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Gauge management system QM-MANAG - Viewer



Today, almost every company is faced with the task of adjusting to the requirements of the DIN-ISO 9000 standard, particularly in the fields of quality assurance and gauge inspection. This is usually accomplished using various gauge data base card index systems which are generally organised to meet the needs and technical capacity of each individual company. The QM-MANAG gauge inspection system has been designed to replace the need to create customised systems and contains many qualities that cannot be found in similar programs currently available on the market.

When applying ISO 9000 to 9004 standards, the installation of a gauge data management system is indispensable. When working with these standards a complete inspection of all measurement and test gauges is required periodically.

QM-MANAG characteristics include:

- free definitions of data structures;
- an unlimited number of user defined gauge types;
- configurable order processing, administration and documentation;
- a practically unlimited number of possibilities (nearly 2 billion !) for each kind of gauge;
- a practically unlimited capacity of gauge histories;
- free definition of database calling up operations
- the possibility of parallel administration of different stocks of gauge data (client capability);
- inclusion of nominal value generation (calculation of tolerances) for practically all common gauges for length inspection; it is possible to add other types of gauges without having to change the system;
- inclusion of on-line measurement through integration of separate measurement modules of any type of gauge;
- standardised user interface using XML files between the database system and the measurement programs;
- network and multi-user capability for almost all common network platforms;
- reasonably priced hardware basis (IBM compatible PC's).

These and other features are what make the QM-MANAG system a viable alternative to the other gauge inspection systems currently available on the market.

The QM-MANAG manual is divided into two principal sections:

- Section III.1. does describe the settings you should do before starting to work with the system;
- Section III.2. gives an general explanation of how to use the system;

ATTENTION: Before starting to work with the database and entering your gauge data enter your company specific data for "location(s)", "cost departments" and other specific catalogues. See the section "III.3. Program settings" for this. This settings can only be done by the "system manager"

When using the software, make sure that the license copy lock is properly connected and you have entered the correct license code. If not, the system will run on demonstration mode which contains only a limited number of the features of the complete QM-MANAG system.

**Please note that the viewer version does have only a restricted functionality!
A number of functions shown in the menus may be not available!**



III.1. Before starting; the Database Configuration Tool

Please read this section attentively. It will describe the basic settings the "Administrator" should do before starting to use the QM-MANAG program.

Some of the basic settings for the program are already done during the installation process.

The next important step is to create your "Start" database and to configure the database connection. It will be start automatically in case that the configuration tool can not find a valid database connection.

This steps are described in the manual section I.3.1.

See also section III.3. describing the internal configuration of the database.

The settings we will describe here are important for:

- defining the program users, their passwords and access rights to the database system;
- the program QM-MANAG is able to handle an unlimited number clients with their own Gauge stocks; define here the client names and the database information for the clients.

All this settings can be changed by using the configuration tool "Configurator32". To start this tool the access privilege "QMSOFT32" is required. When the system is just installed this privilege is assigned to the "Administrator" user group.

Start now the QMSOFT GaugeMan program at your desktop and enter the access data for the "Administrator": User name : "**system**" and Password: "**system**".

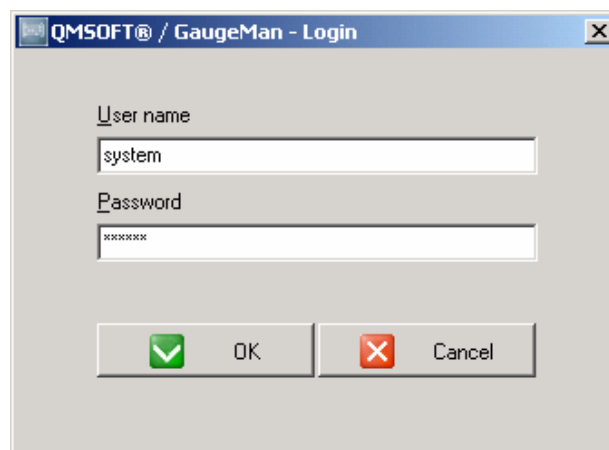


Figure: Start the program with Administrator rights



Now start for the QMSOFT GaugeMan the configuration tool

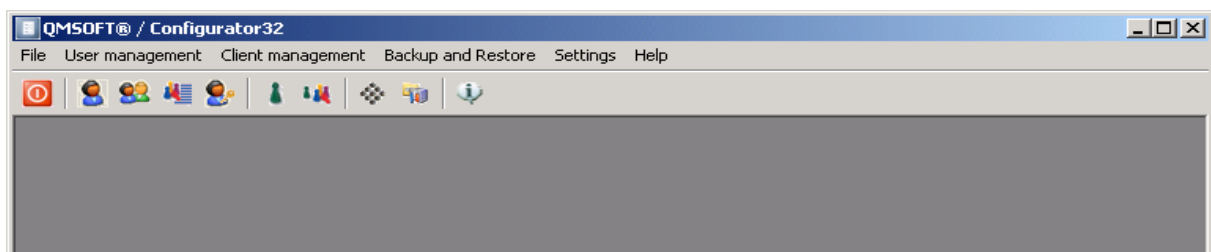


Figure: the Database Configuration Tool

III.1.1. Manage users, user groups and their privileges

In the function "User management" you will find the following items:

- User: does define the "User name", the "Password" and some general information about a user;
- User groups: define user groups and the privileges of a group;
- Privileges: show a list of all available privileges;
- User history: show the list of user log-ins and log-outs.

III.1.1.1. Create a new "User" or change existing user data

If the system is new installed there is only the user "system" with the password "system" available. This user has all Administrator rights.

