Beas Manufacturing Integration

Overview

From product version 19.4, Produmex WMS adds support to the logistical needs of Beas Manufacturing 9.3 PL03 and later. It is recommended to use Beas Manufacturing for production transactions and to use Produmex WMS for stock transactions.

Available features in Produmex WMS:

- Beas-type production lines can be created in the Organizational Structure.
- The Picking for Production and Picklist for Production flows can be used to pick the components of Beas work orders.
- Supporting version control items (I-version) in reception:
  - Reception: No PO Flow
  - Reception: Order Flow
  - Reception: Container
  - Bulk Reception: No PO Flow
  - Bulk Reception: Order Flow
  - ASN Reception Flow (Mobile Client & Open ASN Lines window)
  - Goods Receipt PO window

Additional documentation:

- Beas - WMS integration information package
- Beas Manufacturing documentation
- Beas Manufacturing release notes
- Beas Manufacturing: version control items

Installation

Produmex WMS

The standards installation process applies to the add-on and the Produmex SB1 Notification Listener must be installed and started as well (see documentation here).

When Beas Manufacturing is installed, Produmex WMS automatically identifies the Beas tables in the database.

Beas Manufacturing

The standard installation process applies to the add-on and the Common Interface must be running (Beas Manage Server > Common Interface). See documentation here.

Important
If you first install Beas Manufacturing and then Produmex WMS and you insert the Produmex Logex

Addon Code to the dbo.SBO_SP_TransactionNotification stored procedure manually, make sure that you insert the Produmex code **ABOVE** the Beas Manufacturing code.

```
ALTER            proc [dbo].[SBO_SP_TransactionNotification]

@object_type nvarchar(30),                      -- SBO Object Type
@transaction_type nchar(1),                -- [A]dd, [U]pdate, [D]elete, [C]ancel, C[L]ose
@num_of_cols_in_key int,
@list_of_key_cols_tab_del nvarchar(255),
@list_of_cols_val_tab_del nvarchar(255)

AS

begin

-- Return values
declare @error  int                        -- Result (0 for no error)
declare @error_message nvarchar (200)           -- Error string to be displayed
select @error = 0
select @error_message = N'Ok'

------------------------------------------------------------------------------------------------------------------------

IF @error = 0 BEGIN
       BEGIN TRY
              EXEC [dbo].[PMX_SP_TransactionNotification]
              @object_type,
              @transaction_type,
              @num_of_cols_in_key,
              @list_of_key_cols_tab_del,
              @list_of_cols_val_tab_del,
              @error = @error OUTPUT,
              @error_message = @error_message OUTPUT
       END TRY
       BEGIN CATCH
              SET @error = ERROR_NUMBER()
              SET @error_message = ERROR_MESSAGE()
              DECLARE @msg as NVARCHAR(255)
              SET @msg = SUBSTRING('PMX_SP: sql error ' + CAST(ERROR_NUMBER() AS NVARCHAR) + ' : ' + ERROR_MESSAGE()
                     + ISNULL( ' line ' + CAST(ERROR_LINE() AS NVARCHAR), '' ) + ISNULL( ' in ' + ERROR_PROCEDURE(), '' ),1,255)
              EXEC xp_logevent 999999, @msg, ERROR
       END CATCH;
END

------------------------------------------------------------------------------------------------------------------------

-- Select the return values
-- beasarea
EXECUTE [dbo].[beas_SP_TransactionNotification] @object_type, @transaction_type, @num_of_cols_in_key, @list_of_key_cols_tab_del,
@list_of_cols_val_tab_del, @error OUTPUT, @error_message OUTPUT
-- /beasarea
select @error, @error_message

end
```

1. Produmex code inserted above the Beas Manufacturing code

2. Beas Manufacturing code

Produmex Notification Listener Service

Make sure that you check the configuration file of the Notification Listener Service.

Path: C:\Program Files\Produmex\Produmex SB1 Notification Listener (...)\ File name: Produmex.Foundation.SboNotification.ServiceHost.exe.config

The file must contain the line highlighted in red (see screenshot below). If it is not present in the file, make sure that you add it.

```
<action senderType="BEAS_Request" objectType="*" transactionType="*"
logic="Produmex.Sbo.Logex.SboNotification.Actions.BeasRequests,
Produmex.Sbo.Logex.SboNotification.Actions" />
```

