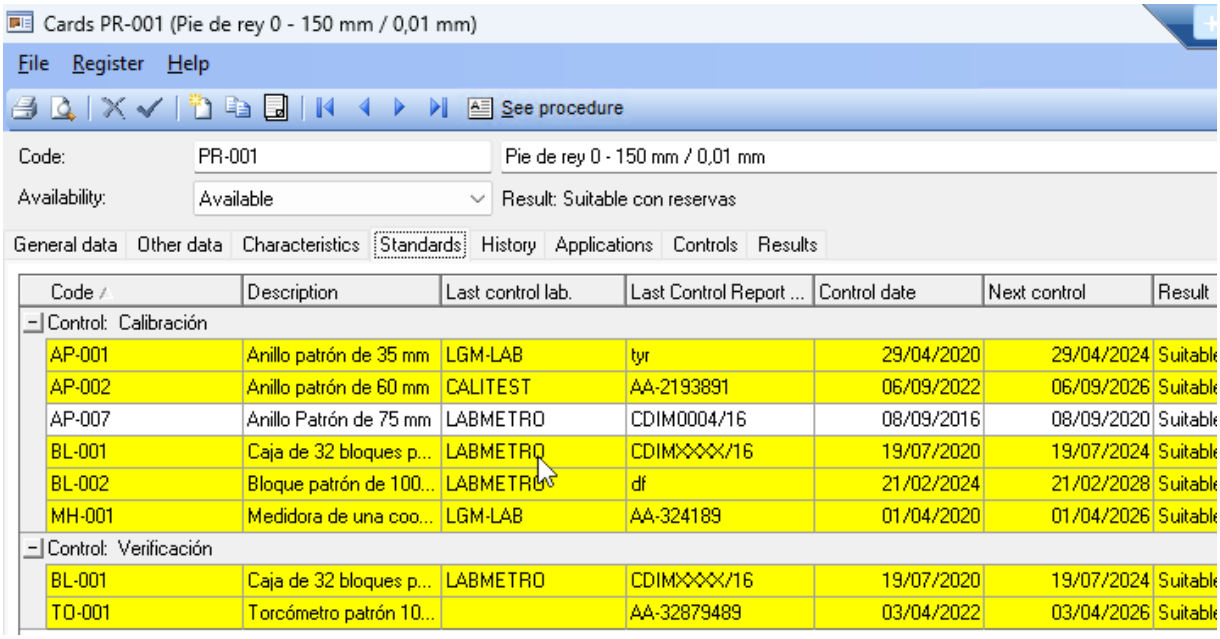
- Depending on how you have to make one more mouse click to access the information.

Presentation of the patterns

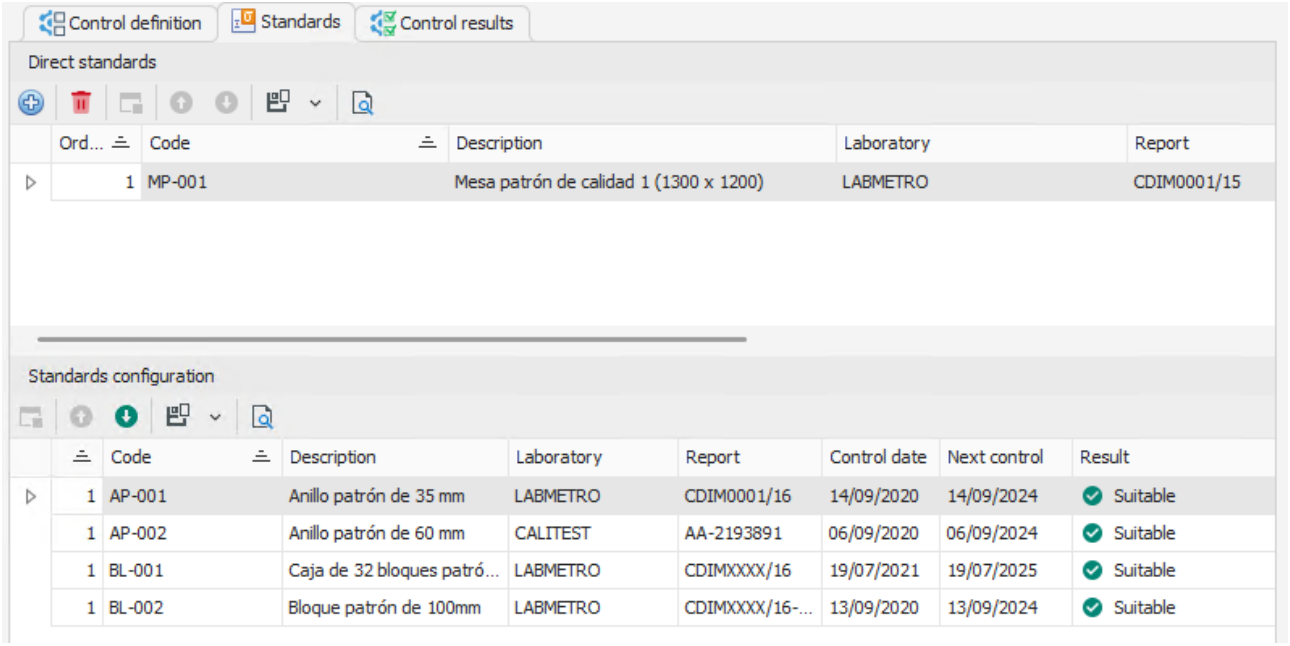
The way the patterns used are presented changes:

In version 7.6, patterns were presented in yellow if they were patterns defined in the control format. These controls can't be modified from here. They have to be modified from the definition of the control.

