ExtensionsForce

Logistic Units Management System
for Microsoft Dynamics 365 Business Central

User Manual

Logistic Units Management System

Table of Content

Logistic Units Management System

Sales

Logistics unit is an item of any composition created for transportation and / or storage, which must be managed through the supply chain. Logistic unit can be a single box containing a limited number of products, a pallet with multiple products, or an intermodal container containing several pallets.

A logistic unit can be created in main documents of the Microsoft Dynamics 365 Business Central. Creating a logistic unit is grouping goods into a unit of a certain type.

New Logistic Unit

Release Sales Document and Run New Logistic Unit Wizard
Sales Order >Logistic Units > **New Logistic Units**

Logistic Units Management System

Expand Wizard Page to see more fields

General			Show more
Customer Name	Adatum Corporation		
Contact	Robert Townes		
Posting Date	10/04/2023		
VAT Date	10/04/2023		

Details   **Attachments (0)**

Logistic Units ⌄

Unit No.   Logistics   Posted

(There is nothing to show in this view)

New Logistic Units Wizard

Welcome

Welcome to Create Logistic Units Wizard.

A logistic unit combines individual items or items in shipping containers (palletes, boxes) into single "units" that can be transported together.

The Wizard will create logistic units manualy or by the build rules.

Next   **Finish**

Lines | Manage | Line | Order | Fewer options

Type		No.	Item Reference No.	De...
→ Item	:	1896-S	AT	

Subtotal Excl. VAT (GBP)
Inv. Discount Amount Ex... 0.00   Total VAT (GBP)   12,968.00

Sell-to Customer Sales History

Customer No.   10000

0	0	22
Ongoing Sales Quotes	Ongoing Sales Blanket Orders	Ongoing Sales Orders
2	0	0
Ongoing Sales Invoices	Ongoing Sales Return Orders	Ongoing Sales Credit Memos
45	40	0

On second page of the Wizard, you can select lines of source document and quantities that will be included in a new logistic unit.

If any line is to be skipped, set "Selected Quantity" to zero.

New Logistic Units Wizard

Next Steps

1. Use the "Auto Build" feature to automatically create logistic units using build rules.
2. Complete the "Selected Quantity" field for the lines to be included in the new logistics unit and click Next button.

Document Lines | Manage

Item No.		Description	Quantity	Selected Quantity	Distributed Quantity	Document Source ID ↑	Document Source Information	Lot No.	Package No.	Unit of Measure Code	No. of Build Rules
→ 1896-S	:	ATHENS Desk	100.00	50.00	0.00	101031	Adatum Corporati...			PCS	0

Auto Build Logistic Units   **Back**   **Next**   **Finish**

Logistic Units Management System

On the third page of the Wizard, you should select a type of the logistics unit, which determines the type of packaging and parameters such as size and some additional conditions.

If control by weight or volume toggles are activated for a selected logistic unit type, then when choosing a type, the system will warn you about possible excess.

Select: **EUR Pallet** and click **Create**

New Logistic Units Wizard

Weight (kg)	*1,989.5 exceeds the weight limit of "Pallet EU" , which is 1,500*
Volume (m³)	60

Select Logistic Unit Type

Unit Type	PAL.EUR
Description	Pallet EU
Weight Limit (kg)	1,500.00
Volume Limit (m³)	

Limit control warning!

Logistic Unit Types | ⊙ ∨   + New   ···

Code ↑	Description	Limit Filling Volume Control	Limit Filling Weight Control
P40X40	Pallet 40 x 40	☐	☑
P40X42	Pallet 40 x 42	☐	☑
P40X48	Pallet 40 x 48 Falserth American Standard (GMA)	☐	☑
P42X42	Pallet 42 x 42	☐	☑
P43X43	Pallet 43.30 x 43.30	☐	☑
P44X44	Pallet 44 x 44	☐	☑
P45X45	Pallet 45.9 x 45.9	☐	☑
P48X20	Pallet 48 x 20	☐	☑
P48X36	Pallet 48 x 36	☐	☑
P48X40	Pallet 48 x 40	☐	☑
P48X45	Pallet 48 x 45	☐	☑
P48X48	Pallet 48 x 48	☐	☑
→ PAL.EUR ⦙	Pallet EU	☐	☑
PAL.EUR.H	EU Pallet (Half the size of a EUR pallet)	☐	☑
PAL.EUR.R	EU Pallet (Width and length rotated)	☐	☑
PAL.SDT	Pallet Standard	☐	☑

Create   Finish

OK   Cancel

Logistic Units Management System

System will show the number of the logistic unit.