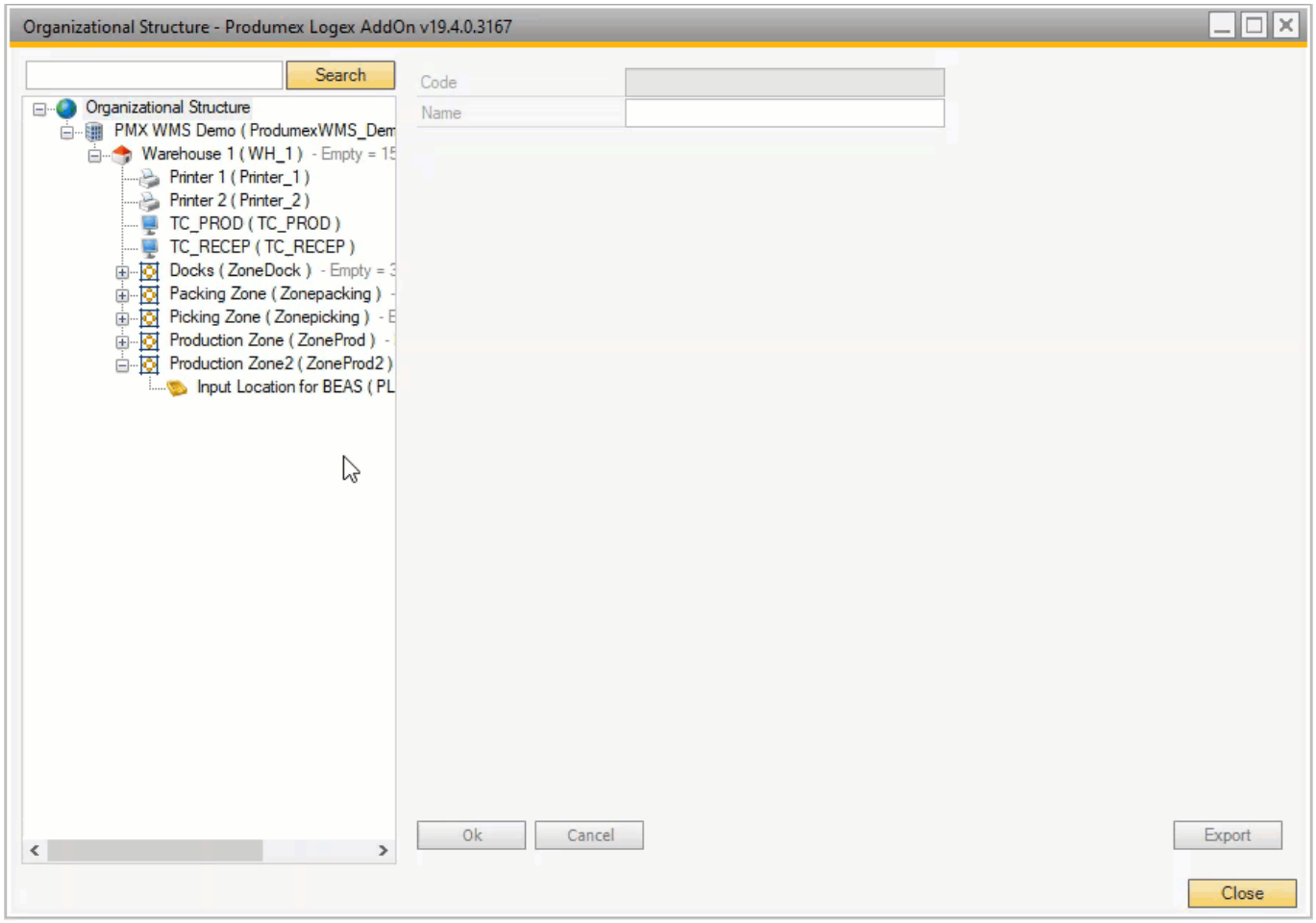
```
<configuration>
  <configSections>
    <section name="log4net" type="System.Configuration.IgnoreSectionHandler" />
    <section name="sboNotificationSettings" type="System.Configuration.IgnoreSectionHandler" />
  </configSections>
  <appSettings>
    <add key="TransactionIsolation" value="ReadCommitted" />
    <add key="TransactionTimeout" value="00:10:00" />
  </appSettings>
  <connectionStrings>
    <add name="SboConnectionString" connectionString="Server=..." />
  </connectionStrings>
  <log4net>
    <appender name="RollingLogFileAppender" type="log4net.Appender.RollingFileAppender">
      <filter type="log4net.Filter.LevelRangeFilter">
        <levelMin value="DEBUG" />
        <levelMax value="FATAL" />
      </filter>
      <file type="log4net.Util.PatternString" value="C:\Produmex\Log\Produmex.Foundation.SboNotification.ServiceHost.exe.%property{LogSuffix}.log" />
      <appendToFile value="true" />
      <rollingStyle value="Size" />
      <maxSizeRollBackups value="4" />
      <maximumFileSize value="10MB" />
      <layout type="log4net.Layout.PatternLayout">
        <conversionPattern value="%date [%thread] %-5level %logger [%property{NDC}] - %message%newline" />
      </layout>
    </appender>
    <root>
      <appender-ref ref="RollingLogFileAppender" />
    </root>
  </log4net>
  <sboNotificationSettings>
    <service nameSuffix="SboConnectionString" />
    <action senderType="BEAS_Request" objectType="*" transactionType="*" logic="Produmex.Sbo.Logex.SboNotification.Actions.BeasRequests, Produmex.Sbo.Logex.SboNotification.Actions" />
  </sboNotificationSettings>
</configuration>
```

Prerequisites

1. Creating a Beas-type production line

1. Create a new production line in the Organizational Structure.

2. Select *Beas* in the *Type* drop-down menu.



3. Fill in the *Code* and *Name* fields and configure the production line on the *General* tab.

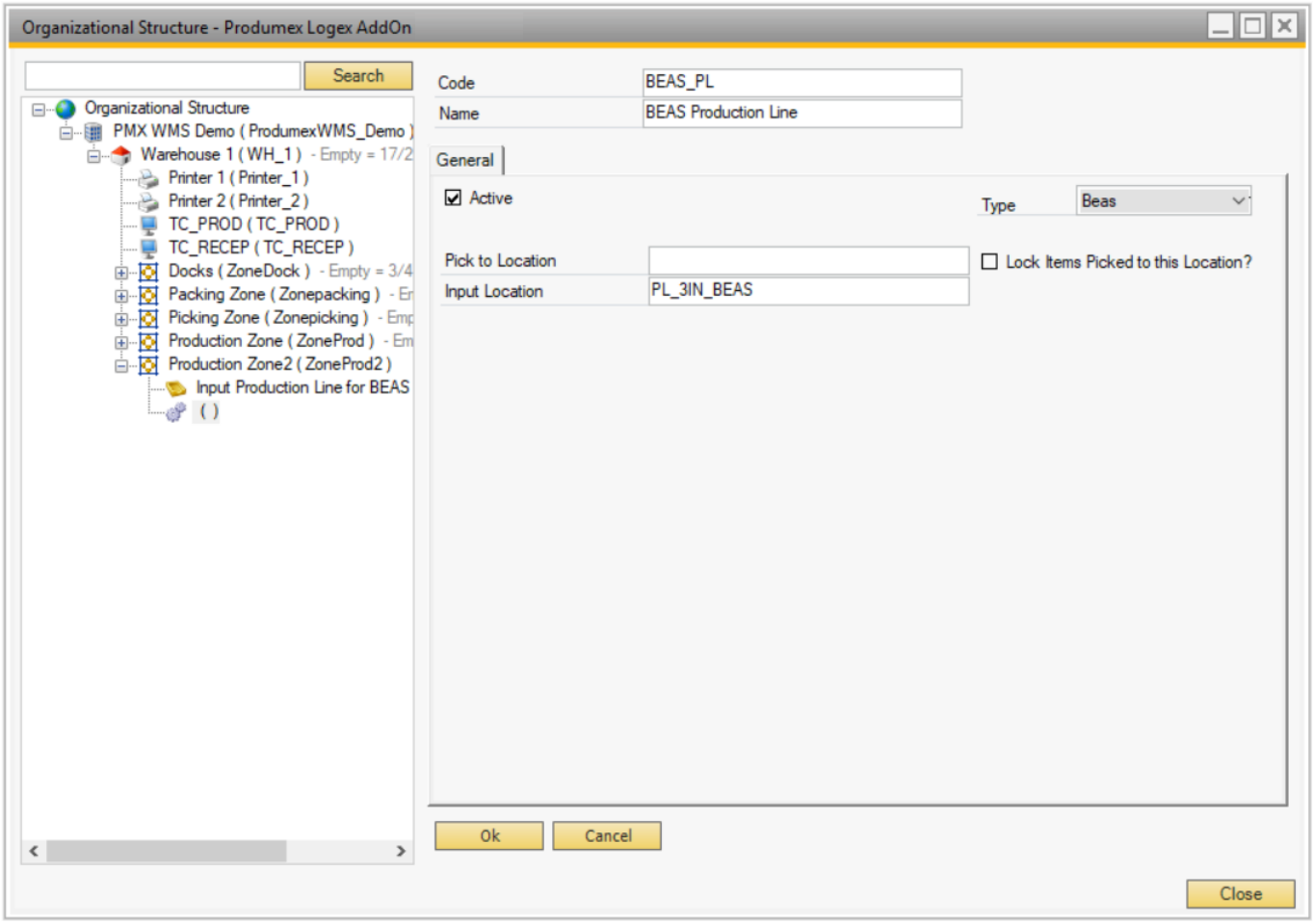
Pick to Location field (optional)
The Pick to Location is the location where the components can be picked to if they are not ready to be used for production and they first must be weighed.

