

QMSOFT

Software for gauge inspection



I.1. QMSOFT-Installation

The software is delivered on a CD-ROM. The installation procedure starts automatically if the auto start property of the CD-ROM drive is enabled. If the installation does not start automatically, please execute "manually" the program file "SETUP.EXE". Please follow the installation messages on the screen.

**Please note, that you should be logged in as "Administrator" at your PC!
Otherwise not all installation steps will be properly executed.**

The installation of the program can be done in a few easy steps.

Make sure that your purchase of the program is done by a known dealer and distributor of L&W for software products (for licence agreements see Appendix A) !

Desktop, Client or SQL-Server installation?

When starting the installation you will get this screen:

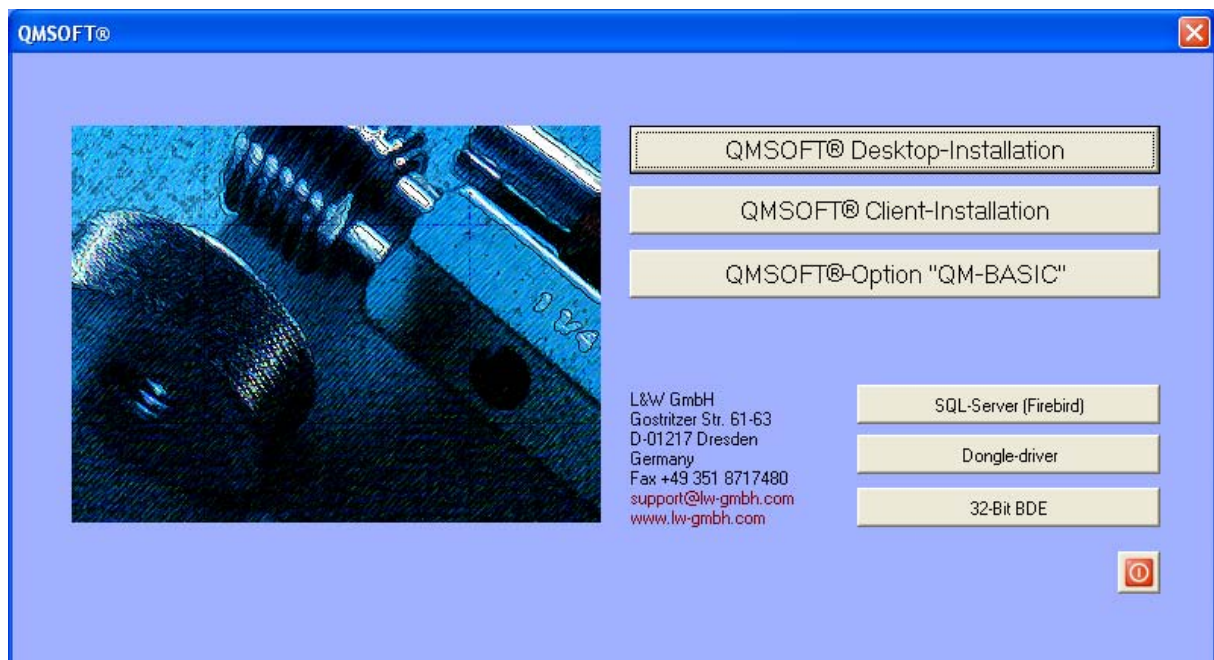


Figure: Select the type of installation

☛ The selected option is very important for the further usage of all Gauge management components. To run all components on your local PC, including the Gauge Management Database, please select the default Option "Desktop"!

In case that you want to use the Gauge management system (QM-MANAG32) and/or the programs for Gauge blocks and Cylindrical pins you have to decide your wished program configuration. The reason is that all these programs using database functionality are so called Client/Server programs. So the program itself does require a **SQL Database Server**. With the shown options you decide where this SQL Database server has to be run.

Desktop (Single user with local database installation):

if you want to use the Gauge management as a local user only at your personal computer and the Database should be stored also at your local computer.