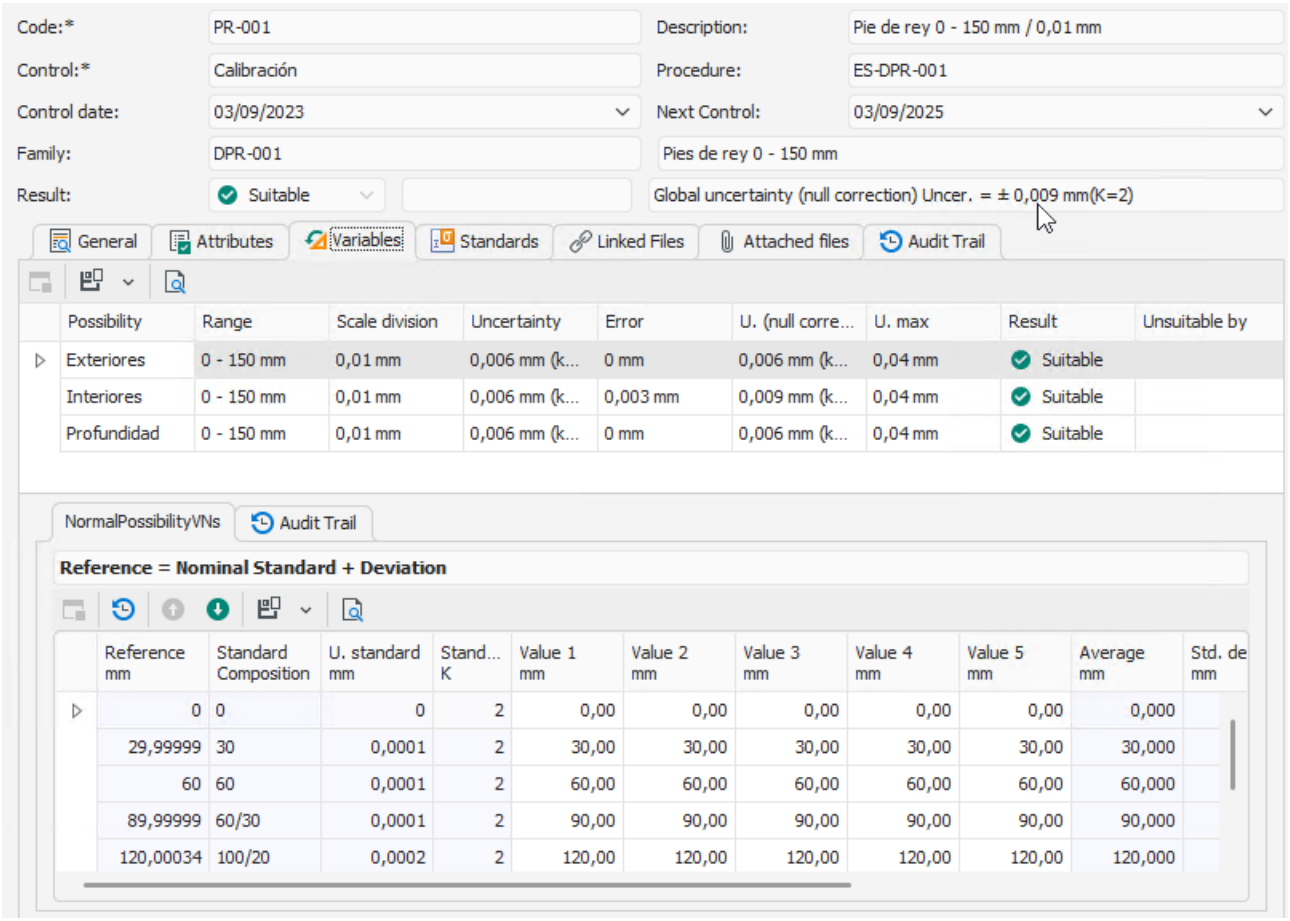
Other patterns could also be entered directly. This type of pattern is mostly used in Excel-type formats. These patterns were blank and could be modified.



In version 23. Patterns of both types are separated into two different tables.

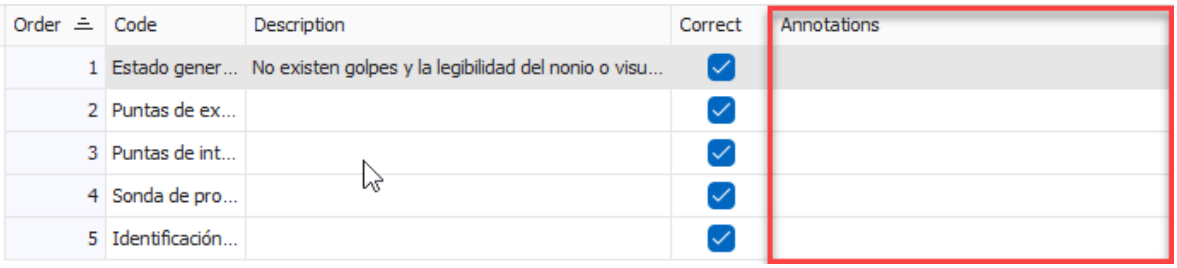


Results



Although the data entry process is very similar between version 7.6 and 23, there are a few points to highlight:

