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# YellowCube Magento 2 Extension

## Introduction

YellowCube is a service offered by Swiss Post that provides highly-automated warehouse for storage, picking and shipping of the physical goods.

This manual will support you with setting up YellowCube plugin on your Magento 2 store. Only YellowCube specific topics are covered in this document. In order to efficiently set up the website you should be familiar with Magento 2. If that is not the case we strongly suggest you study the Magento 2 documentation pages first.

This document is publicly developed on GitHub in the GitBook format. If you notice any mistakes or inconsistencies please consider proposing improvements by opening a pull request or opening an issue describing the problem.

If you need any support by the YellowCube team please contact us at yellowcube.ch or by phone +41 58 386 48 08.

# Installation

## Getting the plugin

Upon installing Magento 2, you'll proceed with YellowCube Magento 2 Extension installation. The extension can be installed through Composer or manually.

### Composer

Go to the root directory of your Magento 2 website and run the following commands:

```
composer require swisspost-yellowcube/magento2-yellowcube
bin/magento module:enable Swisspost_YellowCube
bin/magento setup:upgrade
```

It is worth mentioning that the YellowCube Magento 2 Extension currently isn't available from the Magento Marketplace. We are aware that this would simplify the installation process significantly and are currently working on getting it included. We will update this document as soon as this is achieved.

# Requirements

In order to use the YellowCube Magento 2 extension you will need to meet the following requirements:

1. **YellowCube account**: In order to use the YellowCube shipping services you will first need to obtain an account. To do that you'll need to get in touch with the Swiss Post by using the online contact form. Post's staff will lead you through the onboarding process and provide you with the account information. This will include, among other information, things like *Sender ID*, *Receiver*, *Depositor Number*, *Partner Number* and *Plant-ID*. You will need those when configuring the shop.
2. **Magento 2 site***:* You will obviously need a working Magento 2 installation. If you are not sure how to do that consider checking the relevant documentation sections or finding professional support. Magento 2, and YellowCube Magento 2 Extension are all open source software which means that there are many experts with the necessary expertise available.
3. **Server requirements**:
   - *Magento:* 2.3 or newer.
   - *PHP version*: YellowCube Magento 2 Extension will work with any supported version of PHP 7.1+.
   - *PHP extensions*:
     - *SOAP* : YellowCube uses SOAP to communicate with individual stores. YellowCube Magento 2 Extension requires PHP SOAP extension to be installed on the server for that reason. If you are unsure if that is the case you should check with your hosting provider.
     - *DOM*
     - *Multibyte String*
   - *MySQL database*: MySQL version 5.6 or greater OR MariaDB version 10.0 or greater is required.
4. **HTTPS support**: eCommerce websites usually deal with potentially sensitive information. In order to protect those we **strongly** suggest using HTTPS encryption. If you are not sure where to get the certificates we suggest you to check Let's encrypt, the free, automated and open certificate authority.
5. **YellowCube PHP SDK**: YellowCube Magento 2 Extension depends on the official PHP SDK. If you will install the plugin using the suggested method you don't need to do anything as it is already bundled in the official package.
6. **Store locale**: **Keep in mind that the store locale must be set to one of the following locale codes supported by YellowCube:
   - `DE`
   - `FR`
   - `IT`
   - `EN-GB`

For the general requirements please follow Magento 2 system requirements.