☛ **To avoid unauthorised access to internal database settings you should change the Administrator Password and you should create new users with less privileges!**

Use the related buttons to create a new user or to change an existing one.

☛ ***Please note, that here you can not define the privileges that this user have. Any user has to be assigned to a User Group! The privileges of an user are only defined by its User Group!***

III.1.1.2. User groups

Here you can define new user groups or changing the privileges for existing groups.

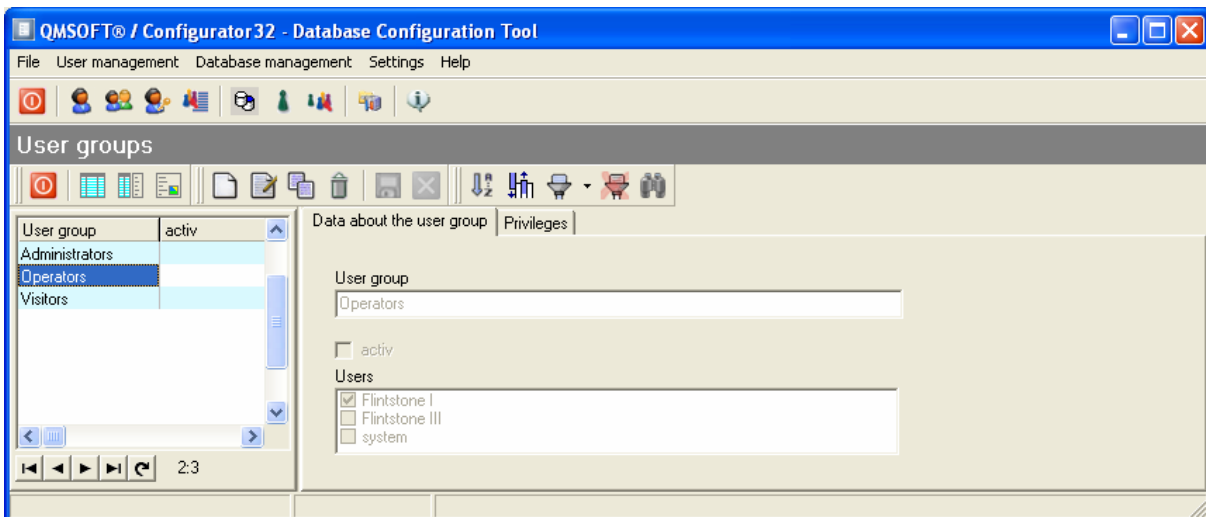


Figure: Working with User Groups

Use the function “Privileges” for the assignment of the privileges either to a “User group” or to an individual user.