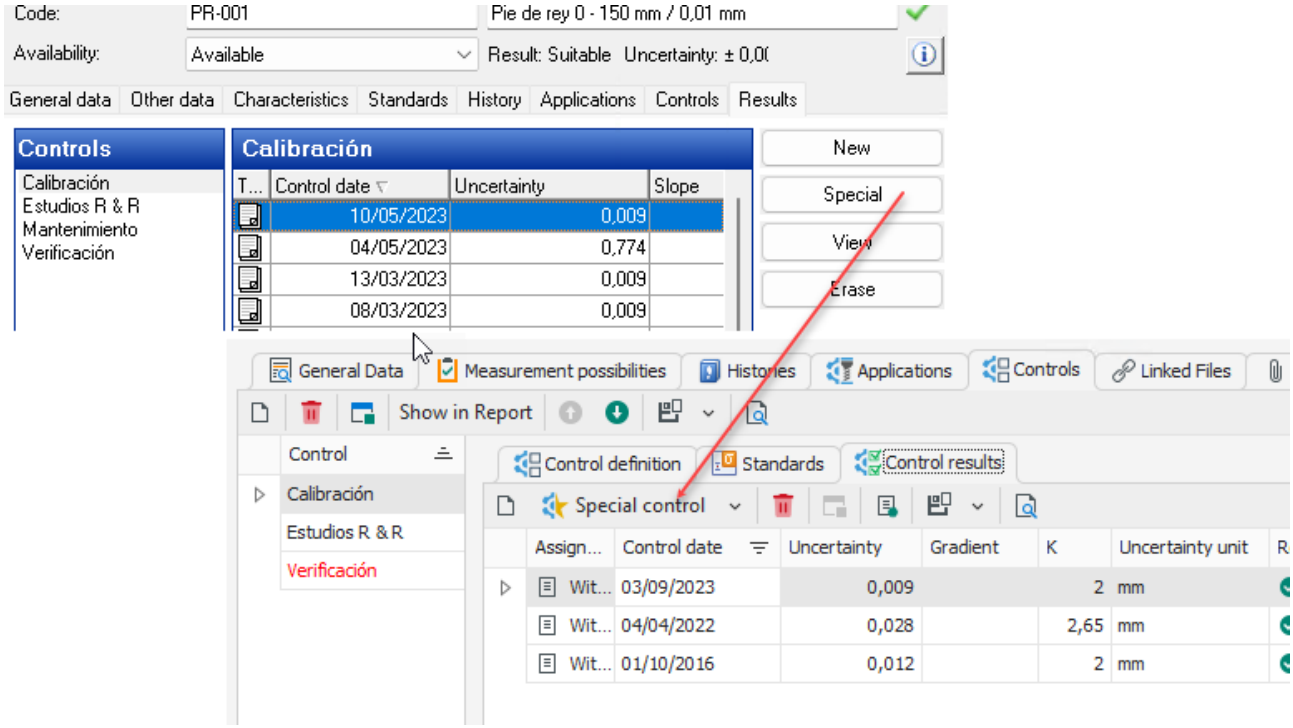
- It is possible, by configuration, to enter atmospheric pressure and duration.
- A column has been added to attribute annotations.



- Fill of a single value with the nominal: 7.6: F3. 23: F4.
- Filling all data cells of a possibility: 7.6: Ctrl + F3. 23: May. + F4
- It should also be noted that it is possible to link and attach files. In version 7.6 you could only do one of the options, which was defined globally. By default, linking was enabled.

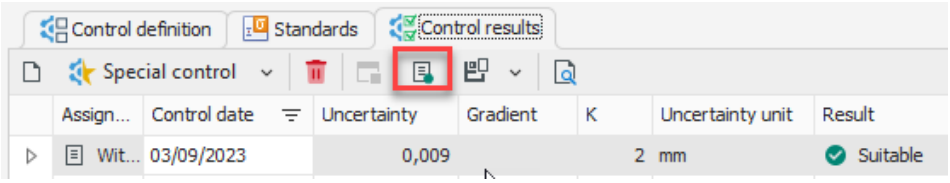
Special Controls

The location of the special controls has changed:



Certificate Printing

The certificate can be printed directly from the checks made view.



In addition, as in version 7.6, it can be printed from the form where the control is being performed. It is also possible to print the certificate from the Controls, Equipment and Results modules.

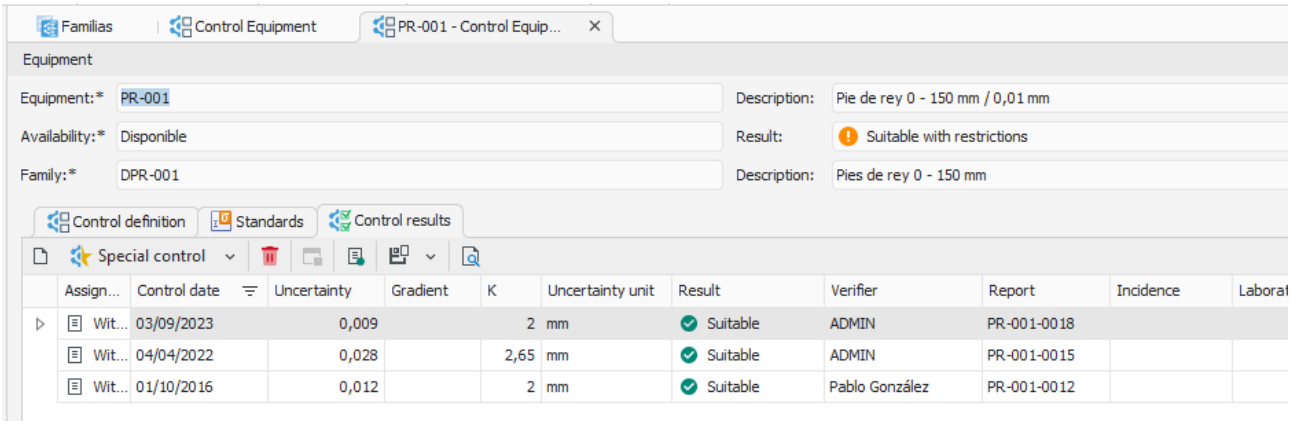
Controls on Go – No Go equipment

The data entry formats for these types of devices are the same as for Tool.

Although the way the data is presented (both on the screen and on the certificate) are different, the results are the same.

