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Process Data
Softproviding Core
User Documentation

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Contents

1 Process Data: Overview

1.1 Introduction

With release Softproviding Core v2.80, the data entry functionality and the representation of process data underwent a thorough redesign. In the Process Data Cockpit (also referred to as "Cockpit" in the following), the data acquisition options and the representation of the data have been improved and newly developed functionalities have been integrated.

For further or more detailed information on the new functionalities, users may consult the release notes written for release v2.40. There, the newly developed functionalities are documented per application area (in this case, Process Data).

The Process Data Cockpit mentioned above is called up as follows:

Application Menu	*Softproviding Core > Logistics > Process Data Acquisition > Entry > Process Data Cockpit*
Transaction	/N/SPDGS/PDAON

The Cockpit features the following functional areas:
— Further Processing Entry
— Enter Process Order
— Goods Receipt for Purchase Order
— Goods Receipt for Delivery
— Inventory Count Data Entry
— PDA Data Cockpit

Applications and Transactions

In an earlier release, the following three applications had to be called using separate transactions:

Application	Transaction
Further Processing Entry	/SPDGS/PE41
Goods Receipt for Purchase Order	/SPMEAT/PE22
Maintain PDA Operation	/SPDGS/PDAO

Calling these applications is no longer possible with the mentioned transactions. At startup, a popup with a corresponding message is issued.

For the following applications, which are also described in this document, no or only minor adjustments have been made in this release compared to the previous release:

Application	Transaction
Repetitive Manufacturing	— /SPDGS/PE51 (Process Data Acquisition: Repetitive Manufacturing process data entry)
Order Pair Formation	— No transaction for Order Pair Formation — /SPDGS/MPPA (Manual Pair Formation)

Collective Run: Post Goods Movements	—	/SPDGS/GMBT (Post Goods Movements)
Functions for Inventory Management	— — — —	/SPDGS/PDATADJU (Rebuild Stock Update (PDAS/PDAT)) /SPDGS/PDAT_UPDATE (PDAT Update (Decoupled)) /SPDGS/GMSC (Collective Run: Clear Batch Stock) /SPDGS/STOCK_CORR (Warehouse Stock Cleanup)
Adjust PDA Status	— —	SPDGS/AFKOCOMP (Set Status *PDA Completed*) /SPDGS/AFKORECO (Undo Status *PDA Completed*)

Descriptions of the following applications are given in separate chapters in this document:

Application	Transaction
Component Replacement	This function is controlled via customizing settings and material master table.
Control Settings for Period Batch	Control settings are made via material master and master data table.
PDA Evaluation	Transaction in the application: /SPDGS/WGAU.
HU Management	Integration of inbound deliveries in the data acquisition process.
CWM (Catch Weight Management)	Double inventory management with or without CWM.

Use of Non-ABAP Software Components

Non-ABAP software components are NOT qualified by SAP, they are provided directly by Softproviding (via the Softproviding Extranet). Customers who install and operate these components do so on their own responsibility. They are not part of the SAP license agreement but are still maintained by Softproviding.

Fiori-Apps – Instructions

SAP Fiori is the design concept for user interfaces within SAP applications. With this approach, Fiori apps can be simplified and personalized, and made available in the *Launchpad* based on user roles.

SAP Fiori were created for the various applications of Softproviding Core and can be executed in the Fiori Launchpad. Please compare the following documents for the prerequisites and the procedure regarding the configuration of SAP Fiori apps:
— Softproviding Core *Security-Guide*

The *Security Guide* documents for which Softproviding Core Applications SAP Fiori apps were created and which roles are required for this.

1.2 Process Data Cockpit

Once the Process Data Cockpit is started, all the above-mentioned functional areas are listed with the Further Processing Entry preselected by the default. In order to select a different function, the respective option (radio button) must be selected. For each of these functional areas, the respective selection parameters are displayed.

1.2.1 Common Features

The applications that are called up via the cockpit share a number of common features. For reasons of simplicity and for better overview they are described here. They are valid for all data entries that can be made in the Cockpit. These functions are:
— Selection fields
— Variants
— Multiple selection
— Displaying the selection results (views: *Explorer* (representation in tree) and *Detail*)

Selection Fields

Selecting an application via the respective option field will display the valid selection parameters. For all functions that include the *Plant* field, entering a plant is mandatory. The user might also be prompted to enter further parameters, for instance an order.

Variants

It is also possible to create variants in the above-mentioned areas of the Process Data Cockpit.

Note
Variants that previously existed in the areas Further Processing Entry *and* Goods Receipt for Purchase Order *in customers' systems in release v2.30 could not be transferred to the Process Data Cockpit since transaction /SPDGS/PDAON uses new programs.*

If desired or necessary, the variants of the different areas need to be created again manually. Since the function areas, with the exception of the PDA Data Cockpit, all use the same program, all existing variants are visible in each of those areas. We therefore highly recommend using expressive names and descriptions when you name the variants.

The variant function offers you the option of saving data entered into programs as variants. This is particularly useful for programs that are frequently started up with identical restrictions. This means that you do not need to enter the same values every time you start the program. When you select the variant, the fields that are already populated with data are used when the program starts.

Any number of variants can be created for each program. After a program starts, input fields are displayed. When you have entered the parameters you want, you can save them by clicking on the *Save*

as variant button. After adding a variant name and a description and entering data in other fields or highlighting them, you can save your entries.

By choosing *the Goto > Variant* menu option, you can display, modify and delete existing variants.

Multiple Selection

In selection fields, an individual value and, where appropriate, a range can be entered in the report selection window. Using the Multiple selection button, you can:
— restrict the entries via selection options (for example, larger or smaller than an individual value and inside or outside a range)
— select several individual values or ranges which are to be used when creating a report
— exclude several individual values or ranges which are not to be used when creating a report

For more information about multiple selections, see the SAP standard system documentation.

Selection Results/Representation in Explorer

Once the desired selection parameters have been entered, the application is started with the *Execute* function key (F8). The results of the selection are displayed in a split screen.

In the left screen half, application-specific information like, for instance, order and components of a further processing order or purchase order and PO item for Goods Receipt for Purchase Order are displayed. By selecting individual elements (e.g. by double-clicking on a purchase order), the respective detailed information is displayed in the right screen half.

Above the explorer structure, generally available functions are displayed in the form of an ALV grid. They are available with every application. These functions are:
— Collapse subtree
— Find
— Print (view and hierarchy)
— Layout (select, change, save, manage)
— List (again displays the basic list in the right-hand screen area, e.g. all selected orders)
— Overview off (hides the left-hand screen area; the *Overview on* button becomes available)

These functions are also used in SAP standard applications and are generally known which is why no further explanation is given.

Note
The following ALV grid functions are only available in the PDA Data Cockpit:
— *Legend: The* Legend *button shows the icons for the various PDA data record statuses in an overview.*
— *Optimize column width: the width of the columns and the information contained therein are optimally aligned.*
— *Change sorting: this function allows you to change the representation of the structure. Either the folders and the PDA data records contained therein are displayed, or the PDA data records are displayed in ascending order without their folders.*

— *PDAOs overview: this function allows you to sort all PDAOs in the right screen area in descending order and list by line.*

Selection Result/Representation of the Details

The representation of the details in the right-hand screen area is a consequence of the selection of the respective elements in the right-hand screen area (selection by double-clicking). These detailed pieces of information for the individual cockpit applications differ from each other. They are discussed in depth in the respective chapters in this document.

The function which are generally available in every application (as an ALV grid) are:
— Details
— Sort in ascending order
— Sort in descending order
— Find/Find next
— Set filter
— Total/Subtotals
— Print
— Views
— Export
— Choose layout

These functions are also used in SAP standard applications and are generally known which is why no further explanation is given.

