

Materials Management System for nopCommerce

Bill of Materials Product Management

Plugin Documentation

Materials Management System Bill of Materials Product Management

Plugin Documentation v4 Series

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Materials Management System

The materials management plugin is used to manage the setup, creation and production of a Bill of Materials or a 'recipe' used for the production of saleable products.

Materials management is a complex process of determining what materials to keep in store, what quantities to stock, when to order and when to make changes to your process in order to meet your operations and your team's production goals – sometimes on a per project or product basis.

Efficient materials management is about knowing what materials are in store and what needs to be procured at any given time, enabling you to understand inventory lifecycles, avoiding stock-outs and stockpiles.

Once you know what materials are required to create a product you can then do costs estimates for production runs as well as keep track of what is in production at any given time.

Bill of Materials (BOM)

The materials management system uses the process of creating a Bill of Materials or BoM for an item or product to be manufactured. A BoM is a list of all the materials that are required to create a product along with the quantities. The BoM can also include the various types of labour or work processes which may also be required to build a product.

The following diagram proves an overview of the process of managing the production of products using a BoM system.



Bill of Materials System

In this first version of the Materials Management System the processes detailed have been implemented which allows an operator to utilise the nopCommerce system along with other online and offline tools and processes to manage the production process.

This manual provides a summary and details of each of the specific functions.

Also refer to the nopCommerce documentation for more information regards configuring nopCommerce elements.

Desktop Administration

nop Commerce	=		John Smith Logout Public store 🛠
Search D	The store has some error(s) or warning(s). Please find more inform	ation on the <u>Warnings</u> page	×
Dashboard	Dashboard		
🗏 Catalog 🛛 🖌			
🏋 Sales 🗸	NopCommerce News		-
Customers <	"Powered by peop Commerce" link	Promium support convices	Recommended besting for your store
Promotions <	Powered by httpcommerce mix	Premium support services	Recommended hosting for your store
👶 Content management <	Would you like to remove the "Powered by	Get dedicated support from the nopCommerce team	Everleap cloud hosting seamlessly scales sites with ease
📽 Configuration 🛛 🕻	here for more info.	for more info.	day free trial.
System <			
Reports 🕻			
🕜 Help 🖌 🖌	Let Common statistics		-
Nop-Templates <			
Apollo System <			
Materials Management V	Orders	Im requests Registered customers	Low stock products
Bill of Materials (Groups) Production Orders	More info 오	More info 🗢 More info 오	More info
Materials			
O Low Material Quantity	😭 Orders	Year Month Week - & New customers	Year Month Week -
Suppliers			
Material Types			
• Configuration			

Before continuing on in this manual refer to Installing the Plugin section below. One the plugin has been installed and configured then the following menu options will be displayed.

Plugin Menu Options

The plugin has a number of menu options which will be discussed in detail in this manual.



Products in nopCommerce

A product is item that can be sold to customers using the nopCommerce ecommerce system.

Refer to https://docs.nopcommerce.com/en/running-your-store/catalog/products/index.html

Once a product has been created then it is possible to link it to a materials management group or BoM allowing you to manage the production of the product. For example a Bench with storage is shown in this example.

Edit product details - Bench	wit	th S	torag	e o back to	prod	uct list									
						Preview		Save	📓 Save a	and Cor	ntinue	Edit	Co	py product	🛍 Delete
Advanced									-						
i Product info).
Product name 💡	Ben	ch wit	h Storage												*
Short description 🥹	The	is the	new Bend	h with Storage	produc	it									
Full description 💡	File	Edit	View Ir	sert Format	Tools	Table									
	Я	¶<	~ ~	Paragraph	~	System Font	~ 1	12pt	×	в	Ι	<u>A</u> ~	× 🗶 v		
	The	e is the	e new Be	nch with Storag	ge pro	duct									
	P													POWER	ED BY TINY 🦼

A new widget has been added to the Product configuration view.

Note: Ensure the widget is enabled in configuration before using this function.

Vidgets					
Learn more about plugins in nopCo	mmerce				
Friendly name	System name	Display order	Is active	Configure	Edit
Materials Management System	Apollo.MaterialsManagement	1	×	Configure	

The widget allows you to select and link a previously created BoM Group.

Attachments							
Tabs							
Bill of Materials (Gro	oup)						
Name	Units	Quantity	Preferred group	Display order	Edit	View	Delete
		No	data available in ta	ble			

Enter the required parameters and click search

Material	Name 👩		Vendor 😮 All	~
Material Type 😵 No Material Type		al Type 🗸 🗸		
		Q	Search	
D	Name	Units	Quantity	Preferred group
0	Name Bench with Storage	Units	Quantity 1	Preferred group

Click the checkbox to select the BoM and click Save

Name	Units	Quantity	Preferred group	Display order	Edit	View	Delete
Bench with Storage	Each	1	×	1	🖋 Edit	View	🗊 Delete

The Product is now linked to the "Bench with Storage" BoM Group.

Bill of Materials

The system allows you to create or edit a Bill of Materials Group. A group allows you to collect together and define the **Material** items and **Labour** items required to build a product. You can also calculate the cost to product a specific number of products or create a production order to produce a specific number of products.

