

ADM Automatic Design Software GmbH



User Documentation

VERSION 3.0.1

Stand: 10.01.2024

Erstellt von ADPM

Abstract

Introduction.....	4
User Interface	5
The matiCon® Configurator Extension.....	5
Product Configurator.....	5
Quotes	5
User Management.....	5
General Setup.....	5
Lists and Cards.....	5
Fact Boxes	6
matiCon® - Basic principles.....	7
Domain List.....	7
Menu List.....	7
Menu Item List.....	7
Item List.....	7
Custom Item List	8
Text List	8
Setting List.....	8
Replace List.....	8
Exception Head List	9
Rule List.....	9
Template List.....	9
Configurator Style List.....	9
Image Dynamic List	10

Content List	10
Media Management List	10
General Setup	11
Setting up a Configuration	12
Create a new product configuration	12
Add a new record to the Menu List	12
Add records to the Menu Item List	14
Add records to the Item List	17
Add more basic information to the Items in the Item List	19
Add properties to the Items	20
Selected item properties and their use in the configuration context	23
Image handling	25
Assigning images (basic)	25
Image layer (advanced technique)	28
Media Management	30
The Media Management List	30
Customizing the configurator	31
Options	31
Settings	33
Customize the configurator in general via settings. // Text List (Filter: Setting)	Fehler! Textmarke nicht definiert.
Exceptions	37
Template Building	39
Introduction	39
matiCon® Content Management System (CMS)	40
Introduction	40
Checklist Configuration (AMP)	41

Introduction	41
Description and Recommended	43
Add properties to an Item.....	45
Options	47

Introduction

With the matiCon® product configurator there is a tool to make the variety of possible product combinations accessible online. The products are visually shown in each configuration step, can be selected and compared and finally requested. matiCon® is easy to maintain despite the complexity of the products behind it and offers the multitude of individual possibilities can be made accessible to the customer. The matiCon® product configurator works like a funnel: The user is guided step by step through the configuration and is only offered options that are possible in the process. This guarantees errorfree and precisely fitting offers, and jump rates are significantly reduced. The matiCon® product configurator works platformindependently in web browsers and responsively adapts the layout to the devices used. A special feature of the matiCon® configurator is its photorealistic product representation. Every configuration can be displayed in real time on the basis of the CAD renderings created in advance - this way the product is build together piece by piece in front of the customer's eyes.

The diversity of information and it's photorealistic product representation will be maintained in Dynamics 365 Business Central user interface as an extension that allows you to add extra functionality without making any changes to the base code itself. Rather the matiCon® product configurator data expands and works hand in hand with your existing data.

Captions : *Product Code*

All captions will be marked with this light background.

Codes : **GROUP**

All codes will be transformed, like in BC, in capital letters.

Business Central / matiCon® List- and Cardnames: **Domain List**

All List- and Cardnames will be marked bold and capital initial letters.

User Interface

The matiCon® Configurator Extension

The **Role Center** page is your starting point when you access Business Central. Here you will find the **matiCon®** menu (see Figure 1) in the navigation bar (A). The navigation menu provide you a quick access to the main groups (B) of the matiCon® extension: **Product Configurator**, **Quotes**, **User Management** and **General Setup**.



Figure 1 – Role Center with navigation bar

Product Configurator

The main configurator application can be found under **Product Configurator**. Start here to create a new or manage existing configurators with all capabilities.

Quotes

Manage here all received configuration requests in the **Quotes** surface.

User Management

The **User Management** refers to various activities that involve managing the users of the protected login area and all related data. Usually, the administrator is the one who performs these activities and/or coordinates them.

General Setup

The **General Setup** surface provides several default settings.

Lists and Cards

As common in Business Central, you'll do most of your work in a list or a card. Both types of pages have a bar with actions that are relevant to the particular page, and the actions are almost the same for the individual card and for the list of entities.

Entering a list view, you are normally in a read-only mode. By clicking the “Edit List” the editing mode for the whole list will be activated.

If you click on a record directly the card page will open. The card page is designed to edit data. This page is typically open in edit mode.

Hint: If you navigate directly to a list via the “Navigate” or “Related” menu, you will be entering in edit modus immediate.

Create, edit, or delete data

You can start to create your data from different places. In the list you can click on the “+ New” Symbol, if you click on it, you create a new entry. If you open a card, you can see the plus Sign to create a new entry, as well.

Most lines have a “Show more options” button, marked with vertical ellipsis (three vertical dots).

Hint: Sometimes you’ll have to activate “Edit List” to access all options within the more options button.

Fact Boxes

In addition to lists and cards we have several fact boxes. They provide a quick overview of the most important actions on a page and allow quick access to relevant records. Likewise, within the fact boxes, matiCon® offers preview images in many places, in which you can already see in Business Central how the view will look in the configurator.

matiCon® - Basic principles

Starting from the Configurator List, we will give a brief overview of the lists that can be accessed from here and its basic principles. A more detailed description of the input options and functionalities is given in a later chapter.

Domain List

In the **Domain List**, everything related to the network and hosting infrastructure is organized. You can add several domains for development and / or production environment, manage email settings and Google accounts.

Menu List

The **Menu List** contains the very basic entry of a product configuration: the group. A group in a product configuration is like a superior product item. It represents a product category or literally a starting point, where you enter the configuration route, the **Menu Item List**. You'll have one entry at least.

Menu Item List

The **Menu Item List** specifies and represents the route (menu) a product item will take from start to end within its configuration process. So, each menu-step specifies what items of a product can be configured. The **Menu Item List** always starts with the basic group entry (we've defined in the **Menu List**) and ends with the summary page. In between we'll have the main section of configurable items.

In addition, you will be able to manage dependencies, set up settings, assign designs or image layer in the **Menu Item List**. We will describe these options later.

Item List

Once you are in the **Menu Item List** you can enter the **Item List** to add or manage **Items**. Entering the **Item List** is like step into a menu step within the configuration process. Here you'll add those items you

can choose from in the configurator. All specifications, descriptions, properties or images can be added and managed here.

Additionally set up settings, property changes or advanced matrix selection values. Those options we will describe later as well.

Custom Item List

All items that for some reason are not yet ready to be maintained within the **Item List**, we provided the **Custom Item List**. Here we can manage those **Items** with free text fields for descriptions and images without integrating them into the inventory. A very brief example is the conditional option “without” (a state we won't add to the inventory) or even an item that is still in prototype state.

Text List

The main task of the **Text List** is gathering text values as text modules or text blocks. These values generally concern the configurators framework, not the items or products itself. There are various of placeholder uses text blocks, like address data, general descriptions, mail form elements, button text and so on. These text blocks are fully translatable. On the other hand, you can use text values to customize the configurator in general, like to provide a company logo.

Setting List

With the **Setting List** you can customize the configurator in very specific ways. These setting values concern a lot of variables that can be overwritten by adding a corresponding value. A very frequently used method is to customize the configurators look and feel by overwriting design values or by selecting given standard values, like image background color.

Replace List

Exception Head List

Sometimes the configuration process needs special attention because, for example, a selection that has been made isn't yet available or allowed but not recommended. Therefore we've got three different settings and corresponding dialog windows in the **Exception Head List**. For the first case displays an error and the selected step won't proceed. The second case will display a warning dialog, so that you can confirm or cancel the selected item. The third type draws attention to a change of order number.

Rule List

The **Rule List** is a versatile tool for creating (more or less) complex dependencies that control the configuration process. These dependencies declare which configuration steps are possible and are displayed accordingly. The approach can be done in different ways and even logical operators like 'AND OR NOT' can be used. Once you are in the item list, you can use the set rules via the restriction mode.

Template List

In the **Template List** you can create and manage all HTML templates. These HTML files are largely modular. Together they make up the markup that the configurator needs for its display in the web browser. In addition to the structuring markup, the templates also contain the variables that are responsible for the dynamic configuration contents. You can edit a template by using an HTML editor or a line-based **Design List** (outdated).

Configurator Style List

To ensure that the configurator has at least the basic HTML structure, you must create the minimum required templates in the **Configure Style List**.

Image Dynamic List

The **Image Dynamic List** allows you to compose an image from several images. You can vary the size and position of each individual image until you are satisfied with the overall picture. When arranging the images, a preview in real time helps a lot. Usually, this functionality is used on the start page for the group picture.

Content List

With the **Content List** you have the possibility to create a structure for content pages that are displayed independently from the configuration process. Once you have created a page, you can access the **Content Modules List** and add or edit content such as headings, images, text, etc.

So, you will have a content management system within your matiCon® Application.

Media Management List

Using the Media Management list, you can create and organize media files such as images or PDF files, which you can then use in the Content Management area or add as properties within configurator items.

General Setup

Create task overview / Checklist first steps (matiCon® specific)

<https://docs.microsoft.com/de-de/dynamics365/business-central/setup>

Setting up a Configuration

Create a new product configuration

For this scenario we would like to add a cordless screwdriver as a new configurable product. Starting a new product configuration begins with a very basic entry: the group. A group in a product configuration is like a superior product item. It represents a product category or literally a starting point. The product configuration will be added in the **Menu List**.

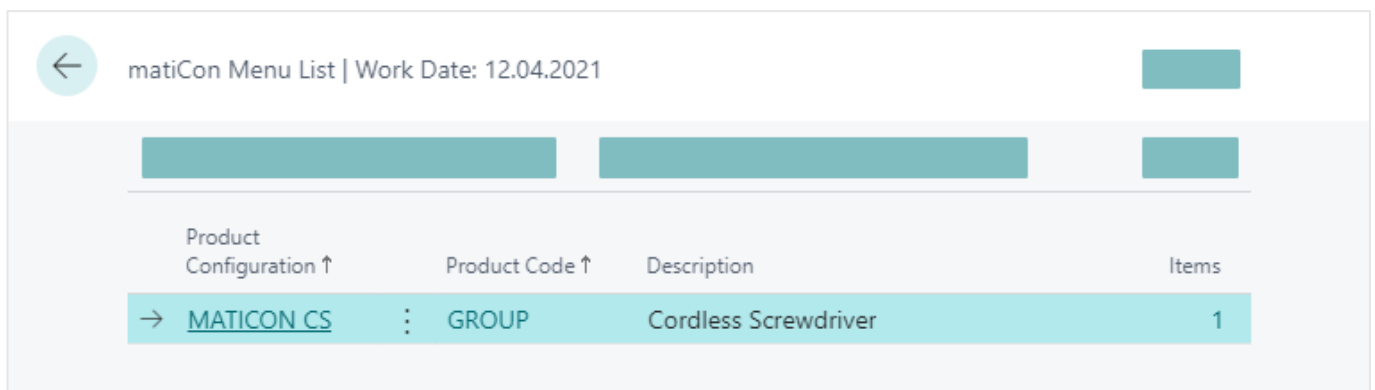
We recommend naming all basic **Product Codes** of any **Product Configuration: GROUP**.

Add a new record to the Menu List

Add a new product configuration:

1. Select the **Menu List**. You can select the list by:
 - Choose **Show Menu List** from navigate or related menu
 - Click on the record count of *Menus* in the **Configurator List**
 - Click on the record count of *Menus* in the **Configurator FactBox**
2. In the **Menu List** choose **New**. You will enter the Menu Card:
3. Select the *Product Configuration* from lookup mode
4. Choose **New** to create a new entry. You will enter the **Item List**:
 - a. Select **Custom Item** from *Item Type*
 - b. Choose *Item No.*
 - i. Choose **New** to create a new entry within the lookup mode
 - ii. Fill in **matiCon_CS** as *Item No.* (never use blanks)
 - iii. Fill in **Cordless Screwdriver** as *Description*
 - iv. Fill in **Configure your matiCon® Cordless Screwdriver** as *Description (2)*
 - v. Choose **OK**
 - c. Choose *Order No.*
 - i. Fill in CS – so all configured products in this group will start with “CS...”
 - ii. Choose **OK**
5. Choose *Product Code*

6. Choose **New** to create a new entry within the lookup mode
 - a. Fill in **GROUP** as *Code*
 - b. Fill in **Cordless Screwdriver** as *Description*
 - c. Choose **OK**
7. Finally fill in a *Description* like **Cordless Screwdriver**. It's a descriptive name for this Product Configuration Group. This *Description* is for internal use and does not appear in the configurator at all.
8. Done! You created the cornerstone for the new configuration process (see Figure 2).



Product Configuration ↑	Product Code ↑	Description	Items
→ <u>MATICON_CS</u>	⋮ GROUP	Cordless Screwdriver	1

Figure 2 – matiCon® Menu List

Add records to the Menu Item List

After providing an entry point we will add records into it to create the **Menu Item List**. The **Menu Item List** always starts with the basic group entry (we've defined in the **Menu List**) and ends with the summary page. Each entry represents a configuration step. There will be seven steps for cordless screwdriver configuration in between and one step each for the group and for the summary:

- Group
- Power | Voltlage
- Torque | Newton meter (Nm)
- Torque Steps
- Handle
- Battery | Ampere (Ah)
- Material
- Accessories
- Summary

With these seven respectively nine steps we will define the configuration route itself – the funnel.

To identify each step of the configuration process, we define the **Step Code**. We recommend naming the **Step Code** in the same way as the **Product Code**.

Naming: If you create new records that are specific to a product configuration and are not universal, we recommend prefixing the names with an abbreviation, like **MCS_BATTERY**. MCS stands for matiCon® Cordless Screwdriver.