2 Further Processing Entry

2.1 Overview

Further Processing Entry (FPE) is used for the entire production order process. This includes all process data acquisitions for input and output and confirmation and closing of the production orders.

In process data acquisition for orders, PDA operations for production input and/or output are created. These data records are stored centrally in table /SPDGS/PDAO. Based on these PDA data records, stock levels can be updated either directly or in a subsequent process.

In goods issue (GI = further processing inbound) a PDA operation with the document group D (for further processing) and document category WA is created, together with an SAP material document (movement type 261).

In goods receipt (GR = further processing outbound) a PDA operation with the document group D (for further processing) and document category WE are created, together with an SAP material document (movement type 101).

For further information on the topic of PDA operations please see the following chapters in these documents:
— "PDA Data Cockpit"
— "Posting Goods Movements"

Data entries in Further Processing Entry are possible via SAP GUI, DGAs or RAF applications. However, this document focuses on the SAP GUI.

Production orders in Further Processing Entry are generally anonymous make-to-stock production orders. In the case of this type of production order, the products are not planned and produced based on a sales order, but for stock.

Graphical representation of the process steps in Further Processing Entry:
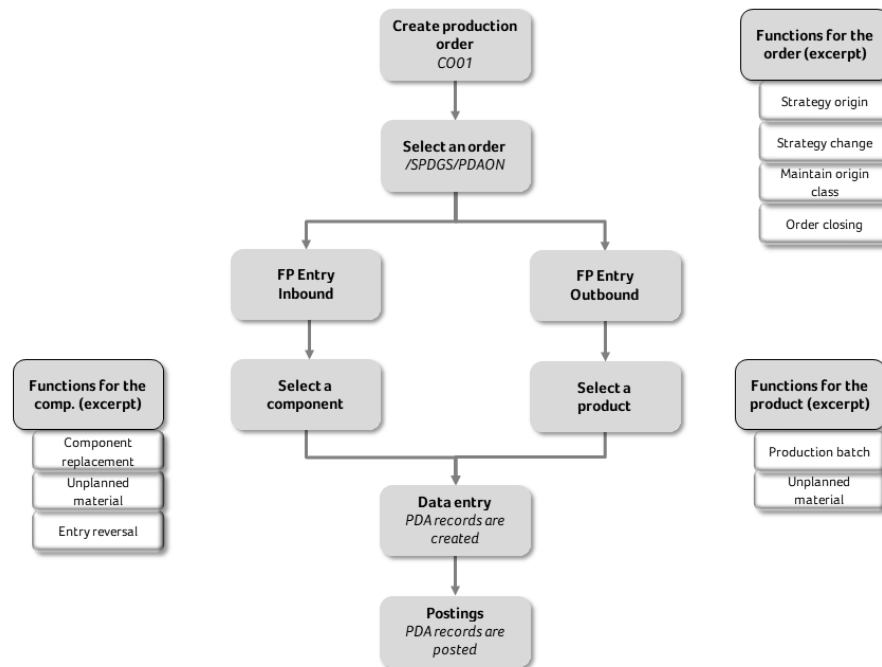
Further Processing Entry

2.1.1 Executing the Program

Further Processing Entry can either be started using the central Process Data Cockpit transaction or via the *Softproviding Core* or *Softproviding Meat* application menu as follows:

Application Menu	*Softproviding Core > Logistics > Process Data Acquisition > Entry > Process Data Cockpit*
	Softproviding Meat > Production > Execution > Further Processing > Further Processing Entry > Process Data Cockpit
Transaction	/N/SPDGS/PDAON

After the Cockpit is started, various functional areas are offered for selection, with the Further Processing Entry application being preset as default setting. The selection parameters for data entry are displayed. Apart from the plant, at least one other parameter must be entered.

Prerequisites

The following prerequisites must be met if you want to be able to process an order in Further Processing Entry:
—   The production must be released and must not be closed, technically closed, or deleted.

— The necessary customizing settings (for instance, in Softproviding Core) have been made. You will find details of the required settings in the *Process Data* configuration guide.

Selection Parameters

Field Name	Description
Plant	The plant is an organizational logistical unit that structures the company from the perspective of production, procurement, maintenance, and materials planning. Materials are produced and goods and services are provided in a plant. The plant is a company's production site.
Order	The order number of the further processing order. Further processing orders are SAP Standard production orders. Existing further processing orders can be accessed by pressing the F4 help key. You enter an asterisk (*) to display all the orders.
Material	A material is an item that is the subject of a business transaction. In SAP materials such as raw materials, semi-finished products, operating supplies, and finished products are identified using a unique material number. The material entered here is the header material to be produced (material with BOM).
Further processing group	The further processing group is used as a selection criterion in Further Processing Entry. It can be assigned to the material to be produced (= output material) in the material master data. When selecting an order in Further Processing Entry, orders can then be explicitly selected or excluded from the selection using the further processing group. Further processing groups are defined in Customizing under *Softproviding Core > Logistics > Process Data Acquisition > Definition > Further Processing Groups*.
MRP controller	The number of the MRP controller or MRP controller group that is responsible. This is taken from the material master data for the material that is being produced.
Production supervisor	The group that is responsible for production scheduling for a material.
Scheduled start	The date on which the execution of the further processing order will start.
Scheduled finish	The date on which the execution of the further processing order will end.
Basic start date	The basic start/finish date indicates how long the further processing order will be processed for.
Basic finish date	The basic start/finish date indicates how long the further processing order will be processed for.
Selection profile status	Optional input of a selection profile status.
System status	Optional input of a system status.

Field Name	Description
	Note *When selecting orders, please note that orders with the status Created (EROF) are not displayed in the Process Data Cockpit, since order release (status REL) is a prerequisite for data entry.*
Excl.	*Excluded* indicator. Flag indicating that objects satisfying the selection condition are ignored by the system.
Work center	Key identifying the work center.
Without those on hold	By setting this indicator, you can deselect further processing orders that have been put on hold. They will not be displayed. This indicator is always set by default, but you can deactivate it. *Note* *After the selection, orders can be highlighted and using the function* Hold order *or* Reactivate order*, be processed.*
No assembly orders	By setting this indicator, assembly orders are excluded from the selection. Assembly orders for a material can be created automatically via a forward order (VA02). Here, an assembly order can be created for a production order (PP01), e.g. with order type PP04, and an assembly order can be created for a process order (PI01), e.g. with order type PI04.
Work group	A work group is an organizational unit within production. It is used for evaluation purposes in Softproviding Core. In Softproviding Core Customizing you can define whether this field is a mandatory field in dialog applications. **Example** A specific shift or group of workers can be defined as a work group. This allows you to evaluate how the group has worked.

The program is started with the *Execute* button (F8). The results of the selection are displayed in a new overview. If there are no results, the message *"No data for chosen selection"* is displayed.

2.1.2 User Profile

Using the path given below, you can maintain user profiles using parameter IDs. A parameter ID allows proposed data to be entered in a field from the SAP memory.

SAP Menu	*System > User Profile > User Data*

Example

A user only has the authorization for plant BP01. If the value BP01 was defined for the parameter ID WRK in the user's own data, this plant is used as default setting for all of the transactions.

Parameter ID for Dates

The parameter IDs listed below ensure that the basic start/finish date fields and the scheduled start/finish fields in the selection screen are not populated in advance with the current date

Parameter ID	Parameter Value	Short Description
/SPDGS/XS001	X	X=PDA selection without default Basic start/finish date
/SPDGS/XS003	X	X=PDA selection without default Scheduled start/finish

2.1.3 Order Status Management

All further processing orders are given a Softproviding-specific status from the perspective of Process Data Acquisition (see table below). This status has no effect on processes in the SAP Standard system and no connection with the order status.