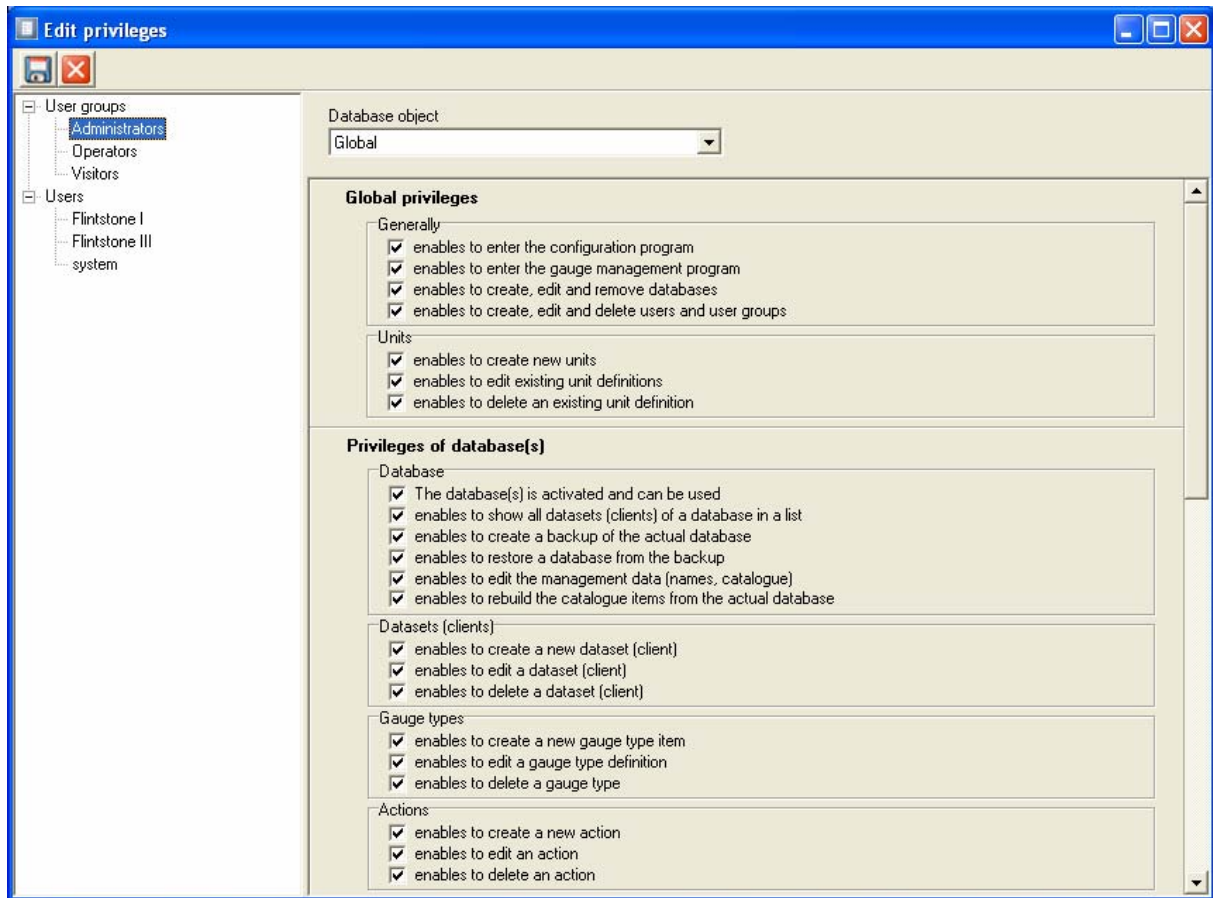


Figure: Assignment of privileges

With the selection of the “Database object” you can assign this rights for all existing databases and clients (using the object “Global”) or you can set it for selected databases and clients only.

III.1.2. Client management

The program QM-MANAG does support the parallel administration of different stocks of gauge data (client capability). Here you can manage your existing client informations and can add new clients or delete existing.

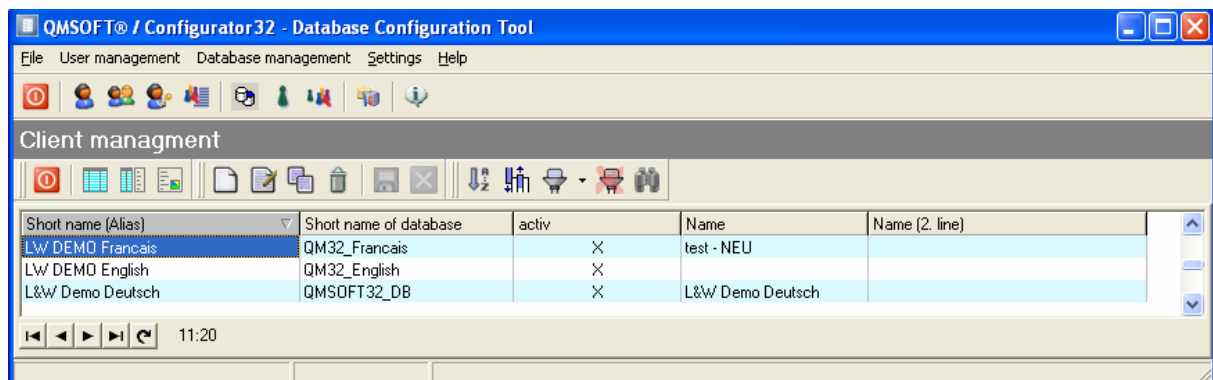


Figure: List with the existing "Clients"

III.1.2.1. Creating a new client



Figure: Creating a new "Client"

When creating a new client you have at first to enter the "Client name". After that you can enter more client information: Client address.. and others.

Important is the decision about the "Position" of a new client. You can either create the new client in an existing database OR you can create a new database for it.

The most common option is it to use an existing database. In this case the new client will have all the information about "Gauge status", "Gauge actions" and "Gauge types" stored in this database. So the most important informations about the Data to be managed will be identical to the existing clients.

If you want to create the new client in a new separated database you have two options for it:

- a) you can create this new database with the "**Default database structure**":
this means you will get the information about the used "Gauge types", "Gauge status" and "Gauge operations" from the "Default structure" you will get when the program will be installed;
- b) "**Import the database structure**" to create the new database
in this case you will use a special file to import all information about "Gauge types", "Gauge status" and "Gauge operations";



III.2. How to Use the Program QM-MANAG (User Manual)

This section of your manual describes the "user dialog" of the QM-MANAG gauge management program. This section has been written to correspond with the dialog structure of the program so that even a non-specialist can use the system.

III.2.1. Start and cancel the program

The QM-MANAG program can be opened by click on the QM-MANAG symbol in the QMSOFT "GaugeMan" program shell.

After your login name and password have been entered, the QM-MANAG program will be opened. If an incorrect or invalid login name or password has been entered, access to the program will be barred. Make sure that what you have entered corresponds exactly including spelling, spaces, capital and small letters. If you do not have a login name and password, make sure to ask the system administrator in your company responsible for your computer system to give you one.

III.2.2. Open a database

To work with a gauge stock you have to open a database. Use the option **"File|Open"** and select one of the available databases. If you have the system newly installed you have two databases available, **"DB"** and **"DEMO"**.

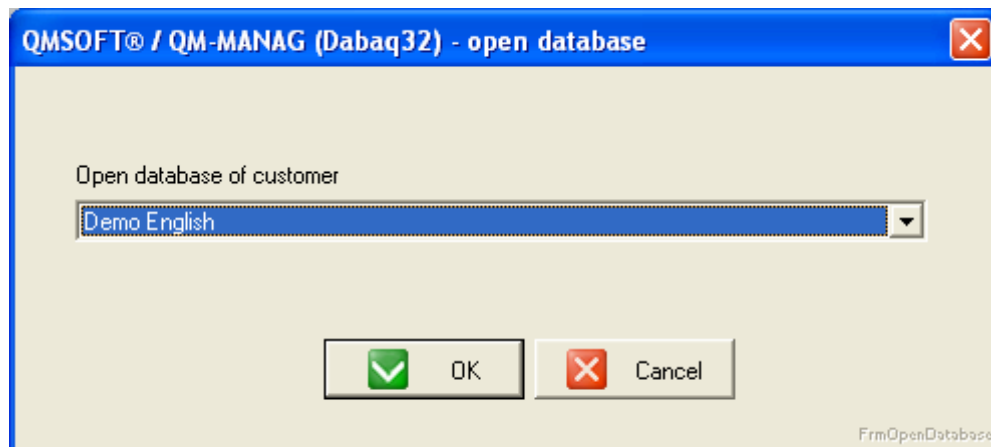


Figure: open an existing "Client" database

If you start, the "DB" database is empty. Use this database to enter your individual gauge data. The "DEMO" database includes different gauge data. Use this to demonstrate the database functions and to make your experiences in using of the system.

