

Functional guide

1. Pick list

1.1. Global information

Once a wave is selected on the scanner, all the pick lists in the wave go through a process to allocate the stock to an item detailed level. This means the stock is locked on the location. Pick list lines that have a location allocated, will get the status 'ready'.

Stock allocation on detailed level is only done for pick locations.
Stock on a bulk location (Non-pick location) cannot be taken to pick.
Also keep in mind that the stock details from the proposal are copied.

So for example: If on the proposal a certain LUID is locked, the pick list can only take stock for this LUID. This is the same for a batch. The pick list will only allocate for locations where the batch on the proposal is stored.

There are some exceptions to allow the picking on bulk locations: Full pallets can be picked from a bulk location, if this has been configured.

Status:

Not ready ('N'): The pick list has been created, but there is no locking done on detail level.

Partially ready ('A'): Some of the lines still do not have locking on detailed level.

Ready ('R'): All the lines have locking on detailed level.

Partially picked ('I'): Some lines are picked

Picked ('P'): All lines are picked

Partially packed ('T'): Some lines are packed

Packed ('K'): All lines are packed

Partially shipped ('L'): Some lines have been shipped (*Pmx sales shipping*)

Shipped ('S'): All lines have been shipped (*Pmx sales shipping*)

Partially delivered ('E'): Some lines have been delivered

Closed ('C'): All lines are closed. Either by closing the pick list or shipping all goods.

In case a movable location is used to pick on, the lines that are picked will be in status 'Picked'. The users need to go through the packing flow to pack the items.

When no movable location is used, the picked lines get the status 'Packed', because the users will not go through the packing flow.

An exception to this rule is when the option 'Always status picked?' is set to true on the Pick list type table (*For more explanation see Produmex pick list types (PMX_PLTY) at page 28*)

1.2. Stock order by

Picking, Multi picking, Zone picking

The order to take the stock is based on settings in the pick list controller.

If there is a custom 'Stock order by' option, the sorting will be the value of that setting.

However when that setting has the value *DEFAULT*, the sorting is as below:

Settings that are taken in account:

- Must the user pick full pallet from bulk location
- Can the user pick full pallet from bulk location

If the setting 'Must the user pick full pallet from bulk location' is checked, the sorting is as follows:

- BBD
- BatchNumber
- BatchNumber2
- Full pallet
- Non-pick location
- Has LUID
- Location sequence
- LUID

Otherwise the sorting is done as:

- BBD
- BatchNumber
- BatchNumber2
- Pick location
- Has LUID
- Full pallet
- Location sequence
- LUID

After getting this sorting, the system will loop through all the lines it finds. If during this loop, a full pallet is found on a pick location, it is stored in a serarate list, and is NOT used on the pick list line. If after assigning the locations to the pick list line, there is still quantity to allocate, the stock for full pallets on a pick location is used.

Ad hoc picking

For ad hoc picking, the stock is sorted by:

- BBD
- Batch with smallest free stock
- Pick locations
- Location with most LUID's
- Non-full pallets

- Smallest quantities per inventory line
- Location sequence

1.3. No location allocated

When there is no location allocated on the pick list, it means that there is no free stock available on the locations allowed for picking.

So there is no free stock on pick locations, and (if configured to allow full pallet bulk picking) there are no free full pallets on bulk locations.

1.4. Pick list screen

1.4.1. Make delivery

On the pick list screen there is a button called 'Make delivery'. This button can only be used when:

- The pick list is in status 'Ready'
- The pick list does not have any products with serial numbers
- The option 'Do not lock stock on picking' is not set

When clicking the button, the system will pick, pack, load and deliver the goods on the pick list. It will use the stock details from the pick list. It is not possible to override locations, LUID, ...

1.4.2. Skip item

This button is available when:

- The form is in OK mode. This means there are no unsaved changes to the pick list.
- All selected pick list lines have status 'Not ready' or 'Ready'
- At least 1 line is selected

When clicking the button, the system will skip the selected lines. This means the lines will be closed, and the items will not be picked.

1.4.3. Choose alternate item

This button is available when:

- The form is in OK mode. This means there are no unsaved changes to the pick list.
- The selected pick list line has status 'Not ready' or 'Ready'
- Exactly 1 line is selected

When clicking the button, the system will show an additional screen where the user can select 1 or more alternate items to pick from.

If over picking is allowed, the system will allow the user to select more than what was needed to pick. The list of alternate items is compiled the same way as it would on the picking flow.

1.4.4. Adjust quantity for non-inventory items

The quantity for non-inventory items can be changed when the pick list line is in status 'Ready'.

2. Pick list proposal

2.1. Disallowed locations

Stock on some locations is not allowed to use for creation of pick list proposals. This includes:

- Can be lined up locations linked to a production line
- Input location of a production line
- The production line
- Special locations linked to a warehouse
- Moveable locations
- Locked locations (*Cycle count*)
- All locations linked to a WA location.