Note
All further processing orders are selected except those with the status C (completed) since they are no longer intended for data entry. If necessary, orders with status C may be reopened for entry. This is made possible with a special program that is described in the "Complete PDA Production Orders" section further down.

The additional indicator Without those on hold *determines whether production orders with the status* On hold *(B) are selected or not.*

Possible Production Order Statuses

Status	Function	Description
Blank	Open	There are no weighing procedures or entries in the production order.
A	In process	There are weighing procedures and entries in the production order.
B	On hold	The production order has been put on hold, which means that you can choose to exclude it from the selection process in Further Processing Entry.
C	Completed	The entries in the production order are closed. The production order is no longer displayed in Further Processing Entry.
D	Partially confirmed	The order has been confirmed.
E	Operation confirmed	The order has been confirmed on the operation level.

Note
In the /SPDGS/MPAK table, the status of the further processing orders, the PDA strategy and the order details are shown, among other things.

In the table below three status options from the SAP Standard system are described, which can be used to restrict order processing in the CO02 transaction and which may also have consequences for Further Processing Entry.

Function (CO02)	Data entry in Further Processing possible?	Can PDA operation be posted?
Lock (SPER)	No	No Message: System status SPER is active
Technically complete (TABG)	No Error message in Data Cockpit: The order has no relevant BOM items.	Yes
Close (ABGS)	Yes	Yes

2.2 Representation: Orders in the Explorer

Selection Result

On the left-hand side of the screen, the order numbers of the further processing orders are listed within an explorer folder (tree) structure in the *Further Processing Orders* folder.

For each order, the folder elements *components* and *products* are listed with their material numbers. For orders with a production batch, the element *component* is replaced with the element *production batch* and the number of production batches is displayed. Double-clicking on one of the structural elements (e.g. the order, the component, or the production batch) will display the respective details on the right-hand side of the screen.

Note
For further detail on production batches, see the respective section in this document.

Example
Order 100470
— Component
    — Material 120
    — Material 130
    — Material 140
— Product
    — Material 600

In the explorer, the materials are displayed in the following colors:

Color	Description
Light blue	The material can be entered.
Red	The material cannot be entered (for instance, because backflushing is intended).

ALV Grid Toolbar

In the general overview in chapter 1, the toolbar functions like *Find* and *Print* that are universally available were introduced. Apart from these functions, there is a range of further buttons available for use with the order overview on the left-hand side:

Button	Description
Collapse subtree	This button allows you to collapse individual orders or the whole order list.
Select layout	The representation of the order data can be modified by adjusting the layout (selecting, changing, saving, managing the layout).
List	This function lists all orders in the right-hand screen area by row in descending order.

Button	Description
Overview off	This button allows you to hide the left-hand screen area. A button, *Overview on*, will then be displayed which allows you to unhide the screen area.

2.3 Representation: Order List and Order Details

2.3.1 Order List

Selection Result

As a result of the previous selection, the orders on the side to the right of the screen are listed and sorted in ascending order. The list is displayed in an ALV grid control.

Note
ALV Grid Control (ALV is the SAP List Viewer) is a flexible tool for displaying lists. It is used in a variety of applications both in the SAP Standard system and in Softproviding products.
It consists of a toolbar, a title and the output table that is displayed in a grid control.
The following functions are generally provided. Depending on the program, one or more of these functions may not be provided and special functions not described here may be offered:
— *Choosing details*
— *Sorting in ascending or descending order*
— *Finding terms*
— *Setting and deleting filters*
— *Calculating and deleting total/average/maximum/minimum*
— *Calculating and deleting subtotals*
— *Printing*
— *Choosing views*
— *Exporting data*
— *Selecting layout*

Use the SAP online help to obtain more information about using the buttons.

The individual rows of the ALV grid have different background colors. These colors indicate whether the input/output weighing procedure has already been completed.

Color	Meaning
Light blue	No input/output posted yet
Green	Input/output posted
Red	Order on hold

The order list has a number of columns that can be displayed or hidden. In this manual only the most important and useful fields are described.

Column Heading	Description
Order	Displays the numbers of the further processing orders in accordance with the selection.
Material	This material is the product to be manufactured.
Order category	There are order categories for Further Processing and Disassembly. The order category is used in the Customizing function as a

Column Heading	Description
	differentiating feature and determines the software functionality in dialog and remote applications. Typically, the previously order categories, FPO for Further Processing and DAO for Disassembly, are used.
Status	The status of the whole order from the perspective of Process Data Acquisition. This status has no influence on the processes in SAP Standard, and there is no connection to the object status whatsoever. The status influences the usability of the order in Further Processing Entry. For more on this, also see the information in the "Order Status Management" section above.
Strategy	Data entry strategies (PDA strategies are a central function in Further Processing Entry). In this table, the predefined PDA (Process Data Acquisition) strategies are provided. They define whether an input or output material is captured, calculated, or only displayed. Entering a material in the application without entering and using a strategy is not possible.
Target quantity	The target quantity is calculated in dependence of the weighed actual quantity. Target quantities can be calculated for inputs and outputs. The calculation is carried out as a function of the PDA strategy. **Example** With strategy IQOW, the target quantities of the input materials are calculated based on the captured actual quantity of the output material as well as on the own planned quantity.
Quantity - actual	The actual quantity is the effectively captured quantity on the order in the display UoM/order UoM. If the production order is handled in KG, the unit of measure is also KG.
Base quantity - actual	The quantity that was effectively entered on the order in the base quantity of the material. This is the unit of measure in which the stocks of a material are managed. The system converts all quantities the user entered in other units (alternative units of measure) to the base unit of measure
Co-/by-product	In addition to the header material, other products may be produced. These are listed on the BOM as components (with a negative quantity) and labelled as such. **Example (by-products of sausage production)** — The remains of sausage meat from the mincing and sausage-making process — Sausages that have burst in the boiling unit — Faulty packaging (not airtight) — Second class packs
Target batch size	The target batch size corresponds with the size of the production equipment used to produce the material. In Process Data Acquisition, batches are created for this material until the order quantity

Column Heading	Description
	is reached. Often the quantity remaining for the final batch is smaller than the target batch size. In this case, the smaller quantity is divided equally between the last two batches. This size is set by the system to be at least the minimum batch size. *Note* *The* Target batch size *field is relevant for the production batch function.* *Note* *The target batch size bears no relation to the SAP batch management function.*
Batch - target	The number of target batches is determined using the production order quantity and target batch size in the material master data (*Process Data Acquisition* tab). *Note* *The* Batches - target *field is relevant for the production batch function.* *Note* *The minimum batch size must also be taken into consideration in the calculation.*
Batches - actual	The number of actual batches produced. The batches can be generated or created manually. The first time you access the input function of Further Processing Entry or Process Data Acquisition, you can generate the number of actual batches automatically based on the number of target batches. If necessary, the number of actual batches can be amended later, for example by manually deleting or adding an actual batch. *Note* *The* Batches - actual *field is relevant for the production batch function.*
Batch	The batch number uniquely assigns the material that has been produced in batches, lots, or production lots to a specific batch. This batch is the output batch of the order.
Item number	This is a unique identifier of the order item.

ALV Grid Toolbar

Above the order list, you will find a toolbar with functions like *Sort, Find* or *Print*. These functions were already mentioned in the general overview in chapter 1. Apart from these well-known functions, there is a range of further buttons that becomes available for use when the order overview on the left hand side is started:

— Update

— Change strategy
— Confirm and/or close
— Label printing
— Preceding
— Subsequent
— Reset subsequent/preceding
— Hold order
— Reactivate order
— Recalculate target
— Origin of strategy
— Maintain origin class

In addition to the existing columns in the ALV grid, additional, customer-specific columns can be implemented using business add-in (BAdI).