☞ **Please see section III.1.2. if you need to create a new "Customer (Client)"**

III.2. Working with a Gauge database, Gauge Management

After opening a database, a window will appear on your screen with a list of gauges already stored in the data base (see Figure III-1). If the window is empty, this simply means that no gauge has been stored here. In this case it is only possible to enter a new gauge using the "Ins" key or the "Insert a new Gauge" button.

Type	Identity number	Nominal size	Cost department	Current location	Date of last inspection
Caliper	0012	150.0 mm	Dept. 002	Measurement laboratory	20.08.2005
Depth caliper	TMS_17455	6.00 inch	Dept. 001	Gauge storage	20.07.2005
Depth micrometer	09876	0.00 - 25.00 mm			20.08.2005
Dial gauge (ANSI standard)	DG_Ansi_12333	0.00000 - 0.50000 inch			20.07.2005
Dial gauge (British Standard)	DG_1768554	0 - 5 mm			09.10.2004
Dial gauge (DIN standard)	0012	0.000 - 10.000 mm			22.09.2004
Dial gauge (DIN standard)	00899	0.000 - 10.000 mm			
Dial indicator	FZ_17454	0.4 mm - 0.4 mm			04.10.2004
External micrometer	235	25.00 - 50.00 mm			21.10.2003
External micrometer	01237	25.00 - 50.00 mm	Dept. 1734	Grinding / Milling	09.10.2004
External micrometer with interch. anvils	089	100.00 - 200.00 mm			09.10.2004
External micrometer with interch. anvils	BMS_A_3465	4.00 - 8.00 inch			26.07.2005
GO / NOGO plain plug gauge for minor diameter	0089	Rd40x1/6-7H	Dept. 002	Grinding / Milling	10.10.2004
GO / NOGO thread plug gauge	0234	M 40x4 5-6H	Dept. 003		10.10.2004
GO / NOGO thread plug gauge for Steel conduit threads	2222_Test	Pg 11			10.10.2004
GO ring gauge	0098	20h7			10.10.2004
GO/NOGO plug gauge	GLD_1745	25.0000 mm / 25.1000 mm			10.10.2004
GO/NOGO plug gauge	0815	20h7	Dept. 004	Quality assurance	10.10.2004
GO/NOGO plug gauge acc. to ANSI	GNP_17888	1.00000 " / 1.00020 "			20.07.2005
GO/NOGO snap gauge	1238	20h7			12.07.2000
Height caliper	001	12.00 inch		Measurement laboratory	26.07.2005
Internal micrometer	IMS_1765	25.00 - 50.00 mm	Dept. 004	Grinding / Milling	22.09.2004
Knife edge	HL_17655	500.0 mm			20.09.2004
Master ring acc. to BS (BS4064 / BS4065)	MBS_23466	40.0000 mm			10.10.2004
Measuring rule	test_3444	2000 mm			20.09.2004
NOGO plug gauge	ALD_1234	40x8	Dept. 003	Measurement laboratory	10.10.2004
NOGO plug gauge	Test_1725	30h7			
NOGO snap gauge	ARL_01735	45h7			10.10.2004
Other gauge type	0123_test	Digital Thermometer			06.01.2000
Pressure gauge	0899_Test	0 - 25 Bar			09.07.2003
Protractor	001	360.0 Grad			10.10.2004
Screw thread micrometer	5710	0.00 - 25.00 mm	Dept. 1734	Measurement laboratory	04.10.2004
Setting plug (analogous DIN-ISO)	ELD_test12	40.0000 mm	Dept. 003	Quality assurance	10.10.2004
Steel square	STW_0023	500 x 270		Quality assurance	22.09.2004

Figure III-1: Start screen of the database – Gauge "Basic data" screen

To operate the database you can use the Buttons or the menu "Edit". If you open the menu "Edit" you can also see "Hot keys" for special functions.

On the top of the shown window you can find a toolbar including the Icons for the available functions. Pay attention, that you can select the functions shown in the toolbar by switching the „tabbed notebook“.

III.2.1. Define the viewed details

Using the menu "View" you can configure different views at your "Gauge basic data":

- "Show / Hide columns" – define the fields (columns) which are shown at your start screen;
- "Show help texts" – switch on/off the viewing of help texts for menu items and buttons; this help texts will be shown when you move the mouse pointer on a Button;
- "Show grids colored" – switch on/off the colors in the shown grid;
- "Show the detail panel" – the "Detail panel" will show you specific Gauge information (see page 7) about the Gauge currently selected (e.g. Nominal sizes and Tolerances);
- "Show gauge picture.." – in case that you have stored an image of a special Gauge type you can show this on the "Detail panel" (NOTE: If you have performance problems with your computer please switch this option OFF !).