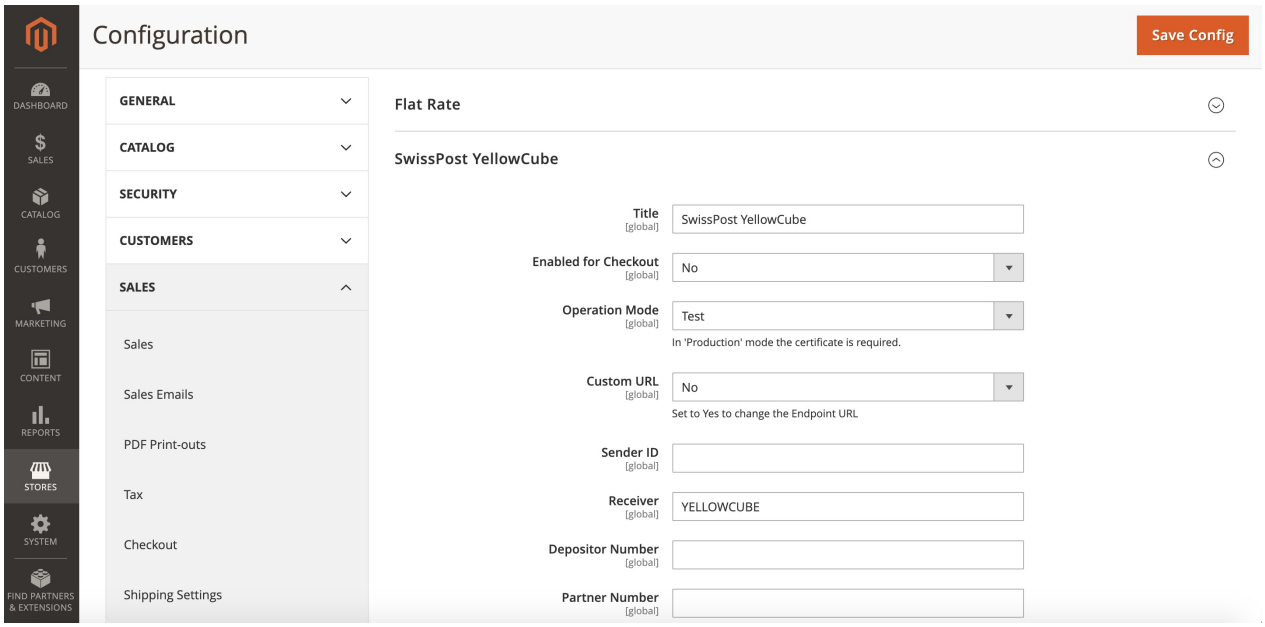
# License

This extension is licensed under OSL v.3.0. Some classes and JavaScript files are published under MIT license.

# Configuration

## Basic configuration

You will find the YellowCube configuration section under: **Stores** > **Configuration** > **Sales** > **Shipping Methods**.




The fields below **SwissPost YellowCube** need to be setup.

### Fields obtained from the YellowCube:

- *Sender ID*: The shop ID.
- *Receiver*: The receiver value. The default value is set to `YELLOWCUBE`.
- *Depositor Number*: This number will be assigned to you by Swiss Post.
- *Partner Number*: The unique number in the YellowCube system.
- *Plant-ID*: The storage location.

### Connection details:

- *Title*: The title of the plugin.
- *Enabled for Checkout*: Whether the extension is enabled in the checkout process or not.
- *Operating mode*: Choose between Testing, Production, or Development.
  - In Testing mode orders are processed virtually. Documents, labels etc. are printed out and scanned. This mode is for testing purposes.
  - Production mode needs to be set when the website is live and working.
  - Development mode is only intended to be used by developers. YellowCube users should never use this mode.
- *Custom URL*: Whether to enable the custom endpoint URL.
  - *URL to the Endpoint*: The YellowCube SOAP custom EntryPoint for the selected operating mode.
- *Certificate Path and Filename*: If the certificate authentication is used, provide path to the certificate file on the server in this field (relative to the folder of the Magento 2 YellowCube extension). For security reasons, the certificate must be placed outside of the public root directory.
- *Certificate Password*: The password to the certificate if this authentication method is used. For security reasons, it is recommended to protect your certificate with a password.
- *Debug*: This setting will enable logging and it is relevant for development purposes.

### Shipping information:

- *Shipping Method*: The list of available shipping methods. You can choose one or multiple supported YellowCube shipping methods and define price for each of these shipping methods.
- *Tara Factor*: *Gross Weight* is required for YellowCube. This can be calculated with Tara Factor: *Gross Weight = Net Weight x Tara Factor.*
- *Ship to Applicable Countries*: The list of allowed countries for shipping purposes.
- *Ship to Specific Countries*: Use this list to select the allowed countries for shipping.

Note that you need to provide the IP address of your Magento 2 Shop to YellowCube for giving your shop access to YellowCube. This can also affect the configuration for any staging/development environments. Consult your dedicated service provider for more informations about that.

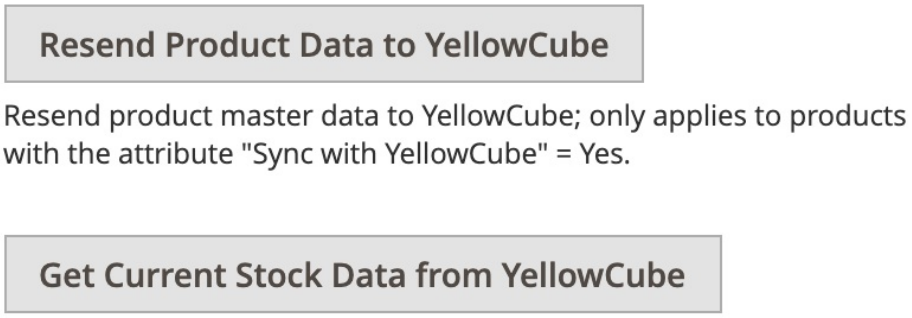
Every time you save the settings form all states and caches are cleared. Background processes will re-run with the next trigger. This reduces issues when switching between Testing / Production and different accounts. However product registration states remain stale.