Note
Business add-ins are used to create customer-specific additions to programs, which the customer can implement as required. These additions remain unchanged when a new release is installed. Softproviding supplies the following BAdIs for this application:
— */SPDGS/BADI_PD_GRID_EXTENSION (this BAdI is used to display and edit additional customer-specific fields)*

2.3.2 Order Details

Selection Result

After double-clicking on a particular order (in the explorer on the left, or on a row with an order on the right), details of the order are displayed in the area on the right-hand side of the screen. The materials defined as order components in the BOM are displayed in the upper half, the materials (products) to be produced are displayed in the lower half of the screen.

Toolbar

Above each of the two screen areas (order details: components and products), a toolbar is displayed with the same elements for both areas. These are:
— Details
— Sort in ascending order
— Sort in descending order
— Find...
— Set filter...
— Total
— Subtotals
— Print
— Views (list output)
— Export
— Choose layout...

Apart from these generally known toolbar functions, the following buttons are displayed, the appropriate customizing settings provided:
— Batch staging
— Component replacement
— Unplanned material
— Entry Reversal

Note
These functions will be described later in this chapter.

2.4 Functions for the Order List and Buttons

2.4.1 Update

Via the menu item *Program > Update* or the *Update* button, master and transactional data are updated and read again. This function is particularly useful in the case of existing data entries if you want to display current actual entry data for the product to be produced (output).

2.4.2 Change Strategy

Weighing strategies (PDA strategies) are a crucial function in Further Processing Entry. They determine whether an input or an output material is captured, calculated, or only displayed. Data entry in the application without selecting and using a strategy is not possible.

Using PDA strategies allows you to, in part, automatically create process data (inbound and outbound data acquisition of PDA operations) which may significantly reduce data entry work in production. Weighing strategies can use planning data as the basis for quantity calculation.

There is a great number of different PDA strategies which, depending on the requirements, can be used (e.g. IWOQ or IQOW). If needed, the strategy may be changed using the *Change strategy* button or via the menu item *Order > Strategy* just this one time, or permanently (*Save* button).

Note – Determining the PDA strategy for the order
The PDA strategy for the order is determined according to the following sequential order:
— *Strategy of the production version (in the product's material master)*
— *Settings in the material master database of the product (*Process Data Acquisition *tab)*
— *Settings in Customizing for the terminal*
— *Default strategy $SYS (capture input and output) if none of the above-mentioned settings have been made*

Note – Changing PDA strategies
After the initial entry for the order has been made, the strategy can no longer be changed, if this was specifically excluded per plant in Softproviding Core Customizing.

Note
The Softproviding Core customizing settings provide the option to inactivate the strategy change function in Further Processing Entry so it is no longer available.

The following PDA strategies are available as standard:

PDA Strategy	Name
$SYS	System standard setting (enter everything)
IGOW	Input via output actual – Enter output
IPOP	Input plan = actual – Output plan = actual
IPOW	Input plan = actual – Enter output

IQOW	Input via quote – Enter output
IWOG	Enter input – Output via input actual
IWOP	Enter input – Output plan = actual
IWOQ	Enter input – Output via quote
IWOW	Enter input – Enter output

In Softproviding Core Customizing, new PDA strategies can be created. This is usually not necessary since the standard PDA strategies delivered by Softproviding cover all typically used entry strategies. For further information, please see the *Process Data* configuration guide.

Example for Strategies

IGOW

Using this strategy, the output is captured and a target quantity is generated for the input. When the order is closed, a PDA operation is created for the target quantity. The target quantity is the same as the actual quantity.

Mat.no.	Description	Input / Output	Item type	Plann.qty.	Wght. / enter calc. qty.	Input calculation	Output calculation
13	Mortadella	Output	G	1000 pcs (8 kg = 100 pcs)	1100 pcs	no	no
13a	Mortadella	Output (NP)*	G	12 kg	24 kg	no	no
14	Packaging	Input	L	51,430 M	52 M	no (no weight material)	no
15	Mortadella blank	Input	G	82 kg	112 kg	(8/100 * 1100) + 24 = 112 kg	no

* In this example, the by-product (24 kg) is included in the calculation of the weight of the input material. This setting can be made in the Customizing function under *Softproviding Core > Production > Process Data Acquisition > Plant Settings* (Target from the by-product activated/inactivated)

IPOP

If you choose this strategy, when the order is closed the items in the input and output will automatically be posted as plan = actual and PDA operations will be generated. If you attempt to enter the items, the following error message will appear: *"Upon closing the item will be automatically posted plan=actual."*

Mat.no.	Description	Input / Output	Item type	Plann.qty.	Wght. / enter calc. qty.	Input calculation	Output calculation
30	Liver mass	Output	G	137.016 kg →	137.016 kg	no	no
31	Pork liver	Input	G	131.116 kg →	131.116 kg	no	no
32	Nitrite curing salt	Input	G	3.278 kg →	3.278 kg	no	no

IPOW

In this strategy, the output is captured. When the order is closed, plan=actual is posted in the input and PDA operations are generated. If you attempt to enter the items in the input, the following error message will appear: *"Upon closing the item will be automatically posted plan=actual."*

Mat.no.	Description	Input / Output	Item type	Plann.qty.	Wght. / enter calc. qty.	Input calculation	Output calculation
30	Liver mass	Output	G	137.016 kg	137,5 kg	no	no
31	Pork liver	Input	G	131.116 kg →	131.116 kg	no	no
32	Nitrite curing salt	Input	G	3.278 kg →	3.278 kg	no	no

IQOW

Using this strategy, the output is captured and a target quantity is generated for the input. When the order is closed, a PDA operation is created for the target quantity. The target quantity is the same as the actual quantity.

Mat.no.	Description	Input / Output	Item type	Plann.qty.	Wght. / enter calc. qty.	Input calculation	Output calculation
16	Ham, packaged	Output	G	700 kg	900 kg	no	no
17	Ham (blank)	Input	G	700 kg	900 kg ←	(900 / 700) * 700) ≡ 900 kg	no
18	Packaging I	Input	Z (retrograde, no usage in FPE)				
19	Packaging II	Input	Z (retrograde, no usage in FPE)				

IWOG

Using this strategy, the input is captured and a target quantity is generated for the output. When the order is closed, a PDA operation is created for the target quantity. The target quantity is the same as the actual quantity.

Mat.no.	Description	Input / Output	Item type	Plann.qty.	Wght. / enter calc. qty.	Input calculation	Output calculation
13	Mortadella	Output		200 kg	260, 870 kg	no	(300 * 200 / 230) = 260,870 kg**
13 a	Mortadella	Output (NP)*		30 kg	39,130 kg	no	(300 * 30 / 230) = 39,130 kg**
14	Packaging	Input	L (retrograde, no usage in FPE)				
15	Mortadella blank	Input	G	205 kg	300 kg	no	no
25	Labels	Input	L (retrograde, no usage in FPE)				
26	Container	Input	L retrograde, no usage in FPE)				
27	Lid	Input	L (retrograde, no usage in FPE)				

** Calculation 230 kg = Total Plan output = Planned quantity Article 13 = 200 kg + planned quantity Article13a = 30 kg => Total plan = 230 kg

IWOP

In this strategy, the input is captured. When the order is closed, plan=actual is posted in the output and PDA operations are generated. If you attempt to enter the items in the output, the following error message will appear: *"Upon closing the item will be automatically posted plan=actual."*

Mat.no.	Description	Input / Output	Item type	Plann.qty.	Wght. / enter calc. qty.	Input calculation	Output calculation
30	Liver mass	Output	G	137.016 kg	→137.016 kg	no	no
31	Pork liver	Input	G	131.116 kg	131.2 kg	no	no
32	Nitrite curing salt	Input	G	3.278 kg	3.3 kg	no	no

IWOQ

In this strategy, the input is captured. The quantity entered is transferred to the target quantity. When the order is closed, the target quantity is calculated for the output and entered in the actual quantity and a PDA operation is generated.

