

**FOCUS  
ON REAL  
DESIGN  
AUTOMATE  
THE REST**

**Microsoft Dynamics  
NAV – SOLIDWORKS  
integration**

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**CUSTOMTOOLS**



**CUSTOMTOOLS**

## **NAV integration to SOLIDWORKS Plug-in**

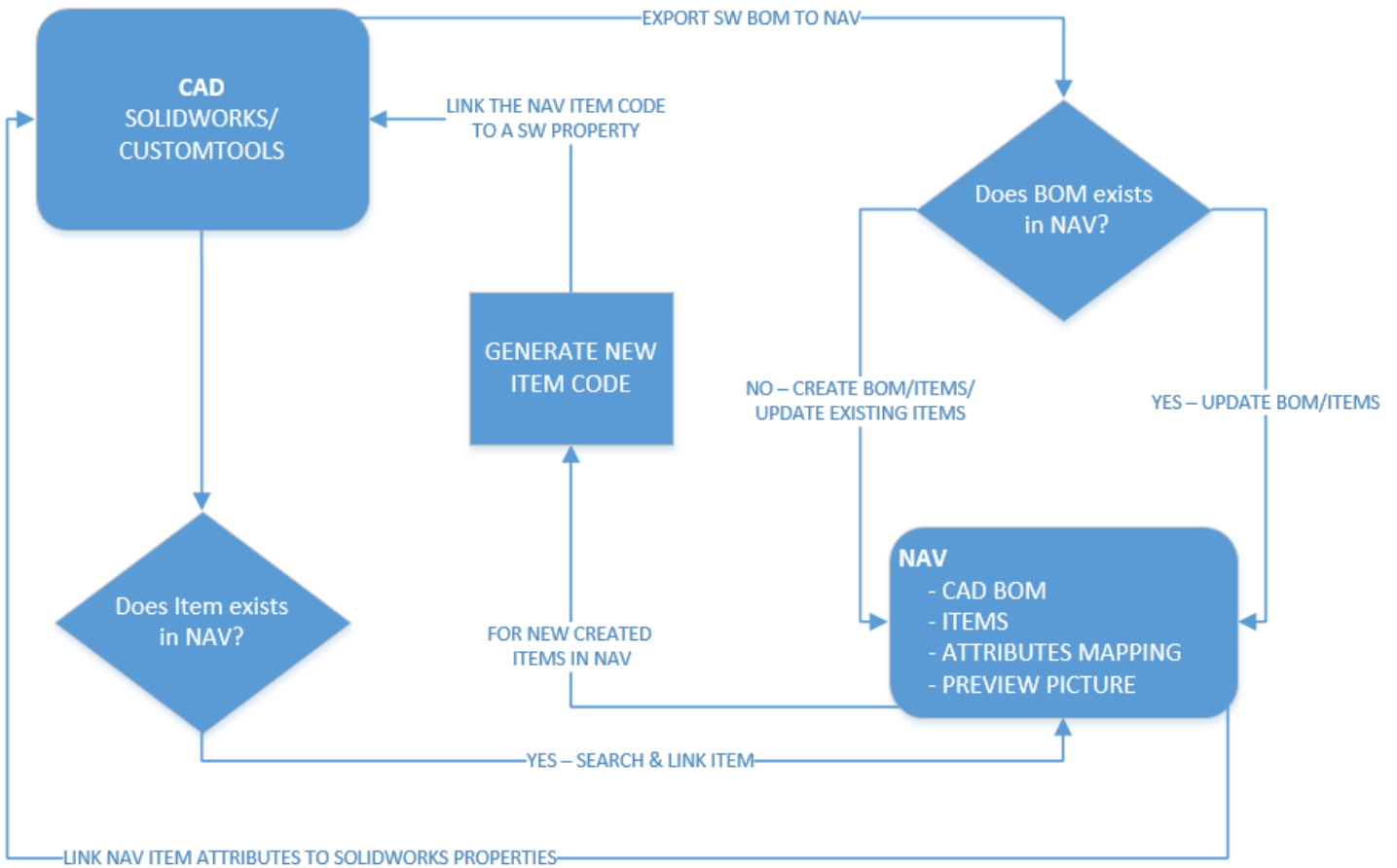
### *Requirements from NAV:*

From NAV 2009 onward.