Note: also in this case you can make a backup of your database files on a network directory using the Firebird backup tool "gbak"!

Client (Working place in a network):

you want to store your Gauge management data on Server in a network and/or you need the access to your Gauge management data from several working stations;

NOTE: This option does require an existing SQL Database Server ! See also the option "SQL-Server". If necessary please contact a person from your IT department!

QM-BASIC

this option is installing **only the indicating software** to show measuring values for measuring machine which are using a Heidenhain interface card (IK220) for the connection to the computer;

SQL-Server (Firebird):

this option does install only the SQL Database Server "**Firebird 1.5**"!

The QMSOFT software does use the Firebird Database server as the default SQL database server. This option does not install any other QMSOFT programs.

Use this option to install the Firebird SQL Server on a server machine where you want to place your database files for a shared access for different client PC's.

Please contact L&W if you want to use existing SQL Database servers running in your system!

32-Bit BDE:

this option does install the 32bit Borland Database Engine. This option has to be installed in any case when you need to convert 16bit QMSOFT database data to the new 32bit system.

It is also required for the conversion of data for the 16bit versions of QMBlock (Gauge block inspection) and QM-PIN (cylindrical pins).

After this please select your language. The language setting for the program can also be changed after the installation.

After confirming the "Licence agreements" you have to do the next step:

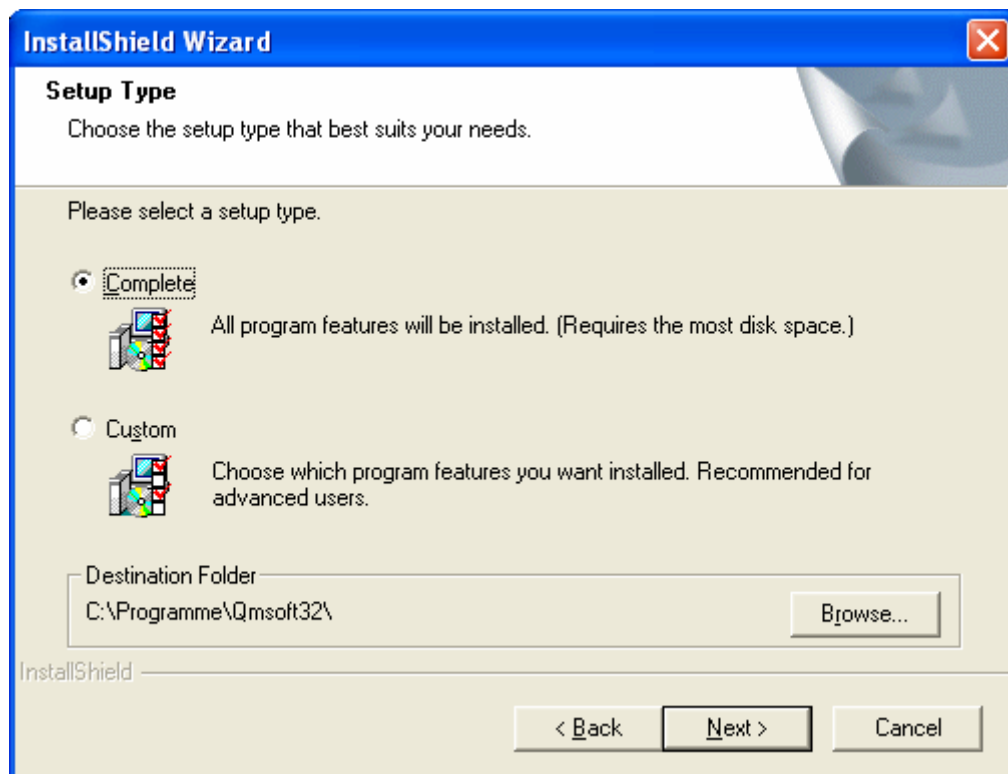


Figure: Select the QMSOFT program options to be installed

Please select the installation option "**Complete**" if you want to install all available QMSOFT options. With a "**Custom**" installation you can select the program options as you want. Here you can also select the "Destination folder" for the program installation.