- If the field is filled in, the components are first picked to this location and then they must be moved to the Input Location with the Component Weighing Production flow.
- If the *Pick to Location* field is not filled in, the system uses the Input Location.

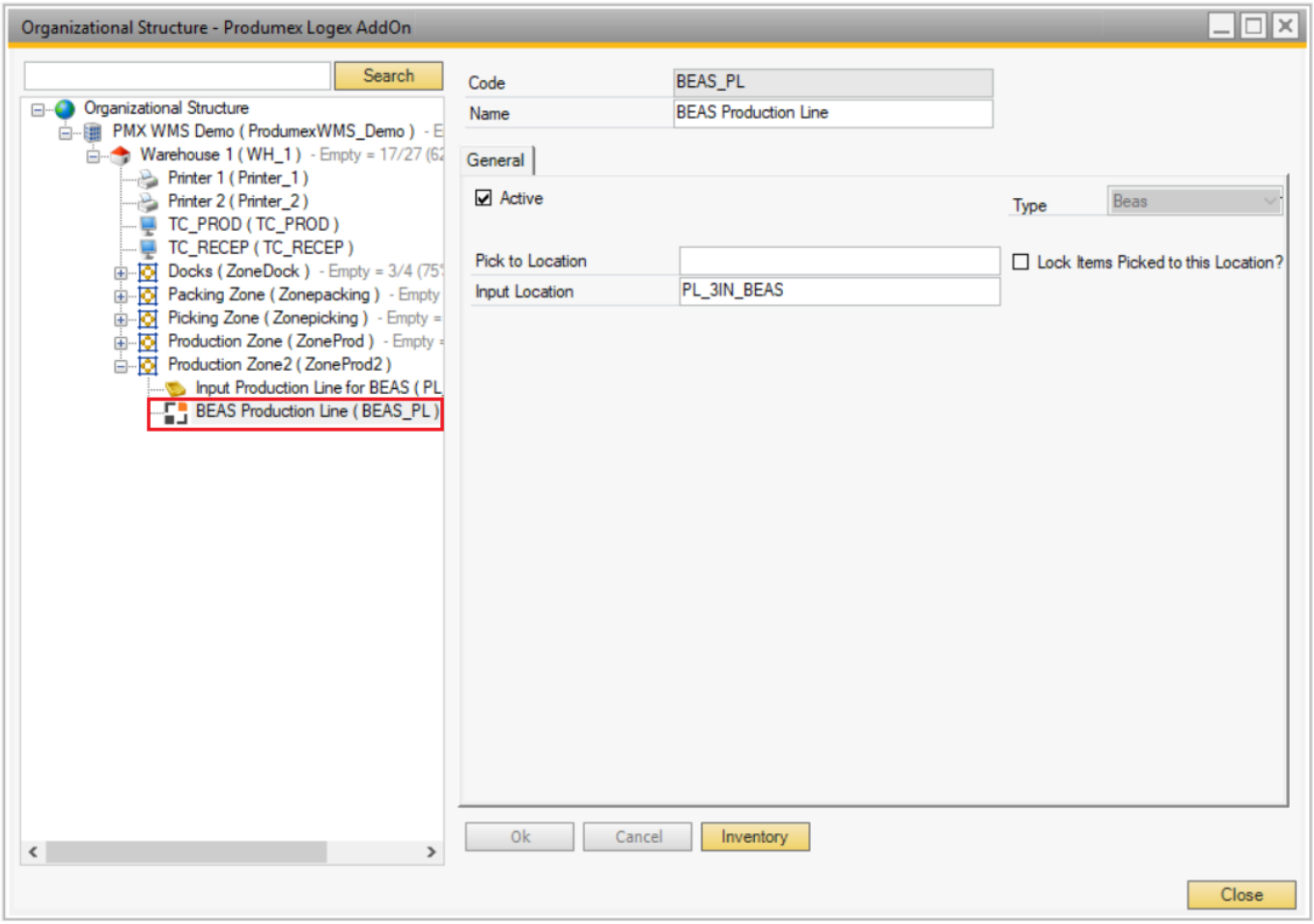
Lock Items Picked to this Location?
If the setting is enabled, the system locks the components on the Pick to Location.

Input Location field (mandatory)
The Input Location is the location where the components are picked to or moved to from the Pick to Location. When the components are in the Input Location, they can be moved to the production line with the Move to Production Line flow.

Active
Check in the checkbox if the production line is active. A production line can only be active if the Input Location field is filled in.



4. Click OK and the Beas-type production line appears in the Organizational Structure.



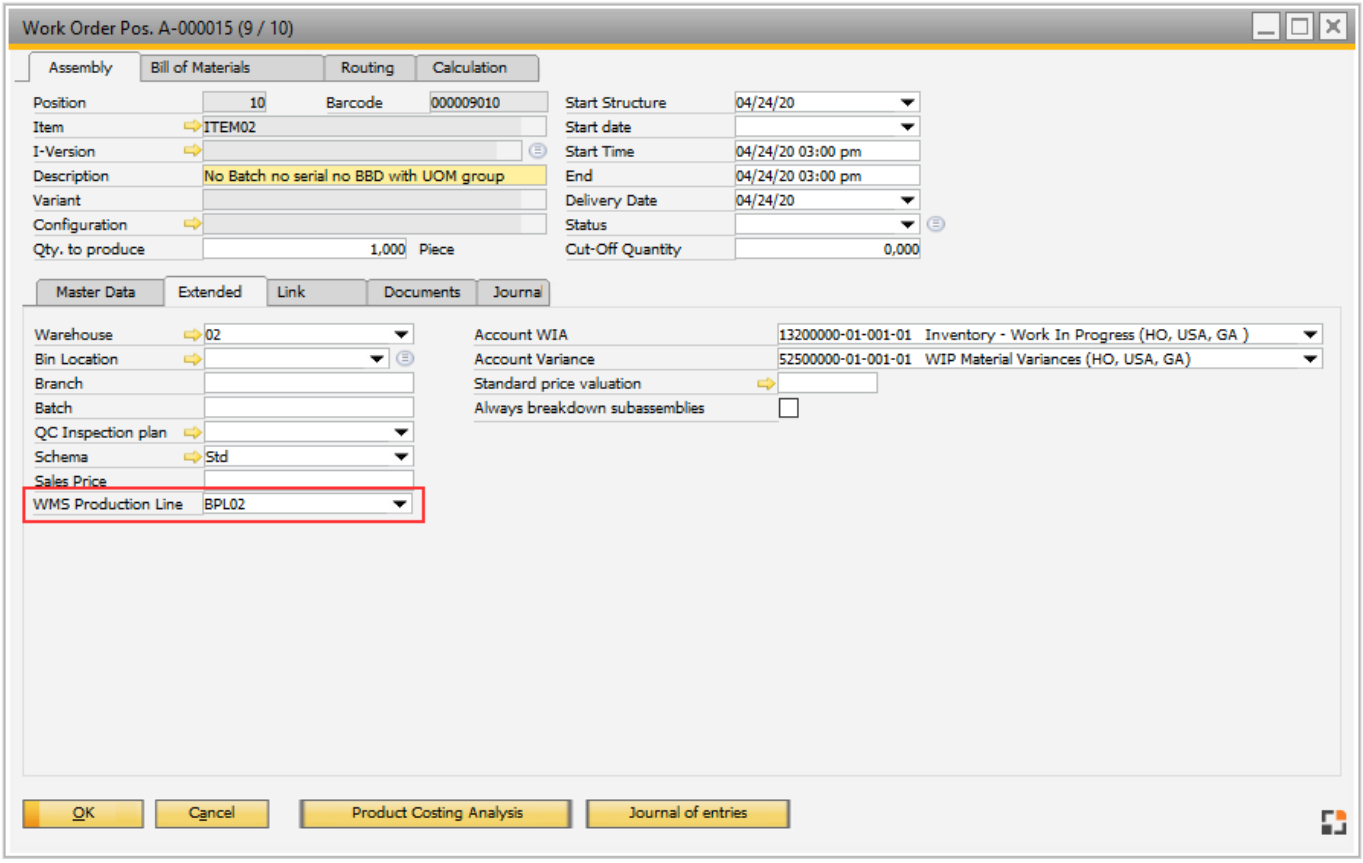
2. Selecting an active Beas-type production line

