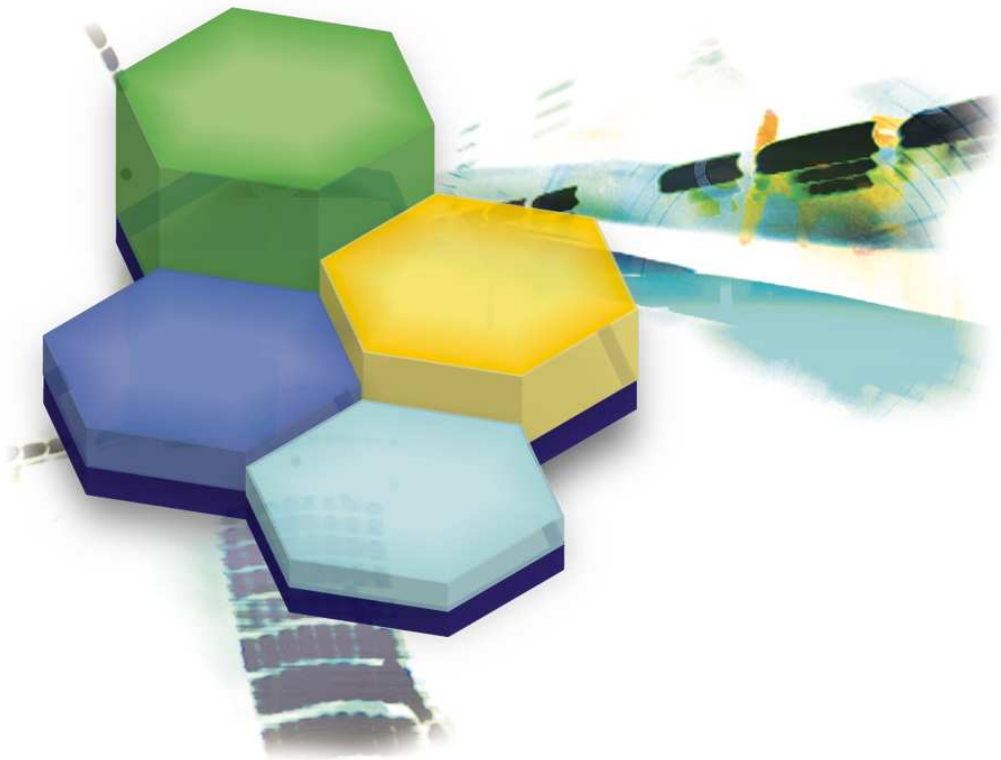




Material Data Manager.



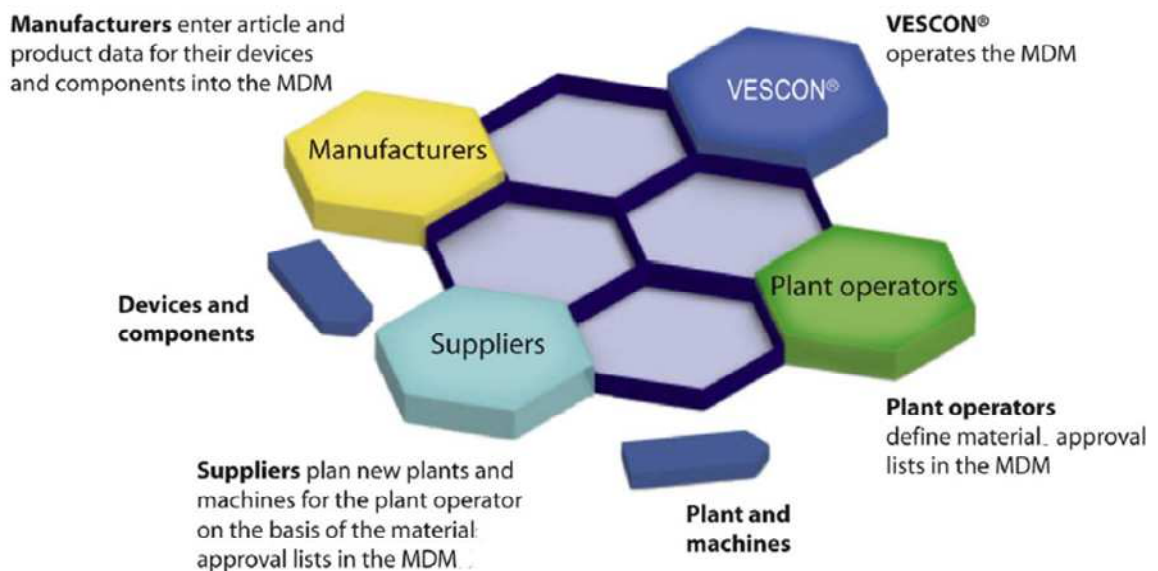
Operating instructions for users

Version 1.1 / August 2008

Operating instructions for users

1 About the Material Data Manager MDM

1.1 Overview



The online software solution Material Data Manager provides software and device, component and system data together with documentation, where applicable, for various user groups online, for retrieval or download.

The following user groups work with the software solution MDM:

- Manufacturers enter their device, component and system data into MDM, together with technical descriptions, order and CAD data.
- Plant operators define their material approval lists in the MDM for their suppliers on the basis of the device, component and system data defined by the manufacturers.
- Suppliers, who produce plants, machines, etc. for the plant operators and deliver them must register in the MDM. After successful registration in the MDM, the approved device, component and system data from the material approval list are provided to the suppliers. These data can be further processed in data processing systems using separate MDM interface programs.

Device, component and system data not included in a material approval list in the MDM may not be used by suppliers.

Operating instructions for users

1.2 Principle of central data storage in the Material Data Manager

The basic principle of the Material Data Manager that strictly governs all databases, functions, links and interfaces is central data storage, which avoids redundancy.

Databases and data structures

In the development of databases and in the data structure of programs, it is important to avoid redundancy as thoroughly as possible, since it requires more storage space and can lead to inconsistencies. For this reason, redundancies are considered to be anomalies. The absence of redundancies is a basic principle of databases. ...

(from Wikipedia© 12/07 - http://de.wikipedia.org/wiki/Redundanz_%28Informationstheorie%29)

This principle of using **one** common data source for **all** users of the Material Data Manager offers the following advantages

- Changes are immediately available
- Data are consistent
- virtually unlimited additional information from attached documents (e.g. links, .jpg, .pdf)
- no "manual" distribution of data and documents
- no incorrect data exports
- no redundancy in material approval lists and CAD/CAE applications
- central workflow function is implemented

Moreover, the superordinated administration by VESCON means

- minimized expense for the user for an administration and support
- central hotline

Because the MDM is available on the Internet and the MDM client is a simple download

- inconvenient client setups are not required

Even without a connection to the Internet or if the connection fails (Notebook / Laptop) it is always possible

- to work offline

Operating instructions for users

1.3 Author

VESCON implements projects in the fields of automation and process technology, energy and high voltage technology as well as specialized mechanical engineering and testing technology. Numerous CAD/CAE, software and IT services extend the range of our services.

As a medium-sized provider of engineering services and our distinctive insight as a systems integrator, we have become an attractive business partner.

Our clients are planners, suppliers and plant operators in the following industries and areas:

- Production industries such as automobile, electro and semiconductor industries, etc.
- Process technology industries such as chemical, food, pharma industries, etc.
- Energy generation and distribution
- Machine, plant and apparatus construction as well as steel and pipeline construction
- Infrastructure installations and building technology

1.4 About these operating instructions

These operating instructions concentrate on a description of the functions necessary to use the MDM as intended. For this reason, a description of administrative functions (e.g. for user management) has been consciously omitted.

The operating instructions are for version 1.1. It can happen that the current version of the MDM has functions that have not yet been described in the handbook or have been described differently. In addition, the user interface can differ from the examples displayed in the handbook. These differences will be documented in the next version of the handbook.

1.4.1 Revision of content and structure

The Material Data Manager continues to develop. In this process, the experience and suggestions of the users are indispensable for VESCON. To the extent possible, these suggestions are promptly implemented, even between official version updates. An example of this is the assignment of company contact persons to the records or the optimization of navigation.

With the same goal in mind, the present operating instructions take into account experience from the schools and workshops for manufacturers, planners and MFL managers. Therefore, in addition to the description of the functions, structures and workflows, the articulation was revised, and important points for an understanding of the MDM were presented in greater detail.

We ask users to continue to give us suggestions and criticism. Please direct your suggestions to the hotline or your contact person at VESCON.

1.4.2 What's new?- Version change from 1.0 to 1.1

- **English translation**
Translation of the user interface and the operating instructions for users into English.

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- **Manufacturers can define precursors/successors for their (Premium) data records**

Every manufacturer having a contract with VESCON can itself define the precursor/successor relationship for its data.
- **Additional fields in the contact data**

The contact data are expanded by the following fields: Function (e.g. marketing) and user group (one control field each for supplier, manufacturer and operator). If "manufacturer" is selected, the choice is made through the "manufacturer" list box.
- **Expansion of the navigation window**

The navigation window is adapted in such a way that all links to the record are shown (combinations, precursor/successor, comparison types). This adaptation also affects navigation via context menu ("right mouse button").
- **Duplication of records with chapter assignment**

If an existing record is copied, the chapter assignment is copied with it.
- **Workflow "New manufacturers"**

If a new manufacturer is needed in the manufacturer list box and the user has no write access to this list box, he can request this manufacturer using a new button on the toolbar.
- **"What's New" deactivated**

The "What's New" function is deactivated in the Help menu. In the future, information about new functionalities are published in a newsletter and documented in update information.
- **Workflow: Create a job for a single recipient.**

If a task is created for several recipients, each of these can close the task. As a result, it can happen that not all recipients see this task. VESCON expands the Task workflow (only device jobs) so that each recipient can create a new job (separately selected by control field).
- **Customizing the MDM search**

The input field "Search for devices" has been removed and a customized search function with its own permanently accessible list field is displayed at upper right (similar to Internet Explorer 7.0 "Google Search"). The previous "search" in the data table is changed to "filter" since this function is always related to the currently displayed data range and corresponds to a filter.
- **Checking for a connection to the server**

If there is no connection to the MDM server (e.g.: connection setting incorrect), no data can be sent to the server and any data entered are lost. In order to prevent this, check for a connection to the server before calling up the "sign in" and "password" interfaces.
- **SSL (Secure Socket Layer)**

VESCON is reworking the Client-Server data connection so that in the standard setting, communication is always via an SSL process. The user can switch off this encoding.
- **Show abbreviation for section in record**

In the data field Chapter of a record, an additional editable identification code (three ASCII characters - as for chapter number) for the section (e.g. E) is also given.

Operating instructions for users

■ Hiding locked records

A new icon is added to the menu list for hiding and un-hiding locked records. At the start of the program, the locked records are hidden.

1.4.3 Terms, manner of presentation and conventions in these instructions; abridgements

In these operating instructions, the individual operating and screen elements are not always graphically presented, for ease of legibility. Instead, they are formatted differently.

The following convention is used:

<u>Clear</u>	Icons are framed
<u>right mouse button</u>	if an operation with the right mouse button is called for, the term "right mouse button" is underlined
Format	Terms for menus, sub-menus or context menus are printed in bold
Save	Buttons are grayed out
"Search for"	Input fields or list fields are enclosed in quotation marks

Example:

1. in the Selection window activate the icon Edit mode
2. click with the right mouse button on the record in which you wish to add the new section
3. select the menu item **add record**
4. in the field "Name" enter the selected term and confirm the entry with the button **Apply**

If at the start of working with the Material Data Manager - before a certain routine has been established - the graphic presentation of individual operating and screen elements is unknown, reference is made to the following chapters: For the rest, with a few program-related exceptions, the WINDOWS conventions apply.

Abridgements:

BQF: the german abridgement of **BezugsQuellenFreigabe** means "supplier approval"

MFL: the german abridgement of **MaterialFreigabeListe** means "material approval list"

QA Task: the abridgement of **Quality Assurance Task**



If actions relating to data consistency and security are described in these operating instructions, this is indicated once more with this attention icon.




If there is an alternative to a described procedure, a recommendation or indication of a related topic, this icon is displayed.

Operating instructions for users

2 General Administration


The super ordinate administration of the MDM is performed by VESCON.

2.1 Data security

	<p>Attention! Users are exclusively responsible for content and technical correctness of the records!</p>
---	--

If actions relating to data consistency and security are described in these operating instructions, this is indicated once more with this Attention icon.

The MDM should only be used by qualified and trained users. Reliable use of programs run under the WINDOWS interface is a prerequisite.

	<p>Attention! These operating instructions should be read before the start of work with the MDM!</p>
---	---

2.2 Hotline

For further user support VESCON can be reached by phone at **+49 (06233) 60 00 – 9 99** at the following times:

Mon. - Thu.: 9:00 am to 05:00 pm CET

Fri.: 9:00 am to 2:00 pm CET

By e-mail: **mdm@vescon.com**

2.3 System requirements

To operate the "Material Data Manager" the following system and software prerequisites must be met:

- Broadband connection to the Internet (recommended at least DS: 1000)
- Windows 2000/XP or higher with Microsoft Net Framework 2.0.
- Microsoft EXCEL 2003 or higher (because of interface with EXCEL export)

Operating instructions for users

3 User groups – Term definitions and justifications

3.1 Suppliers

Suppliers are those users who provide the operator with plant and machines and must have access to the relevant approval lists.

Suppliers have limited rights in the MDM. Thus they can not perform any data management or administration functions. However, suppliers can change existing records and create new records within the possibilities described in Chapter 5.4.

New records must be released by the operator (MFL manager or BQF administrator). Only after this release may these records be used.

3.2 Manufacturers

Manufacturers produce and deliver the devices, components and systems listed in the MDM to the suppliers.

Manufacturers have limited rights in the MDM. Thus they can not perform any data management or administration functions. However, manufacturers can change or lock existing records and create new records within the possibilities described in Chapter 5.4.

New records must be released by the operator (MFL manager or BQF administrator). Only after this release may these records be used.

3.3 Operators

The operator's users fall into three groups with different rights and responsibilities.

- Managers at the MFL level
MFL Managers compile new material approval lists and publish them. MFL managers can also publish new and changed records from other users or lock existing records.
- Administrators at the BQF level
BQF Administrators maintain the BQF structure at the pool level. BQF administrators can also publish new and changed records from other users or lock existing records.
- Users for normal use of the MDM (e.g. Maintenance)
This user group has limited rights in the MDM. Thus they cannot perform any data management or administration functions, but can change existing records and create new records.

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5 Description of services

5.1 Software class

The Material Data Manager is a database solution that provides device, component and system data for various user groups over the Internet or offline, read only.

5.2 Normal purpose

The MDM serves the three different user groups for the following tasks:

- Manufacturers enter their device, component and system data into MDM, together with technical descriptions, order and CAD data.
- Plant operators define their material approval lists in the MDM for their suppliers on the basis of the device, component and system data defined by the manufacturers.
- The device, component and system data published in material approval lists are made available to suppliers who build and supply the plant and machines etc. for plant operators. These data can be further processed in data processing systems using separate MDM interface programs.

5.3 Special features

The MDM is characterized particularly by its integrated workflow management: different workflows and processings are visualized and thus comprehensible. This applies to:

- Visual control for records and version control
- MFL - material approval lists
- Forwarding records for processing

5.4 Modular-use service and function scope

Depending on the contract concluded with VESCON, the functions described in the following overview are available for the user groups defined in Chapter 3.

Operating instructions for users

Services and functions in the Material Data Manager (Selection)	Circle of users
Basic module	
Read access to existing records and structures	A
Creation of new records ¹⁺²⁾	B
Changing existing records ¹⁺²⁾	B
Definition predecessor / successor ¹⁺²⁾	B
Use of the workflow functions ¹⁺²⁾ (currently: Application for MFL release, visual monitoring and record versioning, forwarding record)	B
CAD interface (currently RUPLAN)	B
Creation of new data structures (chapters, MFLs and list boxes)	C
Manufacturer module (planned services)	
Evaluations for use of own manufacturer's record in the CAD (currently RUPLAN) ¹⁾	D
Manufacturers can make targeted suggestions of components / records to an operator	D
Price query by supplier firms to manufacturing firms ¹⁾	D

Description of user groups
A Guests and registered users
B Registered users
C Registered users and users with special rights belonging to operators having a separate contractual relationship with VESCON
D Operator's registered users having a separate contractual relationship with VESCON

1) Applies only to records of manufacturers having a separate contractual relationship with VESCON

2) Record of a manufacturer not having a contractual relationship can only be changed or created by VESCON.

Some systems functions in the Material Data Manager are still in development.

Detailed information about conditions of use, state of development, prices and other conditions can be obtained at

VESCON GmbH
Mr. Bernhard Adler
Dürkheimer Straße 130

67227 Frankenthal

Telephone +49 (06233) 60 00 - 6 40
E-Mail b.adler@vescon.com

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6 Internet program download

If you have not yet copied the MDM-Client download the file **mdm.zip** from our homepage <http://www.materialdatenmanger.de> onto your computer and unpack (e.g.: with [Winzip](#) or [WinRar](#)) the files into any local folder.



To run on your computer, MDM requires Microsoft Net Framework 2.0. If this does not already reside on your computer, first install Net Framework (To download page: [Net Framework 2.0](#))

If you do not know whether Version 2 of Framework is loaded on your computer, please download the Version check program from the following [Internet page](#) and run it.



Please always copy the MDM into a local file on your computer, since .Net Framework does not permit execution of a network drive as a standard feature.

6.1 Server setting in connection buildup

If there should be a problem during connection buildup to the server of the Material Data Manager, check the Proxy-Server setting. To do this, activate the **connection setting** button in the login window. In the following window, enter the name of the proxy server and the corresponding proxy port. If necessary, ask your system administrator.



Connection settings

It may be that your company or your Internet provider will require you to use a proxy server or offer you one. A proxy functions as a mediating point between your computer and the rest of the Internet. It is possible to answer questions addressed to the proxy from one's own buffer. Proxies are used to increase efficiency, filter queries and conceal your computer from the Internet in order to increase security. Proxies are often used as part of a company firewall.

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Direct connection to the MDM: That is the standard setting. Use this if you do not wish to use a proxy.

Recognizing the proxy setting for this network automatically: Choose this option if the Materials Data Manager is to try to determine the proxy settings of your network automatically. System settings (Internet Explorer Settings) are used.

Manual proxy configuration: Ask your system administrator for the name and port numbers of the proxy server and enter this information into the corresponding fields.

6.2 Sign in and registration

Use of the Material Data Manager requires registration as user. Sign in is only permitted for legal entities and natural persons with unlimited legal competence.

The data requested by VESCON at sign in must be given completely. VESCON retains the right to check the registration data. If it happens that registration data entered are incorrect or incomplete, the user concerned can be locked.

With registration, the user agrees to the existing conditions of use.

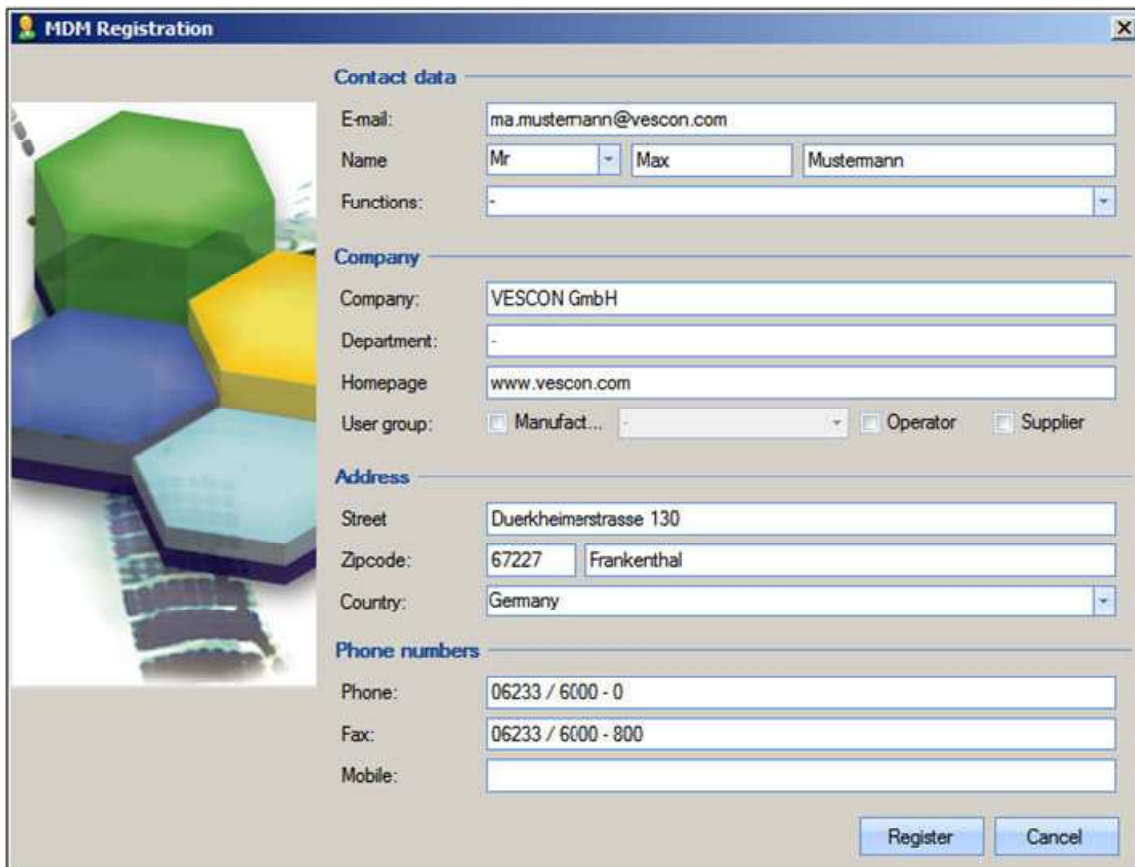
VESCON has the right to lock the access of a user who uses the system illegally and/or in violation of the responsibilities established in these conditions of use.

6.2.1 Registration

New users must register in the Material Data Manager. This is done in the MDM registration window that is started from the login window using the **Register** button.

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For successful registration, all questions must be answered. The password is automatically sent in an e-mail after successful registration.



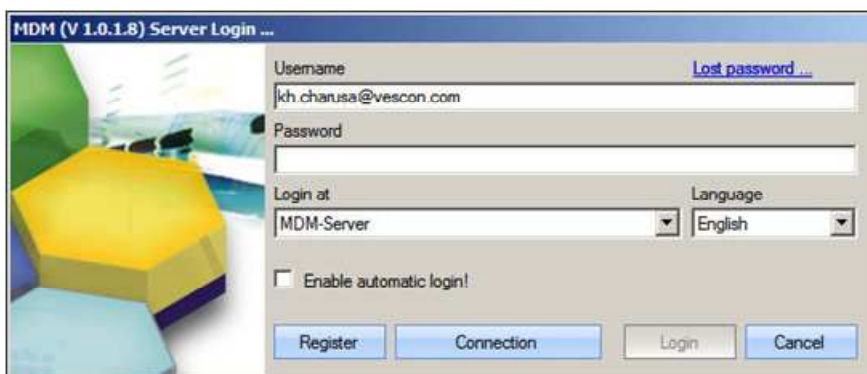
The screenshot shows the 'MDM Registration' dialog box. It contains several sections for user information:

- Contact data:** E-mail (ma.mustermann@vescon.com), Name (Mr Max Mustermann), Functions (-).
- Company:** Company (VESCON GmbH), Department (-), Homepage (www.vescon.com), User group (Manufact...), Operator, Supplier.
- Address:** Street (Duerkheimerstrasse 130), Zipcode (67227 Frankenthal), Country (Germany).
- Phone numbers:** Phone (06233 / 6000 - 0), Fax (06233 / 6000 - 800), Mobile (-).

Buttons for 'Register' and 'Cancel' are located at the bottom right.

Until release by VESCON, the user has read-only access to the data.

6.2.2 Login of already-registered users



The screenshot shows the 'MDM (V 1.0.1.8) Server Login' dialog box. It contains the following fields and options:

- Username (jch.charusa@vescon.com) with a [Lost password...](#) link.
- Password field.
- Login at (MDM-Server) and Language (English) dropdown menus.
- Enable automatic login!

Buttons for 'Register', 'Connection', 'Login', and 'Cancel' are located at the bottom.

Users who are already registered sign in with their user names and password.

6.2.3 Test and schooling / productivity server

The schooling server (Test and schooling server) is a copy of the productivity server (MDM server).

Operating instructions for users

The first registration is also done on the schooling server.

! If you should still be somewhat insecure with the MDM at the start of work, first try out functions relating to the consistency of the data on the test and schooling server!

6.3 Guest access

Guest access is possible with the following login identification:

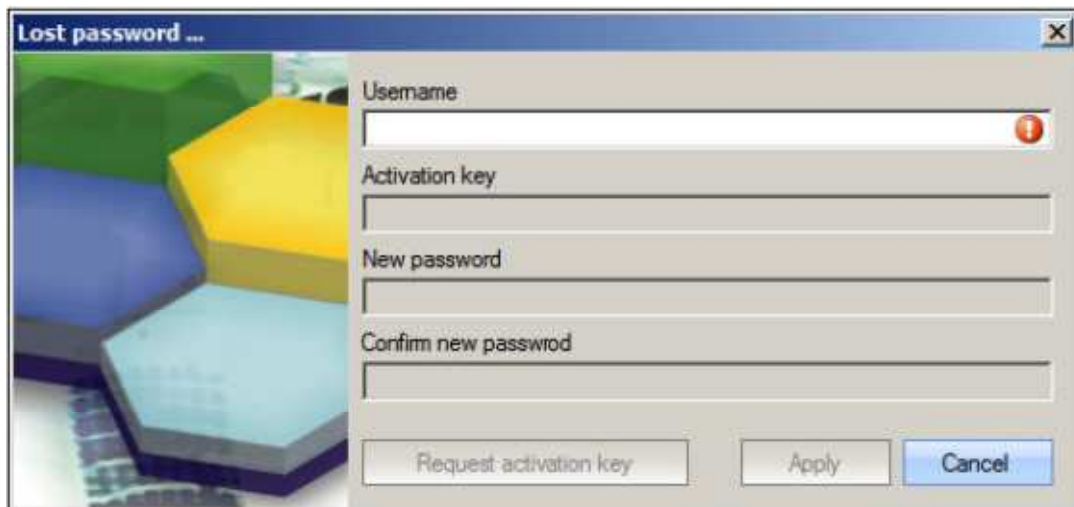
User name: guest

Password: test

Users signed in for guest access to the Materials Data Manager have read-only access to the data. The workflow functions are also not available.

6.4 Lost password

If as a registered user you have forgotten your password, you can enter it again after requesting an activation key. To do this, start the "Lost password" window in the login dialog by activating the "lost password" link.



Enter your user name in this dialog and request an activation key with the **activation key** button. By e-mail you will receive a key that can be copied into the appropriate field. Then you can enter a new password.

Operating instructions for users

7 Working offline

There can be two reasons for working with the MDM offline:

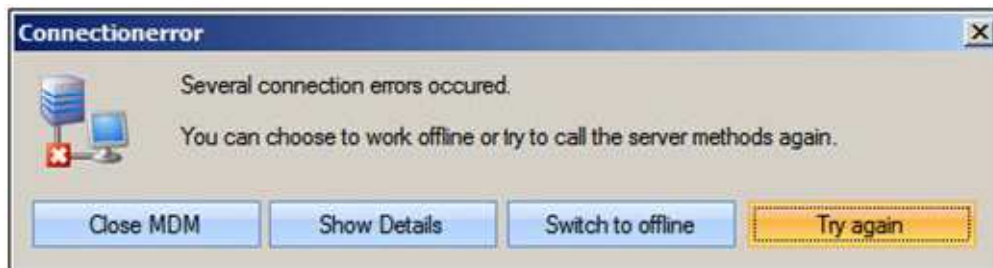
- the registered user currently has no Internet access (e.g. with notebook/laptop or no network connection)
- a user who is not yet registered generally has no Internet access and needs a version of the MDM at his local workplace.



