

MDM
Quick guide for suppliers



Quick guide for suppliers

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Revision index

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Glossary

Term	Meaning		
MDM	Material Data Manager		
Supplier	Supplier, vendor, deliverer of machines or plants		
Manufacturer	Manufacturer, producer, fabricator of single parts, components or units		
OEM	Mercedes-Benz, Daimler Truck, facility or plant operator		
Approval Manager	Responsible person of the facility or plant operator for material approvals		
Maintenance	Maintenance and repair, up keeping		
MFL	Material approval list (German abridgement of: Material Freigabe Liste)		
Special approval Project or supplier specific approval (no derivation from MFL)			
	Suppliers have only reading rights for special approvals in their own projects		
EQ number	Equipment number, unique designation of machine or project		
Universal approval	Approval of type, classes / series or standard parts		
Parts list	Parts, stock, piece list; BOM = bill off materials of used components with unique designation, i.e. the number is usually 1. Components can be listed multiply.		
Order list	List of used components with accumulated numbers of components. In EPLAN: summarized parts list		



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Quick guide for suppliers

1. Introduction

This quick guide should be an assistance for the usage of the MDM from a suppliers view. The most effective workflow for suppliers is accurately described.

This document is not a substitute for the operating instructions for users or the bookable two-day training for suppliers (see http://www.materialdatenmanager.com/schulungen/).

The description of specific functions or features can be found in the operating instructions for users (key <F1> or http://onlinehilfe.materialdatenmanager.de/EN).

The topics special approvals, parts list check and resulting requests are shown by a characteristic example describing the usage and interaction of suppliers and approval managers.

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2. First steps

Please download the MDM from the SCIO AUTOMATION homepage. The download instruction and the client program can be found in:

http://www.materialdatenmanager.com/en/downloadfirst-steps/

Please sign in and register accordingly to these instructions. After this the supplier specific rights are assigned by SCIO AUTOMATION.



Your relevant project is normally already provided by the Mercedes-Benz AG or Daimler Truck AG. In order to make this project visible certain rights are assigned to you. So you can see the properties, approvals and parts lists. As holder of the role "supplier manager" you have additional rights for "Quick administration" so that you can assign reading or writing rights to further users.

Important: suppliers find their projects solely in the structure view "Project structure - plants".

If you cannot find your machine or plant in the project structure, please contact your approval manger / contact person.

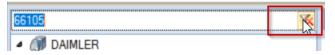


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3. Finding projects if the name or the EQ number is known

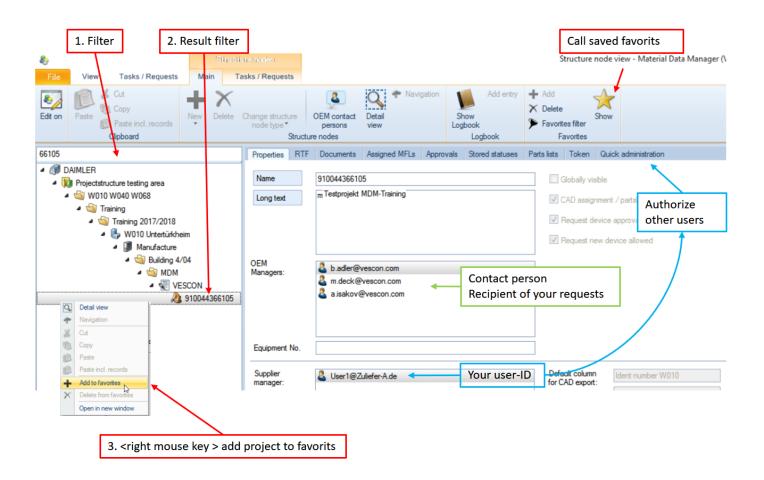
The best way to find the own project is filtering of a known string in the structure tree (e.g. EQ number, name of supplier or project).

Tip: as long as the filter is "active", only those structure elements are displayed which are matching exactly the filtering criteria. The deactivation of the filter can be done by clicking on the button "clear filter".



Please proceed as follows:

- 1. Enter the filter criteria and press <Return> (e.g. the last 5 digits of the EQ number)
- 2. Mark the found structure element (e.g. the machine) in the structure view by clicking
- 3. Press the right mouse key and "add to favorits".



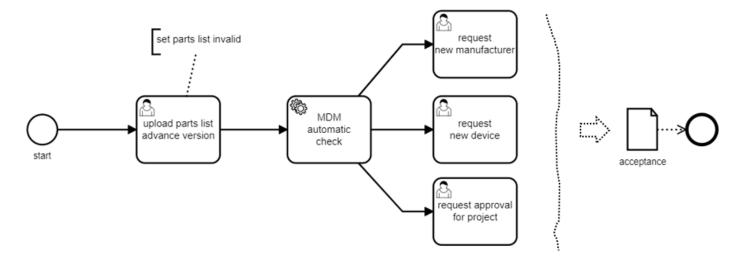


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4. Workflow order list /parts list / check / requests

The best way

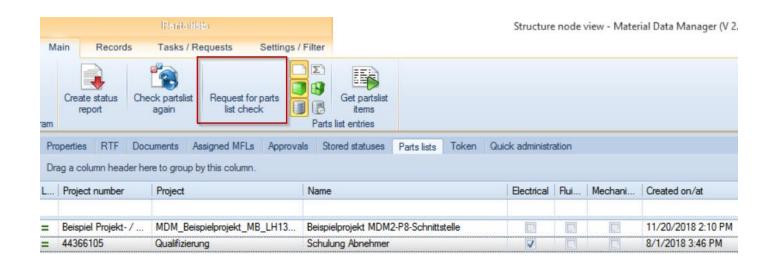
The most effective procedure for suppliers is the upload of an order or parts list as soon as possible. When importing the order or parts list the MDM checks automatically if errors exist. So errors can be corrected in their data sources (e.g. EPLAN, SAP) and requests for new devices or project approvals can be sent directly from the parts (better: order) list.