New Logistic Units Wizard   ⤢ ✕

✓

Done!
Units has been created. Click Finish to close wizard.

Created Logistic Unit ·   0001500   …

Press **Assist Button** to view the created logistic unit card.

New Logistic Units Wizard   **Edit - Logistic Unit - 0001500**   ⤢ ✕   ⤢ ✕

✓

Done!
Units has been created. Click Finish to clos

Created Logistic Unit · · · · · · · · · · · · · · ·

Manage   Home   Print   History   Page

General   Show more

No. · · · · · · · · · · · [0001500]   SSCC · · · · · · · · · · · [▾] …

Description · · · · · · · Pallet EU   LU Location Code · · · · · · OPEN

Type Code · · · · · · · · PAL.EUR   ▾

Lines   Manage   Line   Fewer options   ↗ ⤢

	Type		No.	Description	Quantity	Unit of Measure Code	Expected Quantity	Inventory Quantity	Gross Weight (kg)
→	Item	⋮	1896-S	ATHENS Desk	50.00	PCS	-50.00	0.00	1,989.5

◄   ►

Logistics ›   MAIN

Documents   Manage   ↗ ⤢

	Source Name		Source ID ↑	Lot No. ↑	Weight (Base)	Volume (Base)
→	Sales Order	⋮	101031		1,989.5	60

Close   Create New   Finish

Logistic Units Management System

Once Wizard is closed, the system will update Logistic Units Fact box to view all logistic units that assigned to a document.

Once an item is linked to a logistic unit, posting can be done **only** by the logistic unit.

An attempt to post without selecting a logistic unit will return an error.

Logistic Units Management System

Post

To Post order you need to select Home > Post > **Post by Logistic Unit** in main menu.

On the opened page, choose one or more logistic units and click "**OK**".

Logistic Units Management System

Choose the posting type and press **OK**.

Logistic Units Management System

The following changes will be made in the logistic unit after posting

LU Location Code - availability for the next logistics processes

History of posted by the logistic unit documents. This section contains full information about supply chain by logistic unit.

Remaining Qty. by Logistic unit

Logistic Units Management System

Add Sales order into existing Logistic Unit

For sales and purchase orders there is a feature to add items to a logistic unit that already contains items from other orders.

Order 1 + Order 2 + Order 3
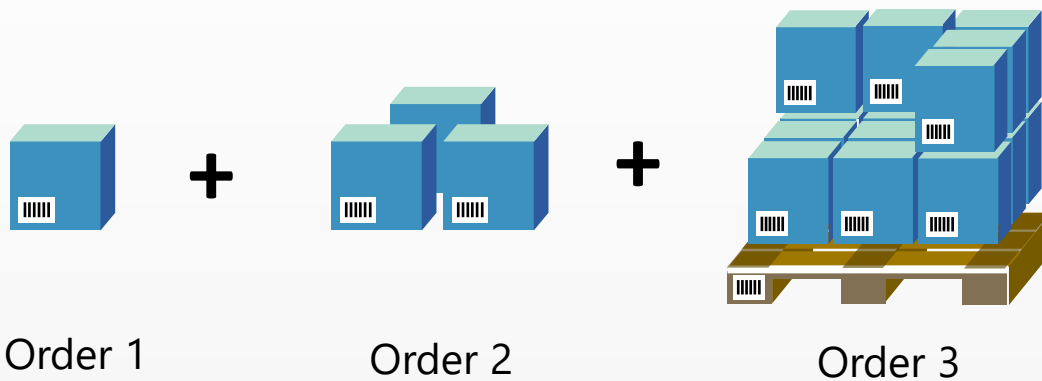
To add items of the sales order **Release** document and press **Logistic Units** > **Add to Logistic Unit** in main menu

Logistic Units Management System

In Wizard on second step select a logistic unit.

Logistic Units Management System

On the third step, you can select lines and quantities for this logistic unit. Press **Add** button to finish the process.