### *Features:*

- Exporting data from SOLIDWORKS to NAV:
  - Export your SOLIDWORKS BOM to NAV
  - Create new items inside NAV
  - Create new items in NAV when SOLIDWORKS files are revised
  - Generate new item codes in NAV
  - Mapping SOLIDWORKS properties to attributes of items in NAV
  - Update existing BOMs and Items in NAV
  - Adding SOLIDWORKS Document preview to NAV
  
- Importing data from NAV to SOLIDWORKS
  - Search and link NAV item with SOLIDWORKS Custom Properties
  - Possibilities to search data from multiple tables inside NAV
  - Link content of your drop down in SOLIDWORKS with data retrieved from NAV

**Communication diagram:**





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## Exporting data from SOLIDWORKS to NAV

### Creating BOMs and items inside NAV

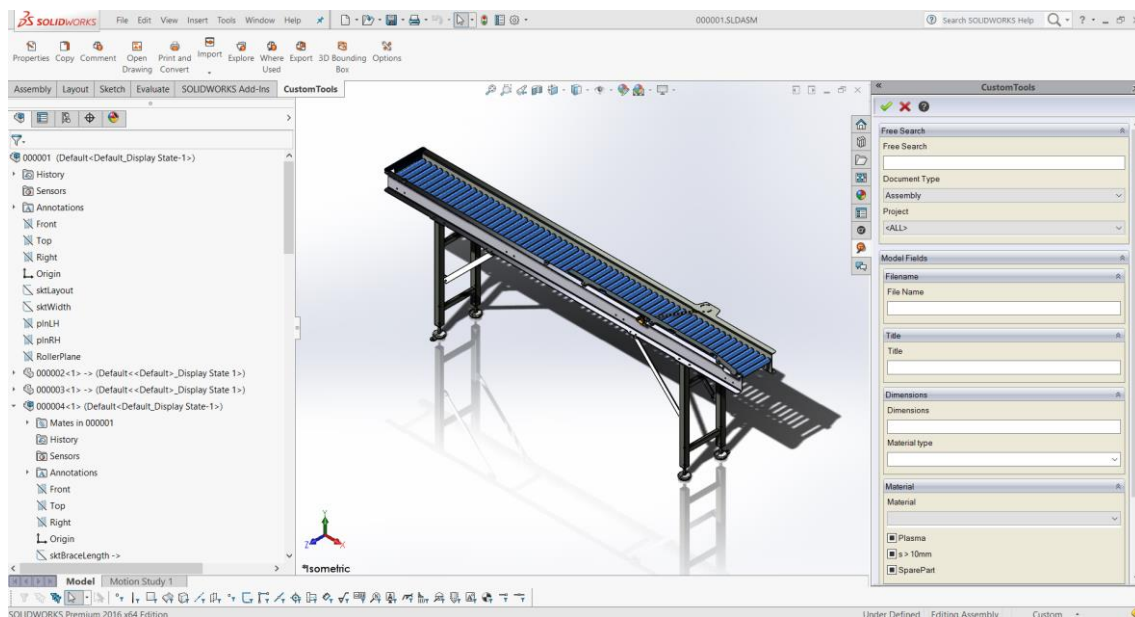
CUSTOMTOOLS can be used to automate the creation of your SOLIDWORKS BOM and items inside NAV. The entire SOLIDWORKS BOM can be exported in 2 clicks to NAV. The information written into NAV can be mapped with your own SOLIDWORKS properties defined with CUSTOMTOOLS.

### Benefits of using CUSTOMTOOLS:

- Can be customized based on customers' specifications
- Eliminate data entry errors
- Remove a lot of manual data entries
- Higher consistency between SOLIDWORKS data and NAV data
- Important time savings
- Higher data quality

### Export your SOLIDWORKS BOM to NAV

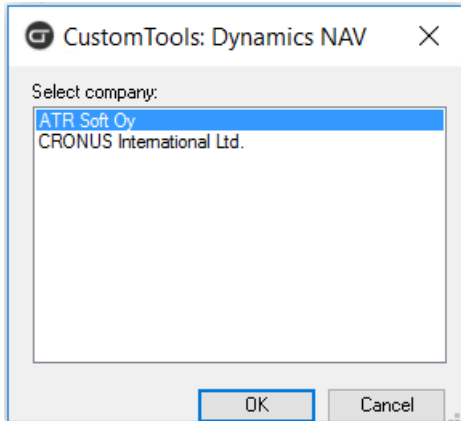
1. SOLIDWORKS Assembly ready to be exported to NAV.



