

Routes Guide

Overview

Produmex WMS offers a specific Routes module that allows for grouping multiple deliveries into routes and defining the route planning.

Routes can be created from templates (route master data) or ad-hoc. The route planning windows can be customized on the route controller.

Prerequisites

An API key is needed to run the Google maps functionality. Each customer needs to get his own API key to be entered in the Google API key field.

The Google API key must be created [here](#) and its status must be set to active. For more information on how to generate a Google API key click [here](#).

Configuration

1. Go to Organizational Structure > Extension Parameters > [Route Controller](#) and define the settings.
2. Go to Organizational Structure > [Config tab](#) and provide the Google API key.

1. Create route from a template

1.1. Create route template(s)

First define the master data (template) for a specific delivery route. Open the Route template form via: Produmex>Routes>Route template.



Specify the code and the name of the route.

You can define the day the route is carried out by selecting a weekday from the dropdown menu. If the route is not bound to a specific day of the week, select the 'No Weekday' option. The weekday is for information only.

Select the loading dock from which the route departs from the dropdown menu. Every dock that can be used for loading can be selected.

It is possible to cancel a route template by selecting 'Y' as Canceled. Canceled route templates cannot be selected when creating a route from a template.

Add clients to the route template.

Click on the 'Add client' button to add a new line. Enter the code of the customer to the 'Card code' field. Other fields on the line will automatically be populated. To change the ship to address, select the Ship to Code from the dropdown menu.

It is possible to modify the route sequence. Select a customer line then move it with the up and down arrows.

To delete a line, select the line then click on the 'Delete client' button.

Click on the 'Add' button to add the route template.

1.2. Create route

To create a route for specific orders on a specific date, open the Route Planning-Selection Criteria window via: Produmex>Routes>Route Details.



On this form the following can be selected:

- date when the route takes place
- the applicable route template
- the warehouse from which the route will be executed

Only warehouses managed by Produmex can be selected. It is possible to select a different warehouse than the warehouse of the loading dock on the template. It is also possible to select a date that is not on the weekday of the template.

Click OK to create the route.

If there is no route matching the selected criteria, the system will create one. The 'Route Detail' window will open.

If there is an existing route matching the selected criteria, a system message will open. Click on the 'Yes' button to open the existing route or click on the 'No' button to create a new route. The new route will overwrite the existing route.



Open orders that match the following criteria will be added to the new route:

- the delivery date is identical with the date of the route or has passed by on the date of the route
- the customer and the shipping address is assigned to the route
- there is no pick list/pick list proposal for the sales order
- the sales order is assigned to the selected route

When the route is created, a pick list proposal will be generated for each sales order on the route.

The Route Detail window will open up.



The following information is displayed on the header:

- *Route date*: The selected route date.
- *Template*: The code of the selected template.
- *Description*: The route name. The route name can be adjusted.
- *Number*: The route number.
- *Dock*: The loading dock. The default loading dock is the loading dock selected on the template. If the route was generated for a different warehouse, the default dock is the first dock from the loading docks of the warehouse sorted by: structure level/alphabet. It is possible to modify the loading dock.
Select the dock from the dropdown menu. Every loading dock from the warehouse of the route is listed.
- *Status*: The route status. Possible values:
 - Not released: The route can be modified.
 - Released: The route is released for shipping therefore cannot be modified.
 - Closed: The route is closed.
- Route for '*Proof of Delivery*'?: This checkbox indicates whether the route is for [proof of delivery](#) or not. If the *Routes are by default POD? (Y/N)* option is enabled on the [Route controller](#), this checkbox is automatically ticked.

Each pick list proposal created for the route has a dedicated line on the grid. On the grid the following information is displayed:

- *Customer code and name*: The code and name of the customer.
- *Address*: The ship to address.
- *Full Stock*: The inventory status of the items that are on the pick list or pick list proposal linked to the route. Possible values:
 - N - None of the items on the pick list proposal are in stock.
 - P - Some of the items on the pick list proposal are in stock.
 - A - All items on the pick list proposal are in stock.
- *Stock compliant shelf life*: The inventory status of the items using the shelf life that are on the pick list or pick list proposal.
 - N - None of the items on the pick list proposal checking the shelf life are in stock
 - P - Some of the items on the pick list proposal checking the shelf life are in stock
 - A - All items on the pick list proposal checking the shelf life are in stock.

It is possible to delete or add customers to the route.

To add an extra customer to the route, press the 'Add client' button then select the customer from the list. The customer will only be added to the route if (s)he has at least one open sales order without a pick list or pick list proposal. After the customer is added, pick list proposal(s) will be generated for the open sales order. The generated pick list proposal(s) will be assigned to the route.

To remove a pick list proposal from the route, select its line then press the 'Delete client' button. The pick list proposal will be closed and will be removed from the route.

The route sequence can be modified by selecting a line and moving it with the up and down arrows.

To generate pick lists from the sales orders assigned to the route click on the 'Gen.pick list' button.

Customer collect pick lists will not be added to the route.