*Limitation*: Do NOT connect multiple shop instances to the same YellowCube account as WAR request (hourly cron containing confirming shippings with track & trace) can not be shared.

## Synchronisation

On the configuration form, you are able to use the following synchronisation options:

- *Resend Product Data to YellowCube*: Each product in your Magento 2 shop can be enabled for the synchronisation with YellowCube. Clicking this button will send all the relevant information to YellowCube about your products.
- *Get Current Stock Data from YellowCube*: This button will update the stock data for each YellowCube product in your catalog




## Custom Shipping Methods

The list of known shipping methods can be extend in `app/etc/config.php`. For example:

```
    'system' => [
        'default' => [
            'carriers' => [
                'yellowcube' => [
                    'methods' => [
                        'eco' => [
                            'label' => 'PostPac Economy CHANGED',
                            'code' => 'ECO',
                        ],
                        'extra' => [
                            'label' => 'Extra new option',
                            'code' => 'ECO EXTRA',
                            'real_code' => 'ECO',
                            'additional' => 'EXTRA',
                        ],
                    ],
                ],
            ],
        ],
    ],
```

Before making configuration changes make sure to export the whole configuration and then adjust it. See Export the configuration for more details.

# Stock management

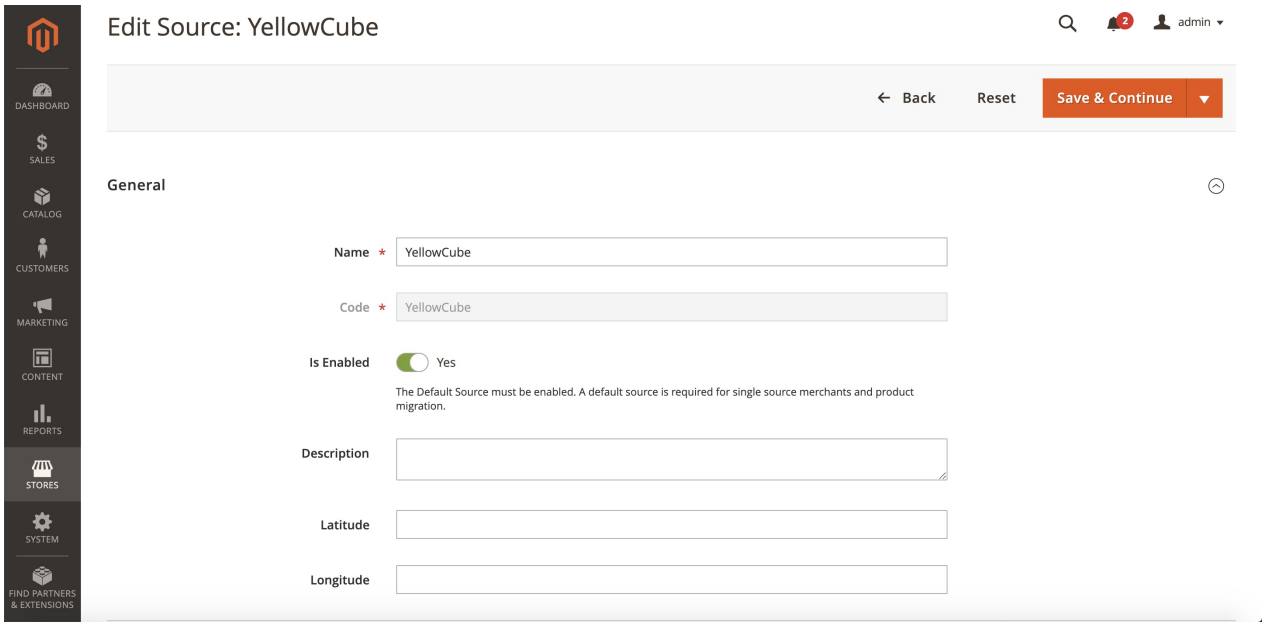
Magento 2 allows you to manage inventory regardless of the warehouse location. There are two steps to have Stock management in place.