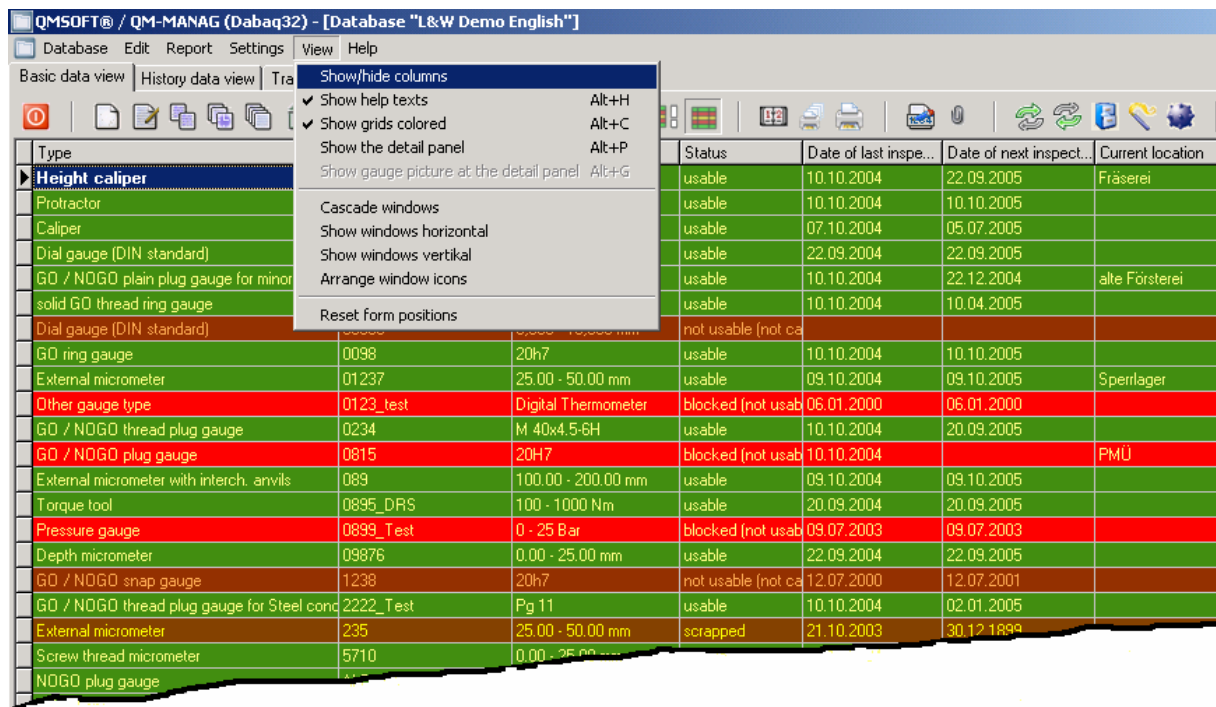


Figure: the menu "View"



III.2.2. Sorting and Searching of gauges, Filters

This functions should be used when you wish to locate a certain gauge from the data stock to sort the gauges according to a defined pattern or to restrict the view according to specified parameters.

a) Sorting the gauge stock



Note: If you need only a simple sorting according to one parameter (e.g. "Identity number" or "Location") you need only to click in the header line of the related column. You will see an activated "sort order" by the "Gray colored" header.

Using the menu "Sort" or the related button you will get the window shown in the next. Select here the fields you will use. Continue with "OK" if you have set the wished parameters.

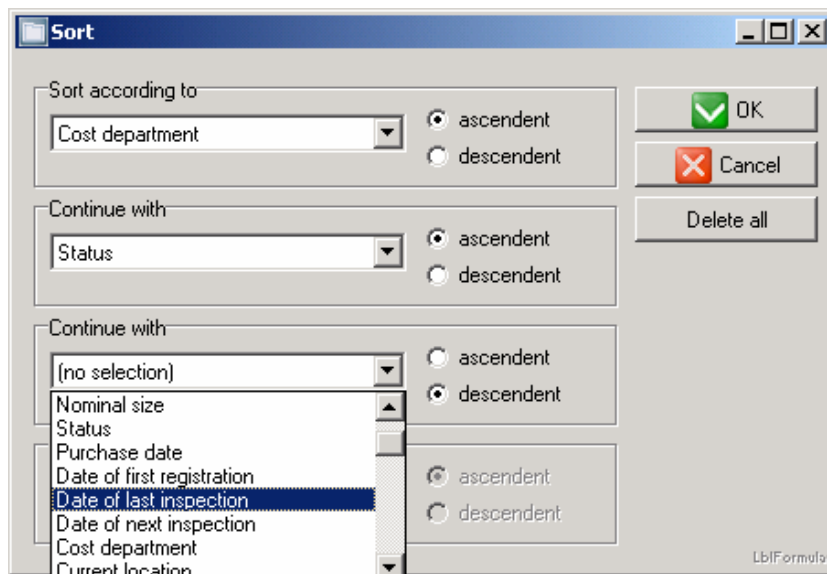


Figure: Set a sort order

You can also sort according to different columns by pressing the "Shift"-key when clicking at the column header.

b) Search function (F3 key)



After pressing the **F3** key or clicking at the "Search" symbol, a dialog box will appear where you can enter the gauge parameter you want to search.

In this dialogue the program does offer only "Simple search" after a single parameter. The default setting for the parameter "Field" does depend on the current sort order. If your gauge stock is sorted after the "Status" the "Status" field will be shown as the first parameter you can search for.