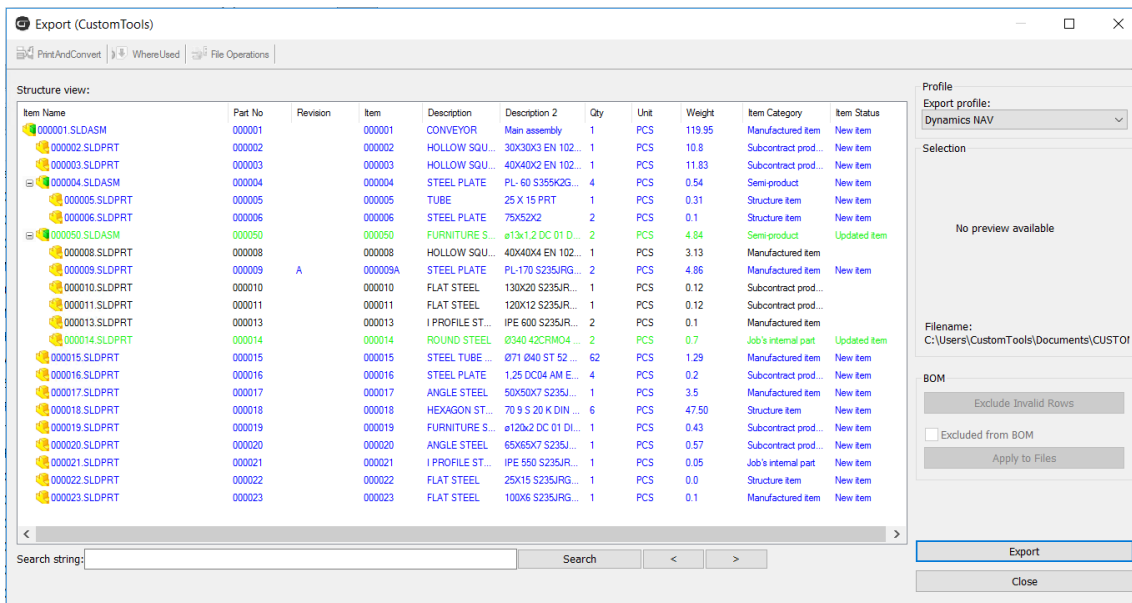


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2. If you are using multiple companies in NAV, then CUSTOMTOOLS offers you the possibility to select the company where to perform the export (e.g. In this case, ATR Soft Oy has been selected).



3. Information displayed to the SOLIDWORKS users before exporting the SOLIDWORKS BOM to NAV. Some data can be retrieved automatically from SOLIDWORKS (e.g. Quantity) and others are defined with the Custom properties in CUSTOMTOOLS (e.g. Item number, description). Also a color code can be used to retrieve the item status from NAV, in case items are created or updated in NAV.





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## 4. SOLIDWORKS BOM Exported to NAV. The BOMs are automatically added into NAV

The screenshot shows the 'Production BOM - Microsoft Dynamics NAV' window. The breadcrumb path is 'ATR Soft Oy > Departments > Manufacturing > Product Design > Production B'. The ribbon includes 'HOME', 'ACTIONS', and 'REPORT' tabs. The 'HOME' tab has icons for 'New', 'Edit', 'View', 'Delete', 'Exchange Production BOM Item', 'Delete Expired Components', and 'Where-Used (Top Level)'. A left-hand navigation pane shows a tree view of departments, with 'Manufacturing' expanded to show 'Product Design'. The main area displays a table titled 'Production BOM' with the following data:

No.	Description	Status	Uni
000001	CONVEYOR	New	
000004	STEEL PLATE	New	
000050	LEG FRAME ASSEMBLY	New	
000050A	FURNITURE STEEL TUBE	New	