## Sources

Sources describe the physical locations where products are managed. Go to **Store** > **Inventory** > **Sources** to open the Sources configuration page.

Upon enabling the extension, the Sources list should already contain YellowCube source.

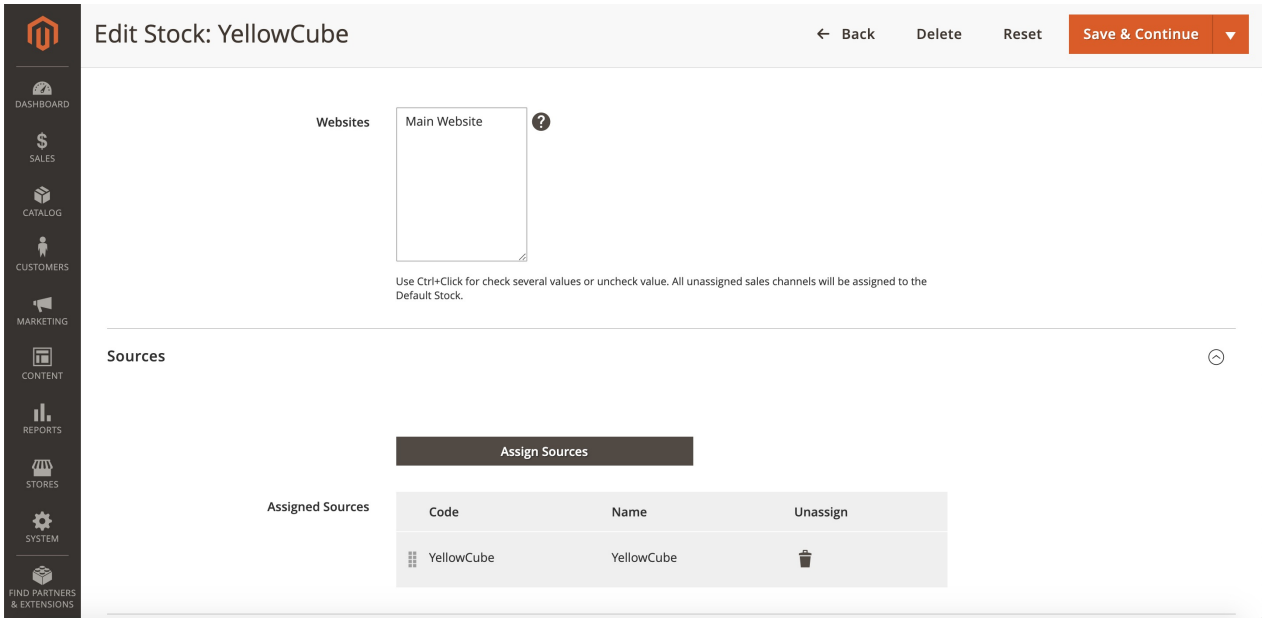
The YellowCube source must be enabled.




## Stocks

Stocks is a virtual inventory of your products available for sale through your sales channels.

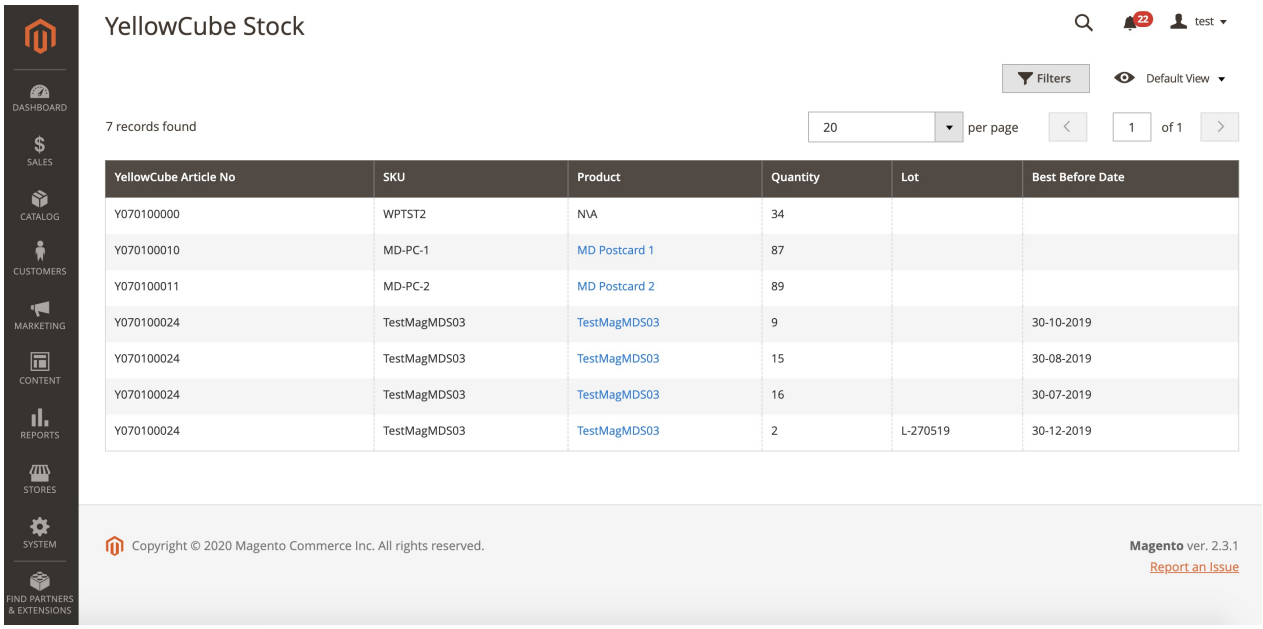
Similarly to sources, the YellowCube Magento 2 extension creates and configures YellowCube stock entity. Keep in mind that YellowCube stock must have a valid YellowCube source assigned.