Add To Logistic Unit Wizard

Document Lines | Manage

	Document Source ID ↑		Document Source Information	Item No.	Description	Lot No.	Package No.	Quantity	Unit of Measure Code	Distributed Quantity	Selected Quantity
→	101032	⋮	Trey Research	1929-W	Conference Bundle 1-8			20.00	PCS	0.00	20.00

Back | **Add** | Finish

Sales Order

101032 · Trey Research

Home | Prepare | Print/Send | Request Approval | Order | Logistic Units | Actions ⌄ | Related ⌄ | Automate ⌄ | Fewer options

General   Show more

Customer Name	Trey Research ···	
Contact	Helen Ray ···	
Posting Date	10/04/2023	
VAT Date	10/04/2023	

Order Date	10/04/2023	
Due Date	24/04/2023	
Requested Delivery Date		
External Document No.		
Status	**Released**	

Details | Attachments (0)

Logistic Units ⌄

Unit No.		Logistics	Posted
MSKU261955	⋮	Outbound	☐

Sell-to Customer Sales History

Customer No.   20000

Lines | Manage | Line | Order | Fewer options

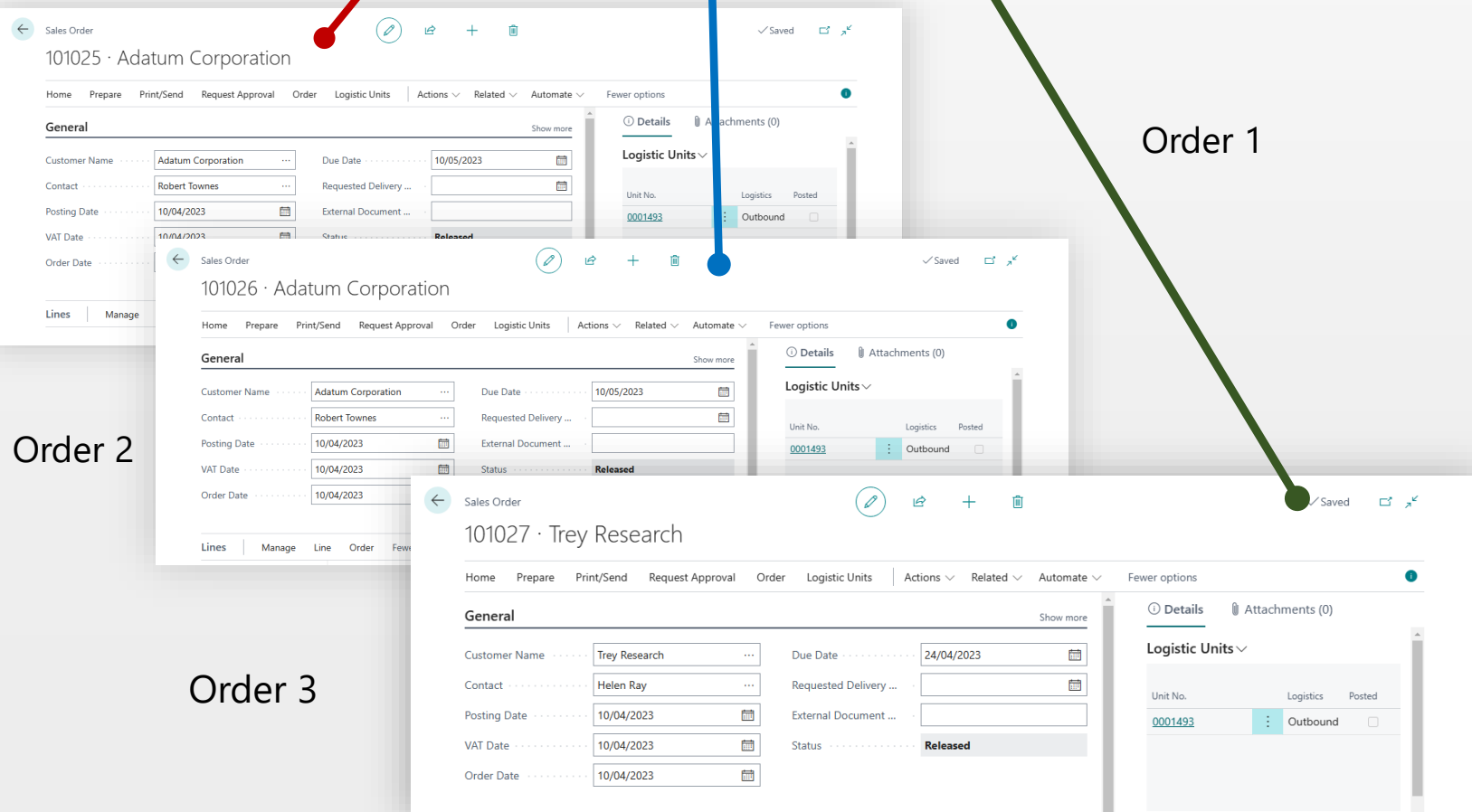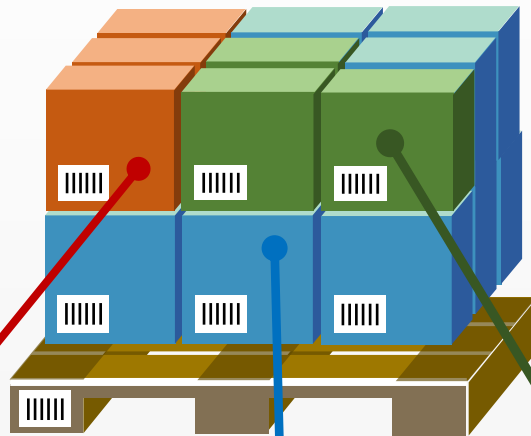|	Type	No.	Item Reference No.	Description	Location Code	Quantity	Qty. to Assemble to Order	Reserve
→	Item	⋮ 1929-W		Conference Bundle 1-8	MAIN	20		