## 5. BOM Structure inside NAV

The screenshot shows the 'Edit - Production BOM - 000001 - CONVEYOR' window. The ribbon includes 'HOME' and 'Prod. BOM' tabs. The 'HOME' tab has icons for 'Edit', 'View', 'New', 'Delete', 'Copy BOM...', 'Versions', 'Matrix per Version', 'Where-used', 'Comments', 'Go to', 'Previous', and 'Next'. The 'Prod. BOM' tab has icons for 'Go to', 'Previous', and 'Next'. The main area displays the '000001 - CONVEYOR' details in a 'General' section and a 'Lines' section.

**General**

No.: 000001 Search Name: CONVEYOR  
Description: CONVEYOR Version Nos.:  
Unit of Measure Code: Active Version:  
Status: New Last Date Modified: 6.2.2016

**Lines**

Type	No.	Description	Quantity per	Unit of Mea...	Scrap %	Routir
Item	000002	HOLLOW SQUARE BAR	1	PCS	0	
Item	000003	HOLLOW SQUARE BAR	1	PCS	0	
Item	000004	STEEL PLATE	4	PCS	0	
Item	000050A	FURNITURE STEEL TUBE	2	PCS	0	
Item	000015	STEEL TUBE PIPE	62	PCS	0	
Item	000016	STEEL PLATE	4	PCS	0	
Item	000017	ANGLE STEEL	1	PCS	0	



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### Create new items inside NAV

With CUSTOMTOOLS the users have two different ways of creating new items inside NAV.

Typically, the creation of new items is done during the BOM Export. If an item does not exist, then CUSTOMTOOLS will automatically create it during the export. In that approach multiple items can be created at the same time in NAV. The Item code is generated inside NAV by using the NAV or CUSTOMTOOLS sequencing and sent back as a SOLIDWORKS property.

Items can also be created individually if a user exports an individual SOLIDWORKS part to NAV.

1. New items can be created in NAV during the BOM export to NAV or individually by using the same export dialog.

No.	Description	Ass.	Base Unit	Cost	Unit Cost	Unit Price	Vendor No.	Search De.	Bloc.	Product Gr.	Item Cate.	Assembly	Item Track
000001	CONVEYOR	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		CONVEYOR	<input type="checkbox"/>		M	Assemble-t...	
000002	HOLLOW SQUARE BAR	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		HOLLOW S...	<input type="checkbox"/>	C	Assemble-t...		
000003	HOLLOW SQUARE BAR	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		HOLLOW S...	<input type="checkbox"/>	C	Assemble-t...		
000004	STEEL PLATE	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		STEEL PLATE	<input type="checkbox"/>	SP	Assemble-t...		
000005	TUBE	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		TUBE	<input type="checkbox"/>	X	Assemble-t...		
000006	STEEL PLATE	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		STEEL PLATE	<input type="checkbox"/>	X	Assemble-t...		
000008	HOLLOW SQUARE BAR	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		HOLLOW S...	<input type="checkbox"/>	M	Assemble-t...		
000009	STEEL PLATE	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		STEEL PLATE	<input type="checkbox"/>	M	Assemble-t...		
000009A	STEEL PLATE	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		STEEL PLATE	<input type="checkbox"/>	M	Assemble-t...		
000010	FLAT STEEL	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		FLAT STEEL	<input type="checkbox"/>	C	Assemble-t...		
000011	FLAT STEEL	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		FLAT STEEL	<input type="checkbox"/>	C	Assemble-t...		
000013	I PROFILE STEEL	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		I PROFILE S...	<input type="checkbox"/>	M	Assemble-t...		
000014	ROUND STEEL	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		ROUND STE...	<input type="checkbox"/>	O	Assemble-t...		
000015	STEEL TUBE PIPE	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		STEEL TUBE...	<input type="checkbox"/>	M	Assemble-t...		
000016	STEEL PLATE	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		STEEL PLATE	<input type="checkbox"/>	C	Assemble-t...		
000017	ANGLE STEEL	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		ANGLE STEEL	<input type="checkbox"/>	M	Assemble-t...		
000018	HEXAGON STEEL	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		HEXAGON ...	<input type="checkbox"/>	X	Assemble-t...		
000019	FURNITURE STEEL TUBE	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		FURNITURE ...	<input type="checkbox"/>	C	Assemble-t...		
000020	ANGLE STEEL	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		ANGLE STEEL	<input type="checkbox"/>	C	Assemble-t...		
000021	I PROFILE STEEL	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		I PROFILE S...	<input type="checkbox"/>	O	Assemble-t...		
000022	FLAT STEEL	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		FLAT STEEL	<input type="checkbox"/>	X	Assemble-t...		
000023	FLAT STEEL	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		FLAT STEEL	<input type="checkbox"/>	M	Assemble-t...		
000050	LEG FRAME ASSEMBLY	No	PCS	<input checked="" type="checkbox"/>	0,00	0,00		LEG FRAME ...	<input type="checkbox"/>	SP	Assemble-t...		