# Reports

YellowCube Magento 2 Extension creates a stock report about available product quantities.

Access the page by navigating to **Reports > Products > YellowCube Stock**.




The table displays a list of YellowCube articles with the following columns:

- *YellowCube Article No*: The remote YellowCube identifier.
- *SKU*: The local SKU.
- *Product*: The referenced product in the Magento 2 shop.
- *Quantity*: The available quantity in the YellowCube stock.
- In case the lot management is enabled for a product the following columns have values:
  - *Lot*: The YellowCube lot identifier.
  - *Best Before Date*: The expiration date.

Use each of the table columns above as filter option.

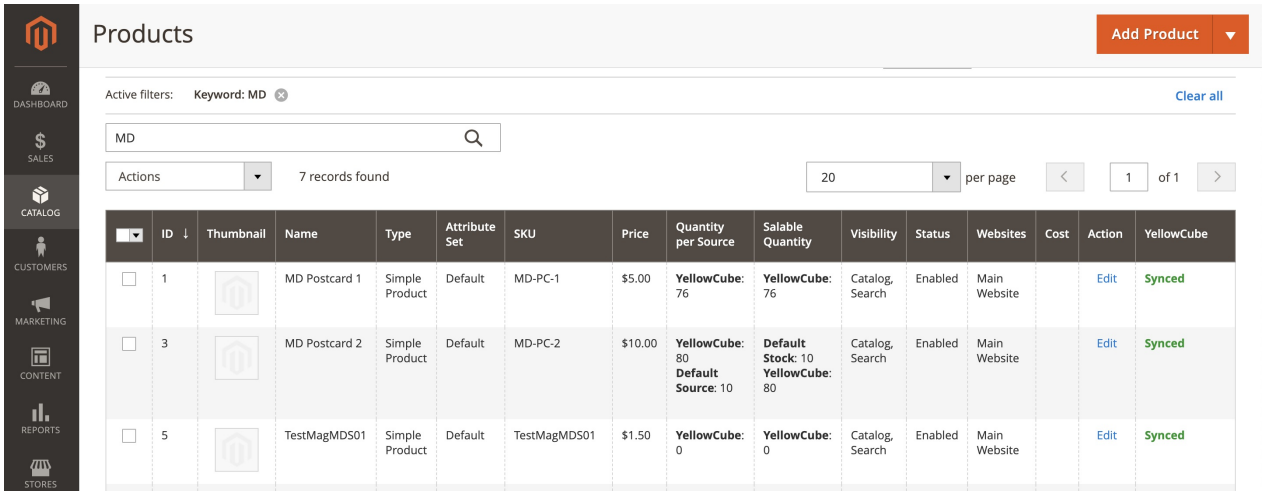
The Stock inventory data synchronises with YellowCube on a daily basis. See Background updates for more details.

# Products

A product that is managed by YellowCube needs to be registered first.

# Product list

The registration status of each products can be seen on the product listing page (**Catalog > Products**):




The possible values in the YellowCube column are:

- *Not connected*: Product is not connected to YellowCube.
- *Synced*: YellowCube confirmed that it received and processed the product information. Everything seems to be OK.
- *Error*: YellowCube was unable to process the product information. Check the log next to the label to learn more.