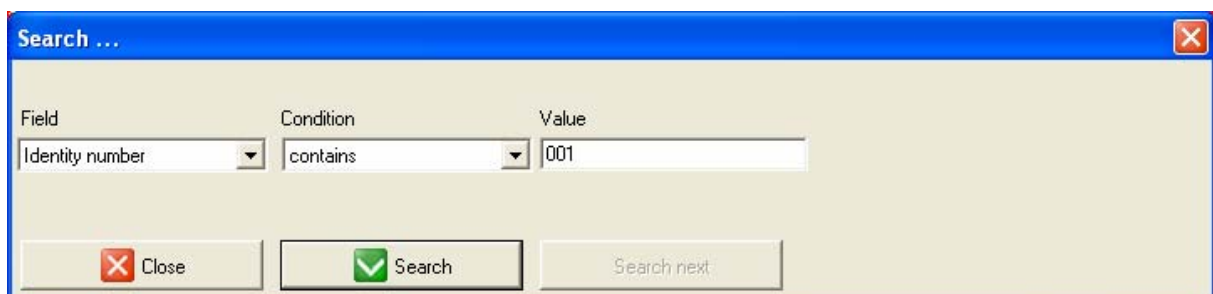


Figure: Making a "simple" search operation

If the search will result more then one gauge which will fullfill the search criterias the search dialogue will not be closed. Using the function key "Search next" you will get the next result(s).

- ☞ For a more complex searching operation use the "Filter" operation which will give you all searching results in one view (see the next section for it).



c) Filter operations (restrict the database view)

If you want to show only a special part of your gauge stock use the "Filter" function. So for example you want to see only "Dial gauges" on your screen – set a filter for it.

Filter are also used to make a selection of that gauges with those you want to perform an other operation: Gauge reports; Gauge data export..

- ☞ ***The "Filter" operation is often required to prepare your data for the next operation ! To make the report of a Gauge list, to export Gauge data or to execute an "Replace" operation always you have at first to set a filter to select all gauges with those you want to do this operation – except you have to do it with the complete Gauge stock!***

If a Filter is activated you will see a yellow status message on your screen. To remove a filter you have to press only the related button. After removing a filter you will see your complete Gauge stock again.

The setting of filters is shown in the next figure:

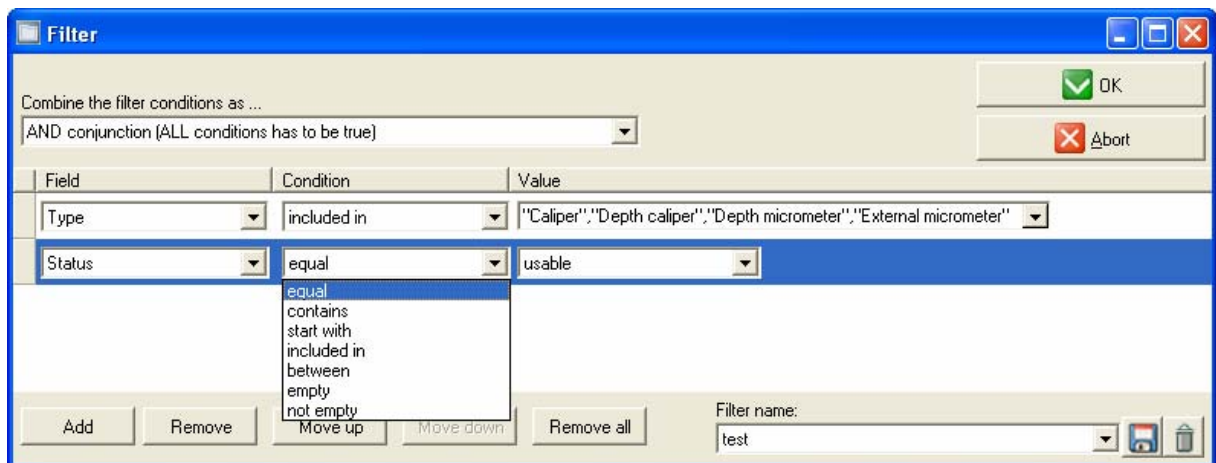


Figure: Setting a "Filter"

The example does show how to apply a filter in that way that only "Caliper", "Depth caliper", "Depth micrometer" and "External micrometer" whose "Status" is currently "usable" are shown at the screen.

To do it call the filter function. Now at first select the field "Type". Click now at the field shown under "Condition" to select one of operators from the list (is "equal", "start with"..). Use the ***"included in"*** operator if you need a list for the selection. After this you have to enter or select the property where you want to look for (in our example you select "Status" / "equal" / "usable").

Use the Buttons "Add" to define more parameters for the filter or "Remove" to remove it from the list.

Saving a "Filter" is very simple by clicking at the "Disc" – Symbol and entering a name to save it. To load a saved filter you have only to select it from the list when you click at the "Filter name" menu.

- ☞ **ATTENTION:** ***The "Combine the filter conditions as.." setting will define the logical operator to combine the filter parameters you have set. As default it is set to "AND" which does mean that all filter conditions has to be "true". The "OR conjunction" will give a "True" result if one of all conditions will result as "True". "User defined" will give you the possibility to combine the logical operators "AND" and "OR". Please note that the operator "AND" will always be analysed before the "OR" operator.***

III.2.3. Data Base Reports

The previous section described the functions needed for entering data in the gauge data base. The QM-MANAG menu option "Report" allows you gauge information to show, print out or save in a file.

III.2.3.1. Report | Gauge data card

Once you have selected a gauge, the menu option "Gauge data card" allows you to access the contents of the gauge's set of data as well as all the inspection data of the gauge. This is set up in order so that you can examine all information that has been recorded about the gauge.

Selecting the gauge is done by using the normal procedure. Either highlight the desired gauge or use the search function, using the F3 key, to locate the gauge.