After pressing the "Next" button you have to select your default "Measuring unit". You can change this setting also after the installation without problems!



I.2. Program licences

After the installation all programs are running in a "DEMO" mode. In this mode some menu items are disabled and not all program features are usable.

If you purchase one or more programs a "Copy protection hardware" usually called "Dongle" is a part of the program package you get.

NOTE: the manufacturer of this Dongle - Aladdin - does it name "Hardlock"!

This dongle has to be plugged into a parallel interface of your computer. The dongle acts as the registration number of the program.

NOTE: If you use a Windows NT, Windows 2000 or Windows XP workstation with the software it is necessary to install a driver for the dongle being used. The automatic installation during the QMSOFT installation process does require that you are logged in as "system manager". If the installation fails you have to install this driver manually.

To install the driver manually:

- log in as "Administrator"
- execute the program "**HLDRV32.EXE**"; located on the QMSOFT CD-ROM in the directory „**Additional\Hardlock**“

To remove the "DEMO Mode" restrictions from a QMSOFT program you have to activate the dongle and to type in the "Licence number" for each program which you have purchased.

Please click onto the yellow key icon inside of the QMSOFT program window to initiate the licence procedure, than follow the messages being shown.

☛ **Use the "Test dongle function" to test if your system does recognize the dongle correctly and the dongle driver was installed successfull!**

1st: do the "Dongle" authorization:

Figure: Authorization of the dongle

To carry out the authorization you have to type in:

- your company name (at least 3 characters are required);
- the Dongle No (it is only a sequential numbering for the identification);
- the Serial No (16 characters long) - **important to licence the programs!**

You will find this information at a printed paper inside of the QMSOFT user manual.

Press "Authorization" to log in the dongle information and continue with the "OK" Button.

2nd: enter your licence codes:

Licence registration

Instructions:

1. Type Licence/Sub-Licence number, click the "red key"-button
2. Repeat step 1 for all available licences
3. Click the "close"-button

QMSOFT®-Modul		Licence#	SubLicence#		
QM-MANAG standard		C16D115751F7B271			Gauge management
QM-MANAG lite					lite version
QM-MANAG viewer					viewer version
QM-MANAG internet access					Internet-Option
QM-PLAIN		5F58F90044E46883			Calculation/Inspection of plain gauges
QM-PLAINCAL					Nom. size calculation of plain gauges
QM-THREAD		25DFC57A55C7F271	0D0C2BE2443C2971		Calculation/Inspection of thread gauges
QM-THREADCAL 1					Nom. size calculation of thread gauges 1
QM-THREADCAL 2					Nom. size calculation of thread gauges 2
QM-THREADCAL 3					Nom. size calculation of thread gauges 3
QM-GAUGEAL		79775F0C7F8DF629			Nom. size calculation of plain/thread gauges
QM-TAPTHREAD					Inspection of tapered thread gauges
QM-DIAL		80B8CBDE8A9AEEE3			Dial gauges and indicators

OK

Figure: Entering the QMSOFT programs licence codes

Please follow the instructions shown on the screen and enter your licence codes.

Click at the "Red Key" symbol to activate the licences. The Key should now change to "Green" color.

I.3. First start and Program configuration

After the installation you have to set two basic properties for the program system. Please find here the instructions for it.

Creating a database / Set a database connection

☞ **While installing the QMSOFT programs there will not be installed a database for Gauge management activities. This will be done when you start the QM-MANAG program the first time.**

In case that there does not exist a database you will get an error message. This error message does also appear if the connection to an existing database is not possible. After testing the database connection the QMSOFT 32 – Database configuration tool (Configurator32) will be started automatically.