In offline mode you always have only read-only access to the MDM and can neither save, change nor cut data or data structure!

7.1 Registered users

If it is determined during login or operation that access to the MDM server is not possible or is interrupted, the following status message is displayed:



Click on the **Switch Offline** button in order to work with the Materials Data Manager in read-only mode. The message "Offline" is displayed both in the MDM window at the upper left and on the status bar at the lower right.

After the close of the Material Data Manager, as soon as the network connection is reestablished and the MDM is restarted, working offline is no longer possible since at startup the online version is loaded by default.

7.2 Non-registered user without internet access

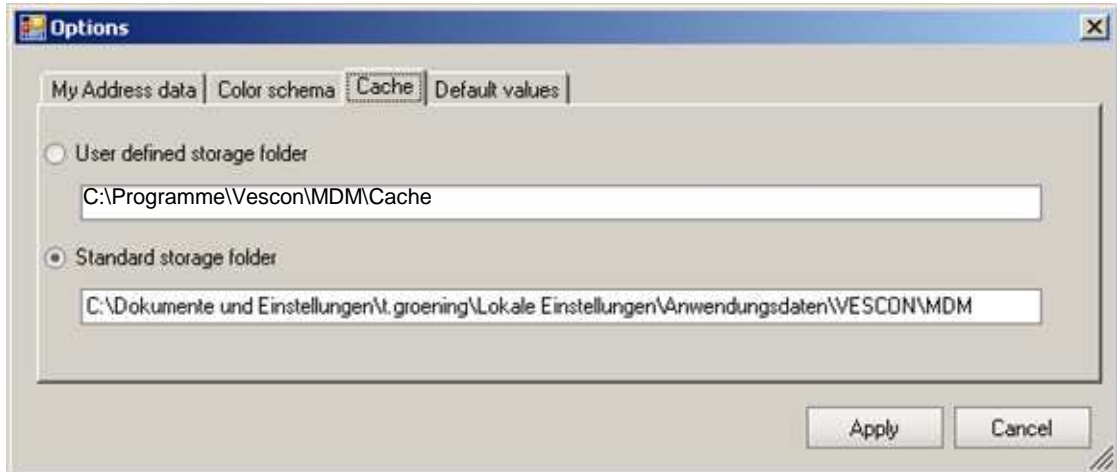
To work with the Material Data Manager without Internet access, it is necessary to copy the required MDM files and folders to the user's personal local directory. In order to do this, at least one user must have Internet access so as to make the necessary MDM files available to the offline users.

Proceed as follows:

1. In Material Data Manager open the menu **Extras**, from there the submenu **Settings** and in the settings window go to the Register cache. There you will find both the user-defined and the

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standard storage location of the necessary data.



2. Switch to the operating system level or to the Explorer and copy these folders and files to an off-line user's personal local folder.



You may not copy the data and folders into a public folder in order to work offline with the Materials Data Manager! But it is certainly useful first to copy the necessary data and folders into a public folder in order to make them available to individual offline users.

3. Start the Materials Data Manager from the file MDM.exe and place an appropriate link on your desktop.

7.3 Login, Registration, Guest access, Password

The requirements and the procedure are the same as described in Chapters 6.2 to 6.4.

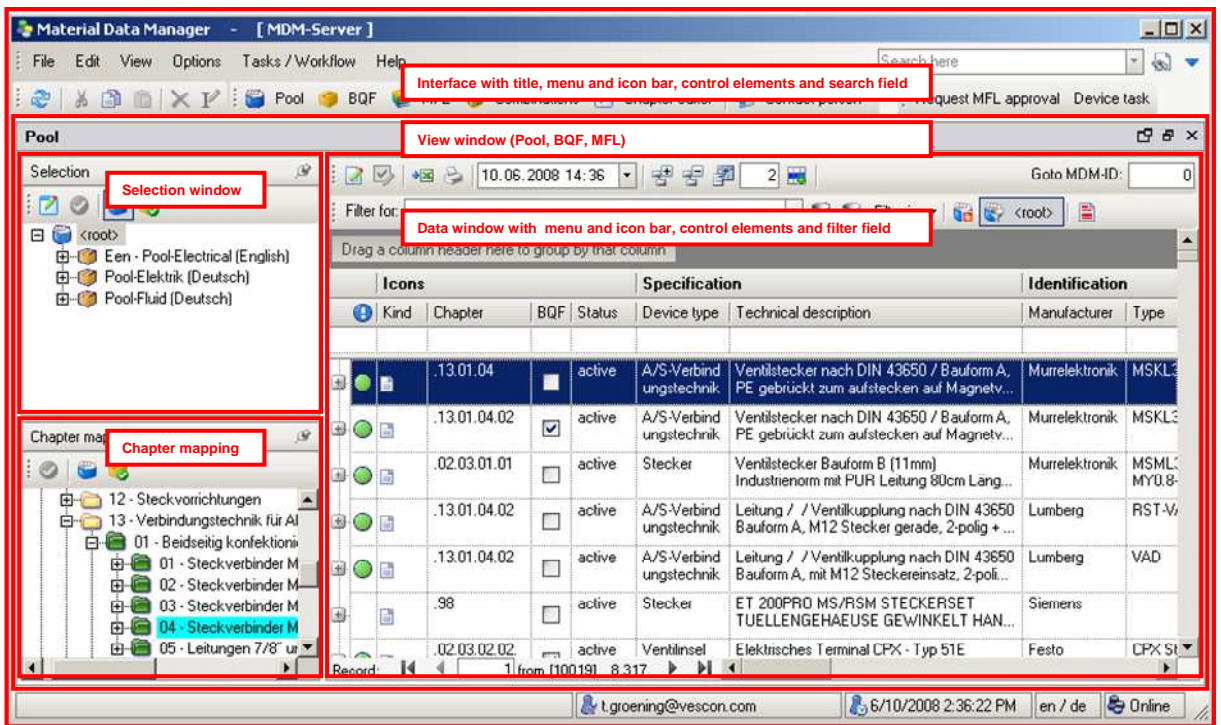
If the offline user is not yet registered on the MDM server, he must sign in as "Guest". If he is already registered, login is also possible with his personal identification.

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8 User interface

8.1 Description of the screen structure

The arrangement of the screen layout largely follows the WINDOWS convention both in the configuration of the elements and in their naming and functionality. In development great importance was placed on the recognition effect for users and ease of operation.



8.1.1 The interface with title, menu and icon bar, control elements and search field

In the title bar upper left are programs (Materials Data Manager) and the current server (MDM server or test and schooling server) with control elements on the right.

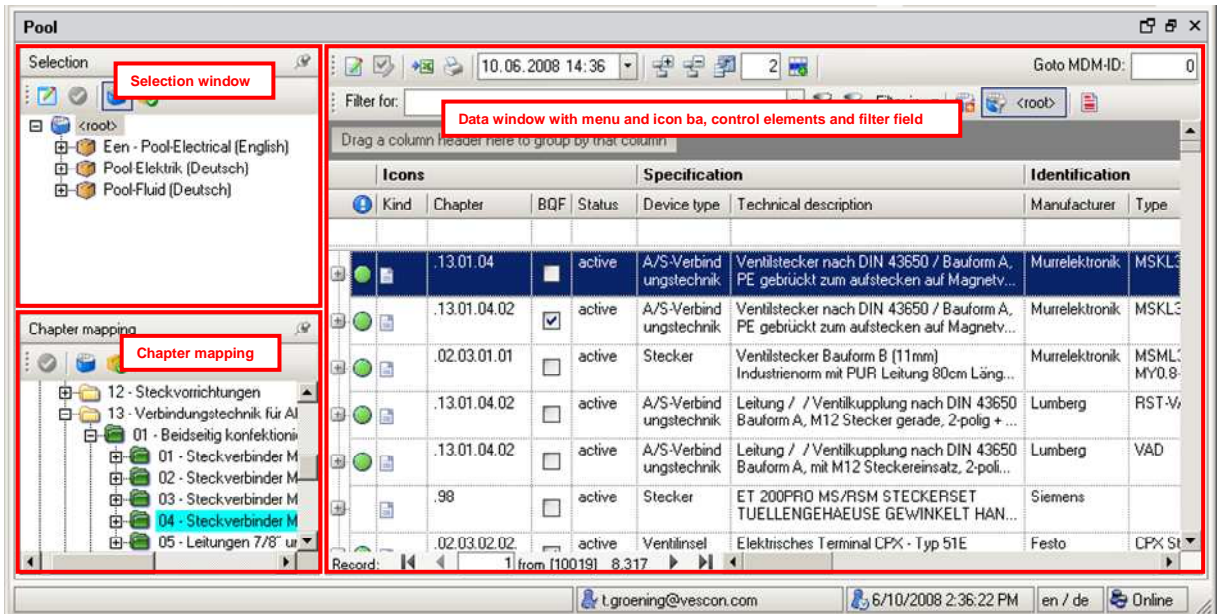
Among these is the menu bar with the search field, in which, independent of the active view window records can be searched for, including the icon bar.

At the lower edge of the screen is the status bar with the display of user names, date and time, language as well as the type of connection (online - offline).

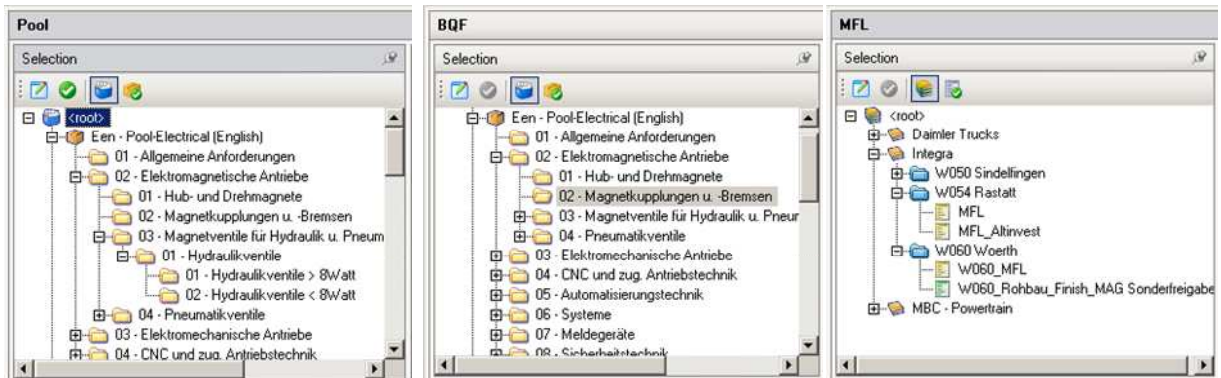
Windows and views are on the interface.

8.1.2 The view window (Pool, BQF, MFL)

The view window has the same layout in each of the three views (Pool, BQF, MFL). Upper left, the selection window, lower left the chapter window and to the right of it the data window with menu and icon bars, filters and input field for the desired MDM-ID (unique record number, assigned by the system counting upward).



8.1.3 The selection window



Views shows the structure with which the totality of records is logically and hierarchically subdivided in MDM. If only the root level is activated, all records are displayed in the data window. Every additional activated subdivision displays correspondingly fewer records. The underlying logic is based on conjunctions and is identical with the file / directory structure in WINDOWS.

The records are divided into sections under the root level and there into directories and chapters. Analogously, in the MFL view they are divided into MFL, directory, plant /factory and sector MFL. Detailed information see in Chapter 10.

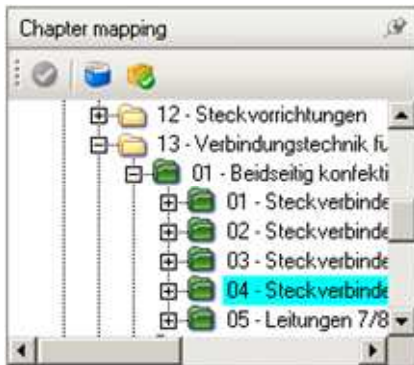
! In moving through the directory structure, observe the record counter at the lower edge of the view window - the lower the level selected, the smaller the number of records.

! Even when the root level is selected, not all the records are shown at program start, but only those with "active" status. In order to display locked records, click on the left side of the icon bar of the data window on the icon for show/hide locked records

The record counter now shows all records (e.g. "9,929 of 9,929").

Operating instructions for users

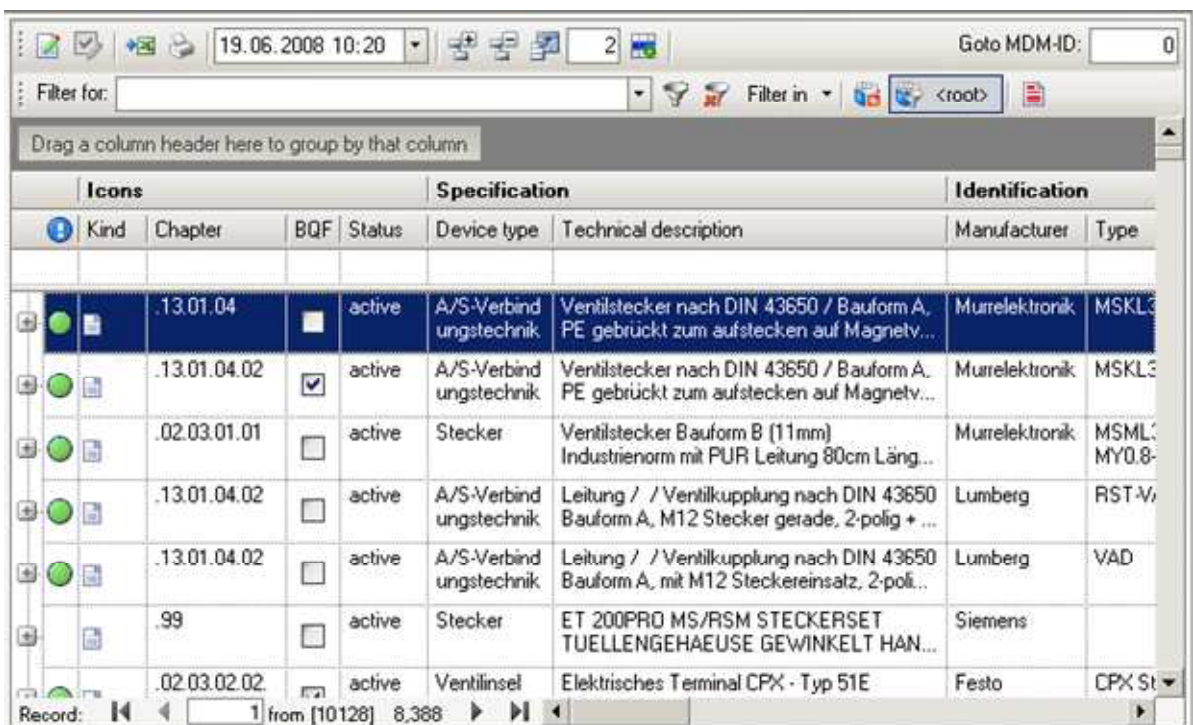
8.1.4 The chapter window



The chapter window shows to which chapter the record selected in the data window is assigned. The entry in the "Chapter" column of the record (e.g."13.01.04") is shown in the chapter assignment highlighted in color.

! For clear differentiation: In the selection window you move through the data structure and choose a chapter; in the chapter window, only the chapter assignment of the record marked in the data window is displayed!

8.1.5 The data window



Icons		Specification				Identification	
Kind	Chapter	BQF	Status	Device type	Technical description	Manufacturer	Type
	.13.01.04	<input type="checkbox"/>	active	A/S-Verbindungstechnik	Ventilstecker nach DIN 43650 / Bauform A, PE gebrückt zum aufstecken auf Magnetv...	Murrelektronik	MSKL3
	.13.01.04.02	<input checked="" type="checkbox"/>	active	A/S-Verbindungstechnik	Ventilstecker nach DIN 43650 / Bauform A, PE gebrückt zum aufstecken auf Magnetv...	Murrelektronik	MSKL3
	.02.03.01.01	<input type="checkbox"/>	active	Stecker	Ventilstecker Bauform B (11mm) Industriennorm mit PUR Leitung 80cm Läng...	Murrelektronik	MSML MY0.8-
	.13.01.04.02	<input type="checkbox"/>	active	A/S-Verbindungstechnik	Leitung / Ventilkupplung nach DIN 43650 Bauform A, M12 Stecker gerade, 2-polig + ...	Lumberg	RST-V
	.13.01.04.02	<input type="checkbox"/>	active	A/S-Verbindungstechnik	Leitung / Ventilkupplung nach DIN 43650 Bauform A, mit M12 Steckereinsatz, 2-pol...	Lumberg	VAD
	.99	<input type="checkbox"/>	active	Stecker	ET 200PRO MS/RSM STECKERSET TUELLENGEHAEUSE GEWINKELT HAN...	Siemens	
	.02.03.02.02	<input type="checkbox"/>	active	Ventilinsel	Elektrisches Terminal CPX - Typ 51E	Festo	CPX St

The record table with the corresponding result value is displayed in the data window, depending on the selection of chapter, MFL or filters. The table, with its operating elements and structure, is largely similar to the customary presentation in EXCEL; the width of columns can be changed, shown or not

Operating instructions for users

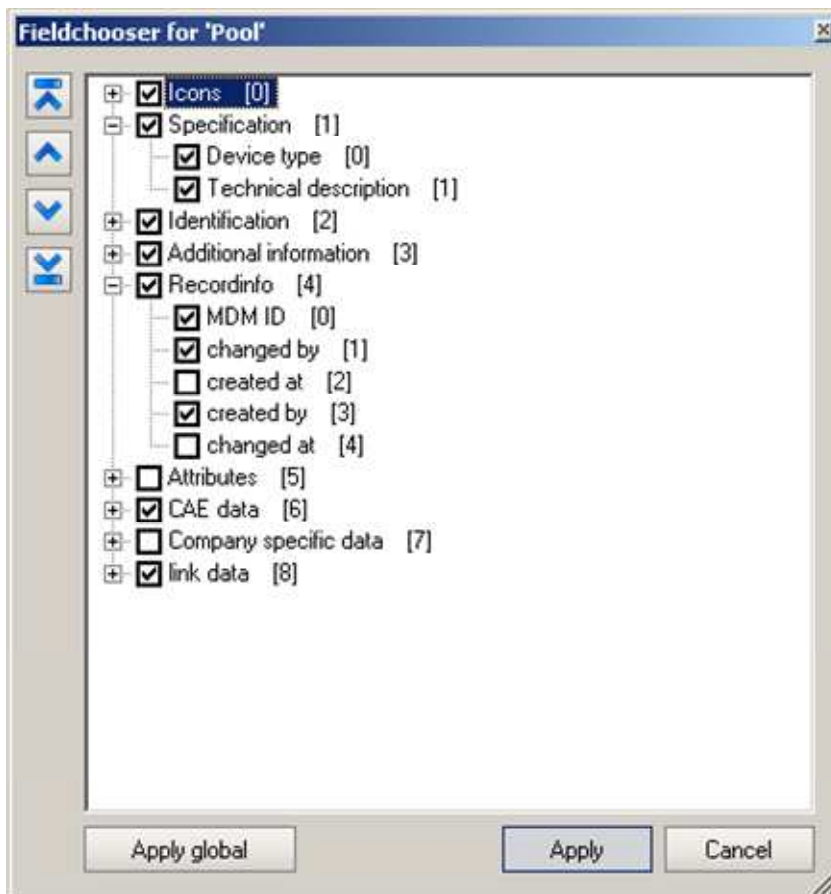
shown and moved to right or left. The columns that belong together are gathered into column areas (so, for example, the column area "Icons" contains the column "Type," "Chapter," "BQF" and "Status").

! At this point it is only a matter of presenting data; a detailed record description with contents, conventions and syntax rules can be found in Chapter 9.

8.1.6 Hide / display columns and column areas

At startup all columns are shown in the default setting. It is often desirable for reasons of clarity and easier manipulation to show or hide columns with their data fields in the tabular list. This option is available in all views (Pool, BQF, MFL, Combinations), using the icon [Show field options](#).

1. Click on the icon for [field options](#)
2. The field selection window is opened



All data fields or column areas are listed. The data fields visible in the current option or column area are checked in the control field. The hook can be inserted or removed by clicking. The icon shows that additional fields are hidden under the individual areas. These fields are displayed when this icon is clicked.

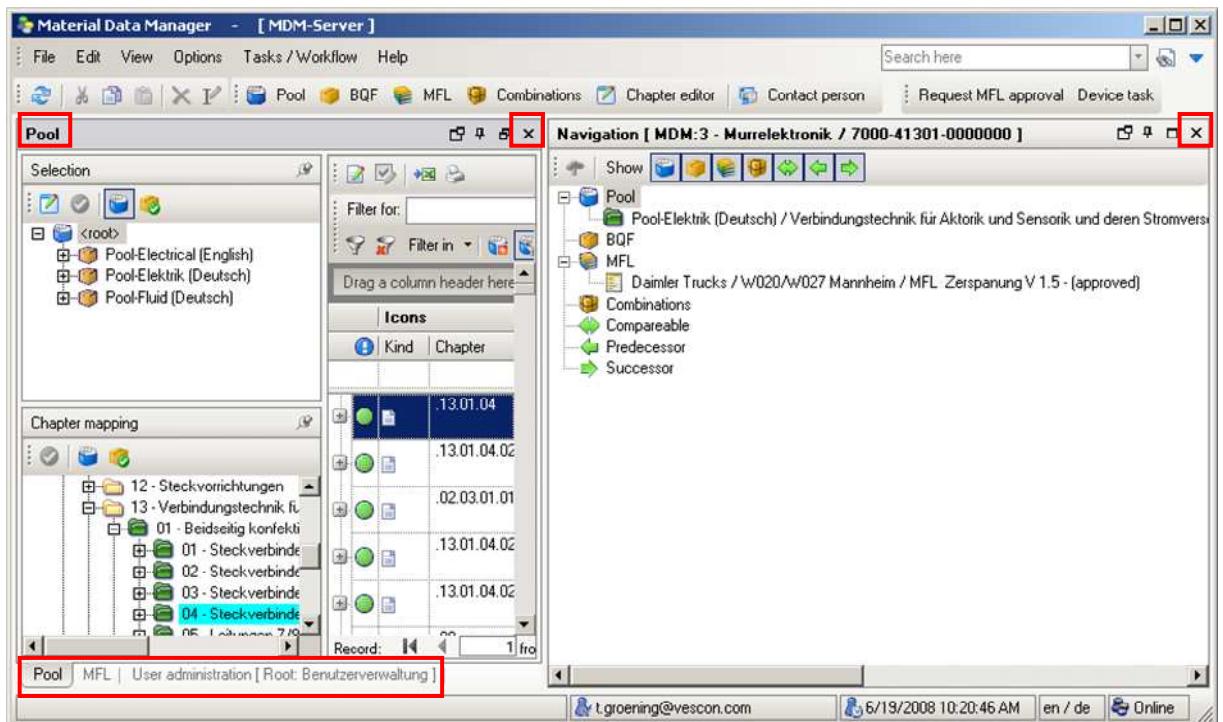
3. Construct your desired view by activating or deactivating the areas and fields.

Operating instructions for users

4. You can change the order of a marked area or field with the blue control elements (in the window up appears as left in the view, down correspondingly as right).
5. The **Global apply** button applies your selection for all views, the button **Apply** only for the current view. When the MDM is shut down, this selection is saved and displayed in the MDM at the next login.

! The MDM ID (unique record number counting up and assigned by the system) in the column "Recordinfo" is the unambiguous identity of each record. In communicating with other users of the MDM it is advisable to refer to the MDM ID, in order to avoid misunderstandings. Tip: Move the column with the MDM ID to the left front so that you can see it immediately in any view selected!

8.1.7 Register



Both the views already mentioned (Pool, BQF, MFL) and other windows as well from the menu item **View** can be active at the same time. They are displayed with the register analogous to the EXCEL tables within a file at the lower left edge of the interface. It is possible to toggle between the two views with a mouse click; they can be closed with the control elements.

8.2 Description of the menu list



Operating instructions for users

8.2.1 Menu file

- **Log off**
Ends the Material Data Manager and shows the login interface so that the user can log on under another name or on another server.
- **Close the cache and log off**
The Material Data Manager is automatically shut down and the local offline cache is closed.
- **Change password**
Serves to change the current password.
- **Closing**
Closes the Material Data Manager

8.2.2 Edit menu

- **Cut**
Copies a marked element into the clipboard and cuts the element
- **Copy**
Copies a marked element into the clipboard
- **Insert**
Inserts elements from the clipboard
- **Clear**
Clears marked elements
- **Rename**
Opens a dialog box for the renaming of data
- **Select all**
Marks all data

8.2.3 Menu view

- **Pool**
Opens the pool view and displays the Pool tree
- **BQF**
Opens the BQF view and displays the BQF tree
- **MFL**
Opens the MFL view and displays the MFL tree
- **Chapter Editor**
Opens the window for the Chapter Editor
- **Navigation window**
Opens the navigation window

Operating instructions for users

- **Combinations**
Opens the Combinations view
 - **Device history**
Opens the Device history window in which the changes in the currently highlighted device file are displayed.
 - **Successor**
Opens the Successors window Predecessor / successor relationships are maintained by VESCON.
 - **Comparison types**
Using the function Comparison types, files that can be alternatively used during the planning and projection phase are set in relationship to each other. In the CAD device list, first the file assigned in the CAD is displayed and under it, the comparison types defined in the MDM. Comparison types are currently only applied to terminal clamps and only defined and maintained by VESCON.
 - **User administration**
Window to manage user settings. These settings are only accessible to VESCON.
 - **Edit lists of items**
Interfaces to edit various lists of items such as manufacturer, Type/Production series, etc. These lists of items are maintained by the operator and VESCON.
 - **Parts list Editor**
Functionality is currently not available.
 - **Evaluations**
Opens the window for evaluations.
- ! In addition, each new view is displayed in addition to the already open view. A change can be made to the already open views via the registers at the lower left edge of the screen.

8.2.4 Menu extras

- **Default Section**
Selection of a section preset as default in the corresponding views (saved for each user) .
With a section it is possible to differentiate among electro technology, mechanics, fluid control, etc.
- **Default section MFL**
Selection of a preset section MFL (saved for each user) Selection of a section MFL makes it possible to limit access to a specific section MFL. This serves for person oversight.
- **Settings**
Administration of the color and schematic settings of the user interface In this window it is possible to edit one's own address data.

Operating instructions for users

8.2.5 Menu tasks / Workflow

- **Tasks**
List of tasks.
- **Edit task**
Opens the window to edit individual tasks.
- **Request MFL approval**
Opens window to select MFL
- **Device task**
Opens window to create device task

8.2.6 Menu help

- **Conditions of use**
General MDM conditions of use
- **Support-Information**
Telephone number and e-mail address for Support
- **Display operating instructions for users**
Calls up the operating instructions for users (Acrobat Reader must be installed on the computer).
- **Information about**
Gives general information about the MDM, e.g. the version.

Operating instructions for users

8.3 Description of the icon bar

8.3.1 Main icon bar



The icons mean:



Display / update data



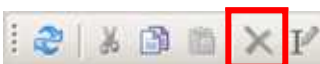
Cut



Copy



Insert



Clear



Rename



The icons mean:



Open Pool view



Open BQF view

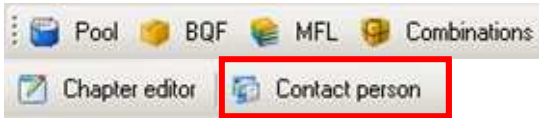
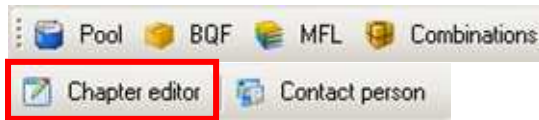


Open MFL view

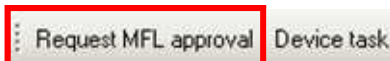


Devices and their components, option groupings or subassemblies can be configured in the combinations.