Search								
Grou	p name 🔞				Warehouse 🚱	All		
Vendor 😮 All		All		~	Active	Active only		
				Q Search				
0	Name		Group Code	Q Search Active	Display order		Edit	Build

The quantity of each item is also entered based on the units defined for a material. Also refer to the section on creating materials and labour below.

From this view you can also go to the Build function to estimate the cost and to build a product.

Copy Group

You can Copy existing group. Select the checkbox for the Group to copy then click the Click button to copy the group to a new group.

Build Group

Click the **View** button to view the BoM Product Build view. Refer below for more information on using this function.

Edit Group

Click the Edit button to edit a Group

Edit Bill of Materials (Group	o details) - Be	ench with Ste	orage G back t	to Group list 🛽 🖻	Save	Save and Contin	ue Edit	🗊 Delete	
Advanced									
i Bill of Materials (Group) info								-	
Name 🚱	Bench with Storage								
Description 😮	File Edit View Insert Format Tools Table								
	¶ ¶ ∽ ∂	Paragraph ~	System Font 🔍 🗸	12pt 🗸	В	I <u>A</u> ~ 🖍 ~			
	Bench with Storag	e							
	P						POWERE	D BY TINY 🏑	
Manufacturer Part Number 😮									
Picture 😧	NG IMAGE	Upload a file							
Parent Group 💡	[None]							~	
Vendor 🕄	No vendor				~				
Warehouse 😮	None							~	
Admin comment 😌									
								11	

Export Group

To export a group to excel click the Export Button which will create an excel file containing the group details

Import Group

To import a group excel file click the Import Button then select the file to Import.

Delete Group

Select the checkbox for the Group to copy then click the Click button to copy the group to a new group.

Add a new Group

Add a new Group

Click Add new to create a new group

Add a new Group Stack to Group	13 Save 13 Save and Continue Ed	dit
Advanced		_
i Bill of Materials (Group) info	-	
Standard 📰 EN 🚍 Arabic		
Name 😧		
Description 💡		
	B I U S X, X 《 《 J, 注 :: 半 半 19 명 트 크 크 트 / 11 11 태· 의 및 严 교 파 프 프 프 O JE ®	
	Styles - Format - Font - Size - ▲- 집 - 兴 □ ?	
	4	
Manufacturer Part Number 😮		
Picture 💡		
	NO MARE Upload a file	
	<u> </u>	

Once you have entered the details click Save or Save and Continue to continue editing.

Once you have created a Group you can proceed to add Materials required in the group to build the Product.

Materials							
Material	Unit	Quantity	Is preferred material?	Display order	Edit	View	Delete
4 F		Nc	o data available in ta Show 15	ble • items		No re	cords C
Add a material							

Add a Material

To add a new Material click the Add a material button. Then Enter the required search criteria and click search

dd a r	naterial		
Ma' Ma	terial Name 🕢	Vendor 🥥 All	~
D	Material name	Unit of Measure	Active
	11/2" Pocket Screws (box of 100)	Each	~
	1 1/2" Pocket Screws (each)	Each	~
	1x2x8	Each	×
	Template - Material	Each	×
0			1 4 - 6 4 14

Click the checkbox to select the materials to add then click Save

Material	Unit	Quantity	Is preferred material?	Display order	Edit	View	Delete
L 1/2" Pocket Screws each)	Each	10	×	1	🖋 Edit	View	Delete
Lx2x8	Each	1	×	2	Sedit	View	🗊 Delete

Once you have selected the material items they will be displayed

Edit Quantity

Click the Edit button to adjust the number of material items required for each type selected

Add labour

Once you have created a Group you can proceed to add the labour items required in the group to build the Product.

A aterial	Unit	Quantity	Is preferred material?	Display order	Edit	View	Delete
		No	o data available in ta	ble			
• •			Show 15	tiems		No re	cords

To add labour click the Add labour button. Then Enter the required search criteria and click search

localtest4	5.selectsystems	com.au/Admin/Grou	p/LabourAddPopup?g	groupId=19&btnId=btnRefreshLabour&formId=grou	ıp-form		
dd lab	our						
Mat	erial Name 👩			Vendor 😧 All	~		
Ма	terial Type 🕝	All	~				
				O Search			
				Q Search			
				Q Search			
	Material nar	ne	_	Q Search Unit of Measure		Active	
	Material nan	ne		Q Search Unit of Measure Hourly Rate		Active	
-	Material nar Labour1	ne		Q Search Unit of Measure Hourly Rate Show 7 + items	1-1 of 1 items	Active	

Once you have selected the labour items they will be displayed

Edit Quantity

Click the Edit button to adjust the number of hours required for each type of labour item

laterial	Unit	Quantity	Is preferred material?	Display order	Edit	View	Delete
abour1	Hourly Rate	2	×	3	🖋 Edit	 View 	🗊 Delete

Create a Group - Other information

You can set the group to be active or inactive.

Active 🚱		
Price range filtering 😮		
Display order 😮	1	A ¥
ppings		
uppings Limited to customer roles 🚱		In order to use this functionality, you have to disable the following setting: Ca settings > Ignore ACL rules.