### Create new items in NAV when SOLIDWORKS files is revised

As NAV does not support revision, if an item that already exists in NAV and that is already linked to a SOLIDWORKS file is revised in SOLIDWORKS then CUSTOMTOOLS will create a new item inside NAV. The new item created in NAV will associate the item number of the revised file with the revision number defined in your custom properties. In the Export dialog the revised item will appear as a new item.



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Export (CustomTools)

Item Name	Part No	Revision	Item	Description	Description 2	Qty	Unit	Weight	Item Category	Item Status
000001.SLDASM	000001		000001	CONVEYOR	Main assembly	1	PCS	119.95	Manufactured item	New item
000002.SLDPRPT	000002		000002	HOLLOW SQU...	30X30X3 EN 102...	1	PCS	10.8	Subcontract prod...	New item
000003.SLDPRPT	000003		000003	HOLLOW SQU...	40X40X2 EN 102...	1	PCS	11.83	Subcontract prod...	New item
000004.SLDASM	000004		000004	STEEL PLATE	PL- 60 S355K2G...	4	PCS	0.54	Semi-product	New item
000005.SLDPRPT	000005		000005	TUBE	25 X 15 PRT	1	PCS	0.31	Structure item	New item
000006.SLDPRPT	000006		000006	STEEL PLATE	75X52X2	2	PCS	0.1	Structure item	New item
000050.SLDASM	000050		000050	FURNITURE S...	a13x1.2 DC 01 D...	2	PCS	4.84	Semi-product	Updated item
000008.SLDPRPT	000008		000008	HOLLOW SQU...	40X40X4 EN 102...	1	PCS	3.13	Manufactured item	
000009.SLDPRPT	000009	A	000009A	STEEL PLATE	PL-170 S235JRG...	2	PCS	4.86	Manufactured item	New item
000010.SLDPRPT	000010		000010	FLAT STEEL	130X20 S235JR...	1	PCS	0.12	Subcontract prod...	

## Generate new item codes in NAV

Item numbers can be generated by using a CUSTOMTOOLS sequences or by retrieving the next available item numbers from NAV.

## Mapping SOLIDWORKS properties to attributes of items in NAV

NAV item attributes can be automatically populated with SOLIDWORKS properties defined in CUSTOMTOOLS.

## Update existing BOMs and Items in NAV

### Visualize modified rows

In this example, rows marked as Green corresponds to Items or BOMs that already exist inside NAV but will be updated (e.g. If the description has been modified in SOLIDWORKS). Status in NAV can be retrieved from NAV (e.g. here as the items will be modified the Item status is Updated Item).