Operating instructions for users



The icons mean:



Chapter Editor

shows in the Pool data the contact persons responsible for chapter assignment and for MFLs in the MFL view.

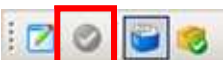
Opens the window Request material approval lists

Opens the window Device task

8.3.2 Icon bar Options and Chapter assignment



The icons mean:



Edit mode on / off

sets selected section as default.

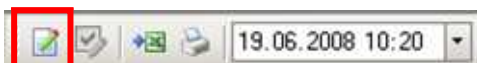
Display all

Display of default sections

8.3.3 Icon bar in data window



The icons mean:



Change the highlighted devices or set up new devices

Operating instructions for users



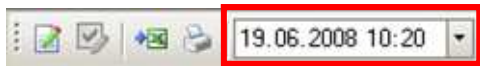
Change MFL assignment



Excel Export



Print selected records



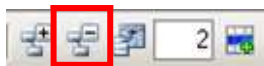
Enter date after which changes were made



The icons mean:



Reduce all groupings



Expand all groupings



Show field options



Maximal number of lines per file



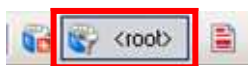
Switch preview line on and off



The icons mean:



Displays all devices in a list - independently of the MFL option chosen.



Switch Pool filter on and off



Show/hide locked records



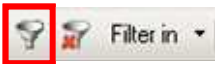
Entry field for the MDM ID that is to be found

Operating instructions for users

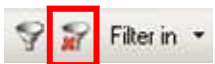
Filter for:



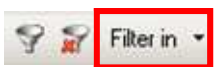
The icons mean:



Set filter



Reset all filters




Enter the columns to be filtered

Operating instructions for users

9 Record description

9.1 General Informations

A record in the MDM is a device or order unit with a unique order or article number and corresponding description. In the MDM, each record is only present once. At this point, once more the security notice that was already given in Chapter 2.1 - Data security:

	<p>Attention!</p> <p>Users are exclusively responsible for content and technical correctness of the records!</p>
---	--

If actions relating to data consistency and security are described in these operating instructions, this is indicated once more with this Notice icon.




The screen layout is described in Chapter 8.1. In all views (Pool, BQF, MFL) the records assigned to the respective sections with their directories and subdirectories (chapters) are listed in table form.

The lines contain a complete record and the columns the corresponding data fields. The data fields related by content are collected in the data field or column areas (specification, identification, etc.). Columns can be shown and hidden, records can be sorted and selected via the data fields.

9.2 Data Table



The fields - grouped in data fields or column areas with related content - contain the following data:

Scope of function

Icon	Content	Example
	For this record, all functions are available (for printout and Excel Export versions: "Premium")	like icon (green)
	These data can not be changed and no new data can be created for this manufacturer. Not all functions are available for them, e.g.: - Definition of predecessor / successor - Definition of comparison types - all workflow functions (For printout and Excel Export version: "Limited") In order to be able to use the entire scope of MDM function, a supplementary agreement with VESCON is necessary (see also Chapter 5.4 - Conditions of use).	like icon (red)
	Limited scope of service (no workflow functions); authorized users can change data and create new data.	like icon (blank)

Operating instructions for users


Icons

Field name	Content	Example
Type	Designate the record as standard device or material or as combination	 Standard  Combination
Chapters	Designate the hierarchical level in the directory structure, corresponds to the presentation in the Chapter assignment window	07.01.01.02
BQF	Indication whether this record is listed in a supplier approval (internal list of Daimler AG, that identifies preferred devices or materials, not relevant for suppliers and manufacturers)	Control field with or without <input checked="" type="checkbox"/>
Status	Status of the record Active or locked (see field notice here)	Active

Specification

Field name	Content	Example
Designation	Designation of devices or materials that are managed in an independent list of items and serve as additional classification.	Limit switch
Technical description	Description of devices or materials with their technical specifications. This field contains all significant properties. The basis for it is usually the manufacturer's catalogue. Syntax rules: the technical description always begins with the correct order information for the component. Word wraps and blank lines are not permitted because of sprawling field lengths, abbreviations are not permitted for the sake of better legibility and understanding. Content is displayed in CAD outputs (e.g. device lists).	Complete device roller lever with metal roller metal encapsulated, housing divisible; thread M20

Identification


Field name	Content	Example
Type	Device or material type that can have identical order numbers with a few manufacturers. Content is displayed in CAD outputs (e.g. device lists).	XCKJ
Order number	Order number of a device or materials that can have identical type designations with a few manufacturers.  Changes in order numbers can have a direct effect on existing ordering processes! New components may never be created by changing the order number! (see also predecessor / successor)	XCKJ110513H29



Operating instructions for users

	Content is displayed in CAD output (e.g. device lists).	
Type/Construction series	Definition of construction series Components that belong together can thus be grouped in item lists according to manufacturer.	Harmony style 4/5
Manufacturers	Manufacturers of devices or materials that are managed in an independent list. Content is displayed in CAD outputs (e.g. device lists).	Schneider electric

Additional information

Field name	Content	Example
Documents	Documents or Internet links with additional information.  When Internet links are utilized, users must update every change here in the data structure in order to have continued access to the information stored here!	XCKJ.2.pdf www.vescon.com
Comment	Comments regarding components that are not part of the technical description	At this time, no operating instruction is available.
Note	Notes regarding record management, such as the justification for locking a record	***Lock DS*** Linking identification numbers in the Order number field. Components ...

Attributes

Field name	Content	Example
Height [mm]	Height of the device or material in mm	440
Width [mm]	Width of the device or material in mm	120
Depth [mm]	Depth of the device or material in mm	67
Length [m]	Length of a cable or pipe in m	50
Diameter [mm]	Diameter of the device or material or the bore in mm	30
Packing unit	Number of devices / materials per order / packing unit	10

CAE data (for Transfer into the CAD system RUPLAN)

Field name	Content	Example
------------	---------	---------

Operating instructions for users

TD1	Place holder 1 for technical data for entry into documentation The content of this column is forwarded to the text place holder TD1 of the icon in the CAD (for terminals also as entry in terminal connection table).	bl
TD2	Place holder 2 for technical data for entry in the documentation The content of this column is forwarded to the text place holder TD2 of the icon in the CAD.	
TG1	Address of the functional object in the CAD system RUPLAN (Image of the record in the CAD system)	H11502A0
TG2	Alternative address of the functional object in the CAD system RUPLAN (Image of the record in the CAD system)	
TG3	Alternative address of the functional object in the CAD system RUPLAN (Image of the record in the CAD system)	
Company-specific data		
Item code number W010 - W175	Plant operator's factory-specific warehouse no.	Y700009461993
SRM item code number	Plant operator's all-factory warehouse no.	QEV111ABABGY
Record information		
Field name	Content	Example
Changed by	User who changed the record	kh.charusa@vescom.com
Created on/at	Date and time of creation of record	26.04.2007 14:34
Created by	User who created the record	kh.charusa@vescom.com
Changed on/at	Date and time of change of record	26.04.2007 14:34
MDM-ID	Internal record number for unambiguous identification of the record Corresponds to the assigned address in the CAD/CAE The current version number follows the minus.	5421 - V0.2

Linkage data

Operating instructions for users

Field name	Content	Example
Number of linkages	Number of times the device or material was assigned to a MFL or a chapter of a BQF	1
Changed on/at	Date and time of the change	02.05.2007 09:43
Linkage status	Status of the record in the MFL view	approved
Changed by	Identification of the user who changed the record	t.hg@vescon.com
Created on/at	Date and time of the creation	02.05.2007 09:42
Created by	Identification of the user who created the record	t.hg@vescon.com

9.3 Degree of detail of the data

In the section "Pool-Electrical (English)", all components listed in a part, device or cable list of the CAD/CAE system must be entered in detail with order number. Instead, for other components a super ordinate entry can be made (e.g. type), where in the document field the individual order numbers must be listed or saved as an annex to the file.


Operating instructions for users

10 Data structures and linkages to material approval lists - MFL


A record in the MDM is a device or an order unit with a unique order or article number and corresponding description or, if necessary, a type description (see degree of detail of data).

The organization and presentation of the data is done via the area of the Pool, BQF and MFL data.

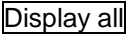
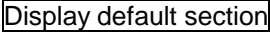
In the MDM, each record is only present once. Assignment to different MFLs or grouping in combinations is done by means of links. The object model stored in the MDM thus permits any assignment desired with simultaneous assurance that the material data are consistently up to date and free of redundancy (see Chapter 1.2).


 Creating, changing or clearing directories, sections, chapters, MFLs etc. is only possible for authorized personnel of the plant operators. When new records are created, a chapter to which the new record will be assigned must be selected (see Chapter 10.1); the approval of a record in a MFL can be requested for premium records via the workflow in the MDM (see Chapter 10.3).

10.1 Pool data

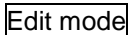

In the **View** menu with the menu item **Pool** or with the icon  the user activates the device pool of the Material Data Manager.

In this view, all records present in the MDM can be displayed. The records are divided below the root level into sections and at that level into directories and chapters (sub-directories).

It is possible to set a **Default Section** as a standard structure in order, for example, to have rapid access to frequently used records. This definition is only possible on the Pool level. In the icon bar of the Selection window it is possible to toggle rapidly back and forth by activating the icons  or .

 The structure of the Pool data is dynamic, additional sections and chapters different from this record description can be added!

10.1.1 Creation of a section / directory

1. in the Selection window activate the icon 
2. click with the right mouse button on the record in which you wish to add the new section
3. select the menu item **add record**
4. in the field "Name" enter the selected term and confirm the entry with the button 
5. in the field Number the MDM, program driven, counts a three-place number up. This serves the sorting order in the Options and Chapter assignment windows. If you wish a different sorting order, any changes can be entered.

10.1.2 Renaming of a section / directory

1. in the Selection window activate the icon 

Operating instructions for users

- click with the right mouse button on the section you wish to rename.
- select the menu item **rename**
- or
activate the icon **Rename** on the main icon bar.
or
select in the menu **Edit** the menu point **Rename**
- in the field "Name" enter the selected term and confirm the entry with the button **Apply**
- in the field Number the MDM, program driven, counts a three-place number up. This serves the sorting order in the Options and Chapter assignment windows. If you wish a different sorting order, any changes can be entered.

10.1.3 Copying a section / directory

- in the Selection window activate the icon **Edit mode**
- click with the right mouse button on the section you wish to copy.
- select the menu item **Copy**
- or
activate the icon **Copy** on the main icon bar.
or
select in the menu **Edit** the menu point **Copy**

10.1.4 Inserting a section / directory

- in the Selection window activate the icon **Edit mode**
- click with the right mouse button on the section under which you wish to insert the copied section
- select the menu item **Insert**
- or
activate the icon **Insert** on the main icon bar.
or
select in the menu **Edit** the menu point **Insert**

10.1.5 Deleting and Inserting/shifting a section / directory

This function is carried out by means of the WINDOWS drag & drop technique:

- in the Selection window activate the icon **Edit mode**
- click with the left mouse button on the section you wish to cut and insert or shift
- hold the left mouse button down and drag the section to the target section under which the section is to be placed and release the left mouse button.

Operating instructions for users

10.1.6 Clearing a section / directory


1. in the Selection window activate the icon **Edit mode**
2. click with the right mouse button on the section you wish to clear.
3. select the menu item Clear
4. or
activate the icon **Clear** on the main icon bar
or
select in the Edit menu the menu point Clear

10.1.7 Creation of a Default Section

1. click with the right mouse button on the section you wish to set up as Default section. This definition is only possible on the Pool level.
2. Select the menu point **Set as Default**

the selected Default section is now active in the Selection window; the new Default section is listed in the menu **Extras**.

In the icon bar of the Selection window it is possible to toggle rapidly back and forth by activating the icons **Display all** or **Display default section**.

 Working in sections and chapters proceeds as in the WINDOWS structures - directories and sub-directories or folders and files.

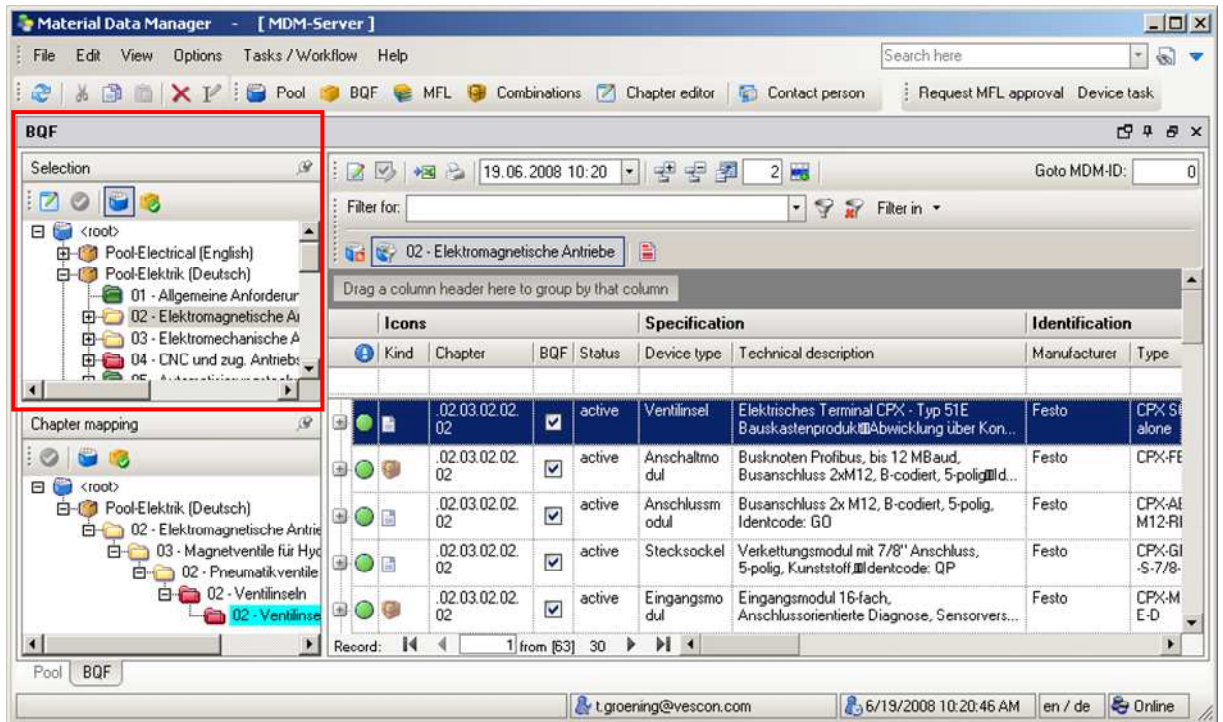
10.2 BQF - Supplier approval

The functions of supplier approval are only available to administrators and the operator's managers (see Chapter 3.3); suppliers can not change the structure of the Pool data.

All materials that belong to the operator's "superordinated" material approval list are listed in the BQF (**BQF**: the german abridgement of "**BezugsQuellenFreigabe**"). Approval within the BQF must not be confused with the approval of materials in a project (see Chapter 9.3). The supplier must use its project-related approval list in accordance with the bidding documents and in coordination with the operator.

The supplier approval view of the Material Data Manager is opened in the menu **View** via the menu point **BQF** or with the icon **BQF**. A standard structure can be set (e.g. for electrical engineering or mechanics).

Operating instructions for users




10.2.1 Structure of the BQF data

The structure and functionality broadly correspond to those of the Pool data and material approval lists (see Chapter 10.1). Here too the sections can be subdivided into directories, which builds up a structure for the records.


10.2.2 Assigning records to a supplier approval

To assign a record to a BQF, the following steps must be performed:

1. Highlight the selected record in the records table
2. Click on the icon  Edit highlighted devices or Add new device
3. Check the control field in the BQF column
4. Click on the **Save** button

10.2.3 Removing records from a supplier approval


To remove a record from a BQF, the following steps must be performed:

1. Highlight the selected record in the records table
2. Click on the icon  Edit highlighted devices or Add new device
3. Uncheck the control field in the BQF column
4. Click on the **Save** button

Operating instructions for users

10.3 MFL - Material approval lists

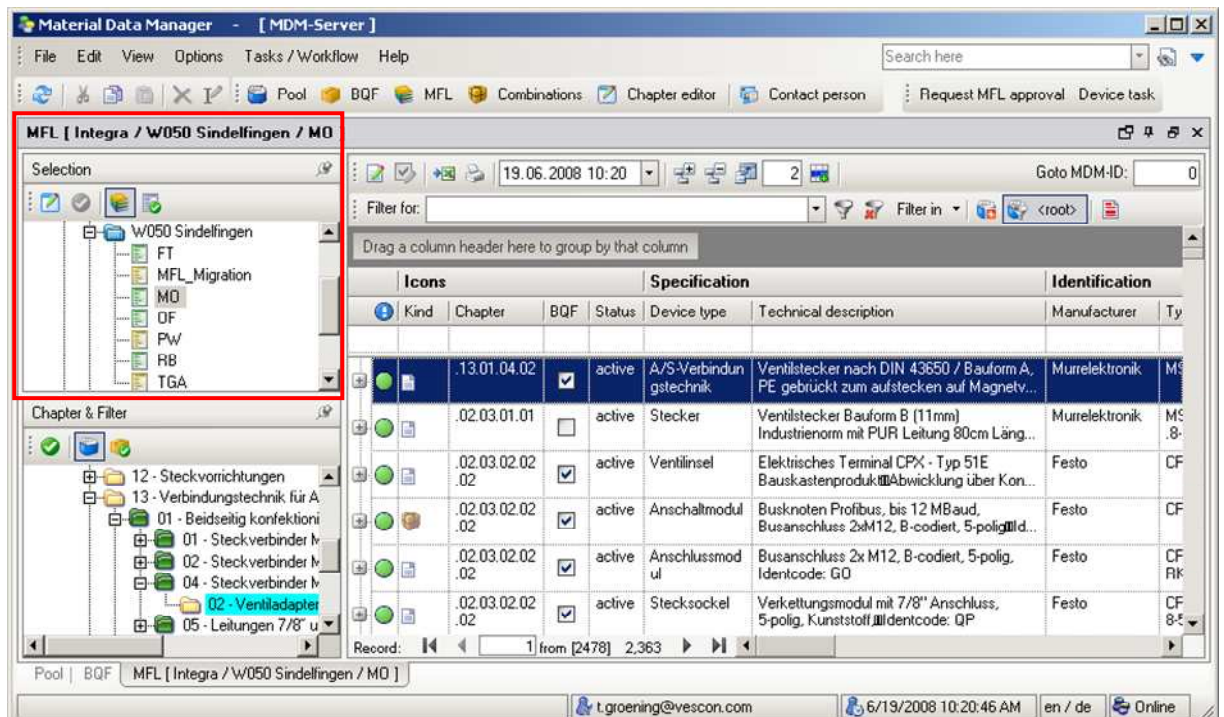
Plant operators define the devices, components and systems that supplier firms may use for the plant and machines to be delivered, in a material approval list (**MFL**: the german abridgement of "MaterialFreigabeListe").

 Suppliers must request from the operator the project-related MFL that applies to them and may use only these data. The fact that some materials may already appear on other MFLs is no justification for using them in a new project! The use of "non-approved" materials in plants and machines is absolutely not permitted!

Hierarchies in the MFL

In the MDM, each record is only present once. Assignment to different MFLs or grouping in combinations is done by means of links. The object model stored in the MDM thus permits any assignment desired with simultaneous assurance that the material data are consistently up to date and free of redundancy.

The hierarchies in the MFL, like the Pool data follow the known WINDOWS structures of directory / sub-directory and form a tree structure. Every MFL can be subdivided into plant and sector MFLs, where a sector MFL is the lowest level.




The icons within the hierarchical tree structure have the following meaning:

Icon	Designation	Description
 <root>	Root	Root / Root of the MFL




Operating instructions for users


Icon	Designation	Description
 iDCX	MFL	MFL level, serves to map an area
 01 - Kabel	Directory	Directories serve to structure the MFL tree; creation of sub-directories is possible.
 W050 Sindelfingen	Plant / Factory	Plants or factories can be set up under a MFL.
 FT	Sector MFL	A sector MFL can be set up under a MFL or plant / factory.


 The currently selected MFLs and their directory structure are displayed both in the view window and the status bar!

Status of the sector MFL

The colors of the icons for the sector MFLs have the following significance:



Icon	Color	Status	Description
 Bereichs-MFL	Yellow	1. - In planning	MFL is in the planning stage with the operator
 Bereichs-MFL	Green	2. - Approved	the MFL is approved for the supplier
 Bereichs-MFL	Red	3. - Archived	Changes are no longer possible

 The change in status (only by plant operators) is only possible in sector MFLs in the series presented above. Reversal is not possible for reasons of data consistency and control of the workflow!

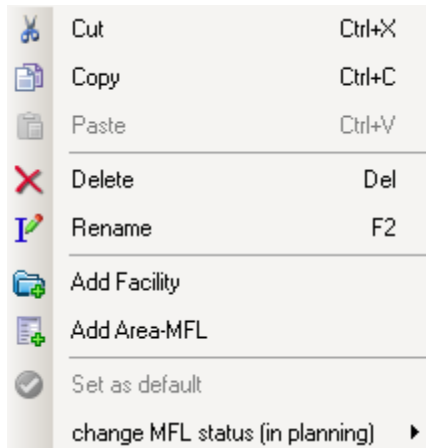
 All MFLs and the corresponding records are visible to all users of the MDM independently of their status.

10.3.1 Adding Directory, MFL, Plant / Factory or sector MFL

The following steps must be performed:

1. Click on the icon  in the main icon bar
2. Click on the  icon in the Selection window of the MFL view
3. Highlight the hierarchy level in the MFL tree under which the new MFL, the new directory or the new plant or factory are to be added and click the right mouse button, the context menu of the given hierarchy level will open in the MFL tree

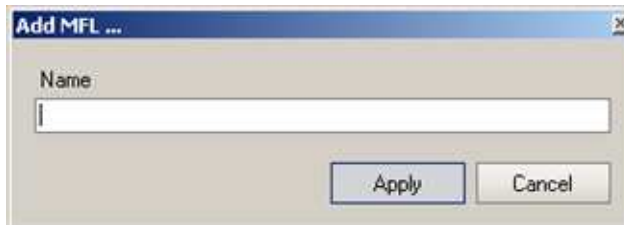
Operating instructions for users



4. Select the new hierarchy level and enter the name



Dialog box titled "Add Folder ...". It contains a text input field labeled "Name" with a red exclamation mark icon on the right. Below the field are "Apply" and "Cancel" buttons.



Dialog box titled "Add MFL ...". It contains a text input field labeled "Name". Below the field are "Apply" and "Cancel" buttons.



Dialog box titled "Add Plant ...". It contains a text input field labeled "Name" with a red exclamation mark icon on the right. Below the field are "Apply" and "Cancel" buttons.



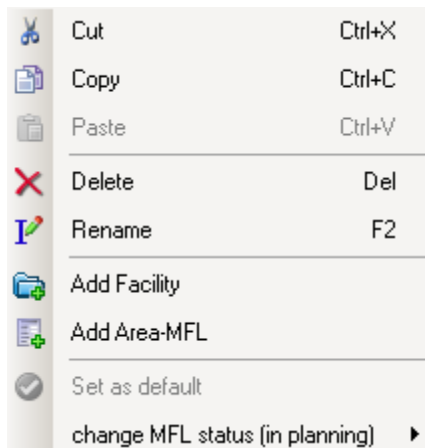
Dialog box titled "Add Area ...". It contains a text input field labeled "Name" with a red exclamation mark icon on the right. Below the field are "Apply" and "Cancel" buttons.

Operating instructions for users


10.3.2 Change status - approving MFL and archive it

The following steps must be performed:

1. Click on the icon **Display a new MFL window** in the main icon bar
2. Click on the **Edit** icon in the Selection window of the MFL view
3. Highlight the sector MFL of which the status is to be changed and click the **right mouse button**; the context menu will be opened at the right hierarchy level in the MFL tree.



4. In a new sector MFL you can change the status "in planning" using the context menu **Set Status** to "approved"; for existing sector MFLs you can change the status "approve" to "archived" using the context menu **Change status sector MFL**.

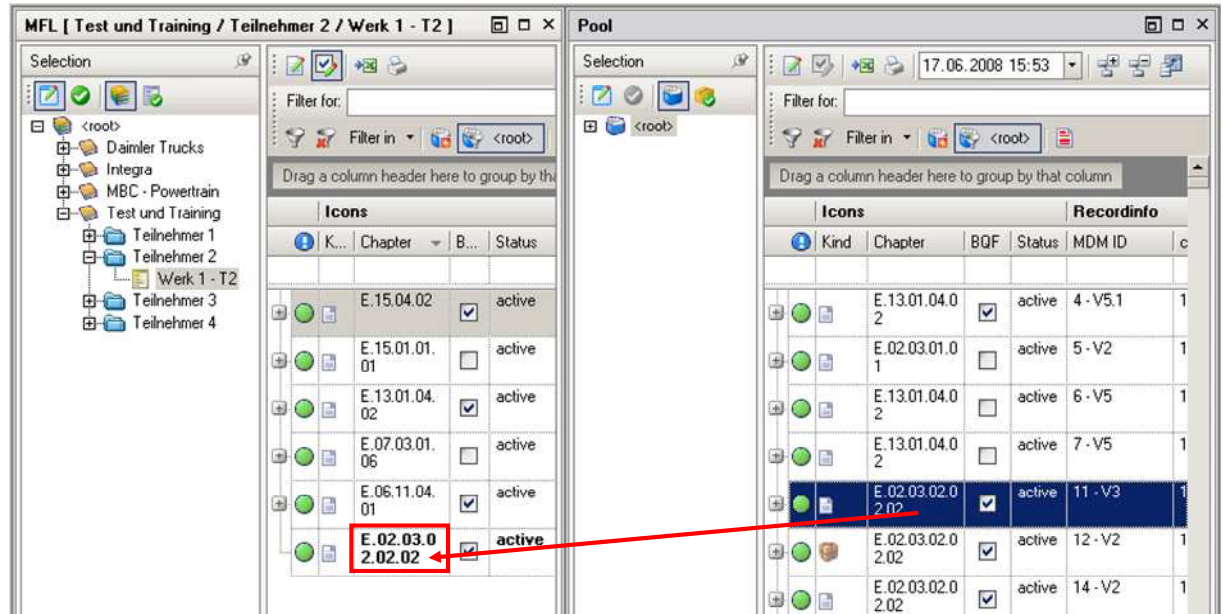
 As soon as the MFL has the status "approved" all changes are recorded. Reversal of the status (see above) is no longer possible. Materials in an approved sector MFL can no longer be cleared.

Operating instructions for users

10.3.3 Approving data in MFL

The MFL manager can approve records in various ways:

- **By the workflow (see Chapter 17)**
- **By drag & drop (optimal when two screens are used)**



1. Open the MFL view and from there the MFL in which you wish to approve the record
2. Click on the **Edit mode** icon in the Choose MFL window and enlarge it until the record table of the MFL becomes visible.
3. Drag & drop the record to be approved from the record table of the Pool view into the record table of the MFL view.