Equipment Controls

The way Controls Works Teams is the same as in version 7.6, except that before, when you entered a record, the team file opened in the Controls tab and now the control of the corresponding team opens directly:



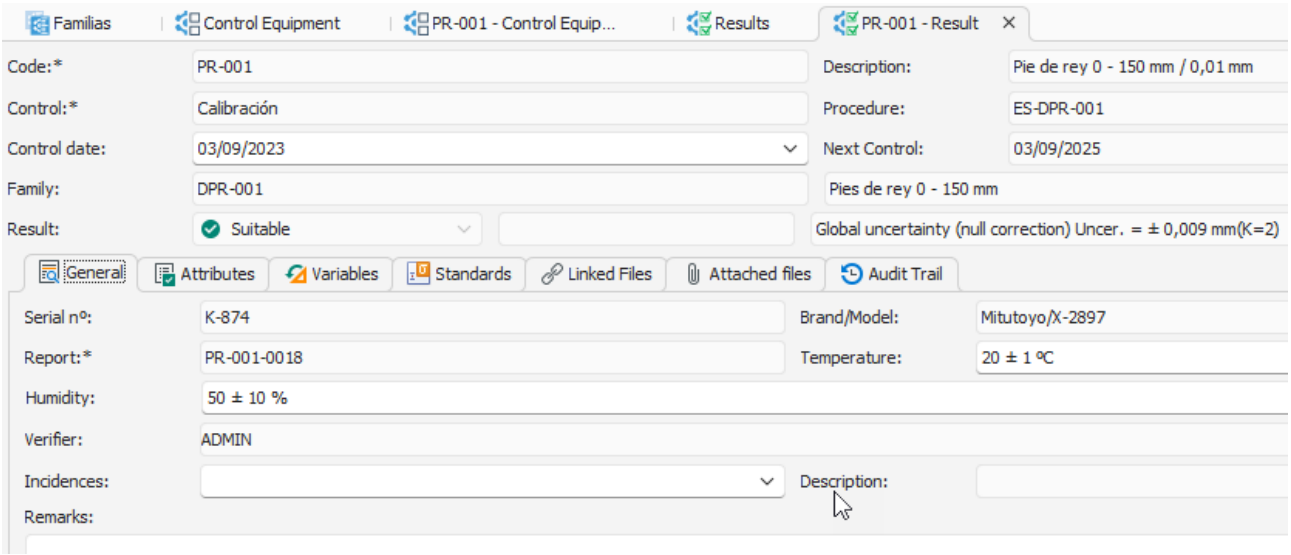
In this way, we can visualize more clearly the control we want to see.

We always have the option to place ourselves in a field and open the corresponding object

Here it is especially useful to be able to go directly to the Team or the corresponding family.

Results

The way Results works is also the same as in version 7.6, except that before, when you entered a record, the team file was opened in the Results tab and now the result of the corresponding control and team is opened directly:



In this way, we can directly view the calibration carried out so that we can continue editing or reviewing it.

We always have the option to place ourselves in a field and open the corresponding object

Masters

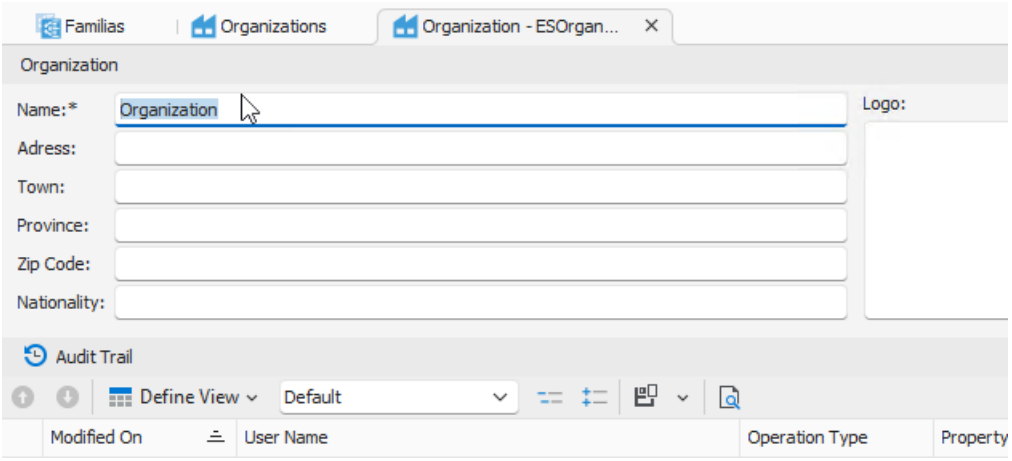
The same masters as in version 7.6 are maintained with the same functionalities except that in version 7.6 you could put a value that was not defined in a master and now in version 23 it is essential that the values are defined in the master.

In the migration from version 7.6 to version 23, all the values that were defined in the tab were automatically created, but not in the master.

Organizations

This new master must contain at least one organization, which may usually be the name of the company.

In the event that the company has several locations, the idea is that these locations are the different organizations of the program.

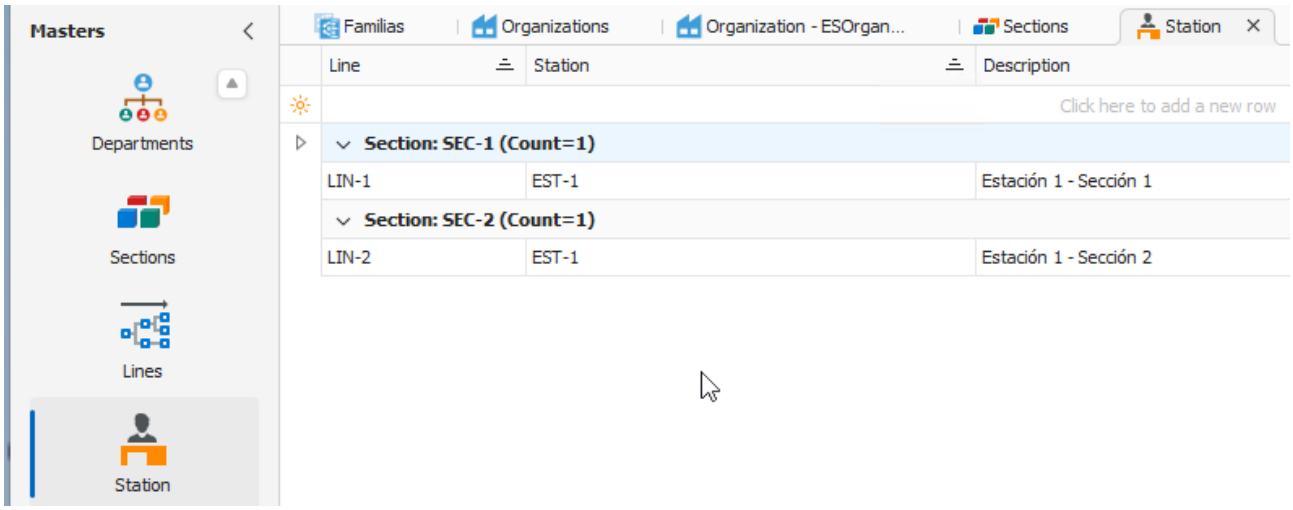


Stations

New master below line level.