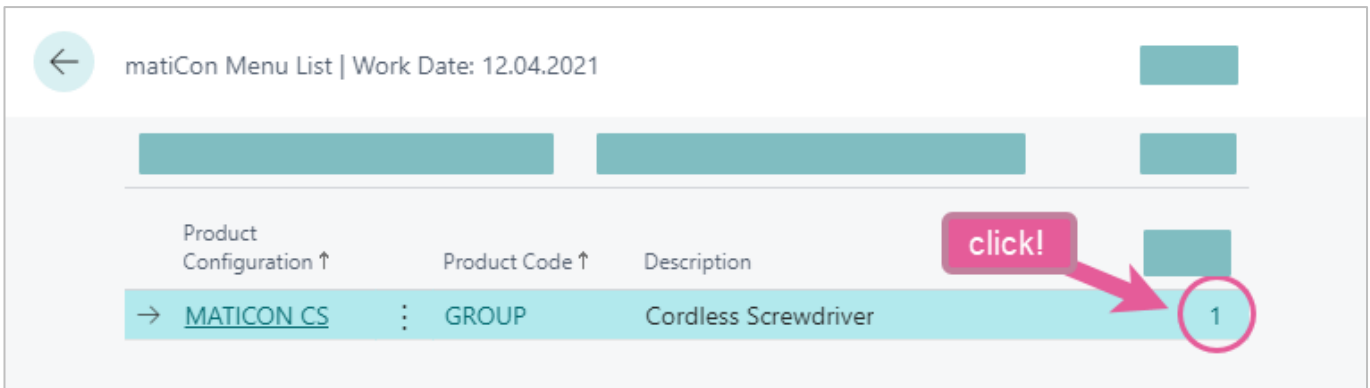


Figure 3 - matiCon Menu List

Add a new record to the **Menu Item List**:

1. Select the **Menu List**.
2. In the **Menu List** click on the record count (see Figure 3) of the **Menu Item List Entries**
When you start from scratch the record count will be "0"
3. Choose **New** to create a new entry: The **Menu Item Card** opens

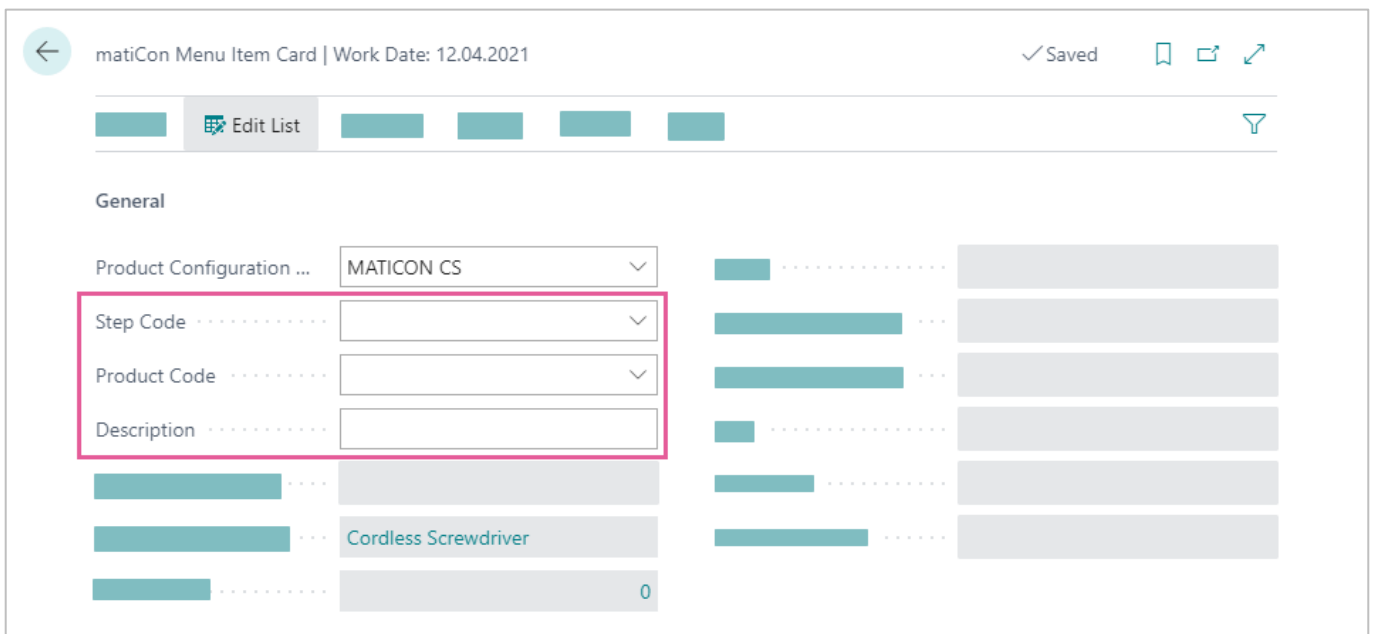


Figure 4 - A lot of input options appear here. For now, we will focus on the following fields in General section: Step Code, Product Code and Description

4. Choose **Step Code**
 - a. Choose **New** to create a new entry within the lookup mode
 - b. Fill in **MSC_ACCESSORIES** as **Code**
 - c. Fill in **Accessories** as **Description**

- d. Check **Translatable** checkbox if record should be translatable
- e. Choose **OK**
5. Choose **Product Code**
 - a. Choose **New** to create a new entry within the lookup mode
 - b. Fill in **MSC_ACCESSORIES** as **Code**
 - c. Fill in **Accessories** as **Description**
 - d. Check **Translatable** checkbox if record should be translatable
 - e. Choose **OK**
6. The **Description** field belongs to the **Product Code** field and will be filled automatically.
7. Done! You created a step within the Menu Item List.

Repeat the process until you have created all steps. You should now have a Menu Item List that looks something like this (see Figure 5):



Step Code	Product Code	Description	Step ↑	Items	Product Group Name
→ GROUP	GROUP	Cordless Screwdriver	1		Cordless Screwdriver
MCS_POWER	MCS_POWER	Power	2		Cordless Screwdriver
MCS_TORQUE	MCS_TORQUE	Torque	3		Cordless Screwdriver
MCS_TORQU...	MCS_TORQU...	Torque Steps	4		Cordless Screwdriver
MCS_HANDLE	MCS_HANDLE	Handle	5		Cordless Screwdriver
MCS_BATTERY	MCS_BATTERY	Battery	6		Cordless Screwdriver
MCS_MATERI...	MCS_MATERI...	Material	7		Cordless Screwdriver
MCS_ACCESS...	MCS_ACCESS...	Accessories	8		Cordless Screwdriver
ORDERNO	ORDER NO	Order No	9		Cordless Screwdriver

Figure 5 - Menu Item List with records

Add records to the Item List

Each applied record / step in the **Menu Item List** can hold various amounts of items you can choose from in the configurator. For the step **Material** we like to have five different records:

- Sonic Silver
- Indigo
- Camouflage
- Shockproof
- Sustainable / Recycled

Add a new record to the **Item List**:

1. Go to the **Menu Item List**
2. In the **Menu Item List** click on the record count (Items) of the menu step you want to add items to - in this case **Material**
3. The **Item List** opens
4. Choose **New** to create a new entry: The **Item Card** opens
5. Choose **Item Type** and select **Item**
6. Choose **Item No.**
 - a. Choose **New** to create a new entry within the lookup mode
 - b. Select a template for a new item: choose **Artikel**
 - c. Choose the field **No.** and assign an item number:
 - i. Fill in **MCS_MAT_SONIC**
 - ii. Confirm the dialog "Do you want to rename the record?" with **Yes**
 - d. Choose the field **Description** and fill in: **Sonic Silver**
 - e. Choose OK

Repeat step 5 and 6 until all five materials are set. You should now have an Item List that should look like this (see Figure 6):



Item Type	Item No.	Sorting ↑	Title	Short Description	Order
→ Item	MCS_MAT_S...	1	Sonic Silver	-	-
Item	MCS_MAT_IN...	2	Indigo	-	-
Item	MCS_MAT_C...	3	Camouflage	-	-
Item	MCS_MAT_S...	4	Shockproofed	-	-
Item	MCS_MAT_RE...	5	Recycled	-	-

Figure 6 - Item List with Materials

These are the most basic entries to enable an output of an item in the configurator. In the next step we add more information and properties to the items.

Add more basic information to the Items in the Item List

We stay within **Item List** and add two basic pieces of information to each material item.

At first, we start with the **Short Description**.

If you have prepared short descriptions for all five materials, it is best to select the **Edit List** option from the menu and simply fill in the fields (see Figure 7):

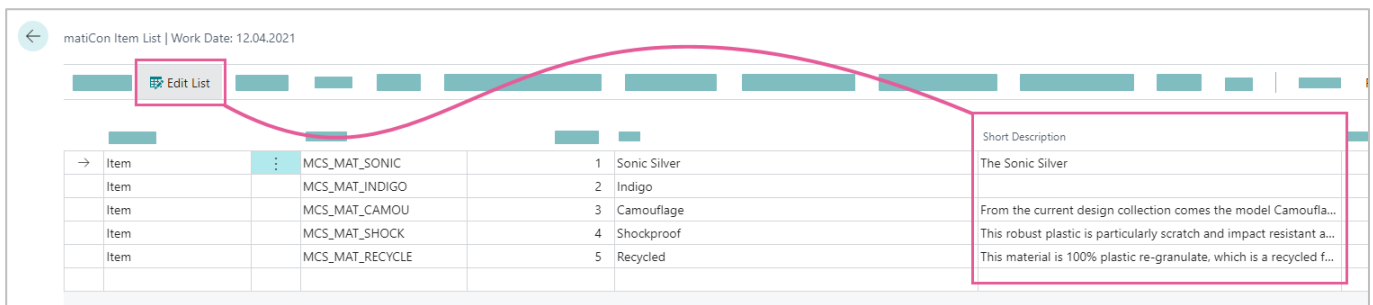


Figure 7 - Item List: Edit List - fill in Short Descriptions

The **Short Description** can contain max. 250 characters.

The second information is the **Order No.** (which serves as the order number for a particular material as part of the general order number). Again, it is best practice to select the **Edit List** option from the menu and simply fill in the fields.

Add properties to the Items

There are several properties that can be assigned to an article by the **Item Property List**. The most common are description, PDF files and of course images. We will deal with the latter in more detail in a separate section and start with the **Description**.

We stay within **Item List**. Below the entered items you will find the item properties list, which is currently still empty. Select the **Edit List** option from the menu and choose one of the material items.

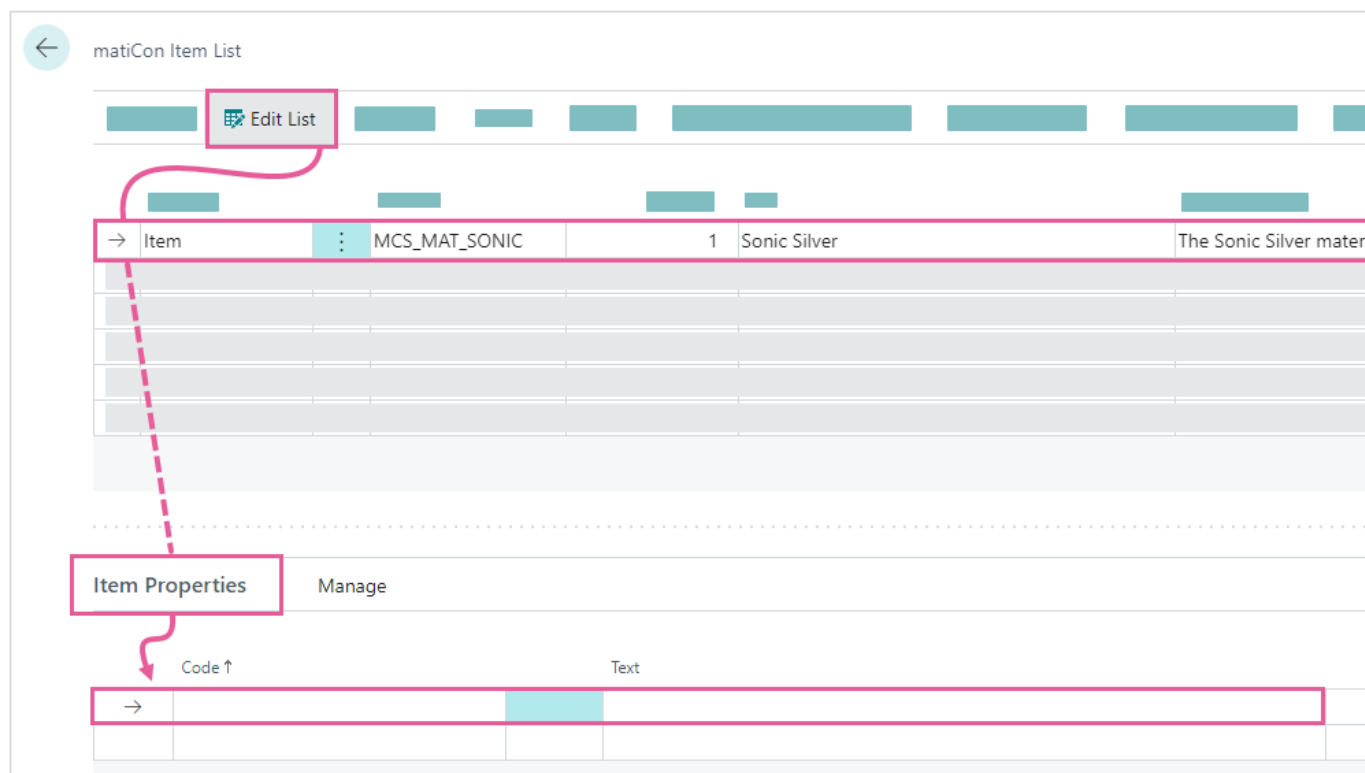


Figure 8 – Add new entry to Item Property List

Add new record to the **Item Property List**:

1. Select **Code** and choose **New** to create a new entry within the lookup mode*
 - a. Fill in **DESCRIPTION** as **Code**
 - b. Fill in **Description** as **Description**
 - c. **Field Type** will be (in this case) **Text Long**
 - d. Check **Translatable**
 - e. Choose **OK**
2. Select **Text** and fill in the prepared text you want to have as description
3. Done!