The uploaded parts list must be marked as "invalid" and must be deleted after the sending of the requests.

This procedure can be reiterated as often as needed until an accurate and approvable parts list is available.

A valid parts list can be sent to the approval manager for "Parts list check".



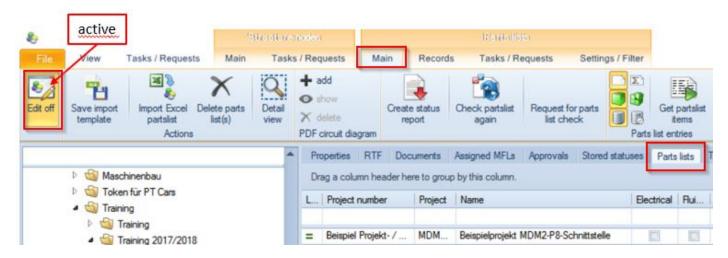


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5. Creating a parts or order list

For parts list upload writing rights are necessary on the related structure element. These rights are assigned by the responsible OEM or supplier user employing the "Quick administration".

If the writing rights are present the button "Edit on" is activatable.



View "Structure view" / tab "Parts list" / menu "Main"

If you have no writings rights please contact the responsible OEM or supplier user.

Allocation to the MDM records

During the import the devices will be allocated by manufacturer and order number in the parts list to the manufacturer and order number in the MDM.



- 1. Allocation by manufacturer (variants of notation in the MDM are allowed)
- 2. Allocation by order number
 - 1. Check: order number in the parts list = order number in the MDM
 - 2. Check: order number in the parts list = article / type in the MDM
 - 3. Check: article / type in the parts list = order number in the MDM

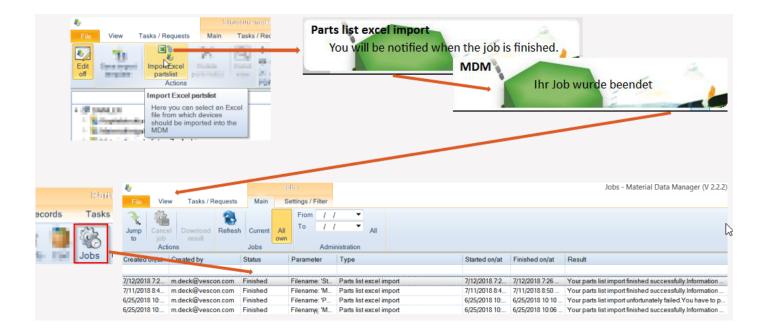
Tolerant search in the order number: special-, punctuation- and additional characters will be ignored.



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Workflow parts list import

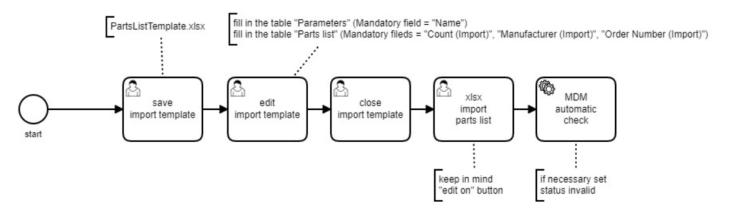
- The import of a parts list generates a corresponding job
- The status can be checked in the job view



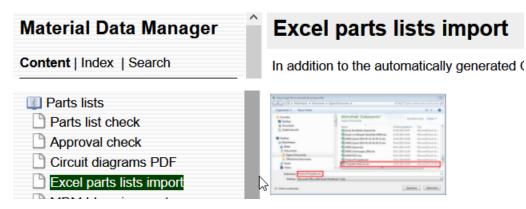


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5.1 Import Excel parts list (mechanics)



Further information and a step by step instruction can be found in the online help (keyword "parts list").



Advice: Erroneous data resulting from the Excel parts list must be rectified there and the parts list must be

uploaded again. If all header data are identical the existing parts list will be overwritten.

Tip: Always save the versions of your revised Excel parts lists.



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5.1.1 Editing the import template

The import template (PartsListTemplate.xlsx) contains two Excel worksheets.