You can also map a group to a customer role or store. Refer to nopCommerce documentation for more information.

At this stage the Page range filtering information is not used and is included for reference.

Calculate and Build Function

To build a group or estimate the cost to build a group click the Build button

	s (oroup acture	s) - Dench wit	In Storage	G back to Group li	st	Calculate	Build D
vanced							
Calculate							
Quantity to Bui	ild 🚱 1	* *		Total Pr	ice 🝞 471.48		
Batch Material Co	ost 😮 355.28			Total Pro	ofit 😧 36.19		
Batch Material Pri	ce 😮 383.48			Total 1	ax 😢 0.00		
Batch Labour Co	st 😮 80.00						
Batch Labour Pri	ce 😢 88.00						
Matorials							
Materials	Unit	Quantity	ls preferred material?	Display order	Edit	View	Delete
Materials Material 11/2" Pocket Screws (each)	Unit Each	Quantity 10	Is preferred material?	Display order	Edit & Edit	View View	Delete Delete
Materials Material	Unit Each Each	Quantity 10	Is preferred material? X X	Display order 1 1	Edit Edit Edit Edit	View View View	Delete Delete Delete
Materials Material I 1/2" Pocket Screws (each) I 1/2" Pocket Screws (each) I 1/2" Applied Screws I 1/2"	Unit Each Each Each	Quantity 10 10 10 11	Is preferred material? X X X	Display order 1 1 2	Edit Edit Edit Edit Edit	View View View View	Delete Delete Delete Delete Delete

The materials and labour items linked to the group will be displayed.

Calculate

Quantity is the number of products you wish to which to estimate to build.

When the **Calculate** button is clicked then an estimate of each type of input to the product production process is displayed for this batch along with the batch totals.

Build

Quantity is the number of products you wish to build.

When the **Build** button is clicked then the system will try to create a production order for this batch.

Order Created							
Edit Bill of Materials (Gro	up details) - B	ench wi	th Storage 😗 back to Group list		🕲 Calculate	🕲 Build	🗊 Delete
Advanced							
Calculate							-
Quantity to Build 🥝	1	* *	Total Price 😢	274.61			
Batch Material Cost 📀	173.62		Total Profit 💡	21.00			
Batch Material Price 📀	186.61		Total Tax 😯	0.00			
Batch Labour Cost 💡	80.00						
Batch Labour Price 🚱	88.00						

If there are no errors then the order will be created

If there are not enough materials in store to create the batch or there is some other problem then an error will be displayed and the order is not created.

Material 1x2x8 has low quantity: -1.00000							
Edit Bill of Materials (Gro	oup details) - Bench with	n Storage 😗 b	ack to Group list		窗 Calculate	ያ Build 🗴 💼 Delete
Calculate							-
Quantity to Build 🕑	1	*		Total Price 💡	279.74		
Batch Material Cost 💡	177.64			Total Profit 💡	22.10		
Batch Material Price 😮	191.74			Total Tax 🕑	0.00		
Batch Labour Cost 🕢	80.00						
Batch Labour Price 🕢	88.00						
III Materials	Unit	Quantity	ls preferred material?	Display order	Edit	View	Delete
1x2x8	Each	1	×	1	🖋 Edit	 View 	Delete

Production Orders

A production order is created when the requested number of products are requested to be build using the Build BoM function.

Search	(
St	art date 🔞		(iii)	Order statuses 😮	All ×		
E	nd date 🕜			Order notes 😮			
Wai	ehouse 😮	All	~	Go directly to order # 💡		Go	
	Vendor 🕜	All	~				
3	Material 😮						
				Q Search			
	Order #	Order status	Customer	Q Search	reated on	Order total	View
	Order #	Order status Pending	Customer test@test.com	Q Search cr	reated on 1/05/2022 6:14:52 AM	Order total \$274.61	View View
	Order # 4 3	Order status Pending Pending	Customer test@test.com test@test.com	Q. Search Cr 21 21	reated on 1/05/2022 6:14:52 AM 1/05/2022 6:11:29 AM	Order total \$274.61 \$279.74	View Viev Viev Viev
	Order # 4 3 2	Order status Pending Pending Complete	Customer test@test.com test@test.com sales@selectsyste	Q Search cr 21 22 23 23	reated on 1/05/2022 6:14:52 AM 1/05/2022 6:11:29 AM 0/05/2022 7:41:24 AM	Order total \$274.61 \$279.74 \$230.61	View © Viev © Viev © Viev © Viev
	Order# 4 3 2 1	Order status Pending Complete Pending	Customer test@test.com test@test.com sales@selectsyste sales@selectsyste	Q Search cr 21 21 ems.com.au 10 95	reated on 1/05/2022 6:14:52 AM 1/05/2022 6:11:29 AM 0/05/2022 7:41:24 AM 0/05/2022 3:33:30 PM	Order total \$274.61 \$279.74 \$230.61 \$230.61	View © Viev © Viev © Viev © Viev © Viev © Viev

Each production order has a current Order status. Each status represents a step in the production process and you can track orders in the production process by searching for and changing the status.