* Once you have created a property code (like Description), you do not need to do it a second time. When you enter the next item, you can simply select the property **Description** from the list.

Add new record to the **Item Property List – Quick Edit**:

If the article property codes are already created, like the **Description** property in our case, you can also use the **Quick Edit** section to fill in the fields:

1. Select the **Edit List** option from the menu and choose another material item
2. Go to **Item Properties: Quick Edit**
3. Click inside **Description** and fill in the prepared text you want to have as description
4. Done!

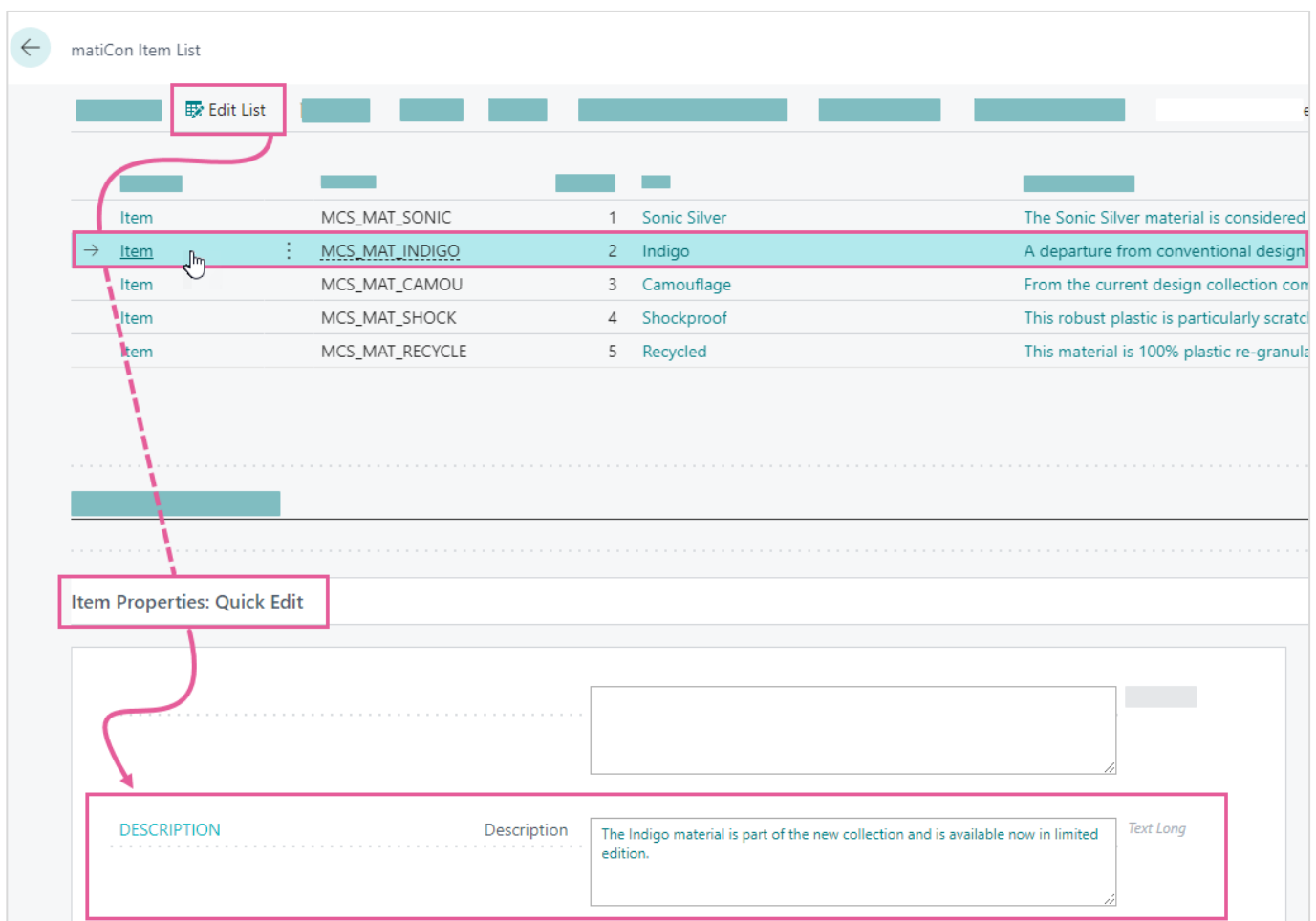
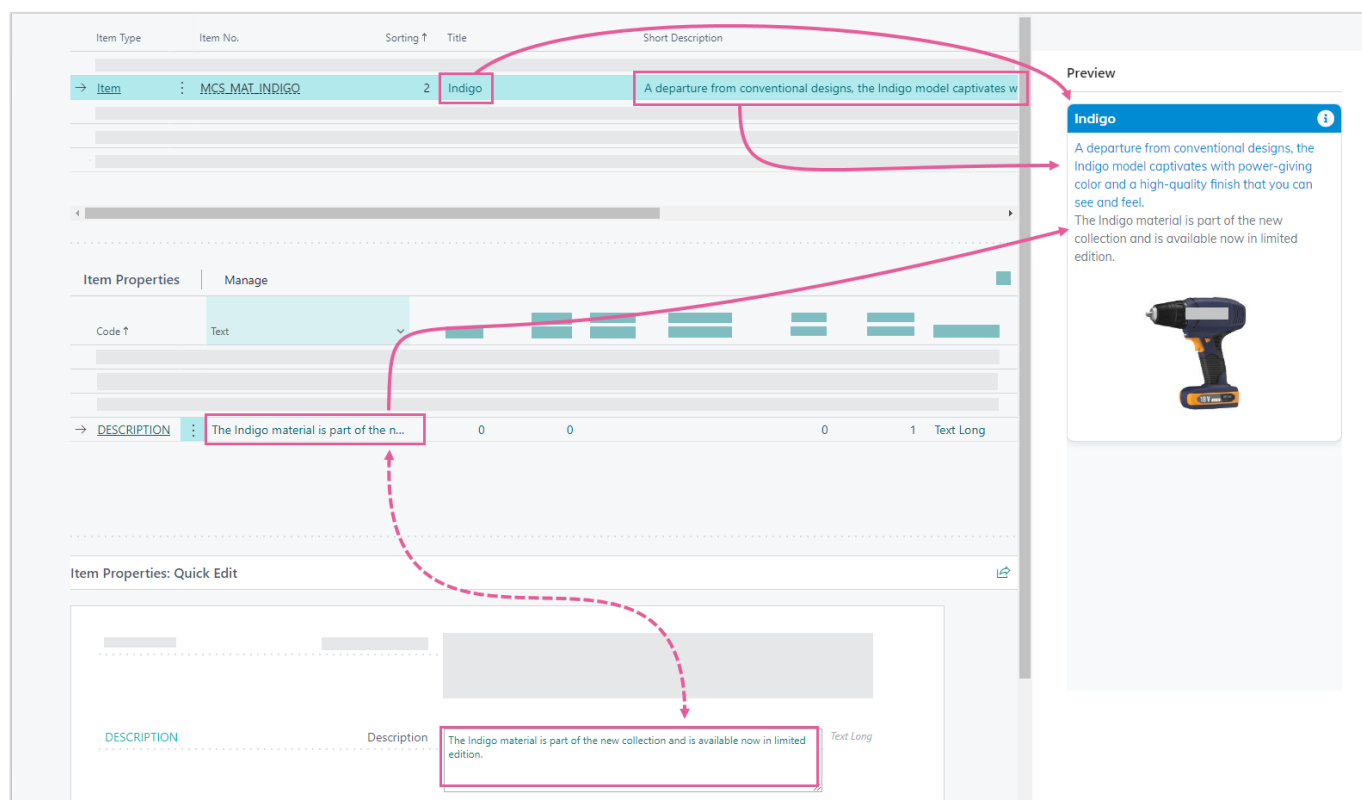


Figure 9 - Property Items Quick Edit

After the data is synchronized, you can preview the result:



The screenshot displays the matiCon software interface. At the top, a table lists items with columns for Item Type, Item No., Sorting, Title, and Short Description. The first row is highlighted in blue and contains the following data: Item Type: Item, Item No.: MCS_MAT_INDIGO, Sorting: 2, Title: Indigo, Short Description: A departure from conventional designs, the Indigo model captivates w... Below the table, there is an 'Item Properties' section with a 'Manage' button and a 'Code' dropdown menu. A 'DESCRIPTION' row is visible with a value of 'The Indigo material is part of the n...'. At the bottom, there is an 'Item Properties: Quick Edit' section with a 'Description' field containing the text 'The Indigo material is part of the new collection and is available now in limited edition.' On the right side, a 'Preview' panel shows the 'Indigo' item with a blue header, a description, and an image of a power drill. Red boxes and arrows indicate the flow of data from the table to the preview panel.

Figure 10 – Preview off the entered data

Now you can maintain more properties in the property list and provide more information about the article. As described above, you can maintain and complete all created items within the **Menu List** (Power, Torque, Torque Steps, Handle, Battery and Accessories).

Selected item properties and their use in the configuration context

In the following, further individual **Item Properties** and their use are described.

- **APPLICATION** and **COMMENT**:

appearing as additional text information (beneath Title, Short Description and Description) in the info modal window only.

Item Properties	Manage
Code ↑	Text
APPLICATION	Semi-Professionell, Professionell, DIY, wood, metal, plastic
BILD2	imageLayer/<ITEM.URLIMAGE>.jpg
COMMENT	Light, fast and extremely powerful - this 18-volt tool combin...
DESCRIPTION	Suitable for drilling and screwing applications in wood, met...
FOLDER IMAGE APPLICA...	/media/Hero;/Hero Shots
INTERESTINGFACT	Did you know?:This Device will be available in <span class="...
PDF	media/pdf/2022-01-26 matiCon MCS Schulung TD.pdf; Con...

- **FOLDER IMAGE APPLICATION**:

Specify here a relative file path to a folder on the web server. All image files within this folder will be displayed in the modal info window. The following syntax applies: */path/to/image/folder/;Appearing Name* (take care of the semicolon)

- **PDF**: Link to a specific PDF document using the PDF (or PDF2 and PDF3) property code. The following syntax applies: *path/to/pdf/file-name.pdf;Appearing Name* (take care of the semicolon)

- **INTERESTINGFACT**: You can place the interesting fact to draw attention to the special feature of an article. You can create it with the following syntax: *Title of the fact?;Content of the fact and5 incrementing number* (take care of the semicolon)

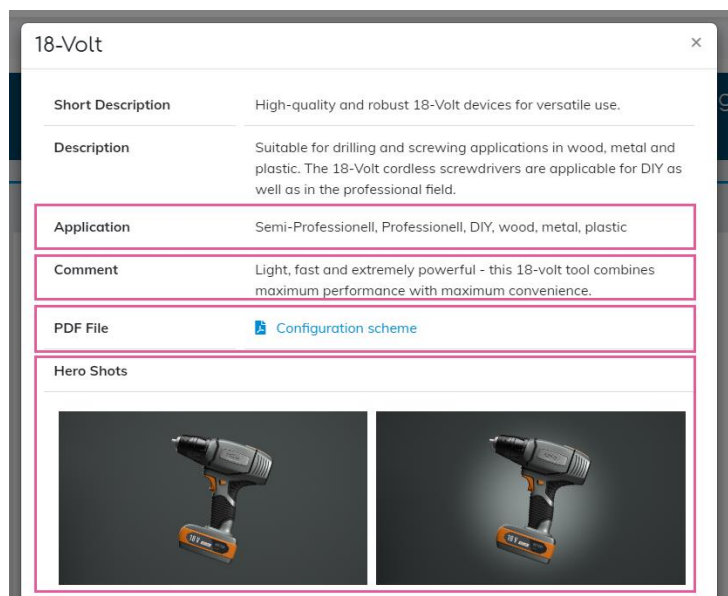



Figure 11 - Modal info window with properties

18-Volt i

High-quality and robust 18-Volt devices for versatile use.

Suitable for drilling and screwing applications in wood, metal and plastic. The 18-Volt cordless screwdrivers are applicable for DIY as well as in the professional field.



Did you know?

This Device will be available in **5** different materials




Figure 12 - Property interesting fact

Image handling

The visualization of data is a central element in the configuration process. The interaction between a selection and the photo-realistic illustration makes the selection clear and intuitive.

We use a layer-based technique that superimposes the individual images. In this way, the items of the respective step are interchangeable and thus compose themselves step by step into an overall composition.