At first you will get the following screen:

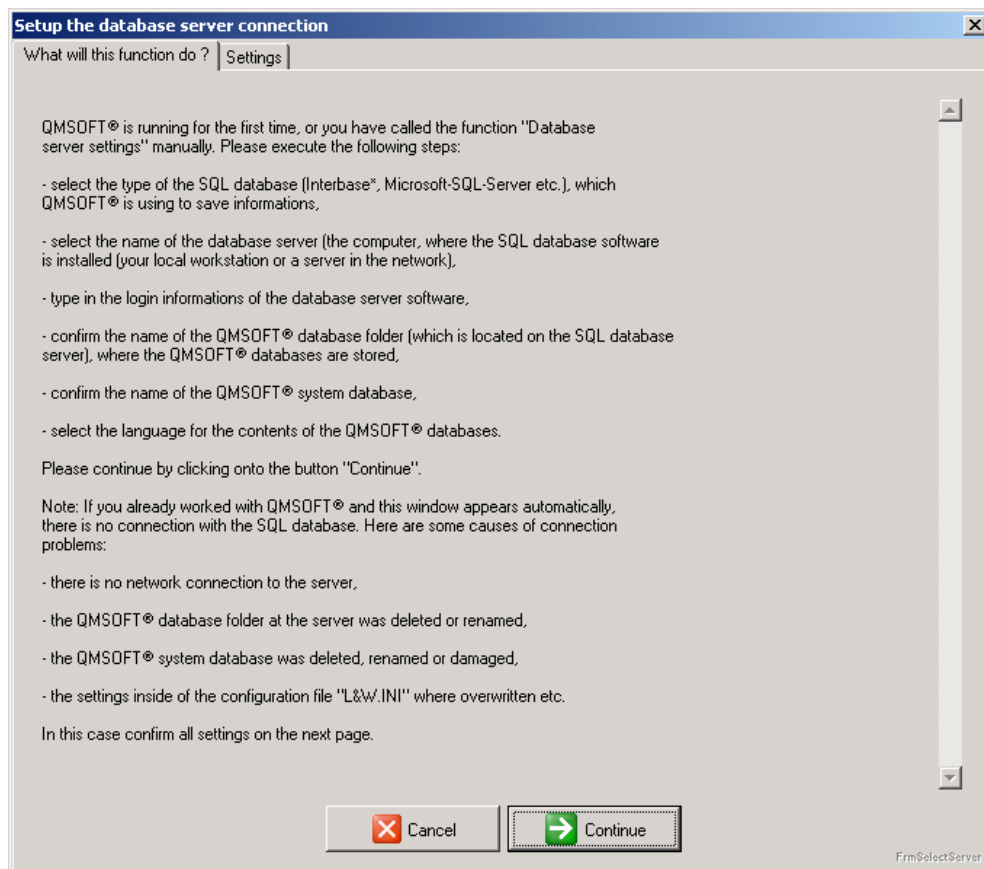


Figure: Info screen about the database configuration

Here you will find an explanation about the next steps.

NOTE: For a local "Desktop" installation all settings will be done automatically to default settings. So you can immediately proceed the database installation!

These steps will be explained on the next page too.

☞ **Please notify: When starting the Gauge management system the first time, two database files will be created! One of these files, the so called "System database" (default name "QMSOFT32_System") does include the user, client and address management. The second file does include your complete Gauge data.**