III.2.3.2. Report | Gauge list

The menu option " Report | Gauge list " is used when you want to get a list of gauges regarding special defined parameters (e.g. to create a gauge recall list).

☞ Making a "Gauge list" is usually joined with setting a filter !

Otherwise you will get the complete stock at your list. Use a filter (see section III.2.1.6.) to select the gauges you want to have at your list BEFORE starting this function.

If you open the menu " Report | Gauge list " you get a list with the report layouts available. Select the layout file you want to use (default is "GaugeList_English.lst") and continue with "Open".

Now the report tool "List&Label" will be started with the "Print options" dialogue (see figure):

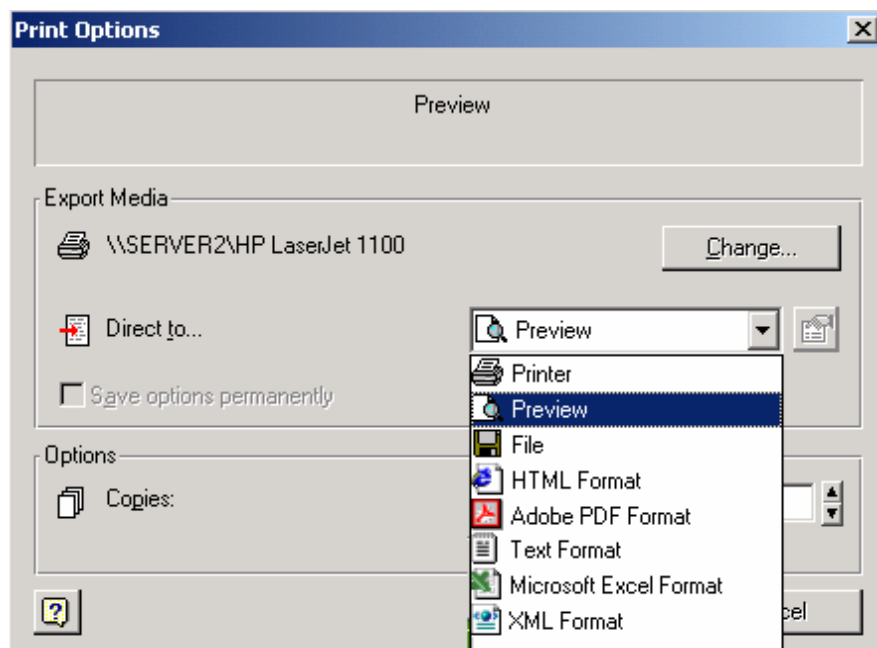


Figure: Print options "List&Label" reporting tool

As default this dialogue is set at "Preview". This will start the List&Label to show you the Gauge list at the screen. Here you can start the "Printing out" or other operation (send it as mail...).

If you do not need the "Preview" with the option "Direct to.." you can start the printing out just now or you can also save the list as a "Excel"-File, in XML or other format.

III.2.4. Gauge history and Gauge actions



One of the most important functions of the "Gauge management system" is the performing of any kind of operations with a gauge.

A "gauge operation" is any operation was done with a gauge during a gauges life. Each gauge action will be saved in the "gauge history". A gauge action may be a gauge inspection, a gauge distribution or the repair of a gauge.

III.2.4.1. Showing of "Gauge Basic data" in the History screen:

Date/Time	Login name
04.05.1998 12:36:20	system
22.09.2004 16:02:07	system
22.09.2004 16:02:39	system

Measuring range (up - to)
0.00 - 25.00 mm

Spindle range
25,0 mm

Graduation/Resolution
0.010 mm

Standard
DIN 863 : 1999

Valuation - hardness inspection

Actual values of extensions

Comments

3:3 Frm6

Figure: Show type dependent "Basic data" in the history screen

Sometimes it may be helpful to see the Gauges nominal data and tolerances in the history screen. To show it please use the related button as marked in the figure.



III.3. Gauge data export and import

The program has special functions to export and import data. For the data exchange the QM-MANAG program is using the "XML" file format combined with the exact definition of all Gauge informations (QMLink data exchange format).

Mainly the export and import of gauge data will be used to transfer Gauge data from one QM-MANAG database to an other QM-MANAG installation located on a different computer. The main usage is the exchange of data between a calibration service provider and its clients.

If you are interested to exchange data with other management systems please contact L&W to get more information about the "QMLink" data interface !

III.3.1. Gauge data export



Use the related button start the export. You will get the shown screen.

