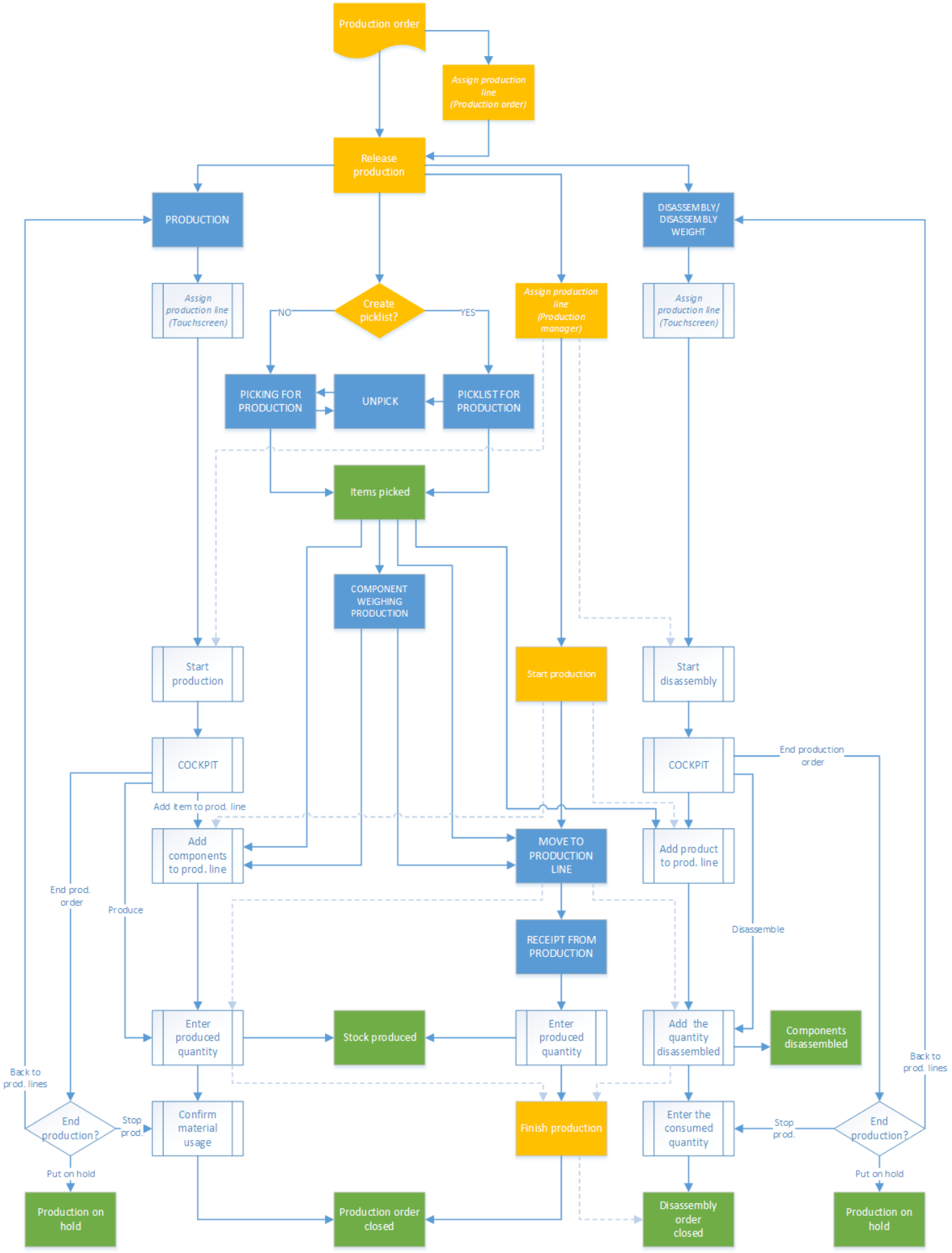
Production Guide

The process chain of the production consists the following steps:

1. creating a production order
2. releasing the production order
3. picking for the production
4. starting the production
5. moving the components to the production line
6. producing
7. finishing the production



1. Configuration settings for the production

Before starting the production process, adjust the following configuration settings:

1.1. Quality status
Define the default status for the produced items. At the company level of the Organizational Structure go to the Production tab. Select the quality status from the dropdown menu. For more information about the quality status see: 5.1.9. Quality status

1.2. Production line settings
Adjust the settings of the production lines. For more information about the production line settings see: 5.2.3. Production line settings

1.3. Production controller
Customize the settings of the production in the production controller. For more information about the production controller see: 5.1.3.48. Production controller

1.4. Picking for production
Customize the settings of the picking in the Picking for production controller. For more information about the controller see: 5.1.3.47. Picking for production controller

1.5. Batch number of the product
When producing items managed by batches, specify the settings of the batch number.
On the Batchnumber production company controller, select an extension to define the batch number format. Adjust the batch number settings on the controller. For more information about the batch number controller see: 5.1.3.4. Batchnumber production company

1.6. Best before date for the product
The best before date settings can be specified for items with best before dates.
Adjust the calculation formula of the best before date on the 3.2.3.29. Expiry definition UDT. Link the expiry definition to the item in the Produmex Production tab on the 3.1. Produmex Production Tab.
Adjust the settings of the best before date modification on the Best before for production generator.
For more information about the generator see: 5.1.3.6. Best before for production generator

1.7. Item settings
Adjust the settings of the product and the materials in the Produmex Production tab of the Item Master Data. For more information see: 3.1.3. Produmex Item Master Data Tabs

1.8. Scale configuration
It is possible to integrate a scale to the production process. For more information see:8. How to setup/ integrate a scale with Produmex

2. Create a production order

Create a production order in SAP B1. For more information about the Produmex extensions on the ’Bill of Materials’ and ’Production Order’ screens see: 3.3. Production When a production order is created, both the SAP and Produmex status of the order is ‘Planned’.

3. Release the production order

Production orders can be released in the office environment only. The order release can be performed

on the production order or on the production manager.

3.1. Production order

3.1.1. Assign the production line on the production order

Please note that the production line can only be assigned or changed on the production order if the SAP status of the order is 'Planned'.

Select a production line from the dropdown menu next to the 'Warehouse' field. Only the active production lines located in the product's warehouse are listed.

3.1.2. Release the order

Change the SAP status of the order from 'Planned' to 'Released' then press the 'Update' button. The Produmex status of the order will remain 'Planned' until the production is started. As long as the Produmex status is 'Planned', the SAP status of a released order can be changed to 'Planned' or to 'Closed'.

3.2. Production manager

Open the 'Production manager' from the Produmex Production menu. For more information about the Production manager screens see: Production manager screens

Press the 'Production orders' button to open the 'Production order' screen.
On the Production order screen select the production line from the dropdown menu.

Select a production order from the list. The following production orders will be listed:

- Production orders without an assigned production line. These production orders will be listed under every production line. The 'Production line' field is empty.
- Production orders assigned to the selected production line.

To release the order click on the 'Release order' button. The status of the order will be changed from 'Planned' to 'Released'. The 'Release order' button is only active when the status of the selected line is 'Planned'.
After a production order without an assigned production line has been released, the production still can be started at any free production line.

4. Start the production order

Production orders can be started in the office environment or on the shopfloor.
When using the 'Receipt from Production' flow, it is possible to start multiple production orders on one production line, except if the 'Only 1 started production order allowed' option is set to true for the production line. For more information see: 5.2.3. Production line settings
When using the 'Production' flow, only one started production order is allowed on the production line.

4.1. Office

In the office environment the production order can be started on the production order or on the Production Manager.

Production order
Click on the *'Start'* button to start the production order. The button is only active is the following verifies:

- The status of the production order is released.
- The production order has an assigned production line.

A 'Start production' window will open up. Click on the 'Cancel' button to close the form.

Production manager
Open the Production Manager and click on the 'Production orders' button. Select the production line from the dropdown menu. Select the production order and click on the 'Start production order' button. The button is only active when the status of the selected order is 'Released'.

A 'Start production' window will open up. To go back to the previous screen, click on 'Cancel'.

4.1.1. Assign a tank

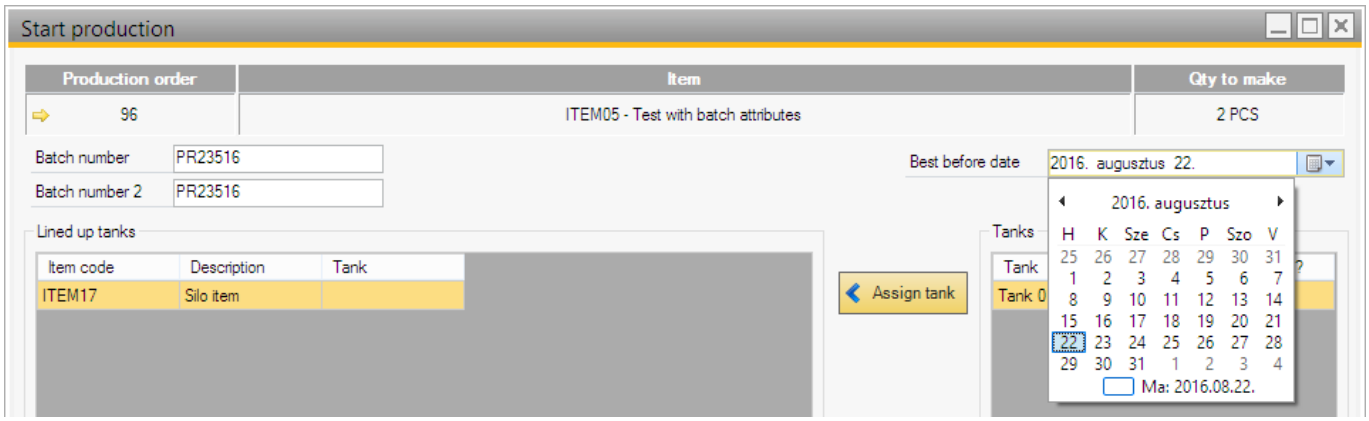
When there is a component that has to be lined up, assign a tank to the component on the 'Start production' screen before starting the production order.
Select a component from the 'Lined up tanks' section. Then select a location listed under 'Tanks'. Only locations that verify for the following are listed:

- the location is lined up
- the location is added to the production line as a lined up location
- there is stock of the component available on the location

Press the 'Assign tank' button. After a lined up location has been assigned to the component, the code of the location is displayed in the 'Tank' field.
When the 'Auto line up selection' option is enabled on the Item Master Data of the component, the system will automatically line up the location for the component.

4.1.2. Batch number and best before date

When the produced item is managed by batches and/or has a best before date, based on the settings, the batch number and the best before date can be changed on this screen. For more information about the batch number and best before date settings for production see: *1.5. Batch number of the product, 1.6. Best before date for the product.* Enter the batch number(s) and/or select the best before date from the calendar.



4.1.3. Start the production order

After the lined up locations have been assigned and the batch number(s) and best before date have been defined, click on the ‘Start production’ button to start the production.
After the production order has been started, the status will be changed from ‘Released’ to ‘Started’ and the order will be assigned to the production line where it was started. On the production order the Produmex order will be changed to ‘Started’. The SAP status will remain ‘Released’.
The ‘Production line details’ button is only active when a production order with the status ‘Started’ is selected. It opens up the ‘Production details’ screen.

4.1.4. Change tank

It is possible to change the assigned lined up location after the production has been started. On the ‘Production detail’ screen select a component from ‘Ingredients (lined up)’ list. Then select a lined up location from the ‘Tanks’ list. Click on the ‘Change tank’ button. This button is only active if the selected lined up location is not assigned to the component.
A ‘Production – swap tank’ window will open up.
Add the quantity or weight remaining in the previous tank to the respective field.

4.2. Shopfloor

Production orders can be started also on the shopfloor. When using the default settings, the production order can be started only in the ‘Production’, Disassembly’ and ‘Disassembly – weight’ flows. When the ‘Allow starting production order on production receipt flow?’ option is enabled on the Production controller, the production order can be started also in the ‘Receipt from Production’ flow.

For the detailed description about starting production orders on the shopfloor see:

- Receipt from production flow:8.1.2. Select a production order
- Production flow: 8.2.4. Start production
- Disassembly flows:8.3.4. Start production

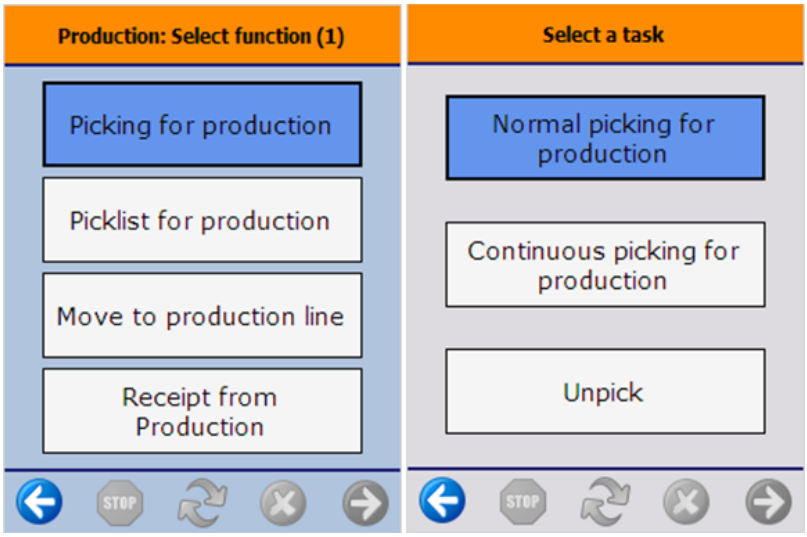
5. Production picking

In the picking step collect the needed components for the production. Based on the Production line settings, the destination of the picking can be the input location or the pick to location.

Produmex offers two flows for picking the components of a production. The 'Picking for production' flows uses the production order as an input. Because the picking is performed without a picklist, the stock to be picked is not locked in the inventory. The picked quantity can exceed the planned quantity in the production order. **Picking for production can only be used when the final product warehouse and the warehouses set on the component level are identical.**

The 'Picklist for production' flow uses a pick list generated from the production order as an input. The system will lock the stock when creating the proposal and the pick list. Pick lists can only be generated from a production order when the 'Create proposal for picking' option is set to true in the Picking for production controller. The picked quantity cannot exceed the proposed quantity in the pick list. **Picklist for production can be used if final product warehouse and the warehouses set on the component level are identical, or not identical. Picklist for production flow can create warehouse transfer documents, while Picking for Production flow cannot.**

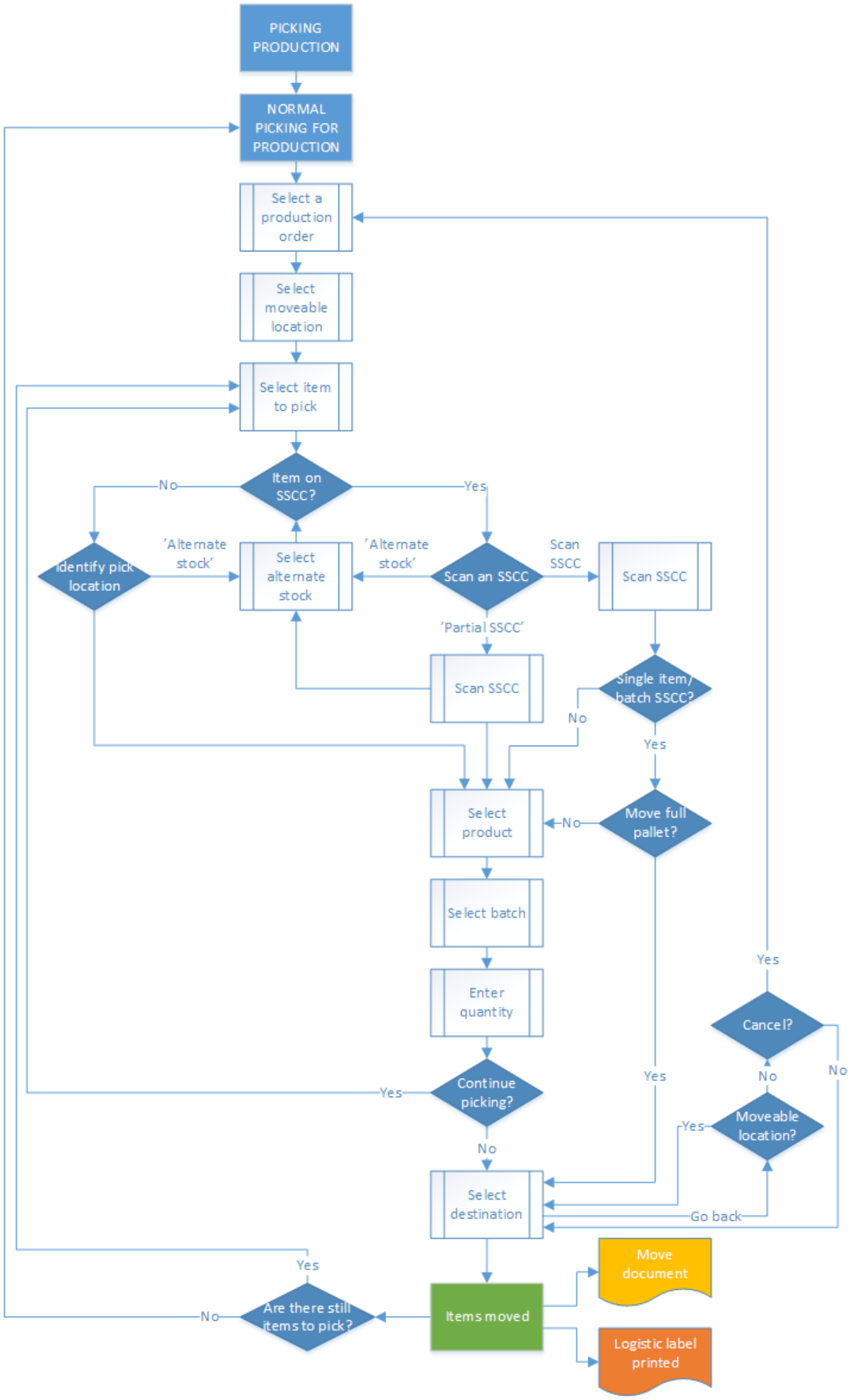
5.1. Picking for production



Press the 'Picking for production' button. On the next screen select a task.
Press the 'Normal picking for production' button to pick for the production.
Press the 'Unpick' button to remove previously picked stock from the pick/input location.

When the 'Allow continuous picking for production' option is enabled on the Picking for production

controller, an additional 'Continuous picking for production' button is displayed on the screen. When performing the picking with this flow, the system will allow to pick production order lines whose full quantity has been picked.