Although it is true that the vast majority of our customers have enough with the section and line levels, some of them required more precision when it came to locating the equipment.

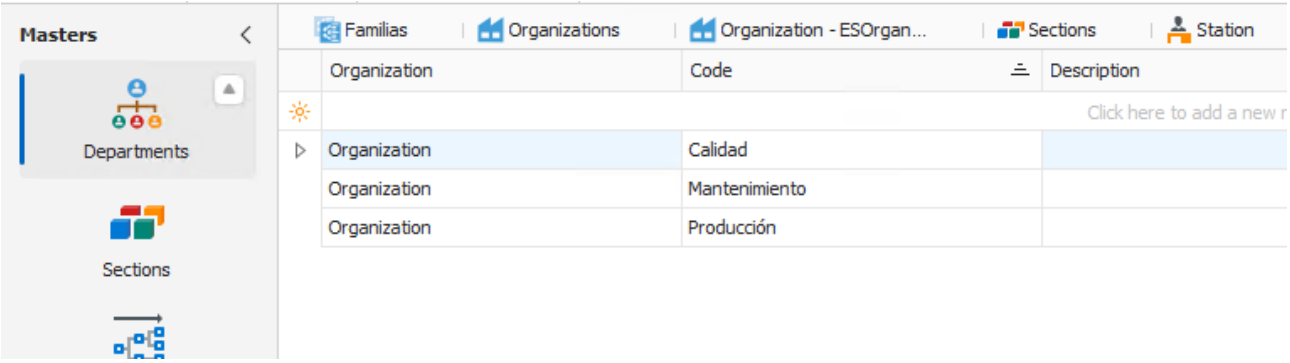
To create a new station, you must first indicate the line it belongs to.



Departamentos

Now the departments also depend on the organization.

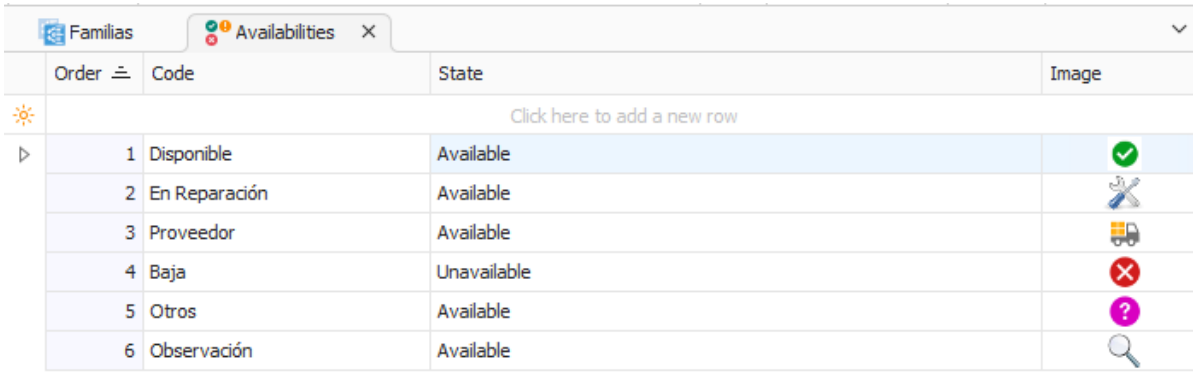
For most customers who only use one organization, it will be transparent. In this case, when you fill in, the master automatically fills in the organization field with the only one defined.



Availability

In version 7.6 there was no availabilities master and if you wanted to create a new one you had to go to the Literal Definition and define and configure the new possibility in several tables of the program, it was very expensive and critical if you wanted to modify something.

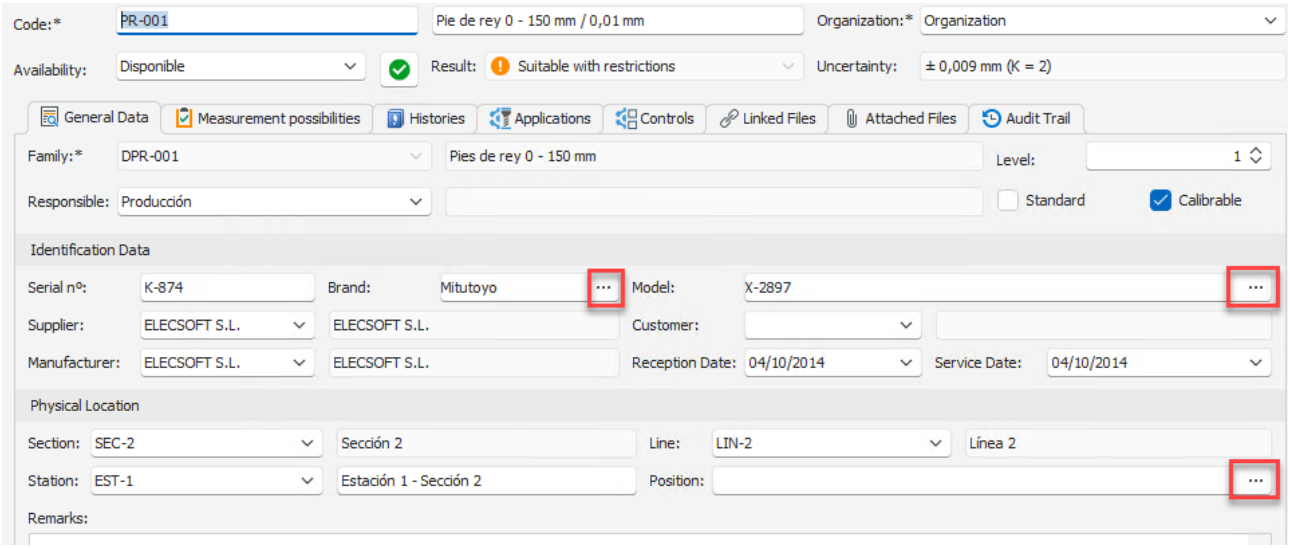
Possibilities can now be modified and added directly from this master:



A "Status" field is also included in order to indicate whether the equipment is available or not and to be able to make inquiries about this.