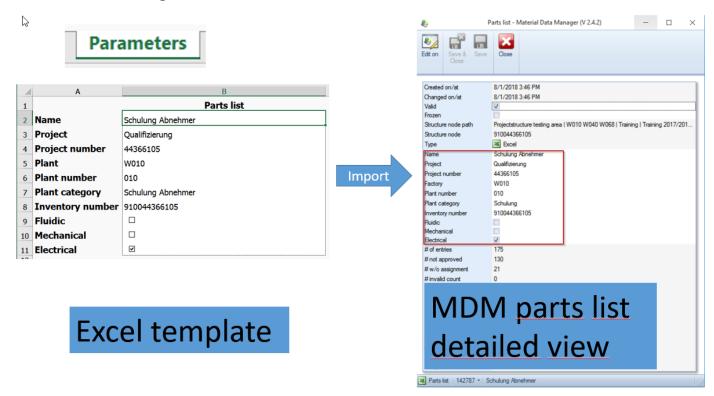


In order to import the parts list the following mandatory fields must be filled:

- Parameter: Name

- Parts list: number (import), manufacturer (import), order number (import)

Which data are assigned where to?



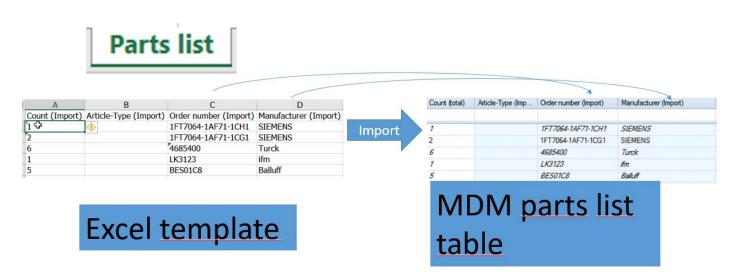
The data from the parameter table are assigned to the header data of the MDM parts list (detail view "parts list"). These data can be filled in or edited also afterwards (don't forget "Edit on").

When the existing parts list will be overwritten?

If all header data are identical the existing parts list will be overwritten.



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The Excel columns are assigned to the MDM parts lists by the column names. The titles of the first row correspond with the column names of the MDM parts list. All columns in the template exist also in the MDM parts list.



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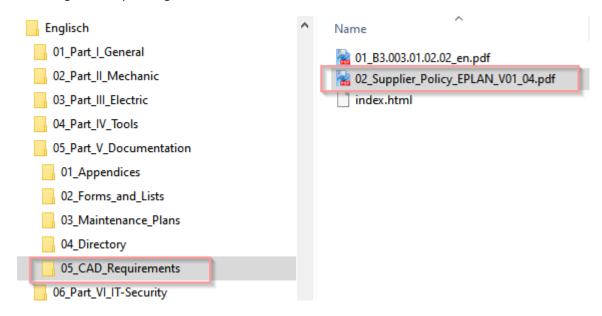
5.2 Generating the order / parts list EPLAN interface (electric / fluidic)

Precondition for generating of a MDM parts list out of EPLAN is the correctly installed EPLAN-MDM interface. Please check the following topics:

- Does the licence exist (EADN: Application 0068)?
- Is the interface correctly installed?
- Is the OEM specific configuration file installed?

5.2.1 OEM specific configuration file

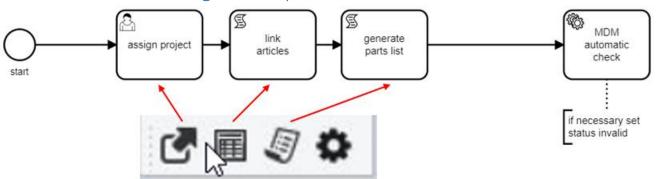
In the OEM specific configuration file is specified which EPLAN properties will be assigned to the MDM parts list. This file is available in the powertrain requirement specification 05_Part_V_Documentation\05_CAD_Requirements including a corresponding instruction.





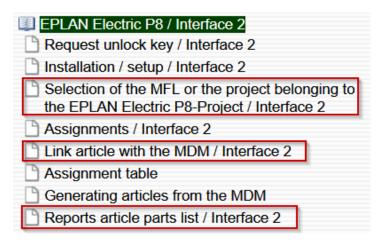
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5.2.2 Generating a MDM parts list out of EPLAN



- The assignment of an EPLAN project to a MDM structure element (project) is necessary for the generation of a MDM parts list. The name and the ID of the structure element are registered in the project properties (<EPLAN.Project.UserSupplementaryField99 +100>.
- If necessary "own" variants of manufacturers notations must be defined in EPLAN, in so far that the MDM manufacturers notations or variants of manufacturers notations are different (see MDM online help).
- Linking EPLAN articles with MDM records: for the graphical EPLAN parts list the contents of the MDM data can be transferred to the free properties of the EPLAN article.
- Generating and upload of the parts list into the MDM (see MDM online help).

Detailed information can be found in the MDM online help.



If problems occur or if you have questions concerning the interface please contact the MDM hotline (email: mdm@vescon.com).