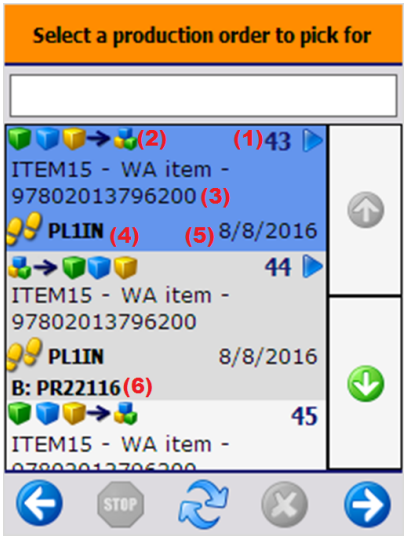

PICKING PRODUCTION
NORMAL PICKING FOR PRODUCTION
Select a production order
Select moveable location
Select item to pick
Item on SSCC?
No
Yes
Identify pick location
'Alternate stock'
Select alternate stock
'Alternate stock'
Scan an SSCC
Scan SSCC
Scan SSCC
'Partial SSCC'
Scan SSCC
Single item/ batch SSCC?
No
Yes
Select product
No
Move full pallet?
Select batch
Enter quantity
Yes
Cancel?
No
No
Continue picking?
Yes
Yes
Moveable location?
No
Select destination
Go back
Yes
Move document
Are there still items to pick?
No
Items moved
Logistic label printed

- Normal picking for production
- Select moveable location
- Select a product to pick
- Select alternate stock
- Identify SSCC/ pick location
- Identify SSCC/ pick location
- Identify SSCC/ pick location
- Identify product
- Select destination location

5.1.1. Normal picking for production

5.1.1.1. Select production order

Select a production order to pick from the list. Only production orders with an assigned production line and 'Released' or 'Started' status are displayed in the list. Proceed with the right arrow button. The following information is shown on the list:



1. The production order number. Started production orders are indicated with an icon.
2. The order type. It is possible to pick for 'Standard', 'Special' and 'Disassembly' type of production orders too with this flow. 'Standard' and 'Special' production orders are indicated with an icon and 'Disassembly' production orders are indicated with an icon.
3. The code, description and barcode of the item to produce.
4. The destination location of the picking. Depending on the Production line settings, the input or the pick to location of the production line is assigned to the production order.
5. The due date of the production order.
6. The batch number of the product.

5.1.1.2. Select moveable location

Press the 'No moveable location' button or select a moveable location from a list to move the picked items with a moveable location. *The steps for picking with or without a moveable location are identical except for the cancellation. When picking onto a moveable location, the list of the already*

picked items cannot be cleared.

5.1.1.3. Select a product to pick

Select a production order line to pick from the list. Proceed with the right arrow button. The following information is shown on the list:

1. The code, description and barcode of the item to pick.
2. The quantity that still needs to be picked. It is calculated by: {Already picked quantity - Planned quantity}. When picking with the 'Normal picking for production' flow, the production order lines whose full quantity has been picked are not displayed on the list. When picking with the 'Continuous picking for production' flow, those order lines are displayed too.
3. The available quantity on the input location of the assigned production line.
4. Optional components are indicated with an icon.
5. Lined up and time registry components are not listed.

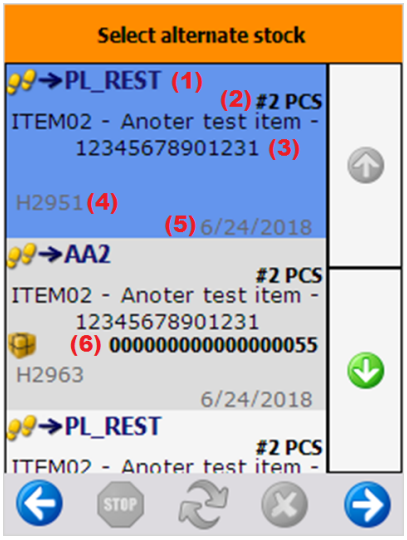
5.1.1.4. Identify SSCC/ pick location

Identify the SSCC or location to pick from. The system sorts the proposed stock based on the option selected as 'Picking order by' in the Picking for production controller. The details of the first proposed stock will be displayed on the bottom of the screen.
When the proposed stock to pick has a linked SSCC, the 'Scan an SSCC' screen is displayed. On the bottom of the screen the pick location and the SSCC is shown. Scan the SSCC.
In case of the scanned SSCC was linked to a single item or batch pallet, the system asks whether to move the full pallet or not. Press the 'Yes' button to move the full logistic unit. Press 'No' to move only a partial unit.
To pick only a partial pallet, press the 'Pick partial logistic unit' button. On the next screen scan the SSCC. When moving only a partial logistic unit, identify the products to move.

When the proposed stock to pick has no linked SSCC, identify the pick location. Scan the location or select it from the list after pressing the 'Select location' button. Only the location that is displayed on the bottom of the screen can be scanned or selected.

5.1.1.5. Select alternate stock

To pick from another SSCC or location, press the ‘Alternate stock’ button and select a production line from the list and proceed with the right arrow button. The following information is shown on the list:

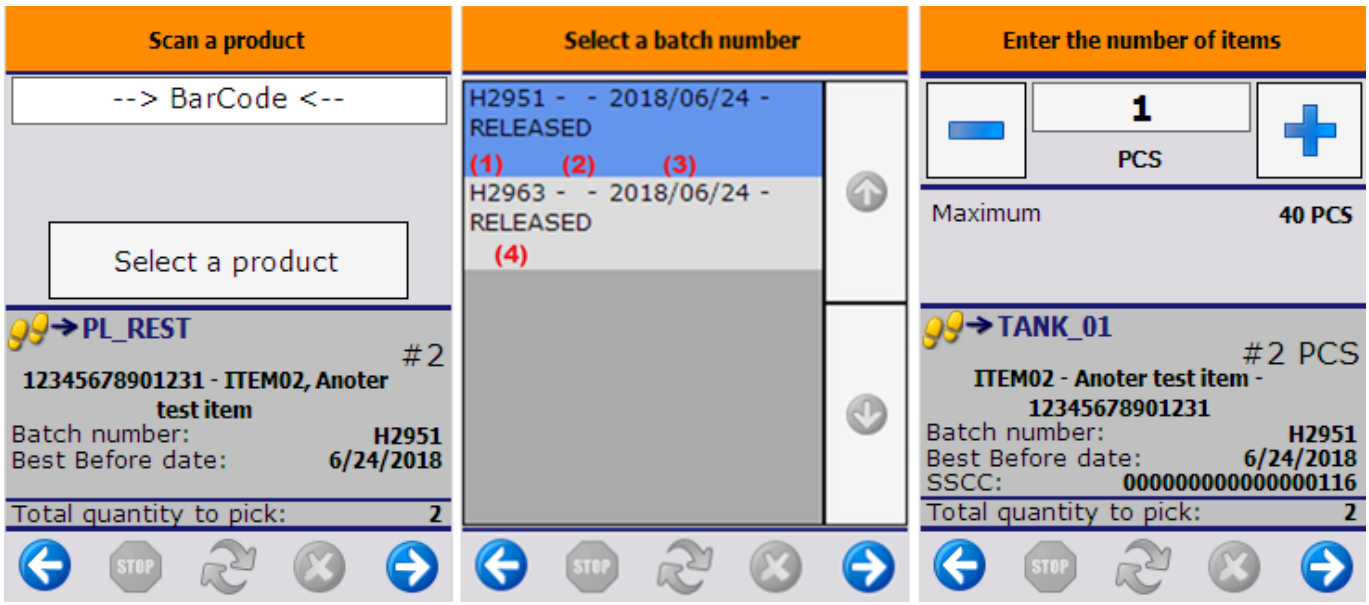


1. Pick location
2. Quantity to pick
3. Code, description, barcode of the item to pick
4. Batch number
5. Best before date
6. SSCC if the displayed stock is full pallet

On the next screen scan the SSCC or the pick location.

5.1.1.6. Identify product

Identify the product to pick. In case a full logistic unit is moved, the system automatically skips the following screens.
Scan the product or select it from a list after pressing the ‘Select a product’ button. Only items stored on the selected logistic unit or pick location are displayed on the list.



Select the batch from the list. The following information is shown on the list:

1. Batch number
2. Second batch number
3. Best before date
4. Quality status

When there is only one batch on the location or the logistic unit for the item, then the system automatically proceeds with that batch.

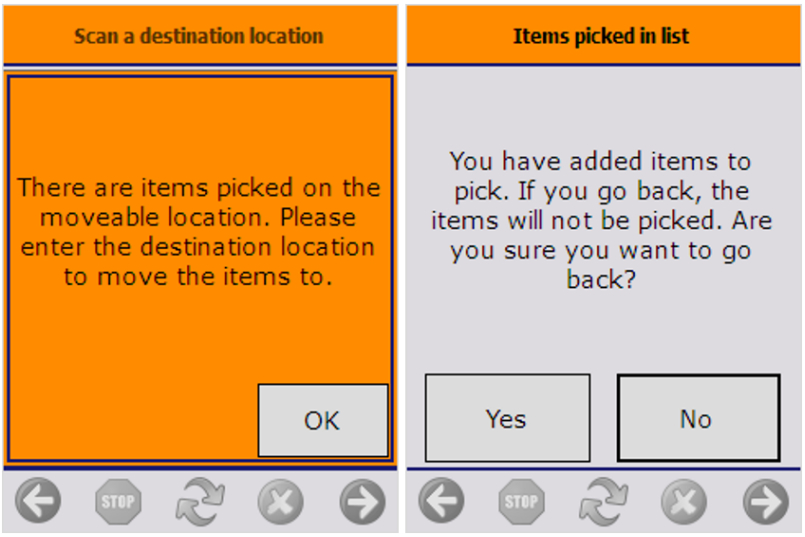
Enter the quantity to pick. The picked quantity can exceed the quantity in the production order, but is limited by the available quantity on the logistic unit or pick location. For more information about quantity entering methods see: 4.3.4. Screens for entering additional information

5.1.1.7. Select destination location

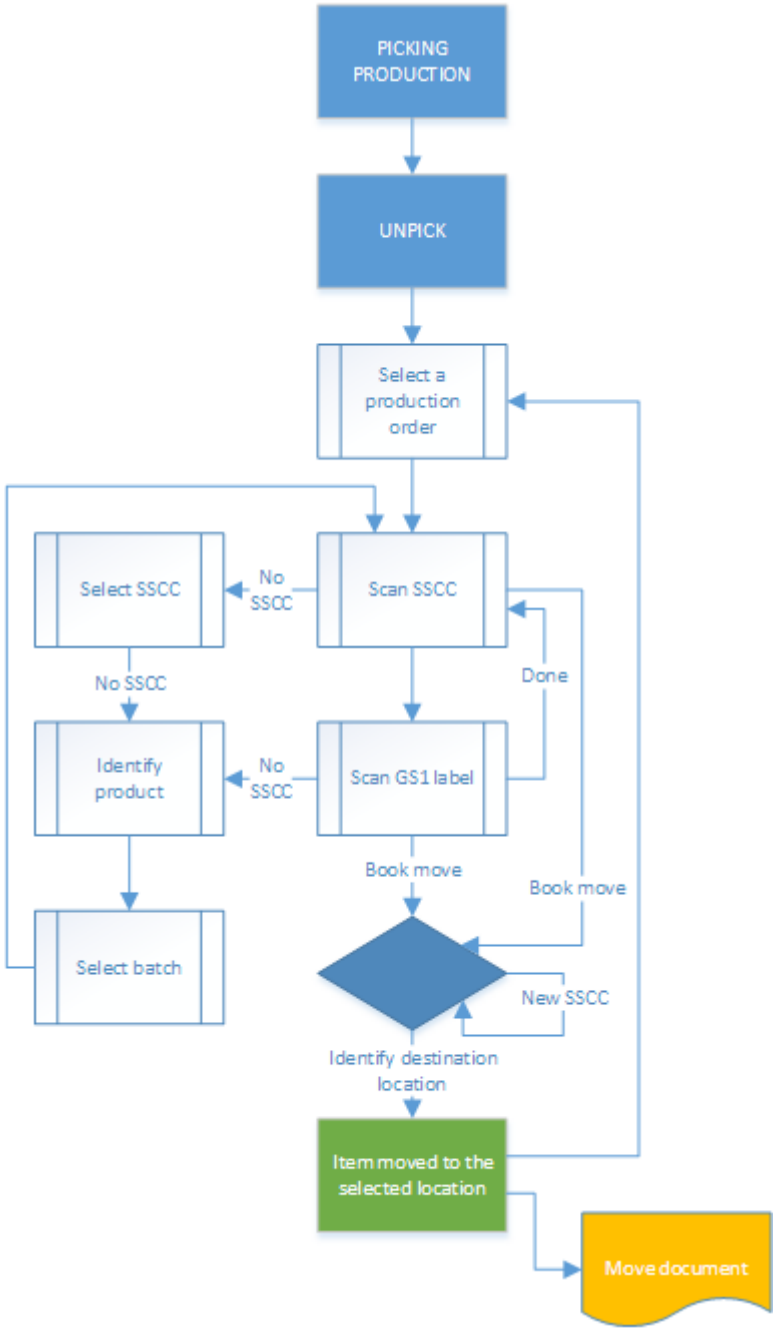
After the product has been identified, scan the destination location or select it after pressing the 'Select location' button. Only the default location can be selected as the destination location. The default location is the input location of the production line. *When a pick to location is set for the production line, it is the default location.*
To continue the picking, press the 'Continue picking' button. The system will go back to the 'Select product to pick' screen. The button is only displayed when there are still components to pick.
When all the components have been picked, and the destination location has been identified, the system shows the 'There are no more items to pick' message.
After the picked items have been moved to the destination location, the system generates a 'Move' document in the Produmex office module to register the movement.
When the *Picking for production: (After picking 401)* print event is set in the Organizational Structure, the system asks whether to print the picklist for production. Press the 'Yes' button to print the pick list.

5.1.1.8. Cancellation

To cancel the picking, press the left arrow button. When nothing was picked, the system will go back to the 'Select a task' screen.
In case of picking onto a moveable location, the system will ask for identifying the destination location for the already picked products.
In case of picking without a moveable location, the system will ask for confirmation. To cancel the process, press 'Yes'. The list of the picked items will be cleared. To proceed with the already picked items press 'No'.


Scan a destination location
There are items picked on the moveable location. Please enter the destination location to move the items to.
OK
Items picked in list
You have added items to pick. If you go back, the items will not be picked. Are you sure you want to go back?
Yes
No

5.1.1. Unpick



- Select production order
- Identify SSCC
- Identify product
- Select destination location

5.1.2.1. Select a production order

Select a production order from the list. Every production order with at least one picked component is displayed in the list, regardless of the flow the picking was performed.

5.1.2.2. Identify SSCC

Scan the SSCC. To select the SSCC from a list, press the 'No SSCC' button. Only SSCC's stored on the pick location of the assigned production line can be scanned or selected.
When there is no SSCC present, press the 'No SSCC' button. On the next screen press again the 'No SSCC' button.

After an SSCC was identified, scan the GS1 label or press the 'Done' button to proceed with the unpicking.

5.1.2.3. Identify product

When unpicking only a partial logistic unit, identify the product. Scan the product or select it from a list after pressing the 'Select a product' button. Every item that can be found on the pick to or input location will be listed, but only items linked to the production order can be scanned or selected.
When the item is managed by batches and there are more than one batch on the logistic unit or pick location, select the batch as well.

After a product has been identified, the system goes back to the 'Scan an SSCC' screen. An extra 'Book move' button is displayed. Press this button to finish the unpicking.

5.1.2.4. Identify destination location

After the 'Book move' button was pressed, identify the destination location. 

A default location is displayed on the screen.

When the location suggestion is enabled for the warehouse, the *Default location* is the first suggested location calculated based on the logic described in Location suggestions.

Note: When we use the suggested location functionality in the reception flow (receiving items to a location instead of a dock) and the system cannot find a suitable location for the item, it automatically receives the item to the dock.

When the location suggestion is not enabled for the warehouse, the *Default location* is the standard location set for the given warehouse on the Produmex Inventory tab of the Item Master Data of the item. If the items to move have different standard location set for the warehouse, no default location is displayed.

Scan an SSCC to unpick the product to that SSCC. If the scanned SSCC is not in stock, identify the destination location on the next screen.

Scan a location to unpick the products to that location or press the ‘Select other location’ to select it from a list.

Press the ‘New SSCC’ button to unpick to a new SSCC. On the next screen scan a location or select it from a list after pressing the ‘Select other location’ button.

After the unpicked items have been moved to the selected location, the system generates a ‘Move’ document in the Produmex office module to register the movement.

After a component was unpicked, it can be picked again with the ‘Normal picking for production’ flow.

5.1.2.5. Cancellation

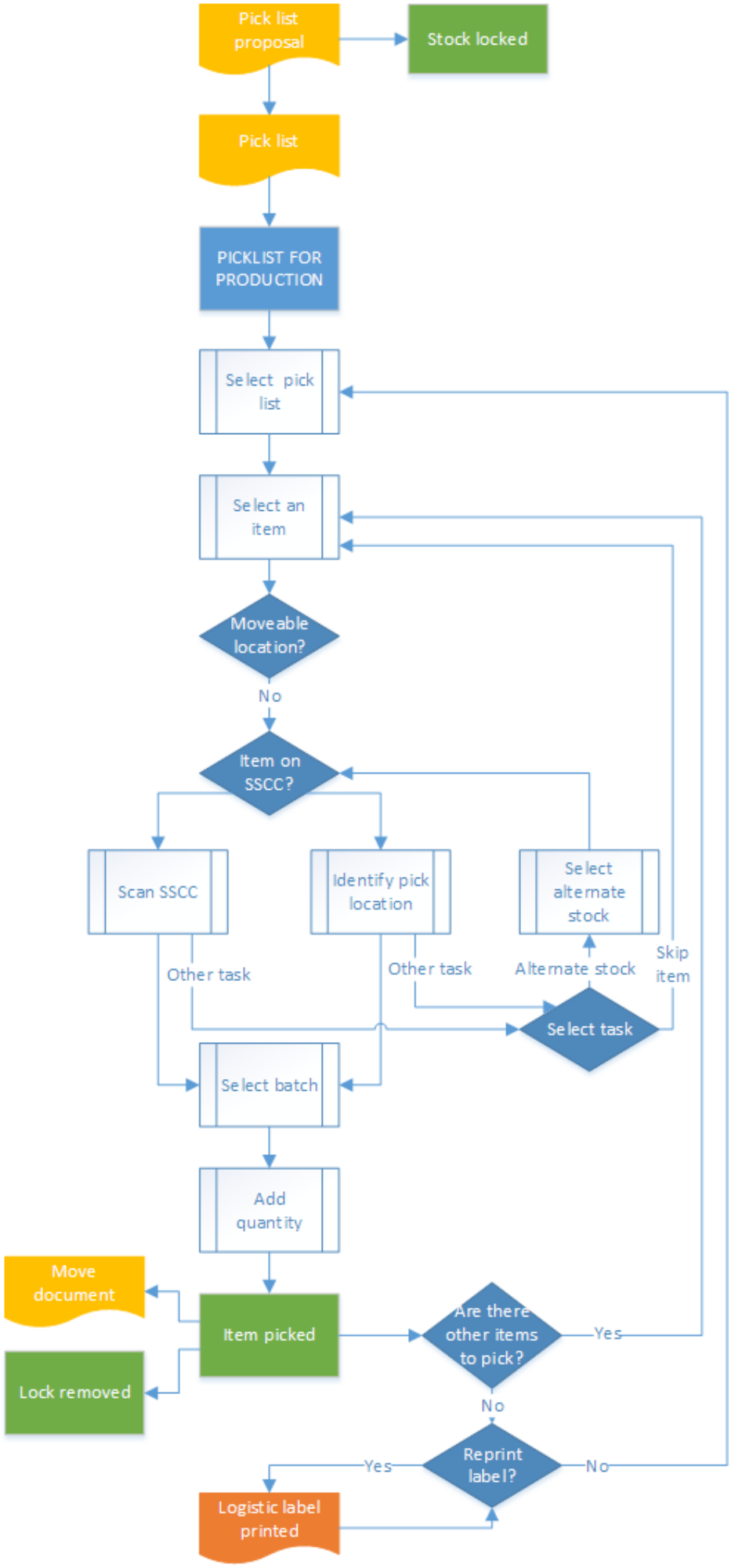
To cancel the unpicking, press the left arrow button. When there are already unpicked products the system will ask whether to process with the unpick or not. Press the ‘Process unpick’ button to book the unpick. Press the ‘Cancel unpick’ button to clear the list of unpicked products.