1.3. Route planning

Routes can be changed and reorganized until their status is 'Not Released'. This possibility is provided by the *Route planning* and the *Routes map* function.

1.3.1. Routes map

To see the route on the map and to get the driving directions, open the Routes Map screen via: Produmex > Routes > Routes map. Produmex uses Google Maps to display the roadmap and to get the driving directions.

Internet Explorer is not supported as a default browser on SAP hosting computer.

On the left side of the window the map is shown. Next to the map open routes that have at least one pick list (proposal) are listed. Tick the checkbox next to the route to display it on the map. Multiple routes can be displayed.

To see the suggested driving directions, select the route from the dropdown list next to 'Select driving directions'. A route can only be selected if its checkbox next to the map is checked. The Total distance and the suggested driving directions will be listed on the screen.



1.3.2. Route planning

To overview and modify the route, open the Route Planning screen via: Produmex > Route > Route planning.

The Route planning screen consists of four sections:

- Open routes
- Pick lists not on a route
- Two sections for route details (Section 1 and Section 2)

On the Open routes section routes with the status 'Not released' are listed. Click on the 'Refresh' button to refresh the section.

- *Nr*: The route number.
- *Description*: The route description.
- *Route date*: The route date.

- *Log.units*: Number of the logistic units packed for the route.

On the Pick lists not on a route section open pick lists and pick list proposals that are not assigned to a route and are not customer collect are listed. Click on the 'Refresh' button to refresh the section.

- *Type*: The document type. Possible values: 'Pick list' or 'Pick list proposal'.
- *Nr*: The number of the document.
- *Shipping ID*: The shipping ID of the document.
- *Card Code & Card Name*: The code and name of the customer.
- The Shipping To address:
 - *Street*
 - *Zip code*
 - *City*
 - *Country*
- *Pick/Pack remarks*: Remark for the picking and packing.
- *Log.units*: The number of the logistic units packed for the pick list.
- *Status*: The status of the pick list. This field is empty when the base document is a pick list proposal.

To see and modify the pick list and pick list proposals assigned to the route, open the route.

Select the route then click on the '>1' button next to the routes section to open it on Section 1, or click on the '>2' button to open it on Section 2.



When a route is opened in a section, pick list and pick list proposals assigned to the route are listed on the grid.

It is possible to change the route sequence, add and delete pick lists and pick list proposals or move them to another route.

To delete a pick list (proposal) select its line and click on the '-' button (1). The pick list removed from the route will be listed on the *Pick lists not on a route* section.

To add a pick list (proposal) select it from the list on Pick lists not on a route section and press the '>1' or '>2' button. The pick list will be added to the bottom of the list. Only pick lists (proposals) assigned to the same warehouse as the route can be added.



Example: In the example we added an extra pick list to the route. If we now check the route in the routes map, we can see that the route can be optimized by changing the route sequence.



To change the sequence, select a line and move it with the 'to the top'(2), 'up'(3), 'down'(4) and 'to the bottom'(5) arrows.



To move the pick list (proposal) to the other opened route, press the '^' (6) or the 'v' (7) button. The '^' (6) button will move the pick list (proposal) selected from the route in Section 2 to the route opened in Section 1. The 'v' (7) button will move the pick list (proposal) selected from the route in Section 1 to the route opened in Section 2. The pick list will be added to the bottom of the list.

It is also possible to drag and drop the pick list (proposal) from one route to another. Simply select the pick list (proposal) in one section the drag it to the other section. The route sequence can also be modified with the drag and drop function.

Example: In the example we moved the pick list to the second line in order to optimize the route.



To enlarge a section, press the 'Maximize' button of the section.
To refresh the section, press the 'Refresh' button of the section.

When the route is linked to a container, an extra control panel is displayed on the screen. For more information please see: [Container management - Route](#)

2. Ad hoc route creation

Routes can also be created on the fly. Open the Route Planning screen via: Produmex>Route>Route planning.

Click on the 'New route' button to create a new route. The 'Create new route' window will open up.

In order to create the route, define the following:

- Add the description of the route to the 'Description' field.
- Select the loading dock from the dropdown menu.
- Select the route date on the calendar.
- Indicate whether the route is for [proof of delivery](#) or not. If the *Routes are by default POD?* (Y/N) option is enabled on the [Route controller](#), this checkbox is automatically ticked.

Press the 'Ok' button to create the route.



The route will be added to the list of Open routes. Open the route in a section then add pick lists (proposals) as described in [22.1.3.1. Route planning](#)

Only pick lists (proposals) assigned to the same warehouse as the loading dock of the route can be added.

3. Release the route

If a route is ready for shipping, release it. Go the *Route planning* window. Select the route from the list then click on the 'Release route' button. A system message will open up. Click on the 'Yes' button to release the route.



It is possible to start picking for the route before it was released, but the route can only be shipped if it's released. For more information about picking for a route please see: [Ad hoc Picking – Route](#)

After the route was released and the picking is finished, the route can be shipped.

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