1. Open the (Beas) Work Order Position window.

2. On the Assembly tab select the Extended tab.

3. In the WMS Production Line drop-down menu select the necessary Beas-type production line. The drop-down menu lists only those production lines that have an Active status in the Organizational Structure.

4. Click OK



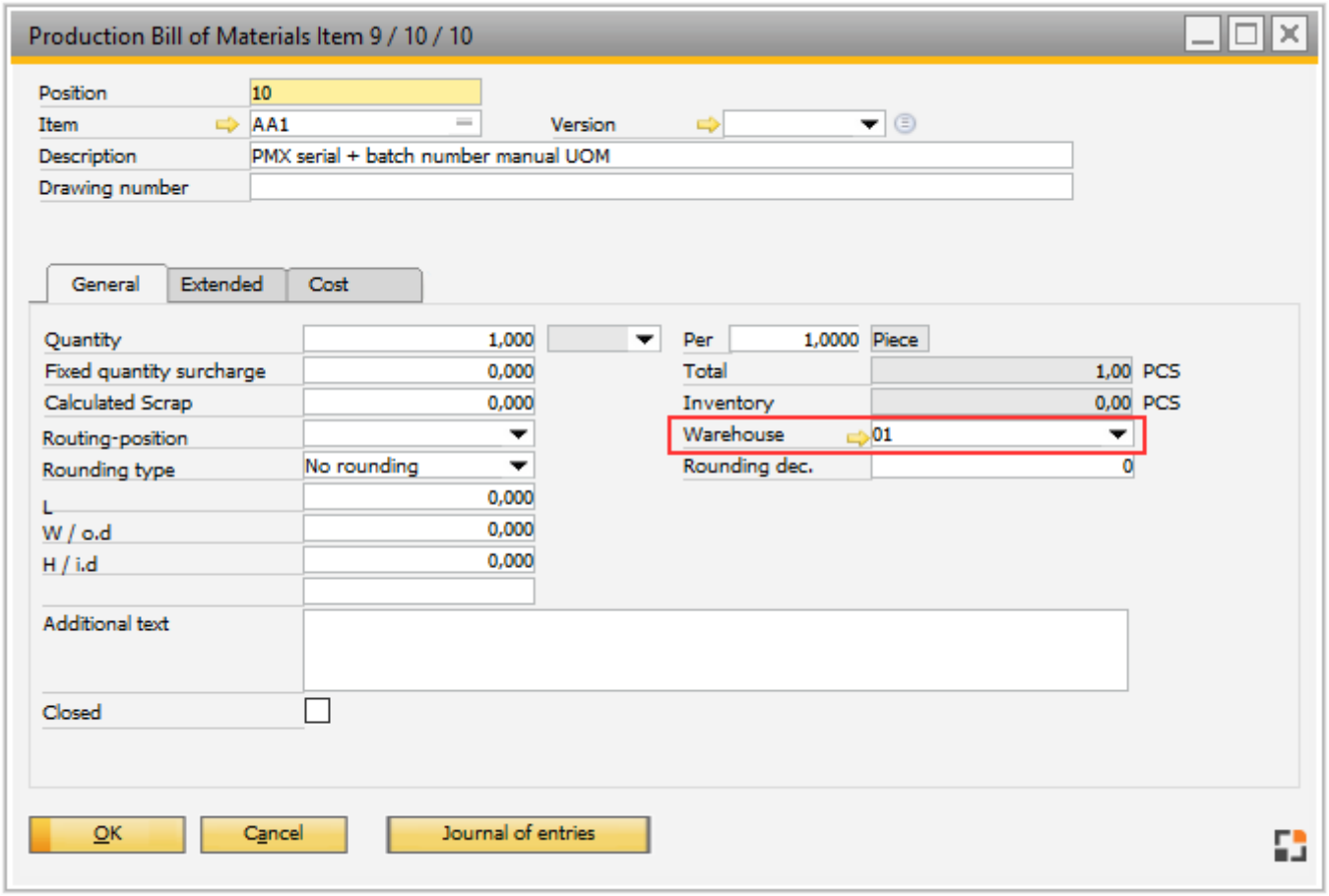
3. Selecting the warehouse for the material item

1. Open the Bill of Materials window.

2. On the General tab navigate to the Warehouse drop-down menu and select the warehouse in which the production line is located.

3. Click OK.

It is important which warehouse is selected as the picking process must be performed in the warehouse where the production line is located in your Organizational Structure.