The valid statuses for an order are:

- Pending the order has been placed but no work has started
- Manufacture the production of the order has been started
- Processing the production of the order has built but it requires a second production step
- Complete the production of the order has completed
- Cancelled the production of the order has been cancelled

Next Status

Click the checkbox to select an order then click the Next Status button to push the order to the next status

Export

Click the export button to export the order or list or orders as an excel spreadsheet

1 2	1	А	В	с	D	E	F	G	н	1
	1	OrderId	StoreId	OrderGuid	CustomerId	ProductionOrderStatusId	ShippingStatusId	OrderSubtotalInclTax	OrderSubtotalExclTax	OrderSubTota
	2	28	1	4bb00035-15ae-4d46-ad39-b4802b025353	1	10	10	49.13	49.13	0
[·]	3			Name	Sku	PriceExclTax	PriceInclTax	Quantity	TotalExclTax	TotalInclTax
	4			1 1/2" Pocket Screws (each)	SML-C150-100-E	0.0577	0.0577	10	0.577	0.577
	5			1x2x8	1x2x8	4.55	4.55	1	4.55	4.55
	6			Labour1	Labour1	22	22	2	44	44
-	7									
	8									

Print PDF Order

To create a production order report click the Print PDF Order button. The report will list all items and the quantities required to product the product

Order# 28 https://localtest45.selectsystems.com.au Date: Monday, May 16, 2022

Materials List

Quantity Ordered : 3

Material Name	SKU	Material Price	Material Qty	Material Total
1 1/2" Pocket Screws (each)	SML-C150-100-E	\$0.06	10.0000	\$0.58
1x2x8	1x2x8	\$4.55	1.0000	\$4.55
Labourl	Labour1	\$22.00	2.0000	\$44.00

Sub-total: \$49.13 Tax: \$0.00

Order total: \$49.13

Edit Order

Click the View Button to view and edit an order

dit production order - 2	28 💿 back to order list
i Production Order Information	-
Order # 🚱	28
Created on 😮	5/16/2022 12:31:04 PM
Customer 😮	admin45@yourStore.com
Order status 🕄	Pending Cancel order Manufacture Change status
Order subtotal 💡	\$49.13 excl tax
Order tax 🚱	\$0.00
Order total 😮	\$49.13
Quantity Ordered 💡	1
Profit 😮	\$49.13
	Edit order totals
Store 🕄	Your store name
Order GUID 😮	4bb00035-15ae-4d46-ad39-b4802b025353
Customer IP address 😮	

To edit order values click the **Edit order totals** button

You can also edit the materials in the order

icture	Material	Price	Quantity	Total	Edit
NO ISAGE	1 1/2" Pocket Screws (each) Material Code: SML-C150-100-E	\$0.06 excl tax	10.0000	\$0.58 excl tax	🖋 Edit 🗎 🗇 Delete
	1 1/4" Pocket Screws (each)	\$0.06 excl tax	10.0000	\$0.58 excl tax	🖋 Edit 🛍 Delete

Picture	Material	Price		Quantity	Total		Edit	
	1 1/2" Pocket Screws (each)	\$0.	06 excl tax	10.0000	\$0.	58 excl tax	間 Save	× Cance
NO 1144C	Material Code: SML-C150-100-E	Incl tax:	0.0577	10.0000	Incl tax:	0.5770		
		Excl tax:	0.0577		Excl tax:	0.5770		

Materials

Materials are the basic elements which are used to create a BoM group. This includes workers labour required to create the product.

Aateria	ls			Add new	🛛 Download (catalog as PDF	🛓 Export 🔹	1 Import	🛍 Delete (selected)
Q Sea	irch								^
Materi	ial name 🔞				Warehouse	IIA 🕥			~
Mater	rial Type 😮	All	~		Active	Active or	nly		~
	Vendor 😧	All	~	Go directly to	material Code	0			Go
	Picture	Material name	Code	Q Se Pric	ce M	Naterial cost	Material quantity	Active	e Edit
	NO WAST	1 1/2" Pocket Screws (box of 100)	SML-C150-100	5.77	7 4	.77	10.00000	~	🖋 Edit
	NO UMAE	1 1/2" Pocket Screws (each)	SML-C150-100	-E 0.05	577 0	0.0477	10.00000 (Parent)	~	🖋 Edit
	ND WAGE	1x2x8	1x2x8	4.55	5 3	.55	1.00000	~	🖋 Edit
	NO MAGE	Labour1	Labour1	22	2	0		~	🖋 Edit

Add a Material (and Labour)

Click **Add new** to create a new material or labour item.

Add a new material G back to material list	📓 Save	Save and Continue Edit
Advanced O Advanced Material Editing Settings		
i Material info		
Material name 🕢		

Export Material

To export a material or list or materials to excel click the **Export** Button which will create an excel file containing the group details

Import Material

To import a material excel file click the Import Button then select the file to Import.

Delete Material

Select the checkbox for the Material to copy then click the **Delete** button to copy the group to a new group.