- **By activating the control fields ("checking")**

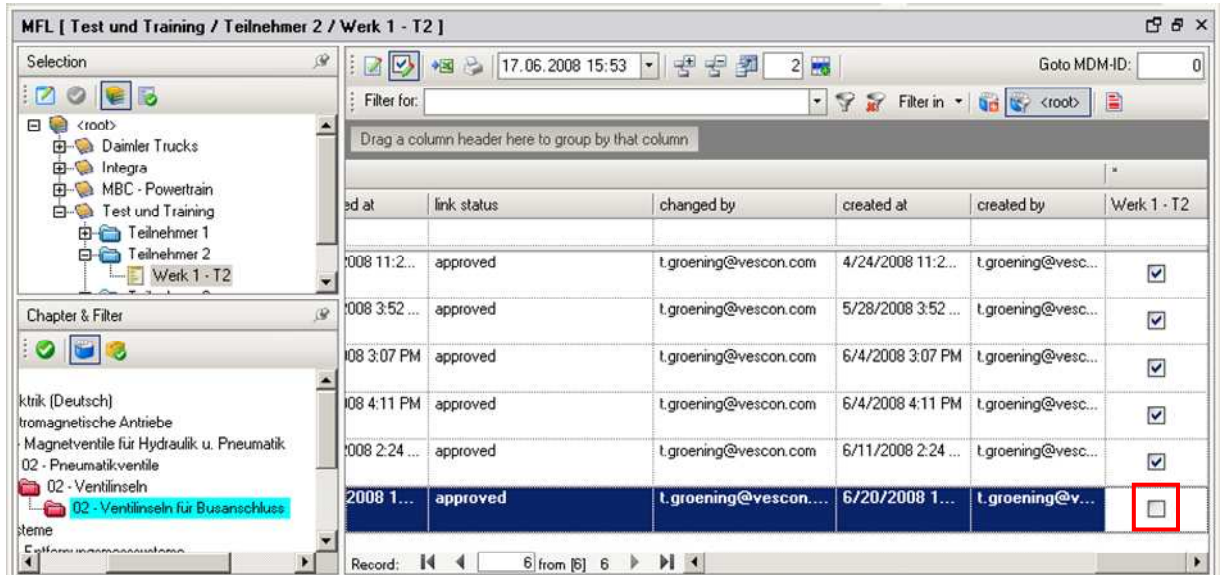
To do this, proceed as follows

1. Select the MFL
2. Click on the icon **Display all devices in list**
3. Click on the icon **Change MFL assignment**
4. Activate the control box

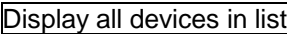
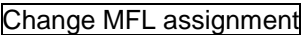
Operating instructions for users

10.3.4 Removing data from a MFL

This is possible at any time as long as the MFL is still in the "in planning" status (see above). From the status "approved" onward, records are only marked as cleared (~~strikethrough~~).



id at	link status	changed by	created at	created by	Werk 1 - T2
008 11:2...	approved	t.groening@vescon.com	4/24/2008 11:2...	t.groening@vesc...	<input checked="" type="checkbox"/>
008 3:52 ...	approved	t.groening@vescon.com	5/28/2008 3:52 ...	t.groening@vesc...	<input checked="" type="checkbox"/>
008 3:07 PM	approved	t.groening@vescon.com	6/4/2008 3:07 PM	t.groening@vesc...	<input checked="" type="checkbox"/>
008 4:11 PM	approved	t.groening@vescon.com	6/4/2008 4:11 PM	t.groening@vesc...	<input checked="" type="checkbox"/>
008 2:24 ...	approved	t.groening@vescon.com	6/11/2008 2:24 ...	t.groening@vesc...	<input checked="" type="checkbox"/>
2008 1...	approved	t.groening@vescon....	6/20/2008 1...	t.groening@v...	<input type="checkbox"/>

1. Select the MFL
2. Click on the icon  Display all devices in list
3. Click on the icon  Change MFL assignment
4. Deactivate the control box

Operating instructions for users

11 Searching for records, filtering and grouping

! In Chapter 8.1.6 there is a description of how you can hide data fields that are not needed. This saves working with the horizontal scroll bar and makes the screen clearer!

At this point, remember the old data processing classic: "empty" is not the same as "blank," "null" is not the same as "0"... The more carefully the data are entered, the easier it is to find them (see Security notes in Chapter 9)!

If at the start of work you are still somewhat unsure with use of the MDM, try Search options and Syntax on the test and schooling server!

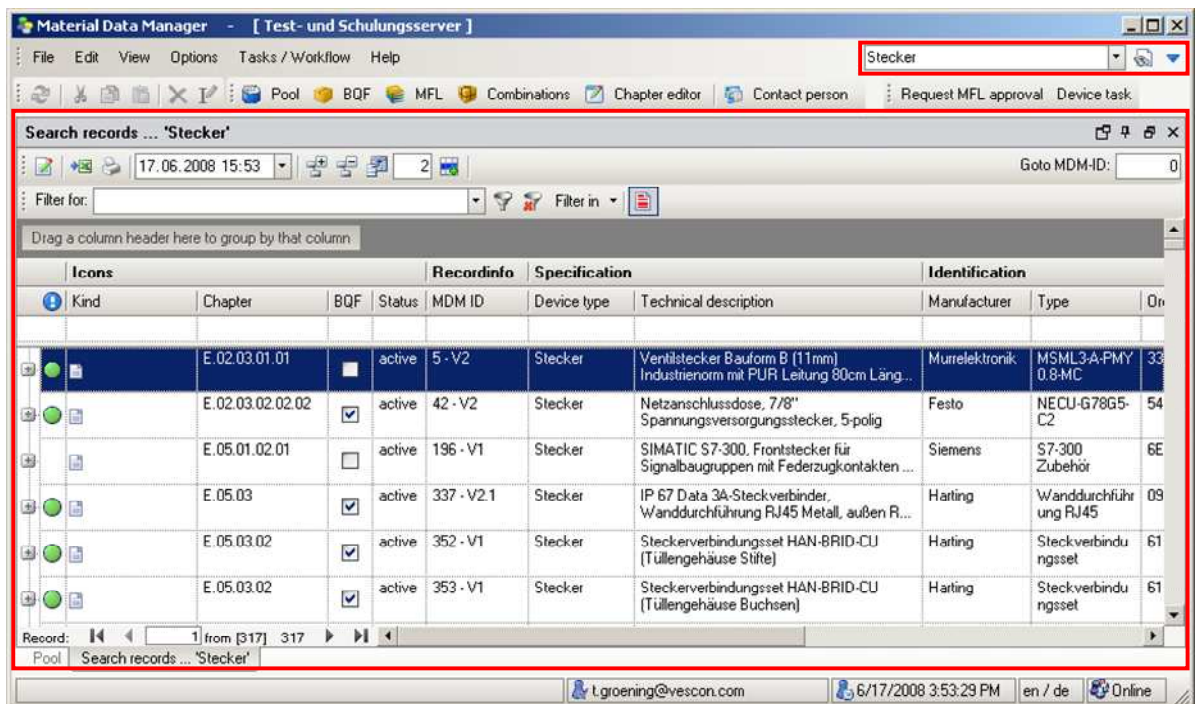
The Material Data Manager offers several options for this purpose, depending on the scope and depth of the research. Which procedure is appropriate depends on the concrete requirements.

11.1 Searching for records

11.1.1 Searching in general

Independently of the currently active view window (Pool, BQF, MFL) or other windows opened via the menu point View (device sequence, navigation, etc.) it is possible to search the entire MDM, including locked records.

For this reason, the search field, as by now in almost all programs with a search function, the search field is located to the upper right directly on the program interface outside the view window. As soon as the search is begun, a dedicated view window, "Search for records '...'" is opened and at the lower left a new register "Search for records '...'" is displayed (see also Chapter 8.1).

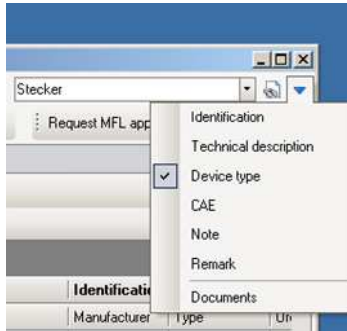


The screenshot shows the Material Data Manager interface with a search window open. The search term 'Stecker' is entered in the search field. The search results are displayed in a table with columns for Icons, Recordinfo, Specification, and Identification. The table contains several records for different types of connectors.

Icons	Recordinfo	Specification	Identification						
Kind	Chapter	BQF	Status	MDM ID	Device type	Technical description	Manufacturer	Type	On
	E.02.03.01.01	<input type="checkbox"/>	active	5-V2	Stecker	Ventilstecker Bauform B (11mm) Industriennorm mit PUR Leitung 80cm Läng...	Murrelektronik	MSML3-A-PMY 0.8-MC	33
	E.02.03.02.02.02	<input checked="" type="checkbox"/>	active	42-V2	Stecker	Netzanschlussdose, 7/8" Spannungsversorgungsstecker, 5-polig	Festo	NECU-G78G5-C2	54
	E.05.01.02.01	<input type="checkbox"/>	active	196-V1	Stecker	SIMATIC S7-300, Frontstecker für Signalbaugruppen mit Federzugkontakten ...	Siemens	S7-300 Zubehör	6E
	E.05.03	<input checked="" type="checkbox"/>	active	337-V2.1	Stecker	IP 67 Data 3A-Steckverbinder, Wanddurchführung RJ45 Metall, außen R...	Harting	Wanddurchführung RJ45	09
	E.05.03.02	<input checked="" type="checkbox"/>	active	352-V1	Stecker	Steckerverbindungsset HAN-BRID-CU (Tüllengehäuse Stifte)	Harting	Steckverbindungsset	61
	E.05.03.02	<input checked="" type="checkbox"/>	active	353-V1	Stecker	Steckerverbindungsset HAN-BRID-CU (Tüllengehäuse Buchsen)	Harting	Steckverbindungsset	61

Operating instructions for users

In the example above, the string "Stecker (= plug)" was only searched for in the "Device type" column, since all other columns were excluded from the search via the selection window "Search in..."



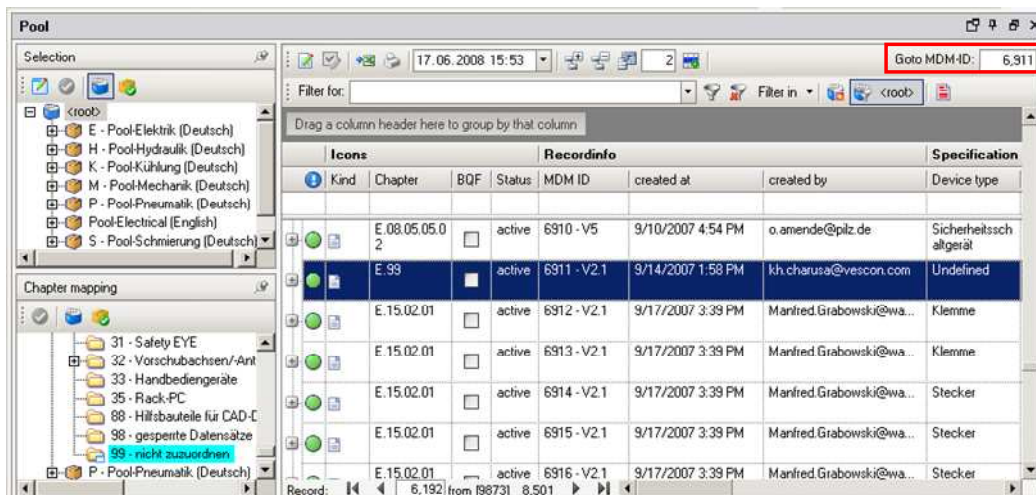
If, for instance, the column "Technical description" were also selected, the number of results would be distinctly larger, since the string "Stecker (=plug)" would also be found, independently of the "Device type" column!

1. Click in the field "Look in" and check the data fields or column areas in which the search should be done.
2. Click in the field "Look for" and enter the search term; the result list is displayed. The record indicator at the lower edge of the screen shows the number of records found.
3. The sorting sequence complies with the data processing standard. To reverse the sorting sequence click on the data field or column title according to which the sorting is to be done. On the right, next to the data field or column title a selection arrow appears with which you can change the sorting sequence again.

After the search you can close the window, use the list at lower left in the view window to change to another view or start another search.

11.1.2 Searching for the MDM ID

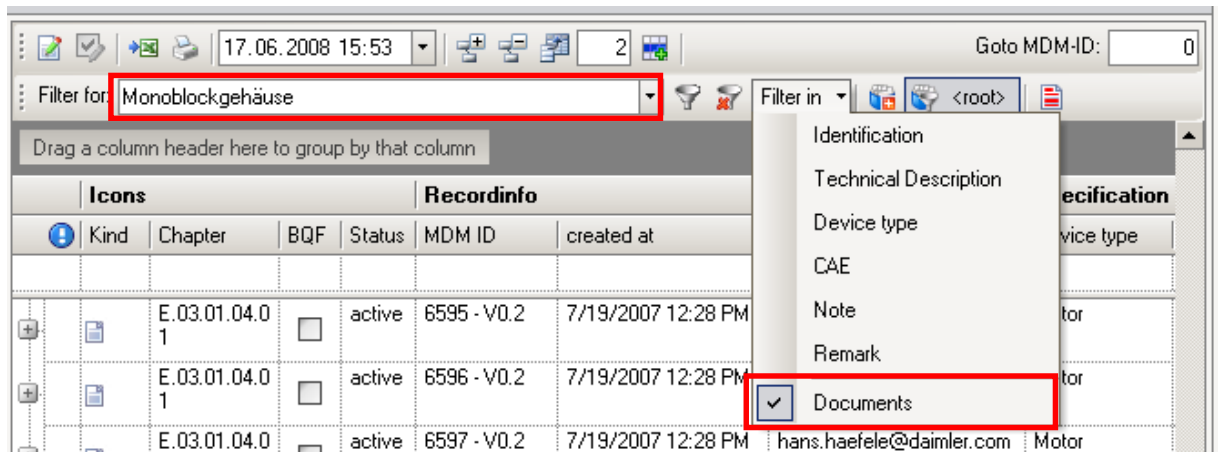
Individual records can be found at once using the field "Go to MDM-ID" but Attention: only in the currently open view window!



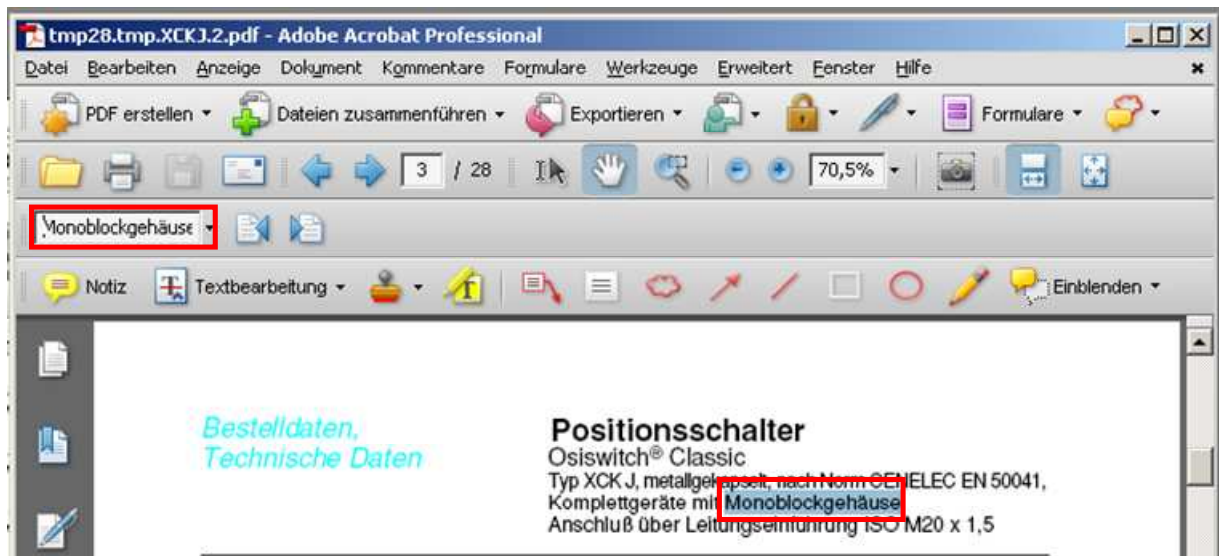
Operating instructions for users

11.1.3 Searching in documents

In the "Documents" column there is very comprehensive information stored in the form of links, PDFs, JPGs etc., such as construction drawings or data sheets. In these documents as well you can search for any character string.




If the document in question is opened in one of the records found, the character string can be found there with the available search tools.



To search in documents, proceed as follows:

1. Activate the control field "Documents" in "Filter in"
2. Enter the desired character string in "Filter for"
3. In the column "Documents" open the link or the file with a double click
4. Use the tools available in the target document, such as "search for" or "go to"

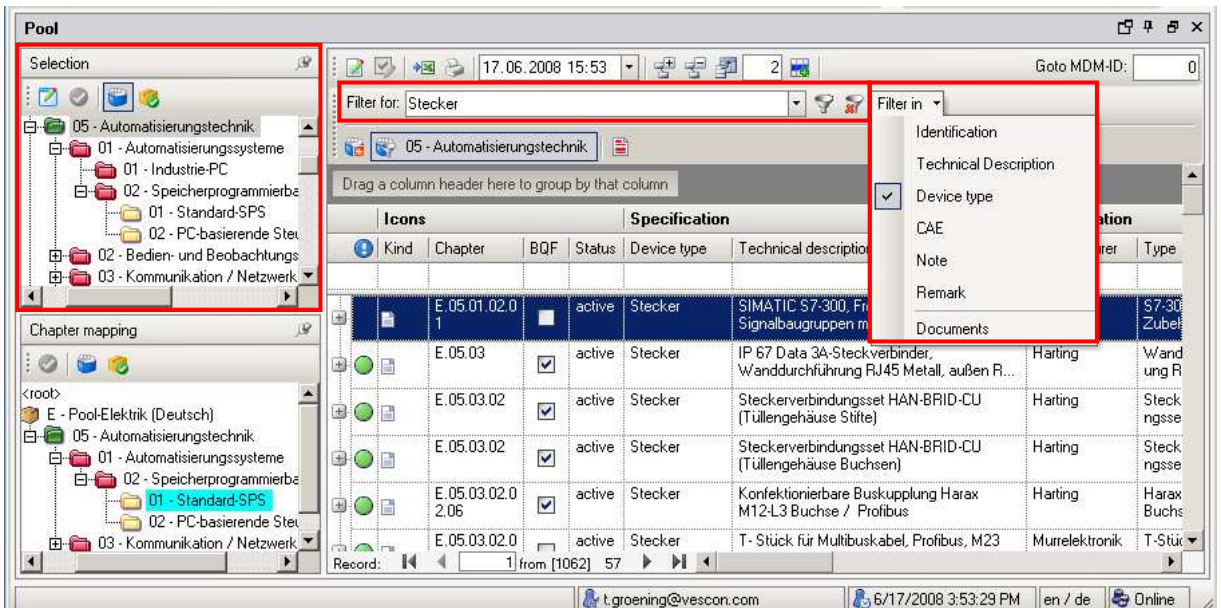
 If you use links in your record, please make sure that addresses are up to date: links that lead nowhere turn the great advantage of this facility into the opposite!

Operating instructions for users

11.2 Filtering records

11.2.1 Filtering via input field

In contrast to "Search" in the entire MDM (see above), always "filter" only in the currently open view window (Pool, BQF, MFL). If as in the following example a chapter in the selection window is already activated (here: 05 automation technology), the number of results will be accordingly smaller; if in addition the column selection in the "Filter in" window is sharply limited, the number of records found is even smaller, in accordance with the underlying AND conjunctions.



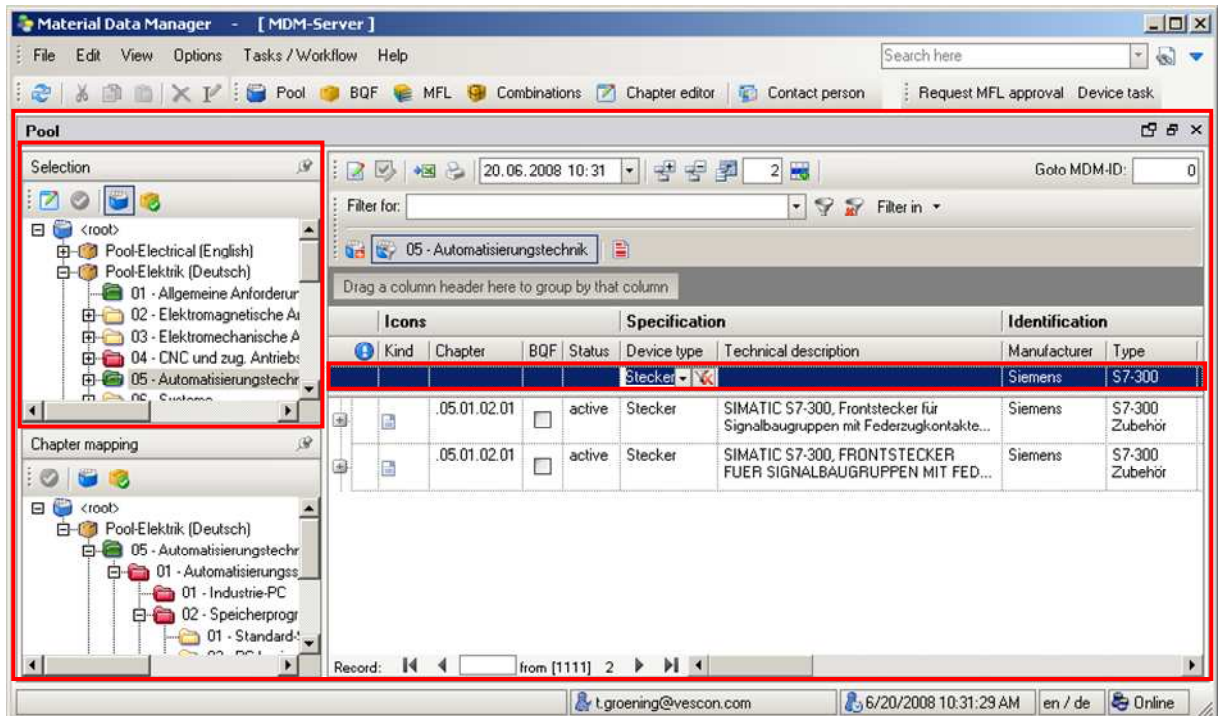
1. Click in the input field "Filter in" and check the data fields or column areas in which the filtering should be done.
2. Click in the input field "Filter for" and enter the search term; the result list is displayed. The record indicator at the lower edge of the screen shows the number of records found.
3. The sorting sequence complies with the data processing standard. To reverse the sorting sequence click on the data field or column title according to which the sorting is to be done. On the right, next to the data field or column title a selection arrow appears with which you can change the sorting sequence again.

Using the icon [Show/hide locked records](#) you can change the results; using the icon [Reset all filters](#) you can clear the filter criteria.

Operating instructions for users

11.2.2 Filtering by column title

Another possibility for filtering with any limiting AND linkage is filtering by column title.



1. Click in the free field under the column title and enter the filtering criterion there (in the columns "Manufacturer," "Type / construction series" and "Designation" there are selection lists available).
2. Repeat the procedure in the other columns until you have achieved the desired AND linkage by means of filtering (in the example above: in the chapter Automation Technology all plugs of the manufacturer Siemens of type S7-300)
3. The sorting sequence complies with the data processing standard. To reverse the sorting sequence click on the data field or column title according to which the sorting is to be done. On the right, next to the data field or column title a selection arrow appears with which you can change the sorting sequence again.
4. Deactivate individual filters using the icon **Reset filters** on the right next to the filter item, to clear individual filter criteria. All filters can be deactivated using the appropriate icon on the right next to the input field "Filter for" **Reset all filters**.

11.2.3 Advanced filter options

If you wish to have searches in the database that go beyond the above-mentioned possibilities, the Material Data Manager provides you with a powerful tool: the query for REGEX standard (REGular EXpressions) with all linkages, operators and place holders. Going into detail on this topic would exceed the limits of this user's manual, but you will find a minimal selection of expressions here that make a more comprehensive search in the MDM possible.

Operating instructions for users

Syntax:

Sign	Meaning	Example
	OR (conjunctive)	shows all scanners and computers in the field "Designation"
empty/blank	AND	shows only Mustermann AG scanners in the fields "Designation" and "Manufacturer"
*	Wildcard	replaces any desired sign in any desired quantity. For instance, when "re*" is input, it displays in the "Designation" field words like regulator or remainder
?	Place holder	replaces only one character; in the fictitious field "verb" if "l?ve" were input, would display: love, live but not leave

Examples:

You are searching in the field "Designation" all computers and scanners

Syntax: Computers|Scanners

You are searching for the scanners of Mustermann AG

Syntax: Scanners Mustermann AG

You are looking for computers as well as controllers from Mustermann AG

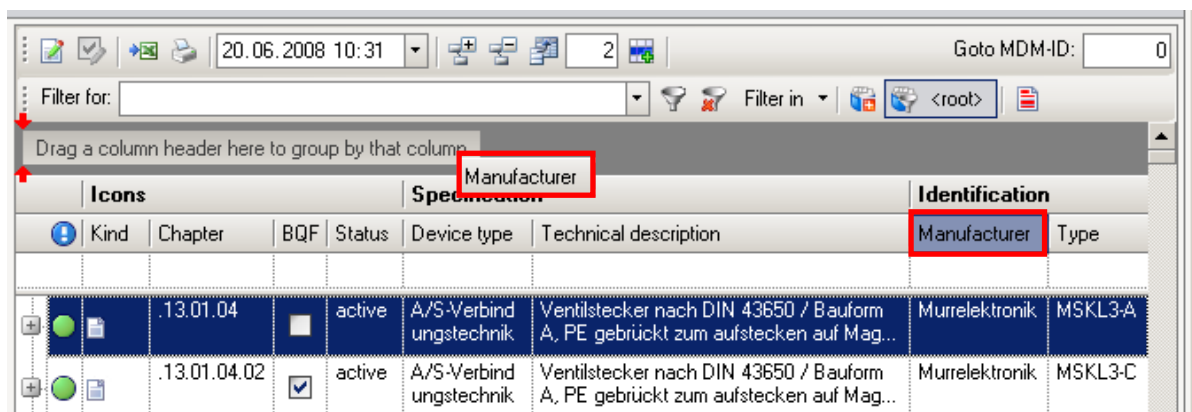
Syntax: Co* Mustermann AG

! Additional, comprehensive and exhaustive information can be found on the Web under the search term "REGEX" with the usual search engines or in WIKIPEDIA.

! This functionality is not available in the field "Documents"! There it is only possible to search for entire words or character sequences.

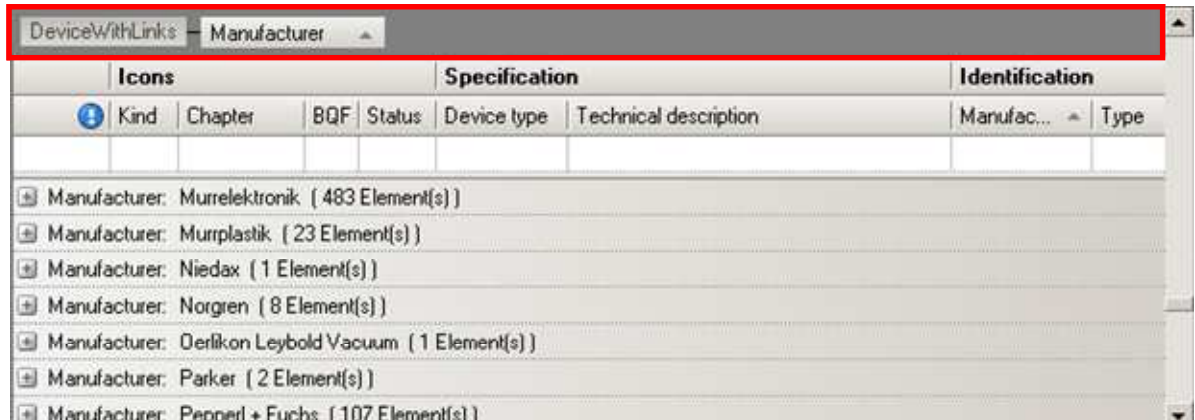
11.3 Grouping records

One possibility for further structuring of selected records is offered by grouping. In this process, the record table is hierarchically structured in the order in which the column heads are pulled into the grouping line by drag & drop.