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5.3 Relevant data fields

The following list describes which columns must be filled out and which properties will be transferred to EPLAN:

Legend M Mechanic, minimum content for a preliminary check					
E Electric, minimum content for a preliminary check			· · · · · · · · · · · · · · · · · · ·		
	UF Important for an approval by an universal approval				
	EPL-ID EPLAN property which matches the MDM field / column				
Column header	М	Ε	UF		
Number (Import)	Х	Х		Integral number > 0. Usually "1", because parts list and	20482
(map 2 sy				not order lists will be imported	
Article type (Import)	Х	Х	Х	Type information of the manufacturer. For standard parts 220	
(the type of the standard (e.g. M10 x 8). Further	
				information in chapter "universal approvals".	
Order number(Import)	Х	Χ	Х	Order number of the manufacturer (Primary	22003
		, ,		manufacturer)	
Manufacturer (Import)	Х	Χ	Х	Name of the manufacturer (Primary manufacturer)	22007
Standard (Import)	Х	Х	Х	For standard parts the official denotation of the standard	22147[81]
Contain a (import)		, ,		(e.g. ISO 12474)	
Technical description	Х	Χ		Repetition of denomination and the most important	22004
(Import)				parameters. Addition of technical data which differentiate	
(the device from devices with the same denomination. For	
				construction parts drawing number / file name which leads	
				to the machine documentation. Additional the	
				corresponding fields of the parts list must be entered.	
Denomination (Import)			Х	Denomination of the device	22147[80]
Replacement / Wearing	Х	Х		Advice to the evaluation of the part. With: 20907	
parts (Import)				E Replacement part	
				V Wearing part	
				EW Replacement part, work piece contacting	
				VW Wearing part, work piece contacting	
Position (Import)	Х			Link / Position number from the drawing.	19007
Device tag location		Χ		Device designation from the CAD 1220	
(Import)				(automatically transferred by the EPLAN MDM interface)	
Device tag plant (Import)				(1120
Device tag (main part)				20008	
(Import)					
Device tag (sub part)					
(Import)					
Complete device	Х	Χ		Electric / Fluidic: automatically from EPLAN	20006
designation (Import)				,	
, ,				General mechanic:	
				The drawing number must be entered.	
Order number of the	Х			Order number of the supplier	22147[82]
supplier (Import)				· ·	
				Construction parts:	

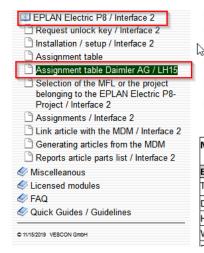
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	The "Order number of the supplier (Import)" must be repeated in the field "order number (Import)". "Manufacturer (Import)" is the name of the machine manufacturer.	
Quantity unit (Import) Value quantity unit (Import)	The MDM is not a tool for disposition and so only quantities are treated. Here the real values can be entered (e.g. length).	22147[83] 22147[84]
Ident number (Import) (storage part number)	If the ident number (storage part number) is available (e.g. gear motors or work piece contacting parts).	22147[86]
Device classification (Import)	Here your additional comments concerning the device can be entered (e.g. bulky loads, construction parts, obtaining by wholesaler).	22147[85]

Advice: For the complete list of mappings from MDM data fields to EPLAN properties, see the MDM Online Help. The assignments are defined in the OEM-specific configuration file (Mdm.WcfClient.Plugins.EplAddIn.2.Properties.json)



1	J	THE COURT DOTTE	10101
Parts list, plant	Prj.Plant	Plant Untertürkheim	10133
Parts list, plant number	Prj.PlantNumber	010	10130
	Prj.PlantName	Plant 010	UserSupplementaryField 95
Parts list, plant category	Prj.PlantArea	Assembly	10134
selected ident number	Prj.IdentField	Ident number W010	UserSupplementaryField 98
MFL/project name	Prj.MflName		UserSupplementaryField 99
MFL-/projet- ID	Prj.MflKey		UserSupplementaryField 100

MDM field	Key in the configuration	EPLAN property	EPLAN property			
	file	(read only)				
EPLAN Device properties, which	EPLAN Device properties, which can be written back in the article (project)					
Technical description	Mdm.Description	22004	22147:95			
Device class	Mdm.DeviceClassName	22026				
Height	Mdm.Height	22012				
Width	Mdm.Width	22013				
s						

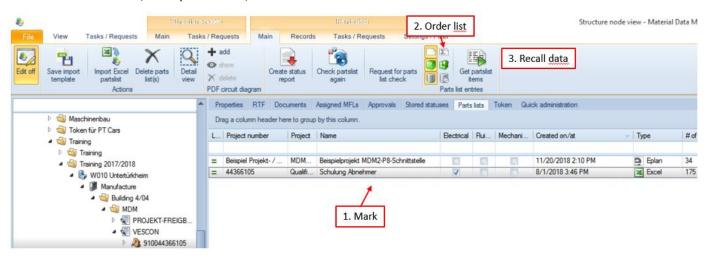


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6. Analysis of parts list errors

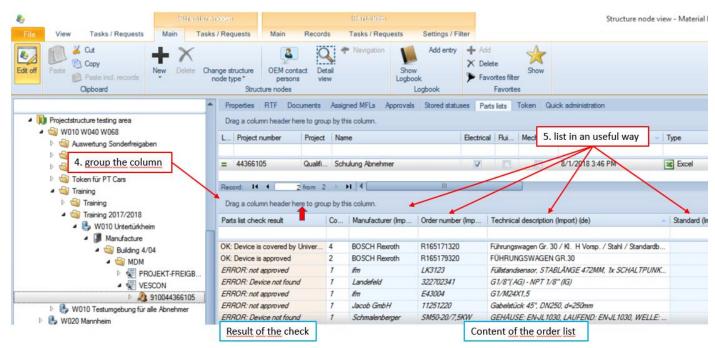
6.1 How to display the MDM order list

View "structure view" / tab "parts lists" / menu "main"



- 1. mark the parts list
- 2. select the view "order list"
- 3. click on "get parts lists items"

It's useful to display the items in an order list, because every article is only shown once in this totalized list.