Edit Material

To edit or view a material item click the View button

Vertical lation Material index Material index Material index Full description File Edit View Inset Format Tools Table If 1 1 2* Pocket Screws (box of 100) File Edit View Inset Format Tools Table If 1 1 2* Pocket Screws, box of 100 p Pocket Derm Picture 0 Image: Code 0 Stable 0 Material Type 0 Stable 0 Material Type 0 Stable 0 Material Type 0 Startist part number 0 Material Type 0 Stable 0 Material Type 0 Stable 0 In order to use this functionality, you have to disable the following setting: Catalog setting: Catal	it material details - 1 1/2" Po	ocket Screws (box of 100) ob	ack to material list 🛛 🔂 Save	Save and Continue Edit	Copy material	D D
Material info Material name Is Lip? Pocket Screws (box of 100) Full description	vanced					
Material name 11/2* Pocket Screws (box of 100) Fuil description File Edit, View, Insett, Format, Tools, Table If The Grit Paragraph × System Fort × 12pt × B J A × Z × F F F F F F F F F If The Grit Paragraph × System Fort View Picture @ Picture @ Image: Starburg Paragraph * System Fort View Picture @ Image: Starburg Paragraph * System Fort View Picture @ Picture @ Image: Starburg Paragraph * System Fort View Picture @ Picture @ Image: Starburg Paragraph * System Fort View Is Labour @ No vendor Vendor @ No vendor In order to use this functionality, you have to disable the following setting: Catalog setting: Catalo	Material info					
Full description File Edit View Insert Format Tools <td>Material name 💡</td> <td>1 1/2" Pocket Screws (box of 100)</td> <td></td> <td></td> <td></td> <td></td>	Material name 💡	1 1/2" Pocket Screws (box of 100)				
Image: Suppler Name @ Material Type @ Source @ Material Type @ Stabour @ Suppler Name @ Hardware Depot Vendor @ No vendor Customer roles @ Imited to stores @ Imited to stores @	Full description 🕝	File Edit View Insert Format Tools Table				
11/2° pocket screws, box of 100 Poweed anti- Picture 0 Poweed anti- Code 0 SML-C150-100 Artist part number 0 Material Type 0 Store Is Labour 0 Vendor 0 No vendor Vendor 0 No vendor Vendor 10 In order to use this functionality, you have to disable the following setting: Catalog settings > Ignore *CL rules. Limited to stores 0 Administration Comment 0		¶ ¶ ← ∽ Paragraph ∨ System	em Font v 12pt v	B I <u>A</u> ∨ ∠ ∨ ≡	₹₹≣ …	
POWEED 9171 Picture @ Active @ Active @ SML-C150-100 Artist part number @ Material Type @ Store Supplier Name @ Hardware Depot Vendor @ No vendor Customer roles @ Limited to stores @ Administration Comment @		1 1/2" pocket screws, box of 100				
Picture ? Active ? Active ? Active ? Material Type ? Store Material Type ? Store Is Labour ? Vendor ? No vendor In order to use this functionality, you have to disable the following setting: Catalog settings > Ignore ACL rules. Limited to stores ? In order to use this functionality, you have to disable the following setting: Catalog settings > Ignore ACL rules. Administration Comment ?		P			POWER	ED 8Y TI
Active @ Code @ SML-C150-100 Artist part number @ Material Type @ Store Is Labour @ Supplier Name @ Hardware Depot Vendor @ No vendor Customer roles @ Limited to stores @ In order to use this functionality, you have to disable the following setting: Catalog settings > Ignore #Limit per store" rules.	Picture 🝞	No MARK				
Code @ SML-C150-100 Artist part number @	Active 🕢	0				
Artist part number ? Material Type ? Store Is Labour ? Supplier Name ? Hardware Depot Vendor ? No vendor Customer roles ? Limited to stores ? In order to use this functionality, you have to disable the following setting: Catalog settings > lignore ACL rules. In order to use this functionality, you have to disable the following setting: Catalog settings > lignore "limit per store" rules.	Code 😮	SML-C150-100				
Material Type () Store Is Labour () Supplier Name () Hardware Depot Vendor () No vendor Customer roles () In order to use this functionality, you have to disable the following setting: Catalog settings > Ignore ACL rules. Limited to stores () Administration Comment ()	Artist part number 🕜					
Is Labour ? Is Limited to stores ? Is Limited to store ? Is Limited to sto	Material Type 🕜	Store		~		
Supplier Name ② Hardware Depot Vendor ② No vendor Customer roles ③ In order to use this functionality, you have to disable the following setting: Catalog settings > Ignore ACL rules. Limited to stores ③ In order to use this functionality, you have to disable the following setting: Catalog settings > Ignore "limit per store" rules. Administration Comment ③ In order to use this functionality, you have to disable the following setting: Catalog settings > Ignore "limit per store" rules.	Is Labour 🕜					
Vendor No vendor Customer roles @ In order to use this functionality, you have to disable the following setting: Catalog settings > Ignore ACL rules. Limited to stores @ In order to use this functionality, you have to disable the following setting: Catalog settings > Ignore "limit per store" rules. Administration Comment @ In order to use this functionality, you have to disable the following setting: Catalog settings > Ignore "limit per store" rules.	Supplier Name 🚱	Hardware Depot		~		
Customer roles ? In order to use this functionality, you have to disable the following setting: Catalog settings > Ignore ACL rules. Limited to stores ? In order to use this functionality, you have to disable the following setting: Catalog settings > Ignore "limit per store" rules. Administration Comment ? In order to use this functionality, you have to disable the following setting: Catalog settings > Ignore "limit per store" rules.	Vendor 🕝	No vendor		~		
Limited to stores 🕜 In order to use this functionality, you have to disable the following setting: Catalog settings > Ignore "limit per store" rules. Administration Comment 🕜	Customer roles 🝞		In order to use this functionality, y Ignore ACL rules.	ou have to disable the followin	g setting: Catalog setti	ings >
Administration Comment 🥹	Limited to stores 💡		In order to use this functionality, y Ignore "limit per store" rules.	ou have to disable the followin	g setting: Catalog setti	ings >
	Administration Comment 😨					