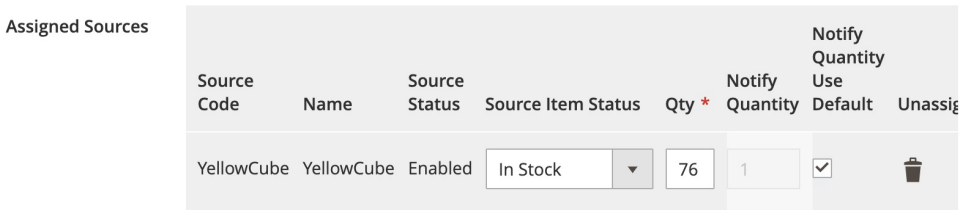
*Quantity per Source* describes the total number of items in the YellowCube stock source.

*Salable Quantity* provides the number of items items in the stock that can be used for new orders. `Salable Quantity = YellowCube stock - Pending orders`.

# Edit product details

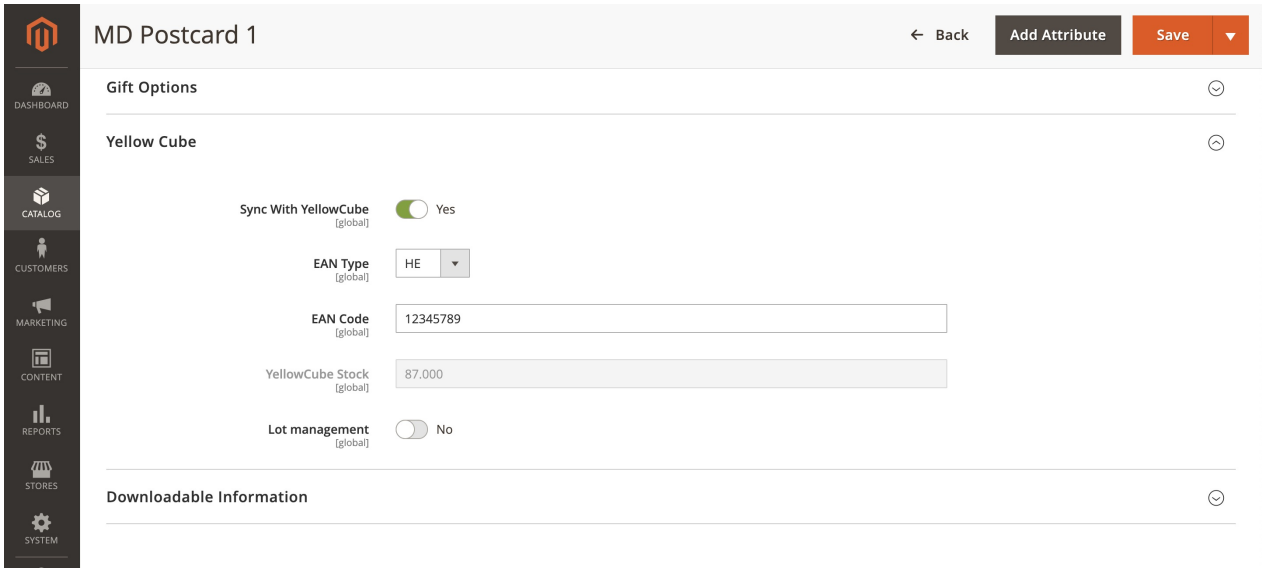
In order to register a product at YellowCube successfully it needs to meet the following requirements:

- *SKU*: required field, used as primary product identifier. Changes are not supported after registration at YellowCube.
- *Weight*: in kilograms (kg).
- *Dimensions (length, width, height)*: in cm, not strictly required. However, it is recommended to provide this information.
- *Assigned sources*: required to add YellowCube source for products managed with YellowCube.




Detailed information about YellowCube communication about the product is available at the bottom of the product edit page.

In order enable product synchronisation with YellowCube you need to enable *Sync with YellowCube*. Click *Save* to confirm the product changes.




# Advanced: Using EAN

YellowCube supports *EAN* (European Article Numbers) values with the following options:

- EAN Type
- EAN Code

EAN code typically contains 8 or 13 characters. YellowCube will use them to better identify labelled products.

# Advanced: Lot management

In order to deal with expiring products, you can enable lot management by choosing *Lot management* and submitting a product update.

You can't deactivate lot management once it has been enabled. Even after disconnecting the product, it needs manual delete at YellowCube to re-add it without lot management again. Before enabling lot management you need to consider all implications of such action. If you are unsure about that please contact Swiss Post support for more information.