But there is also a basic way of assigning images to the created items. Both approaches will be described below.

Assigning images (basic)

We would like to assign an image to a group entry that appears on the home page. To do this, we call the **Item List** of the **GROUP** entry and assign images to each of the entries there.

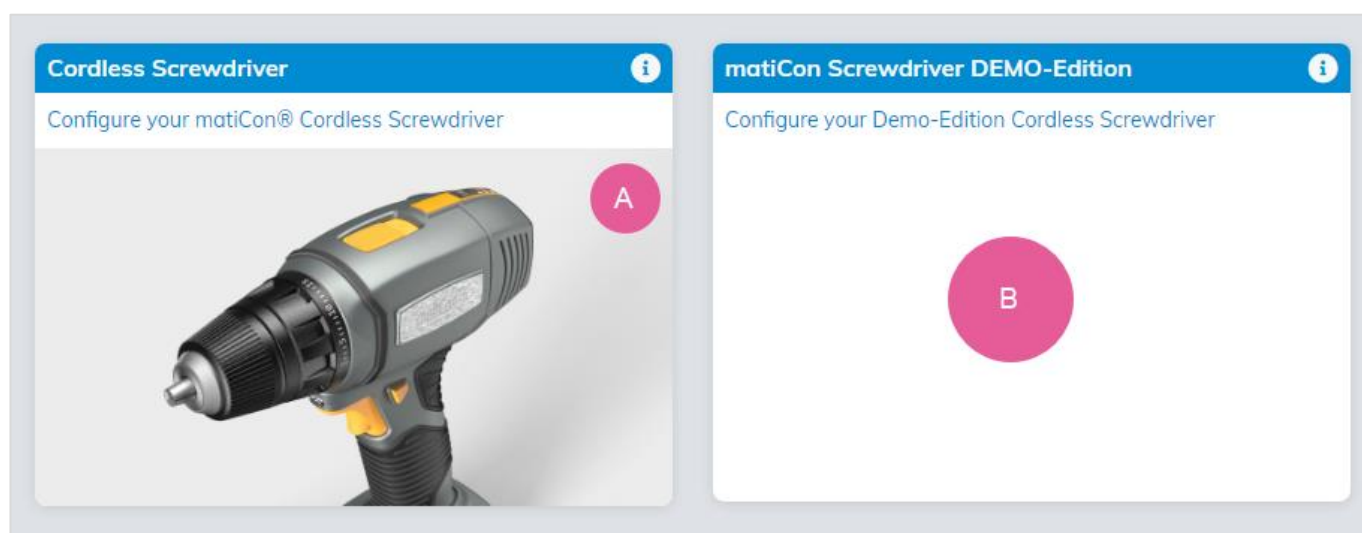


Figure 13 – Selection view: already assigned image (A), item without image (B)

Add an image to an **Item** in the **Item List**:

1. Go to the **Menu Item List**
2. In the **Menu Item List** click on the record count (Items) of the menu step **Cordless Screwdriver (GROUP)**
3. The **Item List** opens
4. Select the Custom Item **matiCon® Screwdriver DEMO-Edition**
5. Choose **Edit List** to edit the **Item Properties**
6. Add **Code BILD1** to **Item Properties**
 - a. In a new Line click inside field **Code** and select **BILD1** from lookup mode

7. Select media file (image) from **Media Management List**
 - a. Open lookup mode in Field **Text**
 - b. Choose **Select from full list**
 - c. Select one of the existing images e.g. **No M00143**
 - i. If there is no suitable image in the **Media Management List**, you can upload additional files via the Import dialog (see also part Media Management).
 - d. Choose OK
8. Done!

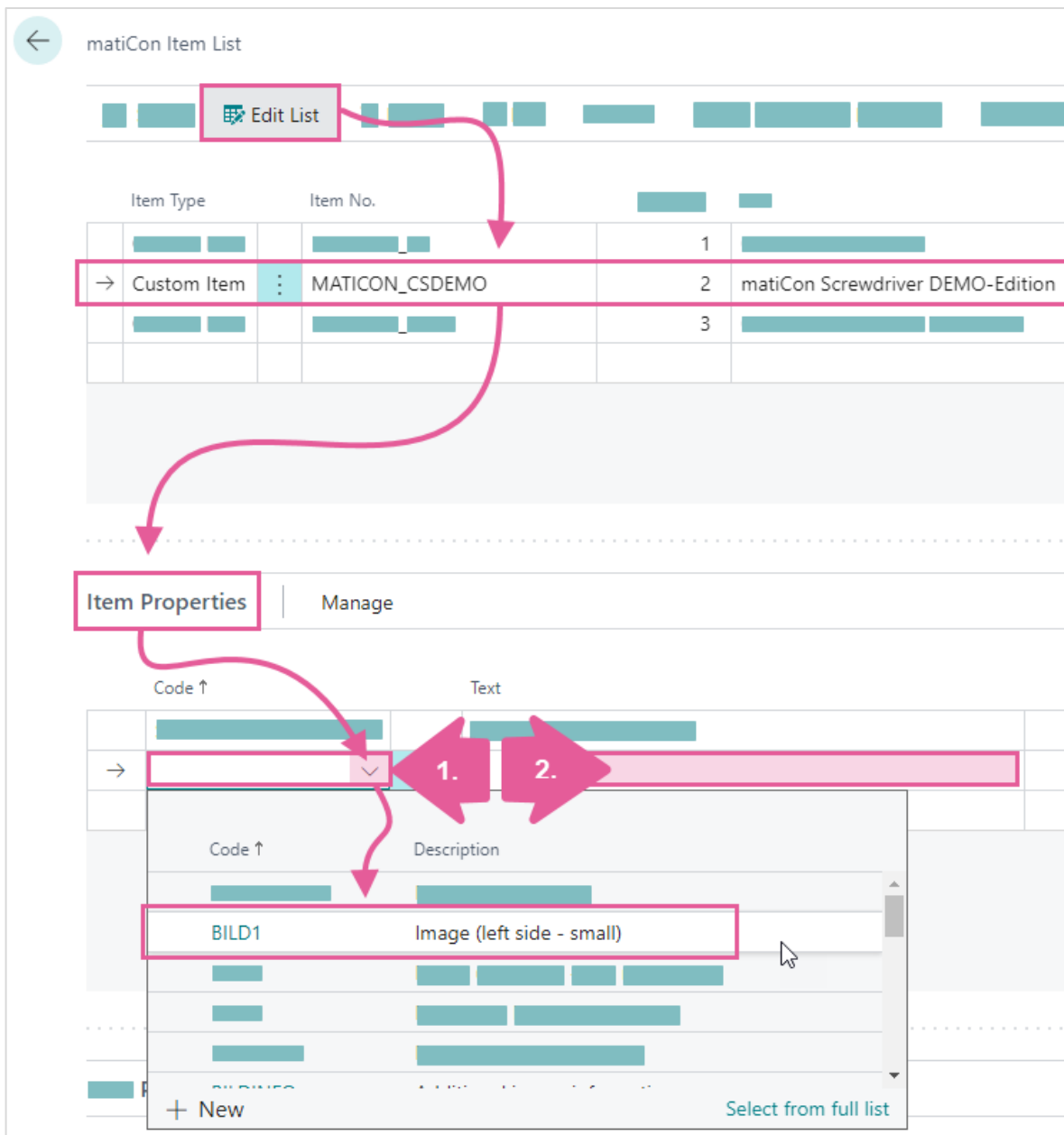


Figure 14 - Add Property Code (1.) and select image file from Media Management List (2.)

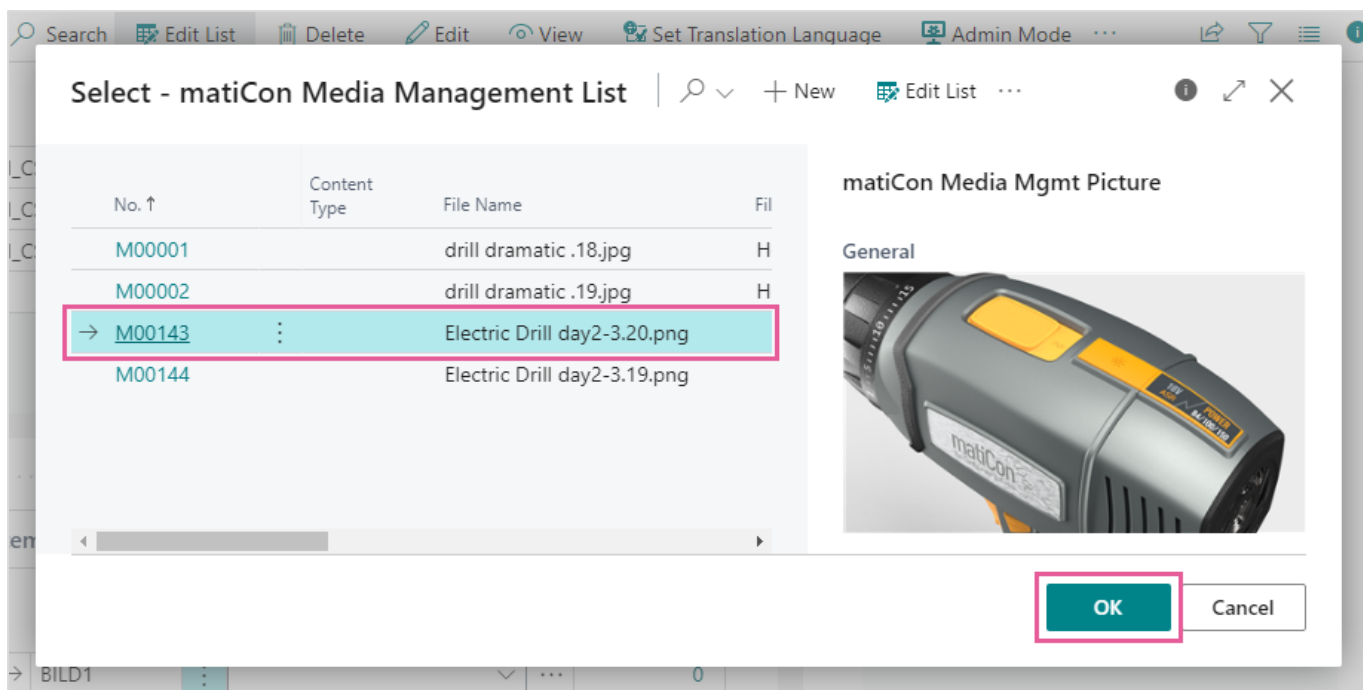


Figure 16 - Media Management List with image files and preview

After editing the article property **BILD1**, you can synchronize the data. After reloading the web browser, you should now see the inserted image.



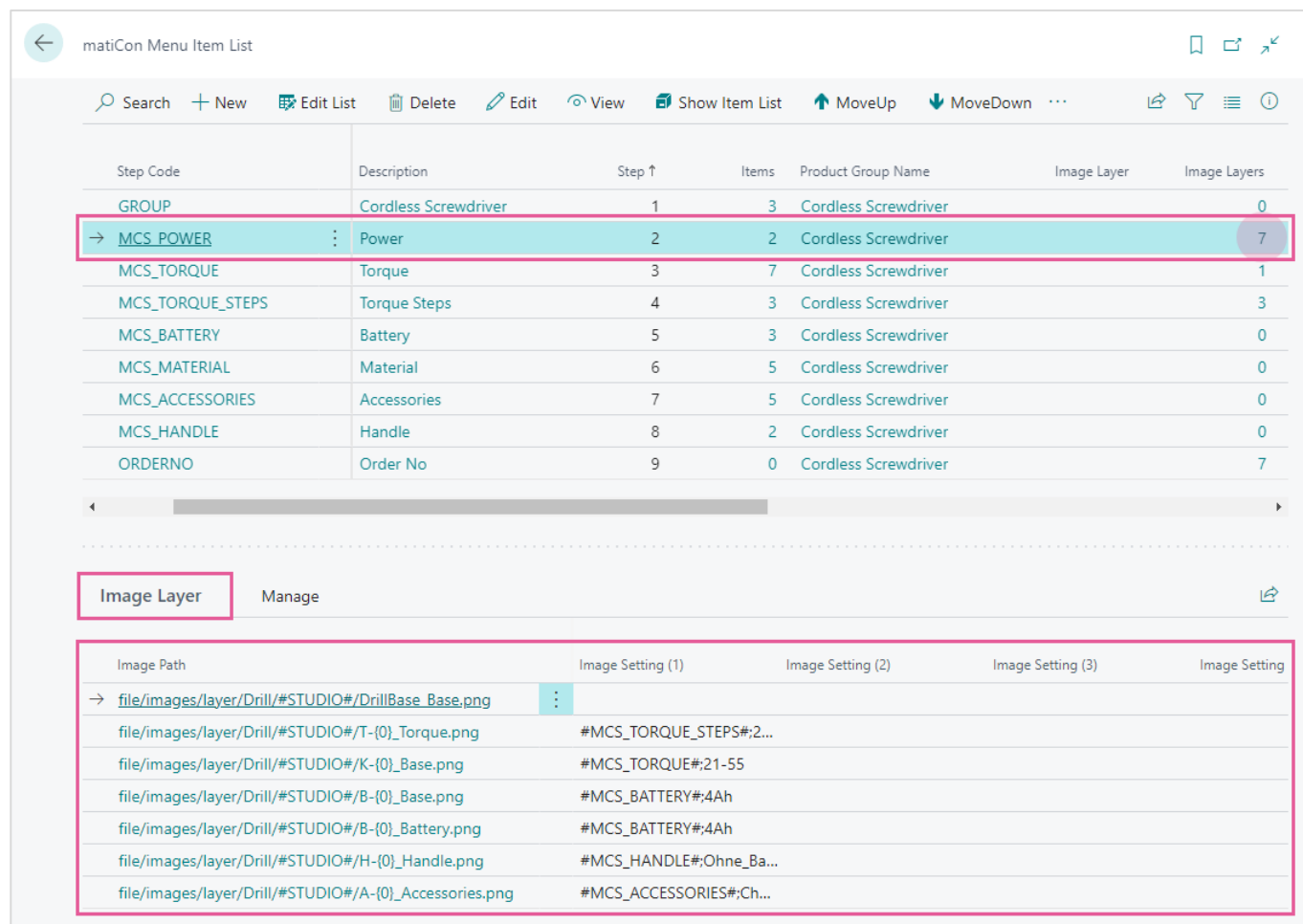
Figure 15 - Assigned Image

Property Codes **BILD1** und **BILD2**: The image with the Code **BILD1** appears in the selection view, the second Code **BILD2** in the modal window.