Mat.no.	Description	Input / Output	Item type	Plann.qty.	Wght. / enter calc. qty.	Input calculation	Output calculation
114	Lake	Output	G	1000 kg	1001,496 kg	no	((171,496 +830) / (171,240 + 828,760)) * 1000 = 1001,496 kg
117	Salt	Input	G	171,240 kg	171,496 kg	no	no
120	Water	Input	G	828,760 kg	830 kg	no	no

IWOW

If this strategy is selected for the further processing order, both the input and output are captured.

Mat.no.	Description	Input / Output	Item type	Plann.qty.	Wght. / enter calc. qty.	Input calculation	Output calculation
114	Brine	Output	G	1000 kg	1001,900 kg	no	no
117	Salt	Input	G	171,240 kg	172 kg	no	no
120	Water	Input	G	828,760 kg	830 kg	no	no

Caution
The IGOW, IPOP, IPOW and IQOW PDA strategies cannot be used in the batch process. The following error message will be displayed: *"PDA strategy IGOW cannot be used in the batch process."*

2.4.3 Confirming/Closing Orders

You can confirm and close further processing orders using this function (*Confirm and/or close* button the *Order > Confirm/close* menu item or the *Confirm/close* button. Further processing orders can be partially or finally confirmed. However, there is also the option of confirming only the individual operations in the order.

Note
You can find more information in the "Confirmation and Closure for Order" section ".

Note
In Softproviding Core Customizing, you have the option of deactivating the Confirm and/or Close function. These processing options will then no longer be available. The above-mentioned button and the menu entry are hidden in the application.

2.4.4 Label Printing

This function (*Label Printing* button or menu item *Order > Label for order*) prints the labels for the further processing order. This requires that the printer, the print program, the form routine as well as the form name be defined at terminal level in the customizing settings. For further information, please see the *Process Data* configuration guide.

Note
Softproviding AG does provide standard print program.

2.4.5 Preceding and Subsequent

Orders may be highlighted and thus selected as upstream or downstream order for manual pair formation. For more information, please see the section on manual order pair formation further down.

2.4.6 Reset Preceding/Subsequent

Orders that were marked as preceding or subsequent may be reset using this function, i.e. the assignment for manual pair formation is undone.

2.4.7 Hold Order/Reactivate

This function (*Hold order* button or menu item *Order > On hold*) allows you to put the further processing order on hold for a certain time. An order which is on hold can be "reclaimed", i.e. displayed again using the *Reactivate order* button or menu item *Order > Reactivate*).

Note

The Softproviding Core customizing settings provide the option to inactivate the functions Hold Order *and* Reactivate Order. *Those options to process orders will then not be available. The buttons and menu items discussed above will be hidden in the application.*

Example

Sausages have been made and are being moved into the smokery for smoking. The smoking process generally lasts between four and six weeks. During this period, the order can be put on hold. This means that it is not displayed in the order selection if the *Without those on hold* indicator in the selection screen has been activated.

If the *Without those on hold* indicator in the selection screen has not been activated and the further processing order is on hold, it will be displayed in the list with a red background. Entries can still be made for this order. The further processing order can also be finally confirmed and closed while it is on hold.

2.4.8 Recalculate Target

This function (*Recalculate* target button or menu item the *Order > Recalculate target*) allows you to recalculate the target quantity in the further processing.

Note
This function only applies to the IQOW and IWOQ PDA strategies.

Example

The sample order has the IQOW PDA strategy (output is entered and the input is calculated) and displayed in the *Target quantity* field. In an order with the IWOQ PDA strategy, the input is entered and the output calculated.

If the required quantities in the further processing order have been increased or reduced (with transaction CO02), the values in the input fields only change when the *Recalculate target* menu item is selected.

The calculated target quantities are documented in the /SPDGS/MPCT table.

Note
The calculated target quantities are documented in the /SPDGS/MPCT table.

If the further processing order has been posted on the input level as target=actual, the target quantity cannot be calculated, because actual postings (PDA operations) have been generated from the existing target quantities. The following error message is displayed: "Target quantities for order (…) cannot be re-calculated."

Note
The Softproviding Core customizing settings provide the option to inactivate the function Recalculate
Target*. This means the function button is not displayed and the function is no longer available.*

2.4.9 Origin of Strategy

This function (*Origin of strategy* button or menu item *Order > Origin of strategy)* allows you to determine for selected orders from which source the strategy of the order is drawn. As a result, a pop-up window with the origin information is displayed.

Examples

— 1000913: Origin of strategy IWOW: MPAK order header
— 1000914: Origin of strategy IWOW: TMP2 terminal (customizing)
— 1000915: Origin of strategy IQOW: AFPO output Product (material master)
— 1000916: Origin of strategy $SYS: System standard setting (enter everything)

Note
The Softproviding Core customizing settings provide the option to inactivate the function Origin of Strategy*. This means the function button is not displayed and the function is no longer available.*

2.4.10   Maintain Origin Class

You can use this function to check or adjust the information on the proof of origin for the selected order with regard to the origin class.

When you choose Maintain origin class, a dialog box appears with the following fields:
— Proof of origin (manual)
— Proof of origin
    — Operative origin class
    — Minimum origin class
— Determine proof of origin automatically (button)

If origin data already exists, the fields *Operative* and *Minimum origin class* are filled. You can change these origin classes by activating the indicator *Proof of origin (manual)* and Proof of origin. You can use the button *Determine proof of origin automatically* to reset the origin data determination to the default value according to the material master and customizing settings. Transfer changes to the data by selecting *Enter*.

2.4.11   Order Pair Formation: Automatic/Manual

Order pair formation allows several further processing orders to be linked with one another. The link is created via preceding and/or subsequent orders that belong to different process levels. This means

that PDA operations can be created automatically which significantly reduces the amount of manual data entry.

Prerequisites

The following prerequisites must be met if you want to perform manual pair formation:
— **Customizing/assignment for automatic pair formation**
Activation of the functionality in Softproviding Core Customizing of Process Data Acquisition at plant/storage location level (*Order Pair* field) with the assignment criteria material and batch or material only.
— **Customizing/assignment for manual pair formation**
Activation of pair formation in Softproviding Core Customizing of Process Data Acquisition at plant/storage location level (*Manual order pair formation* field). Activation of pair formation in Softproviding Core Customizing of Process Data Acquisition at terminal level.
— **Customizing/pair formation with disassembly orders (DAO)**
Activation of pair formation for disassembly order in Softproviding Core Customizing of Process Data Acquisition at plant/storage location level (*DAO order pair formation allowed* field).
— **Master data**
For the relevant material, the indicators *For preceding* and/or *For subsequent* are set (material master tab *Process Data Acquisition*). However, this indicator is only relevant for automatic pair formation.

2.4.11.1 Manual Order Assignment

Order pairs generally consist of two or more orders that are specified as preceding and subsequent orders either by you or automatically at runtime (depending on the Customizing settings). The output of the preceding order is then automatically posted to the input of the subsequent order and vice versa. In order to do so, an order row is highlighted and the function *Preceding* or *Subsequent* is selected (via the respective menu item or the button).

In the application, further processing orders may be assigned manually as follows:
— Menu item *Order > Preceding/Subsequent*
— Button *Preceding* or *Subsequent*

2.4.11.2 Automatic Order Assignment

If automatic order pair formation is activated in Customizing, order pair formation is carried out automatically, and a fitting order is also determined according to the criteria defined in Customizing: *Identical basic start date, identical scheduled start* or according to *customer-specific rules*.