1	0	2

Logistic Units Management System

Post all orders by a Logistics Unit

The Logistic Units Management System makes it easy to post documents that contain items in this unit.
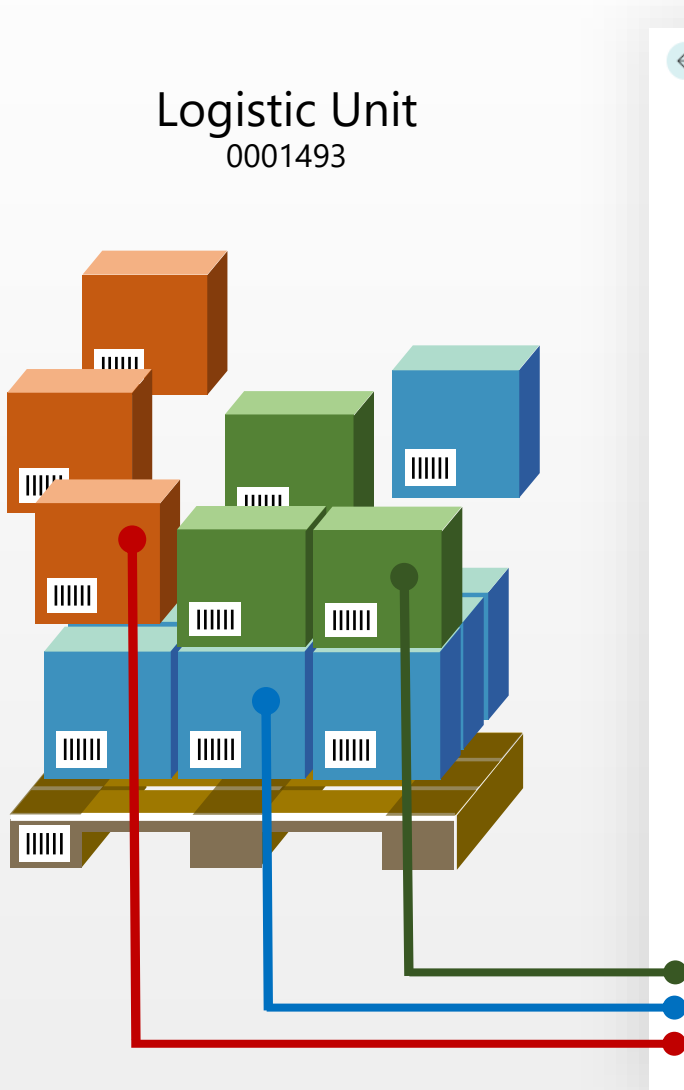

Order 1

Order 2

Order 3

Logistic Units Management System

To post linked shipment documents open Logistic Unit Card and press **Post Documents** > **Post Sales Documents By Logistic Unit.**