There is a view that is used to get those locations: `PMX_DISALLOWED_LOCATIONS_FOR_PICKING`

2.2. Shelf life calculation

In order to calculate the shelf life of an item for a particular customer & shipping address, the systems evaluates the shelf lives that can be found at different places. The first matching shelf life will be taken into account, according to the following priority:

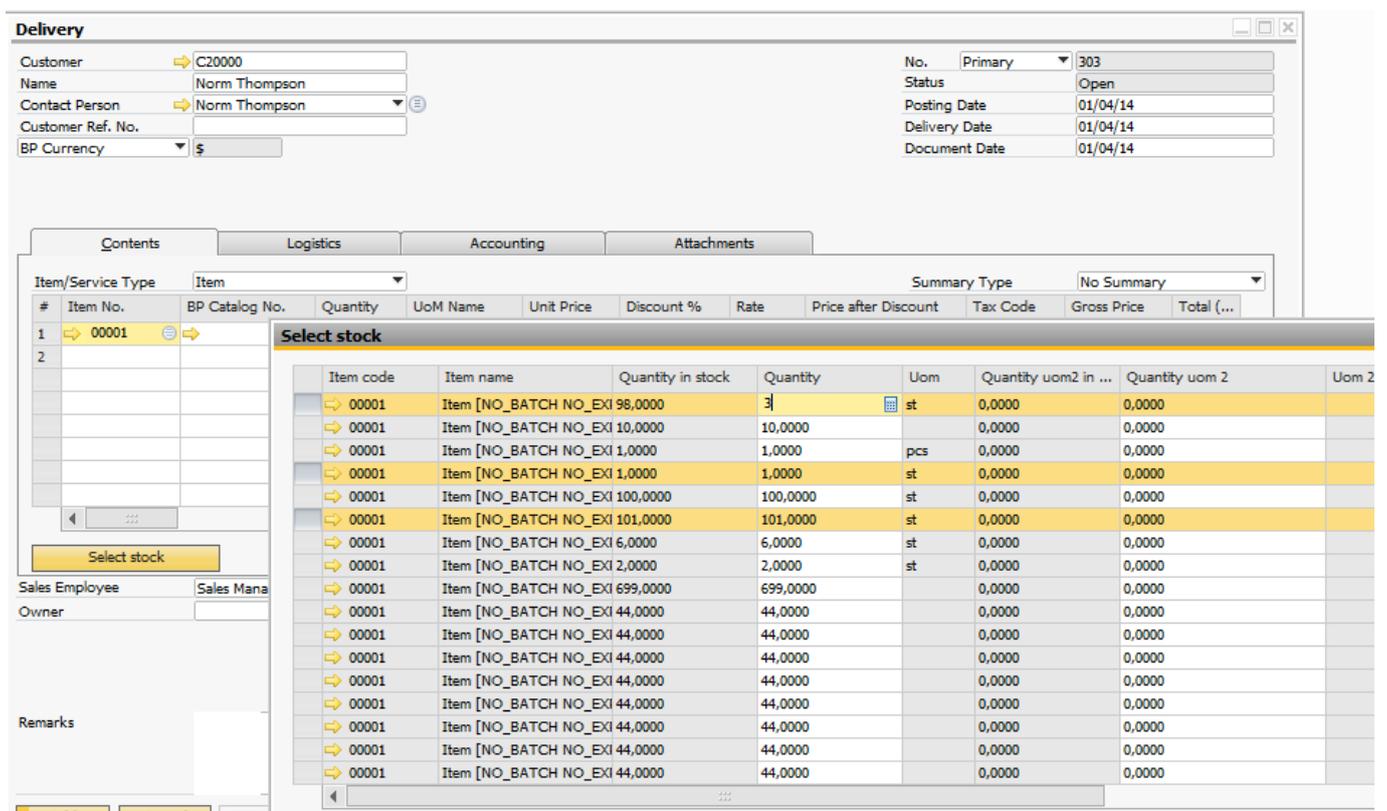
- shelf life defined in the sales order line (RDR1.U_PMX_SHLF column)
- shelf life defined on the item master data for the customer code and country code
- shelf life defined on the item master data for the customer code
- shelf life defined on the item master data for the country code
- shelf life defined for the customer code and country code (@PMX_CSSL user table)
- shelf life defined for the customer code (@PMX_CSSL user table)
- shelf life defined for the country code (@PMX_CSSL user table)
- shelf life defined on the item master data (OITM.U_PMX_SLID field)

3. Stock selector

On some screens of SAP it will be possible to use the stock selector screen to easily select the Produmex stock. This screen will fill in the needed data into the UDF's on the document line.

Supported documents:

- Purchase return
- Sales delivery
- Sales invoice
- Goods issue
- Production issue



When an item is entered, the user can press the 'Select stock' button. On the stock selection screen the user can select 1 or more lines he wants to add. Quantities can be changed.

Please note that you need to select at least 1 line to proceed

The stock lines shown in the editor are the free stock for that item. It does not take in account allocated stock for the base order of the document.

6.3. Inventory report

6.3.1. Change

Change best before date

When selecting 1 or more lines, the system will try to adjust the best before date of the first selected line:

Change quality status

When only 1 inventory line is selected, it is possible to enter the quantity. This allows the user to change the quality status for partial quantities

6.3.2. Move

Perform move

When only 1 inventory line is selected, it is possible to enter the quantity. This allows the user to move a partial quantity.