5.2. Picklist for production

NOTE: in the Beas integration procedure, picklists are created by WMS in the warehouse that is defined in the WO BoM (in case of available inventory) even if a Beas Reservation exists for another warehouse in the actual Work Order.

5.2.1. Office

Before picking with the Picklist for production flow, create a pick list in the office environment.
On the production order click on the ‘Create pick list proposal’ button. The button is only displayed if the ‘Create proposal for picking’ option is set to true in the Picking for production controller. A pick list proposal will be generated and the stock to be picked will be locked. It is only possible to create a pick list proposal for a production order with an assigned production line.
It is also possible to create pick lists for production via the Pick list proposal manager.
Then click on the ‘Gen. pick list’ button on the pick list proposal window to create the pick list. It is only possible to generate a pick list for released production orders.


Pick list proposal
Stock locked
Pick list
PICKLIST FOR PRODUCTION
Select pick list
Select an item
Moveable location?
No
Item on SSCC?
Scan SSCC
Identify pick location
Select alternate stock
Other task
Other task
Alternate stock
Skip item
Select task
Select batch
Add quantity
Move document
Item picked
Are there other items to pick?
Yes
Lock removed
No
Reprint label?
Yes
No
Logistic label printed

- Pick list for production
- Select a pick list
- Select an item
- Identify moveable location
- Identify the SSCC or pick location
- Select batch
- Other tasks
- Enter quantity
- Picked pallet

5.2.2. Shopfloor

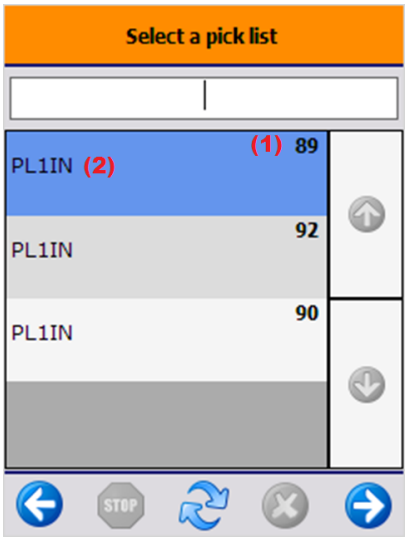
5.2.2.1. Initiate the flow

To initiate the flow, press the ‘Pick list for production’ button on the scanner.

5.2.2.2. Select a pick list

Select a pick list from the list. Only active pick lists for a production order will be displayed. The following information is shown on the list:

1. Production order number
2. Destination location of the picking. Depending on the settings of the production line, the destination location is the input location or the pick to location of the production line.



5.2.2.3. Select an item

Select a pick list line to pick. Press the right arrow button to proceed.

5.2.2.4. Identify moveable location

Press the ‘No moveable location’ button to pick the components directly to the destination location. During this flow it is not recommended to pick onto a moveable location.

5.2.2.5. Identify the SSCC or pick location

Scan the SSCC or the pick location. To select the pick location from a list, press the ‘Select location’ button.

1. Pick location
2. Quantity to pick from the item
3. Item to pick
4. Storage logistic unit
5. Total quantity of the pick list

5.2.2.6. Select batch

When the item is managed by batches and there are more than one batch on the logistic unit or pick location, select the batch as well. Only the batch defined in the pick list can be selected.

5.2.2.7. Other tasks

Press the ‘Other task’ button to reach the following tasks:

- Alternate stock
- Skip item

Press the ‘Alternate stock’ button to select alternate stock. On the next screen select the alternate stock from the list. After the alternate stock has been selected, identify it as described above.
Press the ‘Skip item’ button to skip the item. The system will go back to the ‘Items still to pick’ screen. (5.2.2.3.)

5.2.2.8. Enter quantity

After the SSCC or pick location was identified, enter the quantity to pick. The picked quantity cannot exceed the quantity in the pick list.

5.2.2.9. Picked pallet

After the quantity has been added, the locking is removed for the product. The product is moved to the destination location. The movement is registered in the Produmex office module in a 'Move' document. Proceed with the next line of the pick list. After every component has been picked, the system displays information about the picked pallet.

1. Name of the production line
2. SSCC of the new logistic unit

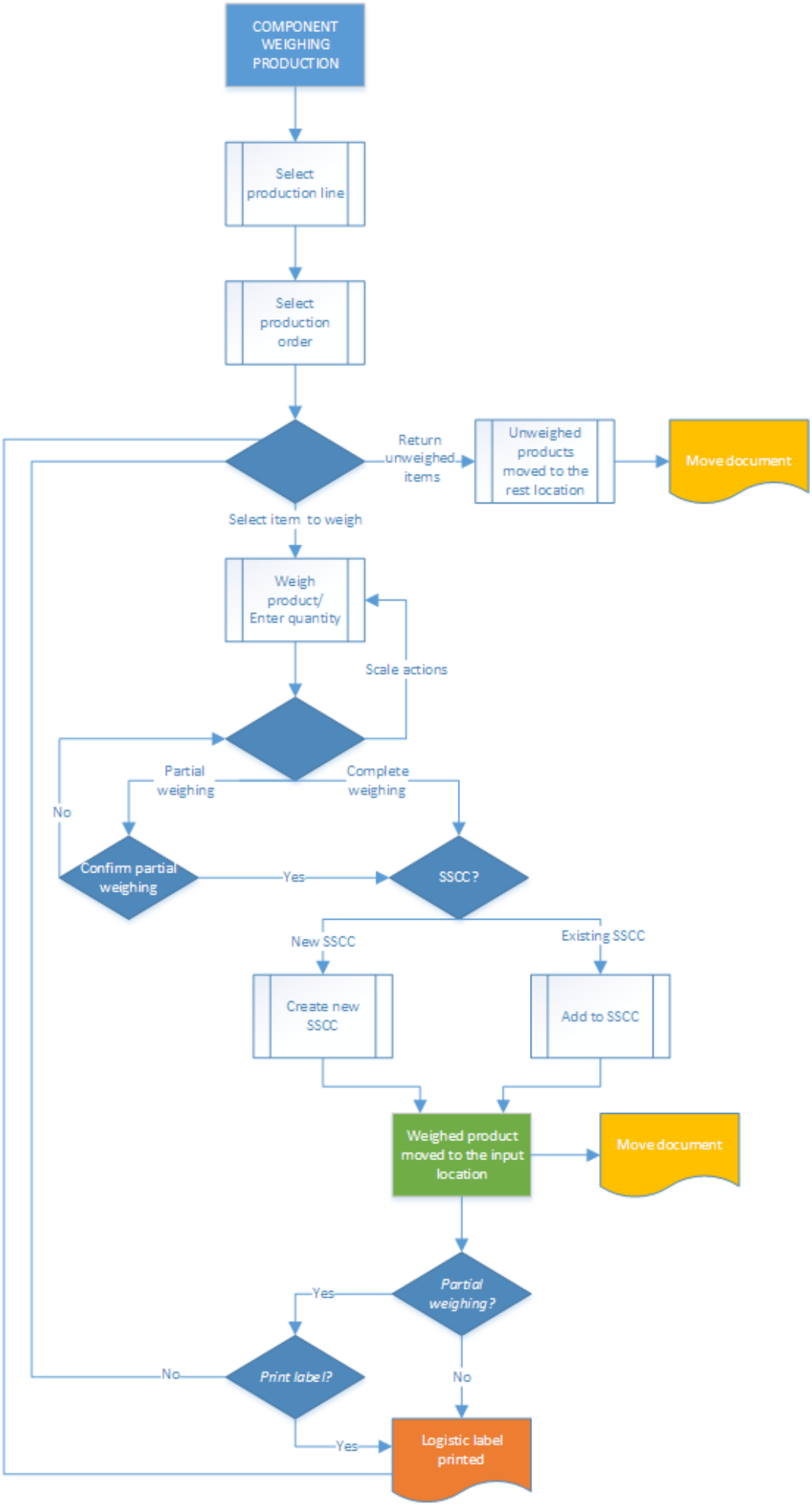
Note:

- NEW If the full quantity of the selected item is picked and the *204 - Picking: after item is picked* print event is set for the pick list type on the Print Events tab of the Organizational Structure, the system asks if you want to print a label. To proceed with the printing click OK.
- When the 'Picking for production: new LU full event (201)' print event is set in the Organizational Structure, the print event is triggered and the logistic label is printed. The default report for this print event is the *DefaultLogisticsLabel.rpt*.

6. Component weighing production

When the 'Prod. Order start condition' is set to 'Component weighed' for a component in the Bill of Materials , weigh the component before moving it to the production line.
Please note: This step is only for items where the weight is the primary uom.

Products picked to the Pick to location of the production line can be weighed. *When the production line has no pick to location set, the components picked to the input location can be weighted.*


COMPONENT WEIGHING PRODUCTION
Select production line
Select production order
Return unweighed items
Unweighed products moved to the rest location
Move document
Select item to weigh
Weigh product/ Enter quantity
Scale actions
Partial weighing
Complete weighing
No
Confirm partial weighing
Yes
SSCC?
New SSCC
Existing SSCC
Create new SSCC
Add to SSCC
Weighed product moved to the input location
Move document
Partial weighing?
Yes
No
Print label?
No
Yes
Logistic label printed

6.1. Initiate the flow

Press the ’Component weighing production’ button on the touchscreen.

6.2. Select a production line

Select a production line from the list. Only active production lines will be listed.

6.3. Select a production order

Select a production order from the list. Only released production orders that are not assigned to another production line will be displayed on the list. When there is a started production order on the production line, the system will proceed with that order automatically.
The following information is displayed on the list:

1. Type of the production order indicated with an icon. Please note that Disassembly type production orders are not supported in this flow.
2. Code, description and barcode of the item to produce.
3. Number and due date of the production order.

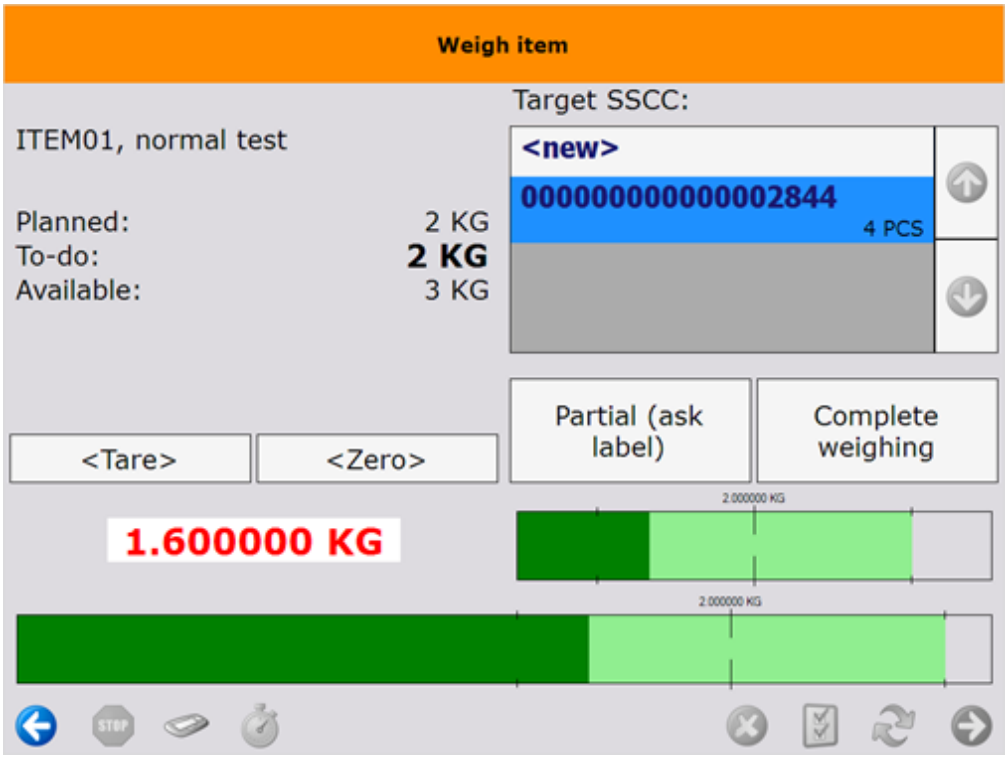
6.4. Select item to weigh

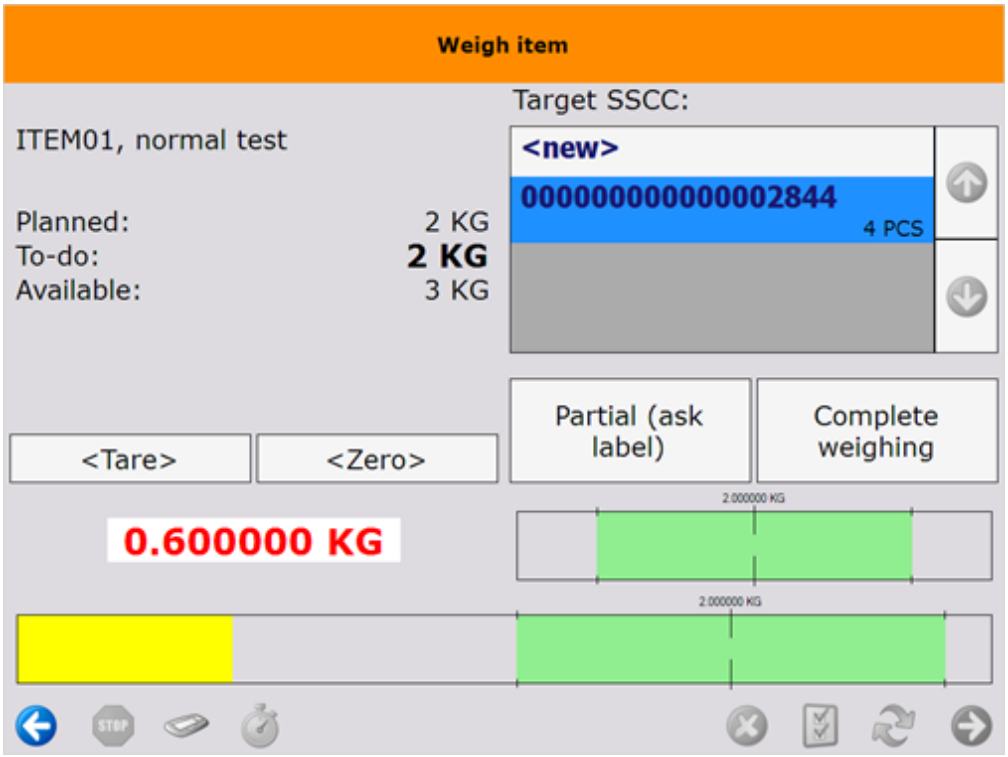
On the next screen every not lined up material from the production order will be listed.
Different batches will be displayed in separate lines.
The available quantity is the quantity of the batch on the location. The completed quantity is the weighted quantity. The planned quantity is the quantity in the production order line.
The quantity will be displayed in black when the components are not yet weighted but there are enough available stock for the weighing. The quantity will be displayed in red when there are no available stock to weigh. The quantity will be displayed in green when the weighing is completed.
Select a batch and press the right arrow button to weigh the products from that batch.

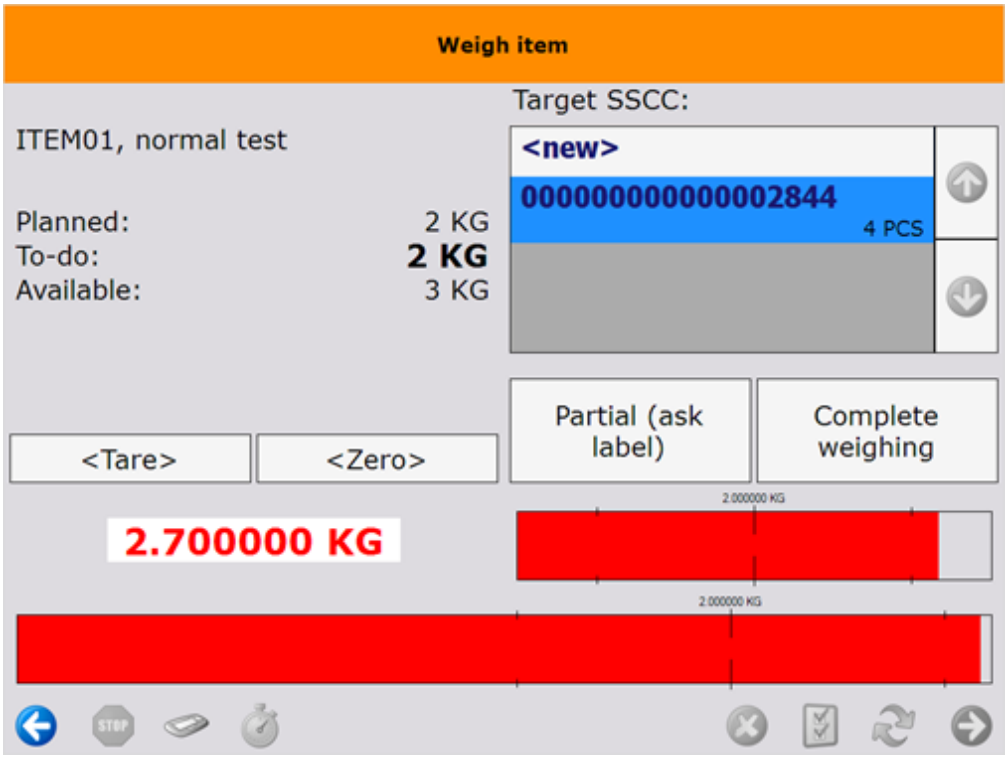
6.5. Weigh product

Weigh the products. It is also possible to enter the weight manually.
The To-do quantity is the quantity that still needs to be weighed. It is calculated by {Planned quantity-Completed quantity}.
There are two indicator bars displayed on the screen. The to-do quantity is marked on both bars.
When the quantity tolerance is greater than zero, the quantity tolerance range is also displayed on

the indicator bars.
The weighed quantity is displayed in green on the indicator bars when the quantity is in range. The weighed quantity is displayed in yellow on the indicator bars when the quantity does not reach the minimum range of the to-do quantity. The weighed quantity is displayed in red on the indicator bars when the weighed quantity exceeds the maximum range of the to-do quantity.
Press the '<Tare>' button to tare the scale.
Press the '<Zero>' button to zero the scale.







6.6. Select SSCC

Select the target SSCC for the weighed products. Press the '<new>' button to move the weighed components to a new logistic unit or select an SSCC from the list and press it.

6.7. Finish weighing

Press the 'Complete weighing' button to register the weighing of quantities within the quantity range. When the *Warehouse: new LU has been created (700)* print event is set in the Organizational Structure, the system triggers prints the label. The default report for this print event is the *'DefaultLogisticsLabel.rpt'*.
Press the 'Partial (ask label)' button to register the weighing of quantities less than the minimum quantity range. Based on the settings in the Production controller, the system might ask whether to print the label when the print event is set in the Organizational Structure.

The weighed products will be moved to the input location automatically.
Press the 'Return unweighed items' button to move the unweighed items to the rest location. The system will ask for confirmation. Press the 'Move' button to move the unweighted items. Press the 'Cancel' button to cancel the movement.