System will post all orders included in Logistic Unit.
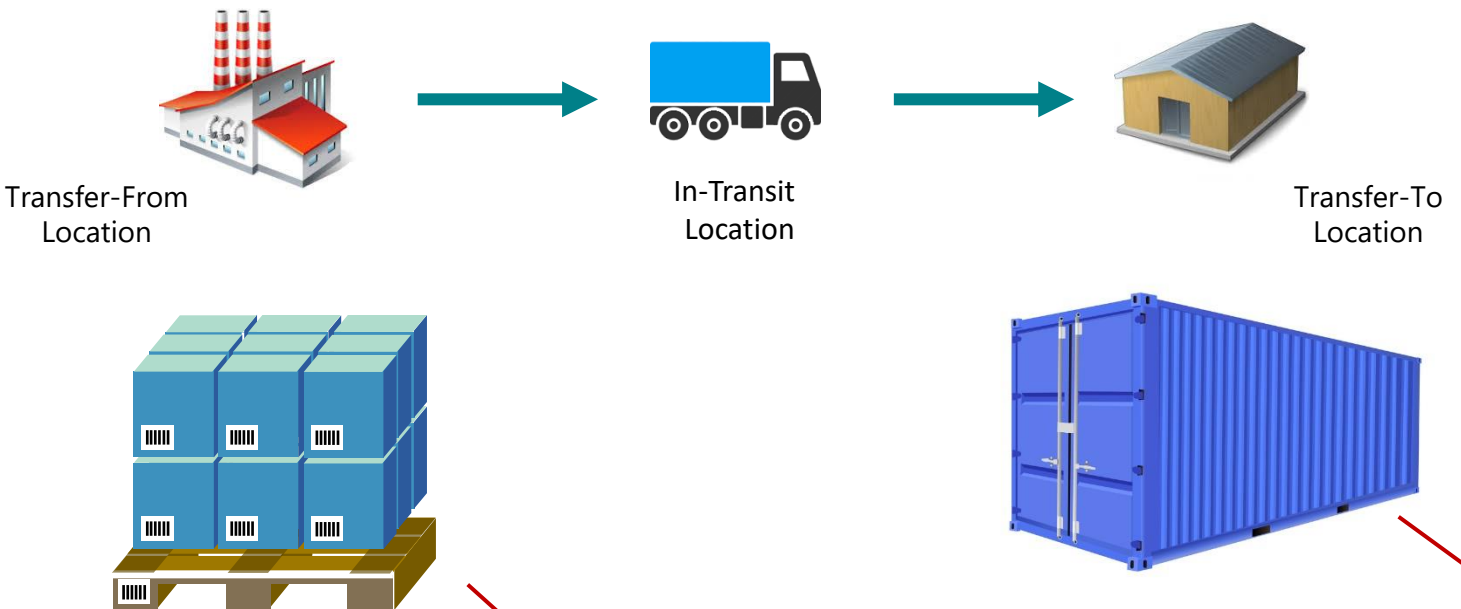

Logistic Unit
0001493

*It's a great tool for managing containers for purchase orders.

Logistic Units Management System

Transfer Orders

Process of managing logistic units in transfer order looks like the same process on sales and purchase orders. Besides, there is option to split shipment process and receipt process. The system allows you to specify different types of logistic unit for shipment and receipt.

Transfer-From
Location

In-Transit
Location

Transfer-To
Location

Transfer Order
1034

✓ Saved

Home   Prepare   Print/Send   Order   Logistic Units   Related ∨   Reports ∨   Automate ∨   Fewer options

🗐 New Logistic Unit | ∨   🗋 Include   ∨   ⅀ Logistic Units   🖶 Print

General

Show more

Transfer-from Code	MAIN	In-Transit Code	OUT. LOG.
Transfer-to Code	NORTH	Posting Date	10/04/2023
Direct Transfer	(toggle off)	Status	Released

Lines

Manage   Functions   Line   Fewer options

Item No.	Description	Quantity	Reserved Quantity Inbnd.	Reserved Quantity Shipped	Reserved Quantity Outbnd.	Unit of Meas
→ 1896-S	ATHENS Desk	100	_	_	_	PCS

Details | Attachments (0)

Logistic Units ∨

Unit No.	Logistics	Posted
0001495	Outbound	☐
0001496	Outbound	☐
0001497	Outbound	☐
0001498	Outbound	☐
MSKU261955	Inbound	☐

Logistic Units Management System

Settings

To run the initial Logistic Unit Management System setup, go to **Assisted Setup** page and find Logistic Units line.

Logistic Units Management System

In opened **Assisted Setup** page click **Next** to specify base units of measure. Base Units of Measure define the system of units that will be used to calculate weight, volume, and other parameters. You can use imperial or metric system units, but it must match the system in which you set the weight or volume in Business Central.