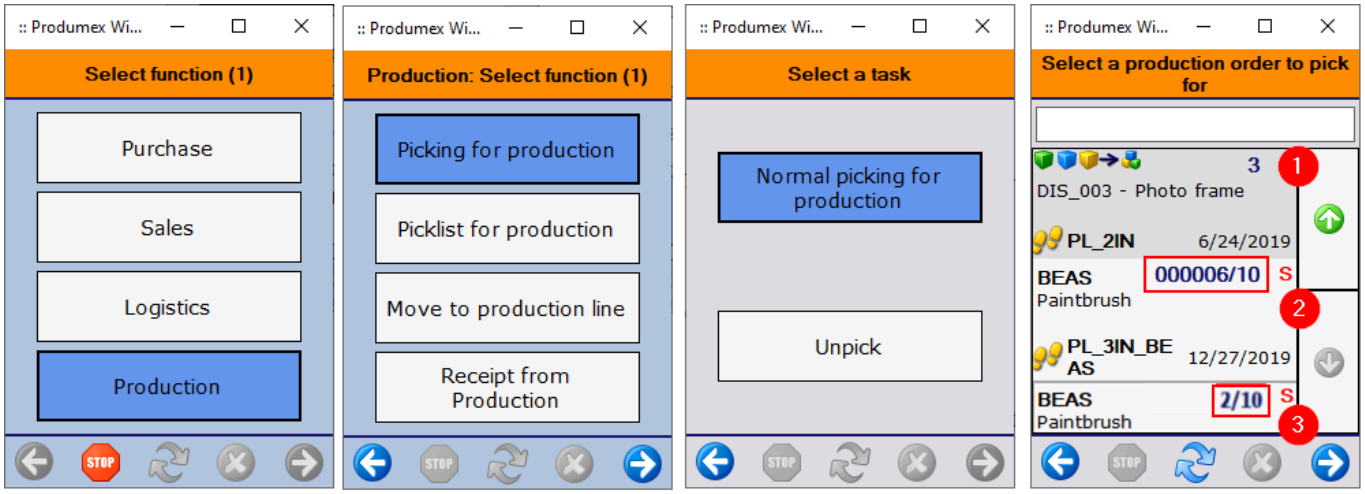
Production picking

The components of Beas work orders can be picked with the Picking for Production and Picklist for Production flows. When the components are moved to the Input Location, Produmex WMS sends a notification to Beas Manufacturing.

1. Picking for Production Flow

The Picking for Production flow identifies Beas work orders if the work order position is linked to a Beas-type production line.

In this case, when the Picking for Production flow is started on the Mobile Client, the *Select a production order to pick for* screen displays the Beas work orders.