Image layer (advanced technique)

The Image Layer settings are defined in the **Image Layer Line List**. You can reach this list via **Menu Item List**. In principle, a definition in one of the created entries here is sufficient, since it applies to the entire route. We select the point of the route from which the layer-based technique should take effect, in our example it is: **Power**.

In this list view (see Figure 17) there is a submodule **Image Layer (Image Layer Line Sub)**, where we can add single *Image Path* Lines and associated *Image Settings* and serves a quick overview.



The screenshot shows the 'mاتيCon Menu Item List' interface. At the top, there is a search bar and several action buttons: '+ New', 'Edit List', 'Delete', 'Edit', 'View', 'Show Item List', 'MoveUp', 'MoveDown', and a menu icon. Below this is a table with the following columns: Step Code, Description, Step ↑, Items, Product Group Name, Image Layer, and Image Layers.

Step Code	Description	Step ↑	Items	Product Group Name	Image Layer	Image Layers
GROUP	Cordless Screwdriver	1	3	Cordless Screwdriver		0
→ MCS_POWER	Power	2	2	Cordless Screwdriver		7
MCS_TORQUE	Torque	3	7	Cordless Screwdriver		1
MCS_TORQUE_STEPS	Torque Steps	4	3	Cordless Screwdriver		3
MCS_BATTERY	Battery	5	3	Cordless Screwdriver		0
MCS_MATERIAL	Material	6	5	Cordless Screwdriver		0
MCS_ACCESSORIES	Accessories	7	5	Cordless Screwdriver		0
MCS_HANDLE	Handle	8	2	Cordless Screwdriver		0
ORDERNO	Order No	9	0	Cordless Screwdriver		7

Below the table, there is a section titled 'Image Layer' with a 'Manage' button. This section contains another table with the following columns: Image Path, Image Setting (1), Image Setting (2), Image Setting (3), and Image Setting.

Image Path	Image Setting (1)	Image Setting (2)	Image Setting (3)	Image Setting
→ file/images/layer/Drill/#STUDIO#/DrillBase_Base.png				
file/images/layer/Drill/#STUDIO#/T-{0}_Torque.png	#MCS_TORQUE_STEPS#;2...			
file/images/layer/Drill/#STUDIO#/K-{0}_Base.png	#MCS_TORQUE#;21-55			
file/images/layer/Drill/#STUDIO#/B-{0}_Base.png	#MCS_BATTERY#;4Ah			
file/images/layer/Drill/#STUDIO#/B-{0}_Battery.png	#MCS_BATTERY#;4Ah			
file/images/layer/Drill/#STUDIO#/H-{0}_Handle.png	#MCS_HANDLE#;Ohne_Ba...			
file/images/layer/Drill/#STUDIO#/A-{0}_Accessories.png	#MCS_ACCESSORIES#;Ch...			

Figure 17 - Menu Item List with Submodule Image Layer Line Sub

Entering the **Image Layer Line List** (see Figure 18), by clicking the *Image Layers* count, we have the same input options, but in addition we have a preview of the individual layers and the stored images. These previews show the principle of superimposed images: On the left side the single image layer and on the right side the composite image layers.

If we look at the entries in the *Image Path* column, we see that:

- the relative paths to the image files are specified here
- a placeholder for the studio is created (#STUDIO# - see chapter Options for usage)
- a placeholder for the BILDCODE is disposed

If we look at the entries in the *Image Setting [1]* column, we see entries for:

- a Step Code Placeholder (#MCS_ACCESSORIES#), where to look for the BILDCODE
- a default value (**Chuck**)

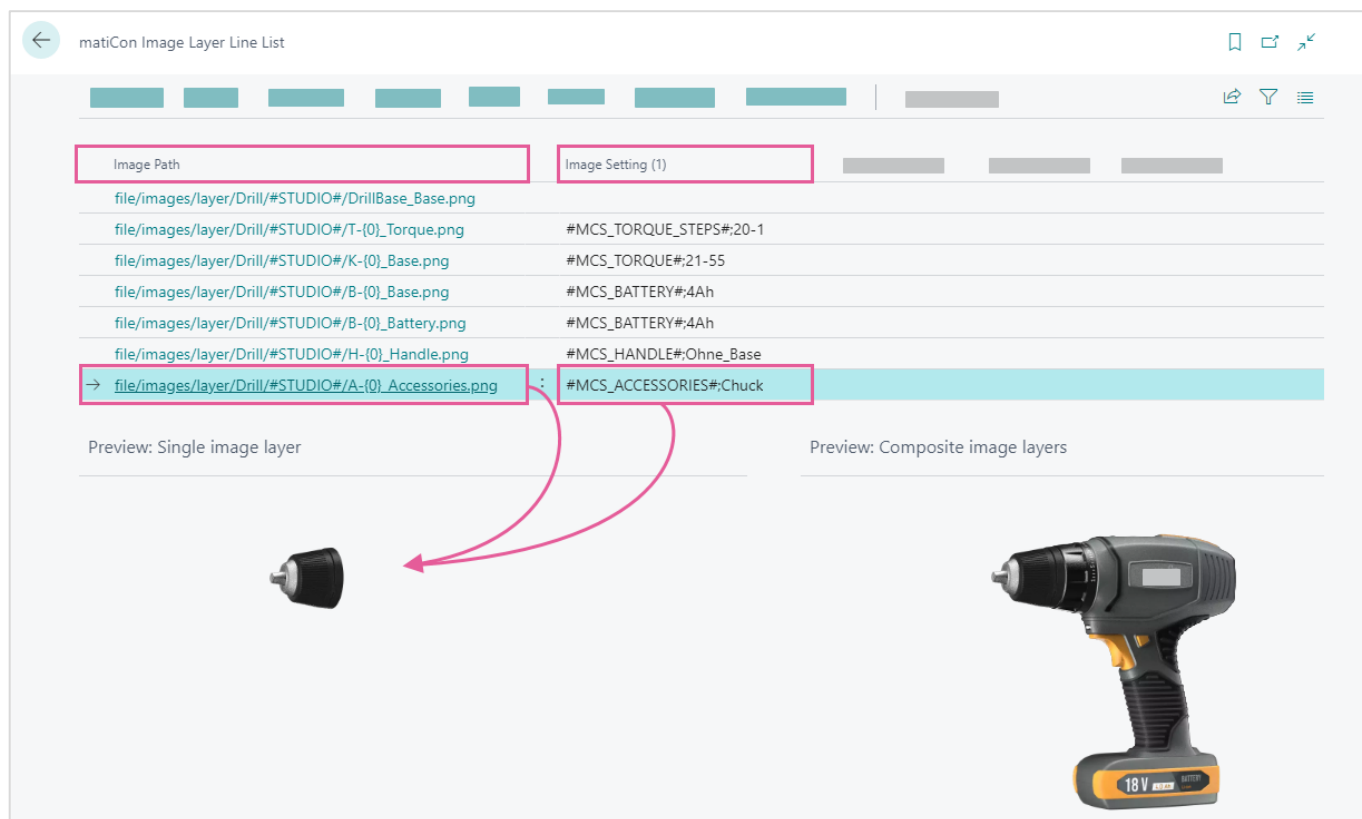


Figure 18 - Image Layer Line List: Preview of Accessories Image Layer (Chuck)

The layer-based composition of the image layers is a powerful tool within the matiCon® Product Configurator. At this point, we can present the basic principles of how it works; for a deeper understanding, there are more in-depth training courses.

Media Management

With the Media Management you can manage files, access, and integrate them at different places within the matiCon® Application. For example, items can be provided with an item image or PDF files can be stored for download (as properties). Files can also be inserted on content pages as content elements.

All uploaded files can be selected comfortably over a lookup field. New files can easily be uploaded via an import or a drag & drop functionality.

You can access the **Media Management List** via the Configurator FactBox by clicking on the record count of **Media Files** (see Figure 19).

Configurator FactBox	
General	
Domains	4
Menus	7
Text Modules	121
Settings	29
Replaces	0
Exceptions	1
Templates	24
Image Dynamic	0
Media Files	5
Content Mgmts	0
Configurator Styles	6
Rules	6
Synchronized Tables	34

Figure 19 - FactBox on Configurator List Page

The Media Management List

Within the Media Management List, you will see already inserted files (see Figure 20). Image files will have a preview. To add more files, choose one of those two actions:

- **Import**: This action will take you to the file upload dialog of your computer. You can upload one file at a time this way.
- **Open Multiple Media Import**: This action will offer you a drag & drop zone. Drag one or more files to this field at the same time. These will then be uploaded together.

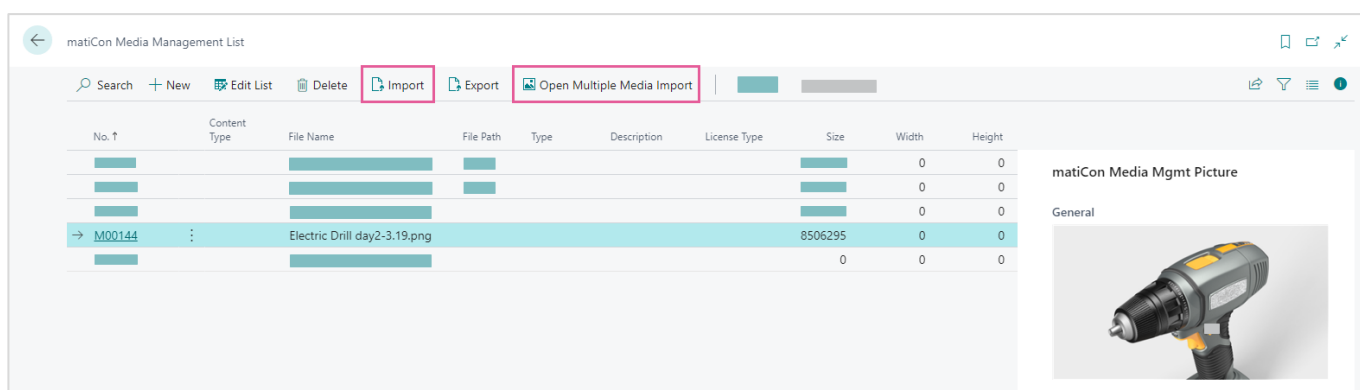


Figure 20 - Media Management List with files and preview

Customizing the configurator

Customize the configurator in several ways. On the one hand, you have the possibility to overwrite all default values with new values via the Setting List. This allows you, for example, to adjust and change the CSS (SASS) controlled styling to your liking.

Also in the Text List is the type Text available. With it you can create (multilingual) text modules.

With both principles you are highly independent and can thus quickly and flexibly make changes in the configurator.

Options

In the **Menu Item List** and **Item List** default values can be overwritten by **OPTIONS**. This allows the appearance and operation in the configurator to be customized. With these options, especially the display options of the images (both on the left and on the right side) can be individualized. Available options are:

- **PRODUCTS GRID 12, 4/8, 5/7, 6/6, 7/5, 8/4**
- **PICTURE SHOW SMALL**
- **ACTIVE STUDIO**
- **ACTIVE STUDIO DETAIL**
- **PICTURE CLOSEUP**

OPTIONS can be set via **Group Settings** or **Line Settings** in the **Menu Item List** or via **Settings** within the **Item List**.

Change the products grid in selection list (left side)

Using the Products grid + value option you can change the arrangement between text and image. The default moderate setting is a ratio of 7 to 5 (text to image). With the respective value you change this ratio. With the **Option PRODUCTS GRID 12**, for example, both the image and the text cover the entire width.

Change the current image view

To change the current image view we have either the Options Active Studio for the left side and Active Studio Detail for the large composite image on the right side.

The **Option ACTIVE STUDIO** allows you to refer to a targeted view for the products in list view (left side). Here, the specified value coincides with the image folder that contains the desired views. This option

corresponds to the placeholder within the Image Layer Setting configuration.

The same applies to the detail view on the right side with the option **ACTIVE STUDIO DETAIL** and the specification of the corresponding folder name as value.

Add small images as an attachment to the detail picture

For selected items that do not directly belong to the product image, accessories for example or a different view, their images can be included as a small additional image in the following.

These images then appear as a small separate image below the detail view. Give the corresponding item the following option:

PICTURE SHOW SMALL.