Assisted Setup

Welcome to Logistics Units System

Logistics Units Module provides a powerful tool to manage the supply chain and ensure that your goods are transported and stored safely and efficiently. The module makes it easy to track and manage single boxes, pallets, and intermodal containers containing multiple products. With this comprehensive solution, you can ensure the seamless and cost-effective tra...

Assisted Setup

Select Base Units of Measure

The values of the other units of measure will be converted into the base unit of measure.

Base Weight Unit of Measure · · · ·	KG ⌄
Base Volume Unit of Measure · · · ·	M3 ⌄
Base Linear Unit of Measure · · · ·	M ⌄
Base Distance Unit of Measure · · ·	KM ⌄

Back | Next | Finish

Logistic Units Management System

Click **Next** to define number for labels of the logistic units.

The SSCC is used to identify an individual logistic unit. A logistic unit can be any combination of units put together for transportation and/or storage where the specific unit load needs to be managed throughout the supply chain.

SSCC consists of two elements:

- **Global Company Prefix** - A globally unique number assigned to a GS1 member company
- **Serial Reference** - The number allocated to identify a logistic unit. This number will be generated by number series of the Business Central

Assisted Setup

SSCC

The Serial Shipping Container Code can be used by companies to identify a logistic unit, which can be any combination of trade items packaged together for storage and/or transport purposes; for example a case, pallet or parcel.

The Global Company Prefix (GCP) is a unique, globally recognized identification number assigned to each company by GS1. It is used to identify and track products, services, and locations through the GS1 System of Standards.

Global Company Prefix · · · · · · · · | 931234567

The serial reference component of the SSCC provides virtually unlimited number capacity, simplifying number allocation and guaranteeing unique identification.

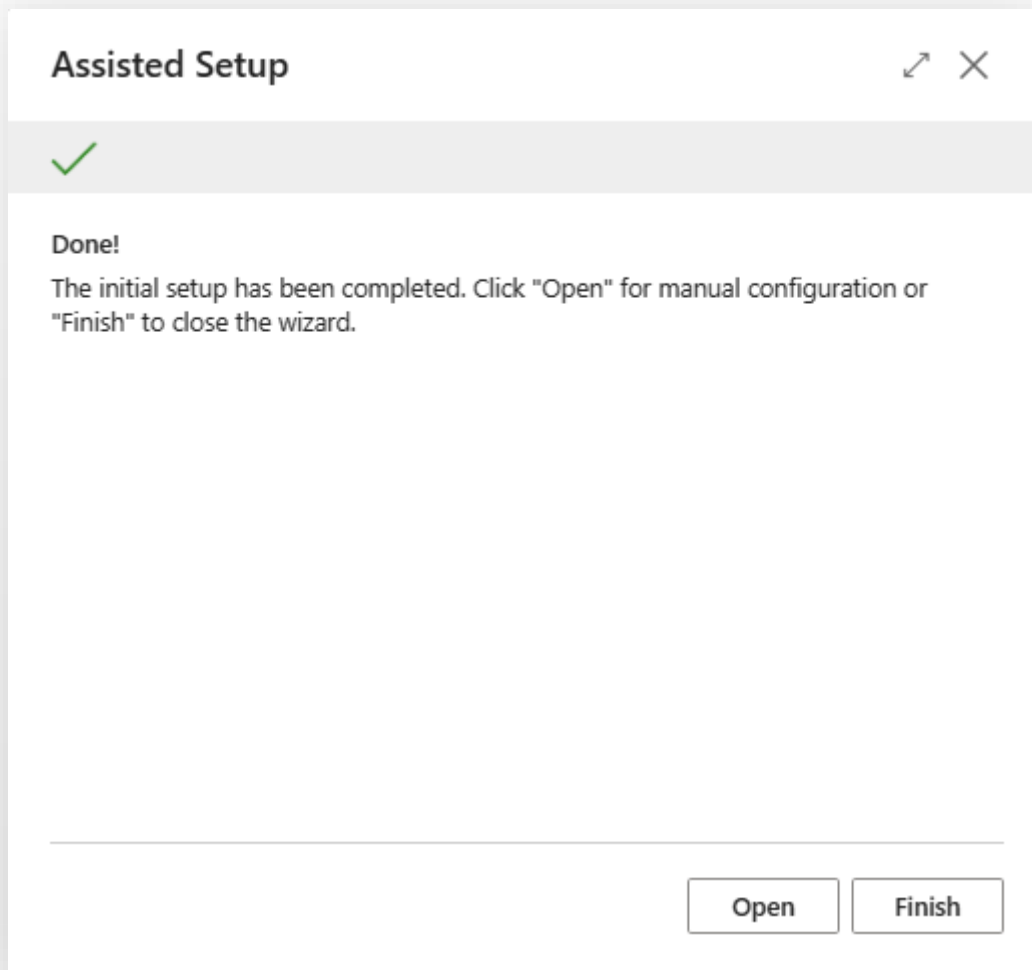SSCC Nos. · · · · · · · · · · · · · · · · | SSCC

Back | Next | Finish

Logistic Units Management System

Click **Next** to finish the process.