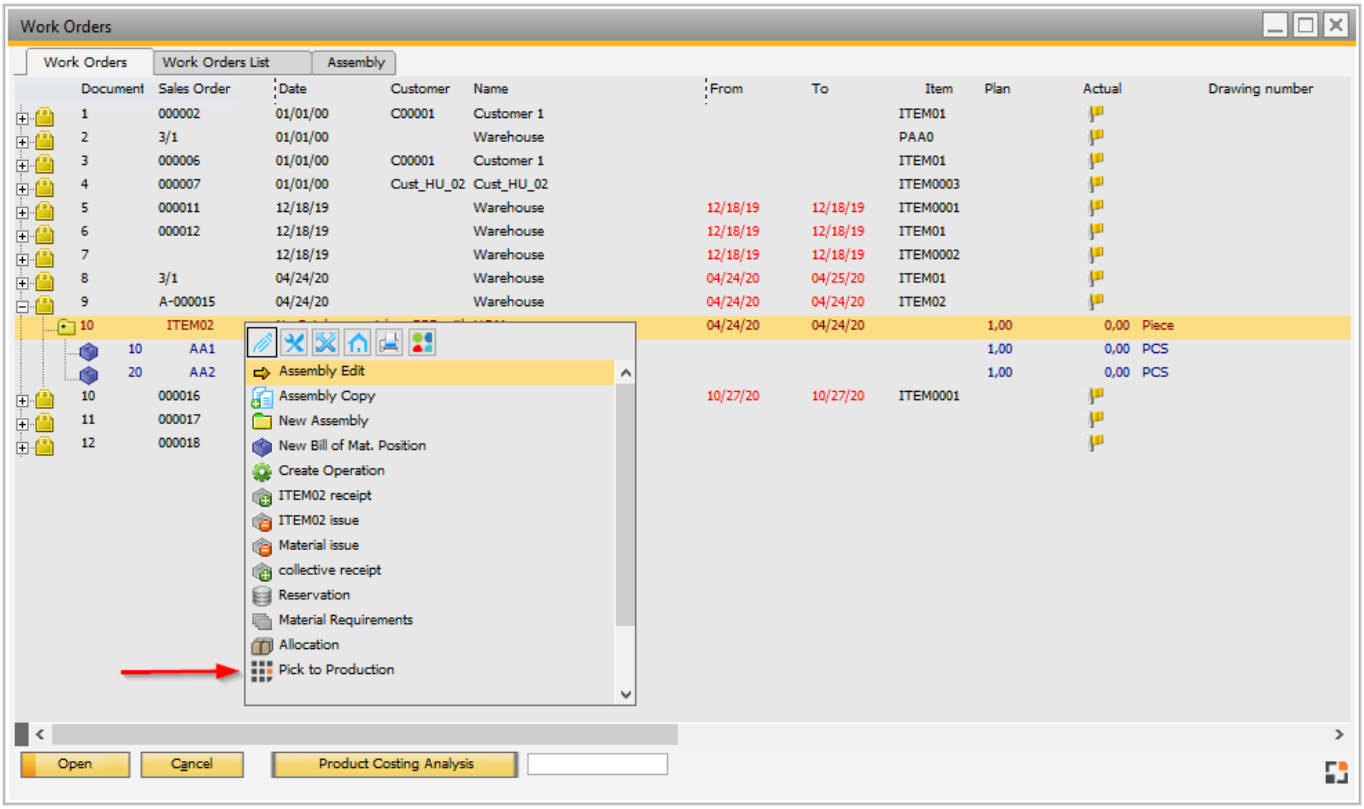


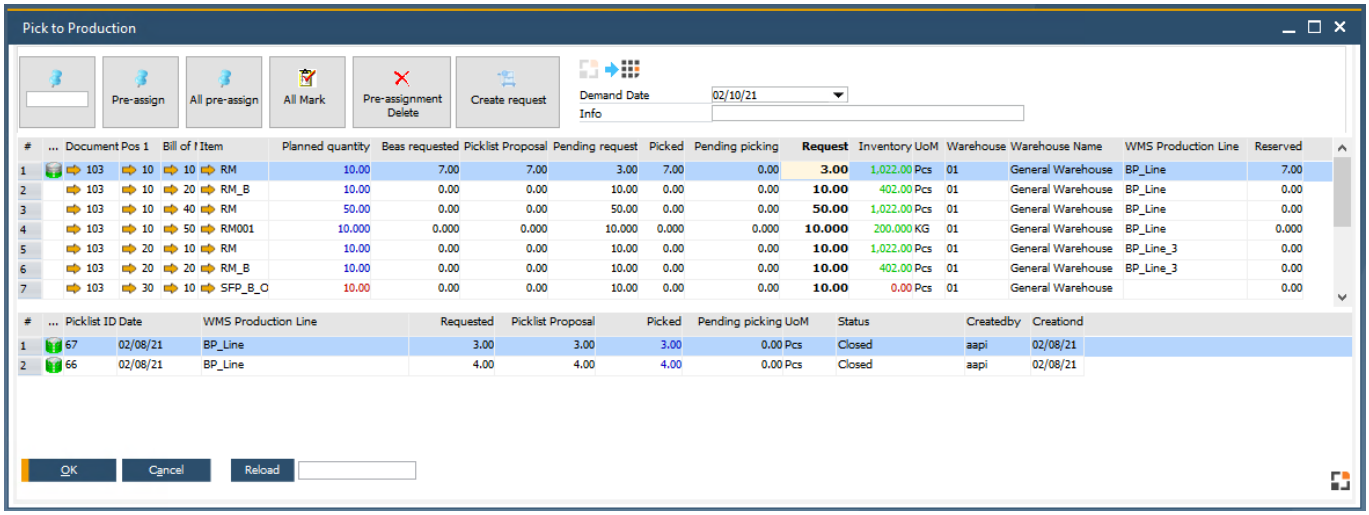
1. Standard SAP B1 production order
2. Beas work order with a sales order
   Displayed values: sales order number and position number (000006/10)
3. Beas work order without sales order
   Displayed values: document entry ID and position number (2/10)

S is a status marker indicating that the production has started.

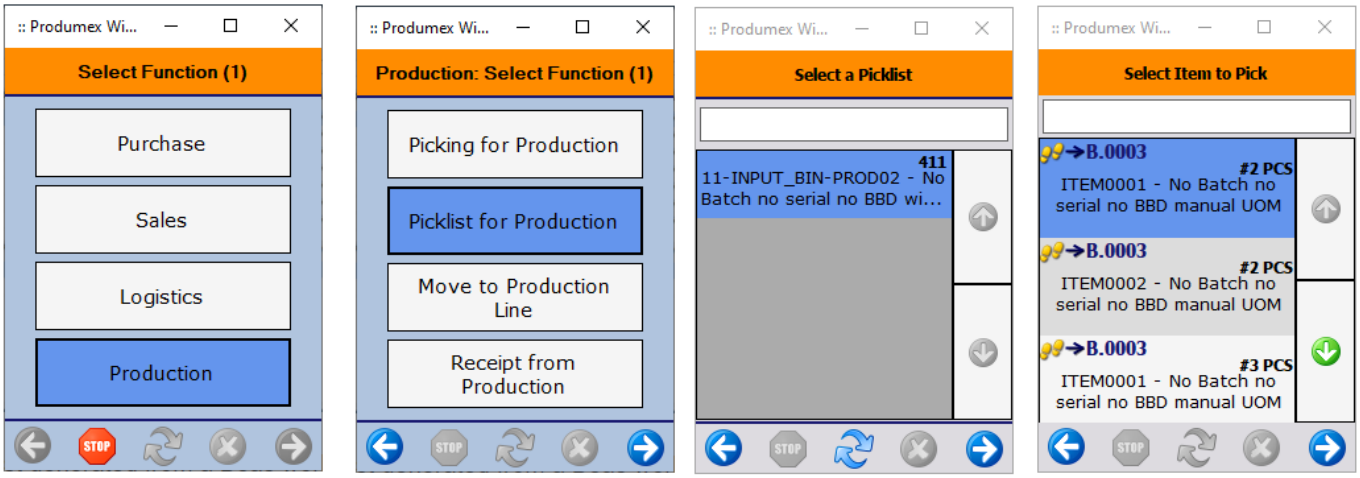
2. Picklist for Production Flow

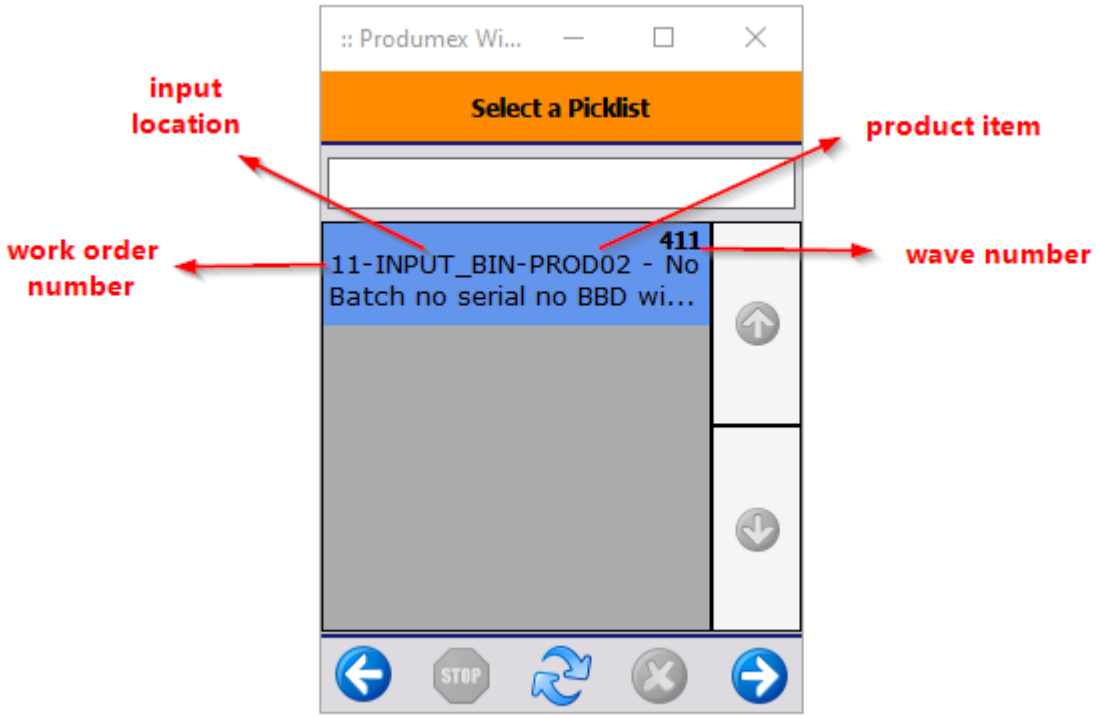
Prerequisite: Before starting the flow, make sure that you generate a picklist proposal in the Pick to Production window of Beas Manufacturing.





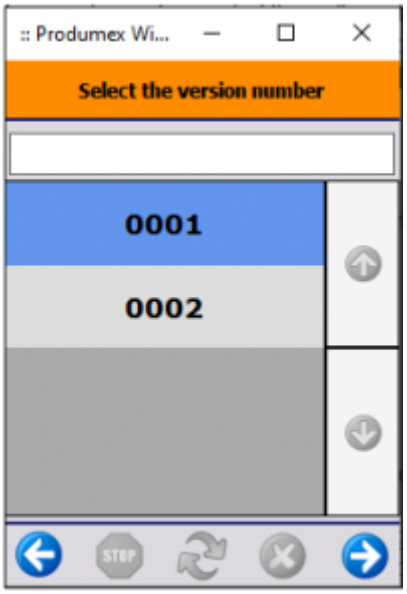
The input of the Picklist for Production flow is a picklist generated from a Beas work order. The flow identifies the picklist generated from the Beas work order.