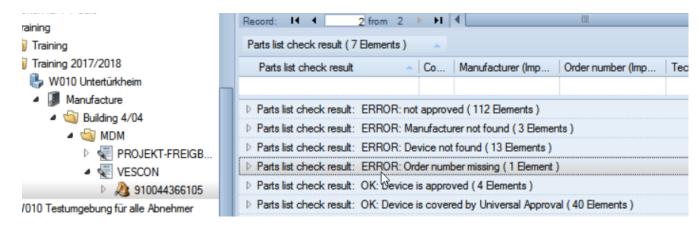


- 4. group the column "Parts list check result" (see MDM online help "grouping")
- 5. structure the parts list in an useful way (menu "Settings / Filter")



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6.2 Checking the errors



The errors should be corrected in order of the error's seriousness.

Typical errors:

		Legend XLS: Excel parts list import EPL: EPLAN parts list import UF: Universal approval
Error:	Reason	Rectification
Manufacturer	Manufacturer not existing	Request "New manufacturer"
not found	Notation ≠ MDM and variants	XLS: adjust / correct name
		EPL: configure own notation
		EPL: correct wrong notation
Device	Device does not exist in the MDM	Request "New device"
not found	Notation of order number wrong	XLS: correct order number
	 missing of left-hand zeroes 	EPL: correct order number in the article
	 type and order number in one field additions like article numbers EPLAN-article numbers (SIE.3RT) 	
	Universal approval does not match	Check the relevant fields: - manufacturer (Import) - article type (Import) - order number (Import) - standard (Import) - denomination (Import)
Not approved	No project approval	Request "Project approval"



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6.3 Starting of requests

6.3.1 Request "New manufacturer"

If a manufacturer is not existing in the MDM, he can be requested via this workflow. These requests will be approved soon insofar the manufacturer not already exists or not a trader / distributer / retailer is requested.

Please check first, if the manufacturer not already exists by opening the view "Manufacturers with accompanying data" and filter the name or a part of the name.

Checking if the manufacturer already exists

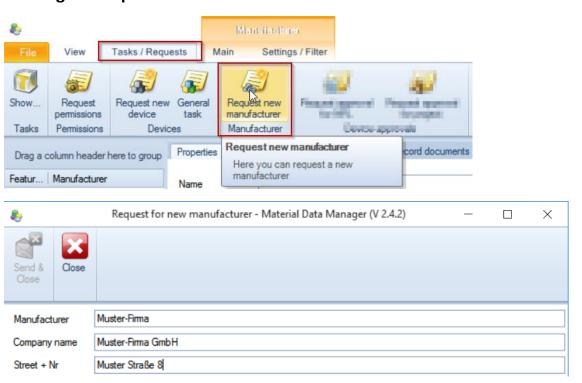


Siemens AG

Company name

Starting the request

Siemens





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6.3.2 Request "New device"

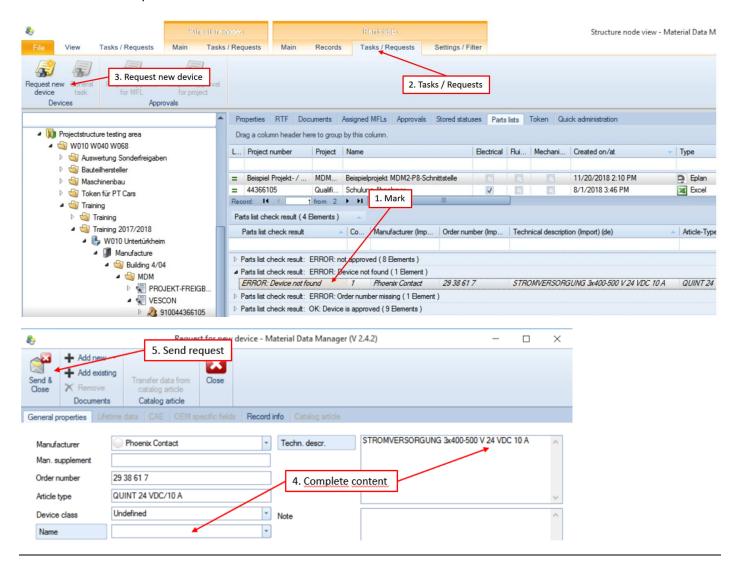
The request is necessary if the needed device (usually a catalogue article) does not exist in the MDM pool data.

Standard devices, fittings, production parts etc. are usually covered by universal approvals and must not be generated or requested in the MDM. Please check the necessary criteria in your parts list so that an universal approval can be effective.

The most convenient and most effective way to request a new device is to start the request directly from the view "order list". The contents of the order or parts list will be transferred directly in the request form. This means: the higher the quality of the source data is (EPLAN articles, SAP, Excel), the less of effort is necessary for the request.

Please proceed as follows:

- 1. Mark the parts list record with the message "Device not found".
- 2. Open the ribbon "Tasks / Requests" (the right one in the section "Parts Lists").
- 3. Start the request "New device".
- 4. Complete the following form (manufacturer, order number, technical description, documents). Please take care for the data quality. Your request will be forwarded to a quality check.
- 5. Send the request.