The initial configuration of the module is completed. You can get started or click **Open** and configure advanced settings.

Assisted Setup

✓

Done!

The initial setup has been completed. Click "Open" for manual configuration or "Finish" to close the wizard.

Open   Finish

Logistic Units Management System

Manual Setup

Action Setup – List of activities that can be logged for a logistic unit automatically or via worksheets.

Logistic Unit Type – define the parameters and settings of the main used types of logistics units in the company. These can be containers, pallets or boxes.

SSCC Default Identifiers – list of values that will be print on SSCC label by default.

Unit Locations – Logistic Unit locations that specifies availability of the logistic unit for inbound or outbound logistics processes.

Tracking Setup – Connection control Wizard for shipment tracking services.

Logistic Units Management System

Actions

Actions are events, which are recorded in a logistic unit's log entries when certain activities are completed. Through this window, users can set up the specific actions which will be registered in the log automatically or create manually registered codes.

Registration of an action with a logistic unit in manual mode is carried out through a **Units Worksheet** available in the logistic unit card.

Logistic Units Management System

Logistic Unit Types

Logistic Unit Type is a class a Logistic Unit belongs to. For example, it might be box, pallet, container, truck or any other abstract kind of logistic unit one could imagine.

Logistic Unit Type is an attribute of a Logistic Unit that must be determined when Logistic Unit is being created.

Click **Code** to open Card.

← Logistic Unit Types				
🔍 Search + New Manage			🖻 ▽ ≡ ⓘ	
Code ↑	Description	Limit Filling Volume Control	Limit Filling Weight Control	
C20CFRC ⋮	20' Collapsible Flat Rack container	☑	☑	
C20DC	20' Dry freight container	☑	☑	
C20FRC	20' Flat Rack container	☐	☑	
C20OSOPC	20' Open Side/Open Top container	☑	☑	
C20OTC	20' Open Top container	☑	☑	
C20RC	20' Reefer container	☑	☑	
C40CFRC	40' Collapsible Flat Rack container	☐	☑	
C40DC	40' Dry freight container	☑	☑	
C40FRC	40' Flat Rack container	☐	☑	
C40HCDC	40' High Cube Dry container	☑	☑	
C40HCRC	40' High Cube Reefer container	☑	☑	
C40OTC	40' Open Top container	☑	☑	
C40RC	40' Reefer container	☑	☑	
C45HCDC	45' High Cube Dry container	☑	☑	
C45HCRC	45' High Cube Reefer container	☑	☑	
CAT	Artificial Tweendeck	☐	☑	
DHL.BOX.2	DHL Sizes - Box 2	☑	☑	
DHL.BOX.3	DHL Sizes - Box 3	☑	☑	
DHL.BOX.4	DHL Sizes - Box 4	☑	☑	

Logistic Units Management System

Logistic Unit Type Card

Enter **Code** and **Description** for new Type.

Sorting Order – value in this field specifies a sorting order for type selection pages. Frequently used types can be placed at the top of the list.

Logistic Units Management System

No. Series – Number series that will be used to create a new logistic unit of this type.

Reusable – specifies the default settings that new logistic unit will have Reusable parameter. Term Reusable defines a physically existing logistic unit, like a fixed asset. During the operating with a logistic unit, the system will transfer all lines, records, and references to the archive, and the logistic unit will not be deleted.

Automatic SSCC Creation - allows you to create a new SSCC label automatically after creating new logistics units and assigning them an SSCC.

Units of Measure Tab – set up units of measure for this type. System can operate with metrical or imperial units, but for this particular logistic unit type the System can operate with different system units (metrical or imperial).

Sizes Tab – to specify inner and external sizes of a logistic unit. It's possible to enable volume control. If during creation of a logistic unit an excess of volume detected, the system warns you about it.