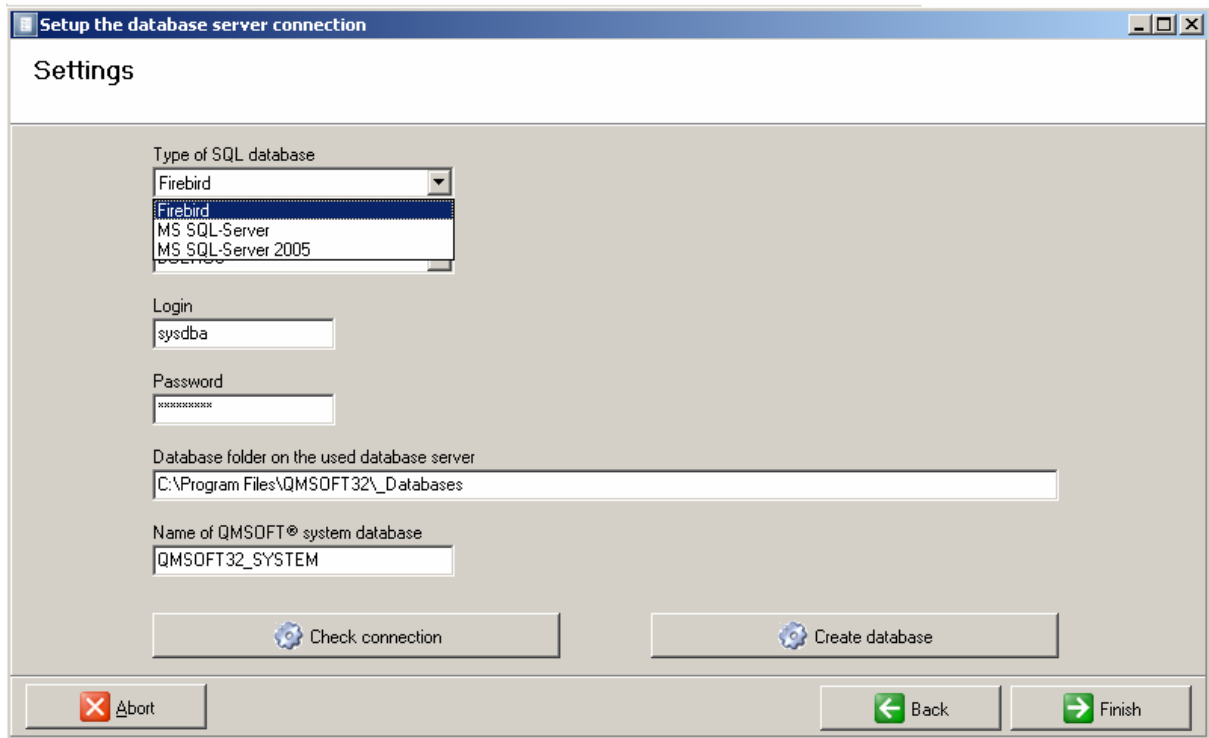


Figure: Configuration of a Database connection

Select or enter the following parameters:

Type of SQL database: at time Firebird SQL server and MS-SQL Server (Version 8.0 and higher) server will be supported. The installation of the open source project Firebird SQL server is a part of the QMSOFT installation CD. This will be used as the default database server for the QM-SOFT system.

Name of Database server: select the name of the computer where your SQL server program is running. For a local installation it is the name of your PC. Use the option "Search database servers.." to detect existing Database servers in your network (ATTENTION: In a large network that can be take a few minutes).

Login and Password: here the default settings for the Firebird Server access are made.

☛ ***Change these settings only if you use an existing SQL server in your network with different access codes! In this case you have to ask your Database Administrator to get it. Using a MS SQL Server your administrator has to give you an access code which does enable you the creation of a new database!***

***Using a FIREBIRD server the default "Login" name is: "sysdba";
the "Password" is: "masterkey"***

Physical database folder on the database server: Use the default settings when installing a local database; otherwise you have to contact your Network administrator to get the access on a network directory. Make sure that you will enter the name of an "physical" existing drive and NOT a "mapped" drive where you have only a "logical" name.

Name of QMSOFT system database: usually you should not change the default setting **"Qmsoft32_System"**

Now you can continue with "Check connection" or "Create database". If you click the button "Check connection" and the system database could not be found (in case that you start it the first time there does no database exist) you will get the following message:



Figure: Message if no existing database was found!

Confirm and continue with "Create database"!