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Advice: By requesting a new device a request for project approval is started simultaneously.

Data quality in the request "New device"

Order number: Every device in the MDM must be uniquely defined by the data fields "manufacturer" and "order number". Please inform you of the correct spelling by the existing order numbers of the specific manufacturer.

Technical description: In the data field "technical description" user can realise what device is meant and what the most important parameters are.

Technical description for production components:

- Repetition of denomination.
- Addition of technical data which differentiate the device from devices with the same denomination.
- Advice to protected documents concerning ISO (DIN) 16016.
- Drawing number / file name which leads to the machine documentation. Additional the corresponding fields of the parts list must be entered.

Document: For further information documents must be listed in the data record - especially small PDF files only concerning the concrete device. Please do not load up complete catalogues.

Documents are necessary for the quality check and the approval workflow and are for this reason mandatory.

In the document the concrete order number should be displayed or a list which shows how order numbers of the manufacturer are composed.

If you load up an internet link please be sure that it matches the concrete device.

Please load up documents without proprietary notice concerning ISO (DIN) 16016 and personal data.

Document production components: Please don't load up any document.

Quality check

SCIO AUTOMATION checks the data quality of new devices in the workflow of "requests for new devices". If data do not fulfil the requirements the request will be send back to the sender for the purpose of revision.

An approval by the OEM is only possible if the quality check was successfully completed by SCIO AUTOMATION.

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6.3.3 Request "Project approval"

This request can be started directly from the order or parts list. It is theoretically possible to start the request for all not approved devices in one form.

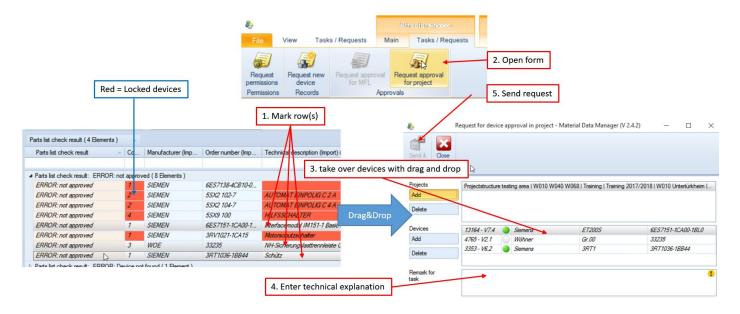
Please note that for every request a special technical reason must be given (see "Remarks" in the form).

Exceptions (summary applications) have to be previously discussed with your contact partner of the maintenance department.

If devices are highlighted, the devices are blocked. These devices should not be used in new projects. Normally are these devices discontinued by the manufacturer.

Process:

- 1. Mark the devices with the error message "ERROR: not approved" in the parts or order list.
- 2. Click on the button "Request for project approval" in the section / tab "Structure elements" (so the project is automatically entered in the request form).
- 3. Enter the not approved devices per drag & drop into the form.
- 4. Enter the reason for your request in the field "Remarks".
- 5. Forward the request.





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6.3.4 Check parts list again

When all requests are forwarded, they will be approved or refused by the OEM approval managers.

As a result a new update of the approved and of the listed devices is generated:

- Fewer errors: Manufacturer not found

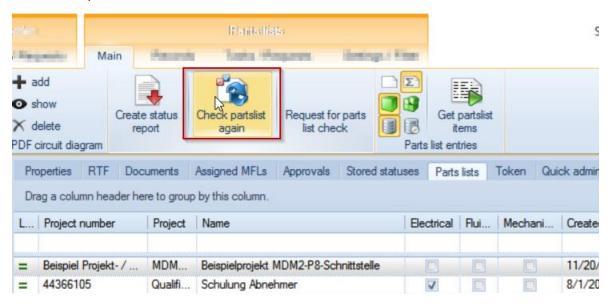
Fewer errors: Device not foundFewer errors: Not approved

Advice: The execution of your requests can take different times. The status of your requests is visible in the task view.

With the function "Check parts list again" former parts list can be checked again the current parts list.

Process:

- 1. Mark any parts list
- Click on "Check parts list again"
- 3. Analyse the result



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7. Universal approvals

7.1 Basics

To avoid single or special approvals in projects or MFLs for several devices universal approvals can be defined. These universal approvals must be added to projects or MFLs.

If a parts list is checked against approved devices, as well project and MFL approvals and universal approvals are checked.

Only the OEM can generate and edit universal approvals.

Universal approvals are usually employed for not replacement relevant devices, e.g.:

- standard parts
- production components without relevance for replacement
- fittings / fixing material without relevance for replacement

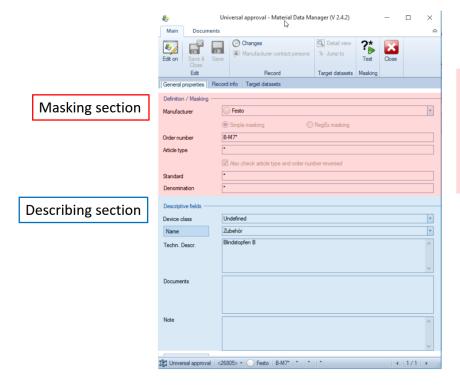


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7.2 Universal approvals: structure of the detail view

The input fields are divided in two sections:

- 1. Masking section: in these fields a masking instead of real data for the universal approval is defined. These fields will be checked in the approval check, e.g. manufacturer: Festo, order number: B-M7*, article type: *. All devices of the manufacturer Festo with an order number beginning with B-M7 are covered.
- 2. Describing section: in the describing fields additional information can be entered.