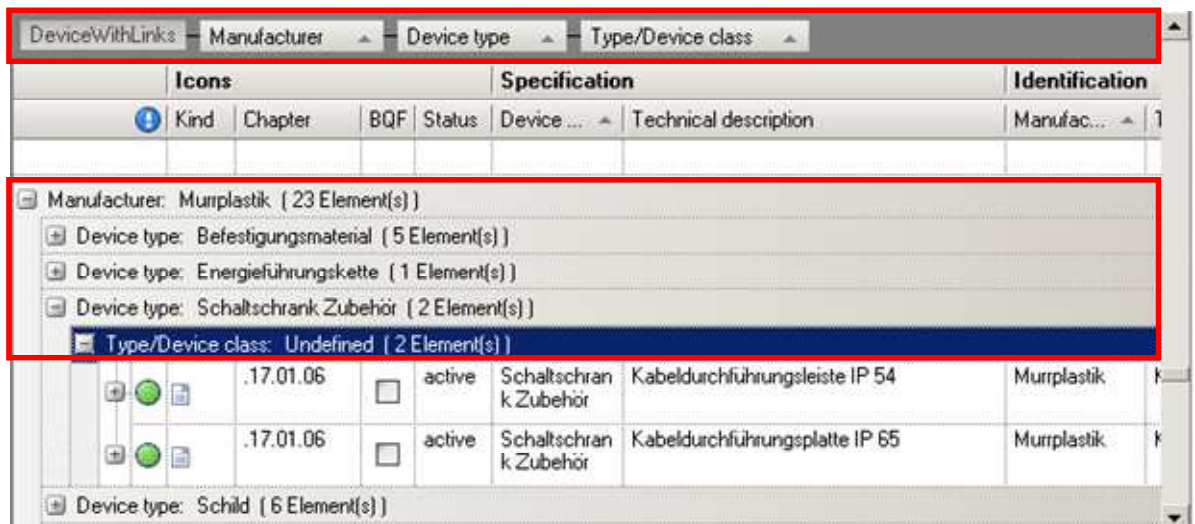
Operating instructions for users

The result is that the record table is horizontally structured with respect to manufacturer.



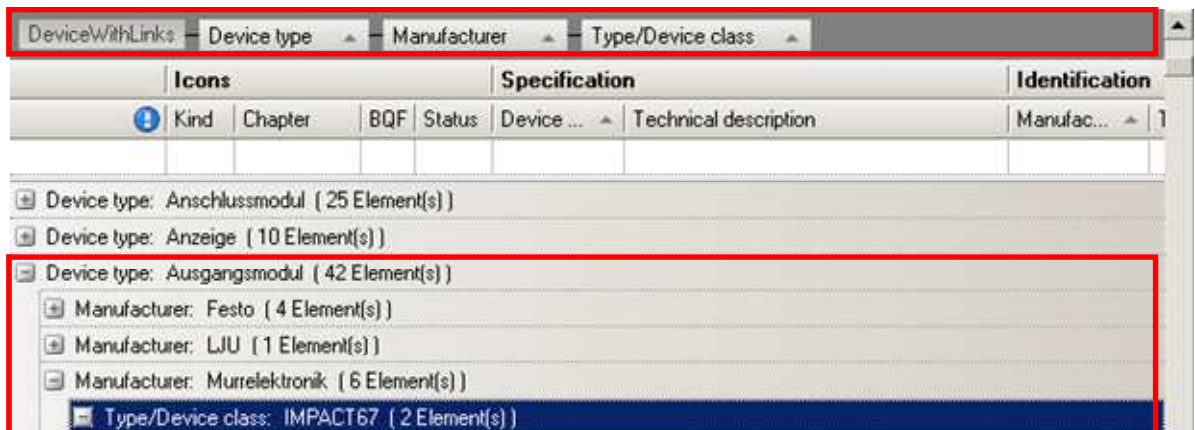
Icons				Specification		Identification	
Kind	Chapter	BQF	Status	Device type	Technical description	Manufac...	Type
Manufacturer: Murrelektronik (483 Element(s))							
Manufacturer: Murrplastik (23 Element(s))							
Manufacturer: Niedax (1 Element(s))							
Manufacturer: Norgren (8 Element(s))							
Manufacturer: Derlikon Leybold Vacuum (1 Element(s))							
Manufacturer: Parker (2 Element(s))							
Manufacturer: Pepperl + Fuchs (107 Element(s))							

The process can be carried out as desired in a manner analogous to filtering:



Icons				Specification		Identification	
Kind	Chapter	BQF	Status	Device ...	Technical description	Manufac...	Type
Manufacturer: Murrplastik (23 Element(s))							
Device type: Befestigungsmaterial (5 Element(s))							
Device type: Energieführungskette (1 Element(s))							
Device type: Schaltschrank Zubehör (2 Element(s))							
Type/Device class: Undefined (2 Element(s))							
		.17.01.06	<input type="checkbox"/>	active	Schaltschrank Zubehör	Kabeldurchführungsleiste IP 54	Murrplastik
		.17.01.06	<input type="checkbox"/>	active	Schaltschrank Zubehör	Kabeldurchführungsplatte IP 65	Murrplastik
Device type: Schild (6 Element(s))							

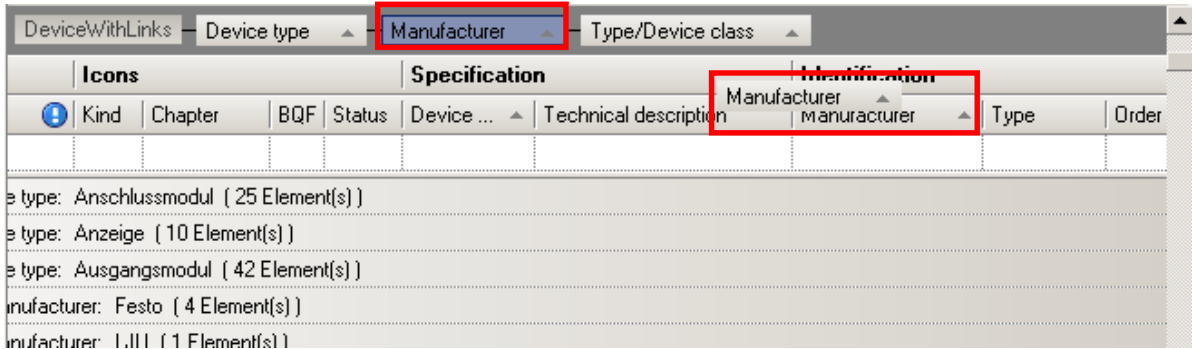
The order of the columns can also be changed to the left front or right back in the grouping line, by means of drag & drop:



Icons				Specification		Identification	
Kind	Chapter	BQF	Status	Device ...	Technical description	Manufac...	Type
Device type: Anschlussmodul (25 Element(s))							
Device type: Anzeige (10 Element(s))							
Device type: Ausgangsmodul (42 Element(s))							
Manufacturer: Festo (4 Element(s))							
Manufacturer: LJU (1 Element(s))							
Manufacturer: Murrelektronik (6 Element(s))							
Type/Device class: IMPACT67 (2 Element(s))							


Operating instructions for users

The individual groupings are saved when the individual column heads are also returned by drag & drop from the grouping line to their original position:



For grouping, proceed as follows:

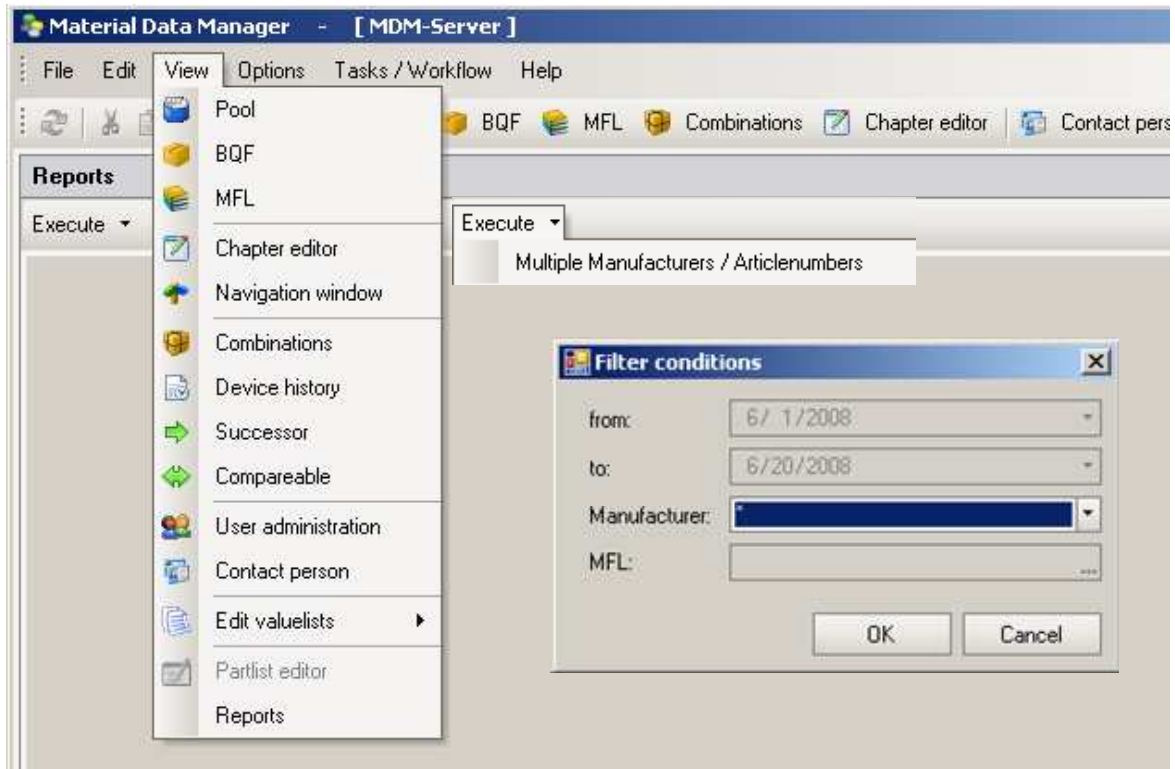
1. Pull the gray column heading(s) into the grouping line by drag & drop
2. Pull the gray column heading(s) in the grouping line by drag & drop to the left front or right back to change the order.
3. In order to open or close the groupings, click on the button + or -
4. Pull the gray column heading(s) by drag & drop from the grouping line back down to their original place in order to reverse the grouping(s)
5. Records selected by this option can be further processed as described in the following sections.

 The great majority of MDM users utilize grouping in order to select records quickly and accurately when entering search and filter criteria.

Operating instructions for users

12 Evaluations - Automated display of duplicate order numbers from the same manufacturer

It can occur that a manufacturer's records have identical order numbers. These can be simply displayed using the **View** menu and the menu point **Evaluations** and appropriately edited:



Proceed as follows:

1. Click on the menu point **Evaluations** in the **View** menu
2. Click on the **Execute** button and then on **Multiple manufacturers / Article numbers**
3. The standard window is opened with the filter criteria that in fact can not be activated in this function; the name of the manufacturer is automatically inserted via the login script. (The other filter criteria are reserved for planned additional evaluations.)
4. Click on the **OK** button and edit the record by changing it, locking it, or defining successor.

! A hint at the workflow! If a record should be locked, this must be conclusively justified in the window „confirm locking“. After locking or changing a record, all concerned users should be informed via device task (see chapter 17.5), or else a new MFL approval (see chapter 17.4) must be requested!

Operating instructions for users

13 Navigation, Linkages, Assignments

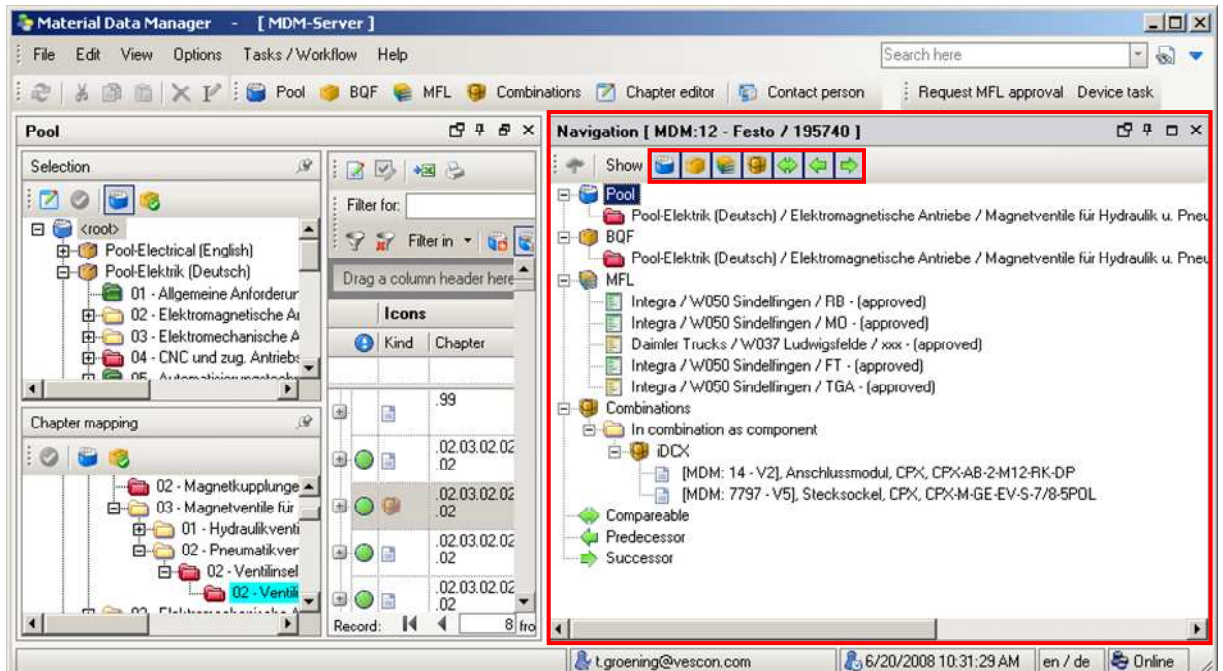
The following activities in the Material Data Manager belong here:

- Navigate to the linkages in Pool and BQF chapters as well as MFLs
- Display contact persons
- Show device sequence
- Display Predecessor / Successor
- Display combinations
- Display comparison types

We have compiled a separate chapter for this, since it is not records that are searched for here but only linkages to other records (combinations, predecessors - successors, comparison types and combinations) or additional information (contact persons and device sequence) as well as the assignment to chapters or MFLs.

13.1 Navigation

Using the **View** menu you can open the navigation window from the menu point **Navigation** in which, as a default setting, all linkages and assignments to the current record are displayed:



Using the icon bar of the navigation window you can show and hide the individual views. Another possibility for the display of linkages and assignments is available from the context menu **Navigate** using the right mouse button (if there are no comparison types, precursors and successors, these options are grayed out):

Operating instructions for users



13.2 Display contact persons / change own contact data

Here you can display the responsible manufacturer's contact person for each record or the operator's chapter manager and MFL manager for chapter and MFL structures. The procedure is identical in the Pool view for the chapters and the MFL view for the chapters.

! The assignment of contact persons of the manufacturers to the records is done in the context of the central administration by VESCON. The same is true for the assignment of chapter and MFL managers.

13.2.1 Display manufacturer's contact persons

To display the manufacturer's contact persons assigned to the record, proceed as follows:

1. Highlight the record for which you wish to see the responsible contact person.
2. Open the context menu with the right mouse button and the menu point contact persons
3. The window with the contact person(s) assigned to the record is opened. If several contact persons are given, choose from the list above.


Operating instructions for users

13.2.3 Change own contact data

Users can change their own contact data from the **Extras** menu and the menu point **Settings**.

13.3 Display device history

In this view you can see and follow the editing history of every record in the Material Data Manager. Every change or new versioning from acquisition to the current status is shown by the QA check; in brief: who has changed what, when, why in this record.

 The device sequence is indispensable for data security and consistency. Since the Material Data Manager is an open platform for all registered users, it must be assured that every change by users with write access is logged. For aspects of data protection and data security please read the conditions of use, which every user of the MDM must accept at the first login and registration.

The window Device sequence is opened from the **View** menu and the menu point **Device history**:

Device history [MDM:15 - Festo / 541244]		
Previous Next Refresh Only show different rows		
changed by	m.deck@vescon.com	thw@de.festo.com
changed at	3/6/2008 9:12:58 AM	5/14/2008 7:59:37 AM
created by	m.jandl@vescon.com	m.jandl@vescon.com
created at	10/24/2006 4:15:53 PM	10/24/2006 4:15:53 PM
Version	V3	V3.1
BQF	Yes	Yes
Status	active	active
Device type	Stecksocket	Stecksocket
Manufacturer	Festo	Festo
Type/Device class	CPX	CPX
Order number	541244	541244
Type	CPX-GE-EV-S-7/8-5POL	CPX-GE-EV-S-7/8-5POL
Technical description	Verkettungsmodul mit 7/8" Anschluss, 5-polig, Kunststoff, Identcode: QP	Verkettungsmodul mit 7/8" Anschluss, 5-polig, Kunststoff, Identcode: QP
Remark	Profibusanschluß bestehend aus: Busknoten zur Ansteuerung von digitalen und analogen EAs, Ansteuern von bis zu 64 Ventilspulen, Busanschlußblock in M12 Technik, Verkettungsmodul zur Systemeinspeisung, modular Metall	Profibusanschluß bestehend aus: Busknoten zur Ansteuerung von digitalen und analogen EAs, Ansteuern von bis zu 64 Ventilspulen, Busanschlußblock in M12 Technik, Verkettungsmodul zur Systemeinspeisung, modular Kunststoff
Note		
Width	0	0
Lenght	0	0
Diameter	0	0
Height	0	0
depth	0	0
SKU	0	0
TD1		
TD2	QP	QP
TG1		
TG2		
TG3		
Documents	https://xdki.festo.com/xdki/data/doc_de/PDF/DE/CPX_DE.PDF	https://xdki.festo.com/xdki/data/doc_de/PDF/DE/CPX_DE.PDF

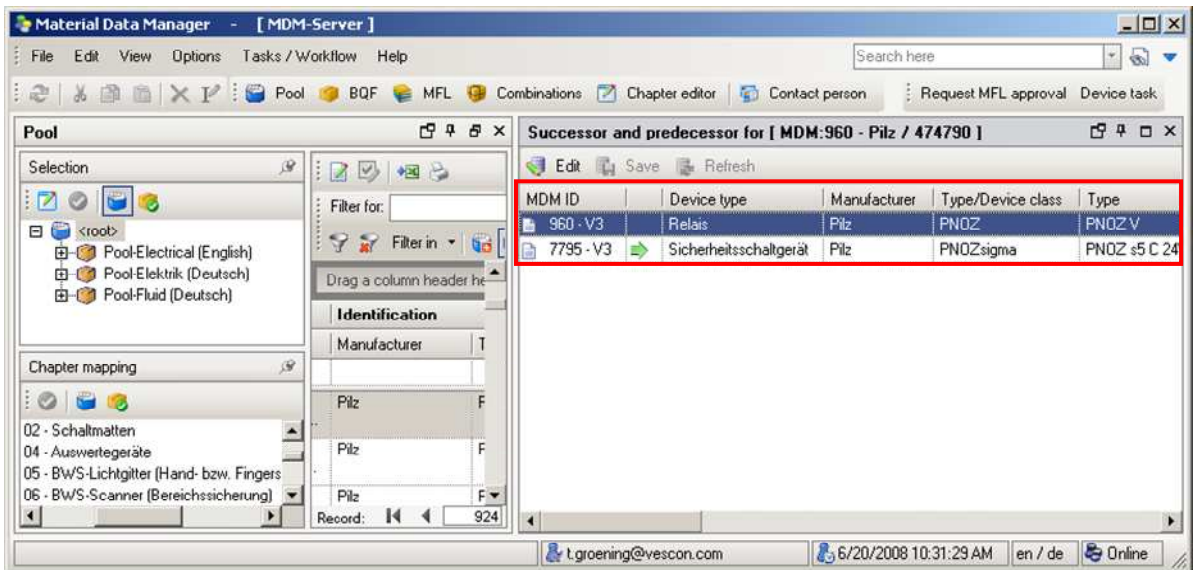
The last, current state of the record is displayed on the right, the most recent change on the left. For better orientation, the names of the fields that were changed are highlighted in yellow; if only the

Operating instructions for users

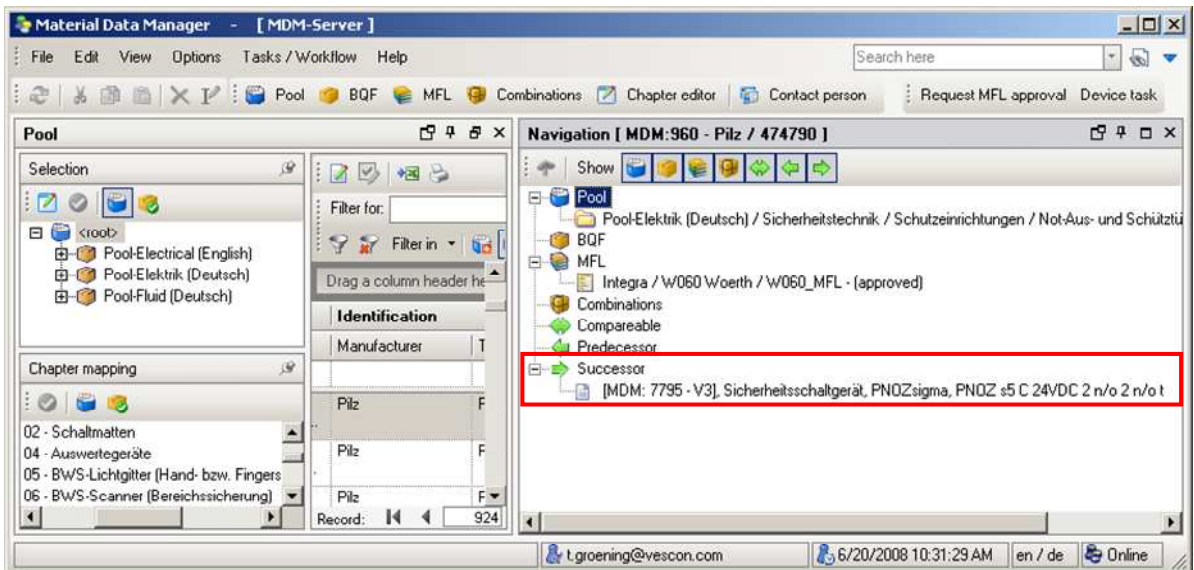
changed fields are to be displayed, click on the icon **Differences only**. You can click through the series of individual changes - the record history - by using the icons **back** and **forward**. **Refresh** jumps back to the last change, the start window.

13.4 Display Predecessor and Successor

The successors of a device can be displayed in the view Successor by clicking in the **View** menu on the sub-menu **Successor**

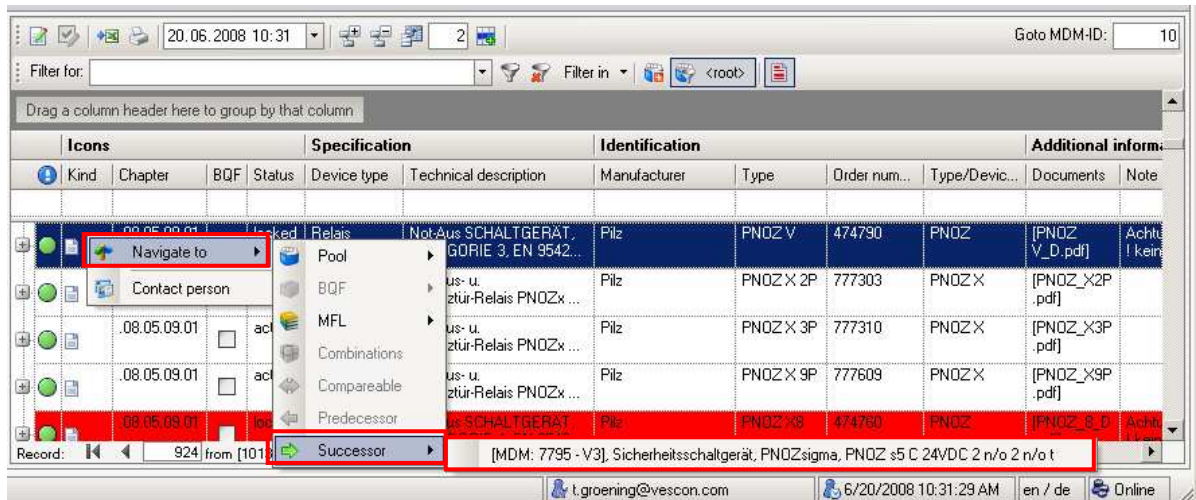


or on **Navigation**:



or use the right mouse button to open the context menu **Navigation**:

Operating instructions for users



13.5 Display combinations

The procedure and the possibilities in the **View** menu and the sub-menu **Combinations** or the context menu opened by the right mouse button are identical to Predecessor/ Successor in Chapter 13.4.

13.6 Display comparison types

The procedure and the possibilities in the **View** menu and the sub-menu **Combination types** or the context menu opened by the right mouse button are identical to Predecessor/ Successor in Chapter 13.4.

Operating instructions for users


14 Editing records

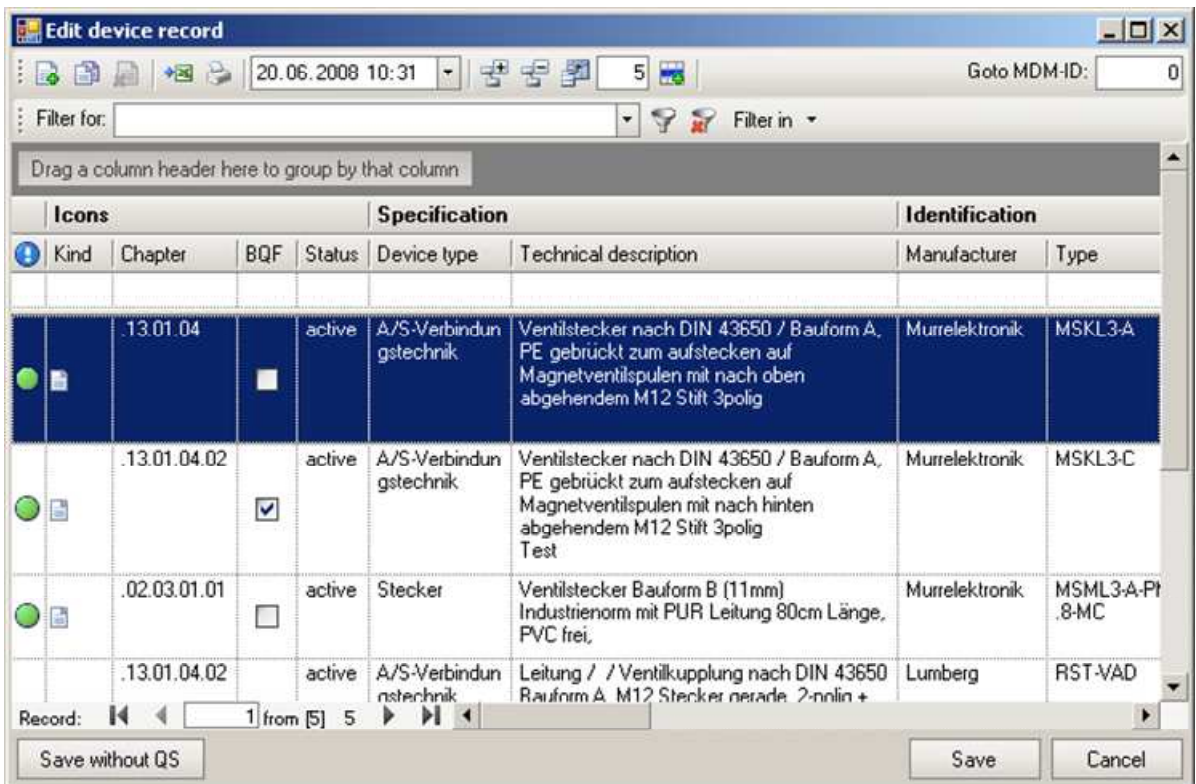
- Changing and locking records
- Acquiring records
- Inserting and importing records

! If the function "Clear record" should be missing: **In the Material Data Manager, no records can be cleared, only their linkages!** Their future use can be prevented by "Lock" or the definition of successors, but because they are used e.g. in maintenance lists, archived MFLs, etc., they may not be removed from the database! In the same way, for reasons of data consistency and security, the device sequence can be monitored at any time as to when and why which MDM user has locked a record (see Chapter 12.2.3).