7. Move Components to the Production Line

You have the following options to move the picked components to the production line:

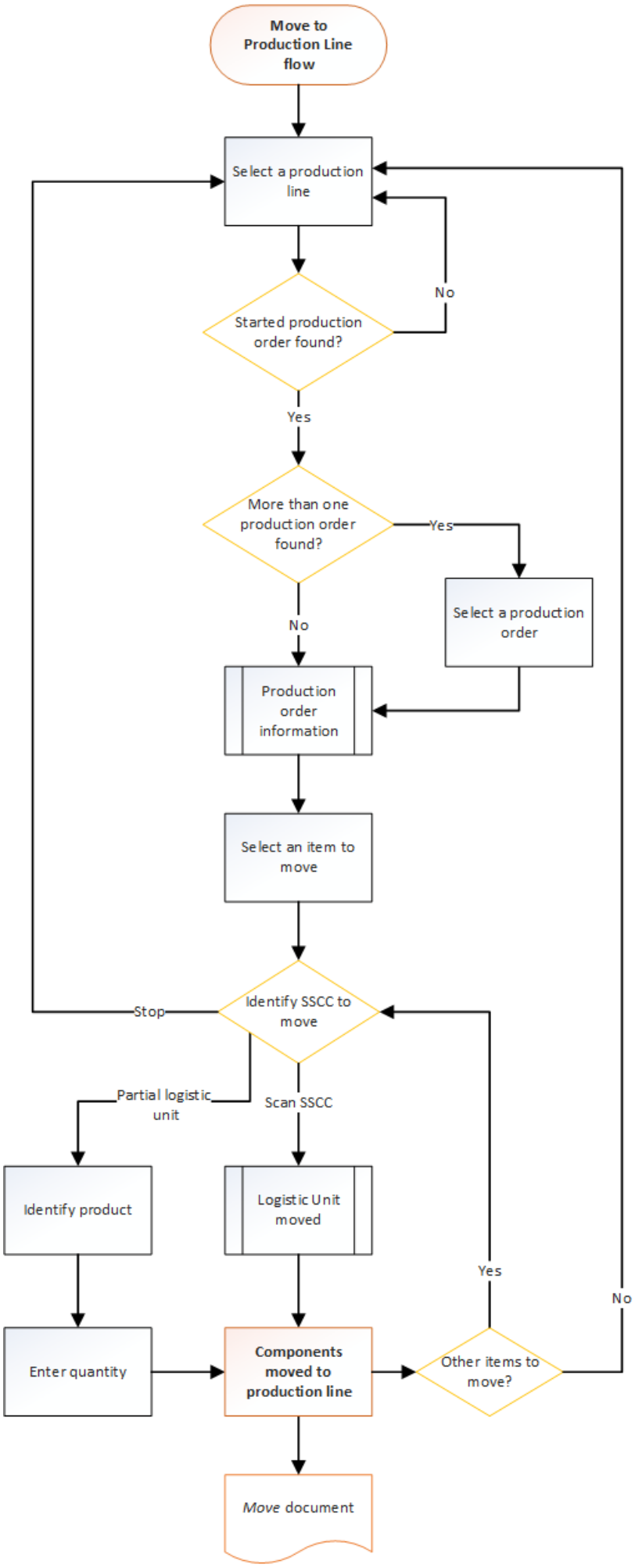
(1) If you produce with the Receipt from Production flow, the picked components can be moved to the production line with the Move to Production Line flow (see section 7.1 below).

(2) If you produce with the Production flow, you can use the Move to Production Line flow (see section 7.1 below) or you can move the components on the terminal (see 8.2.8. Move the components to the production line).

Note:

- When the *Auto move all linked items to BOM?* setting is enabled on the Production controller, the system automatically moves the components from the input location to the production line after selecting the production order in the Receipt from Production flow or Production flow.
- With default settings, components can only be moved from the input location to the production line. If the *Allow to move stock to prod. line from rest location?* setting is enabled on the Production controller, the components can also be moved from the rest location to the production line.

7.1. Move to Production Line flow


Move to Production Line flow
Select a production line
Started production order found?
No
Yes
More than one production order found?
Yes
Select a production order
No
Production order information
Select an item to move
Identify SSCC to move
Stop
Partial logistic unit
Scan SSCC
Identify product
Logistic Unit moved
Enter quantity
Components moved to production line
Other items to move?
Yes
No
Move document

7.1.1. Start the flow

Tap the *Move to production line* button on the scanner.

7.1.2. Select a production line

Select the production line on the *Select a production line* screen and tap the right arrow.

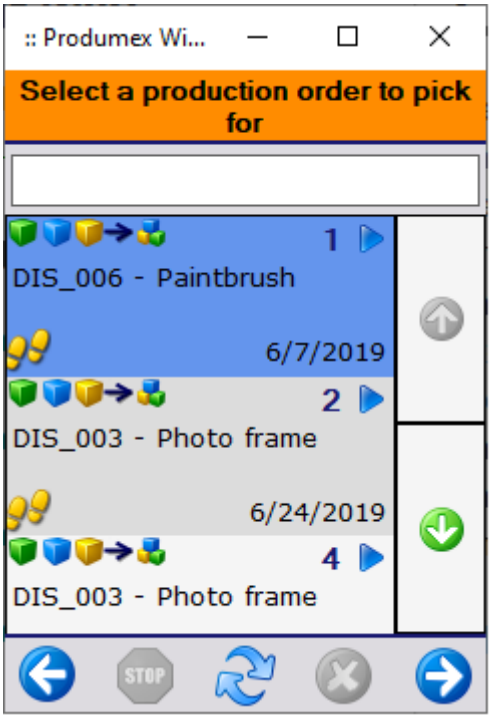
When there is no started production order on the selected line, the system displays the *No started production order found* message. Tap OK and the system goes back to the *Select a production line* screen.

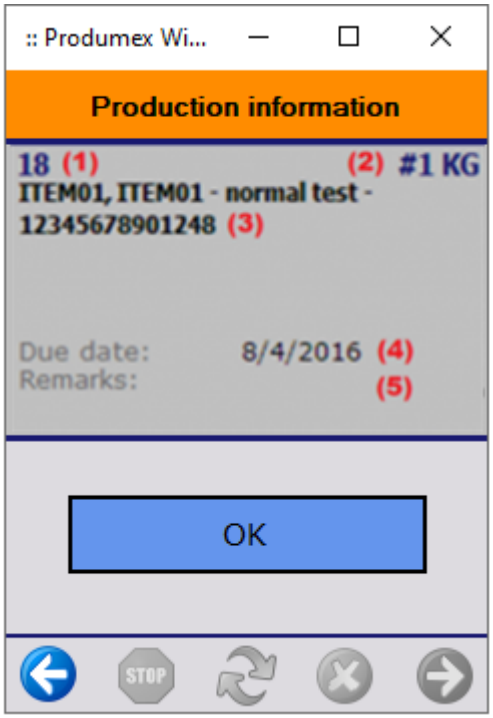
7.1.3. Select a production order

- If there is more than one started production order, the system displays the *Select a production order to pick for* screen.
  Select a production order, tap the right arrow and the system displays the *Production information* screen.
- If there is one started production order, the *Select a production order to pick for* screen is skipped and the *Production information* screen is displayed.
- The *Production information* screen displays the following information:

1. Production order number
2. Planned quantity
3. The code, the description and the barcode of the item to produce
4. The due date of the production order
5. Remarks for the production order

- Tap OK.





7.1.4. Select an item to move

After identifying the production order, the system lists the components from the production order on the *Items to move* screen. Only those components are listed that are available on the input location.

Note: Time registry items are not displayed on the list.

Next to the item code the system displays the quantity to be moved. Negative quantity means that the quantity on the production line exceeds the planned quantity.

Select an item and tap the right arrow button.

7.1.5. Identify the SSCC to move

On the *Identify the SSCC to move* screen you have the following options:

- a) scan the SSCC to move (see section (a) below),
- b) move a partial logistic unit (see section (b) below),
- c) go back to the *Select a production line* screen by tapping the `Stop` button or the left arrow.

a) Scan the SSCC to move.

Note: Only SSCCs meeting the following conditions can be moved:

- there are items linked to the production order on the logistic unit,
- the logistic unit is stored on the input location of the production line.

When the SSCC is scanned and the logistic unit is moved to the production line, the system displays the *Logistic unit/items are moved* message. Tap OK.

The movement is registered in the Produmex office module in a *Move* document.

If there are other items to move, the system displays the Identify the SSCC to move screen.

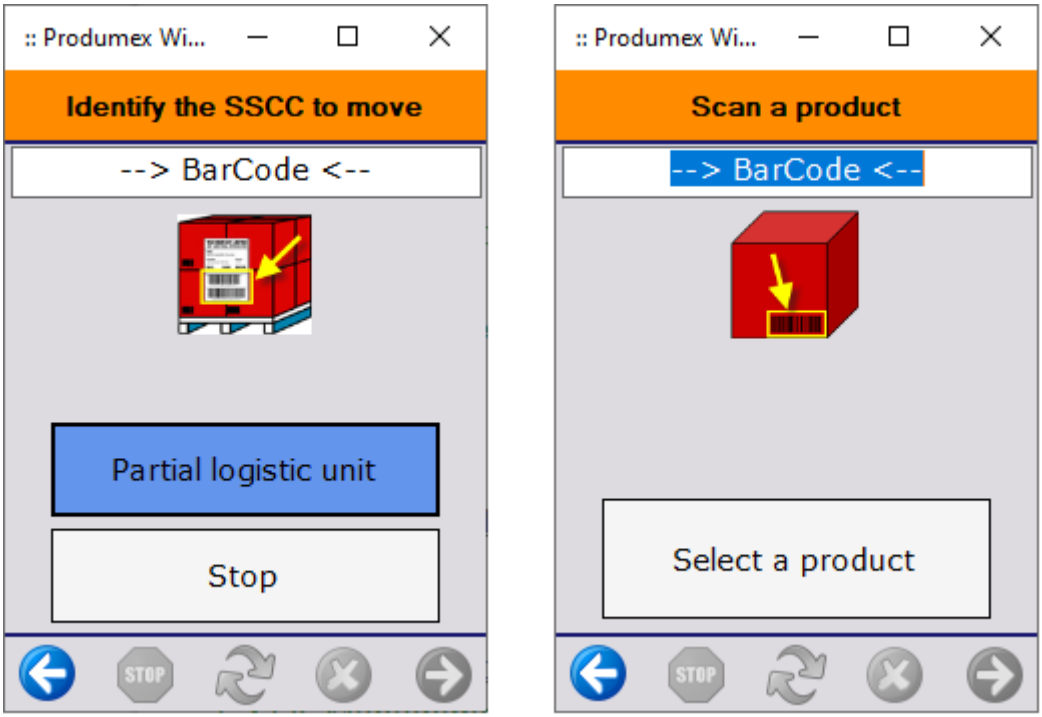
If there is no more item to move, the flow is finished, and the system displays the Select a production line screen.

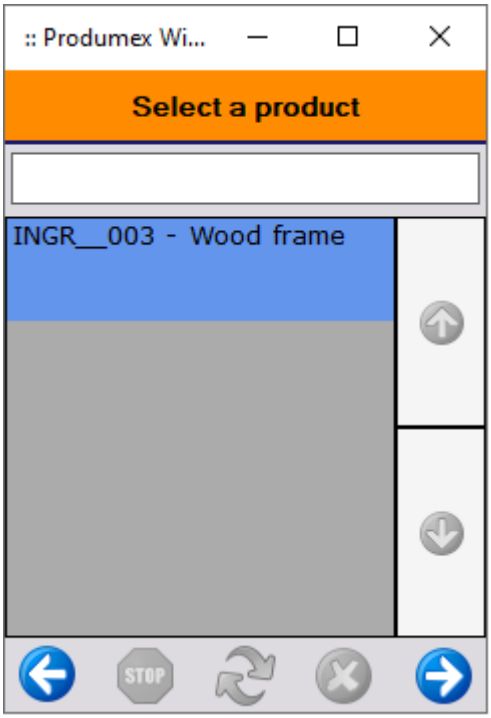
b) Move a partial logistic unit.

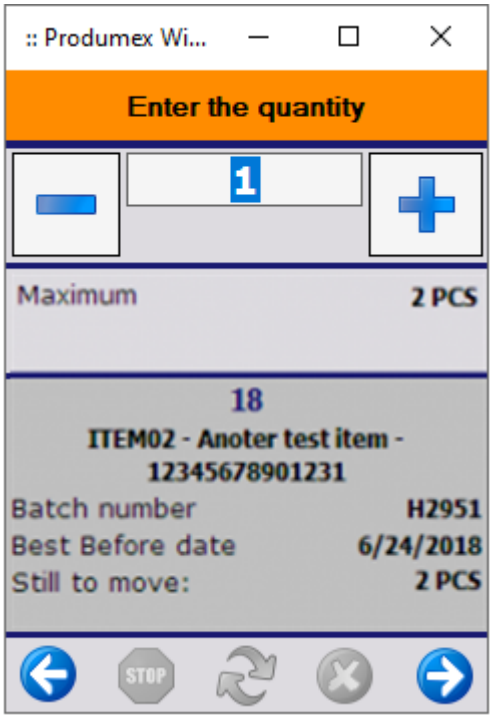
- Tap the `Partial logistic unit` button.
- On the *Scan a product* screen scan the product or tap the `Select a product` button and select the product from the displayed list.
- Enter the number of items on the *Enter the quantity* screen and tap the right arrow.

Note: The moved quantity cannot exceed the available quantity on the input location, but it can exceed the planned quantity of the component on the production order.

The components are moved to the production line and the movement is registered in the Produmex office module in a *Move* document.







If there are other items to move, the system goes back to the Identify the SSCC to move screen.

If there is no more item to move, the flow is finished, and the system displays the Select a production line screen.

8. Production

Produmex supports each of the three SAP B1 production order types.
Based on the significant differences between the 'Disassembly' type and the other two types of production orders, Produmex offers disassembly flows in addition to the production flows.
To perform 'Standard' and 'Special' type of production orders, the system offers two different production flows:

Receipt from production

The flow can be performed either on fixed terminals or on scanners. With default settings the production cannot be started on the thin client. After the production the calculated consumed quantity will be locked. Perform the material confirmation, component issues and the closing of the production order in the Production manager.

Production

The flow can only be executed on fixed terminals. The production can be started on the terminal. The consumed quantities can be modified on the terminal. After the consumed quantity has been confirmed the components are issued and an 'Issue for production' document is created in SAP B1. In this flow, it is also possible to close the production order on the terminal.

When the 'Main Touch Production Flow Script' is set as the workflow for the touchscreen, the Production flow automatically starts on the touchscreen after logging in.

To perform 'Disassembly' type production orders, Produmex also has two disassembly flows. The main difference between the two flows is in the way of defining the disassembled quantities.

Disassembly

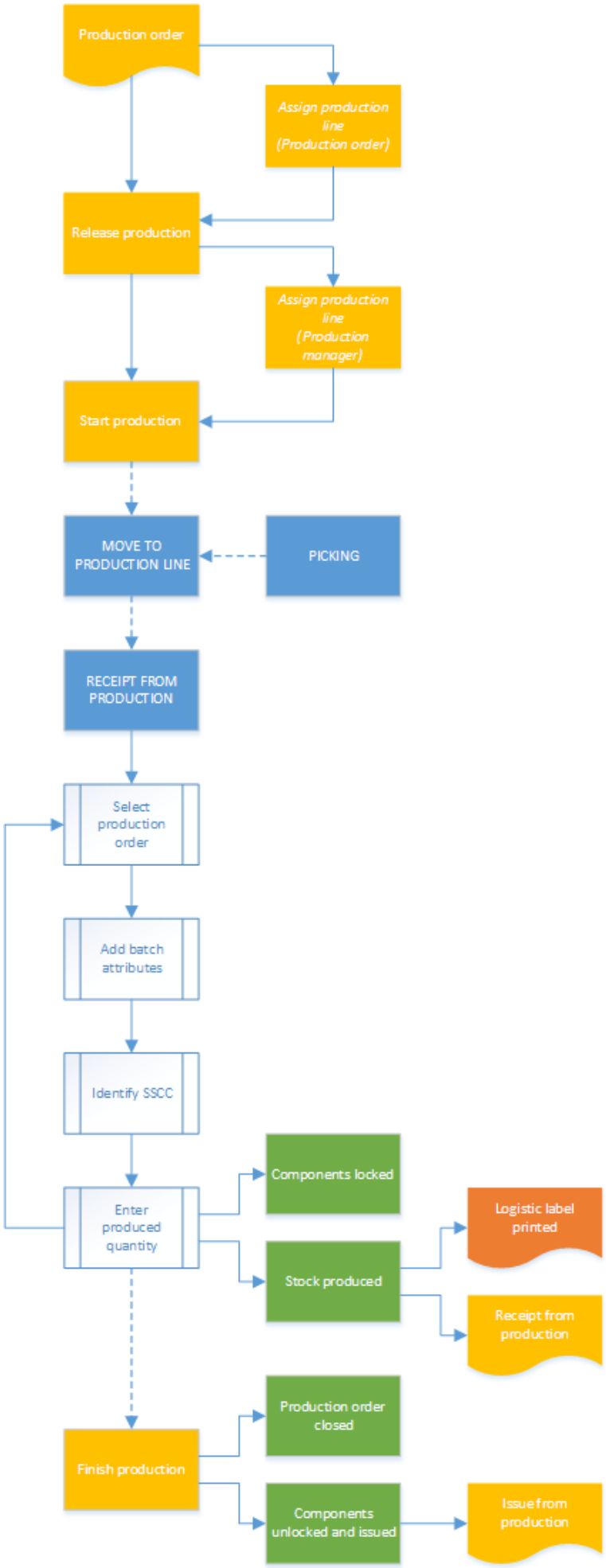
Enter the disassembled quantity one by one for each component.

Disassembly - weight

Add the disassembled quantities on a collective screen. It is possible to add the quantity by weighing with the linked scale.

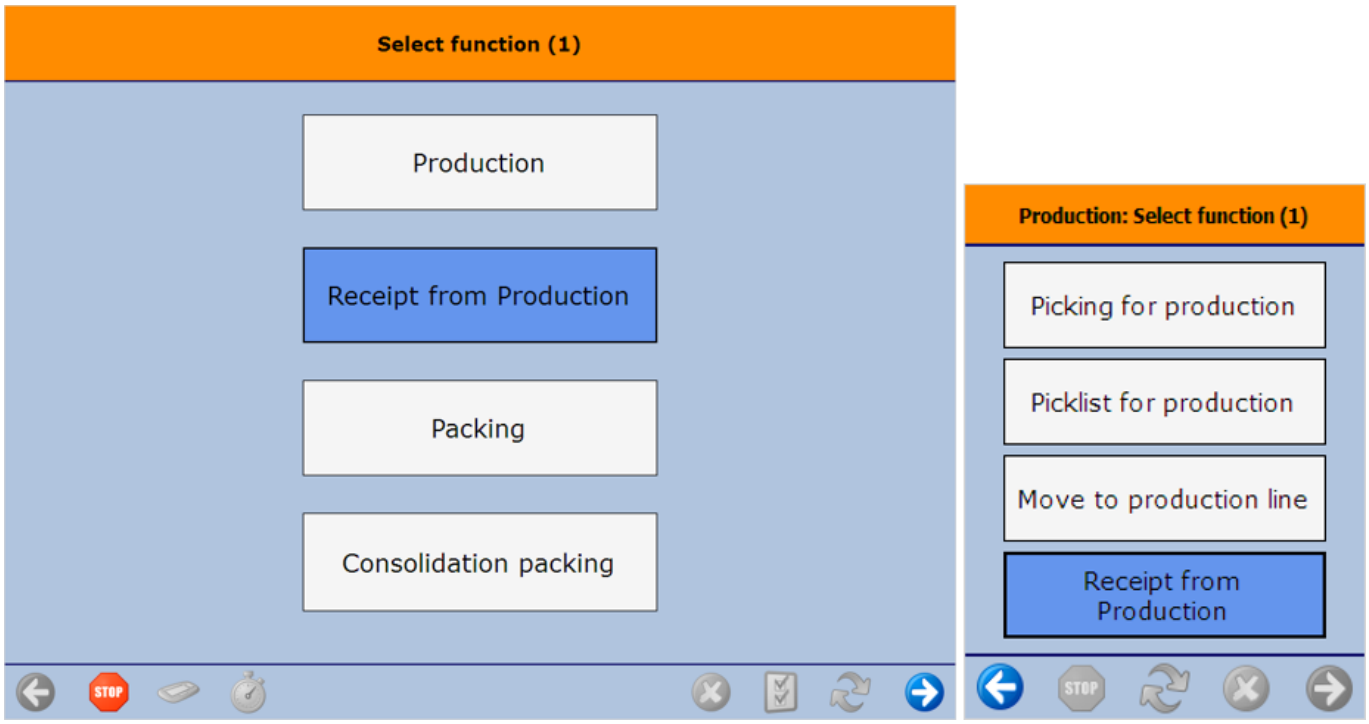
It is also possible to perform ‘Disassembly’ type of production orders in the ‘Production’ or ‘Receipt from production flows’.