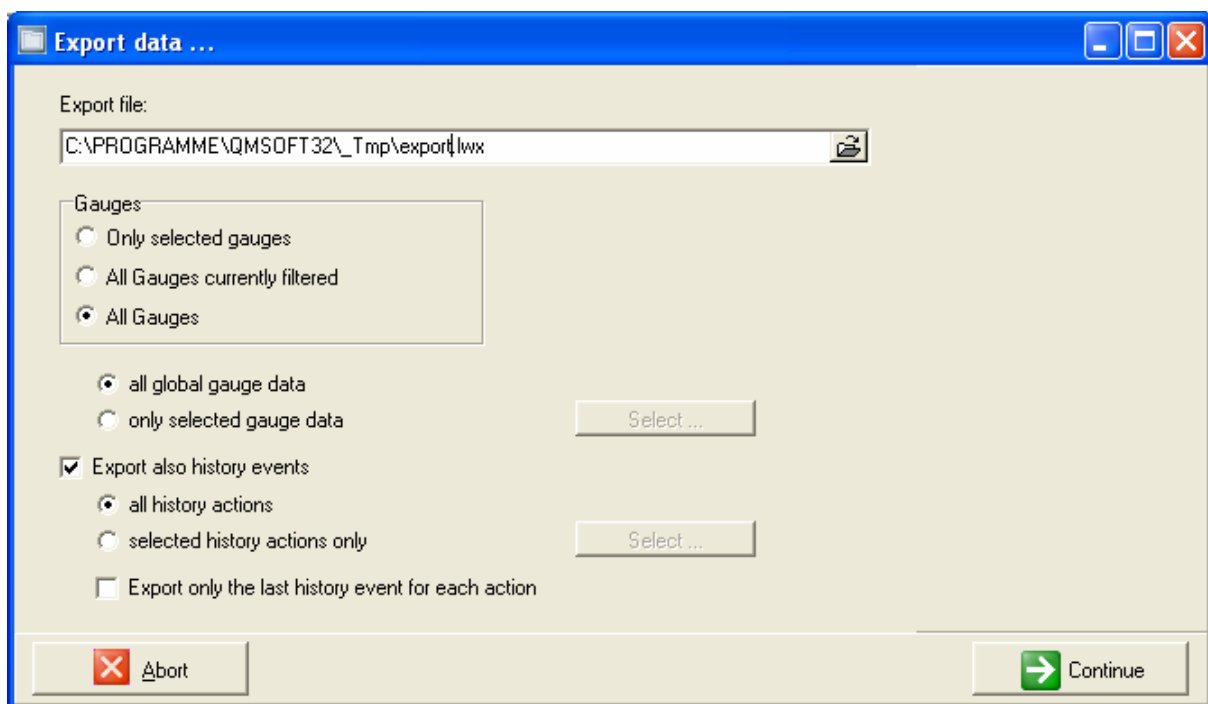


Figure: Select your export options

Please set the export options to select the data you want to export. Use also the "Filter" function to make a pre-selection of the gauges to be exported.

The export function will create a "lwx" file. This is a compressed file containing (if available) all related calibration certificates and gauge pictures and the file "data.xml". The file "data.xml" does contain all related gauge information.

The structure of this XML file is described in the "QMLink interface description. Please contact L&W if you need more information about it.

III.3.2. Gauge data import



Use the related button start the import. Then select your import options as shown in the figure.

Pay attention that you do not overwrite gauge information which should not be changed by the data import. In this case use the option “only selected Gauge data” and use the “Select” button to define only this fields which may be overwritten by the data import. All unselected fields will be kept with its original information.

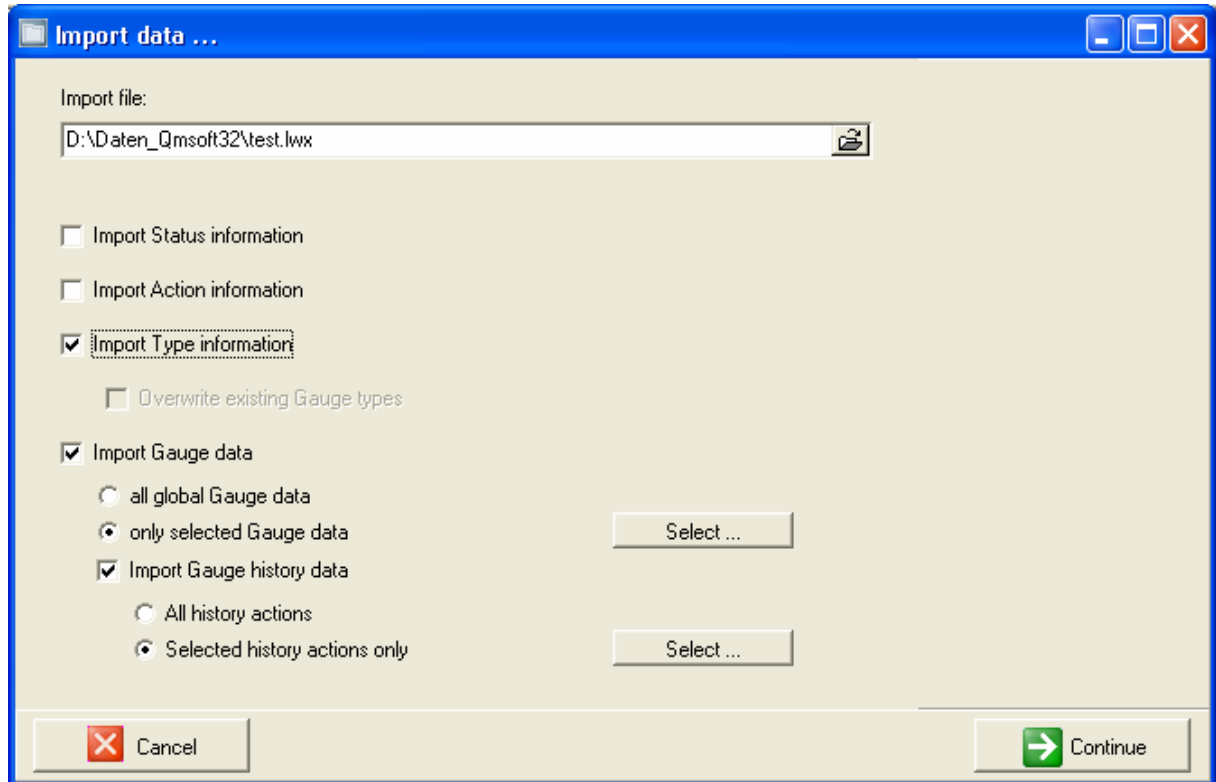


Figure: Setting of Import options

+++++