14.1 Changing records

Search for and highlight the records to be changed.

Click on the icon  **Edit highlighted devices or Add new device.** The Edit device records window is opened and the highlighted records are listed.



The screenshot shows the 'Edit device record' window with a table of records. The table has columns for 'Icons', 'Specification', and 'Identification'. The 'Specification' column is further divided into 'Device type' and 'Technical description'. The 'Identification' column is divided into 'Manufacturer' and 'Type'. The first row is highlighted in blue.

Icons				Specification		Identification	
Kind	Chapter	BQF	Status	Device type	Technical description	Manufacturer	Type
	.13.01.04	<input type="checkbox"/>	active	A/S-Verbindun gstechnik	Ventilstecker nach DIN 43650 / Bauform A, PE gebrückt zum aufstecken auf Magnetventilspulen mit nach oben abgehendem M12 Stift 3polig	Murrelektronik	MSKL3-A
	.13.01.04.02	<input checked="" type="checkbox"/>	active	A/S-Verbindun gstechnik	Ventilstecker nach DIN 43650 / Bauform A, PE gebrückt zum aufstecken auf Magnetventilspulen mit nach hinten abgehendem M12 Stift 3polig Test	Murrelektronik	MSKL3-C
	.02.03.01.01	<input type="checkbox"/>	active	Stecker	Ventilstecker Bauform B (11mm) Industrienorm mit PUR Leitung 80cm Länge, PVC frei,	Murrelektronik	MSML3-A-PI .8-MC
	.13.01.04.02		active	A/S-Verbindun nstechnik	Leitung / / Ventilkupplung nach DIN 43650 Bauform A M12 Stecker gerade, 2-nlin +	Lumberg	RST-VAD

Record: 1 from [5] 5

Buttons: Save without QS, Save, Cancel

Click on the field to be changed. Depending on the field definition (see also Chapter 9, record description), you can now accept the changes from an options list or enter them as free text. If an entry is

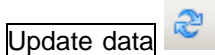
Operating instructions for users

missing from an options list the corresponding item list must be edited from the menu point **View** before this work step (see next chapter). Save the change with the appropriate button.



Changing the order number can have direct effects on existing ordering processes! New devices or materials may not be created by changing the order number!



Update views and record tables with the icon  or the **Function key <F5>** after every change, acquisition or locking of records!




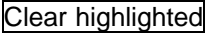
14.1.1 Edit Item lists (Manufacturers, Type/construction series, Designation)



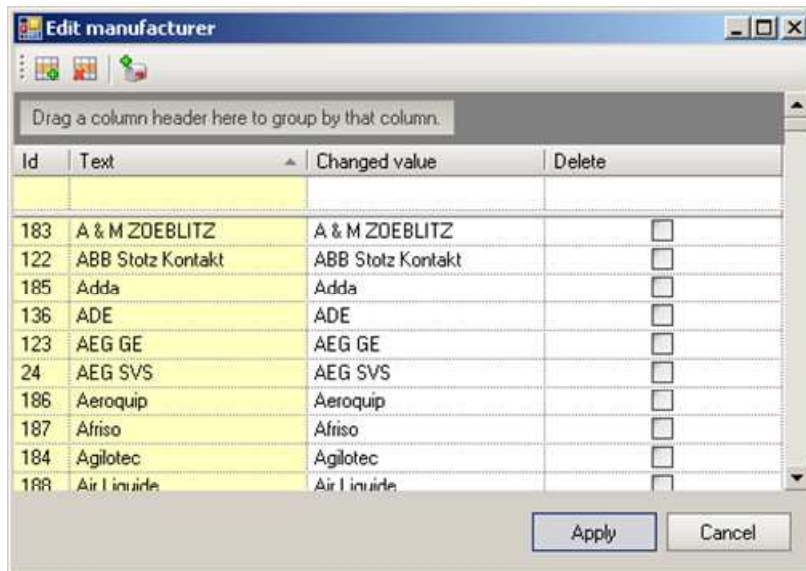
This function is not available for all users. If you need a new record, please call our hotline.

After you have made sure, using the option Find / filter record, that the necessary device or material is not in the MDM yet, a new record will be set up. As stated in the last chapter, for the fields Manufacturer, Type / construction series as well as Designation, you need an entry in the corresponding item list.








In order to ensure the correctness of these field inputs, they are saved in separate tables. In this way possible input errors are avoided that could have grave consequences on further use of such defective records.

1. Click on the menu point **View** and the submenu **Edit item lists**. Click on the field to be edited, the Edit window with the two icons  and  (for safety reasons only possible for newly inserted items, since existing entries are being used in device records).
2. Search for the desired entry and - if it is not listed - enter it as follows: Click on the icon  and enter the Manufacturer, Type / Construction series or the Designation below in the blue input field of the corresponding window. Click on the **Accept** button. The record is now saved.
3. If you should determine after saving that this new entry is incorrect or unnecessary, you can highlight the record and clear it by activating the control field Clear or the icon  after clicking on the button **Accept**.

Operating instructions for users



14.2 Acquiring new records

1. Click on the icon  **Edit highlighted devices or Add new device**. The Edit device records window is opened and the highlighted records are listed.
2. In the icon bar upper left are the icons  **Add a new record** and  **Duplicate an existing record**.
 The difference: If you wish to acquire a device or material that is new in almost all its characteristics, you can get an empty input field with the icon **Add a new record**; to **duplicate an existing record**, all entries of the record are accepted. When adding a new record you must first choose in the window "Choose chapter for new device" the chapter in which the new device or material is to be saved.  When a record is duplicated, the order number is at first accepted identically, which can have direct effects on existing ordering processes! Before saving the record you must enter a new order number!
3. Save the new record by clicking on the appropriate button.
 Update views and record tables with the icon  **Update data** or the **Function key <F5>** after every change, acquisition or locking of records!

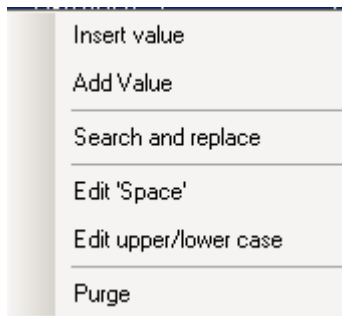
14.3 Insert / Import

For acquisition of large amounts of data, an Excel import function is available for authorized users. Information about access authorization and the procedure can be obtained from VESCON.

Operating instructions for users

14.4 Mass data editing

There are various high-performance but complex tools available in the Material Data Manager for rapid, effective, and above all convention-compliant editing of a large number of records.



! The Material Data Manager grows continuously and currently (June 2008) contains about 10,000 records. If you activate the appropriate Pool and chapter level before filtering, the number of records to be edited becomes significantly more manageable!

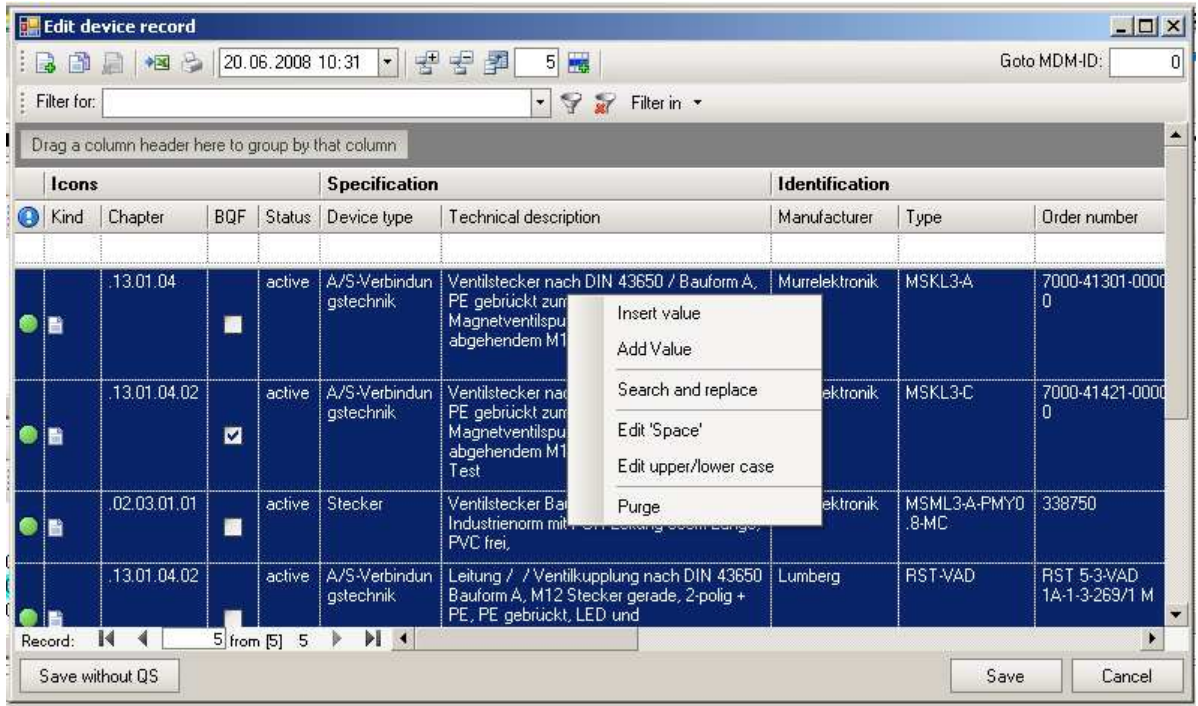
! At this point, remember the old data processing classic: "empty" is not the same as "blank," "null" is not the same as "0"...The more carefully the data are entered, the easier it is to find them (see Security notes in Chapter 2.1)!

! If at the start of work you are still somewhat unsure about the use of the MDM, in addition to search and filter options try the options for mass data processing and their syntax on the test and schooling server!

Procedure up to opening the context menu (identical for all six options):

1. Select the records to be edited via the well-known possibilities such as activating the desired (sub-) directories in the selection window or via the search and filter options
2. Highlight the records to be edited as in the WINDOWS convention in the record table and click on the icon Edit highlighted devices or Add new device
3. The window "Edit device records" is opened with the selected records
 - ! Here you must again highlight the records to be edited or you have the possibility of making another sub-selection!
 - ! The functions for mass data editing are always only related to one column of the highlighted records.
4. Highlight the column to be edited, by clicking on it with the right mouse button. The context menu for mass record editing is opened. Because of the nature of the data, all options are not available in every column. For instance, in the BQF column, no text entry is possible because of the control field available there. In other columns it is necessary to choose from the entries in the item lists (see Chapter 9.8).

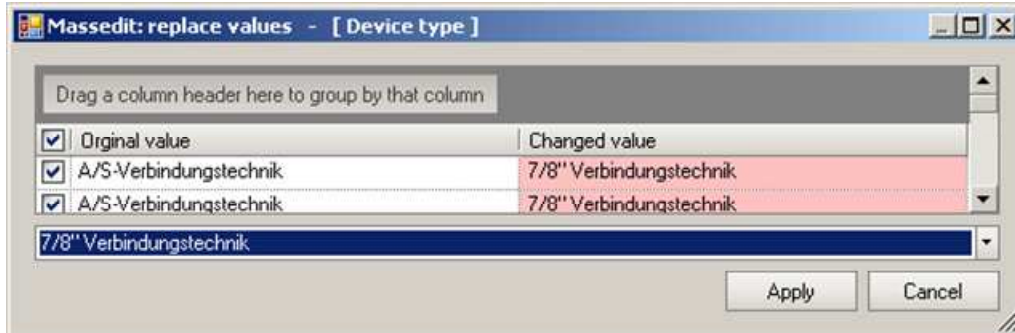
Operating instructions for users



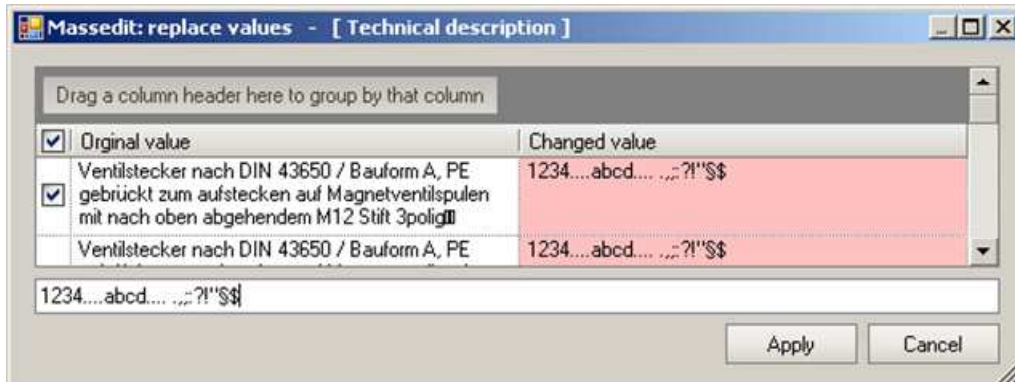
Enter Item / Add item

Open the context menu and choose the option **Enter item**.

Column with included item list: Choice only from the list field:

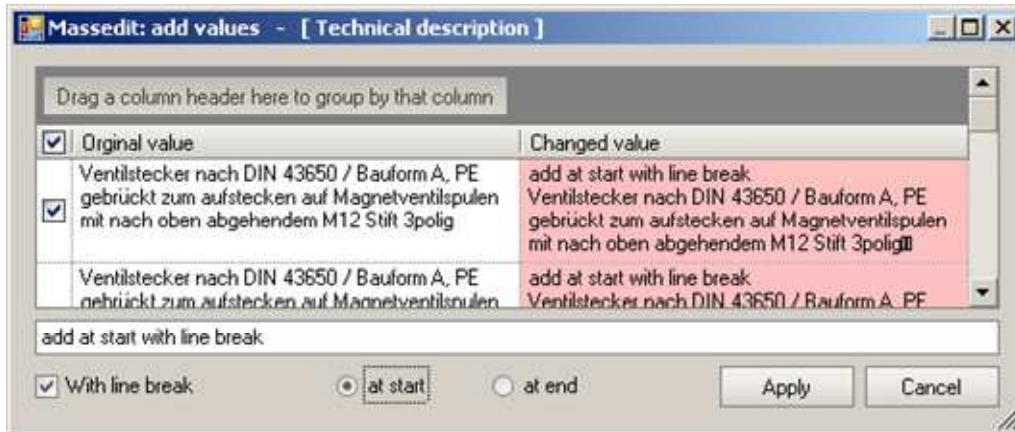


Column without included item list: free text entry:



Operating instructions for users

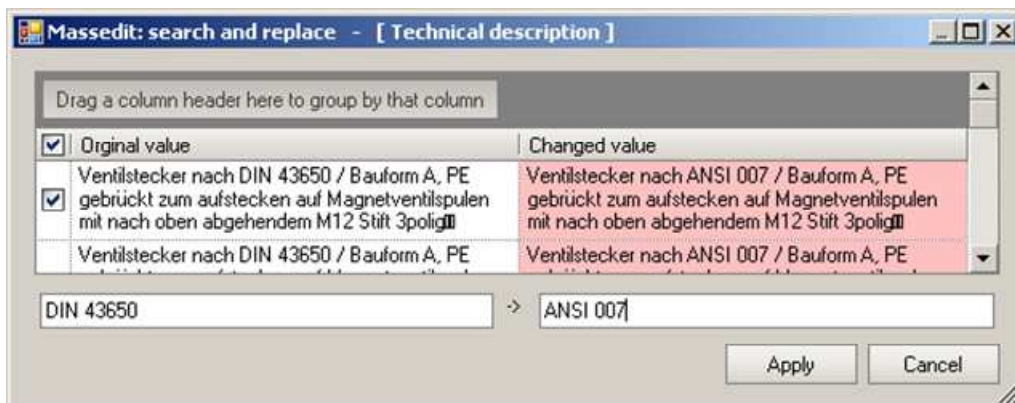
The same is true for the option **Add items**. With the options at the lower edge of the windows you can control configuration and change:



You can also control changes by checking control fields and close the window with the buttons **Accept** or **Cancel**

Search and Replace

The prerequisites and work steps are identical with those in the subsection **Enter items / Add items**



Edit spacing

Spacing is a concept from typography. It designates the typesetter's handling of the spaces between letters and words, e.g. for optimal legibility or as artistic expression in typesetting. In data processing and consequently also in the Material Data Manager this means that database entries that look (almost) identical in print or on the screen are interpreted by the system as different through the use of different inputs to create an empty space or other distances.

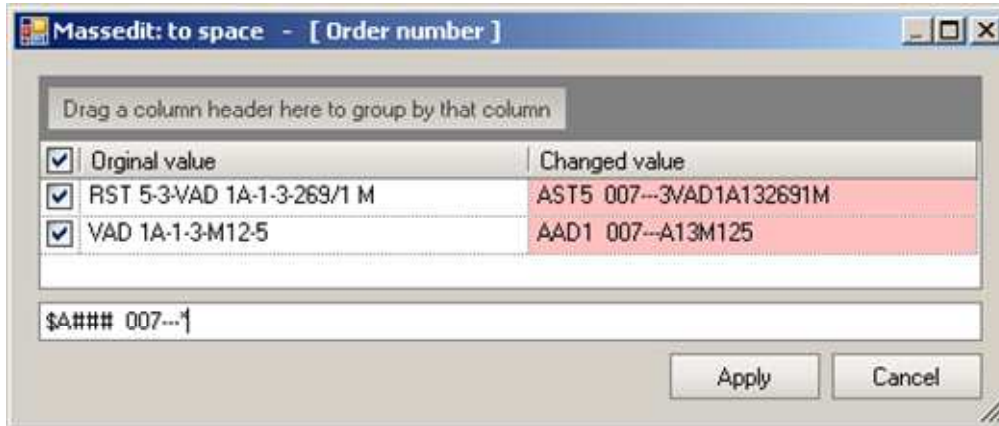
In the Material Data Manager it is important to separate entries in the individual columns or fields in the same way (e.g. spaces in order numbers) so that these are unambiguously interpreted as identical.



Please comply with the security notes and recommendations for data security and consistency (Chapter 2.1, 9.4, 9.6)!

Operating instructions for users

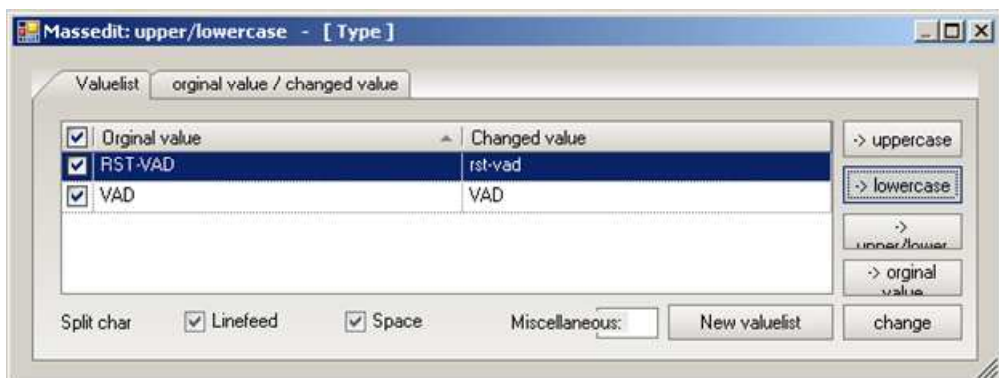
The prerequisites and work steps are identical with those in the subsection **Enter items / Add items**



The following syntax rules apply:

- As input, all numbers, letters in upper and lower case as well as all punctuation, special, and blank signs are permitted
- The character sequence of the original items is previewed in the Changed item column as soon as there is a change in the input cell.
- Additional operations can be carried out with place holders:
 - \$ the sign at this location is replaced by the following input sign
 - # the sign at this position is accepted
 - * all signs from this position are accepted
- Editing upper and lower case

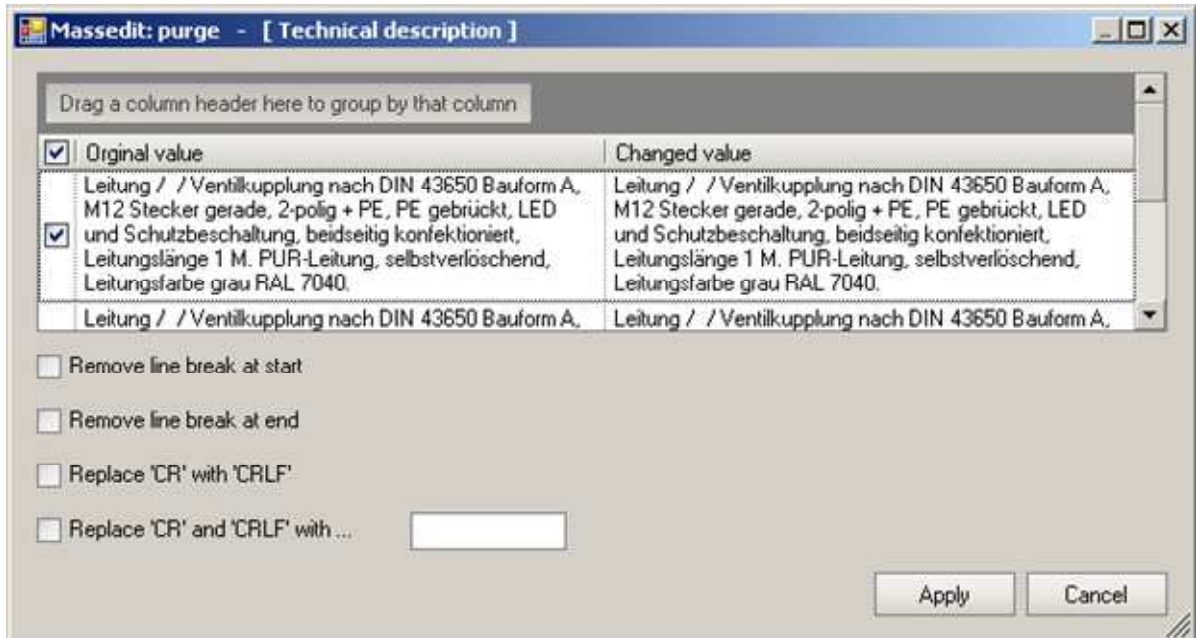
The prerequisites and work steps are identical with those in the subsection **Enter items / Add items**




Operating instructions for users

Revising (Special functions)

The prerequisites and work steps are identical with those in the subsection **Enter items / Add items**



 Update views and record tables with the icon  or the **Function key <F5>** after every change, acquisition or locking of records!

Operating instructions for users

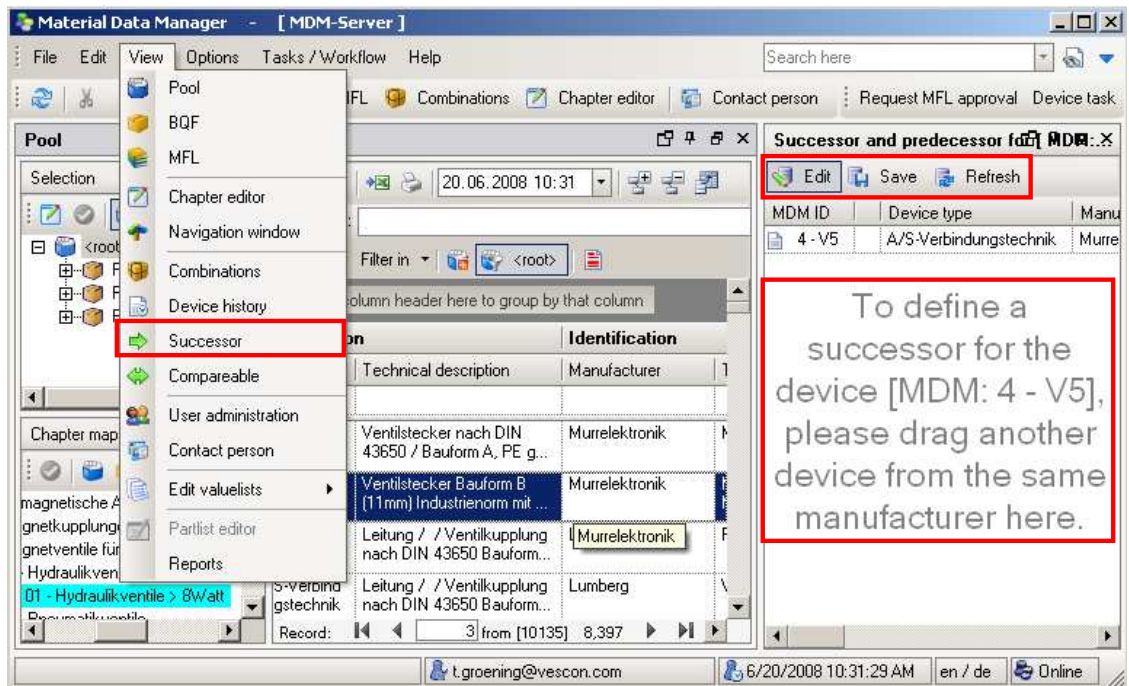
15 Creating and changing linkages and assignments

- Definition precursor / successor
- Definition comparison types

15.1 Definition Predecessor / Successor

As a result of technical development or modification of devices or materials, existing components are replaced by new ones. The definition of predecessor and successor by the user is only possible for premium records. In order to represent these predecessor / successor relationships in the MDM, please perform the following work steps:

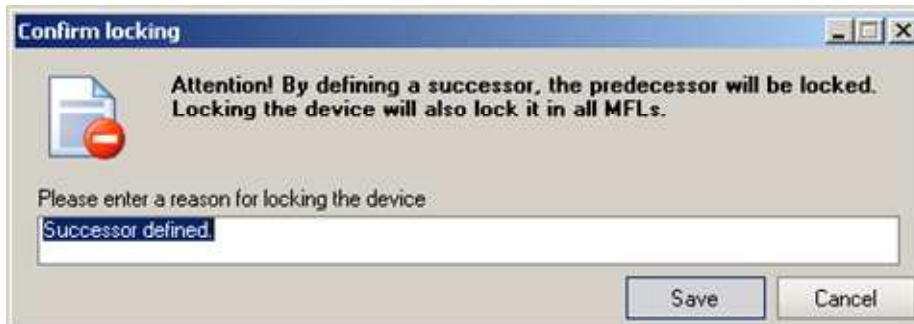
1. In the data table highlight the predecessor and in the **View** menu open the submenu **Successor**




2. In the window "Successor and predecessor" click on the icon **Edit** and move the successor by drag & drop from the record table into the "Successor and predecessor" window

Operating instructions for users

3. Click on the **Save** icon and enter a reason;



the linkage is now defined and the predecessor is automatically blocked.

- ! This function is not configured for necessary information in the maintenance processes; the successor devices are taken into account in the CAD evaluations.
- ! Update views and record tables with the icon **Update data**  or the **Function key <F5>** after every change, acquisition or locking of records!

15.2 Definition comparison types

Using the function Comparison types, files that can be alternatively used during the planning and projection phase are set in relationship to each other. In the CAD device list, first the file assigned in the CAD is displayed and under it, the comparison types defined in the MDM. Comparison types are currently only applied to terminal clamps and only defined and maintained by VESCON.

- ! This function is not configured for necessary information in the maintenance processes; the comparison types are displayed in the CAD device lists.