3. Catch weight

A second version of catch weight is created.

This allows the user to keep track of the stock in 2 uom's. The inventory uom is pieces. The second uom is weight.

This version only supports the entry of the total weight and case scanning.

Supported functionality:

- Purchase Receipt
- Purchase Return
- Ad hoc moves
- Picking
- Multi picking
- Ad hoc picking customer collect
- Packing
- Shipping
- Cycle count
- Production flow
- Production receipt flow
- Cross docking
- Put away
- Sales return

- Quality status changes
- Zone picking
- Ad hoc picking
- Mobile packing
- Consolidated packing
- Easy Stock selector
- Direct cycle count
- Picking for production
- Production manager

4. Fat clients

There are typically 2 types of startup configurations: 1 for a scanner, and 1 for a touchscreen. Below you can find 1 example of each:

SCANNER: *"C:\Program Files (x86)\Produmex\Produmex Execute Fat Client\Produmex.Sbo.Logex.Execute.FatClient.exe" /f- /a:Produmex.Foundation.SlimScreen.WinGui.PocketSize /s+ /w:240 /h:320 /i:SCANNER1 /cs:SboConnectionString*

TOUCH: *"C:\Program Files (x86)\Produmex\Produmex Execute Fat Client\Produmex.Sbo.Logex.Execute.FatClient.exe" /f- /a:Produmex.Foundation.SlimScreen.WinGui.TouchScreen /s+ /w:1024 /h:768 /i:TOUCH1 /cs:SboConnectionString*

Explanation for all the parameters:

Parameter	Description
/f-	f- means no fullscreen, f+ means fullscreen
/a:Produmex.Foundation.SlimScreen.WinGui.PocketSize	PocketSize is for scanner fatclient, TouchScreen is for touch fatclient
/s+	s+ means form is sizable, s- means not sizable. Ignored if 'FullScreen' is set.
/w:240	Screen width (pixels) , scanner default = 240, touch default = 1024. Ignored if 'FullScreen' is set.
/h:320	Screen height (pixels) , scanner default = 320, touch default = 768. Ignored if 'FullScreen' is set.
/i:SCANNER1	SCANNER01 is the code of the client defined in the organizational structure
/cs:SboConnectionString	Connection string tag name defined in fatclient config file.
/k:+	Show a keyboard.
/kp:50	The percentage of keyboard height.
/sp:50	The percentage of screen width.

Parameter	Description
/dilng:EN	The language to use in the DI API connection (overrides the Produmex.DI_API.Language app setting). Use language codes from the OLANG table (ShortName column). Default: EN.

5. 3PL invoicing

When activating the “3PL Invoicing” menu, the “3PL invoicing selection criteria” form opens. There, you can select an invoicing period type and an invoicing period according to the selected period type.

Then you can load 3PL invoicing customers that still need to be invoiced for the selected period. These are the customers who meet both of the following conditions:

- are the linked partner of another business partner
- have no A/R invoice yet with the “3PL Period” user-defined field set to the first date of the selected period

The 3PL invoices consist of a certain amount of prices, in separate lines, all calculated differently.

5.1. Inbound document count

The quantity is the number of goods receipt PO’s with the Doc Date included in the invoicing period. The unit price is the invoicing item’s price, for the price list of the invoicing customer.

5.2. Inbound line count

The quantity is the total number of goods receipt PO lines belonging to goods receipt PO’s with the Doc Date included in the invoicing period.

The unit price is the invoicing item’s price, for the price list of the invoicing customer.

5.3. Inbound item quantity

For each goods receipt PO line, a price is calculated that is equal to the item’s 3PL inbound price (which can be set up on the Produmex tab of the item master data) multiplied by the received quantity (in inventory UoM). The inbound item quantity price is the total of all these prices for –all goods receipt PO’s in the invoicing period.

On the 3PL invoice, the quantity for that item is always 1, and the total price is set as unit price.

5.4. Outbound document count

The quantity is the number of sales deliveries with the Doc Date included in the invoicing period. The unit price is the invoicing item's price, for the price list of the invoicing customer.

5.5. Outbound line count

The quantity is the total number of delivery lines belonging to sales deliveries with the Doc Date included in the invoicing period.

The unit price is the invoicing item's price, for the price list of the invoicing customer.

5.6. Outbound item quantity

For each sales delivery line, a price is calculated that is equal to the item's 3PL outbound price (which can be set up on the Produmex tab of the item master data) multiplied by the delivered quantity (in inventory UoM). The outbound item quantity price is the total of all these prices for –all sales deliveries in the invoicing period.

On the 3PL invoice, the quantity for that item is always 1, and the total price is set as unit price.

5.7. Storage bin location usage per location type

For each location type for which active 3PL settings have been defined, the algorithm calculates the bin location usage of each supplier's stocks on this location type, day per day. The stock level of every day is calculated from the current inventory and the inventory history.