Provide a detailed closeup view

Sometimes there are closeups that only show a section of the entire article and are cropped that way. For this case there is an option, which puts a frame around the corresponding image. Give the corresponding Product within the **Menu Item List** the following **OPTION** within **Line Settings**: **PICTURE CLOSEUP.**



Figure 21 - Items with PICTURE CLOSEUP option

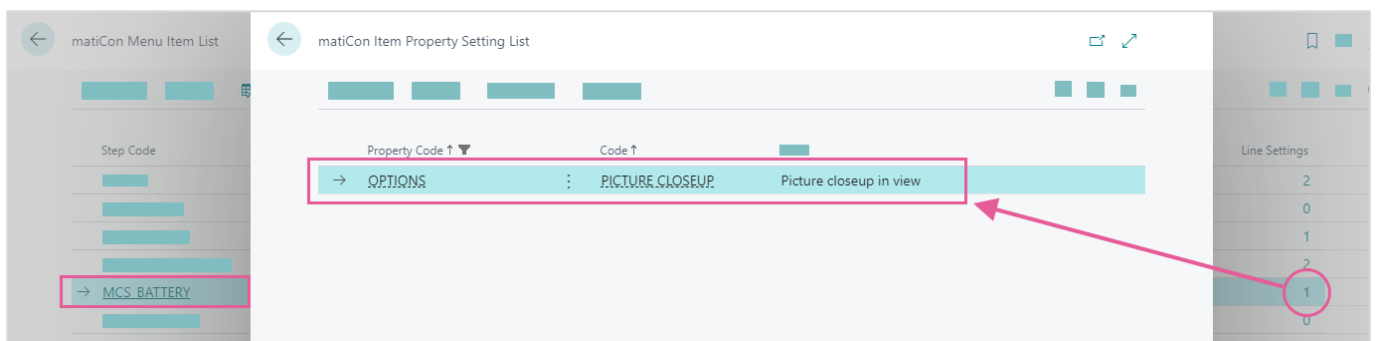


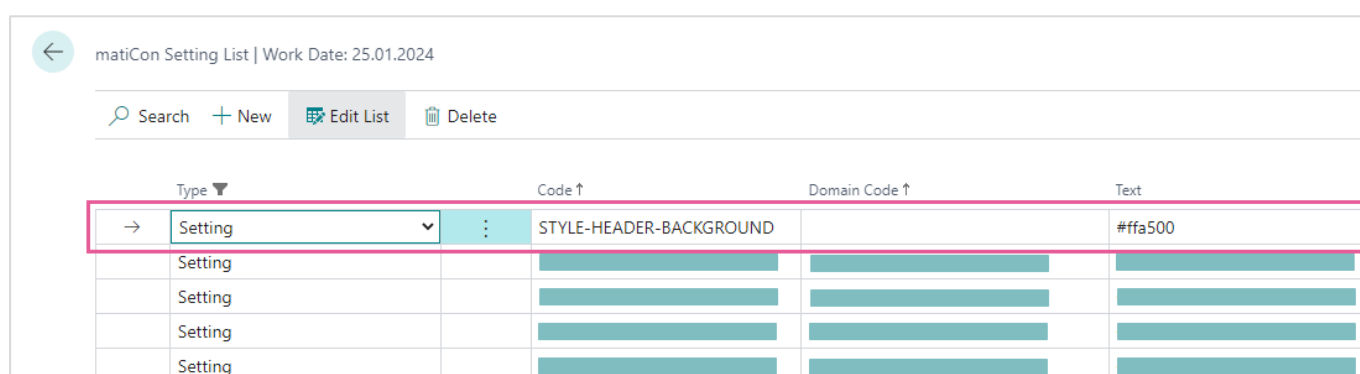
Figure 22 - Step Code MCS_Batter with Option PICTURE CLOSEUP

Settings

The Settings list can be used to add presets or overwrite existing values.

Design / Style Settings

To adapt the basic design to your corporate identity, the matiCon® configurator provides some variables with which you can define color values for certain elements. For colors respectively background colors just define a color hex code within the corresponding **SETTING-CODE**. For example, the color “pure orange” corresponds to #ffa500. To change the header background-color (A) got to **SETTING** list and add the **Code** **STYLE-HEADER-BACKGROUND** with #ffa500 as **Text** value.



Type ▼	Code ↑	Domain Code ↑	Text
→ Setting	STYLE-HEADER-BACKGROUND		#ffa500
Setting			
Setting			
Setting			
Setting			

Figure 23 - Add a color value for header background

Here is an overview of the elements and their associated codes, whose styling can be adjusted via the settings:

- A – Header background color: STYLE-HEADER-BACKGROUND
- B – Footer background color: STYLE-FOOTER-BACKGROUND
- C – Pre-footer left background color: STYLE-PRE-FOOTER-LEFT
- D – Pre-footer middle background color: STYLE-PRE-FOOTER-MIDDLE
- E – Pre-footer right background color: STYLE-PRE-FOOTER-RIGHT
- F – Sidebar background color: STYLE-SIDEBAR-BACKGROUND
- G – Logo Header file: STYLE-LOGO-HEADER

Training Configurator

Cordless Screwdriver | Power | Torque | **Torque Steps** | Battery | Material | Accessories | Handle | Order No

SELECTION: TORQUE STEPS

- 20 + 1** (Recommended)
Torque levels adjustable from 1 to 20.
- 25 + 1**
Torque levels adjustable from 1 to 25.

31 / 60 / -

SUMMARY

- Cordless Screwdriver
- Cordless Screwdriver
- Power: 18-Volt
- Torque: 31 / 60 / -

Figure 24 - Customizable values

Enable / disable optional features:

\$enable-rounded: true;

\$enable-shadows: true;

\$enable-scaling: true;

\$enable-timeline-menu: true;

\$enable-matrix-description: false;

\$enable-readmore: false;

// hasDefault

\$enable-hasDefault-borderArround: false;

\$enable-hasDefault-borderBottom: true;

\$enable-hasDefault-star: false;

// Video footage on start page

\$enable-video-start: true;

// Header background (colored / white) and positioning

\$enable-white-header: false;

// Footer Logo - AD Logo (default) or matiCon Logo

\$enable-maticon-credit: false;

// Meta Header - User Management, Language Navigation

\$enable-meta-header: true;

Text Modules

Exceptions

Sometimes the configuration process needs special attention because, for example, a selection that has been made isn't yet available or allowed but not recommended. Therefore we've got three different settings and corresponding dialog windows in the **Exception Head List**.

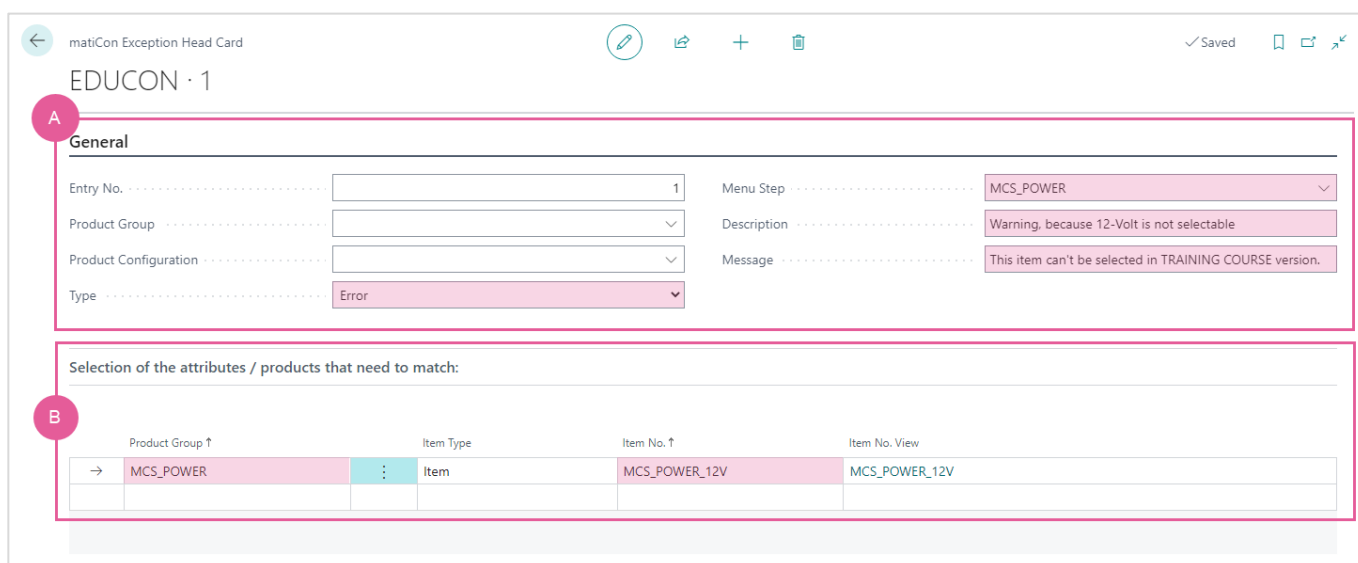
To create one of these exceptions, search for **Exceptions** in either **the Configurator List** or **Configurator FactBox** view and click on the record count to open **the Exception Head List** card. Choose +New to create a new entry.

Error - *The first case displays an error, and the selected step won't proceed.*

The matiCon configurator is designed to display only configuration steps that are possible. Sometimes a configuration step deliberately leads to a dead end, as in our example: the error message states that the 12-volt version does exist but is not selectable in the demo version (or for certain countries or similar).

Start with **General** section (A) and choose **Type Error**. Specify in which **Menu Step** the error message should appear. The **Description** is for internal use only. In the **Message** field, enter the error message to be displayed in the configurator.

Within the selected menu step you must specify for which item(s) the error message should be issued: In **Section of the attributes** (B) select the **Product Group** and an **Item No.** for which the error message should take effect. You can assign several articles to one error message.



The screenshot shows the 'matiCon Exception Head Card' for 'EDUCON · 1'. It is divided into two main sections, A and B.

Section A: General

- Entry No.: 1
- Menu Step: MCS_POWER
- Product Group: (empty)
- Description: Warning, because 12-Volt is not selectable
- Product Configuration: (empty)
- Message: This item can't be selected in TRAINING COURSE version.
- Type: Error

Section B: Selection of the attributes / products that need to match:

Product Group ↑	Item Type	Item No. ↑	Item No. View
→ MCS_POWER	:	MCS_POWER_12V	MCS_POWER_12V

Figure 25 - Exception: Error message

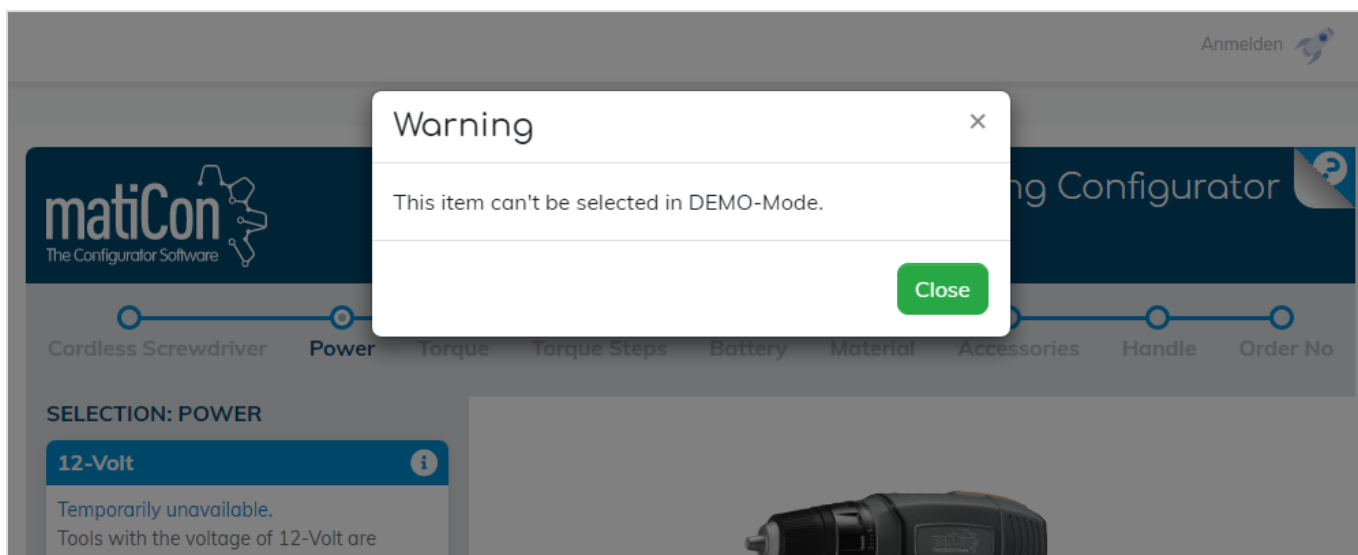


Figure 26 - Error Dialog with warning message

Warning - The second case will display a warning dialog, so that you can confirm or cancel the selected item.

A conceivable case would be that with a certain force and above, a handle is not mandatory, but recommended. The user receives a warning but decides for himself whether he wants to continue the configuration with or without a handle.

OrderNumber - The third type draws attention to change a order number

The structure of the order number usually follows a strict rule. Sometimes there are exceptions, which can be introduced via the **OrderNumber** type.

Template Building

Introduction

For the output in the web browser html markup is used that you can be written and organized in the **Template List**. Together with the CSS styling and the JavaScript functionalities, the html templates form the frontend and make up the markup that the configurator needs for its display in the web browser and for the content pages in the portal environment.