Example

In this example there are two further processing orders with the IQOW PDA strategy. In the first order, ham sausage (material 4711) is being made. In the second order, cold cuts, deli tray in kg is the output material (material 4712)

Ham sausage (order 1)

I   IQOW   O

mat. 4711 = 180 KG

Cold cuts, deli tray (order 2)

I   IQOW   O

mat. 4711 = 180 KG   mat. 4712 = 200 KG

2. autom. PDA operation

1. autom. PDA operation
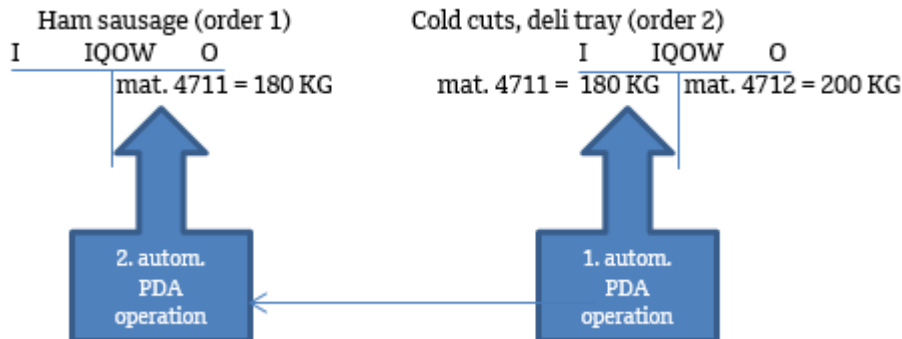
For order 2 the output is entered manually and then order 2 is closed. When order 2 is closed, an actual quantity is posted (determined from the calculated target quantity) by generating a PDA operation (first automated PDA operation). At the same time, because of the order pair formation (1:1 relationship), a PDA operation is generated for the output of order 1 (i.e. for material 4711 = second automated PDA operation). This corresponds exactly to the actual quantity in the first PDA operation.

Where the orders are manually assigned, the first further processing order is identified as preceding and the second as subsequent.

If there are several preceding or subsequent production orders (1:n, n:n or n:1 relationship) in the order pair formation process, a pop-up appears where you must select a preceding or subsequent production order manually. The PDA operations are subsequently posted to this production order. In the case of multiple data entries, the operation must be repeated each time.

If, however, the indicator *Order pairs: Always select order manually* is active in Customizing at terminal level, you only have to select the production order once. Afterwards, the PDA operations are always automatically posted to the selected production order, regardless of how often they are entered.

2.5 Functions for Order Details/Buttons

After making your first order selection in Further Processing Entry, the selected orders are displayed in both the left- and right-hand screen area. By double-clicking on an order or on an order row, the details of the order, i.e. the material components as well as the product to be produced are displayed.

At this level, the following process steps are possible:
— Batch staging
— Component replacement
— Unplanned material
— Entry reversal
— Data entries for components and products

2.5.1 Batch Staging

Batch staging describes the process of manually selecting batches for the components of a production order. The batch staging function may be used in Further Processing Entry after it has been activated (see "Prerequisites"). This is done by selecting the *Batch staging* button in the input components level. Batch staging is a function of manually staging batches; this is not a batch determination. After the batches for the desired components have been staged, they will be searched for at order closing and written to the automatically created PDA data records. This function reduces manual entry work when closing the production orders.

Note
Automatic batch assignment only works with PDA strategy IQOW. If another strategy is used, the following message is displayed: "Batch staging is not recommended because of item usage."

This function is not related to the SAP Standard function of automatic batch assignment.

Prerequisites

In order to carry out batch assignment in the application, the following prerequisites must be met:

Customizing
— Activation of batch staging at storage location level in Softproviding Core Customizing of Process Data Acquisition.
— Activation of the batch staging function at terminal level in Softproviding Core Customizing of Process Data Acquisition.

Example

A component must be highlighted and the *Batch staging* button selected before the batch staging function can be activated. A pop-up with the selected material is displayed. Double-clicking on the material opens another pop-up window which allows you to search for the desired batch and select it. Double-clicking on the batch will activate batch staging, and the pop-up can be closed again.

Note
If a batch has already been defined in the order for this component (i.e. a data entry has been made with this batch), the following message is displayed: "This item has already been assigned a fixed batch in the order." *No other batch can be assigned.*

2.5.2 Component Replacement

In Further Processing Entry, the component replacement function allows you to replace one or several BOM components intended for production with other components (replacement materials)

Prerequisites

In order to carry out component replacement in the application the following prerequisites must be met:

Customizing
— Activation of the component replacement function at terminal level in the Process Data Acquisition section Softproviding Core Customizing.

Master data table
— In the master data table (view cluster /SPDGS/VC_ATKO), the replacement relationship between the component to be replaced and the replacement component needs to be defined. This view can also be called with transaction /N/SPDGS/AT01.

Enhancement

Using a BAdI, customers may define further conditions for component replacement. This optional functionality is realized using the following customizing tables:
— Define conditions
— Implement conditions
— Post replacement

For further information on component replacement, please see the *Process Data* configuration guide.

2.5.2.1 Replacing Components

In order to replace components in Further Processing Entry, the desired material row is highlighted and the C*omponent replacement* button selected. If the requirements are met (see above), an additional pop-up opens in which the replacement materials with their respective replacement factors are listed.

The desired material is selected by double-clicking on it. If you want to perform the replacement, another pop-up window, *"Perform replacement now?"* needs to be confirmed. The replacement material is now displayed in the material overview; the quantity of this material is determined based on the replacement factor and allocated accordingly. The material that was replaced is stored with a planned

quantity of 0. This material replacement will be represented in the Further Processing transactions as well as in the SAP Standard transaction CO02 (change production order).

If no replacement component has been defined in the above-mentioned table, the following information message appears: *"No valid replacement variant for this component."*

Example

Example 1
In this example, Salami Franco weighing around 2.4 kg Slicer is produced. The required components are materials A, B and C. If not enough of material B is in stock, one or more replacement components is used. When you click on the *Component* button, a pop-up appears with replacement variants that were previously defined in the /SPDGS/AT01 transaction with input factors. You can select the replacement components by double-clicking on them. Then the following message appears to which you must answer either Yes or No: *"Perform replacement now?"*

If you answer *Yes*, the replacement component is inserted in a BOM in the further processing order. If you answer *No*, the function is cancelled.

Before the replacement		After the replacement	
BOM	**Planned quantities**	**BOM**	**Planned quantities**
A	100	A	100
B	100	D	60
-	-	E	40
-	-	B	0
C	100	C	100

If material B is replaced with two components as in the example above, the input factor for material D can be defined as 60% of the planned quantity and for material E as 40% of the quantity. The replacement component is now shown in the material overview. The planned quantity of material B is set to 0 and the planned quantity of the replacement components is divided on the basis of the input factor. Now input entries can be made with the replacement components.

Example 2
In this example, the input factor of material D is 60% and of material E is 30%. As a result, the planned quantity of material B is 10%.

Before the replacement		After the replacement	
BOM	**Planned quantities**	**BOM**	**Planned quantities**
A	100	A	100
B	100	D	60
-	-	E	30
-	-	B	10
C	100	C	100

2.5.3 Unplanned Material

The functionality to enter an unplanned material is possible for both input and output materials. If the prerequisites are met, the *Unplanned material* button is displayed in Further Processing Entry.

Prerequisites

Prerequisite for the use of this functionality is the additional activation in Customizing:

Customizing
— The function is activated at terminal level in Softproviding Core Customizing for Process Data Acquisition (field *Unplanned goods movement*).

Entering an unplanned material is only possible if a component defined in the BOM is no longer available and continuation of production requires an alternative or replacement material. Here, the function with which to enter an unplanned material allows you to continue entry in production.