Copy Material

You can Copy an existing material. Click the **Copy** button to copy the material to a new material.

Enter material details

Material Name – enter the material name

Picture - select and add a picture for the material

Active – Click to select the material as being active for use

Code – There the material or part code

Is Labour – Click if this material item is of type Labour

Supplier - Select the material Supplier. See Supplier setup below

Vendor - Select the vendor for the material if required

Customer Roles – select the customer roles that can use this product

Limited to Stores - used when multi factory production is used

Administration comment - enter a comment for other admin users to view

Cost and Price Information

\$ Prices		
Price	5.7700 USD	*
Material cost	4.7700 USD	+

There are two material cost items:

- The cost to purchase or obtain the material
- The price or market up cost used to calculate the final cost of production of the product

Each material item can have a marked-up cost for use of the material

Inventory

the Inventory		-
Inventory method 💡	Manage Materials	~
Material quantity 💡	10.0000	
Warehouse 👔	None	~
Minimum material qty 💡	20 *	
Low material activity 💡	Nothing 🗸	

Inventory method

There are three options for managing material inventories

- Don't Manage Materials Material inventory is not managed
- Manage Materials Material inventory is managed and decremented which a BoM or group item is produced
- Parent the material has a parent material item and the parent item inventory is managed and decremented when this material is used
 - For example the parent material item could be a box of 100 screws and a child material item is the individual screws which are used for production

击 Inventory		-
Inventory method 😮	Parent Material	~
Select parent material 🚱	1 1/2 Pocket Screws (box of 100)	
	Clear	

After selecting Parent Material option then enter and select the parent material

In this case the parent material for 1 1/2" Pocket Screws (each) is 1 1/2 Pocket Screws (box of 100)

Warehouse - In the case when materials are stored in different warehouses you can select the warehouse

Minimum material quantity – this is the minimum quantity to keep in store. A warning will be displayed on the Low Materials Quantity view when the inventory is below the minimum value

Low material activity - This is the action to be performed when the inventory quantity gets to the minimum value

The two options are:

- Nothing no action is taken
- In Active The material is made in active when the minimum is reached

Units of Measure

Units of Measure			-
Unit of Measure 💡	Each	~	
Weight 😧	0.0000 lb(s)		
Length ()	0.0000 inch(es)		
Width 😮	0.0000 inch(es)		
Height 😗	0.0000 inch(es)		

Select the units of Measure for this material - see the Measures Units section below

- Enter the **Weight** of the material if required
- Enter the **Length** of the Material if required
- Enter the **Width** of the Material if required
- Enter the **Height** of the Material if required

Material quantity history

🔊 Material quan	tity history			-			
Here you can see a history of the material quantity changes.							
	Warehou	ise 🚱 🛛 All		~			
		Q Se	arch				
Warehouse	Material quantity	Message	Quantity adjustment	Created On			
None	-10	10	The material quantity has been reduced by placing the order #20 (Parent Adjustment)	05/10/2022 7:30:48 AM			
None	-10	20	The material quantity has been reduced by placing the order #19 (Parent Adjustment)	05/10/2022 7:30:47 AM			
None	-10	30	The material quantity has been reduced by placing the order #18 (Parent Adjustment)	05/10/2022 7:30:4			

This is a record of all inventory movements for a material. A record is added for each change in inventory

When stock is added or decremented via a system process. i.e. Import, build or transfer to warehouse

Select the warehouse to see the material movements for that warehouse

Low Material Quantity

This view will display all materials that have a low material quantity in store

A Search					
Active 😮	All materials	~			
		Q Search			
		Q Search			
		Q Search			
Material name		Inventory method	Material quantity	Active	View
Material name		Inventory method Manage Materials	Material quantity	Active	View View
Material name 1x2x8		Inventory method Manage Materials	Material quantity	Active	View View

Suppliers

Suppliers are required to be setup before it can be added to a Material configuration.

When an Admin Operator is logged in as an Administrator, they can see all Suppliers. Where multiple vendors are configured only the Suppliers defined for the Current Vendor are displayed.

Editing a Supplier

You can edit a supplier and make it active or in-active meaning it will not be displayed when searching and selecting a supplier.

At this stage the address is only used to display information to the store owner and is not used for any other purpose.