Receipt from Production Flow


Production order
Assign production line (Production order)
Release production
Assign production line (Production manager)
Start production
MOVE TO PRODUCTION LINE
PICKING
RECEIPT FROM PRODUCTION
Select production order
Add batch attributes
Identify SSCC
Components locked
Enter produced quantity
Logistic label printed
Stock produced
Receipt from production
Production order closed
Finish production
Components unlocked and issued
Issue from production

- Production order
- Release production order
- Release production order
- Production picking
- Production move
- Production receipt
- Select production order
- Identify batch
- Identify SSCC
- Identify batch
- Production
- Finish production

To initiate the flow, press the ’Receipt from Production’ button on the terminal or on the scanner.



1. Select a production order

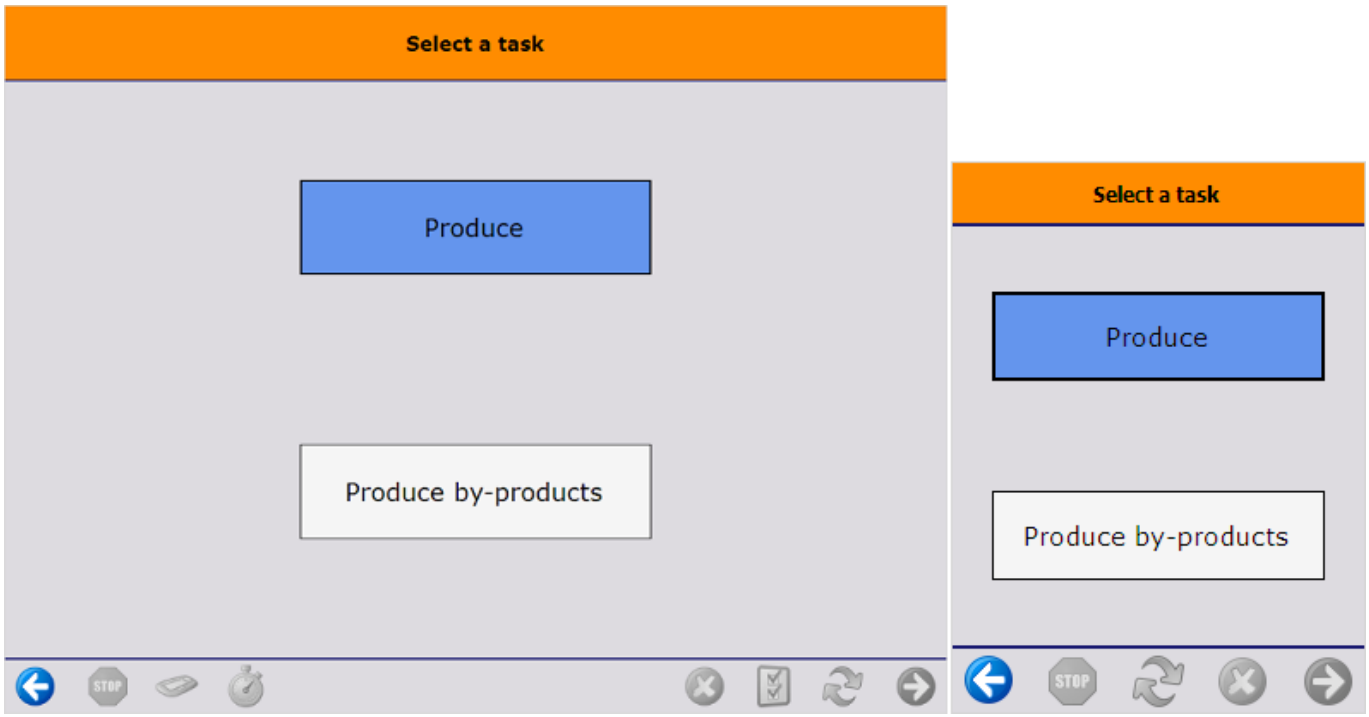
Select a production order from the list and press the right arrow button to proceed.
When using the default settings, only the production orders with ‘Started’ status are displayed in the list.
When the ‘Allow starting production order on receipt flow’ option is set to true on the Production controller, the released production orders with an assigned production line are displayed on the list too. The system will automatically change the status to ‘Started’ when proceeding with these orders.

On the scanner, ‘Started’ orders are indicated with an icon. ‘Standard’ and ‘Special’ type flows are indicated with the icon. ‘Disassembly’ productions are indicated with the icon.
After the production order has been selected, the system checks whether there are enough stock on

the production line to produce. When there is not enough stock to produce, an error message is shown.

2. Select a task

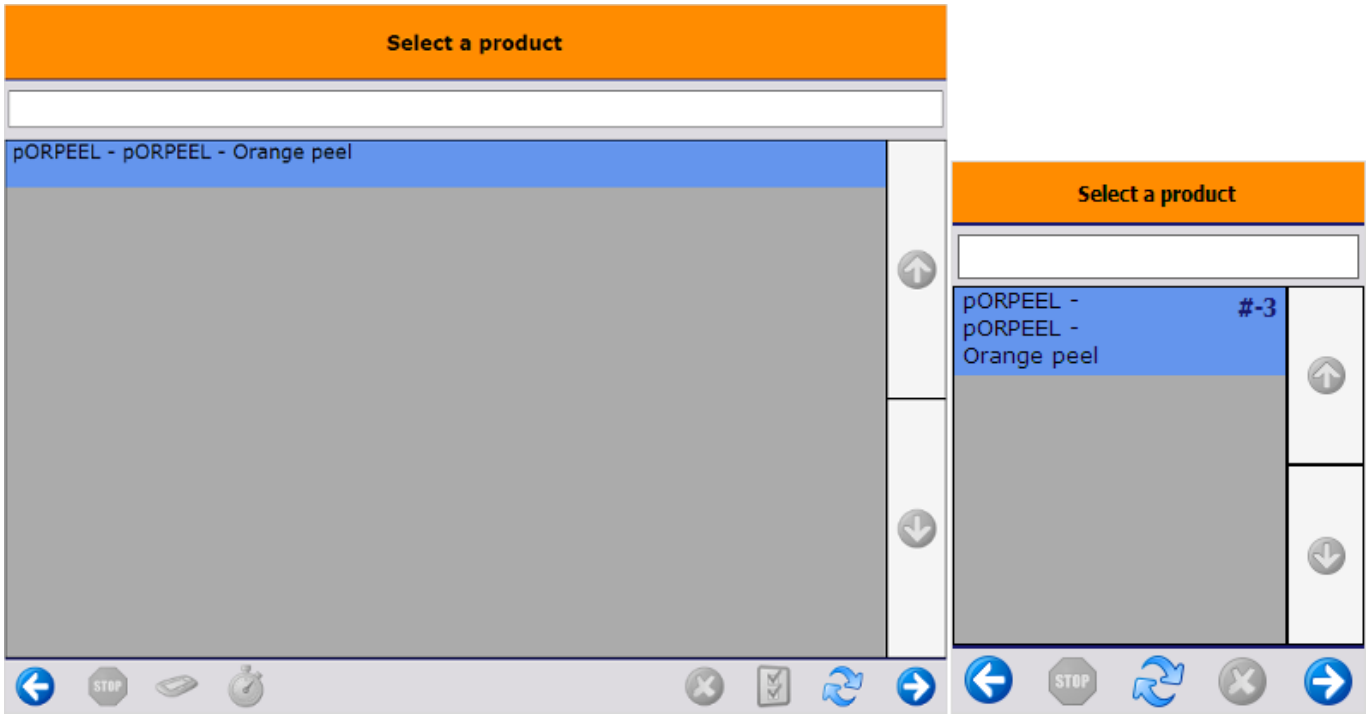
If there is a by-product line on the production order, the Select task screen opens. This screen is automatically skipped if the production order does not contain by-products.



To produce the main product, press the ’Produce’ button.

To produce by-product(s), press the ’Produce by-products’ button. On the next screen select a by-product to produce from the list. Every by-product from the production order is listed.

The steps of main product and by-product production are similar. The differences are described at each given step.



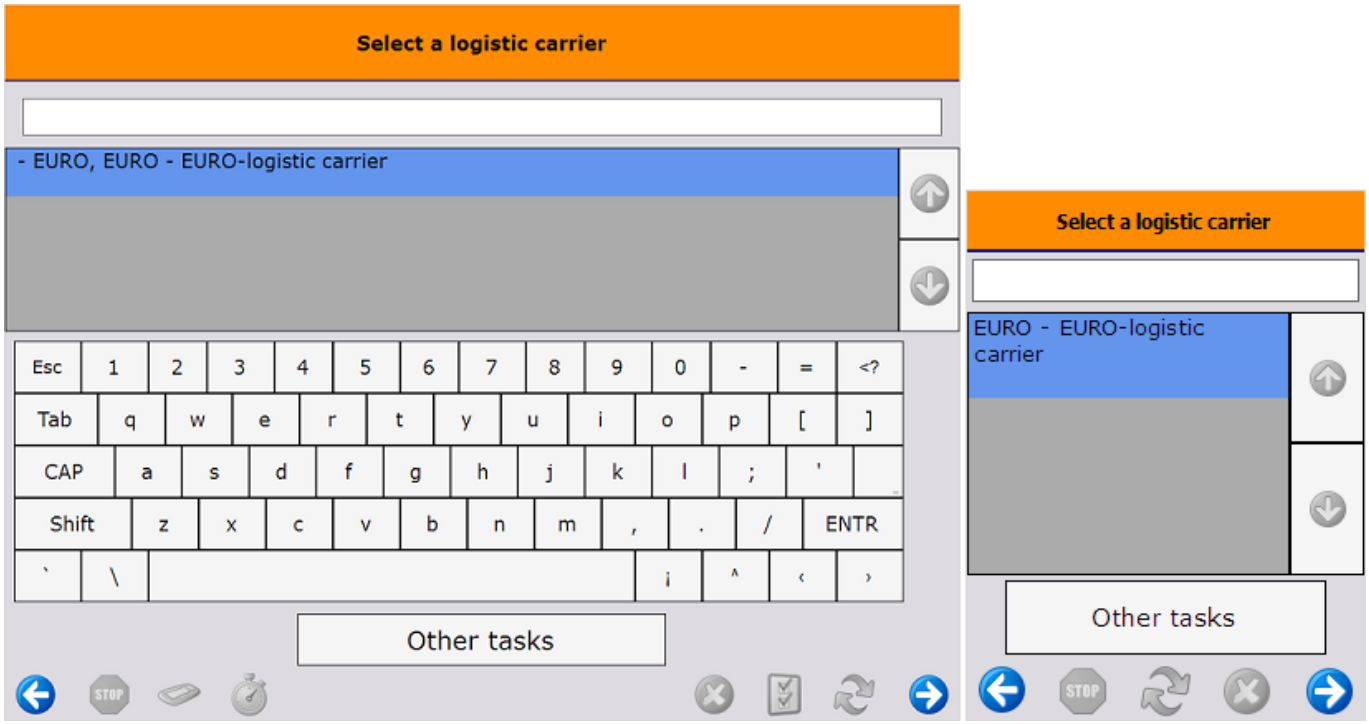
3. Identify batch

Depending on the batch number settings for production the system might ask to enter the batchnumber, if the product is managed by batches.
Depending on the best before date settings for production, the system might ask to enter the best before date, if the product has a best before date.

When the product has batch attributes, the system asks for adding those attributes too.

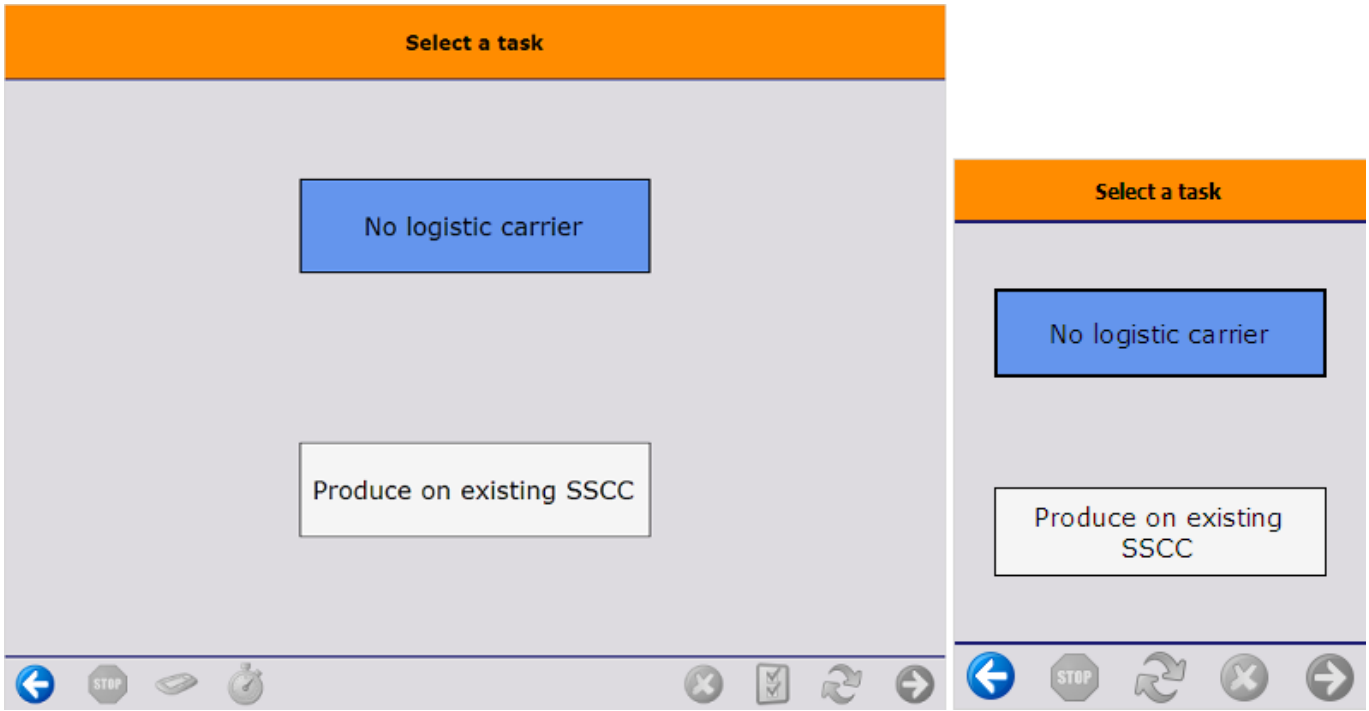
4. Select logistic carrier and identify the SSCC

Then select the logistic carrier from the list. Every logistic carrier that has stock on the *'Stor. Loc. logistic carriers'* location for the warehouse is listed.

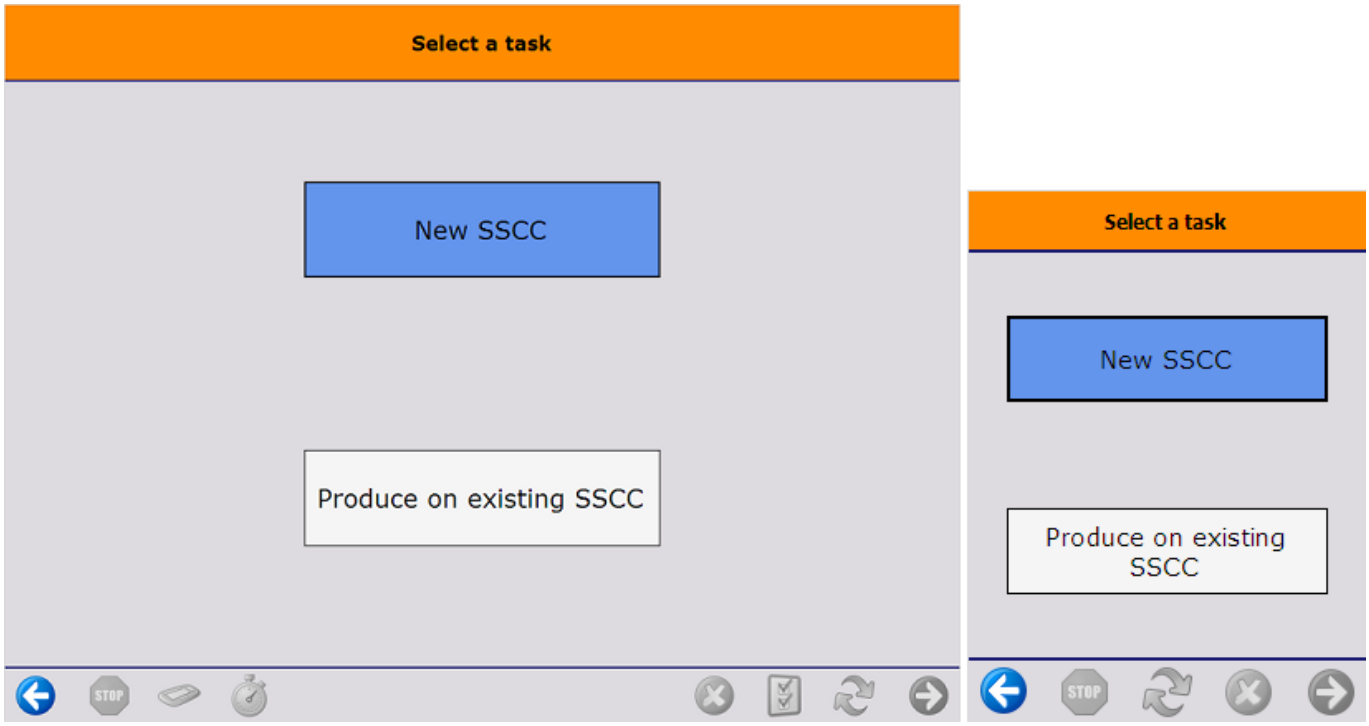


To produce without a logistic carrier press the ‘Other tasks’ button. On the next screen select a task:

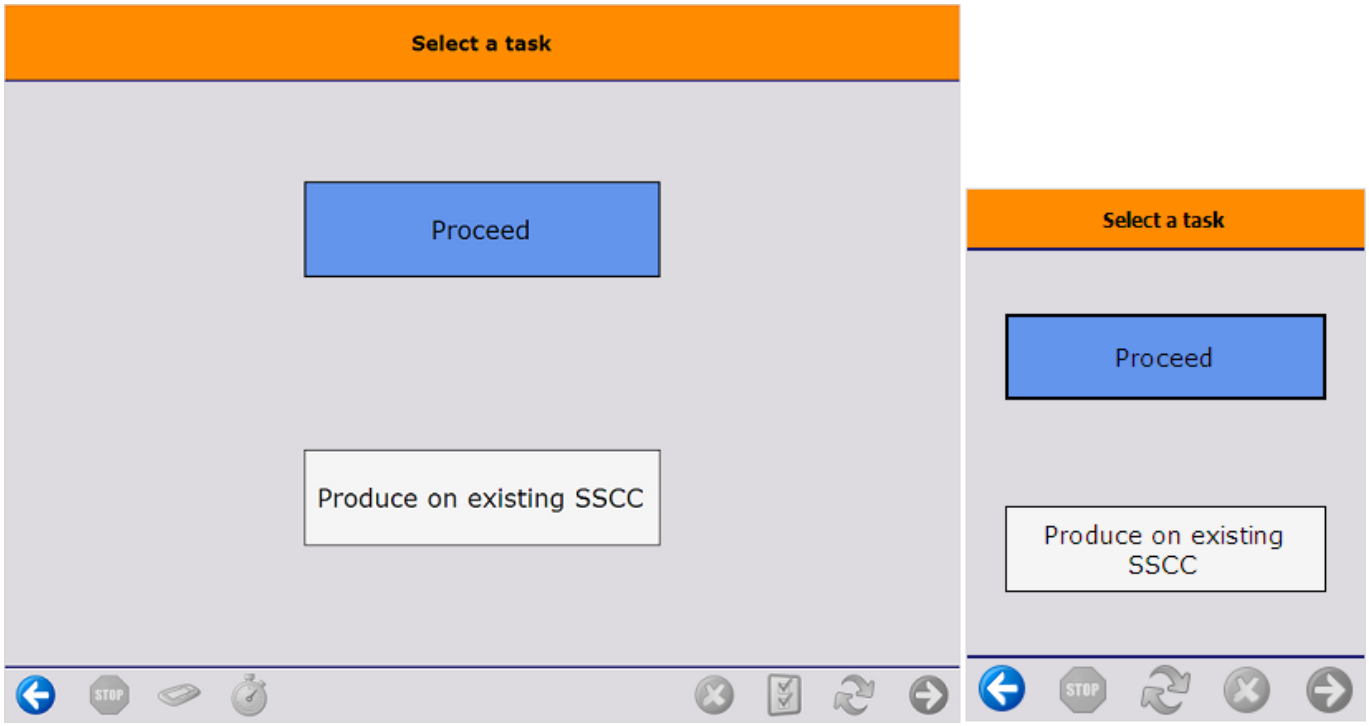
- Press the ‘No logistic carrier’ button to produce onto a new SSCC.
- Press the ‘Produce on existing SSCC’ button to produce onto an existing SSCC. On the next screen scan the target SSCC.



The system automatically proceeds to the Select a task screen and skips the Select a logistic carrier screen if there is no available logistic carrier on the *‘Stor. Loc. logistic carriers’* location or if the company does not use logistic carriers. In this case the ‘New SSCC’ button is displayed instead of the ‘No logistic carrier’ button. Press this button to produce onto a new SSCC. No logistic carrier will be linked to the produced item.



The system also proceeds automatically if the product has a 'Default log. car. production' set on the Produmex Production tab of the Item Master Data. In this case a 'Proceed' button is displayed instead of the 'No logistic carrier' button. Press this button to create a new SSCC with a linked logistic carrier.



5. Enter the quantity produced

After the SSCC has been defined, add the produced quantity. By default the planned quantity is displayed, but it is possible to produce different quantities.
The maximum of the produced quantity for the main product is calculated based on the following values:

- base quantity of the components from the production order
- the quantity tolerance of components set in the production order
- the available quantity on the production line

Note: lined up components and time registration items are not taken into account when calculating the maximum quantity.

The calculation of the maximum quantity occurs in three steps:

- First the system calculates the maximum producible quantity for each material based on only that material.
  Maximum quantity = Quantity on the production line/ (base quantity *(1-quantity tolerance))
- Then the system selects the lowest value from the maximum producible quantities. To define the maximum quantity, the system rounds down that value to the decimal places specified for the uom in the Item Master Data of the product.

The produced quantity for by-products is not limited by the available quantity of the materials on the production line.

5.1. Enter the weight

In case of producing a catch weight item, enter the produced weight too. The maximum weight is calculated from the produced quantity, the default weight and the weight tolerance defined in the Item Master Data of the product.

If the *Weight Capture needed during Production* setting is enabled on Item Master Data > Produmex tab > Production tab, the system displays the *Enter the weight* screen during the flow. In this case the product / by-product must be weighed with a scale.

- Prerequisites: You must define a scale for the production line or the output location of the production line in the Organizational Structure.
- The setting applies to items that are not managed by serial numbers.
- If the item is a catch weight item, you can weigh the item after the first quantity has been added.

5.2. Items managed by serial numbers

When the item to produce is managed by Produmex or ‘On release only’ type serial numbers, it is possible to add the quantity by scanning the serial numbers or by entering the quantity.
When the item to produce is managed by ‘On every transaction’ type serial numbers, the quantity can only be added by scanning the serial numbers.
For more information about quantity entering methods see: Screens for entering additional

information.

6. Production

After the quantity has been added, the product is produced and the system moves the product to the output location. The quality status of the received product is the quality status set as the *Quality status production* on the Production tab of the Organizational Structure.

When the product is produced, the system locks the consumed stock. The locked quantity is calculated from the produced quantity and the base quantity of the component. Materials are not locked for by-products.

Documents:

- When producing by-products, the system creates a receipt for production document for the by-product and no other documents.
- When producing the main product, the system creates a receipt for production document for the main product and issue for production documents for material items which are on lined up location with direct consumption setting.

7. Print event

If set in the Organizational Structure, the *'Production: logistic unit produced event (400)'* print event is triggered and the Production label is printed. The default report of the print event is *DefaultProductionLabel.rpt.*

8. Item produced

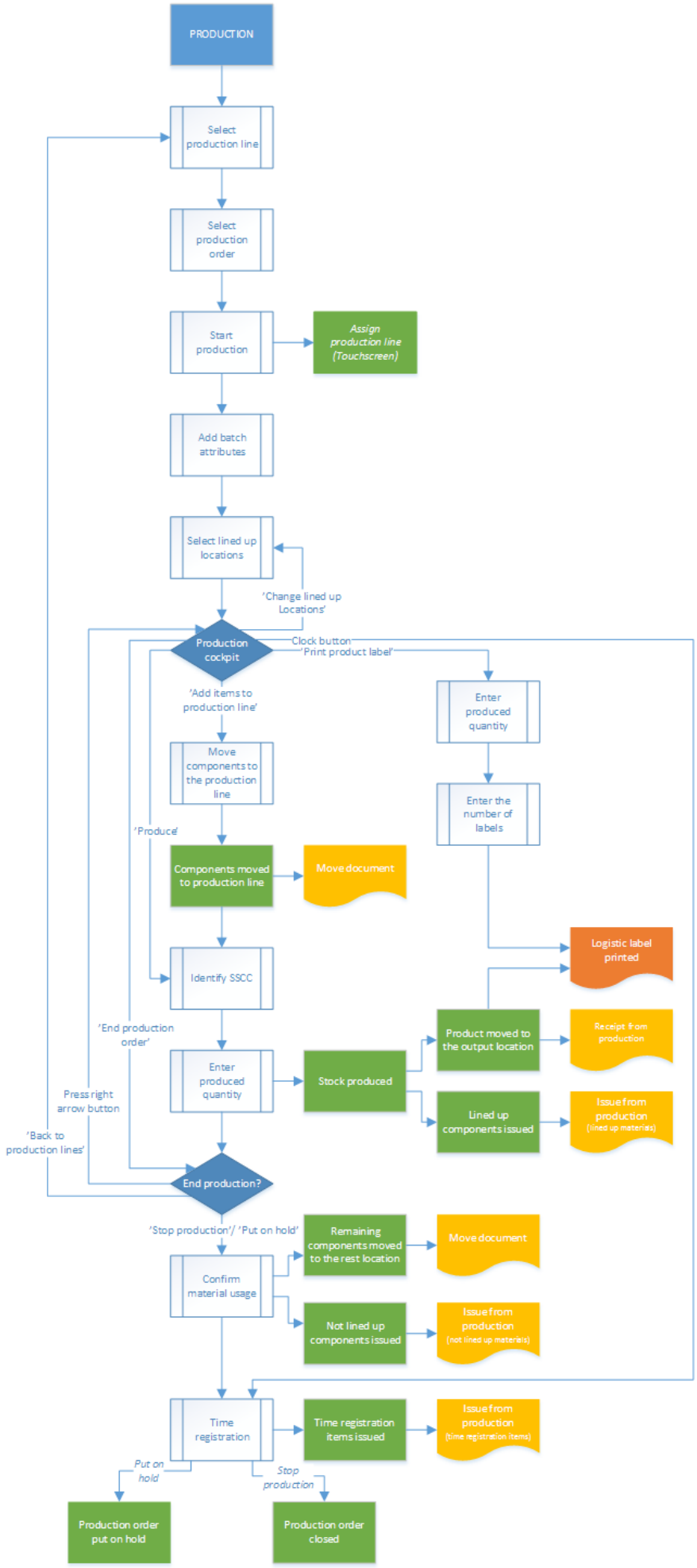
On the screen the 'The item is produced' message is displayed. Press 'Ok' to go back to the 'Select a production order' screen. When the 'Proceed with current production order after entering quantity on prod. receipt flow?' option is set to true in the Production controller, the system automatically proceeds with the current production order.

If the production order is not closed, it is possible to produce more than the planned quantity.

Close the production in the Production Manager.

If the *Automatically close production orders on completion? (Y/N)* setting is enabled on the production controller, the production order is automatically closed when the planned quantity for the main product has been reached. The Issue for Production documents are booked with the planned quantities and the components are issued.

Production flow


PRODUCTION
Select production line
Select production order
Start production
Assign production line (Touchscreen)
Add batch attributes
Select lined up locations
'Change lined up Locations'
Production cockpit
Clock button 'Print product label'
'Add items to production line'
Enter produced quantity
Move components to the production line
Enter the number of labels
'Produce'
Components moved to production line
Move document
Logistic label printed
Identify SSCC
'End production order'
Enter produced quantity
Stock produced
Product moved to the output location
Receipt from production
Lined up components issued
Issue from production (lined up materials)
Press right arrow button
'Back to production lines'
End production?
'Stop production'/ 'Put on hold'
Remaining components moved to the rest location
Move document
Confirm material usage
Not lined up components issued
Issue from production (not lined up materials)
Time registration
Time registration items issued
Issue from production (time registration items)
Put on hold
Stop production
Production order put on hold
Production order closed

1. Initiate the flow

To initiate the production flow, press the ‘Production’ button on the terminal.

2. Select production line

Select the production line where the production will take place. Press the right arrow button to proceed. Every active production line is displayed on the list.

3. Select production order

Select a production order from a list.

- The screen lists production orders with type *standard* and *special*. For production orders with type disassembly use the Disassembly Flow.
- Released production orders that are assigned to the selected production line or that are not assigned to any line yet are displayed on the list.

When there is a started production order on the line, the system automatically proceeds with that order.

4. Start production

After the production order has been selected, the system will display the details of the production:

1. The code and description of the item to produce.
2. The due date of the production order and the attached remarks.
3. The type of the production indicated with an icon.
4. The planned quantity.
5. Production order number.

To start the production, press the ‘Start production’ button. When no production line was assigned to the order, it can be started at any production line. After the order has been started on a production line the system automatically assigns that line to the production order.

5. Identify batch

Depending on the batch number settings for production the system might ask to enter the batch number, if the product is managed by batches. If both the product and the by-product(s) are managed

by batches, the batch number of the by-product(s) is the same as the batch number of the product.

Depending on the best before date settings for production, the system might ask to enter the best before date, if the product has a best before date. If the product and the by-product(s) have a best before date, the best before date of the by-product(s) is the same as the best before date of the product.

When the product has batch attributes, the system asks for adding those attributes too.

6. Select lined up location

When there are no components that has to be lined up, the system skips this screen.
When there is a component that has to be lined up in the production order, select the lined up location from the list. Different lined up component are displayed on separate screens. A location is listed if the following is verified:

- The 'Can be lined up' option is enabled for the location
- The location is added to the production line as a lined up location
- A component that has to be lined up is stored on the location

When there is only one location that verifies these criteria, the system automatically proceeds with that location.
This screen can also be reached by pressing the 'Change lined up locations' button on production cockpit.

7. Production cockpit

The next screen is the Production cockpit.

1. Code, description and barcode of the item to produce
2. The planned quantity
3. The number of the production order
4. The due date of the production order
5. The remarks added to the production order
6. The type of the production order indicated with an icon
7. The list of components that still have to be moved to the production line. The item code, description and barcode of the components and the needed quantity are displayed.
   The following components are not listed:
   - lined up components
   - time registration components
   - optional components
8. `Produce` button (see 8.2.9.Produce)
9. `Produce by-products` button (see 8.2.10. Produce by-products)
10. `Change lined up locations` button (see: 8.2.6. Select lined up location)
11. `Add items to use` button (see 8.2.8. Move components to production line)

12. `Print product label` button (see 8.2.12.Print label)
13. `End production order` button (see 8.2.13. End production)
14. Clock button. Click the button to register time registration items (see 10. Time registration).

8. Move components to production line

The components can be moved either on the scanner or on the terminal. Use the 'Move to production line' flow to perform the move on the scanner.
Only stock from the production line's input location can be moved to the production line. When the 'Allow to move stock to prod. line from rest location' option is set to true in the Production controller, stock from the rest location can be moved to the production line too.

Press the 'Add items to use' button to perform the move on the touchscreen.
There are three possible ways to move the materials to the production line.

- To move only one item, press the 'Move an item' button. Identify the product to move.
  First scan the linked SSCC. When the product has no linked SSCC, press the 'No SSCC' button.
  On the next screen scan the product to move or select it from the list after pressing the 'Select a product' button. Every item on the input location is listed and can be moved.
  After the product has been identified, add the quantity. The moved quantity cannot exceed the quantity stored on the input location.
- To move the entire stock of the components, press the 'Move all items linked to the production order' button. The system will move the entire stock of the items linked to the production order, regardless of the planned quantity.
- To move everything from the input location press the 'Move all items' button. The system will move the entire stock from the input location, regardless of the planned quantity or the item.

When the 'Hide all item buttons' option is enabled in the Production controller, the system automatically proceeds with the 'Move an item' task after the 'Add items to use' button have been pressed.
When the 'Auto move all linked items to BOM' option is enabled in the Production controller, this step can be skipped as the components were automatically moved to the production line after initiating the flow.
After the components have been moved to the production line, the system registers the movement in a 'Move' document in the Produmex office module.

When there are no items displayed on the 'Items still to pick' list, it means that all the required not lined up materials are already on the production line and are available for the production.

9. Produce

To produce the items, press the 'Produce' button.

After the ‘Produce’ button has been pressed, identify the SSCC to produce on. For the detailed description see: 8.1.4. Identify the SSCC
When the item to produce has batch attributes, the system will ask for adding those attributes too after the SSCC has been identified.
On the next screen enter the produced quantity.

10. Produce by-products

To produce by-products, press the ‘Produce by-products’ button. On the next screen select a by-product from the list. Every by-product from the production order is listed.

Then select the logistic carrier from the list. Every logistic carrier that has stock on the *‘Stor. Loc. logistic carriers’* location for the warehouse is listed.

To produce without a logistic carrier press the ‘Other tasks’ button. On the next screen select a task:

- Press the ‘No SSCC’ button to produce without a logistic unit.
- Press the ‘No logistic carrier’ button to produce onto a new SSCC.
- Press the ‘Produce on existing SSCC’ button to produce onto an existing SSCC. On the next screen scan the target SSCC.

The system automatically proceeds to the Select a task screen and skips the Select a logistic carrier screen if there is no available logistic carrier on the *‘Stor. Loc. logistic carriers’* location or if the company does not use logistic carriers. In this case the ‘New SSCC’ button is displayed instead of the ‘No logistic carrier’ button. Press this button to produce onto a new SSCC. No logistic carrier will be linked to the produced item.

The system also proceeds automatically if the product/by-product has a ‘Default log. car. production’ set on the Produmex Production tab of the Item Master Data. In this case a ‘Proceed’ button is displayed instead of the ‘No logistic carrier’ button. Press this button to create a new SSCC with a linked logistic carrier.

On the next screen enter the quantity to produce. The quantity to produce is not limited by quantity of materials available on the production line. Displayed information:

1. Production order number
2. Item code and description
3. Batch number of the main product/by-product
4. Best before date of the main product/by-product
5. Open quantity for the main product

After the by-product is produced, the system returns to the Production Cockpit.

In SAP Business One, the receipt from production document is created and the by-product is taken into stock on the output location of the production line.

11. Enter the weight

In case of producing a catch weight item, enter the produced weight too. The maximum weight is calculated from the produced quantity, the default weight and the weight tolerance defined in the Item Master Data of the product.

If the *Weight Capture needed during Production* setting is enabled on Item Master Data > Produmex tab > Production tab, the system displays the *Enter the weight* screen during the flow. In this case the product / by-product must be weighed with a scale.

- Prerequisites: You must define a scale for the production line in the Organizational Structure.
- The setting applies to items that are not managed by serial numbers.
- If the item is a catch weight item, you can weigh the item after the first quantity has been added.

12. Receive product

After the quantity has been added, the product is produced. The system moves the product to the output line and books a 'Receipt from Production' document.
The system issues the lined up materials and books an 'Issue for production' document for those components. The issued quantity is calculated as the product of the base quantity of the component and the produced quantity.

Note: If the Direct Consumption of Goods setting (Organizational Structure > Silo > General tab) is disabled, the raw materials are not consumed when closing the production order in the Production Flow. To close the production order the Production Manager must be used.

13. Print label

If set in the Organizational Structure, the *'Production: logistic unit produced event (400)'* print event is

triggered and the Production label is printed. Default report for the print event: *DefaultProductionLabel.rpt*

> There is another way to print the label. On the main production screen press the ‘Print product label’ button. On the next screen add the produced quantity. The system automatically skips this screen, if there is already produced quantity. On the next screen add the number of labels to print.

14. End production

After the product was produced, the production can be continued, stopped or put on hold. *This screen can also be reached by pressing the ‘End production order’ button on cockpit.*

To go back to the production lines without finishing the production, press the ‘Back to production lines’ button. The Produmex status of the production order will remain ‘Started’.
To go back to the production cockpit, press the left arrow button.
To put the production on hold, press the ‘Put on hold’ button. Issue for Production documents will be booked for the consumed quantities and the components will be issued but the production order will remain open.
To stop the production press the ‘Stop production’ button. Issue for Production documents will be booked for the consumed quantities and the components will be issued and the production order will be closed.
After pressing the ‘Stop production’ or the ‘Put on hold’ buttons, confirm the consumed quantities for the components.