2.5.3.1 Entry for Unplanned Material

Selecting the *Unplanned material* button lets you start data entry. A pop-up with the entry fields *Material* and *Storage location* is displayed. Once these data are entered another pop up with the following information and options opens:

"Your selection has no reference to a BOM and therefore no reference to a reservation. Do you want to enter although this will cause manual reworking of the order?"
— *Yes*
— *No*
— *Do not warn again*
— *Cancel*

Yes
If you answer *Yes* to the warning, the input/output entry screen will be displayed immediately. Quantities can now be entered as described in the "FP Entry via Components and Product" or "FP Entry via Production Batch" section.
No
If the prompt is answered with *No*, the function is terminated.

Do not warn again
If the prompt is confirmed with *Do not warn again*, the screen for the entry of quantities is displayed. Quantities can now be entered as described in the "FP Entry via Components and Product" or "FP Entry via Production Batch" section. In case of a repeated entry of an unplanned material the prompt mentioned above is no longer displayed.

Cancel
If the prompt is confirmed with *Cancel*, the function is terminated.

As with planned materials, the entries for unplanned materials lead to PDA data records. If you want to delete entries for an unplanned material, you can do this using the entry screen for the unplanned material. However, if you have already closed the entry screen, the PDA operation can no longer be called via the entry screen and can only be selected and deleted using the PDA Data Cockpit.

2.5.4 Entry Reversal

After an inbound posting to a further processing order, it can happen that not the entire quantity withdrawn from the warehouse is used for production. This quantity can be entered again for posting back to the warehouse. On the entry screen for Further Processing Entry, the button *Entry reversal* was added to the entry screen for entering these quantities. AS (Output Reversal) is used as the document category for this function.

2.6 MP Entry via Production Batch

In production, so-called production batches can be created. This function divides the planned production quantity into smaller amounts. This might be required because of production-related restrictions (e.g. machine capacity, or volume of a vessel).

Prerequisites

Prerequisite for the use of the production batch (or short, batch) functionality in Further processing Entry is the fundamental activation in Customizing and respective settings in the material master of the material to be produced:

Customizing
— The function is activated at plant level in Softproviding Core Customizing for Process Data Acquisition (field *Batch entry*).
— The function is activated at terminal level in Softproviding Core Customizing for Process Data Acquisition (field *Batch entry*).
Material master (Process Data Acquisition tab)
— Definition of the target batch size of the output material
— Definition of the minimum batch size for the output material (optional)
— Definition of the target batch size and minimum batch size for a production version

For further information on the customizing settings, please see the *Process Data* configuration guide.

2.6.1 List Production Batches

When the order in Further Processing Entry is created, the production batches are created automatically. They are listed in the left-hand side of the screen in the explorer structure for the order under the folder element *Production batches*. The production batches themselves are stored in the Softproviding table /SPDGS/MPBH.

2.6.2 Calculating the Target Batch Size

The target batch size corresponds with the size of the production equipment used to produce the material. The target batch size drawn from the material master of the product.

A Softproviding Core standard rule is used to calculate the production batches. In Further Processing Entry, batches are created until the order quantity is reached. Quite often a residual quantity remains that is smaller than the target batch size. In this case, the remaining quantity is distributed to in equal parts to the last two batches, the size of which is set at least to the minimum batch size if it is defined in the material master data base.

Note
The calculation of the production batches can be adjusted to the customer's needs using a BAdI that is called /SPDGS/BADI_BATCH_CALC.

Note
If a target batch size is defined for a product in the material master database, the program will always create production batches for the order.

Status
Production batches are always assigned a status. The following statuses are possible:
— **A = open**
No entries have been made yet
— **B = in process**
Entries have been made but have not been completed
— **C = completed**
No more entries can be made, the production batch is completed

Note
There is an option in Softproviding Core Customizing to prevent the status of a production batch from being adjusted after a quantity has been entered. This means, that despite the entry the status of the production batch is still A (open)*. However, this must be explicitly set. For more information on this, please see the* Process Data *configuration guide.*

2.6.3 Entering Production Batches

A production batch can be selected as follows (alternatives):
— **By double-clicking on the production batch (explorer, left screen side)**
Then, double-clicking on the material/component (lower area, right screen side)
— **By double-clicking on the number of the production batch upper area, right screen side)**
Then, double-clicking on the material/component (lower area, right screen side)

In the upper area of the right screen half, the information on the fields below is displayed in an ALV grid; fields may be displayed or hidden:
— Batch number
— Status
— Planned quantity
— Order
— Last posting (user)
— Last posting (date)
— Last posting (time)
— Target batch size
— Batch UoM
— PDA Strategy
— Description (of strategy)
— Actual quantity (cumulated)
— Weight unit
— Order
— Item number
— Created by
— Created on
— Time

2.6.4 Maintaining Production Batches

Production batches that were created automatically can be maintained as follows:

Maintenance
The *Planned quantity* and *Target batch size* fields may be changed without restrictions.

The *Status* field may only be changed as follows:
— Status A cannot be changed manually.
— Status B can manually only be set to status C, but not to A. (Exception: if all quantities of a production batch were deleted, the status can be set manually from B to A.)
— Status C can be manually set to status B but not to A.

The *Strategy* field may only be changed with the following restrictions:
— Production batches require the use of a strategy that allows the entry of an input (e.g. IWOW, IWOQ).
— **Create**
   The *Create* button allows you to add new production batches to the order. Quantities for the fields *Planned quantity* and *target batch size* may be entered freely.
— **Delete**
   The *Delete* button lets you delete previously highlighted production batches. As soon as quantities have been entered, i.e. the production batches have status B or C, deleting is no longer possible. If all entered quantities for a production batch are deleted (i.e. the PDA data records are deleted), production batches with status B or C, too, can be deleted.
— **Complete**
   The *Complete* button allows you to complete previously highlighted production batches, meaning the status is set from B to C. This states that further entries are not intended but still possible. If quantities are entered for a production batch with status C, the status is automatically reset to B.

   A production batch with status A cannot be completed. However, as soon as quantities have been entered and PDA operations created for a production batch (status B = in process) it can be completed (status C = completed).

Note
The Softproviding Core customizing settings provide the option to inactivate the functions for the production batch (create, delete, complete) in Further Processing Entry. This means, the function buttons are hidden and the functions themselves no longer available.

The components for the production batches selected by double-clicking are displayed in the right hand-side area of the lower screen area. In order to enter quantities, these materials are also selected by double-clicking. How quantities are entered is described in the "FP Entry via Component and Product" section further down in this chapter. The steps described there are also valid for production batch entry.

The following functionalities, which have already been described further up in this section, are also valid for the production batch processes:
— Batch staging
— Component replacement
— Unplanned material
— Entry reversal

Note
The terms batch *or* production batch *is not to be mixed up with SAP Standard batches.*

Example

Example 1 – Without remaining quantities, without minimum batch size
A production batch corresponds to a cutter size of 350 kg. This means that the batch size is 350 kg and this is entered in the *Target batch size* field in the material master data. There is no minimum batch size.

If the total quantity of the production order is 3500 kg, 10 production batches will be created as follows:
— 10 production batches of 350 kg

Example 2 – With remaining quantities, without minimum batch size
A production batch corresponds to a cutter size of 350 kg. The target batch size in the material master data has been set to 350 kg. There is no minimum batch size.

If the total quantity of the production order is 3200 kg, 10 production batches will be created as follows:
— 8 production batches of 350 kg
— 2 production batches of 200 kg
— 8 x 350 kg = 2800 kg

The remaining 400 kg of the total quantity is evenly divided into 200 kg batches.

Example 3 – With remaining quantities, with minimum batch size
A production batch corresponds to a cutter size of 350 kg. The target batch size in the material master data has been set to 350 kg. The minimum batch size is 300 kg.