For each day, the algorithm calculates the list of locations that should be invoiced for storage of the supplier's items:

- If 'Daily used number of locations' is active, then all bin locations that have contained any item of the supplier will be added to the list
- If 'Daily final stock' is active, then all bin locations that contain any item of the supplier will be added to the list

The storage price of each bin location is defined in the price list of the item linked to its location type, and the total storage price for the day is the sum of the bin location prices. If a bin location has no location type, then its price is zero.

If the shortest invoiceable duration is 'Week' or 'Month', then if a location is used on any day of the week/month, it is considered as used during the whole week/month, and its daily storage price is then multiplied by the corresponding number of days.

On the 3PL invoice, one separate line is added for each location type that takes part into the calculation.

6. Add-on screens

6.1. Stock allocation

The stock allocation screen is used to allocate stock of 1 item to several sales order lines or customers.

There are 2 required filter fields that need to be entered:

- Item
- Warehouse

The other filter fields are optional:

- Customer From/To
- Customer group

The grouping option has 2 options:

- Sales document
- Customer

Based on what grouping option has been chosen, the allocation that will be created will be against the sales order or the customer

Pressing the **Apply filter** button, the grid will be filled with the data.

The screenshot shows the 'Stock allocation' window. At the top left, there are filter fields: 'Item' (00001), 'Warehouse' (01), 'Customer', 'Customer group', and 'Grouping option' (Sales document). An 'Apply filter' button is located below these fields. On the top right, there are summary fields: 'Inventory quantity' (1481), 'Free quantity' (-819), and 'Total allocated quantity' (1501). The main area is a grid with columns: Customer code, Customer name, Order, Number, Del. date, Shipping type, Ship to code, State, To allocate, Ordered #, Open #, Proposal #, Open # not al..., Pick remarks, and Error message. The grid contains 16 rows of data for customer Norm Thompson, with various order numbers and dates. The 'To allocate' column shows values ranging from 0.0000 to 500.0000. The 'Open #' column shows values ranging from 1.0000 to 20.0000. The 'Open # not al...' column shows values ranging from 0.0000 to 10.0000. An error message 'Allocated quantity too high' is visible in the 'Error message' column for the row with Order 159.

On the top right there are some summary fields available:

- **Inventory quantity:** The total inventory quantity
- **Free quantity:** The current free quantity. This summary takes in account the free quantity in the database, and the unsaved changes in the grid.
- **Total allocated quantity:** The total quantity that is allocated in the grid. Quantities that are for instance allocated to a pick list, production order, ... are not taken in account for this.

Update

When pressing this button the changes made on the screen are updated to the database. There are checks that are performed to validate what has been entered. If there is some data that does not pass this validation, the cell 'Error message' will have the explanation about the problem.

Cancel

When pressing this button the changes made on the screen are cancelled and the screen closes.

Clear allocation

This enters a zero in the 'To allocate' column.

Generate pick list proposal

Generates proposals for all selected lines.

This option is only available for grouping option 'Sales document'

Suggest allocation

Suggest an allocation. When no lines are selected, the suggestion will be for all lines in the grid. In case some lines are selected, the suggestion will be for those selected lines. The suggestion works as follows:

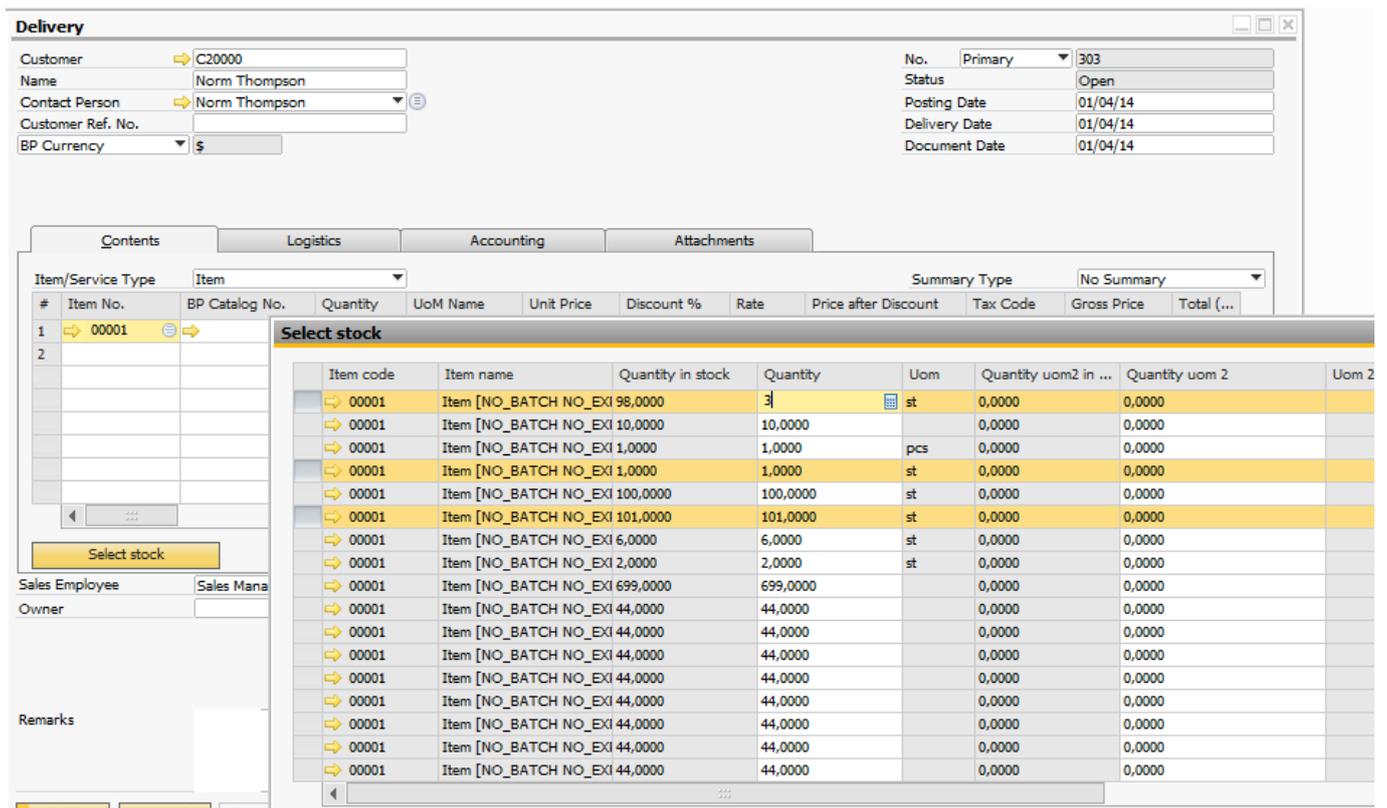
- The free quantity is divided over the selected lines **equally**.
- If the quantity to allocate would be more than what is still 'Open # not allocated', the 'To allocate' quantity will be the remaining 'Open # not allocated'
 - The quantity that is not used to allocate for such a line is NOT transferred to other lines.