15. Confirm the quantity to consume

The consumed quantity can be modified and confirmed on individual screens for each material. The consumed quantity of lined up materials cannot be modified or confirmed on the touchscreen. The consumed quantity of the time registration components can be added in the next step or after pressing the ‘Clock’ button on the Toolbar.
When the ‘Use waste?’ option is enabled in the Production controller, the waste quantities can be added as well.
When the ‘Skip consumption screen on flow for linked components?’ option is enabled in the Production controller, consumption screens for components that have been prepared (eg. weighted) will be skipped.

The stock on the input location is listed on the screen. The different batches are displayed in separate lines. Products stored on different SSCC’s are also displayed in separate lines.

1. The ‘Item to consume’ is the item code and description of the component.
2. The ‘Quantity to consume’ is the product of the produced quantity and the base quantity of the component.
3. The ‘Difference qty to use’ is the difference of the ‘Quantity to consume’ and the ‘# Used’ quantity.
4. The batch number, the second batch number and the best before date of the batch.
5. The ‘# On line’ quantity is the quantity of the stock that was moved to the production line.
6. The ‘#Used’ quantity is the quantity that was consumed for the production.
7. The ‘#Rest’ quantity is the quantity remaining on the production line.
8. The ‘#Waste’ quantity is the quantity of the waste.

The default ‘# Used’ quantity is calculated based on the following logic:

- If the available quantity is greater than or equal to the quantity to consume:
  Default #Used quantity = Quantity to consume.
- If the available quantity is less than the quantity to consume but within the quantity range:
  Default #Used quantity = Available quantity.

When the ‘Auto fill consumed quantity from prepared quantity on stop production?’ option is set to true in the Production controller, the default ‘#Used’ quantity for prepared components (eg. weighted) is the prepared quantity, if it is within the quantity range.
The ‘# Rest’ quantity is the quantity of the stock remaining on the production line. It is calculated by {‘#On line’ quantity - ‘# Used’ quantity}.
The # Used (9) and the # Rest (10) quantity of the selected batch can be modified in the respective input field. After the modification press the ‘Update’ button.
Please note: The ‘# Used quantity’ must be within the quantity range defined by the produced quantity and the components base quantity and quantity tolerance. Because the sum of the ‘# Used’ and ‘# Rest’ quantity must be equal to the on line quantity, when modifying either one of them, the other one is automatically updated.
In case of using waste, the # On line quantity is equal to with the sum of the # Used, # Rest and # Waste quantity. When modifying the used or the rest quantity, the system updates the waste (12) quantity automatically. The # waste field cannot be modified manually on the touchscreen.
When confirming the consumed quantity of a serial numbered item, add the serial numbers of the consumed products too. After the consumed quantity has been added, the system ask the method of entering the serial numbers. Select a method then on the next screen scan the serial numbers.

In case of a catch weight component, the default weights are displayed too.

1. The weight to consume. It is calculated from quantity to consume and the weight defined in the Item Master Data.
2. The On line, Used, Rest and Waste weight of the batch. By default it is calculated from the weight of the batch available on the production line and the quantity to consume.
3. The On line, Used, Rest and Waste weight of the item. By default it is calculated from the weight of the item available on the production line and the quantity to consume.
4. The used weight of the selected batch can be modified in this field.
5. The rest weight of the selected batch can be modified in this field.
6. The waste weight of the selected batch is displayed in this field.

Press the right arrow button to proceed to the next component.

16. Time registration

When the production order contains time registration components, define the consumed quantity for those components as well. For more information about time registration see: 10. Time registration

17. Issue components

Once the material consumption is confirmed, the used quantities are issued and the remaining stock is moved to the rest location of the production line. The movement is registered in a Move document in the Produmex office module.

Documents:

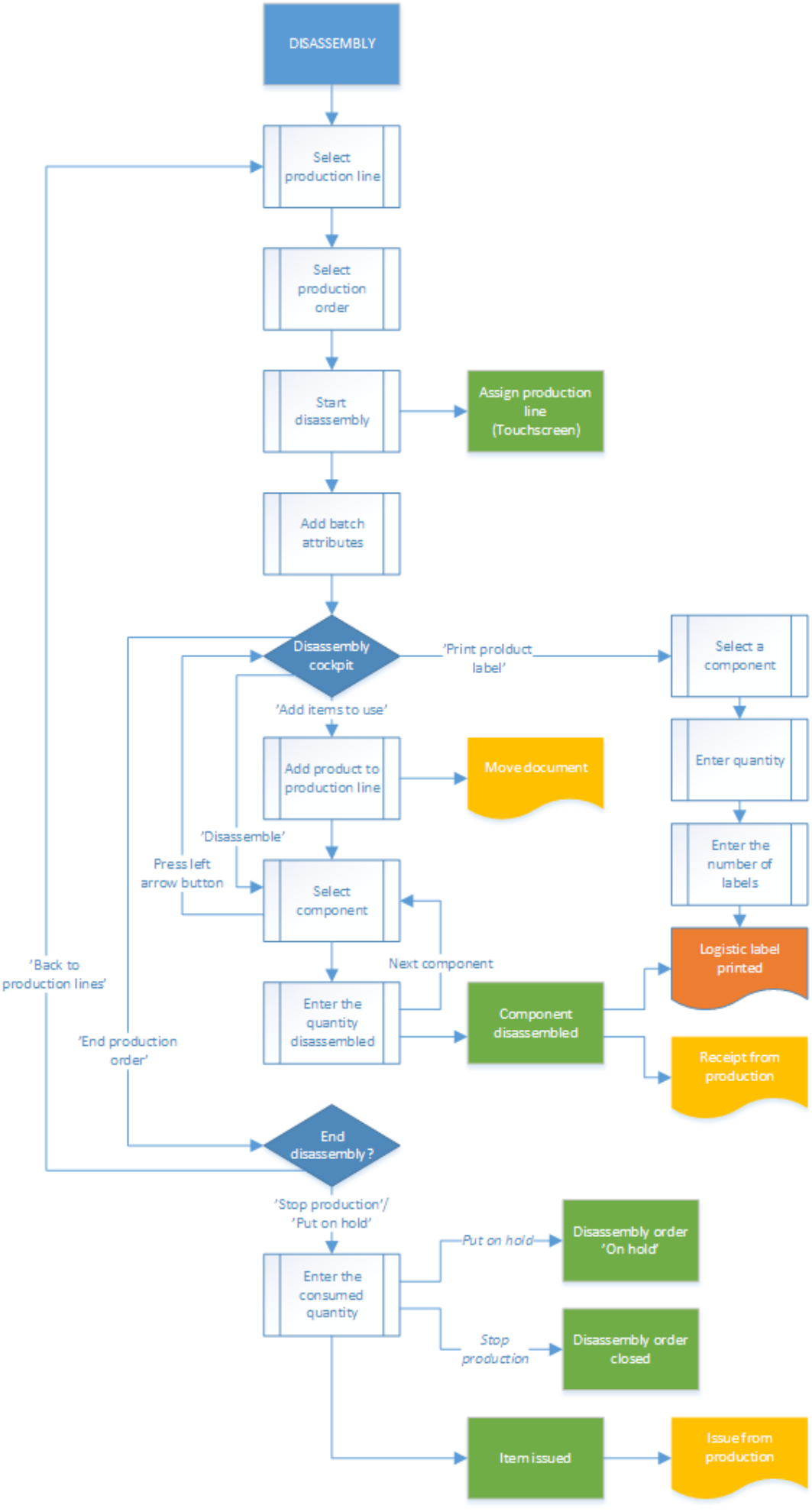
- When producing by-products, the system creates a receipt for production document for the by-product and no other documents.
- When producing the main product, the system creates a receipt for production document for the main product and issue for production documents for material items which are on lined up location with direct consumption setting.
- Time registration items are also issued in a separate issue for production document.

18. Production order status

When stopping the production order, the Produmex and the SAP status of the production order will be changed to ‘Closed’.
When putting the production on hold, the Produmex status on the production order will be changed to ‘On hold’, but the SAP status of the production order will remain ‘Released’. The production can be continued after a restart on the production line. The production can only be restarted on the production line where it was performed previously. *It is not possible to start an ‘On hold’ production in the Production Manager.*

Disassembly Flow

Workflow


DISASSEMBLY
Select production line
Select production order
Start disassembly
Assign production line (Touchscreen)
Add batch attributes
Disassembly cockpit
'Print prolduct label'
Select a component
Enter quantity
Enter the number of labels
Logistic label printed
'Add items to use'
Add product to production line
Move document
'Disassemble'
Press left arrow button
Select component
Next component
'Back to production lines'
Enter the quantity disassembled
Component disassembled
Receipt from production
'End production order'
End disassembly?
'Stop production'/ 'Put on hold'
Enter the consumed quantity
Put on hold
Disassembly order 'On hold'
Stop production
Disassembly order closed
Item issued
Issue from production

1. Initiate the flow

Tap the Disassembly button on the touchscreen.

2. Select production line

See: 8.2.2. Select production line

3. Select the production order

Select the production order from the list. Only released disassembly orders assigned to the selected production line or not yet assigned to any line are displayed on the list.

4. Start production

After the order has been selected, the details of the disassembly will be displayed. Press the ‘Start production’ button to start the disassembly. For more information about the displayed production details see: 8.2.4. Start production
When there is a stared disassembly order, the system automatically proceeds with that order.

5. Disassembly cockpit

The next screen is the disassembly cockpit.

1. Code, description and barcode of the item to produce.
2. The planned quantity in the production order.
3. The number of the production order.
4. The due date of the production order and the attached remarks.
5. The type of the production order indicated with an icon.
6. The product to disassemble is listed here. The quantity that still need to be moved to the production line is displayed next to the item code and description.
7. `Disassemble` button. See: 8.3.8. Disassemble
8. `Add items to use` buton. See: 8.3.7. Move to the production line
9. `Print product label` button. See: 8.2.11. Print label
10. `End production order`. See: 8.3.10. End production

6. Move to the production line

Add the item to disassemble to the production line. Press the ‘Add items to use’ button or move the item with the ‘Move to production line’ flow. For more information about moving the item to the production line see: 8.2.8. Move the components to the production line

7. Disassemble

Add the item to disassemble to the production line. Press the ‘Add items to use’ button or move the item with the ‘Move to production line’ flow. For more information about moving the item to the production line see: 8.2.8. Move the components to the production line

After the ‘Disassemble’ button has been pressed a list of components are displayed on the screen. Only components from the disassembly order will be displayed on the list. Select a component from the list.

If the item is managed by batches, depending on the batch number settings for production the system generates the batch number. Note: The extension *'Batch Number Generator Production - Empty Batch Number'* is not supported in the Disassembly flows. It is not possible to change the generated batch number regardless of the settings on the *Batch Number Production Company* generator.
If the item has a best before date, depending on the best before date settings for production, the system might ask to enter the best before date.
If the item has batch attributes, the system asks for adding those attributes too.

On the next screen identify the destination logistic unit. See: 8.1.4. Identify the SSCC
Add the quantity disassembled of the selected component. The quantity is the base quantity multiplied by the quantity of the product on the production line. The maximum quantity is calculated from the base quantity and the quantity tolerance of the component and the available quantity of the product on the production line.

8. Enter the weight

In the case of a catch weight component, enter the weight too. The weight range that can be added is calculated from the quantity of the component disassembled and the catch weight settings of the item.

- When a component is managed by *On every transaction* type serial numbers, add the quantity by scanning the serial numbers.
- When a component is managed by PMX or *On release only* type serial numbers, the quantity

can also be added by scanning the serial numbers.
- In the case of a lined up component, select the lined up location after the quantity has been added.

Press the right arrow button to proceed.

If the *Weight Capture needed during Production* setting is enabled on Item Master Data > Produmex tab > Production tab, the system displays the *Enter the weight* screen during the flow. In this case the product / by-product must be weighed with a scale.

- Prerequisites: You must define a scale for the production line in the Organizational Structure. If more scales are defined under the same production line, the flow displays the `Switch scale` button.
- The setting applies to items that are not managed by serial numbers.
- If the item is a catch weight item, you can weigh the item after the first quantity has been added.

9. Receive product

After the quantity has been added, the system books a 'Receipt from production' document for the component. If set in the Organizational Structure, the *'Production: logistic unit produced event (400)'* print event is triggered and the Production label is printed. Default report for the print event: *DefaultProductionLabel.rpt*. The system displays the 'The item is disassembled' message.
Then the system goes back to the select a product screen. After every component has been disassembled, press the left arrow button to go back to the disassembly cockpit.

10. End production

Press the 'End production order' button to quit from the disassembly. After the button has been pressed, select a task.
To go back to the production lines, press the 'Back to production lines' button. The Produmex status of the disassembly will remain 'Started'.
To put the disassembly on hold, press the 'Put on hold' button.
To stop the production, press the 'Stop production' button.
After the 'Put on hold' or the 'Stop production' button has been pressed, confirm the consumed quantity.
In case the disassembled quantity of at least one item does not reach the minimum quantity calculated from the quantity of the product on the production line, the base quantity and quantity tolerance of the component and the disassembled quantity of other components, the system displays an error message. To go back to the disassembly cockpit, acknowledge the message by pressing the 'Ok' button.

11. Confirm the consumed quantity

On the next screen, confirm the consumed quantity.

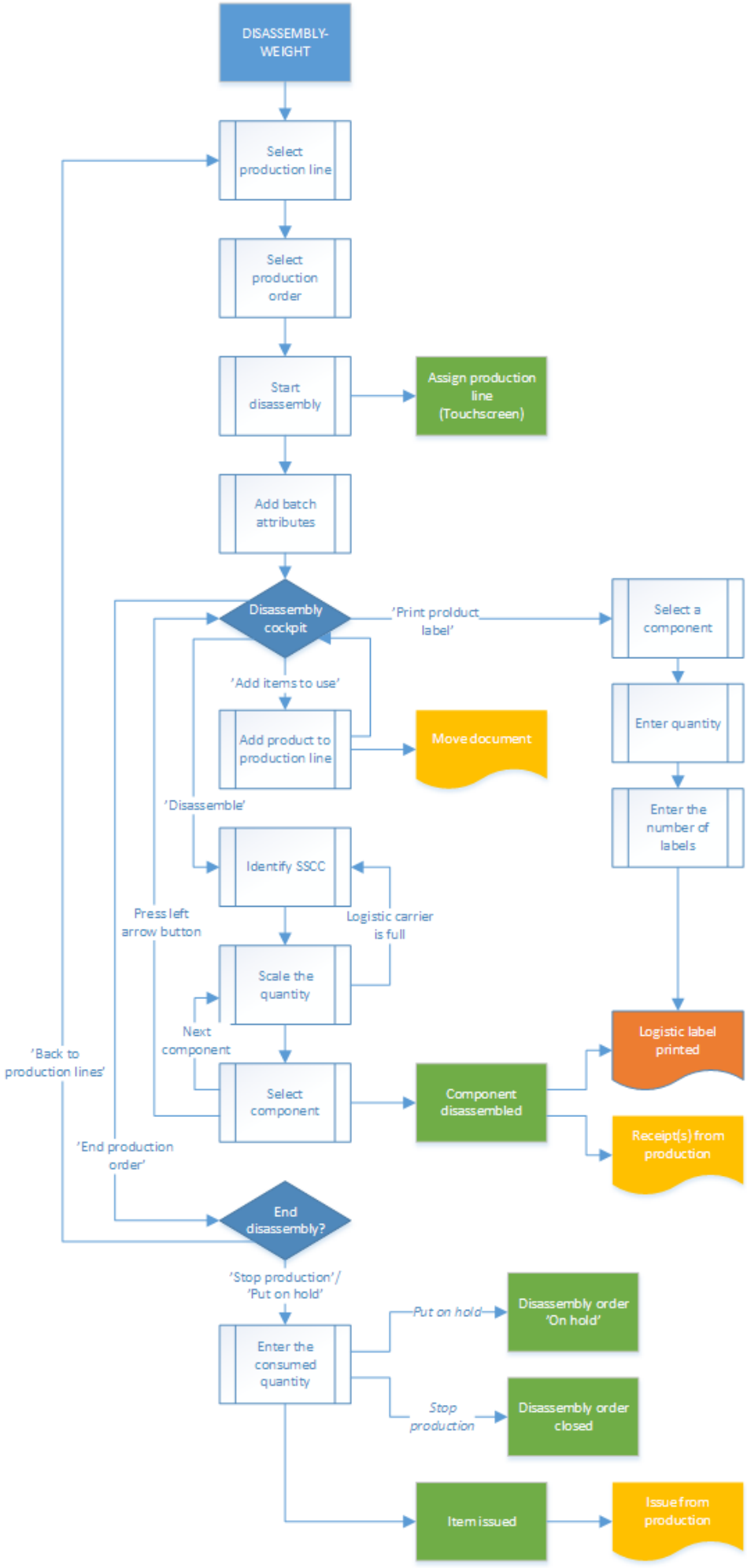
1. Item to consume: the item code and description of the disassembled product.
2. Quantity to consume. The quantity to consume is calculated based on the following logic:
    - First the system calculates for each component the theoretical quantity to disassemble in order to produce the previously added component quantity.
      {Quantity to disassemble = Disassembled quantity / Base quantity}
    - Then the system select the lowest value (the component linked to that value is the limiting component) and rounds it to the decimals defined for the uom in the product's Item Master Data.
      In the case of catch weight products, the weight to consume is displayed under the quantity to consume. The weight to consume is the product of the quantity to consume and the weight defined for the item in the Item Master Data.
3. Difference qty to use: the difference of the quantity to consume and the #used quantity.
4. The batch number, the second batch number and the best before date of the batch. Different batches are displayed in separate lines.
5. The '# On line' quantity is the quantity of the product that was moved to the production line. In the case of catch weight products, the on line weight is also displayed.
6. The '#Used' quantity is the quantity that was consumed for the production. By default the used quantity equals to the quantity to consume. In the case of catch weight products, the used weight is also displayed. By default the used weight equals to the weight to consume.
7. The '# Rest' quantity is the quantity remaining on the production line. In the case of catch weight products, the rest weight is also displayed.
8. The '# Waste' quantity is the quantity of the waste. In the case of catch weight products, the waste weight is also displayed.

The # Used (9) and the # Rest (10) quantity of the selected batch can be modified in the respective input field. After the modification press the 'Update' button. In case of catch weight products, also modify the weights. After the modification press the 'Update' button.
In case of using waste, the # On line quantity is equal to with the sum of the # Used, # Rest and # Waste quantity. When modifying the used or the rest quantity, the system updates the waste (11) quantity automatically. The # waste field cannot be modified manually on the touchscreen.

12. Production order status

See: 8.2.16. Production order status

Disassembly - Weight Flow


DISASSEMBLY-WEIGHT
Select production line
Select production order
Start disassembly
Assign production line (Touchscreen)
Add batch attributes
Disassembly cockpit
'Print prolduct label'
Select a component
Enter quantity
Enter the number of labels
'Add items to use'
Add product to production line
Move document
'Disassemble'
Identify SSCC
Press left arrow button
Logistic carrier is full
Scale the quantity
Next component
'Back to production lines'
Select component
Component disassembled
Logistic label printed
Receipt(s) from production
'End production order'
End disassembly?
'Stop production'/ 'Put on hold'
Enter the consumed quantity
Put on hold
Disassembly order 'On hold'
Stop production
Disassembly order closed
Item issued
Issue from production

1. Initiate the flow

Tap the `Disassembly- weight` button on the touchscreen.