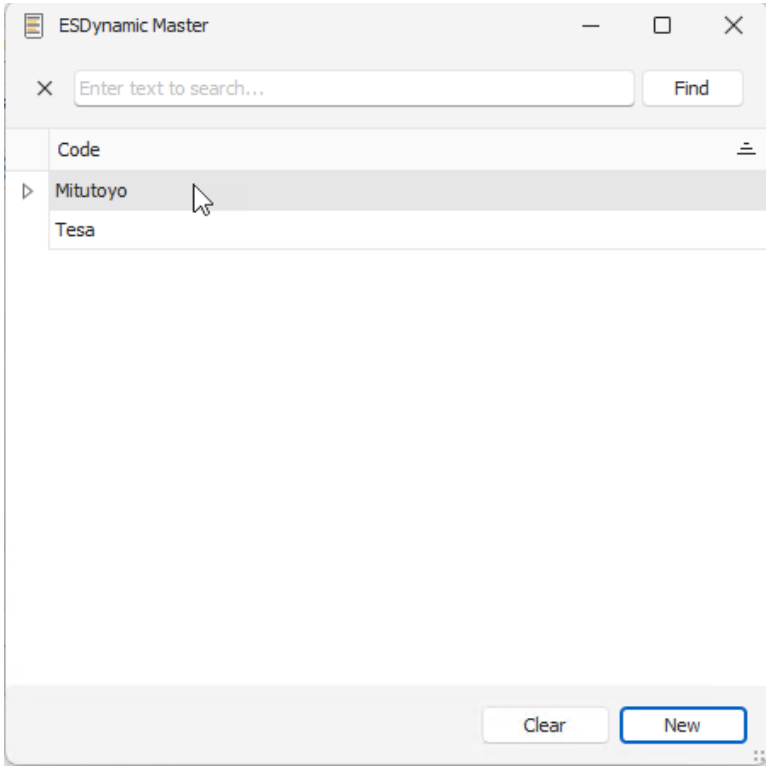
Dynamic Masters

In various text fields of the program, it is possible to dynamically create the values to be assigned. In these fields we see that we can use a button to search for the content within a master:



Since there are several fields that support this functionality, we have chosen to define a single master in which we indicate for each record which fields it is.

When you click on the selection button, you'll get the list of options related to the field you're editing:



From this same screen, you can create new options.

From the Dynamic Masters Module we can perform the maintenance of this master, but we recommend that the new registrations be made from the selection option that we have seen before to avoid assignment errors.

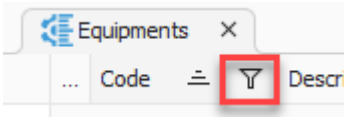
Defining Views

The new XAF framework gives us a bigger and more powerful view manager and allows us to perform queries that previously could not be performed in version 7.6.

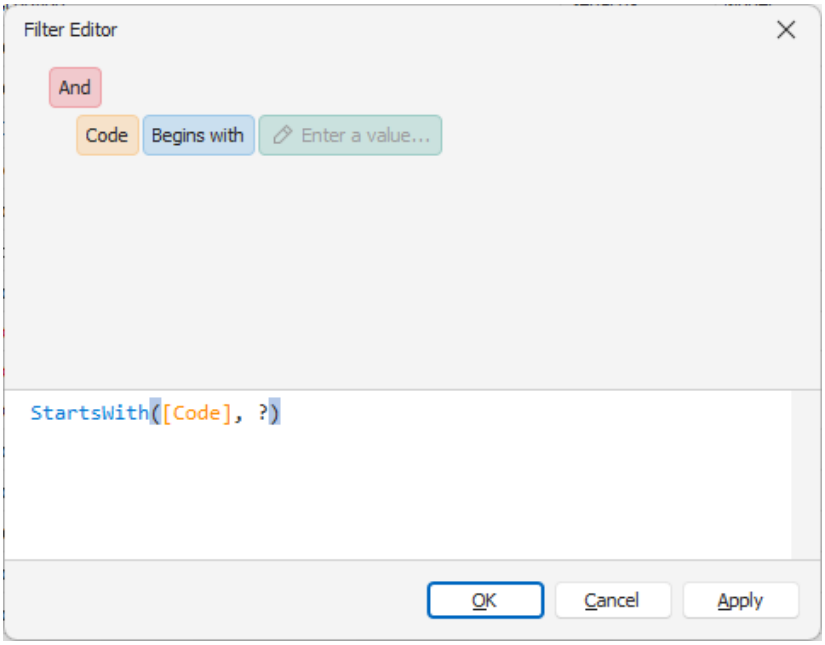
Here we will see the main functionalities, for more information consult the VF Application Framework 2023 manual.

Filter Editor

Each column has a tool to be able to filter , in a similar way to Excel.