6.2 Stock selector

On some screens of SAP it will be possible to use the stock selector screen to easily select the Produmex stock. This screen will fill in the needed data into the UDF's on the document line.

Supported documents:

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- Sales delivery
- Sales invoice
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When an item is entered, the user can press the 'Select stock' button. On the stock selection screen the user can select 1 or more lines he wants to add. Quantities can be changed.

Please note that you need to select at least 1 line to proceed

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6.3. Inventory report

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When selecting 1 or more lines, the system will try to adjust the best before date of the first selected line:

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6.3.2. Move

Perform move

When only 1 inventory line is selected, it is possible to enter the quantity. This allows the user to move a partial quantity.

6.4. Pick list proposal manager

The pick list proposal manager is available through the menu:
Produmex → Inventory → Picklist proposal manager

It allows the user to create pick list proposals based on document **lines**. The list of document lines can be filtered through the selection criteria screen.

6.4.1 Selection criteria

This is used to filter the document lines. Only the fields 'Document type' and 'Warehouse' are mandatory. The other selection criteria are optional.

Document type	Sales		
Warehouse	01		
Customer		To	
Item		To	
Item Group			
Due date			

OK Cancel

Document type

The document type.
This field is mandatory.
Possible values:

- Sales
- Transfer

Warehouse

The warehouse.

This field is mandatory.

Customer

The from - to customer.

Item

The from - to item.

Item Group

The item group.

Due date

The due date.

The filter will get all documents for this due date.

6.4.1 Document lines

On this screen the user can select the lines he wants to put on the proposal. By clicking the 'Generate proposal' button, the proposals will be created for the selected document lines.