You will now get this program screen:

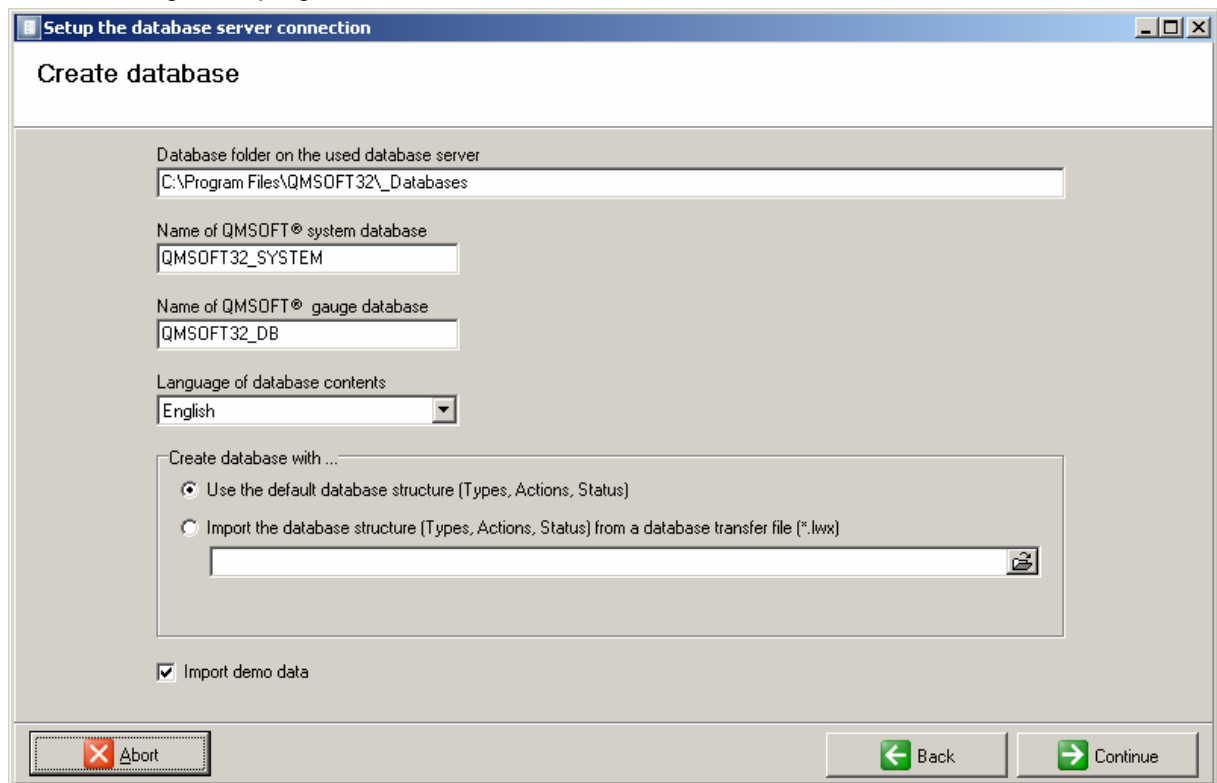


Figure: Settings for the creation of a new database

Here you will see again the names of the database folder and the system database (see also the previous figure).

The other settings are:

Name of QMSOFT gauge database:

usually you should use the default name "**Qmsoft32_Db**"

Language of database contents: here you can select the language for the database which should be created.

NOTES for installation for MS-SQL Server:

- 1) the "MS-SQL-Server" is established for the connection with a MS SQL 2000 server. This connection type requires the installation of the MS SQL Client tools on your local machine(s) (generally we recommend to use the SQL 2005 option!).
- 2) the "MS-SQL-Server 2005" connection type is using the OLEDB interface. It can be used for both: the MS SQL Server 2005 as well as the MS-SQL Server 2000. In this case the Microsoft Data Access components (MDAC) 2.6 (or higher) are used.

☞ **Generally, the MS SQL administrator has to create the two database files, which will be used by the QMSOFT system, before. The default names of these two files (empty database files without any table or something else) are: "QMSOFT32_SYSTEM" and "QMSOFT32_DB". Nevertheless you can choose the names as you want.**

Create database with...: Usually a new database will be created by using the given "Default" database structure. In some cases you can have a special file including a different database structure (mostly when you do a conversion of gauge data from an older database). Only if you have such special file use the option "Import the database structure.." and select the related file.