- The relevant parts list fields are:
 - Manufacturer (Import)
 - Order number (Import)
 - Article type (Import)
 - Standard (Import)
 - Denomination (Import)



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7.3 Universal approvals: syntax

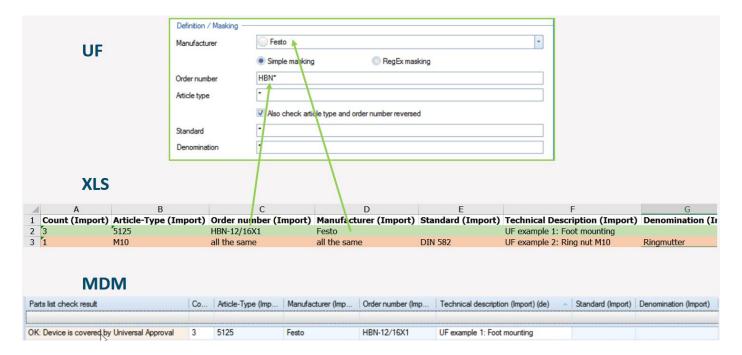
7.3.1 Simple masking:

Here the following wildcards are allowed:

- * For any number of characters
- ? For one character

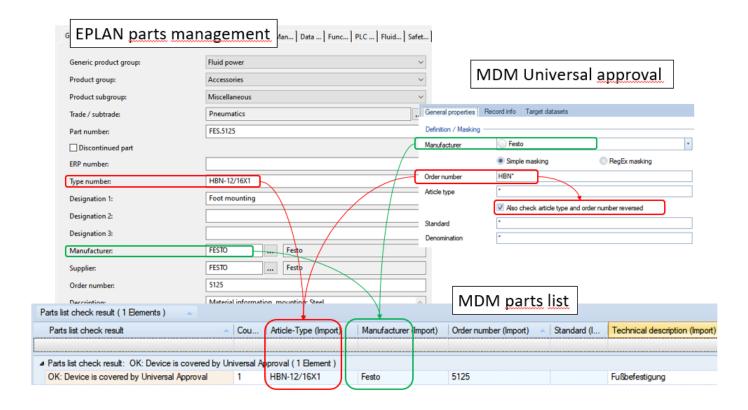
Special / additional characters are allowed and will not be regarded in the check.

Example:





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Advice: Please note that in this example an approval matches, although the article type and order number are reversed. This is controlled by the checkbox in the mask of the universal approval definition.



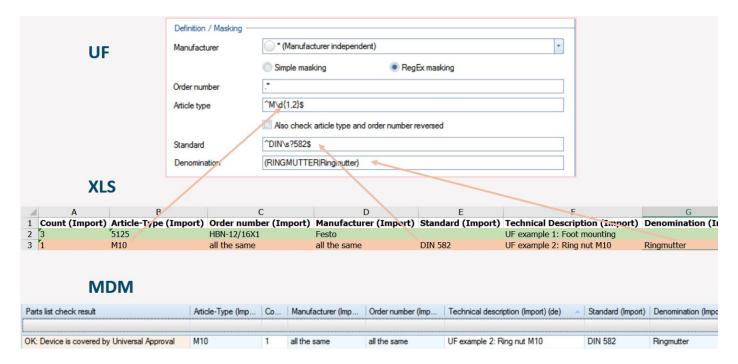
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7.3.2 RegEx masking:

In the masking of the order number, article type and standard only regular expressions (=RegEx) are allowed.

It is not possible in this quick guide to explain the whole potential of RegEx. Further informations concerning regular expressions can be found in the web (e.g.: https://de.wikipedia.org/wiki/Regul%C3%A4rer_Ausdruck). Advice! Special / additional characters were not eliminated before checking, if RegEx masking is used.

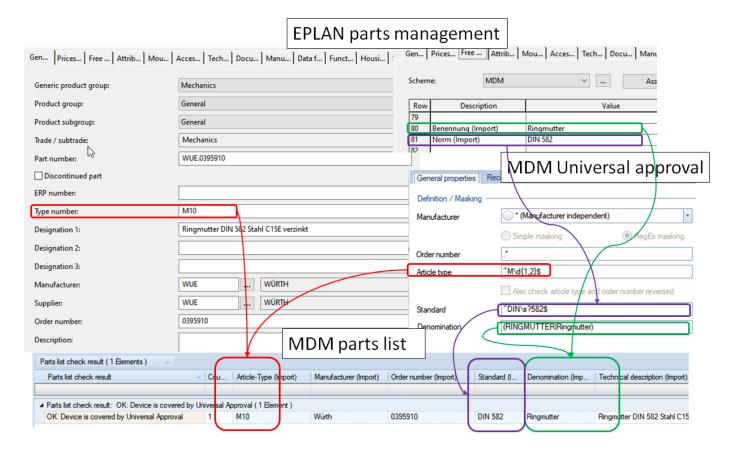
Example:





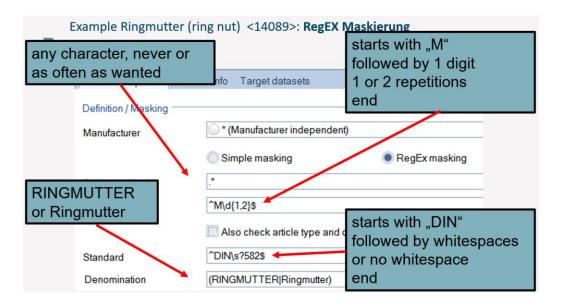
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Example, regEx masking, Source EPLAN article



Advice: Please note that the entries / values in norm / standard and denomination are taken from the "free properties" of the article.