					🕀 Add i
	Sea	rch			
Search Active Only 💡					
State / province	County / region	City	Phone number	Active	Edit
				~	🖋 Edit
	Search Active Only 3 State / province	Search Active Only ② ☑ State / province County / region	Search Active Only 3 State / province County / region City	Search Search Active Only ? State / province County / region City Phone number	Search Search Active Only ? State / province County / region City Phone number Active · · · · · · · · · · · · · · · · · · ·

Edit Supplier - Hardward	e Depot Back to suppliers list	Delete
Supplier Name 😮	Hardware Depot	
Active 😮		
First name 😮		
Last name 😮		
Email 📀		
Company 😧		
Country 😮	Select country	× .
State / province 💡	Other	~
County/region 💡		
City 😮		
Address 1 😮		
Address 2 😮		
Zip / postal code 💡		
Phone number 😮		
Fax number 💡		
Administration Comment 🚱	Hardware Depot is a general supplier	

Material Types

Material types are used to define materials and labour.

Search Name	e 😧	Search		
	Search Active Only 😮 🛛			
Name	Description	Active	Display Order	Edit
Store	Materials kept in store	~	1	🥒 Edit
Procurement	Materials ordered in for use	~	2	🖋 Edit
abour	Labour	~	3	/ Edit

There are three default material types installed

- Store materials that are stored in house or in a warehouse
- Procurement materials that are purchased or ordered
- Labour the material is of type Labour

Edit Material Type - Store	Back to Material Types list	😰 Save 🛛 😰 Save and Continue Edit 🚺 Delet
Name 💡	Store	
Description 😢	Materials kept in store	
Display Order 💡	1	
Active 💡	2	

Measures

Measures are used to define material usage types when building a product

Name	System keyword	Ratio to primary unit	Display order	Is primary	Mark as primary unit	Edit	Delete
Each	Each	1	1	~	Mark as primary unit	Se Edit	🗇 Delete
Jnits	Units	1	2	×	Mark as primary unit	/ Edit	圊 Delete
lox	Box	1	3	×	Mark as primary unit	/ Edit	🗊 Delete
Pallet	Pallet	1	4	×	Mark as primary unit	🥒 Edit	🗓 Delete
lourly Rate	Hourly Rate	1	5	×	Mark as primary unit	/ Edit	🗓 Delete
< 1 >						1-5 of	5 items
Add new rec	ord						
	Na	ame 🕜					
	System keyw	ord 🕜					
	Ratio to primary u	unit 🕜 0.0000		▲ ▼			
	Display or	rdor 🙆 0					

The Mark as primary unit button is used to set the default measure unit

Note: Ratio to Primary unit has no function at present

Description of Default Values

Each - for materials where they are identified as a single unit e.g. screws, timer pieces, parts

Units - for materials which have a relative measurable amount e.g. Paint, Glue

Box – for materials which have a quantity purchased by the box e.g. Box of Screws

Pallet - for materials which have a quantity purchased by the Pallet e.g. Pallet of Packaged Items

Hourly Rate - for labour items that are allocated via time

System Configuration

Plugin Access Control

There are a number of levels of access control which can be defined by Customer Role

Admin area. Materials Manager	
Admin area. Materials Operator	
Admin area. Materials Supervisor	

Refer to Admin > Configuration > Access Control List

See https://docs.nopcommerce.com/en/running-your-store/customer-management/access-control-list.html

Admin area. Materials Operator

User can Operate the system and use existing Bill of materials to create Production Orders

Admin area. Materials Manager

User can Create / Configure Suppliers, Measures, Material Types and Bill of Materials

Admin area. Materials Supervisor

This access is used in association with Operate and Manager to provide supervisor access for managing overall functions

nopCommerce Standard Access Control

In addition, the standard nopCommerce ACL access can be used

Admin area. Manage Plugins can configure Plugins i.e. Shipping Manager Plugin

Admin area. Manage Widgets

can configure Widgets i.e. Enable BoM Selector to display on the Product

Warehouses

Defining Warehouses are optional when setting up a material. Warehouses can also be defined by Vendor in a multivendor system.

When an Admin Operator is logged in as an Administrator, they can see all Warehouses. Where multiple vendors are configured only the Warehouses defined for the Current Vendor are displayed.

Refer to https://docs.nopcommerce.com/en/getting-started/configure-shipping/advanced-configuration/warehouses.html

Search Name 😧		Q Search			
ame	State / province	County	City	Phone number	Edit
ternational Warehouse	London				🖌 Edit
sono Warehouse	Zuid-Holland				/ Edit

Measures Setup

System measures must be configured correctly including the units of weights and dimensions that relate to the dimensions of a material

Refer to https://docs.nopcommerce.com/en/getting-started/configure-shipping/advanced-configuration/measures.html

Export and Import

Import and Export elements i.e. groups and materials

Export

Click Export to export the current element to an excel file

Import

Click Import to select and import a configuration from an excel file in the correct format

To update existing material records the **Code** is used as the key to find and update the record

To update existing group records the **Manufacturer part number** is used as the key to find and update the record