Import demo data: activating this option you can create a separated "DEMO" client which will be filled with a number of gauge data. This "Demo" client you can use to test the program functions.

NOTE: Doing a local ("Desktop") installation you can generally use the "Default" settings.
Use the "Continue" Button to continue.

I.4. Select your default "Measuring device" connection

All QMSOFT measuring programs does give you the possibility to take over the measures directly from a measuring device connected with your computer. If you start one of the measuring programs the first time you have now to set the configuration for your On-line connection (see figure).

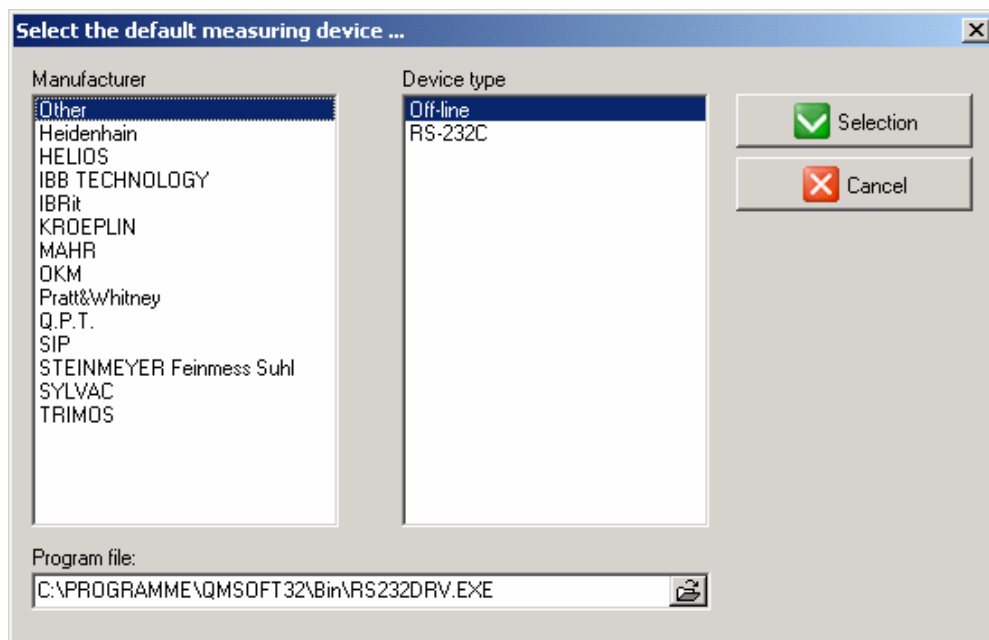


Figure: Set the default measuring device

Select the manufacturer and the device type. In the field "Program file" the QMSOFT program which will realise the communication will be shown. Continue with the "Selection" button to set the parameters.

☞ If you have no on-line connected measuring device, please select "Other" and "Off-line"!

II. Introduction

This section includes a short overview about the QMSOFT system philosophy.

II.1 What is QMSOFT ?

Gauge data management is a vital element in any quality assurance system. It also plays an important role in connection with product liability as well as in highly technical fields (for example, in the defense industry or nuclear technology). When applying ISO 9000 to 9004 (and EN 29000 to 29004) 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.

Despite a rapidly growing interest in gauge data management, very few manufacturers of measurement devices can offer a system solution for this task. In other words, for the majority of measurement devices on the market, a suitable software supporting both gauge inspection and gauge data management was simply not available.

For this reason a variety of hardware-independent software solutions for the field of gauge data management have been developed. The majority of the systems currently on the market are limited only to the management of gauge data. In the field of gauge inspection, however, not only must gauge data be managed but, more importantly, the gauges also need to be inspected. These functions can be adequately supported by only a few systems. The result is that with many systems the input of gauge nominal values must be done manually. The possibility of entering data directly from the measurement device to the computer is not an option in most comparable software packages.