Item Name	Part No	Revision	Item	Description	Description 2	Qty	Unit	Weight	Item Category	Item Status
000001.SLDASM	000001		000001	CONVEYOR	Main assembly	1	PCS	119.95	Manufactured item	New item
000002.SLDPRPT	000002		000002	HOLLOW SQU...	30X30X3 EN 102...	1	PCS	10.8	Subcontract prod...	New item
000003.SLDPRPT	000003		000003	HOLLOW SQU...	40X40X2 EN 102...	1	PCS	11.83	Subcontract prod...	New item
000004.SLDASM	000004		000004	STEEL PLATE	PL- 60 S355K2G...	4	PCS	0.54	Semi-product	New item
000005.SLDPRPT	000005		000005	TUBE	25 X 15 PRT	1	PCS	0.31	Structure item	New item
000006.SLDPRPT	000006		000006	STEEL PLATE	75X52X2	2	PCS	0.1	Structure item	New item
000050.SLDASM	000050		000050	FURNITURE S...	a13x1.2 DC 01 D...	2	PCS	4.84	Semi-product	Updated item
000008.SLDPRPT	000008		000008	HOLLOW SQU...	40X40X4 EN 102...	1	PCS	3.13	Manufactured item	

### Visualize new rows

Rows marked as Blue corresponds to Items that do not exist yet inside NAV and will be created during the export to NAV. Status in NAV can be retrieved from NAV (e.g. here as the items will be created the Item status is New Item). NAV Items that have been revised in SOLIDWORKS are





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marked as new items.

Item Name	Part No	Revision	Item	Description	Description 2	Qty	Unit	Weight	Item Category	Item Status
000001.SLDASM	000001		000001	CONVEYOR	Main assembly	1	PCS	119.95	Manufactured item	New item
000002.SLDPRT	000002		000002	HOLLOW SQU...	30X30X3 EN 102...	1	PCS	10.8	Subcontract prod...	New item
000003.SLDPRT	000003		000003	HOLLOW SQU...	40X40X2 EN 102...	1	PCS	11.83	Subcontract prod...	New item
000004.SLDASM	000004		000004	STEEL PLATE	PL- 60 S355K2G...	4	PCS	0.54	Semi-product	New item
000005.SLDPRT	000005		000005	TUBE	25 X 15 PRT	1	PCS	0.31	Structure item	New item
000006.SLDPRT	000006		000006	STEEL PLATE	75X52X2	2	PCS	0.1	Structure item	New item
000050.SLDASM	000050		000050	FURNITURE S...	a13x1.2 DC 01 D...	2	PCS	4.84	Semi-product	Updated item
000008.SLDPRT	000008		000008	HOLLOW SQU...	40X40X4 EN 102...	1	PCS	3.13	Manufactured item	

## Visualize existing rows

Rows marked as Black corresponds to Items/BOMs that already exist inside NAV and that have not been modified in SOLIDWORKS.

Item Name	Part No	Revision	Item	Description	Description 2	Qty	Unit	Weight	Item Category	Item Status
000001.SLDASM	000001		000001	CONVEYOR	Main assembly	1	PCS	119.95	Manufactured item	New item
000002.SLDPRT	000002		000002	HOLLOW SQU...	30X30X3 EN 102...	1	PCS	10.8	Subcontract prod...	New item
000003.SLDPRT	000003		000003	HOLLOW SQU...	40X40X2 EN 102...	1	PCS	11.83	Subcontract prod...	New item
000004.SLDASM	000004		000004	STEEL PLATE	PL- 60 S355K2G...	4	PCS	0.54	Semi-product	New item
000005.SLDPRT	000005		000005	TUBE	25 X 15 PRT	1	PCS	0.31	Structure item	New item
000006.SLDPRT	000006		000006	STEEL PLATE	75X52X2	2	PCS	0.1	Structure item	New item
000050.SLDASM	000050		000050	FURNITURE S...	a13x1.2 DC 01 D...	2	PCS	4.84	Semi-product	Updated item
000008.SLDPRT	000008		000008	HOLLOW SQU...	40X40X4 EN 102...	1	PCS	3.13	Manufactured item	
000009.SLDPRT	000009	A	000009A	STEEL PLATE	PL-170 S235JRG...	2	PCS	4.86	Manufactured item	New item
000010.SLDPRT	000010		000010	FLAT STEEL	130X20 S235JR...	1	PCS	0.12	Subcontract prod...	