Object type	Doc entry	Document nu...	Doc due date	Card code	Card name	Ship to address	Ship to code	Item code	Item name	Warehouse	Shipping type	Customer ref...	Open quantity
Sales order	67	67	08/02/07	C20000	Norm Thompson	300 Billings Drive	Ship to	A00002	IBM Infoprint 122 01		UPS Ground		20,0000
Sales order	73	73	26/02/07	C60000	SG Electronics	67 Grant Ave Tor	Ship to	A00002	IBM Infoprint 122 01		UPS Ground		5,0000
Sales order	76	76	15/03/07	C23900	Parameter Techn	908 Darby Road	Main WH	A00002	IBM Infoprint 122 01		Fedex EM		20,0000
Sales order	79	79	24/03/07	C42000	Mashina Corpora	400 Range Road	Ship To	A00001	IBM Infoprint 131 01		Fedex ON		20,0000
Sales order	79	79	24/03/07	C42000	Mashina Corpora	400 Range Road	Ship To	A00002	IBM Infoprint 122 01		Fedex ON		20,0000
Sales order	107	107	29/06/11	C20000	Norm Thompson	300 Billings Drive	Ship to	00003	Item [NO_BATCH_01		UPS Ground		29,0000
Sales order	107	107	29/06/11	C20000	Norm Thompson	300 Billings Drive	Ship to	00004	Item [BATCH EXI 01		UPS Ground		40,0000
Sales order	107	107	29/06/11	C20000	Norm Thompson	300 Billings Drive	Ship to	00006	Item [BATCH BA' 01		UPS Ground		30,0000
Sales order	107	107	29/06/11	C20000	Norm Thompson	300 Billings Drive	Ship to	00006	Item [BATCH BA' 01		UPS Ground		20,0000
Sales order	108	108	04/07/11	C42000	Mashina Corpora	400 Range Road	Ship To	00004	Item [BATCH EXI 01		Fedex ON		90,0000
Sales order	133	133	05/09/11	C20000	Norm Thompson	300 Billings Drive	Ship to	00003	Item [NO_BATCH_01		UPS Ground		1,0000
Sales order	133	133	05/09/11	C20000	Norm Thompson	300 Billings Drive	Ship to	ATS_06	ATS_06	01	UPS Ground		600,0000
Sales order	139	139	07/09/11	C20000	Norm Thompson	300 Billings Drive	Ship to	122444	Massiveker Steel	01	UPS Ground		100,0000
Sales order	159	159	10/01/12	C20000	Norm Thompson	300 Billings Drive	Ship to	00001	Item [NO_BATCH_01		UPS Ground		2,0000
Sales order	172	172	15/02/12	C42000	Mashina Corpora	400 Range Road	Ship To	00004	Item [BATCH EXI 01		Fedex ON		1,0000
Sales order	175	175	23/02/12	C42000	Mashina Corpora	400 Range Road	Ship To	00004	Item [BATCH EXI 01		Fedex ON		3,0000
Sales order	178	178	27/02/12	C40000	Earthshaker Corz	208 Hollywood A	Ship To	00004	Item [BATCH EXI 01		Motor Express		15,0000
Sales order	198	198	08/03/12	C20000	Norm Thompson	300 Billings Drive	Ship to	00007	Item [BATCH BA' 01		UPS Ground		20,0000
Sales order	207	207	29/03/12	C20000	Norm Thompson	300 Billings Drive	Ship to	LL_01	Lamp & Licht 01	01	UPS Ground		95,0000
Sales order	208	208	30/03/12	C20000	Norm Thompson	300 Billings Drive	Ship to	00001	Item [NO_BATCH_01		UPS Ground		100,0000
Sales order	208	208	30/03/12	C20000	Norm Thompson	300 Billings Drive	Ship to	116292	Mapel Ultracolor	01	UPS Ground		1,0000
Sales order	208	208	30/03/12	C20000	Norm Thompson	300 Billings Drive	Ship to	116292	Mapel Ultracolor	01	UPS Ground		3,0000
Sales order	208	208	30/03/12	C20000	Norm Thompson	300 Billings Drive	Ship to	116292	Mapel Ultracolor	01	UPS Ground		5,0000
Sales order	214	214	10/04/12	C42000	Mashina Corpora	400 Range Road	Ship To	IMPERMO06	IMPERMO06	01	Fedex ON		3,425,0000
Sales order	219	219	09/05/12	C20000	Norm Thompson	300 Billings Drive	Ship to	00004	Item [BATCH EXI 01		UPS Ground		9,0000

Dock

Select a dock for the proposal.

When no dock is selected, the system will use the first loading dock it finds.

Grid

In the grid user can select all the lines he wants to put on a pick list proposal.

Generate proposal

When pressing this button, the pick list proposal(s) will be created for the selected line(s).

In case no lines was selected, a message will be shown.

After creation of the pick list proposal(s), the created proposal(s) will be shown.

If only 1 proposal was created, the details of this proposal will be shown. But when there are multiple proposals created, a screen with the list of created proposals will be shown.

6.5. Purchase Order

Purchase Order

6.5.1. Pre-Print Purchase Order SSCC's

This feature will allow you to:

- Pre-print the GS1 (SSCC) labels for goods to be received (= goods on a purchase order)
- Use these printed labels to scan & capture the item GTIN, BBD, Quantity, BatchNumber