Logistic Units Management System

Weight

Tare Weight (kg)	2,970.00	Max Weight (kg)	30,000.00
Payload Weight (kg)	27,030.00	Limit Filling Weight (...	27,030.00
		Limit Filling Weight C...	⬤

Content Control

Temperature Control	◯	Mix Source Documen... ◯
Def. Temperature	0.00	Mix Location/Bin Allo... ◯
Ventilation	◯	

Weight Tab – to specify weight parameters. If during creation of a logistic unit an excess of weight detected, the system will warn you about it.

Content Control Tab

Mix source Document Allowed – allows the system to put on a logistic unit content for different customers or vendors.

Mix Location/Bin Allowed – allows to put on a logistic unit content of documents with different location codes in lines. It can be useful for containers.

Temperature Control,

Def. Temperature,

Ventilation – set information for print form to inform a driver about special conditions.

Logistic Units Management System

SSCC Default identifiers

SSCC Default Identifiers are default lines for new SSCC. This lines define a content or structure of information and barcode type to print this information on label.

To print SSCC label you need to customize SSCC Label template using MS Word.

Logistic Units Management System

Unit Locations

The location of the logistic unit is used for tracking the current location of the logistic unit and understanding the availability of the unit for other logistics operations.

Inside	Outside

pallet is located by the customer

Container in seaport

Available for outbound logistics	**Not** Available for outbound logistics

Logistic Units Locations

✓ Saved

Search + New Edit List 🗑 Delete

Code ↑		Description	Inbound Logistics Enabled	Outbou... Logistics Enabled	Default After Shipme... Location	Default After Receipt Location	Default Creation Location
→ FREMANTLE	⋮	FREMANTLE	☐	☐	☐	☐	☐
GENOA		GENOA	☐	☐	☐	☐	☐
INSIDE		Logistic unit inside	☐	☑	☐	☑	☐
OPEN		New Logistic unit was created	☑	☑	☐	☐	☑
OUTSIDE		Logistic unit outside	☑	☐	☑	☐	☐
RUBIERA		RUBIERA	☐	☐	☐	☐	☐
SINGAPORE		Singapore	☐	☐	☐	☐	☐

Logistic Units Management System

Tracking Setup

We use an external service for shipment tracking.

Aftership.com allows to track more then 1000 carriers in the world.

It is a paid service and your company will have to create an account on aftership.com.

Choose a suitable tariff with access by API and generate an API access key.

Click **Next** to enter the API key.

Logistic Units Setup   ✏   ⮕   +   🗑   ✓ Saved   ▌ ⌈⊐ ↗

Logistic Units Setup

⚙ Settings | Automate ⌄   Fewer options

⚙ Actions Setup   ⚙ Logistic Unit Types   ⚙ SSCC Default Identifier   ⚙ Unit Locations   ↝ Tracking Setup ⌄   ⤳

Number Series

Unit Nos. · · · · · · · ·

SSCC - Serial Sh

Global Company Pre

Units of Measur

Base Weight Unit of

Base Volume Unit of

Aftership.com Integration   ↗ ✕

🔶 **aftership**

Welcome to Aftership.com Integration Setup

AfterShip's global shipping API, allows companies to scale and adapt to an ongoing and post retail environment. The multi-carrier tracking solution. Afteship support more 700 carriers worldwide.

AfterShip.com is a paid external service.

Next   Finish

Logistic Units Management System

Once the API key is entered click **Next**. System will load carrier list. Drilldown carrier list to check your carriers.

Activated couriers are carriers you work with.

Aftership.com Integration

⚙

Enter

API Key · ●●●●●●●●●●

Default API Settings

Change Default Settings · · · · · · · · · ⬤

Link to all couriers · · · · · · · · · · · ·

Link to active couriers · · · · · · · · · ·

GetTracking URL · · · · · · · · · · · ·

Aftership.com Integration

⚙

Loaded data ...

Total available couriers · · · · · · · · · · 1171

Activated couriers · · · · · · · · · · · · · · 4

Activate couriers · · · · · · · · · · · · · https://admin.aftership.com/settings/couriers...

[Back] [Next] [Finish]

Logistic Units Management System

Click **Next** to finish the setup process.

Go to **Shipping Agents** to assign the package tracking system to the shipping agent you use.

Tracking Provider – Aftership.

Tracking Service Carrier Code – name of an actual carrier in the tracking system.

These settings allow you to define the shipping agent on the sales order that will be copied to the logistic unit after it is published. Or you can define the shipping agent directly in the logistic unit card and enter a tracking number.