2. Select production line

See: 8.2.2. Select production line

3. Select production order

See: 8.3.3. Select production order

4. Start production order

See: 8.4.4. Start production order

5. Identify the batch

See: 8.3.5. Identify the batch

6. Disassembly cockpit

See: 8.3.6. Disassembly cockpit

7. Move to production line

See: 8.3.7. Move to production line

8. Disassemble

After adding the products, tap the `Disassemble` button. On the next screen identify the destination logistic unit. See: 8.1.4. Identify the SSCC

9. Enter the quantity disassembled

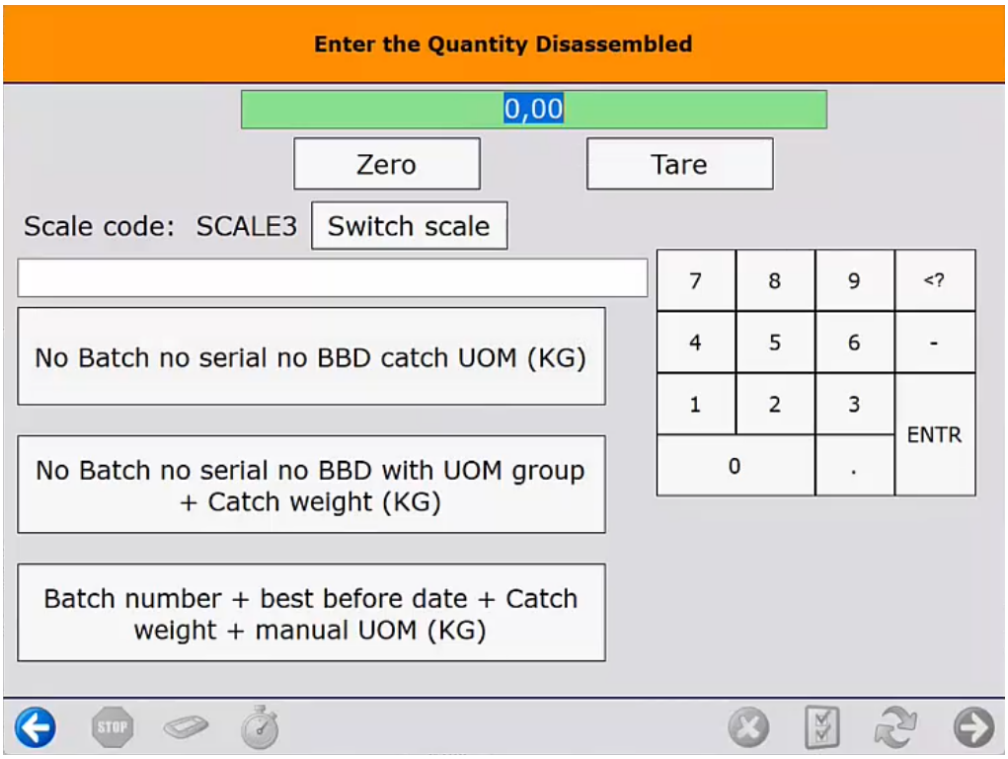
Weigh a component or enter the quantity manually. Then press the button of the component to add the weighted quantity to the system.

- If the component is managed by batches, depending on the batch number settings for

production the system generates the batch number. Note: The extension *'Batch Number Generator Production - Empty Batch Number'* is not supported in the Disassembly flows. It is not possible to change the generated batch number regardless of the settings on the *Batch Number Production Company* generator.
- If the component has a best before date, depending on the best before date settings for production, the system might ask to enter the best before date.
- If the component has batch attributes, the system asks for adding those attributes too.

If the *Weight Capture needed during Production* setting is enabled on Item Master Data > Produmex tab > Production tab, the product / by-product must be weighed with a scale.

- Prerequisites: You must define a scale for the production line in the Organizational Structure. If more scales are defined under the same production line, the flow displays the `Switch scale` button.
- The setting applies to items that are not managed by serial numbers.
- If the item is a catch weight item, you can weigh the item after the first quantity has been added.



After the quantity has been added, the system books a 'Receipt from production' document and moves the component to the output location.

When added quantity exceeds the maximum quantity, the system displays an error message. The maximum quantity is calculated from the base quantity and the quantity tolerance of the component and the available quantity of the product on the line.

Proceed with the next component. After every component has been weighted, press the right arrow button to continue with the flow.

Press the `Logistic carrier is full` button to continue the disassembly onto another logistic carrier. After the button has been pressed, the *'Production: logistic unit produced event (400)'* print event is triggered and the production label is printed. The default report for the print event is *DefaultProductionLabel.rpt*. On the next screen identify the new destination logistic unit.

To go back to the disassembly cockpit, press the left arrow button. After the button has been pressed, the *'Production: logistic unit produced event (400)'* print event is triggered and the production label is printed. The default report for the print event is *DefaultProductionLabel.rpt*.

10. End production order

On the main production screen press the 'End production order' button.
See: 8.3.9. End production order and 8.3.10. Confirm the consumed quantity

11. Production order status

See: 8.2.16. Production order status

9. Finish production

Production orders can be finished in the office environment with the Production Manager. When producing with the 'Production' flow, the closing of the production can also be performed on the terminal.

9.1. Office

Select the production line and click on the 'Detail' button. The 'Detail' button is only active, if there is a started production order assigned to the selected production line.
The produced quantity is displayed on the screen but it cannot be modified on the Production Manager.
On the 'Production detail' screen click on the 'Finish production' button. The closing process depends on the selected production manager type for the production line.

9.1.1. Production manager type: SPL_CONS_LOCK

When the production manager type is set to SPL_CONS_LOCK for the Production Line, the system will use the stock locked during the production as the base of the consumption.
On the 'Stop production' window add the consumed quantities.
The lined up and not lined up components are displayed in separate sections. Different batches are displayed in separate lines. The number of the displayed rows can be limited on the Production controller. Time registrations cannot be modified on the Production manager.

Not lined up ingredients

Add the used quantity to the line of the batch it was consumed from. By default the used quantity is zero. It is also possible to define the used quantity by adding the remaining quantity. Because the sum of the '# Used' and '# Remaining' quantity must be equal to the '# On line' quantity, when modifying either one of them, the other one is automatically updated.
The added consumed quantity cannot exceed the on line quantity.
By default the used weight is also zero. When adding the used or the remaining quantity of a catch weight item, the system automatically fills the standard weight based on the ingredient's catch weight settings. It is possible to modify the weight within the allowed quantity tolerance defined in the Item Master Data.

When the 'Use waste?' option is enabled in the Production controller, the waste quantity and the waste weight can be added as well. In this case the # On line quantity equals with the sum of the # Used, # Rest and # Waste quantities. After modifying two of those fields, the system automatically updates the third one. The # waste field can only be modified if the 'Allow waste to be editable when finishing production on production manager?' option is set to true in the Production controller.
When there are serial numbered items among the ingredients, the serial numbers of the consumed product must be selected. Click on the serial number field in the line of ingredient managed by serial numbers. A 'Serial Number Selection' window will open up. Select the serial numbers of the consumed products.

Lined up ingredients

Since the used quantity of the lined up ingredients cannot be measured, define it by modifying the quantity remaining in the tank. The # used quantity cannot be changed directly. The system will calculate the used quantity by subtracting the remaining quantity from the in tank quantity before the production.

9.1.2. Production manager type: MPL_CONS_INPUT

When the production manager type is set to MPL_CONS_INPUT for the Production Line, every production order started on a production line with the same input location as the selected production line will be closed in one step. The system will use the stock on the input location as the base of the consumption.

9.1.2.1. Confirm material consumption

On the 'Stop production' screen started production orders assigned to production lines with the same input location are listed.
The lined up and not lined up components for the selected production order are displayed in separate sections. Different batches are displayed in separate lines. The number of the displayed rows can be

limited on the Production controller. Time registrations cannot be modified on the Production manager.

Not lined up ingredients

When the production manager type is MPL_CONS_INPUT, the used quantity and weight cannot be modified.
The system will issue the entire stock located on the input location for the component. When the production orders have common materials, the system will divide the stock to issue between the production orders based on the theoretical quantities of the component.

Lined up ingredients

Since the used quantity of the lined up ingredients cannot be measured, define it by modifying the quantity remaining in the tank. The # used quantity cannot be changed directly. The system will calculate the used quantity by subtracting the remaining quantity from the in tank quantity before the production.

9.1.3. Close the production

To close the production, press the ‘Stop production’ button.
After the button has been pressed,

- the system will remove the lock from the components
- the used and waste quantity of the ingredients will be issued and an ‘Issue for production’ document will be created. Waste quantities are displayed in separate lines and indicated as waste in the ‘Issue for production’ document. For more information about additional Produmex production issue lines see: 3.3.4. Production issue lines.
- the remaining quantity of the ingredients will be moved to the rest location of the production line and a ‘Move’ document will be created
- the used quantities will be added to the ‘Issued’ field of the production order
- both the SAP and Produmex status will be changed to ‘Closed’ on the production order

9.2. Shopfloor

For the detailed description about finishing the production on the shopfloor see:
8.2.1.2 End production 8.3.9. End production (disassembly)

10. Time registration

With the help of the time registration module it is possible to book activity costs for activities

performed during the production. (E.g. setup time, working hours, downtime).

10.1. Office

Add a time registration type item to the BoM or to the production order. For more information about time registration items see: 3.1.3. Produmex Production Tab.

Add a time registration type item or resource to the BoM or to the production order.

- For more information about time registration items, please see: Produmex Production Tab of the Item Master Data
- For more information about time registration resources, please see: Resource Master Data

10.2. Shopfloor

Since time registration type components are used for measuring time, there is no need to pick and move them to the production line. Therefore time registration components are not listed during the picking and moving flows.
Time registration can be used in both production flows, but it is only available on the touchscreen. It is not recommended to use the time registration during multiple step products executed with the production step list.

10.2.1. Initiate the time registration

Press the ‘Clock’ button on the toolbar to start registering time. In case of ‘Production’ flow, the button is active on the Production cockpit screen. In case of ‘Production Receipt’ flow, press the button before selecting the production order.

10.2.2. Select a time registration item

Select a time registration item from the list. Only time registration items/resources linked to the production order are listed.

10.2.3. Select a task

Press the ‘Start’ button to start a new time registration. To go back to the production cockpit, press the left arrow button.
Press the ‘Stop’ button to finish the time registration. The button is only available if there is a started time registration. For more information please see: Select an operator
Press the ‘# Hours’ button to add the time manually. For more information please see: Enter the

hours manually
Press the ‘Downtime’ button to register downtime. The button is only available if there is a started time registration. For more information please see: Registering downtime
Press the ‘Overview’ button to see the overview of the booked time registrations. For more information please see: Overview

10.2.4. Enter the hours manually

Press the ‘# Hours’ button. The unit of measurement of the entered value will be the UoM of the time registration component. In this document we will assume that the UoM is “hours”. On the next screen add the number of hours. The number of the hours is not limited.
After the number of hours has been entered, the system asks whether to register downtime or not. Press the ‘Yes’ button to register downtime. Press the ‘No’ button to proceed without registering downtime.

10.2.5. Registering downtime

Press the Downtime button. On the next screen select a downtime type from the list. Every downtime type set in the default forms are listed. For more information about the downtime types see: 3.2.3.13. Down time types

After the downtime type has been selected, enter the number of hours.

The system will asks whether to register another downtime or not. Press ‘Yes’ to register another downtime. Proceed as described above. Press ‘No’ to proceed without registering another downtime.

10.2.6. Overview

Press the ‘Overview’ button. On the next screen it is possible to adjust the registered hours and the linked operator(s) of a selected time registration. It is also possible to remove a time registration entry. Select the line and press the ‘Delete’ button.

10.2.7. Stop time registration

Press the ‘Stop’ button. After the stop button has been pressed, the timer stops. The time registry item will be issued with the measured time.

10.2.8. Select an operator

After the time registration has been stopped or the number of hours has been entered, the system asks for the operator. Select the operator(s) from the list then proceed with the right arrow button. Employees set in SAP B1 can be selected as operators. It is possible to select multiple operators for one time registration entry.

10.2.9. Issuing the time registration items

After the production is finished, time registration components are booked with the reported quantities on a separate Issue for Production document.

The measured quantity is also booked as consumed capacity for the resource on the given day. It is possible to exceed the daily implementation capacity.

Please note: The production order cannot be closed if there is no sufficient stock for the time registration item.

The time registration results are stored in the PMX_TRHE table.

11. Multiple step productions with the production order step list

With the production order step list, it is possible to group multiple step productions into one production order. Execute step list productions in the ‘Production’ flow only.
With multiple step production, the production of the intermediate product(s) and the end products can be grouped together. Produmex also supports the scenario where the intermediate product is the result of a disassembly production. Execute step list productions in the Production Flow only.

Note: Produmex WMS does not support resources in the step list.

11.1. Create step list

Open the Production order step list. The step list can be opened from the Produmex Production module.
Add the end product to the ‘Item to produce’ field.
Add a description to the ‘Description’ field.

Press the ‘Add line’ button to add a new line. Select a component on the line. Set the ‘Is Disassembly?’ option to true if the added item needs to be disassembled in order to produce the intermediate product.
Add the end product to the list too.
Pres the ’Add’ button to create the step list.

11.2. Create production order

Create a new production order. Set the type of the order as ‘Special’ (1).
Select the end product as the item to produce (2). In the next field (3) select the step list from the dropdown menu. Only step list for the item to produce will be displayed.
For more information about the production order settings for using the step list see: *3.3.2. Production order header.*

After the step list has been selected, the system automatically fills the production order lines with data copied from the BOM of the items added to the production step list (4).
In case of intermediate product is the result of a disassembly, the product to disassemble is added to the production order as a component (5).
The intermediate product(s) are also added to the production order, but as an optional item (6).
The production order lines cannot be modified on step list orders.

11.3. Execute the production

Execute the production as described in the *Production Guide*.
After pressing the ’Produce’ button, add the produced quantity of the end product. The produced quantity of the intermediate product can be added after the ’stop production’ or the ’Put on hold’ button has been pressed.

11.4. End production

To end the production, press the ‘End production’ button. On the next screen select a task.
Press the ‘Back to production lines’ button to go back to the production lines.
Press the ‘Put on hold’ button to put the production on hold. Press the ‘Stop production’ button to stop the production. After pressing the ‘Stop production’ or the ‘Put on hold’ buttons, confirm the produced and the consumed quantities.

11.5. Enter the quantity of the produced intermediate item

Enter the quantity of the produced intermediate item. There is no limit to the entered quantity, but the system will display an error message if while confirming the consumed quantities and there is an insufficient stock on the production line.

11.6. Enter the quantity to consume for the optional item

Enter the consumed quantity of the optional item. The entered quantity cannot exceed the quantity available on the production line.

When the end product was not produced, the system skips this screen. When the consumed quantity is greater than zero, then confirm the consumed quantity on the next screen. For more information about the consumed quantity confirmation screens see: *8.2.13. Confirm the quantity to consume*.

11.7. Confirm the quantity to consume for the components

For more information about the consumed quantity confirmation screen see: *8.2.13. Confirm the quantity to consume*.
In case of step list productions, the quantity to consume of a component is the sum of the calculated quantity to consume for the intermediate and the end product.
After the consumed quantities have been confirmed, the system issues the used quantities and books an ‘Issue for production’ document. The rest quantities are moved to the rest location and the movement is registered in a Move document in the Produmex office module.

11.8. Add the quantity of the output item to process

First enter the output quantity of the end product. The maximum quantity is the produced quantity of the end product.
These screens are used to verify the produced quantity. The entered quantity cannot exceed the produced quantity.
First confirm the produced quantity of the end product by entering the output quantity. On the next screen add the output quantity of the intermediate product.

11.9. Issue components/ Receive product

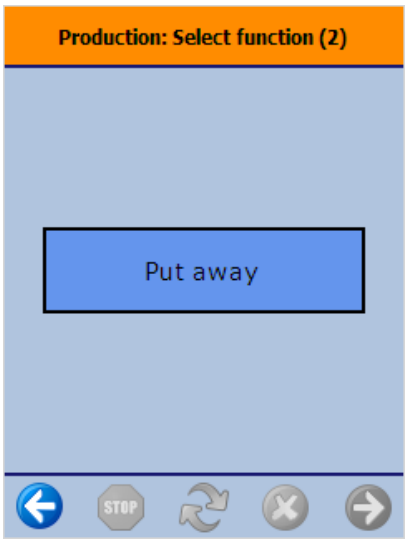
After the consumed quantities have been added, the system issues the components with the confirmed quantity and books an ’Issue for production’ document.
The remaining stock is moved to the production line, and the movement is registered in a Move document in the Produmex office module.

The produced intermediate product is moved to the output of the production line.
The system either closes or puts on hold the production order, depending on which button was pressed in the *11.4. End production* step.

15.2.12. Put away – Production

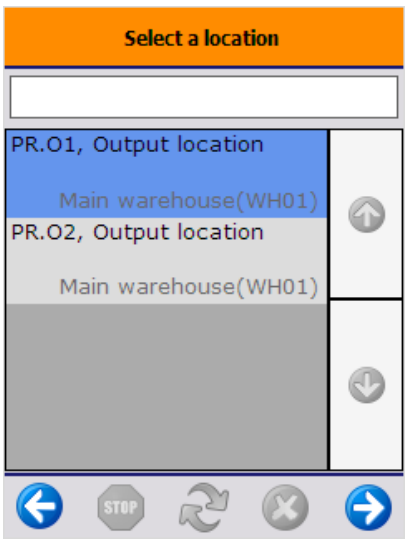
The Put away for production generator controls the creation of the put away orders. When the standard Produmex WMS product is used, a put away order is created after the (by-) product is produced onto a logistic unit. No production put away order is generated when producing without an SSCC.

To start the flow, select the *Put away option* from the Production main menu.



15.2.12.1. Select the source location

Every location that set as an output location of a production line is listed from the warehouses assigned to the thin client.



15.2.12.2. Scan an SSCC

On the next screen every SSCC that belongs to an open production put away order for the location is listed. Scan the SSCC to move.

15.2.12.3. Scan destination location

Then scan the destination location. It is also possible to select the destination location from a list.

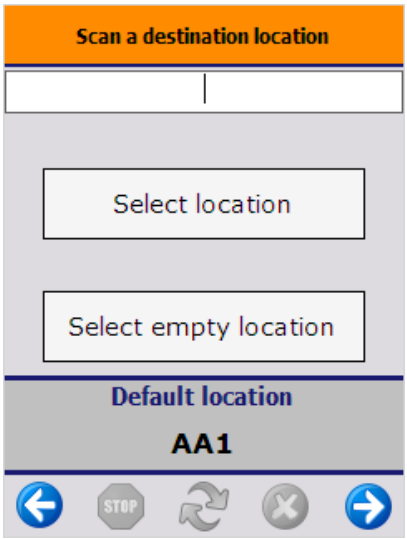
- Press the ‘Select location’ button to see the list of active locations in the warehouse of the selected output location.
- Press the ‘Select empty location’ button to see the list of every empty active location from the warehouse of the selected output location.

On the bottom of the screen the Default location is displayed.

When the location suggestion is enabled for the warehouse, the *Default location* is the first suggested location calculated based on the logic described in Location suggestions.

Note: When we use the suggested location functionality in the reception flow (receiving items to a location instead of a dock) and the system cannot find a suitable location for the item, it automatically receives the item to the dock.

When the location suggestion is not enabled for the warehouse, the *Default location* is the standard location set for the given warehouse on the Produmex Inventory tab of the Item Master Data of the item. If the items to move have different standard location set for the warehouse, no default location is displayed.



15.2.12.4. Logistic unit is moved

After the destination location is selected, the SSCC is moved to that location. The ‘Logistic unit/Items are moved’ message is displayed on the scanner. Press ‘OK’ to acknowledge the message. The system returns to the ‘Scan an SSCC’ screen.