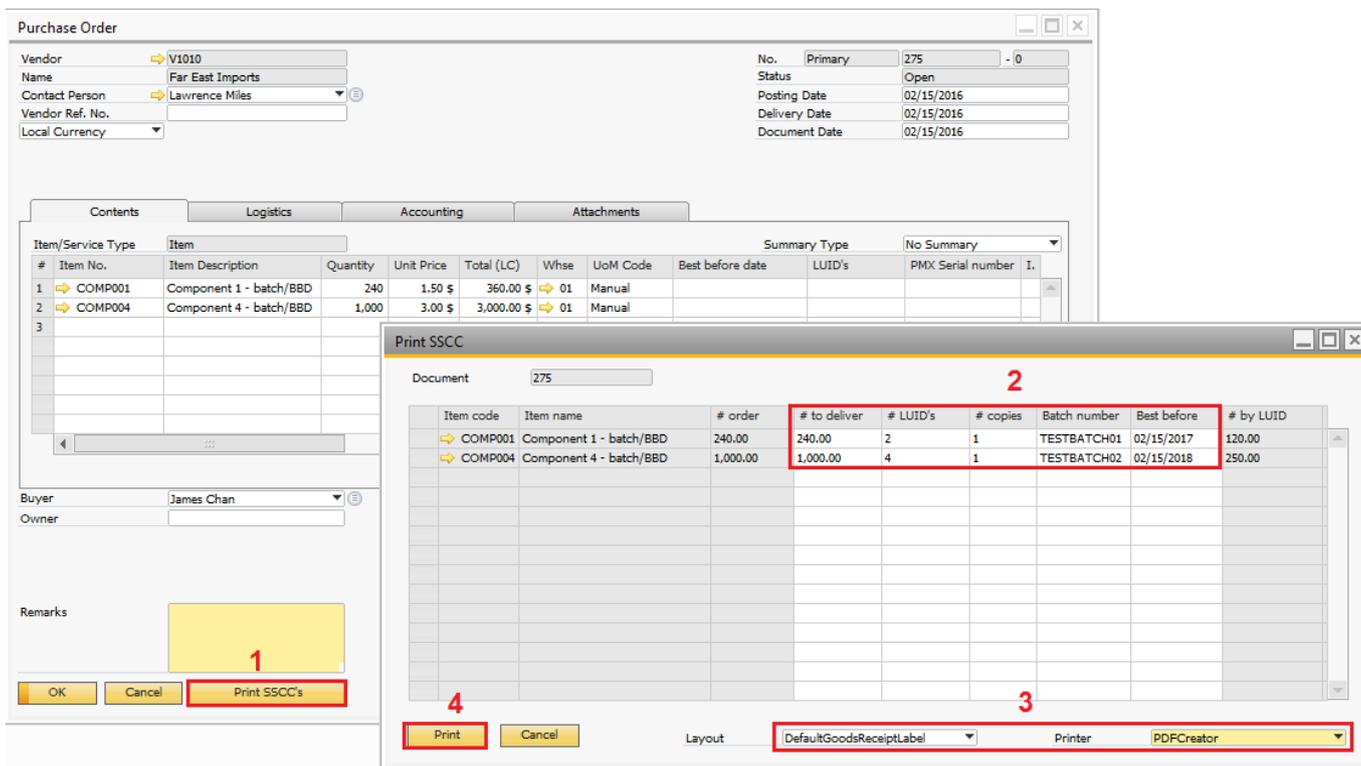
Setup of item master data : Items need to be batch / BBD activated, and have a valid GTIN-14 barcode. (if you are using EAN-13 codes, just add a 0 at the beginning)

The image displays two screenshots of the 'Item Master Data' configuration screen. Both screenshots show the following fields:

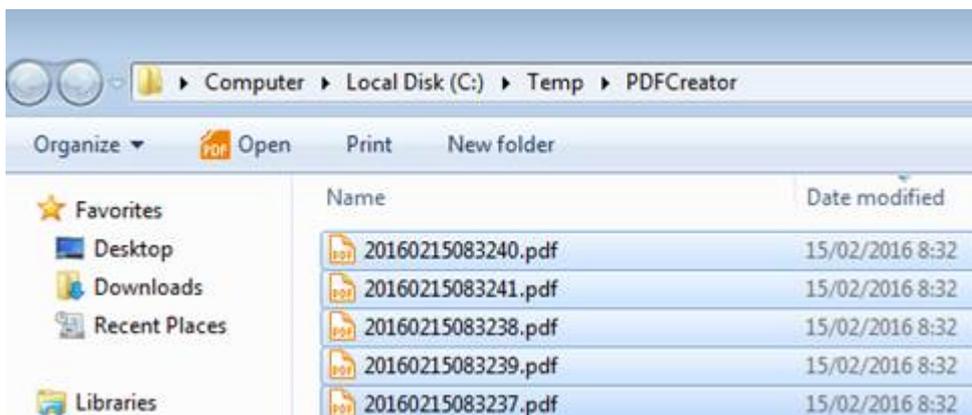
- Item No.:** Manual, COMP001 (top) / COMP004 (bottom)
- Description:** Component 1 - batch/BBD (top) / Component 4 - batch/BBD (bottom)
- Foreign Name:** (empty)
- Item Type:** Items
- Item Group:** ProductionTests
- UoM Group:** Manual
- Price List:** Base Price
- Bar Code:** 05843286332145 (top) / 05843273595164 (bottom)
- Unit Price:** Primary Curr, 2.00 \$ (top) / 4.00 \$ (bottom)
- GTIN-14:** (dropdown menu)
- Checkboxes:** Inventory Item, Sales Item, Purchase Item (all checked)

See button on purchase order → Asks for 'to be received quantity' and number of LUID's (= SSCC's = # of labels) :