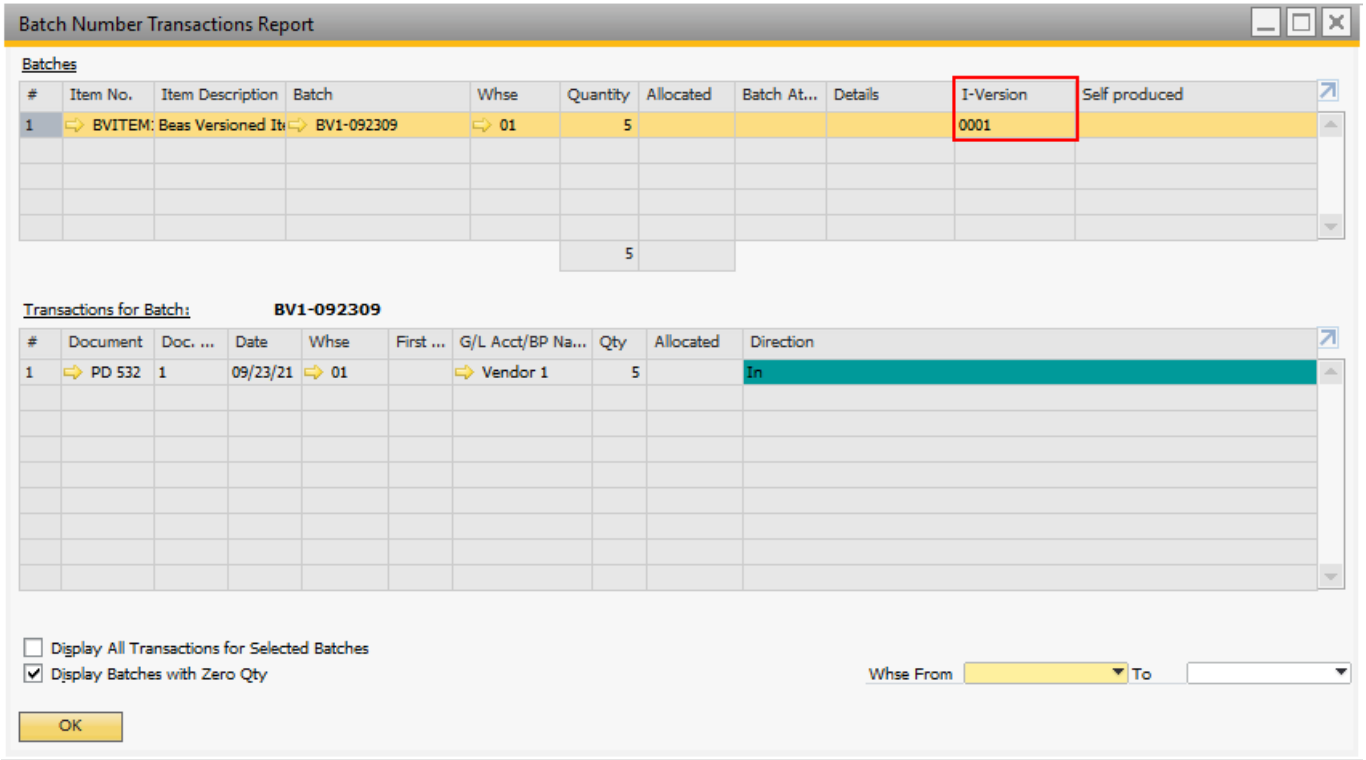


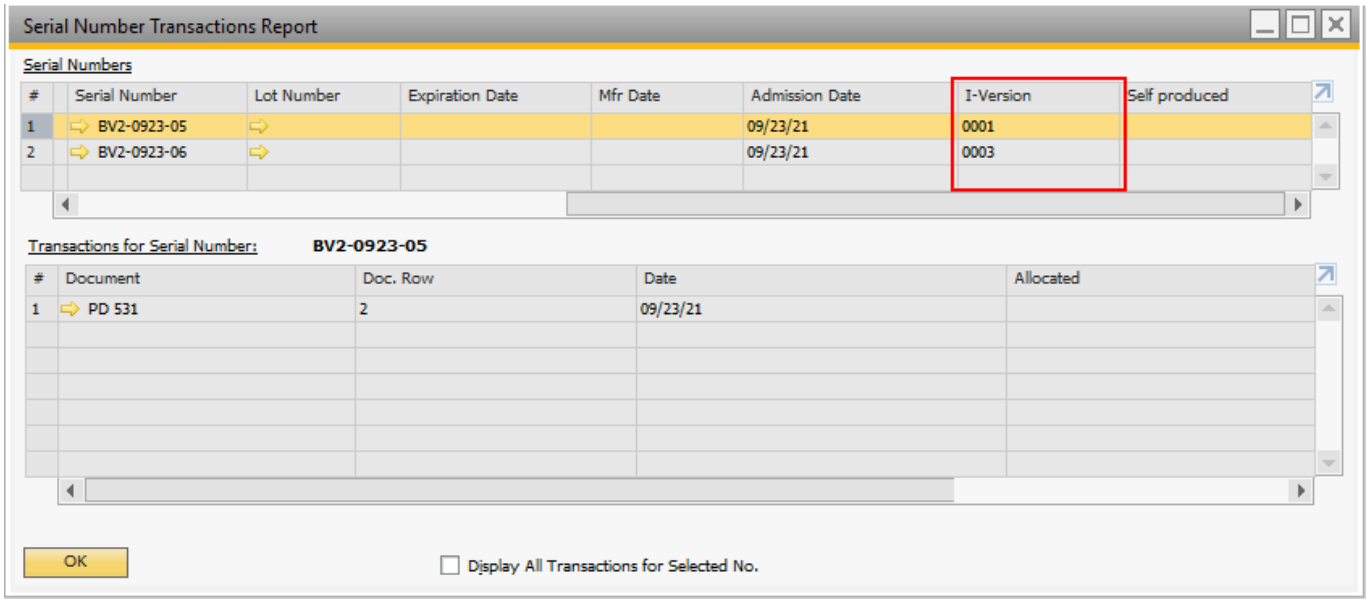
Supporting version control items in reception

Produmex WMS supports version control items (I-version) during reception flows including items managed by bath number or serial number. During the flows on the Mobile Client a separate *Select the version number screen* is displayed. In Produmex WMS you cannot create new version numbers, the system uses the version numbers specified in Beas Manufacturing.