Operating instructions for users

16 Combinations

In planning, combinations facilitate the choice and assignment of records in CAD systems. Relationships, dependencies and hierarchies are defined for individual components that are later represented in the main device.

! Combinations are not subject to the process of approval by the operator but all components that are to be used must be approved in the appropriate MFL. Combinations are only set up by VESCON.

Icons				Specification		Identification	
Kind	Chapter	BQF	Status	Device type	Technical description	Manufacturer	Type
	.16.03.03		active	Hilfsschalter	Standard-Hilfsschalter 10, Schraubanschluss	Schneider Electric	ZBE
	.16.03.03		active	Bedienelement	Wahlschalter (Schwenkschalter), Kompl...	Schneider Electric	XB...

Combination	
Name	Order number
Wahlschalter 2S...	


Fixed components					
Num...	MDM ID	Device type	Manufacturer	Type/Device class	Type
1	6933 - V1.1	Hilfsschalter	Schneider Electric	Harmony style 4/5	ZBE
2	6934 - V1.1	Hilfsschalter	Schneider Electric	Harmony style 4/5	ZBE

Combination	
Name	Order number
Wahlschalter 3S...	

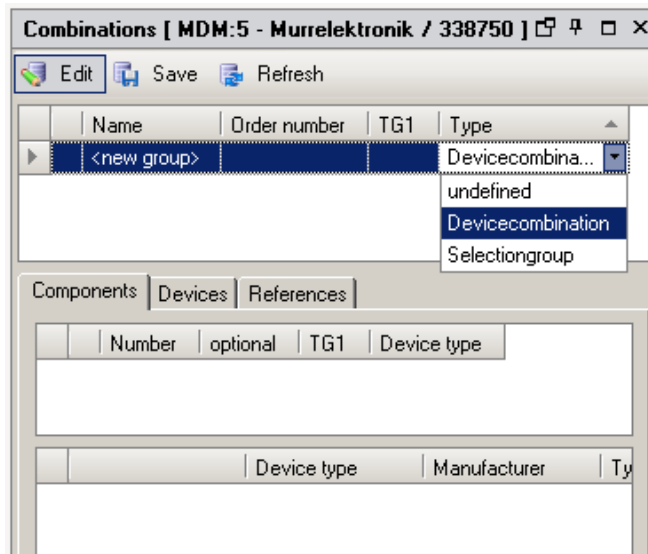
Differentiation is made between device combinations, optional groupings and assemblies.

- When a new combination is set up, the standard specification is at first "undefined."
- In device combinations, individual components are assigned to main devices, and differentiation is made as to whether these are obligatory components or possible components.
- Optional groupings are different main devices that are in an either-or relationship to each other. Thus, for instance, cables of the same type can be represented at different lengths, if the lengths can not yet be defined in the planning and project phase.

16.1 Set up combination

1. Open the **View** menu and the menu point **Combinations** or click on the icon  the Combinations window is opened.



Operating instructions for users



The editing window is divided into three areas: In the upper area the name of the combination is defined. The main devices stored there are displayed in the Devices register.

In the middle area the components are defined. A line for each component group appears. The individual records for a component group are presented in the lower area.

For each component group it is determined whether they are obligatory or possible components. Control is via the Optional column.

2. Click on the icon .
3. Highlight the record in the record table that will be defined as main device and move it by drag & drop to the upper area of the editing window Combination; this defines the main or mother device.
4. In the line that has been created enter the name and if applicable order number (an order number of this combination has its own overall order number with the manufacturer) and select the combination type.
5. Highlight the record that will be added as component, move it by drag & drop into the middle area of the editing window and enter a designation here as well.
6. Check the Optional control field if this is an obligatory component; without a check, it is a possible component.
7. Save the combination with the corresponding icon and use it to leave the Editing window; the saved combination is represented in the record table beneath the main device.
8. Using the icon  the changes that have not yet been saved can be discarded and the starting status can be restored.

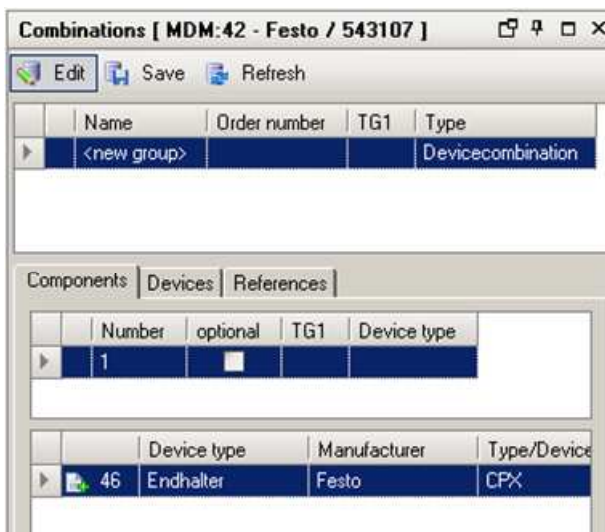
Operating instructions for users

Obligatory and possible components

Example 1: Simple obligatory components

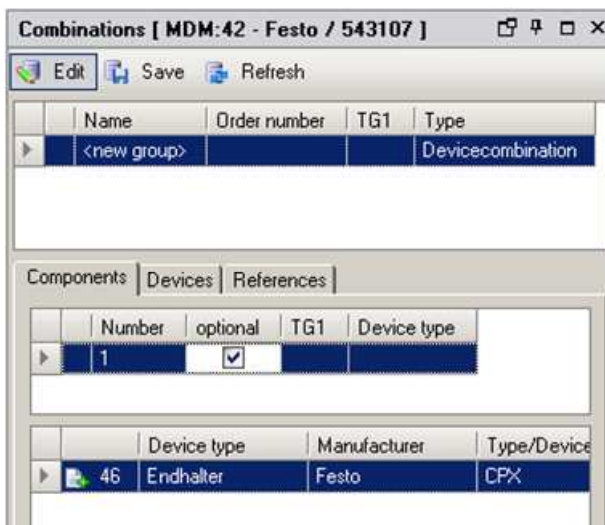
In the example below a device combination was defined in a component group with an obligatory component.

This means that the main device can only be used with this additional component. If several components have been listed below the component group, the user has the choice between these devices or material but must choose one of them.



Example 2: Simple possible components

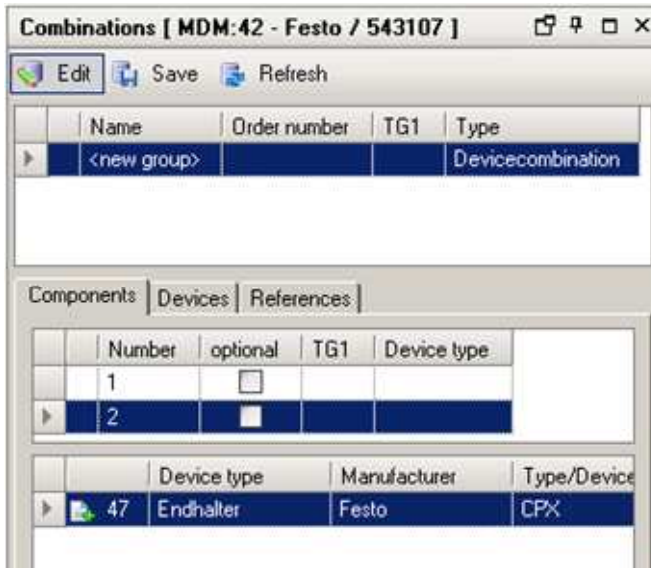
In the example below, a device combination was defined in the component group with a possible component (Optional field is activated). This means that the main device can be used alone or with this additional component.



Operating instructions for users

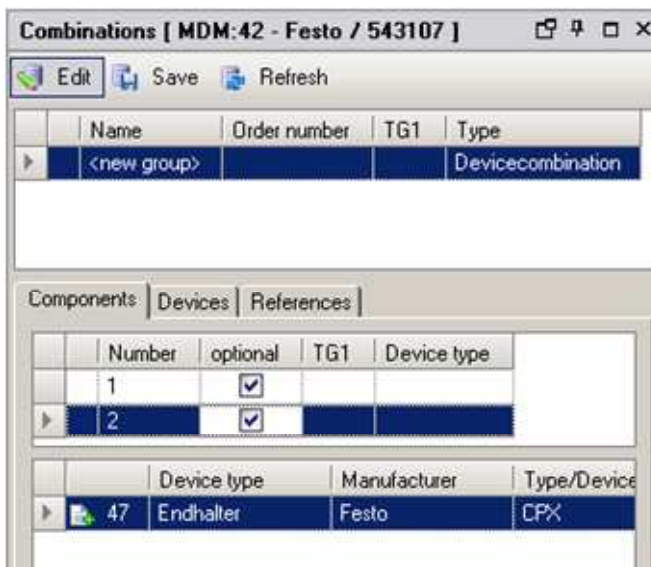
Example 3: Several obligatory components

In the example below a device combination was defined with two component groups as obligatory components. Below the second component group there is a component as an obligatory component. This means that the main device can only be used with these two components.



Example 4: Several possible components

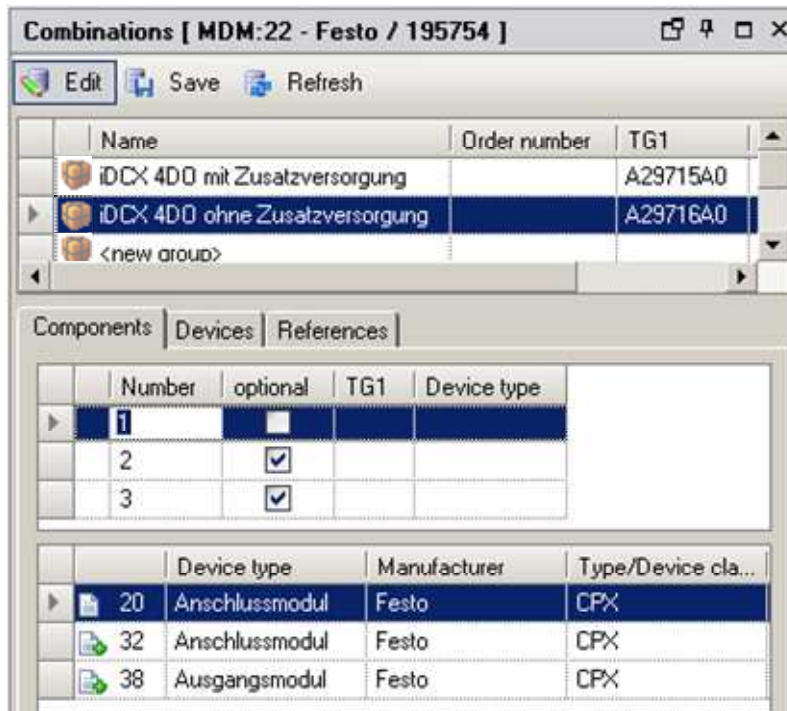
In the example below a device combination was defined with two component groups as possible components (Optional field is activated in each case). Below the second component group there is a component as a possible component. This means that the main device can be used alone or with this additional component.




Operating instructions for users


Example 5: Several combinations with obligatory and possible components

In the example below a device combination with three combinations was built into a main device. Three component groups - one obligatory and two possible component groups are assigned to the first combination.



16.2 Change or clear combinations

1. Open the View menu and the menu point Combinations or click on the icon Combinations. The Combinations window is opened.
2. Highlight the record in the record table with the combination to be changed; this is displayed in the Combination window.
3. Click on the icon Edit.
4. As described in Chapter 10.1, drag & drop the new components from the record table into the Combination window.
5. You can clear existing records with the right mouse button or the key [Entf].
6. Save the combination with the corresponding icon and use it to leave the Editing window; the saved combination is represented in the record table beneath the main device.
7. Using the icon  the changes that have not yet been saved can be discarded and the starting status can be restored.

 Update views and record tables with the icon  or the **Function key <F5>** after every change, acquisition or locking of records!

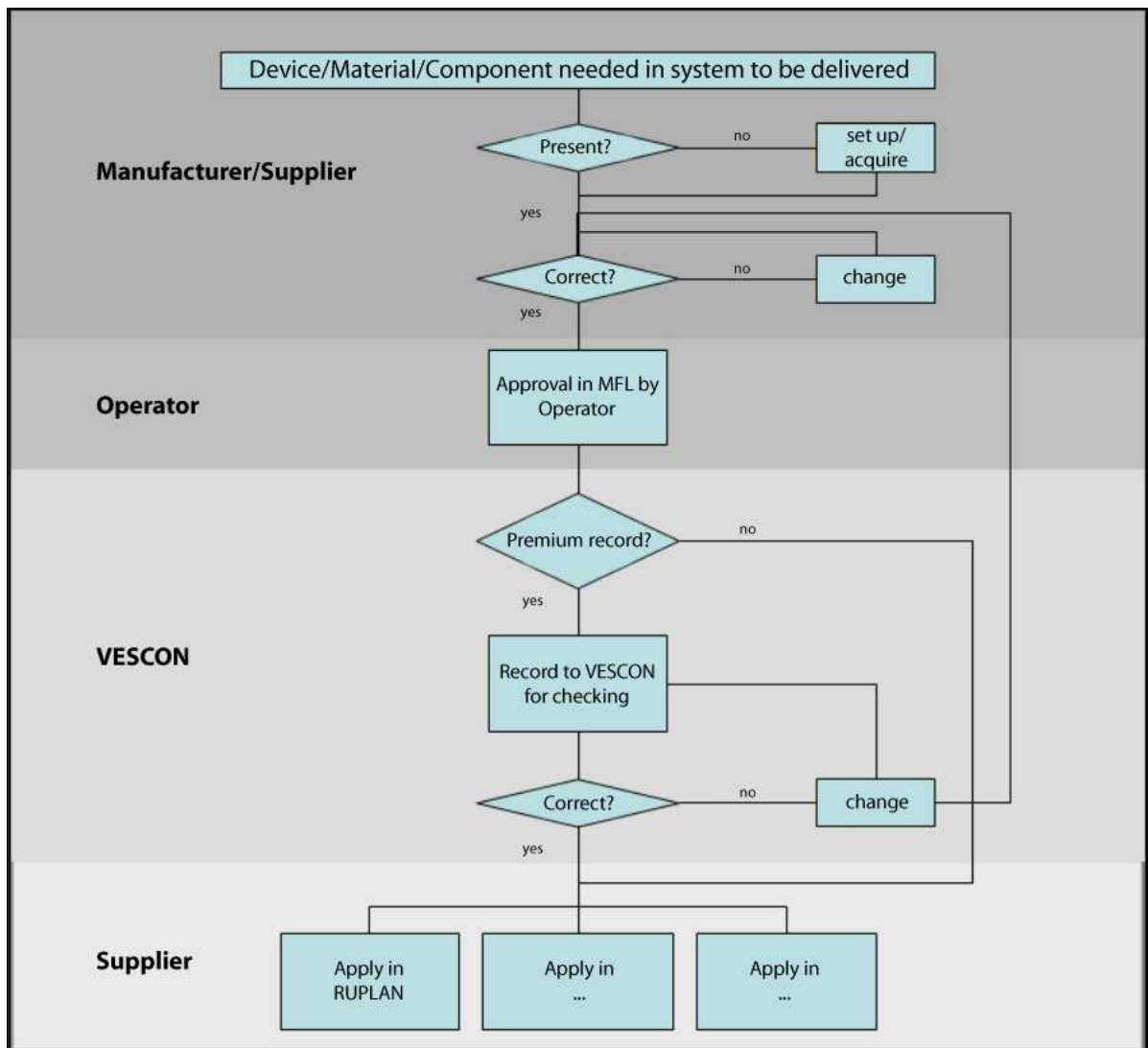
Operating instructions for users

17 Tasks / workflow

Reduced to the important procedures, the use of the MDM has the following workflow with five tasks: the data are

- acquired
- changed
- approved (MFLs)
- checked
- applied (e.g. in a CAD / CAE system)



Course of Quality Assurance or visual checking and record versioning:



! Constant optimization of the course and possible deviations are possible at any time, taking into account the needs of the MDM user!

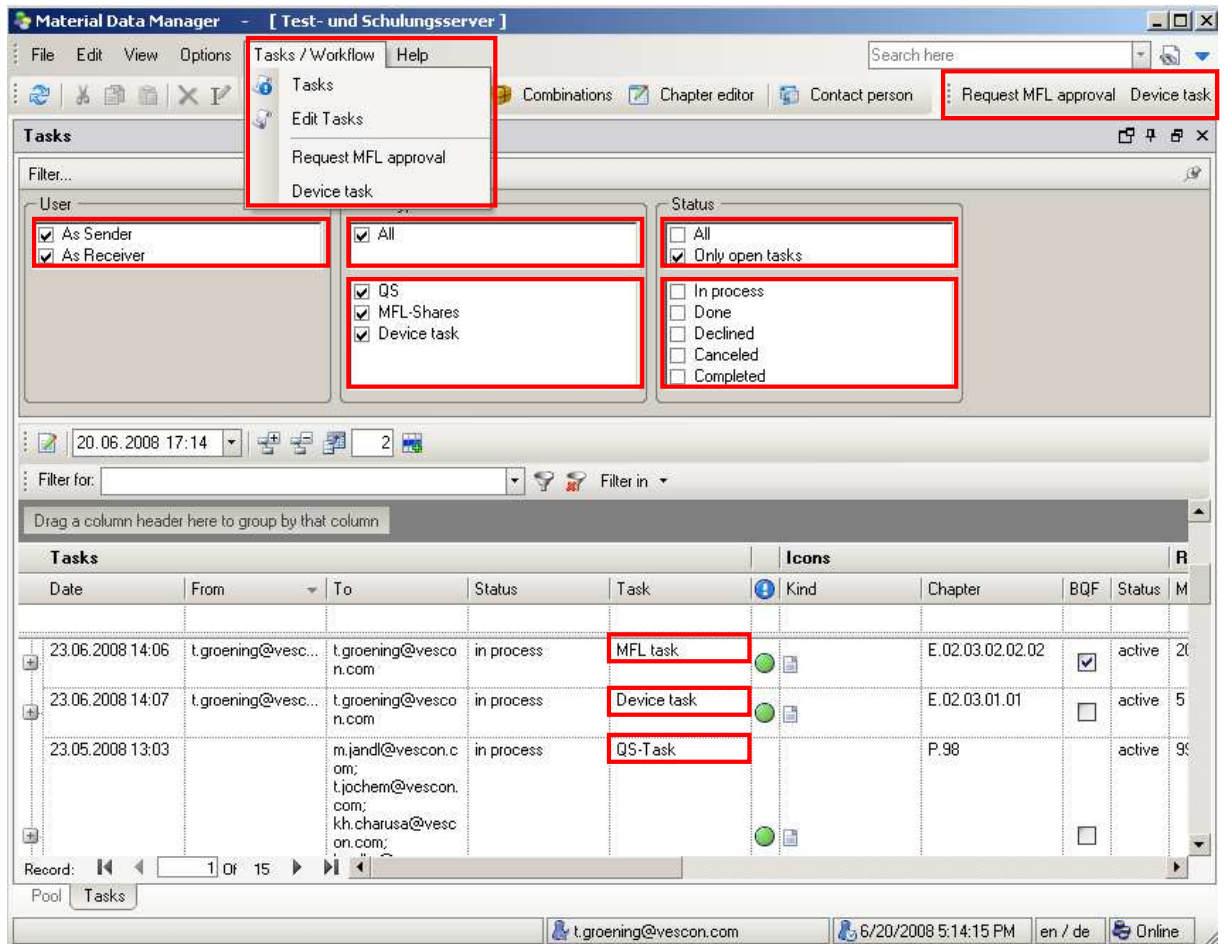
Operating instructions for users

The workflow and editing of tasks are controlled via the **Tasks / Workflow** menu or the icons **Request MFL approval** and **Device task**.

 Update views and record tables with the icon **Update data**  or the **Function key <F5>** after every change, acquisition or locking of records!

17.1 Task window

In this editing window - opened via the **Task / Workflow** menu and the submenu **Tasks** - all tasks are displayed for the user. The editors receive automated messages through the entry of new records and can filter these via three options:



Three types of task are distinguished:

- QA - Quality assurance
- MFL approval
- Device task

In the same way the status of the records to be edited can be defined through filters:

Operating instructions for users

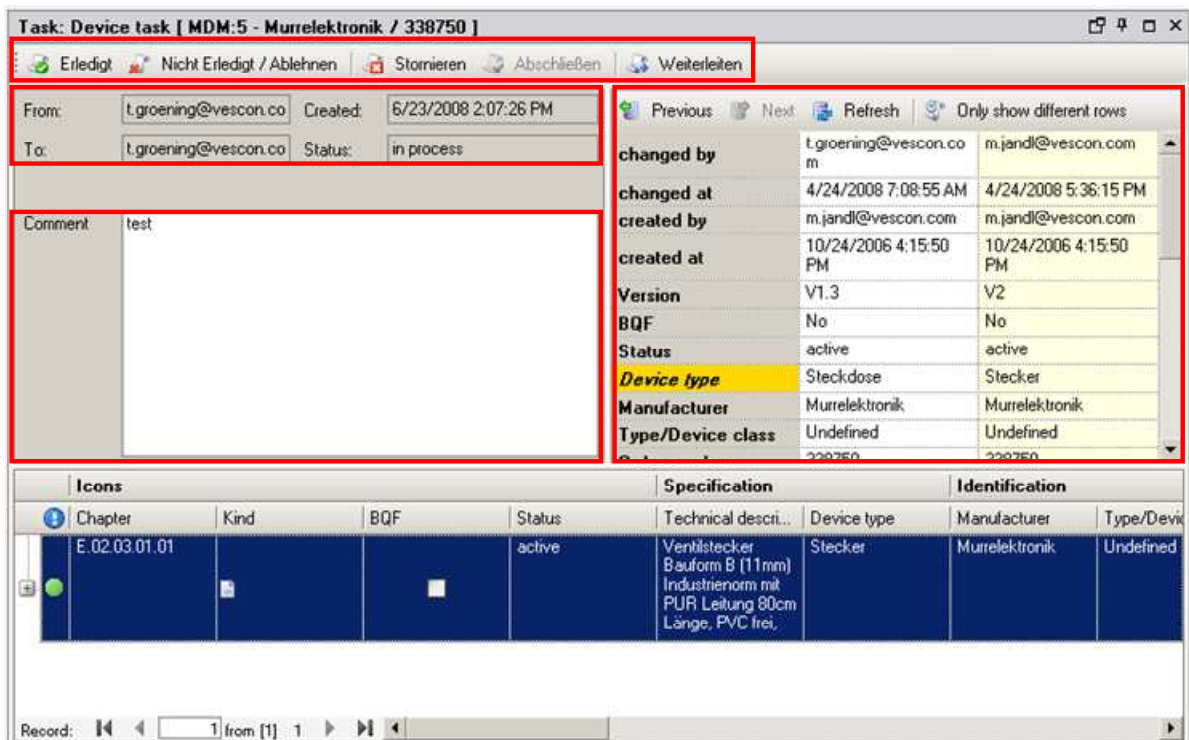
- All
- Only open tasks
- Being edited
- Finished
- Refused
- Cancelled
- Closed

In addition the user can decide whether to filter the tasks addressed to him or the tasks he sends out

- As recipient
- As sender

17.2 Edit task

Via the menu point **Edit task** the records can be edited here, commented on and forwarded to other editors. The functionality is accessed through the icon bar of the task window.



changed by	changed at	created by	created at	Version	BQF	Status	Device type	Manufacturer	Type/Device class
t.groening@vescon.com	4/24/2008 7:08:55 AM	m.jandl@vescon.com	10/24/2006 4:15:50 PM	V1.3	No	active	Steckdose	Murrelektronik	338750
m.jandl@vescon.com	4/24/2008 5:36:15 PM	m.jandl@vescon.com	10/24/2006 4:15:50 PM	V2	No	active	Stecker	Murrelektronik	338750

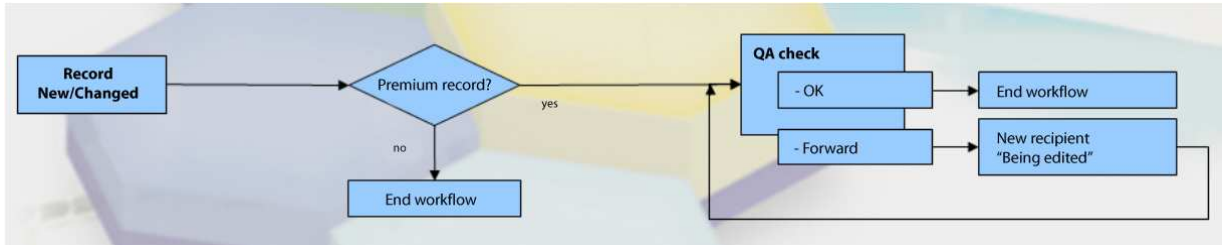
Chapter	Kind	BQF	Status	Technical descri...	Device type	Manufacturer	Type/Devik
E.02.03.01.01			active	Ventilstecker Bauform B (11mm) Industriennorm mit PUR Leitung 80cm Länge, PVC frei.	Stecker	Murrelektronik	Undefined

In addition information about sender and recipient, date of task creation and its status as well as comments and the window with the device sequence or data history are displayed.

The views for QA check and MFL approval correspond to the window for device tasks.

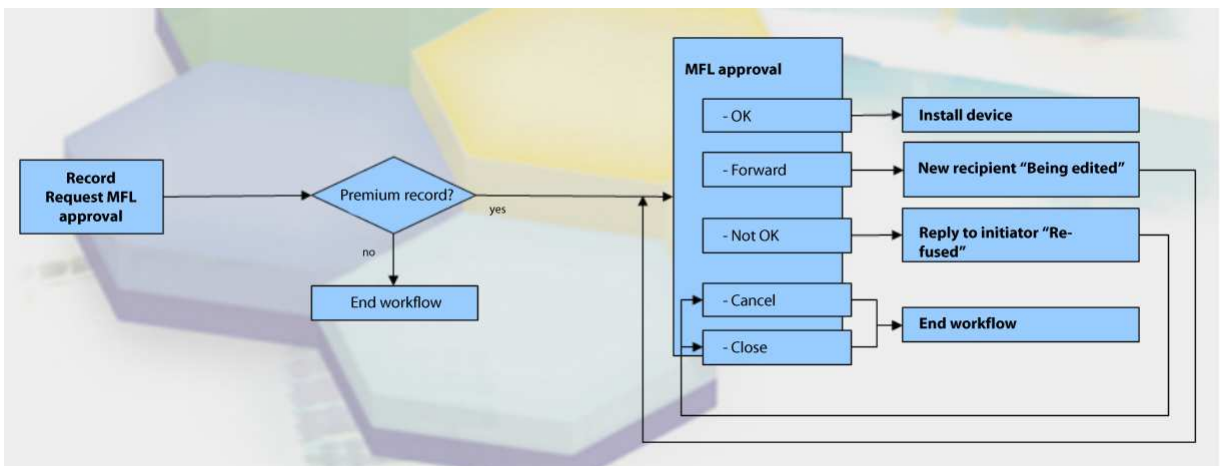
Operating instructions for users

17.3 QA Task (automatically generated)



For premium records the QA task is automatically generated at every acquisition or change and forwarded to responsible VESCON staff via the integrated workflow. (For this reason for QA tasks no sender is shown in the task window; the "from" field remains empty.)