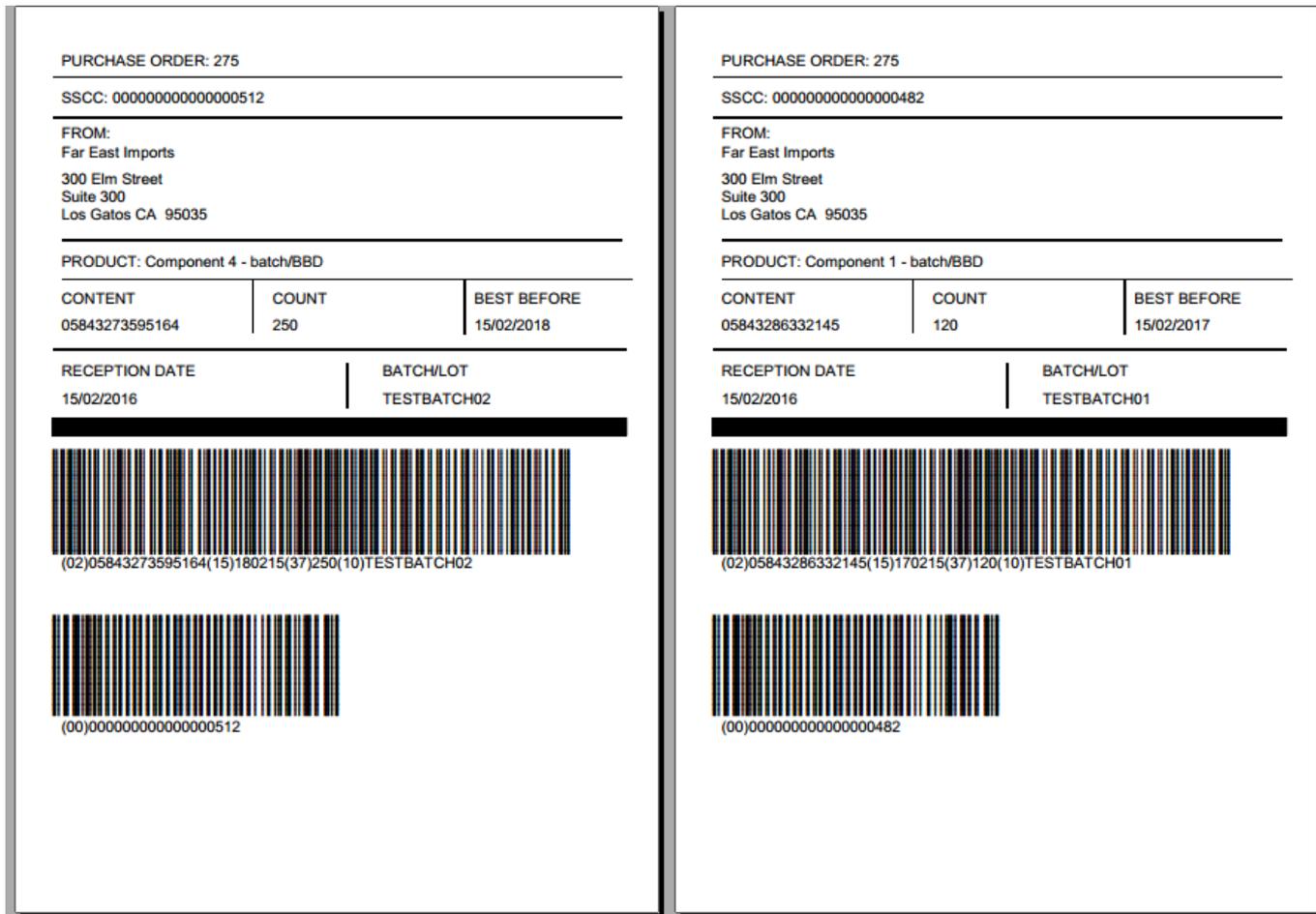
1. Print SSCC's button
2. Fill required data : delivered qty, number of LUID's, copies of label, batchnumber & BBD
3. Select layout & printer
4. Hit print button



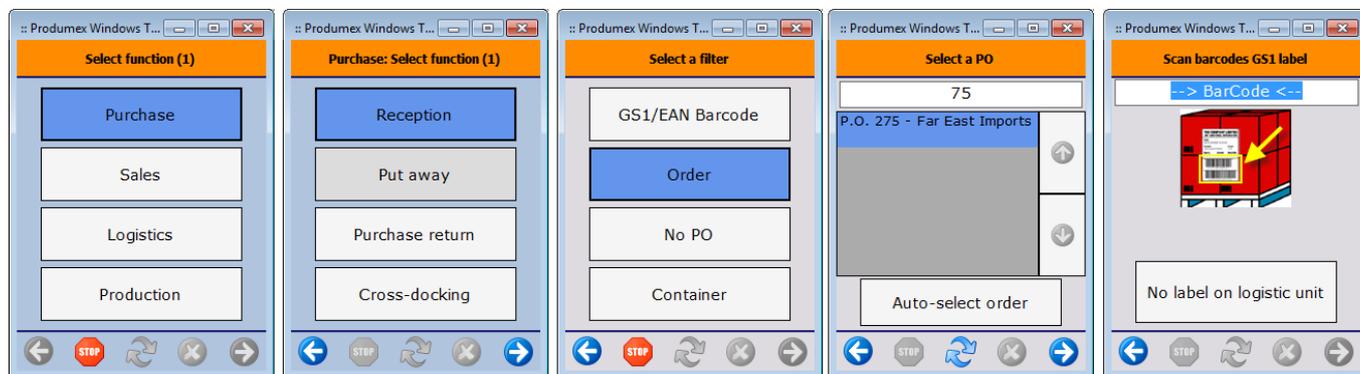
In this example, we have printed to a PDF printer, it has printed 6 labels (2 for line 1, 4 for line 2):



This is what the result looks like (1 example for each line):



These labels can now be used and scanned in the following screen during the reception flow :



scan the GS1 label barcodes here

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