Select the file to Import

nop Commer	ce	=		-			EN	Y Solect Systems	Logout	Public store 🛛 😂
		Materials		Import	from Excel	×	catalog as PDF	🛓 Export 🔹 🛃	Import	Delete (selected)
Dashboard		Q Search		Imported mat corresponding Import require	terials are distinguished b g material will be updated es a lot of memory resour	y Code. If the Code already exists, then its 1. ces. That's why it's not recommended to				^
Catalog		Search		import more t	than 500 - 1,000 records at	t once. If you have more records, it's better				
📜 Sales		Material name 🥝		to split them t	to multiple Excel files and	import separately.	All			~
		Material Type 🥝	All	Excel file	Choose file No fil	e chosen	Active only	t.		~
Promotions		Vendor 💡	All							Go
						Import from Excel				
				-						
				0	Open					
		Picture	Mate	erial name 🤟	> -> 🛧 🧾 > Sear	ch Results in Nop.Plugin.Apollo.MaterialsMana	igement >	Material quantity	Active	Edit
				_)rganize 🔻					
			1 1/2	" Pocket Sc	Quick access	ImportMaterials.xlsx Date modified: 7/05/2022 8:06 P	м	80.00000	~	🥒 Edit
🛗 Apollo System			100)		Materials Manager	Search again in:				
📋 Materials Management					Production System Extension N	🙀 Libraries 💻 This PC 🧧 Custom	File Contents			
			1 1/2	" Pocket Scient	atentin omena	00-200-E 0.00011	0.0111	80 (Parent)	~	/ Edit

The best way to use the import and export function is to manual setup test records with a similar configuration to that desired.

Then export the configuration and copy the records in the exported file to ensure the correct names are imported and no errors occur.

The plugin utilises elements of the nopCommerce system shipping configuration and then must be configured before the plugin is used to estimate and display shipping rates

Refer to https://docs.nopcommerce.com/en/getting-started/configure-shipping/shipping-settings.html

Vendors

nopCommerce allows products to be defined as being provided by a vendor. Vendors are setup in the system and then linked to Customers which are then configured as "vendor customers".

See https://docs.nopcommerce.com/en/running-your-store/vendor-management.html

Once a vendor is setup this then allows products to be created for a particular vendor or owner by the vendor, these products then become "vendor products"

Vendors can also be used to setup materials to be 'owned' by the vendor, these products then become "vendor materials"

Installing the Plugin

The zip package supplied can be uploaded and installed using the "Upload plugin or theme" button on the Configuration > plugins page.

Refer to Then the installation of the plugin follows the standard nopCommerce procedure. See <u>https://docs.nopcommerce.com/user-guide/configuring/system/plugins.html</u>

Alternatively, you can manually install the plugin:

- 1. Copy the Plugin to the correct directory
- 2. Restart the Application Click the Icon in the top

Once installed the you can configure the plugin.

Configure Settings

The settings for the plugin can be set using the configure page. To setup the plugin or define the options open the config page in the Menu then click the required function checkbox. After entering the settings click **Save**.

in Configuration	
Please restart the application once the co	onfiguration has been modified.
Configuration Data and Demonstration Mat	erials will be installed when a system (Materials) is enabled for All Stores. To display the Demonstration Materials in other stores
nanually adjust the Material and Category	Records. Ensure the End Date Attribute Display Order is Higher than Start Date in Material Attributes
Plugin Enabled 💡	
System Enabled 😮	
Hidden Material Attribute 💡	
Maximum Number of Items 💡	0
Attachment Files Directory Location 🚱	
Delete Tables on Uninstall 💡	
Delete Configuration Data on 🤪 Uninstall	
Public Key 😮	Not Required
Private Key 😮	Not Required

Multistore Configuration

The plugin supports multistore configurations. Select All Stores to setup the settings for All Stores or alternatively select the store and customise the settings for the particular store.

Enable Plugin

To Enable the Plugin click Enable

System Enabled

To enable the Material Management system. When the status is enabled then the default configuration for measures, materials and other elements are setup.

Hidden Material Attributes

Note: this setting is not used at present

Maximum Number of Items

Select the maximum number of items which are available in the system

Note: this setting is not used at present

Attachment Files Directory Location

Enter the message template default file attachment directory

• For example, the uploaded directory can be used i.e. ~/wwwroot/images/uploaded/

Note: this setting is not used at present

Delete Tables on Uninstall

This setting is used if the plugin needs to be uninstalled. To delete the tables and the configuration click the Checkbox

Delete Configuration on Uninstall

This setting is used if the plugin needs to be uninstalled and you will not be reinstalling and want to delete the system configuration

Test Mode

When test mode is enabled, the plugin will store Information messages in the system log to enable fault finding and debugging of any issues.

Purchased Licence Keys

When you first install the plugin Demonstration keys will be automatically generated. The plugin can be operated in demo mode for 14 days. The purchase licence keys will be provided via email normally within 1 day after purchase. The purchase licence keys can then be entered as follows:

Public Key

This is the plugin licence public key provided. When you first install the plugin a Demonstration key will be saved. Change this value to the Public key suppled in the email when received.

Private Key

This is the plugin licence public key provided. When you first install the plugin a Demonstration key will be saved. Change this value to the Private key suppled in the email when received.

Error Logging

Using the plugin requires the configuration is setup correctly or no Shipping Rates will be returned. If this is the case then you can check the error log for debug, information and error messages

Turn on Test Mode in Config

Test Mode 😢 🗹

Check the Error log – Search for Information Messages