# Disconnect from YellowCube

A product can be disconnected from YellowCube by disabling the *Sync with YellowCube* option. The option is visible under Yellow Cube tab at the bottom of the product edit page.

Disconnected products will not be sent to YellowCube as order items if they are part of an order.

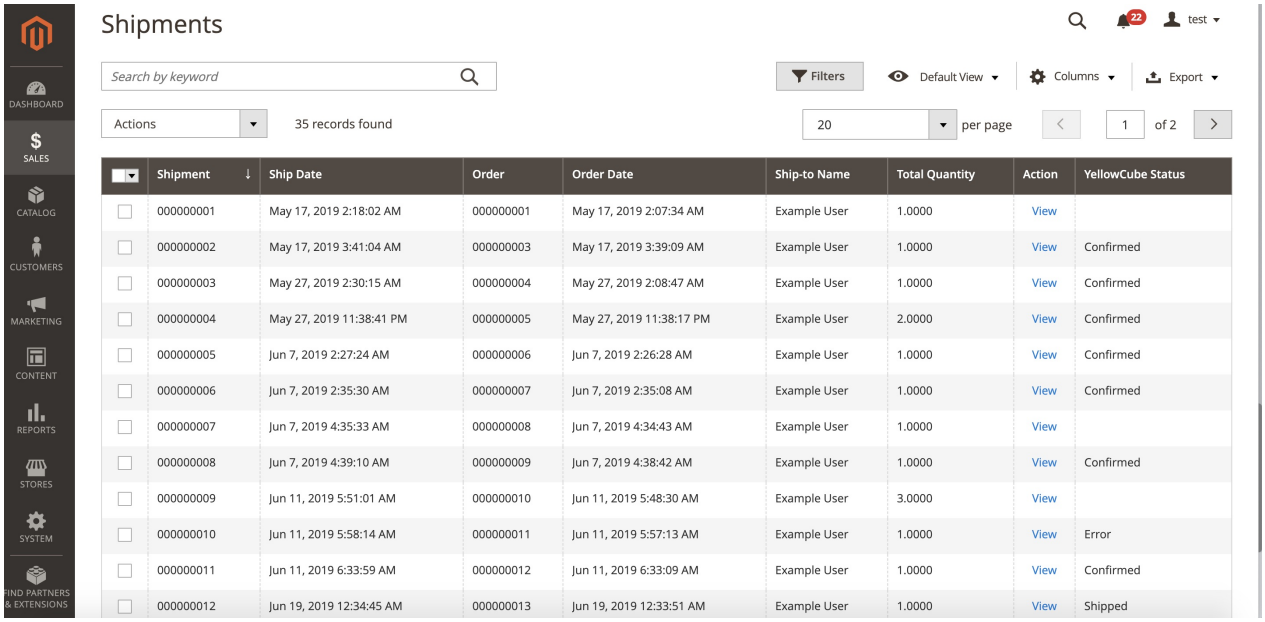
If you later reconnect the product again, it will match the previously created product at YellowCube again based on the SKU.

# Shipments

The Shipments overview provides a central place to manage your shipments processed by YellowCube.

When relevant orders are created they will be sent to YellowCube as soon as orders reach the *Processing* status.

Go to **Sales > Shipments** to access the Shipments overview page.




| Shipment | Ship Date | Order | Order Date | Ship-to Name | Total Quantity | Action | YellowCube Status |
|---|---|---|---|---|---|---|---|
| 000000001 | May 17, 2019 2:18:02 AM | 000000001 | May 17, 2019 2:07:34 AM | Example User | 1.0000 | View | |
| 000000002 | May 17, 2019 3:41:04 AM | 000000003 | May 17, 2019 3:39:09 AM | Example User | 1.0000 | View | Confirmed |
| 000000003 | May 27, 2019 2:30:15 AM | 000000004 | May 27, 2019 2:08:47 AM | Example User | 1.0000 | View | Confirmed |
| 000000004 | May 27, 2019 11:38:41 PM | 000000005 | May 27, 2019 11:38:17 PM | Example User | 2.0000 | View | Confirmed |
| 000000005 | Jun 7, 2019 2:27:24 AM | 000000006 | Jun 7, 2019 2:26:28 AM | Example User | 1.0000 | View | Confirmed |
| 000000006 | Jun 7, 2019 2:35:30 AM | 000000007 | Jun 7, 2019 2:35:08 AM | Example User | 1.0000 | View | Confirmed |
| 000000007 | Jun 7, 2019 4:35:33 AM | 000000008 | Jun 7, 2019 4:34:43 AM | Example User | 1.0000 | View | |
| 000000008 | Jun 7, 2019 4:39:10 AM | 000000009 | Jun 7, 2019 4:38:42 AM | Example User | 1.0000 | View | Confirmed |
| 000000009 | Jun 11, 2019 5:51:01 AM | 000000010 | Jun 11, 2019 5:48:30 AM | Example User | 3.0000 | View | |
| 000000010 | Jun 11, 2019 5:58:14 AM | 000000011 | Jun 11, 2019 5:57:13 AM | Example User | 1.0000 | View | Error |
| 000000011 | Jun 11, 2019 6:33:59 AM | 000000012 | Jun 11, 2019 6:33:09 AM | Example User | 1.0000 | View | Confirmed |
| 000000012 | Jun 19, 2019 12:34:45 AM | 000000013 | Jun 19, 2019 12:33:51 AM | Example User | 1.0000 | View | Shipped |