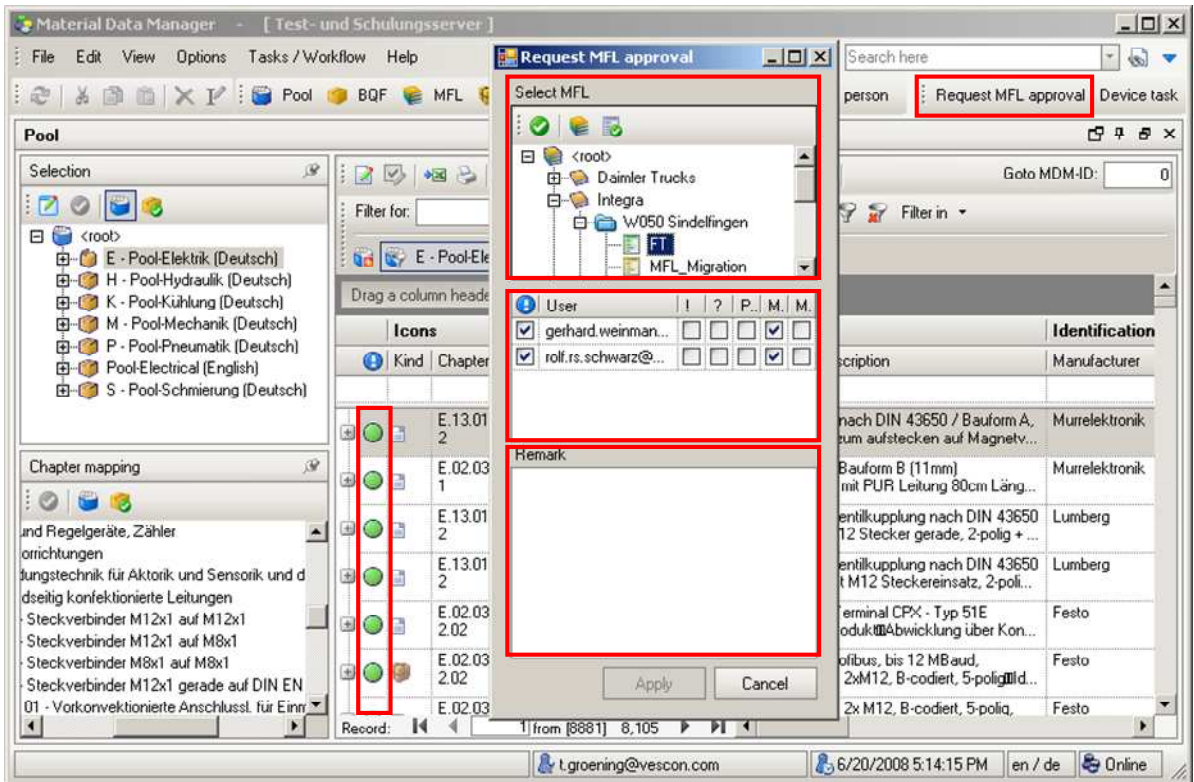
17.4 Request MFL approval



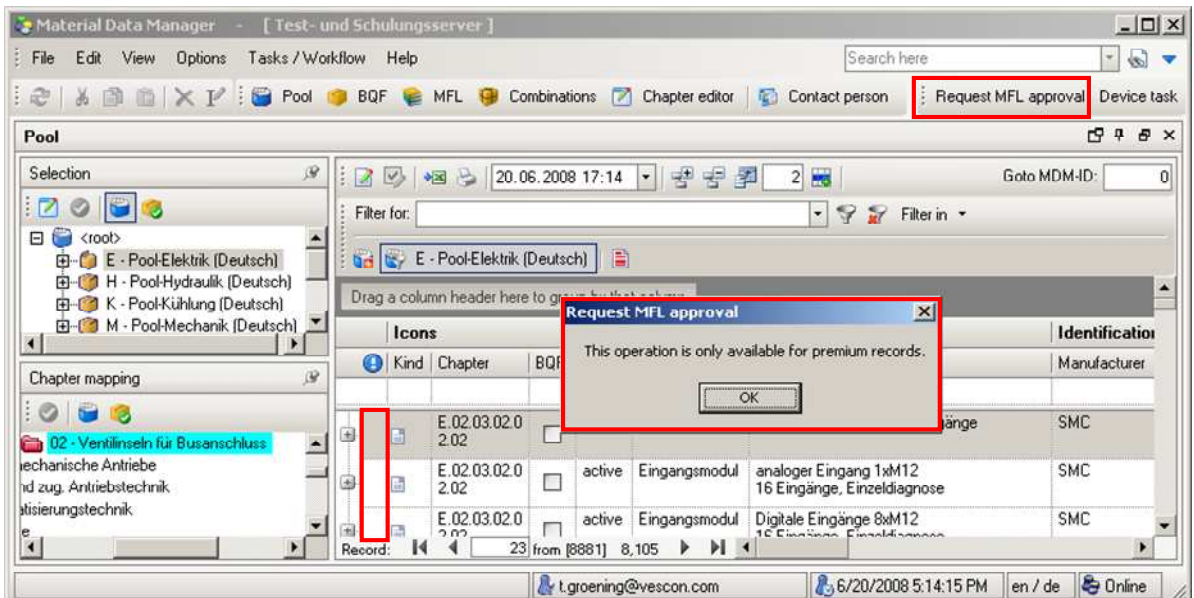
Records from manufacturers that have a contractual relationship with VESCON - so-called premium records - can be assigned to an approval list via this menu point and their approval can be automatically requested from the operator. In case of a refusal the applicant is informed; in the same way cancellation of the application is possible.

1. Select the record to be approved
2. Select the sector MFL
3. Select the MFL manager(s)
4. Enter a comment in the "Comment" field
5. Request the MFL approval with button Accept

Operating instructions for users

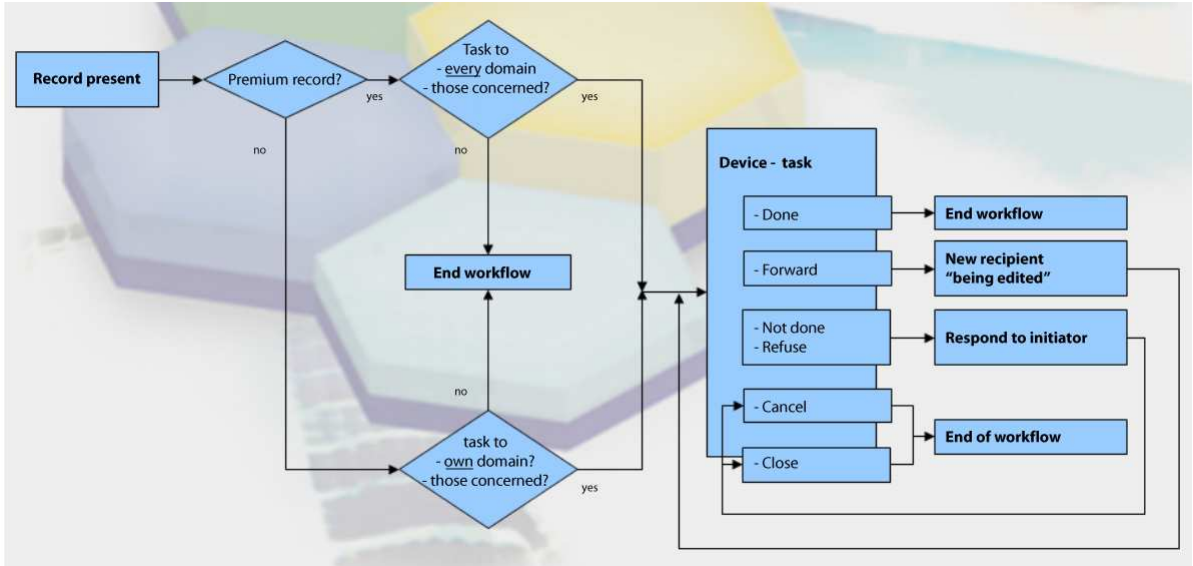


For other records this functionality is not available.

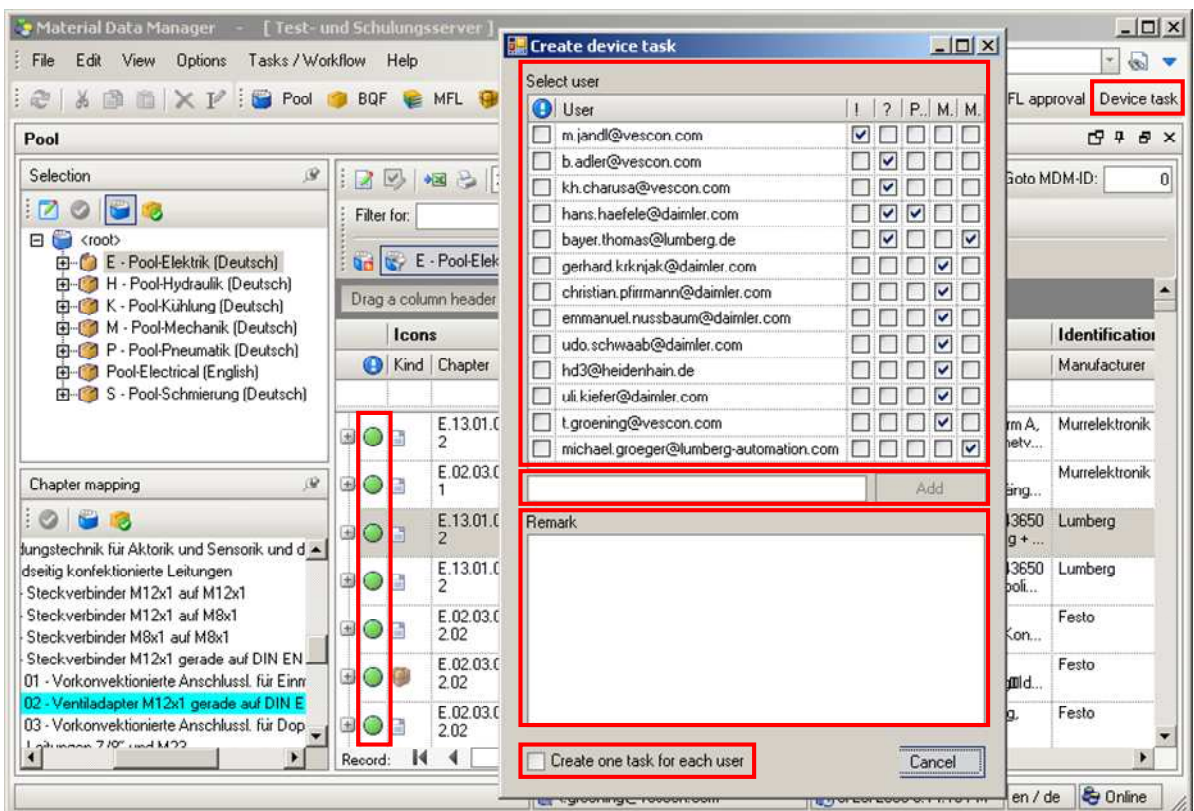


Operating instructions for users

17.5 Device task



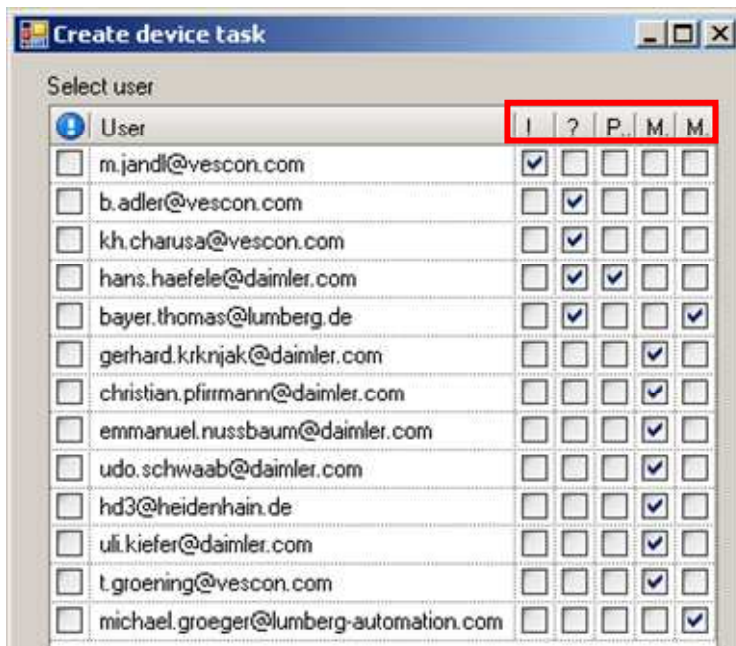
Records from manufacturers with a contractual relationship with VESCON - so-called premium records - can be automatically forwarded to every other MDM user for checking.



1. Highlight the record
2. Click on the icon Device task

Operating instructions for users

3. In the "Generate device task" window select the recipient or enter the e-mail address of any MDM user next to the **Add** button
4. Enter your request in the "Comments" field
5. Normally a task that is addressed to several recipients is completed when one recipient has edited the task. If you wish that each recipient edits the task, activate the control field "Generate a task for each user."

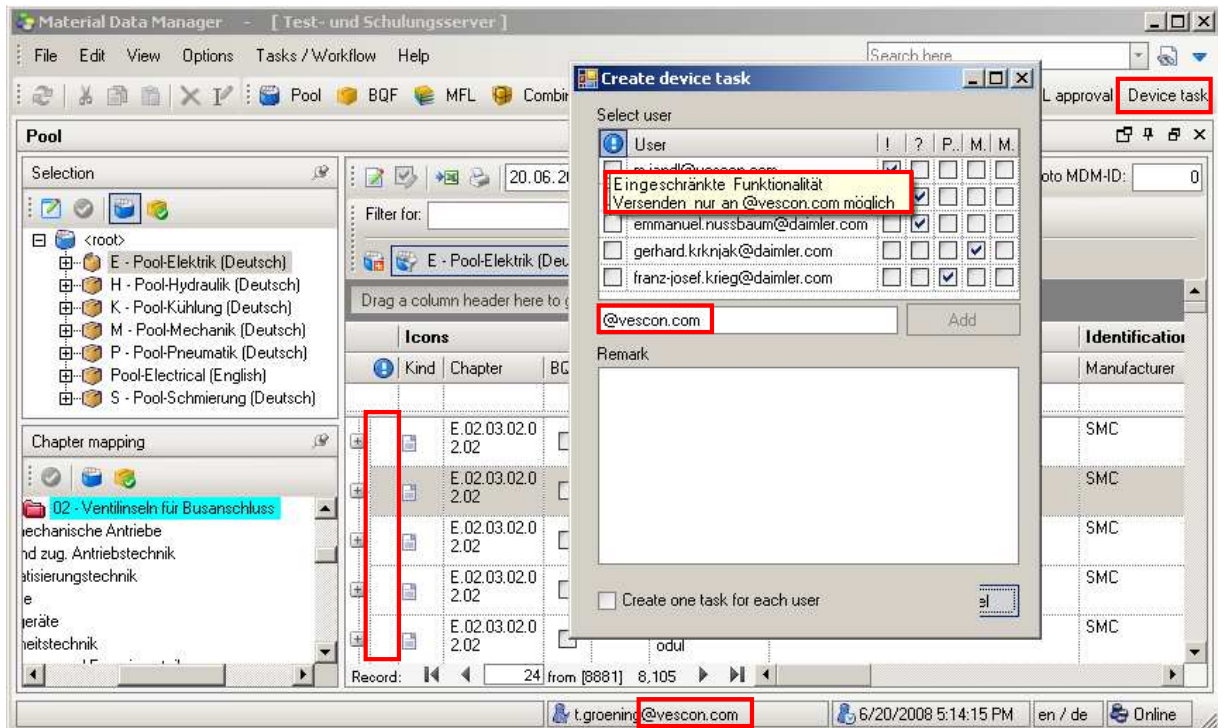


The icons mean:

- ! User has generated record
- ? User has changed record
- P.. User is chapter manager
- M. User is MFL manager
- M. User is contact person for manufacturer

Other records can only be sent to editors of the same domain (here: @vescon.com, since logged-in user belongs to domain @vescon.com)

Operating instructions for users



! Update views and record tables with the icon  or the **Function key <F5>** after every change, acquisition or locking of records.

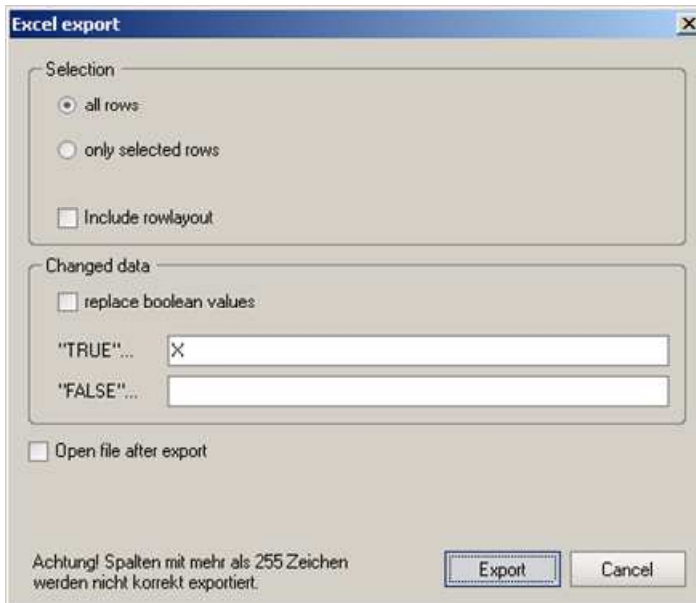
Operating instructions for users

18 Data Export and Printing / Reports

18.1 Export

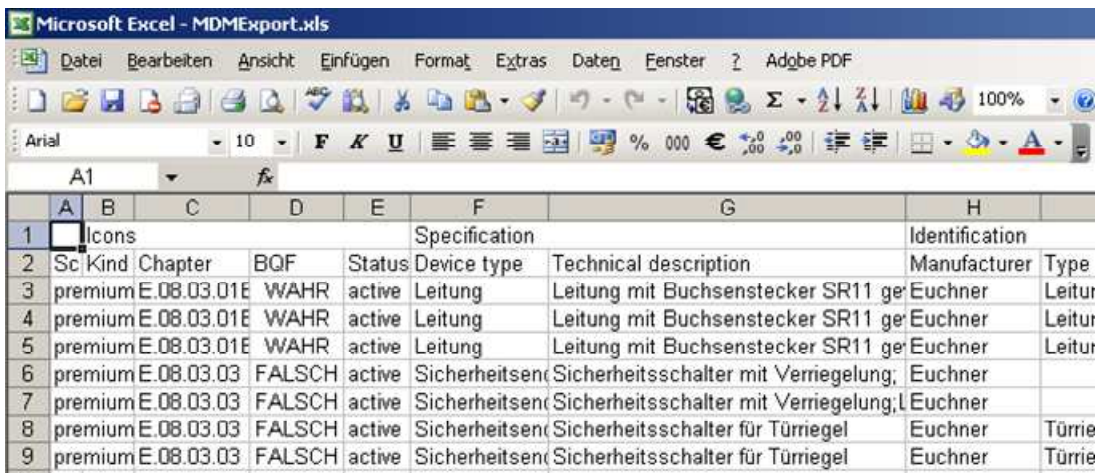
This function makes it possible to edit data from the MDM further in the most various applications.

1. Highlight the corresponding records.
2. In the icon bar upper left is the icon **Excel Export**. After clicking, the window "Excel Export" is opened.



The window is self-explanatory; if you activate the control field "replace Boolean values", X is displayed in the Excel table instead of TRUE.


3. Click on the button **Export**, the window "Export as Excel file" is opened with the usual options.
4. The result is a table that can be further edited at will.



1	Icons	Sc	Kind	Chapter	BQF	Status	Device type	Technical description	Identification	Type
2		premium	E.08.03.01E	WAHR	active	Leitung	Leitung mit Buchsenstecker SR11 ge	Euchner	Leitur	
3		premium	E.08.03.01E	WAHR	active	Leitung	Leitung mit Buchsenstecker SR11 ge	Euchner	Leitur	
4		premium	E.08.03.01E	WAHR	active	Leitung	Leitung mit Buchsenstecker SR11 ge	Euchner	Leitur	
5		premium	E.08.03.03	FALSCH	active	Sicherheitsen	Sicherheitsschalter mit Verriegelung;	Euchner		
6		premium	E.08.03.03	FALSCH	active	Sicherheitsen	Sicherheitsschalter mit Verriegelung;	Euchner		
7		premium	E.08.03.03	FALSCH	active	Sicherheitsen	Sicherheitsschalter für Türriegel	Euchner	Türrie	
8		premium	E.08.03.03	FALSCH	active	Sicherheitsen	Sicherheitsschalter für Türriegel	Euchner	Türrie	
9		premium	E.08.03.03	FALSCH	active	Sicherheitsen	Sicherheitsschalter für Türriegel	Euchner	Türrie	

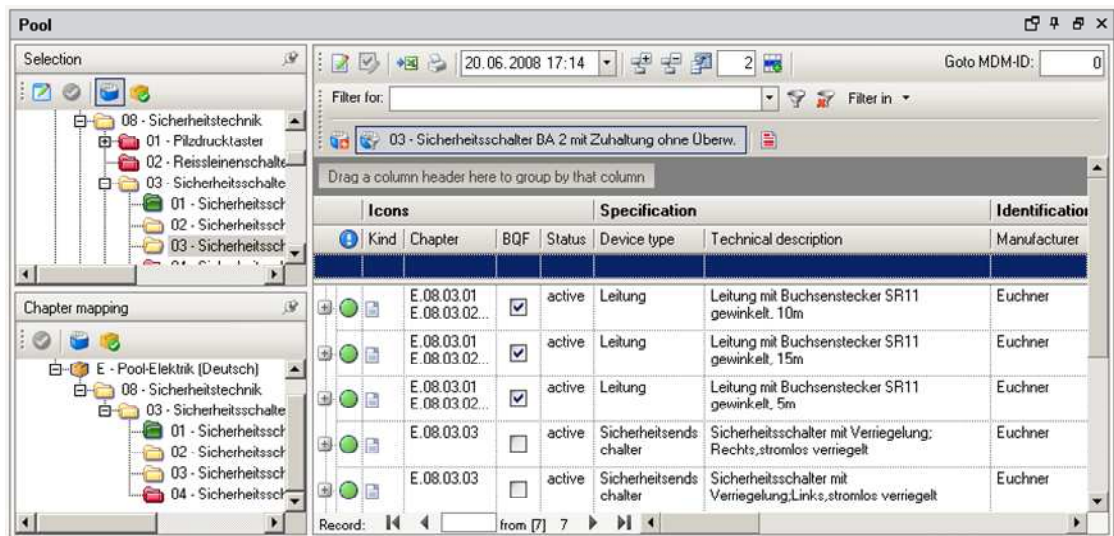
Operating instructions for users


18.2 Printing / Reports

The Material Data Manager has a powerful and convenient print function. It can be activated from the icon bar of data table 1 using the icon .

All the records listed in the record table are printed. As described in Chapter 11, you can define a desired number of parts from the Pool data via the filter function for printing. To do this, proceed as follows

1. Select or filter the desired data



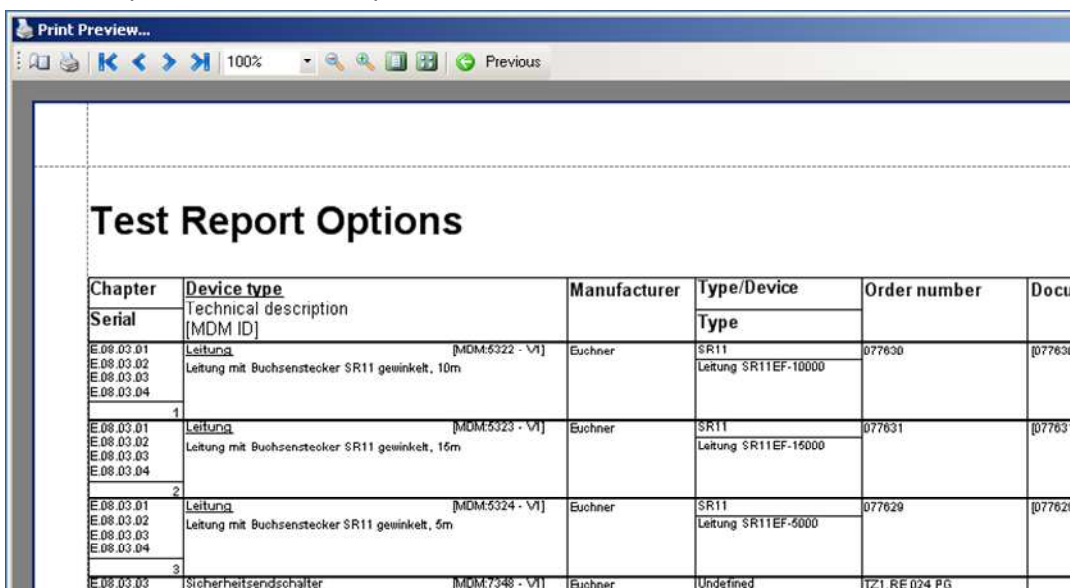
 Check in the record counter in the lower scroll bar whether the number you have selected is realistic! If this is not the case, reset the filter and enter other filter options.

Operating instructions for users

- Click on the icon Print. The window Report options is opened



- You can show/hide the columns listed for your print/report with the blue control elements. In addition you can select the desired font, type style, and font size according to WINDOWS conventions
- The "Print preview window" is opened



Chapter	Device type	Manufacturer	Type/Device	Order number	Docu
Serial	Technical description [MDM ID]		Type		
E.08.03.01	Leitung	[MDM:5322 - V1]	SR11	077630	[07763
E.08.03.02	Leitung mit Buchsenstecker SR11 gewinkelt, 10m		Leitung SR11EF-10000		
E.08.03.03					
E.08.03.04					
1					
E.08.03.01	Leitung	[MDM:5323 - V1]	SR11	077631	[07763
E.08.03.02	Leitung mit Buchsenstecker SR11 gewinkelt, 16m		Leitung SR11EF-15000		
E.08.03.03					
E.08.03.04					
2					
E.08.03.01	Leitung	[MDM:5324 - V1]	SR11	077629	[07762
E.08.03.02	Leitung mit Buchsenstecker SR11 gewinkelt, 5m		Leitung SR11EF-5000		
E.08.03.03					
E.08.03.04					
3					
E.08.03.03	Sicherheitsenschalter	[MDM:7548 - V1]	Undefined	ITZ1.RE 024 PG	

- Using the icon bar known from other WINDOWS applications you can format and control your report as desired.

Operating instructions for users

19 Interface to CAD Systems

Standard work method and general information regarding the CAD interface :

- MDM data are not physically located in the CAD system; the connection is created by a link using the MDM ID.
- Only one MFL can be assigned to a CAD project
- The CAD interface is only available to registered users
- If there is no online connection the offline cache is used
- In the case of evaluations the current data from the database or the offline cache are always used.

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21 Revision service

Date	Version	Editor	Changes, comments
10/25/2006	0.0	Adler	Document prepared
12/04/2006	0.6.0	Adler	First draft (software version 0.6.0.x)
12/08/2006	0.6.1	Keller	Section 11.ff interfaces reworked
08/15/2007	0.10.0.0	Keller	Section 11.1.2.ff interfaces reworked Section 12 Glossary expanded
08/22/2007	0.10.0.1	Charusa	Adaptation of screenshots to current version
09/11/2007	0.10.1.6	Keller	Section 11.1.2.7 Device assignment with assignment interface updated
12/19/2007	0.11.1.1	Gröning	Complete reworking
02/29/2008	1.0	Gröning	Deleted: -Glossary / List of abbreviations - Conditions of use (separator Link) New: - Modular-use service and function scope - Working offline - Material approval lists - Supplier approvals - Mass data editing - Combinations - Tasks / Workflow - Import / export / print records - Interface to CAD / CAE Systems Reworked: - Screen / Record description - Classification structure
04/18/2008	1.0	Gröning	Reworked: - Record description - Workflow - Predecessor / Successor - Comparison types
06/12/2008	1.1	Gröning	New: - Classification and structure - What is new? - Updating of views and data Reworked: - Screen description - Screenshots - Search and filter functions - Record description - Predecessor / Successor
08/01/2008	1.1	reinisch AG Karlsruhe Germany / Gröning	English translation

Operating instructions for users

22 Legal notice

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