In the **Template List** you can create and manage all HTML templates. These HTML files are largely modular. In addition to the structuring markup, the templates also contain the variables that are responsible for the dynamic configuration contents. You'll edit a template by using an HTML editor.

The templates are modular and can be divided via including sub-templates, which creates a greater overview and maintainability.

A Jinja template contains variables and/or expressions, which get replaced with values when a template is rendered; and tags, which control the logic of the template.

matiCon® Content Management System (CMS)

Introduction

With the **Content List** you have the possibility to create a structure for content pages that are displayed independently from the configuration process. Once you have created a page, you can access the **Content Modules List** and add or edit content such as headings, images, text, text with image, news, faq entries, etc.

So, you will have a content management system within your matiCon® Application.

Checklist Configuration (AMP)

Introduction

Having additional the “COSMO Graphical Configurator APP” there is the possibility to use the Cosmo Checklist to use with the matiCon® configurator.

If the matiCon® configurator is controlled in context with the checklist logic, the maintenance of the item properties is like the previous example, but the structural integration is different. In this context, we do not start in the **Menu List**, but from the option **Checklist**, which we find as an entry in the navigation bar. The **Checklist** navigation item gives you access to the **Checklist Template List**.

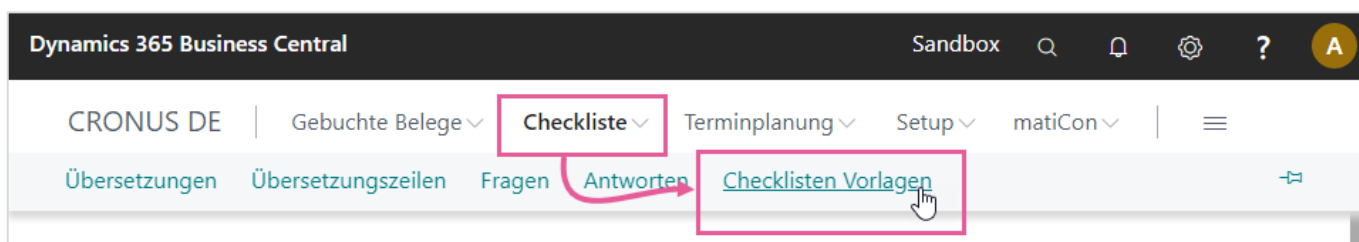


Figure 27 – Business Central Navigation Bar

Within the **Checklist Templates List**, select the existing **Fahrzeugkonfiguration D-TM80000** by clicking on its **Code**. You will then be taken to the corresponding **Checklist Template** of this record.

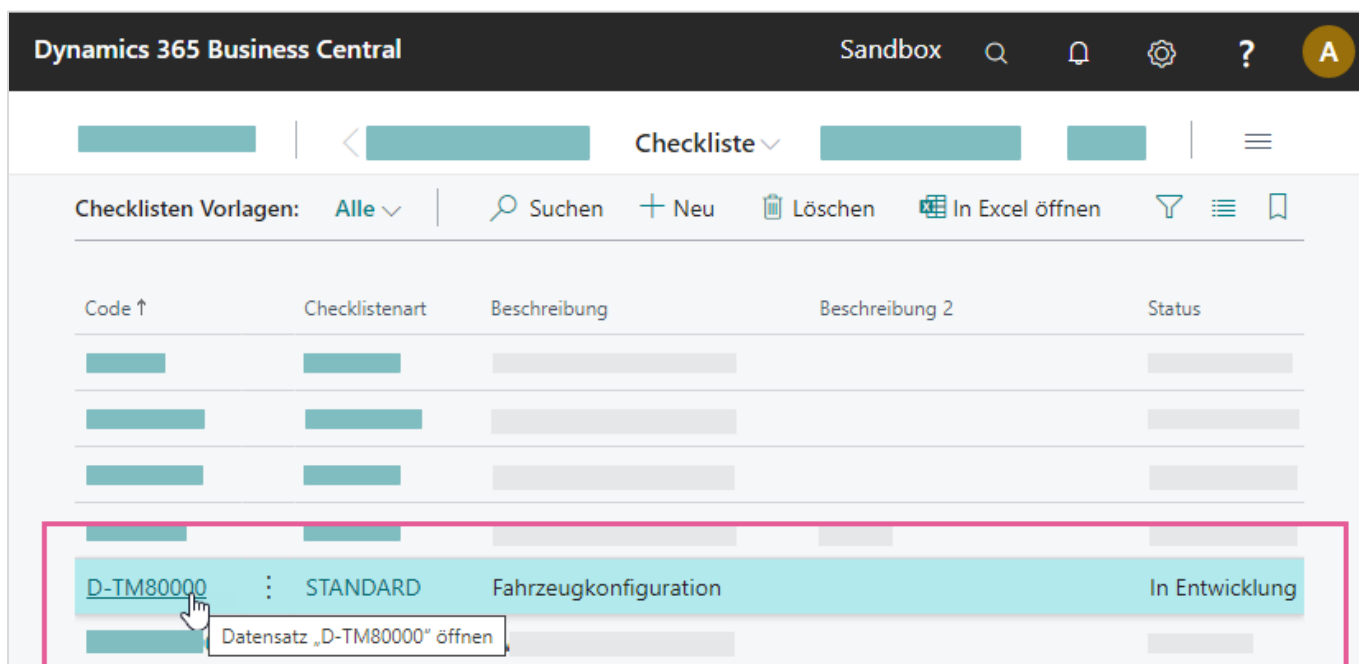
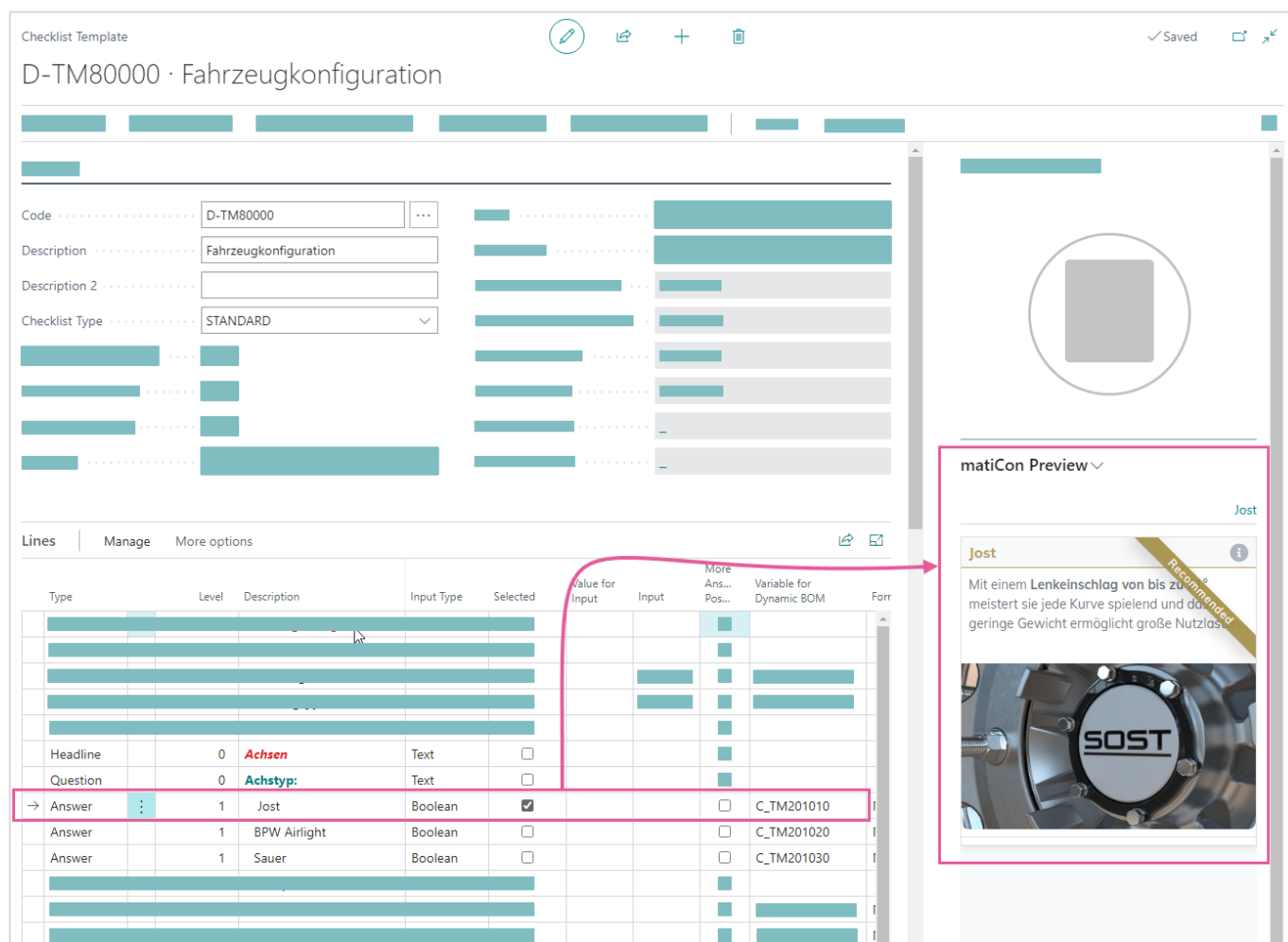


Figure 28 -Checklist Template List View

Within the dataset of the D-TM80000 vehicle configuration we find all entries that represent the configuration process. The following describes how to maintain item properties, set preselections, and create options.

Once the Checklist Template view is open, you can select and edit the individual row-based items. A big advantage when editing is the **direct preview** of the items in real time, as they are displayed in the configurator.



The screenshot displays the 'Checklist Template' for 'D-TM80000 · Fahrzeugkonfiguration'. The top section contains form fields for 'Code' (D-TM80000), 'Description' (Fahrzeugkonfiguration), 'Description 2', and 'Checklist Type' (STANDARD). Below this is a table of checklist items with columns: Type, Level, Description, Input Type, Selected, Value for Input, Input, More Ans... Pos..., Variable for Dynamic BOM, and Forr.

Type	Level	Description	Input Type	Selected	Value for Input	Input	More Ans... Pos...	Variable for Dynamic BOM	Forr
Headline	0	Achsen	Text	<input type="checkbox"/>			<input type="checkbox"/>	C_TM201010	
Question	0	Achstyp:	Text	<input type="checkbox"/>			<input type="checkbox"/>	C_TM201020	
→ Answer	1	Jost	Boolean	<input checked="" type="checkbox"/>			<input type="checkbox"/>	C_TM201030	
Answer	1	BPW Airlight	Boolean	<input type="checkbox"/>			<input type="checkbox"/>	C_TM201020	
Answer	1	Sauer	Boolean	<input type="checkbox"/>			<input type="checkbox"/>	C_TM201030	

The 'matiCon Preview' window on the right shows a real-time image of a wheel hub with the 'SOST' logo. The preview includes a 'Recommended' badge and text: 'Mit einem Lenkeinschlag von bis zu... meistert sie jede Kurve spielend und das geringe Gewicht ermöglicht große Nutzlast.' A red arrow points from the 'Jost' row in the table to the preview window.

Figure 29 - Checklist Template matiCon Preview

Description and Recommended

The example of the selection options in the configuration step "Achsen - Achstyp" shows how the data from the parts list is maintained in the **Checklist Template** and then mapped in the configurator. Here is the view in the configurator and the corresponding section of the checklist template:

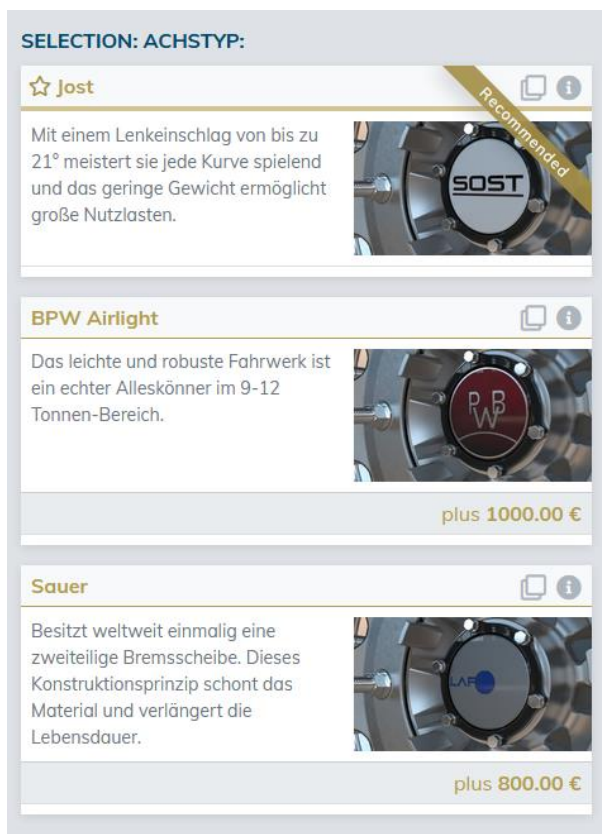


Figure 30 - Item view in configurator

Art	Ebene	Beschreibung	Eingabeart	Ausgewählt	Wert für Eingabe	Eingabe	Me... Ant... mö...	Variable für dynam. Stückliste
Überschrift	0	Achsen	Text	<input type="checkbox"/>			<input type="checkbox"/>	
→ Frage	0	Achstyp:	Text	<input type="checkbox"/>			<input type="checkbox"/>	
Antwort	1	Jost	Boolean	<input checked="" type="checkbox"/>			<input type="checkbox"/>	C_TM201010
Antwort	1	BPW Airlight	Boolean	<input type="checkbox"/>			<input type="checkbox"/>	C_TM201020
Antwort	1	Sauer	Boolean	<input type="checkbox"/>			<input type="checkbox"/>	C_TM201030

Figure 31 - Article View (Axis type question) in Checklist Template (not complete view)

The most basic indication of an item is always the **Description**. It is taken directly from the **Description** field from the corresponding record.