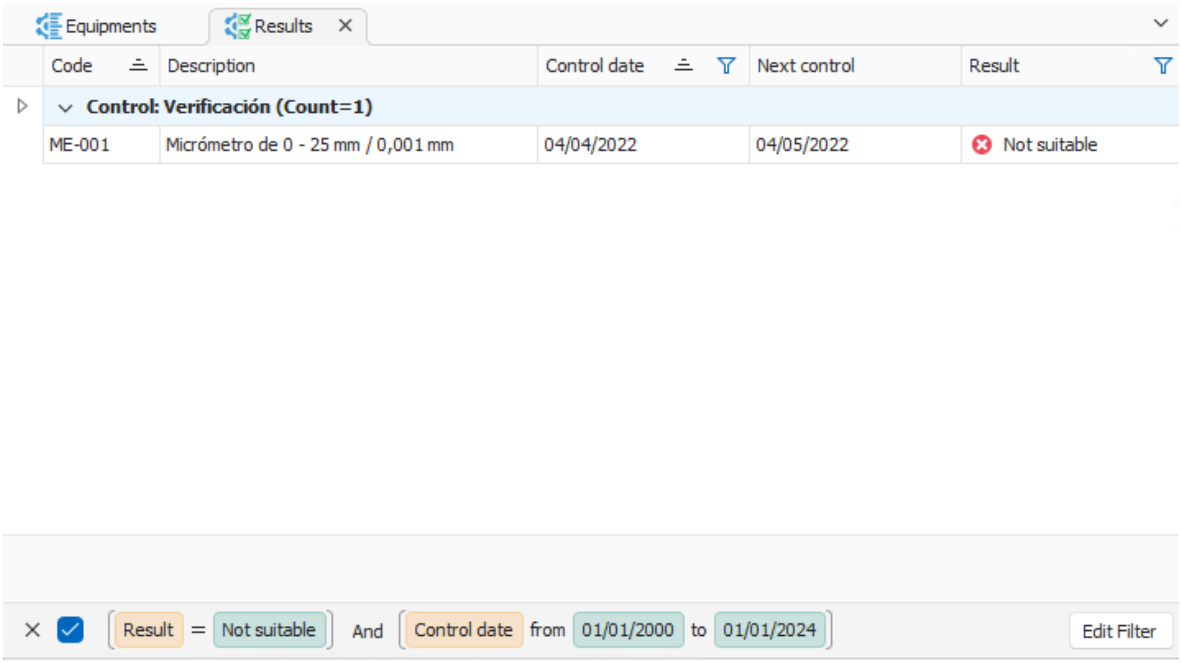


Apart from the funnel, by right-clicking on the title of each column we can also directly open the filter editor to make our own query:



One of the biggest advantages over version 7.6 is that we can have several groups of conditions with different AND/OR operators.

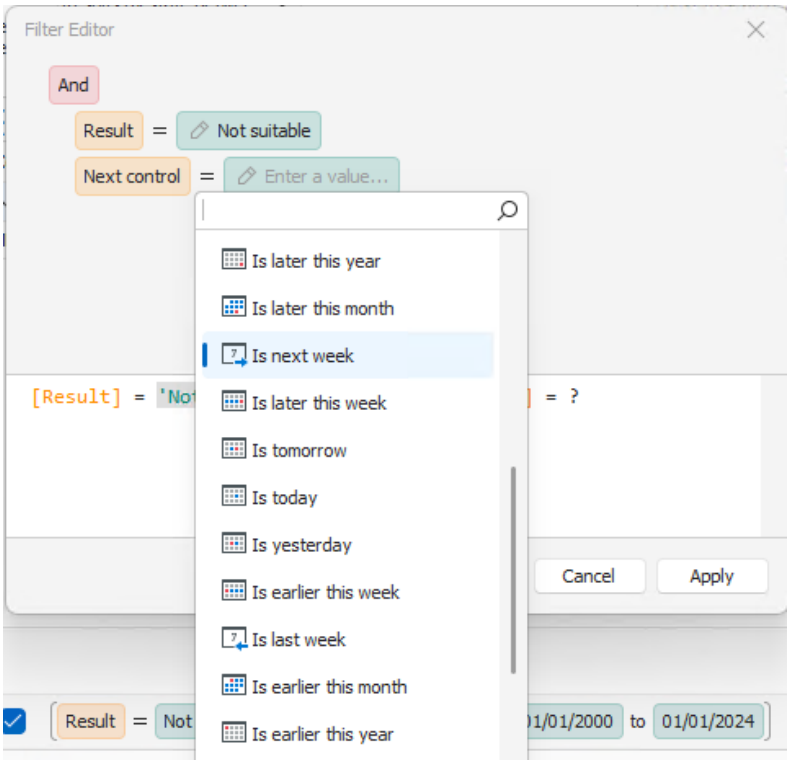
In version 7.6, you could include parameters in which when you run the query, the user assigned the values to those parameters. Now in version 23 you can't use parameters, but it's much easier to change the values directly in the view filter since at the bottom you see the applied filter and an Edit Filter button:



By simply clicking on the Edit filter button, you can change whatever you want (for example, in this case, the dates).

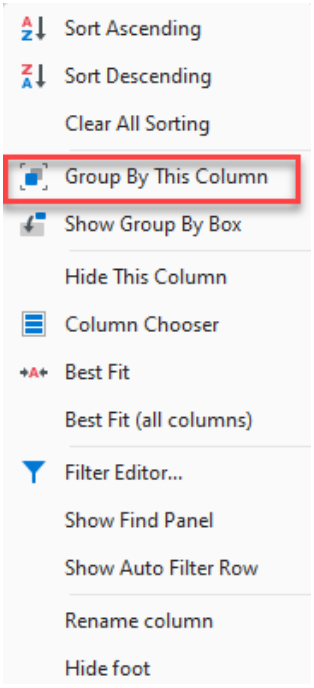
In version 7.6 there were a few built-in functions to support queries such as the Date, Now, Month, etc.