When the Good Receipt PO document is generated, you can see the version in Batch Number Transactions Report or Serial Number Transactions Report.





1. Reception Flows

The reception flows supporting the version control items are the following:

- Reception: No PO Flow
- Reception: Order Flow
- Reception: Container

Version control items managed by batches:

- After selecting a product, the system asks you to identify batch number and then displays the Select the version number screen.
- If there are other items to be scanned on the logistic unit, you can select the product again and if you identify the same batch number, the system skips the Select the version number screen.
- When the Good Receipt PO document is generated, you can see the version in Batch Number Transactions Report.

Version control items managed by serial numbers:

- After selecting a product, the system displays the Select the version number screen and then you can scan the serial number or define a range. All the serial numbers in the range get the same version number.
- When the Good Receipt PO document is generated, you can see the version in Serial Number Transactions Report.

2. Bulk Reception Flows

The bulk reception flows supporting the version control items are the following:

- Bulk Reception: No PO Flow
- Bulk Reception: Order Flow

Version control items managed by batches:

- After selecting a product, the system asks you to identify batch number and then displays the Select the version number screen.
- If there are other items to be scanned on the logistic unit, you can select the product again and if you identify the same batch number, the system skips the Select the version number screen.
- When the Good Receipt PO document is generated, you can see the version in Batch Number Transactions Report.

Version control items managed by serial numbers:

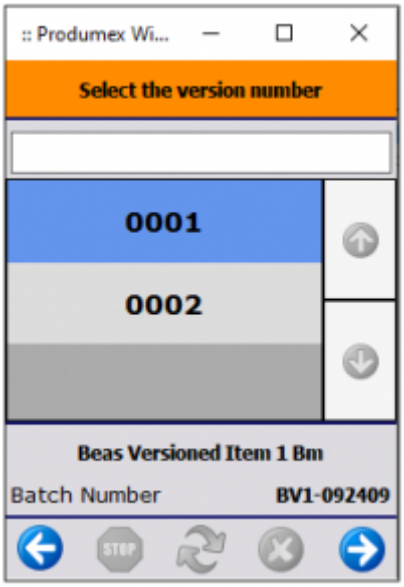
- After selecting a product, the system displays the Select the version number screen and then you can scan the serial number or define a range. All the serial numbers in the range get the same version number.
- When the Good Receipt PO document is generated, you can see the version in Serial Number Transactions Report.

3. ASN Reception Flow

From product version 2021.09, the Interfacing Tool handles the BeasItemVersion column of ASN files.

Mobile Client

If the imported ASN file does not contain the item version, the system asks for the version number after selecting the item to receive during the ASN Reception Flow.



If the imported ASN file contains the item version, the system automatically selects the version number and skips the Select the version number screen. The screen is displayed if the wrong item version number has been added to the imported ASN file.

Example of an ASN file with item version number:

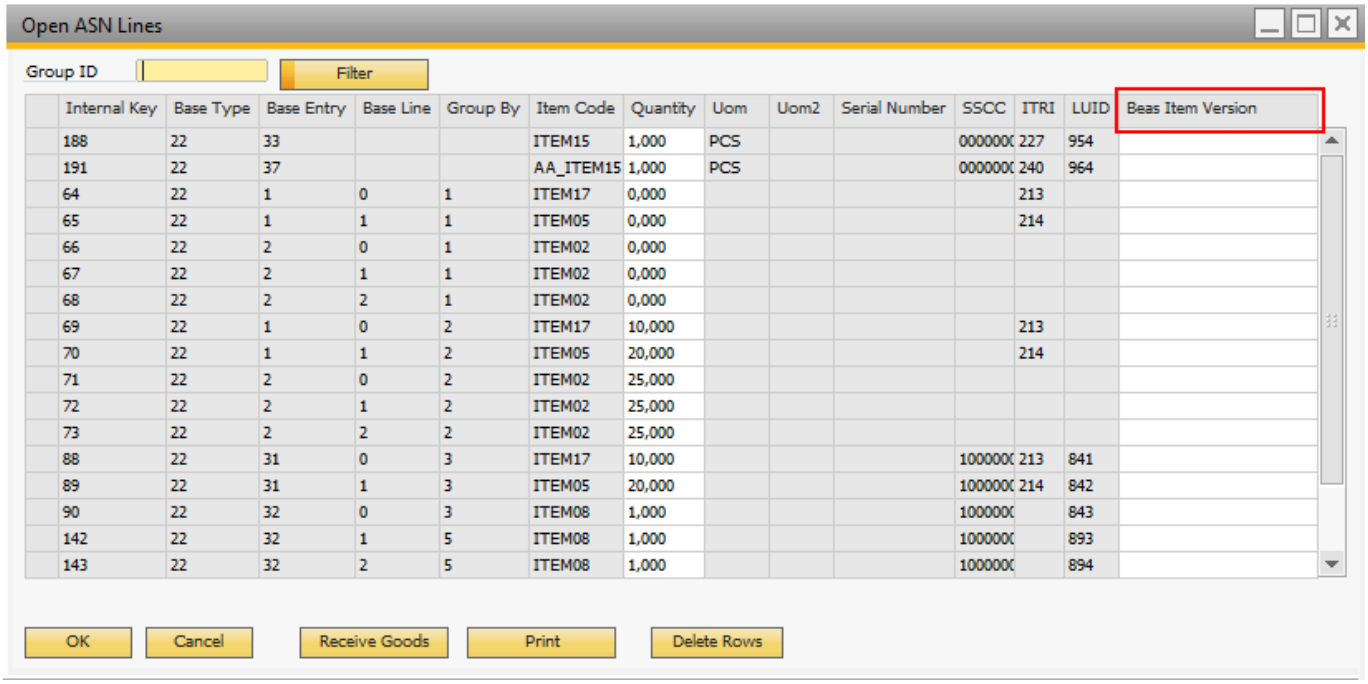
```
ObjType;DocNum;LineNum;ItemCode;Quantity;SSCC;MasterSSCC;Batch;Batch2;BBD;Se
rialNumber;UF1;UF2;UF3;BeasItemVersion
22;65;0;BVITEM1;1;00123456000000094;;BV1-092304;;;;;;;0001
22;65;1;BVITEM2;1;00123456000000094;;;;;BV2-0923-05;;;;0001
```

```
22;65;2;BVITEM1;2;00123456000000094;;BV1-092305;;;;;;0005
22;65;3;BVITEM2;1;00123456000000094;;;;;BV2-0923-06;;;;0003
```

When the Good Receipt PO document is generated, you can see the version in the Batch Number Transaction Report or Serial Number Transactions Report.

Open ASN Lines window

In the Open ASN Lines window a separate Beas Item Version column is displayed. The fields of the column can be filled and saved and in this way the Mobile Client does not ask for the version number.



When the Good Receipt PO document is generated, you can see the version in the Batch Number Transaction Report or Serial Number Transactions Report.