It is precisely this burdensome problem that the L & W concept seeks to resolve. The idea to develop the software first came from our own personal experience with this problem. As a state-of-the-art gauge inspection service, we are, from daily experience, well acquainted with the software options available in this field as well as what was lacking. We soon realized that the problem we were faced with was also being faced by many others in the measurement industry. Given that this was a relatively untouched aspect of quality assurance, we then decided to develop our concept into a marketable product. Our hypothesis has proven correct. Many companies who previously, were forced to do this tedious and time-consuming job manually have been very satisfied with the efficiency of our product.

Since 1990, under the product name **QMSOFT (Quality Management SOFTWARE)**, a series of program components for gauge inspection has been developed to cover an extensive range of geometrical gauges such as thread gauges, dial gauges, plain plug gauges, plain ring gauges etc. These programs provide the ideal computer support for all aspects of gauge inspection.

QMSOFT's features are:

- Computer supported management (evaluation, analysis and archiving) of any gauge data in a flexible data base; the parallel management of multiple sets of data is also possible.
- Automatic generation of nominal values (evaluation of gauge tolerances) for the most commonly used types of gauges (plain gauges, thread gauges etc.) according to a multitude of national and international standards.
- A system designed to be user-friendly, time-saving and virtually mistake proof making it possible for even non-experts to ensure that their work is strictly within the standards being applied.
- Integration of management and measurement, this means the gauge data can be directly transferred gauge data base.
- High flexibility and upgradeability of the system through a solid modular structure; customization to individual needs (factory standards etc.) is always possible.

While developing QMSOFT we attempted to design the user dialog and the measurement procedures according to our own daily experience with the program in the laboratory. The result is that, in our client's opinion, we have successfully created a program which fulfills all of the aforementioned requirements.

II.2 QMSOFT - different types of programs

This section gives you a short overview about the QMSOFT program system and some basic information for the system handling.

Starting the QMSOFT system you get the following screen:



You can see different groups of program symbols. Depending on its basic functions, they differ in the following types of QMSOFT program modules.

ATTENTION: The user manual for each program you can find, if you start the related program and select the menu command "**Help | User manual**" !

Inspection programs:

There are different programs designed to carry out the gauge inspection for the different types of gauges. The programs are related to the standardized procedures for each gauge type.

Data base:

Gauge management system to manage all gauge data, gauge histories; transfer of gauge data. Starting the database you get a dialogue "Open database". Here you can select between "**DB**" and "**DEMO**". The "DB" database should be your "normal" working database. Open the "DEMO" database to see different samples. You can also use this database while doing the first steps with the database and to learn how to operate something.

Miscellaneous (Help programs) :

Different programs for the program environment (Installation, Indication of measures; editing of record listings ...);

Indication programs:

Indication programs are designed to realize the connection to the length measuring machines. Depending on the machines interface, you should use different indication programs.



The program "RS232DRV" is used to connect a length measuring machine with your computer using a serial interface. This program is supporting a wide range of different interface types. If you want to do an "Online" measurement set the parameters for the serial interface before.



The programs "IK121DRV" and "IK220DRV" are used to connect a length measuring machine with your computer using a Heidenhain PC interface card (IK 121 and IK 220).



The program "SIPDRV" is designed to support the measurement with a SIP 550M device. It is realizing the connection to the SIP LMC interface program.



The program „WinDHI“ is a special program designed by TRIMOS S.A., Renens Switzerland. This program will be used for the connection to the TRIMOS „LabConcept“ machines.

Editor program:



The EDITOR program is designed to get the functionality to show, edit, save and print record listings for all QMSOFT inspection programs.

Normally you do not use the EDITOR-program as a stand alone system. The EDITOR will be start up automatically by one of the inspection programs if you want to perform one of the above-mentioned actions.

The different programs are designed to get a complete tool for gauge data management and gauge inspection.

We would like to add that we would be very interested to hear your ideas, requests and criticism concerning the QMSOFT system. We are constantly endeavoring to improve the program and welcome your feedback for use in future versions of the program.

You can contact us by mail, by phone or by fax at:

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If you want to call or write us with questions about how to use the program, please include information about the configuration of your computer and your measuring equipment.

January 2008

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