The new version 23 incorporates many more pre-designed filter functions such as the date type that we can see below:



Group fields

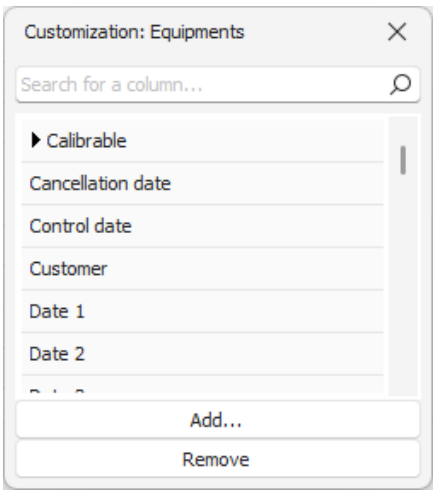
Each column also has the tool to group by this column by right-clicking on its title.



It also allows you to add the Group By window so that we can see the schema of clusters that exist in the view:

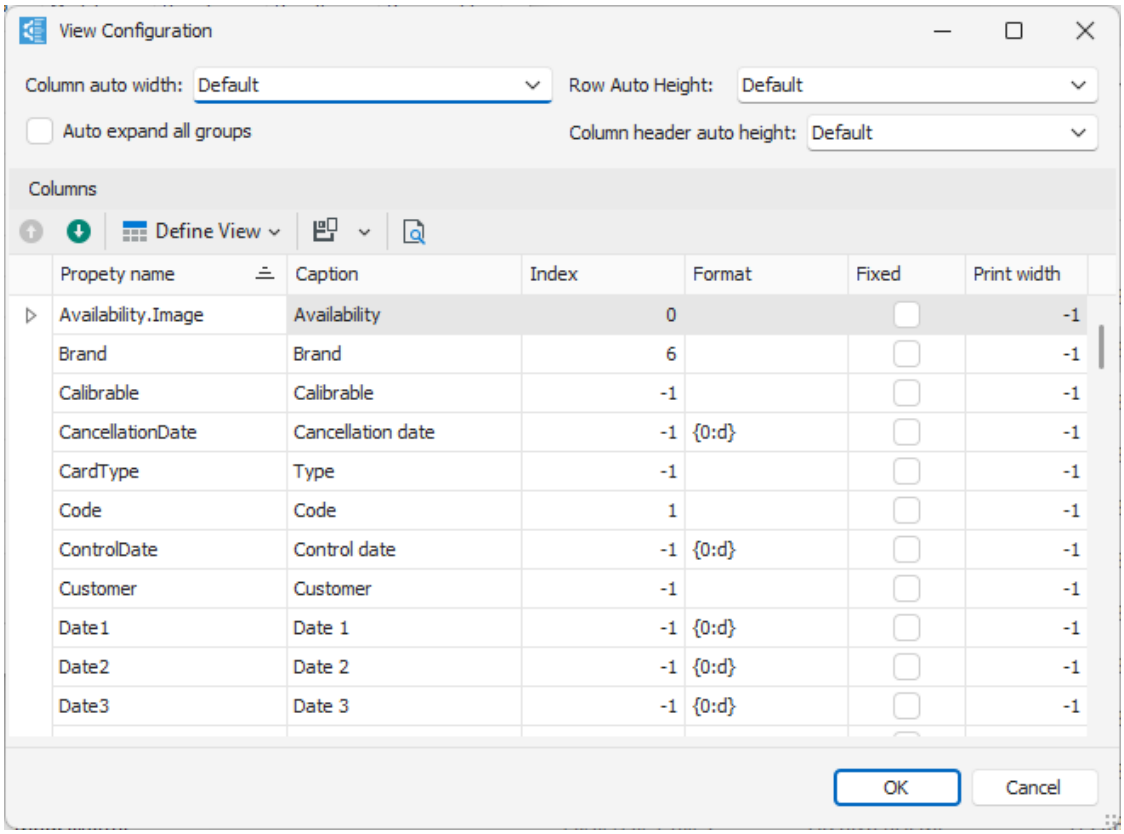
Column Selector

This window allows us to add and remove fields from the view by simply dragging them:



Configuring Views

In the Define Views menu, we have the option to Configure Views, which allows us to adjust the entire theme of widths and field formatting:

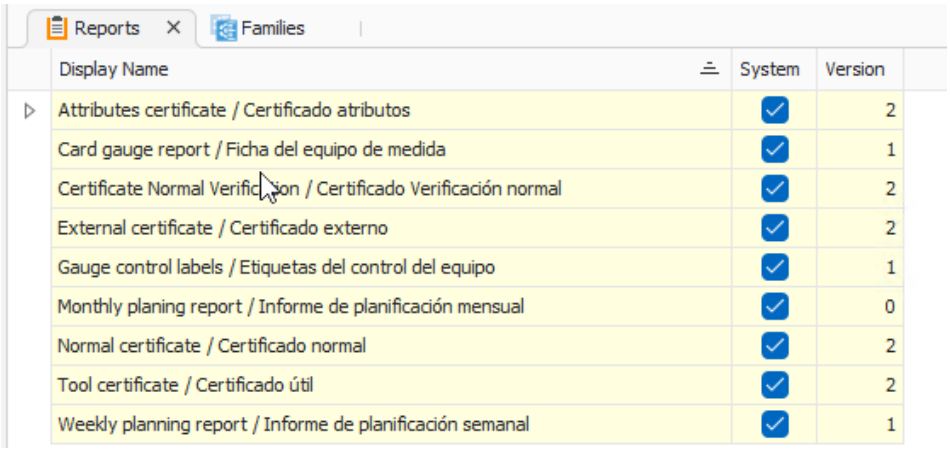


Note: User-defined views from version 7.6 will not be migrated to version 23 due to the complexity that would entail. For this reason, this document has given a few brushstrokes of how the view manager and the filter editor work. Elecsoft will help with everything that is necessary to recreate the views that the client needs.

Reports

VFCalibre23 incorporates a powerful and complex report designer that allows you to create all kinds of lists and files of the teams.

The program is delivered with the specific reports for each type of control and the planning reports that already existed in version 7.6.



These reports appear in yellow because they cannot be modified directly since Elecsoft is the one who will do their maintenance and updates if applicable. The user can duplicate them and then they could modify them.

For more information about how the report designer works, see the standalone Visual Factory Reports 23 manual.