Often, when there are multiple choices, there is one item that is offered as a standard item. This can, for better orientation, be set directly as "recommend" by placing a check mark in the **Selected** option. The article then receives a ribbon in the configurator with the inscription **Recommended** and a **Star-Icon** just before the **Description**.

Frage		0	Fahrzeugtyp:	Text	<input type="checkbox"/>
Überschrift		0	=====	Text	<input type="checkbox"/>
Überschrift		0	Achsen	Text	<input type="checkbox"/>
→ Frage	:	0	Achstyp:	Text	<input type="checkbox"/>
Antwort		1	Jost	Boolean	<input checked="" type="checkbox"/>
Antwort		1	BPW Airlight	Boolean	<input type="checkbox"/>
Antwort		1	Sauer	Boolean	<input type="checkbox"/>

SELECTION: ACHSTYP:

☆ Jost

Mit einem Lenkeinschlag von bis zu 21° meistert sie jede Kurve spielend und das geringe Gewicht ermöglicht große Nutzlasten.



Figure 32 - Description and Selected

Add properties to an Item

Other properties that cannot be maintained directly in the **Checklist Template Vorlage** are available under the selection **Variable for Dynamic BOM**. Using this field you can add properties to the **Item Property List**, as already illustrated in the earlier example.

To edit those properties within **Item Property List**, proceed as follows:

1. Stay in the answer line for **Axis Type Jost** and click the corresponding select field **C_TM201010** in **Variable for Dynamic BOM** column.
2. Click on **Select from full list**.
(Because the correct variable is already selected with the code C_TM201010, further maintenance can be continued directly.)
3. Go to section **Item Properties** or to **matiCon Edit** Section (Quick Edit) and add or edit properties.

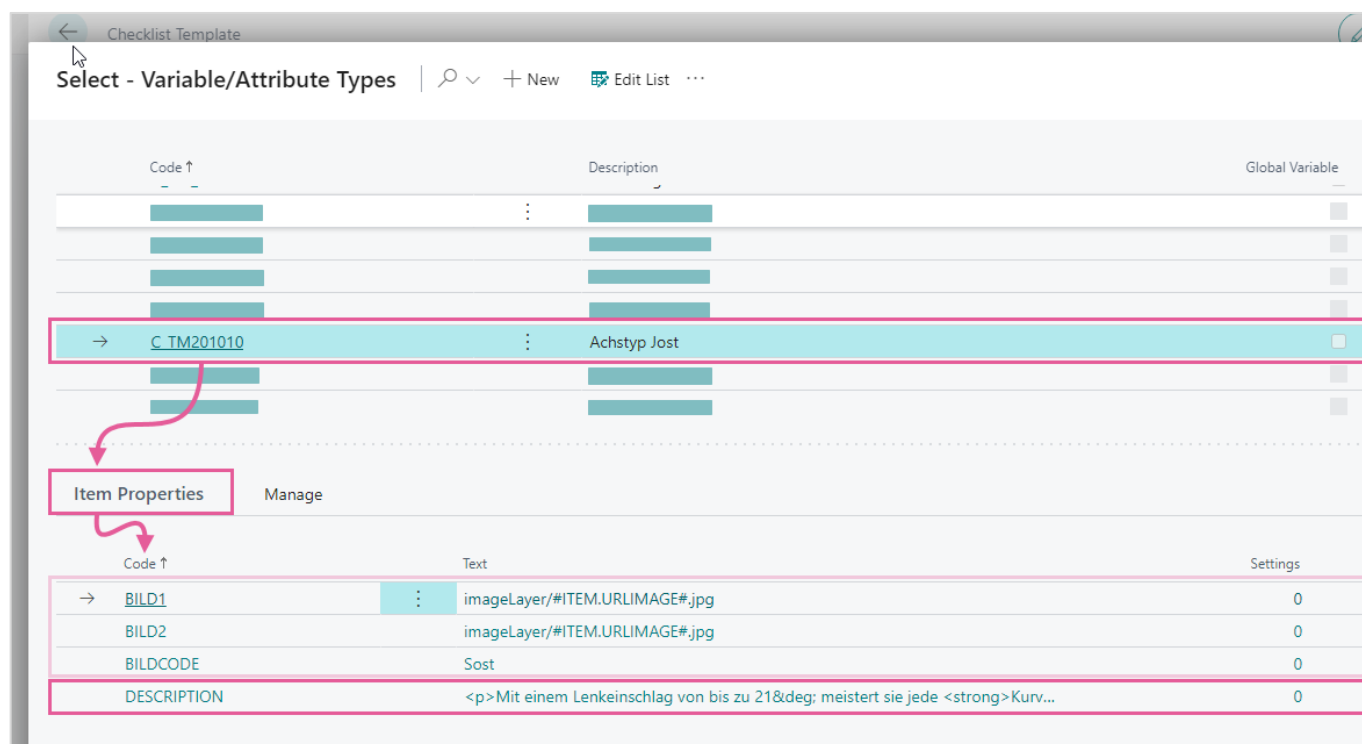


Figure 33 - Item Properties List View

As you can see, the description text is provided with HTML tags. These tags are taken over by the text editor. **We therefore recommend that you use the comfortable text editor in the matiCon Edit (Quick Edit) area.** The number of characters in the text editor is not limited and can be formatted depending on the shared tools.

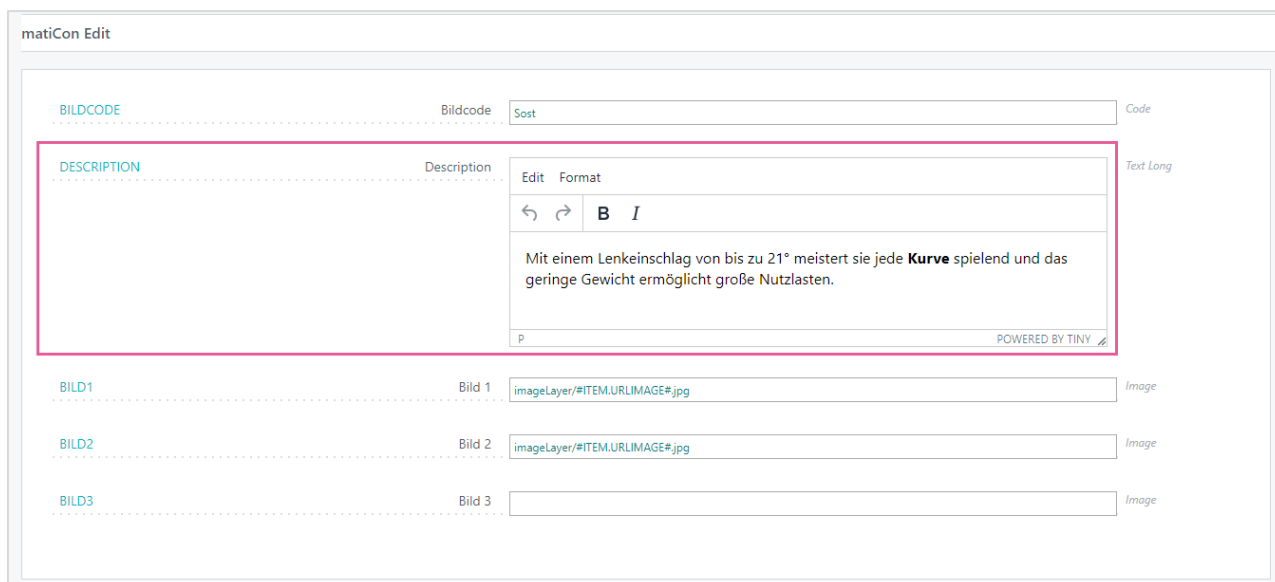


Figure 34 - Item Properties mاتيCon Edit (Quick Edit): Description

While the properties already described have a direct influence on the article display, the **Application** property appears only as additional information in the modal info window.

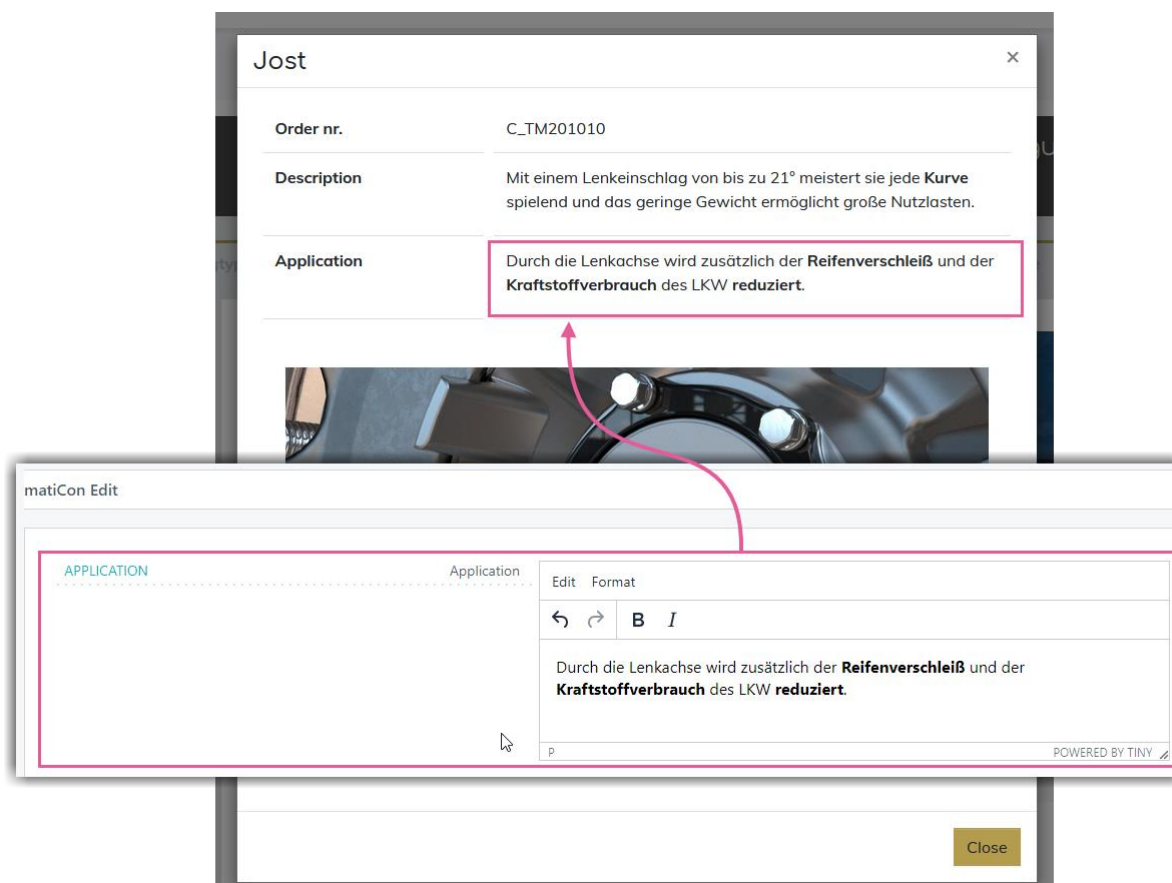


Figure 35 - Item Properties mاتيCon (Quick Edit): Application

Options

In the **Checklist Template List** there is a column *matiCon Settings Count*. In these List, default values can be overwritten by **Options** and thus the appearance and handling in the configurator can be adapted. With these **Options**, especially the display options of the images, both in the left and in the right side, can be individualized. Available options are:

- **PRODUCTS GRID 12, 4/8, 5/7, 6/6, 7/5, 8/4**
- **PICTURE SHOW SMALL**
- **ACTIVE STUDIO**
- **ACTIVE STUDIO DETAIL**

Options can be entered in the checklist template either in the question line, then the stored values apply to all created answers within this question, or specifically assigned to one or more answers individually.

Change the products grid in selection list (left side)

Using the Products grid + value option you can change the arrangement between text and image. The default moderate setting is a ratio of 7 to 5 (text to image). With the respective value you change this ratio. With the **Option PRODUCTS GRID 12**, for example, both the image and the text cover the entire width.

Change the current image view

To change the current image view we have either the Options Active Studio for the left side and Active Studio Detail for the large composite image on the right side.

The **Option ACTIVE STUDIO** allows you to refer to a targeted view for the products in list view (left side). Here, the specified value coincides with the image folder that contains the desired views.

The same applies to the detail view on the right side with the option **ACTIVE STUDIO DETAIL** and the specification of the corresponding folder name as value.

Add small images as an attachment to the detail picture

For selected items that do not directly belong to the product image, accessories for example, their images can be included as a small additional image in the following. These images then appear as a small separate image below the detail view. Give the corresponding item the following option: **PICTURE SHOW SMALL**.