Explanation of the syntax using the example above:





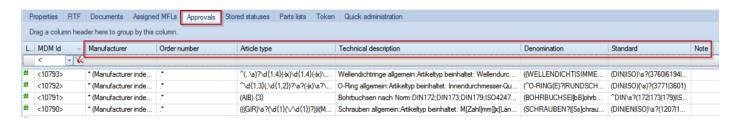
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7.4 Universal approval does not match

If the parts list contains devices which should be actually covered by an universal approval and the message "Device not found" occurs, the masking criteria of the universal approval are not fulfilled.

Important: please adjust the columns in the settings of the tab "Approvals" usefully, e.g.:

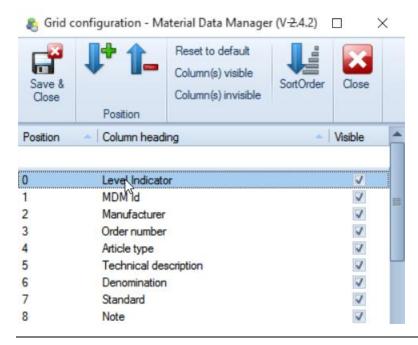
MDM-ID / manufacturer / order number / article type / technical descriptions / denomination / standard / note



With these settings all important columns concerning the device and the universal approval are visible and can be filtered or grouped.

The setting can be done in the ribbon "Settings / Filter".







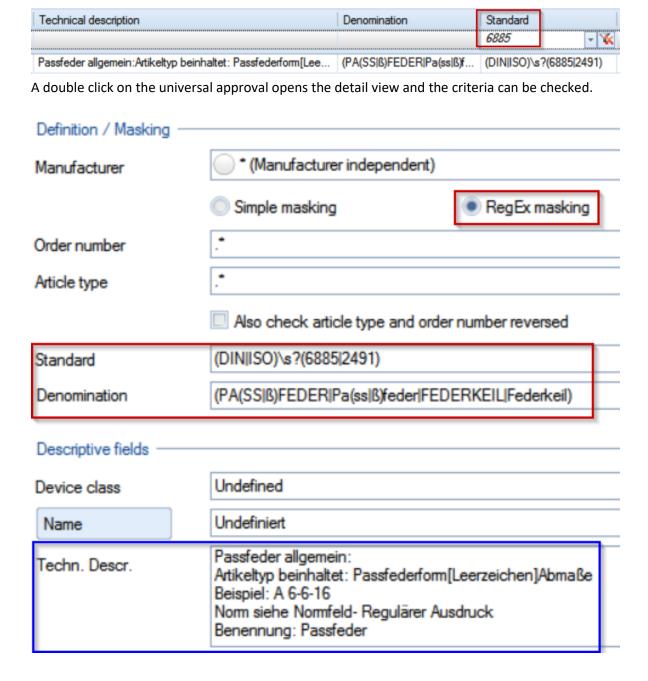
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7.4.1 Example: standard parts

In order to find the matching universal approval the standard part can be filtered in the column "Standard". After this the criteria can be checked and changed in the parts list data.

Example: You are searching for the definition of a feather key according to DIN 6885.

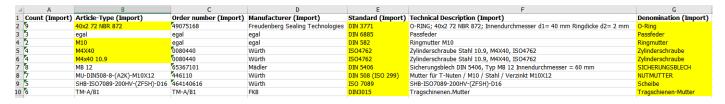
By filtering of the standard number in the column "Standard" the relevant universal approval can be found.





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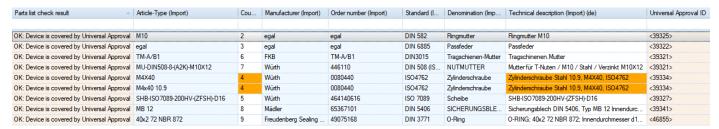
Further examples of typical standard parts which are included in universal approvals are available:



Parts list import template

The fields highlighted in yellow match to the masking fields of the corresponding universal approval.

Result after importing the template



Advice: Please note that usually universal approvals already exist for standard parts. This means that an "request new device" for standard parts is no longer necessary.



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7.4.2 Example: Icotek, Kabeleinführungsleiste, Bauform U

In order to find the matching universal approvals pointedly filtering and grouping is possible. After this the criteria can be checked and changed in the parts list data.

Example: You are searching the ICOTEK Kabeleinführungsleiste, Bauform U

Find the matching universal approvals by pointedly filtering and grouping.

- 1. Grouping by manufacturer
- 2. Filtering by universal approval