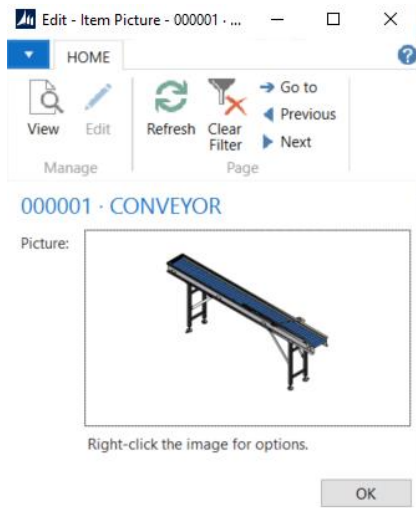
No.	Description	Ass.	Base Unit	Cost	Unit Cost	Unit Price	Vendor No.	Search De.	Bloc...	F
000008	HOLLOW SQUARE BAR	No	PCS	☑	0,00	0,00		HOLLOW S...		
000009	STEEL PLATE	No	PCS	☑	0,00	0,00		STEEL PLATE		
000010	FLAT STEEL	No	PCS	☑	0,00	0,00		FLAT STEEL		
000011	FLAT STEEL	No	PCS	☑	0,00	0,00		FLAT STEEL		
000013	I PROFILE STEEL	No	PCS	☑	0,00	0,00		I PROFILE S...		
000014	SIDE BAR	No	PCS	☑	0,00	0,00		SIDE BAR		
000050	LEG FRAME ASSEMBLY	No	PCS	☑	0,00	0,00		LEG FRAME ...		



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### *Adding SOLIDWORKS Document preview to NAV*

Depending on the type of NAV licenses that you are using we can insert a preview picture of the SOLIDWORKS part inside the NAV Item.



## Importing data from NAV to SOLIDWORKS

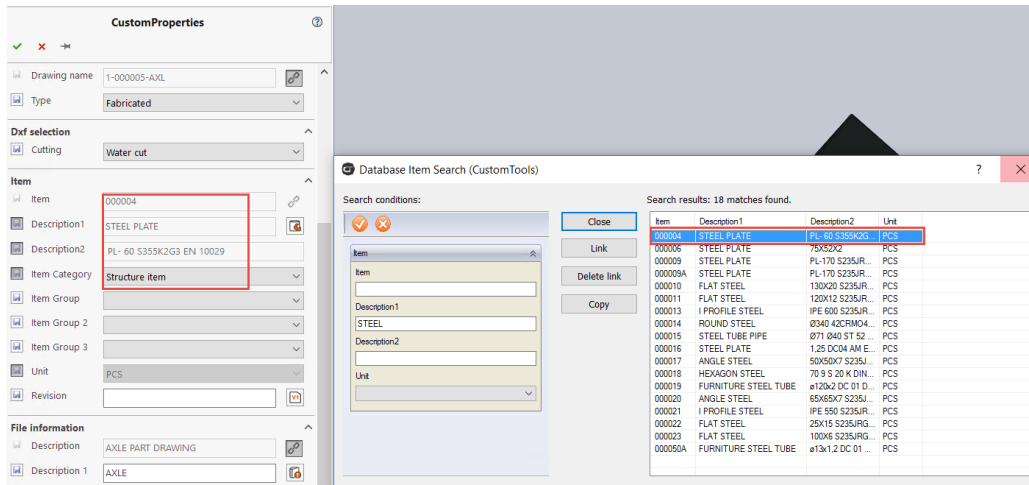
### *Search and link NAV item with your SOLIDWORKS Custom Properties*

In case an item already exists inside NAV, the SOLIDWORKS users can search for the corresponding NAV item directly from SOLIDWORKS by using CUSTOMTOOLS. CUSTOMTOOLS offers a live search in NAV from your custom properties. You can create your own NAV search groups in CUSTOMTOOLS. Search groups can be used to retrieve values from different columns of the same table in NAV.

Item's information from NAV can be linked or copied into the SOLIDWORKS properties. If information of a linked item is modified inside SOLIDWORKS (e.g. Description), then the information will be updated inside NAV during the export.



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## Possibilities to search data from multiple tables inside NAV

Custom properties of your SOLIDWORKS documents can be linked to different table inside NAV. Allowing users to search and link NAV data to custom properties from different tables.

## Link content of your drop down in SOLIDWORKS with data retrieved from NAV

Content available in the drop down menu of your custom properties can be linked to directly to drop down menu defined in NAV, enabling the users to access live data from NAV.