The possible values in the YellowCube column are:

- *(Empty)*: Order has not been sent to YellowCube at all. This could mean that this specific order shouldn't be processed by YellowCube or that there are still conditions to be met to do so (usually awaiting payment).
- *Submitted*: Order has been sent to YellowCube but it hasn't been processed on their side yet.
- *Confirmed*: Order was dispatched from the YellowCube facility and the product is on its way to the customer. Tracking code is provided in the logs if applicable.
- *Error*: A problem occurred wile trying to process the order on the YellowCube side. Check the logs on the shipment page for more information.

# Shipment details

Detailed information about YellowCube communication about each shipment is available at the bottom of the order details page (**Sales > Orders > View Order > Shipment > View Shipment**). The same information can be accessed from the Shipments overview page (**Sales > Shipments > View Shipment**).

The status of the shipping is displayed on the right side under Shipping and Tracking Information tab just next to Payment Information.

Log of all the communication about the shipment can be seen at the bottom of the page. If there were any problems you will be able to see the error messages here.

# Stock reservation on submission

Any order submission will reserve its articles and deduct each products stock counter immediately. As a result, the *Salable Quantity* count is lower than the YellowCube stock count.

# Proper order cancellation

An order can stay stuck in status *Pending Payment* if a customer cancels on the payment page. Customers choosing manual payment methods in status *On hold* might change their mind about the order.

In order to free the reserved stock on cancellation, the store administrator has to put the order to status *Canceled*.

Permanently deleting an order with reserved stock via trash will not restore the stock counter.

# Stop product delivery

Once an order is submitted to YellowCube, you can not stop its delivery in YellowCube Magento 2 Extension.

A store administrator can try to stop delivery by calling YellowCube Support as long as the delivery was no yet started.

Additionally, the store administrator will need to manually set the status to *Canceled* to free its stock again.

# Returns

Please note that the YellowCube Magento 2 Extension currently doesn't handle order returns automatically. If a return happens the affected order will remain unchanged, the payment refund and any other relevant steps need to be made manually by the store administrator. The stock increase will be visible in the stock table the next day after the return.

# Troubleshoot submission errors

If the order triggers a submission error, make sure first that all products are properly registered at YellowCube by resubmitting them with the button *Save* (product). Then try submitting the order again.

If a product has never been sent to YellowCube before, it is skipped on order submission and expected to be manually processed. In order to submit such a product to YellowCube, you need to create a new order after product registration.

# Update

Please follow this guideline to update your YellowCube Magento 2 Extension in an existing installation.

## Composer

If you have already installed your plugin through Composer the easiest way to update is to run the following commands:

```
composer update swisspost-yellowcube/magento2-yellowcube
bin/magento setup:upgrade
```

## Always test after updates

Make sure to test the connection after any update.

We recommend you to go to the YellowCube configuration page and hit *Save config*.

Additionally, we highly recommend you to check updating a product and place an order to make sure everything works as expected.

If there is an unexpected error message, first double check the certificate path and filename matches the configuration.

# Background updates

YellowCube Magento 2 Extension requires configured cron in order to provide background updates for your products, orders, and shipments. Please follow the Configure and run cron in order to make sure you have correct cron configuration.

The extension provides the following cron configuration:

- Updates order status information **every 15 minutes**.
- Synchronises stock inventory data with YellowCube **every day at 5 AM**.
- Checks for YellowCube shipment status updates **every 5 minutes**.
- Synchronises the status of the YellowCube products **every 5 minutes**.