If the total quantity of the production order is 3200 kg, 10 production batches will be created as follows:
— 8 production batches of 350 kg (8 x 350 kg = 2800 kg)

Because of the minimum batch size of 300 kg, the remaining 400 kg cannot be evenly divided. As a result, the system automatically sets the production order quantity to 3400 kg, so that two production batches of the same size (300 kg) are created.

2.7 FP Entry via Component and Product

After the orders have been selected, the selected orders are displayed in the right as well as in the left screen half. By double-clicking on an order or rather an order row the details for the order, i.e. the material components as well as the product to be produced are displayed. The right screen half is subdivided in an upper area (components, or production batches) and a lower area (products). Among others, the following information is displayed in the ALV grid (list) for every order:

Components or Production Batches

Field Name	Description
BOM item number	Item number of the transferred BOM component.
Item category (bill of material)	Categorization of the items in a BOM according to set criteria, such as whether they refer to an object (for example, material master or document info record) or whether they are kept in stock. The item category is used to control field selection, default values for BOM maintenance, triggering of specific system activities, and so on. **Examples of possible item categories**: — **L – Stock item** The management of materials which allow for inventory management. — **A – Acquisition item** The entry of materials that are not handled in kilograms. — **B – Calculation item** The calculation of target quantities. The material is not weighed or entered. — **G – Weight item** This is always an item or a material that is handled in kilograms. — **Z – Additional item** A material is displayed that is generally not entered.
Requirement quantity	In the case of a production order, this is the quantity of the material component required to manufacture the planned order quantity.
Final issue	This indicator shows that a reservation item has been completed. Further goods movements for this reservation item are not expected but they are possible, nonetheless. The indicator is automatically set in the case of a goods movement if the entire reserved quantity has been removed or delivered. It can be set manually for a partial delivery, if no other goods movements are expected for the reservation item.
No goods movements	If this indicator is activated, no goods movements (goods receipt, goods issue, transfer posting etc.) will take place in materials management. Only a PDA operation is generated, but there is no material document for the PDA operation.

Field Name	Description
Batch management	This indicator shows whether the material is handled in batches. The indicator is set manually in the master data record. In the case of the individual evaluation of batches, it is set automatically for the relevant plants and then cannot be changed. If there are stocks in the current or previous period, the indicator also cannot be changed. The previous period must be checked accordingly, because stocks can be posted to this period during goods receipt posting.
Batch key	If a material is handled in batches, the components in the order are given a batch key. The following options are available for the key: — **X – Batch allowed** This key indicates that the material components are handled in batches. However, there has not been a batch split. — **1 – Batch totals record** This key indicates that a batch split has taken place for the material component. A row with this key in the component overview contains the entire required quantity of the component or the yet unassigned quantity. — **2 – Batch single record** This key indicates that a batch split has taken place for the material component. A row with this key in the component overview shows the proportion of the required quantity that was assigned to a specific batch.
Display unit of measure	The unit of measure in which the quantities are displayed/output.
Strategy category	This column shows the name of the strategy category. The strategy category defines the properties of an item and, depending on the PDA strategy, determines the use of an item in Further Processing Entry. The strategy categories are as follows: — **Others** An others item can be used if no other strategy category can be assigned to an item. — **M = Master item** A master item is a leading input item. All the other input items are calculated on the basis of the master item. — **W = Weight item** This is always an item or a material that is handled in kilograms. — **X = Extra item** Extra items are not normally entered. They are used to display an item or a material in Further Processing Entry. — **A = Entry item** Entry items contain items or materials that are not handled in kilograms. — **C = Calculation item** In a calculation item, the item or the material is only calculated, not weighed, or entered.

Field Name	Description
	— **P = Planning item** In a planning item, the planned quantity is used as the actual quantity. The item and the material cannot be entered. The following strategy categories play a special role: — (A) Acquisition item — (C) Calculation item — (P) Planning item They determine the use of an item independently of the PDA strategy. *Note* *There are other indicators on an item level that influence or restrict the use of items. These are as follows:* — *Backflush* — *Goods movement permitted = no* — *Suppress acquisition* — *Final issue/completely delivered* — *Deleted* For further information on strategy categories see the *Process Data* configuration guide.
Usage	Usage of an item in Further Processing Entry. The following options are possible: — A = Enter actual — B = Calculate target — C = Backflushing — D = Post planned=actual — E = Calculate target/Enter actual
Actual quantity	This indicator is set automatically when entries have been made for the selected material.
Actually entered	This indicator determines whether actual entries have been made or not.
Q inspection	This indicator determines for each inspection type how the system responds to process data acquisition. The following settings are possible: — Mandatory — Possible — Recommended — Not recommended *Note* *This command is only relevant if the quality inspection function for the terminal is active. You will find more detailed information in the* Process Data *configuration guide.*

Field Name	Description
Inspection type	The inspection type determines how an inspection is carried out. There can be different inspection types for each inspection lot origin. The inspection type includes a number of control functions that can be set in the Customizing function.
Mass ind.	This indicator determines whether the unit of measure is a weight unit (dimension *mass*).
Backflush	An indicator which shows that the material components backflushed. Each material component is assigned to an operation in the production order. If a material component is backflushed, the system only posts the withdrawal when the operation is confirmed. The withdrawal posting is made automatically.

Products

The following fields are also relevant for the products to be produced:

— Batch management
— Actually entered
— Actual quantity
— Strategy category
— Usage

Furthermore, the following fields may be displayed using the Layout function:

Field Name	Description
Item quantity	Total quantity (including scrap) to be produced in this order.
Quantity	This field shows the combined quantity in kilograms. If an item is not entered in kilograms, but in a different unit of measure (not a weight unit), it is converted to kilograms. For this, an alternative unit of measure with a conversion factor must be defined in the material master. *Note* *The combined quantity in kilograms is required for calculations for certain acquisition strategies.*
Delivery completed	Indicates that the item is considered as delivery completed.
Co-product	Indicates that this item is a co-product.
By-product	Indicates that this item is a co-product

2.8 Entry Screen (Input)

The screen in which to enter inbound quantities (=input for production order) is displayed when the material component is double-clicked on. It does not matter whether this is a production batch or not.

The entry screen is subdivided into the following areas:
— Order Data
— Tab structure with the tabs:
    — *Enter*
      Entry of operation data
    — *Analysis*
      Production progress in totals
    — *Entered PDAO*
      Operation data – details

2.8.1 Order Data

The following order data is displayed in the upper part of the screen:
— Plant
— Order (number of the production order)
— Strategy
— System status (released, pre-costed, error in cost determination etc.)
— Material (product)
— Material (component

Additionally, for components which are called via production batch:
— Batch (number of the production order)
— Batch size

No more information is given here about these fields because they are either self-explanatory or have already been explained in previous sections.

2.8.2 Entry Tab

This area is used to enter operation data. It is subdivided into the following areas:
— Function buttons
— Material data
— Additional data
— Quantities
— Customer-specific additional fields

2.8.2.1 Function Buttons

The following buttons are available for selection above the data entry area:

— **Label (automatic printing)**
   This button allows you to switch automatic printing on or off
— **Print label**
   This button lets you print labels manually
— **Log**
   This button is used to call up a log
— **Stock**
   This button calls up an SAP stock list for the selected material component
— **Clear batch stock**
   This indicator is active when the indicator *Clear batch stock* in the Softproviding Core customizing settings is activated. This function allows you to "clear" batches (i.e. partial quantities of a material) which were recorded as goods issues and were marked as to be cleared. This makes sure that the material stock in the SAP system is set to zero when on the occasion of withdrawing material from the warehouse during production it is noted that the physical stock of a material is zero. For further information on this topic, please see the chapter "Inventory Management" further down in this user guide. It is the objective of the batch stock clearing function reconcile the physical warehouse stock with the SAP stock.

   Example
   Physical stock   99 KG
   SAP stock   100 KG
   Remaining batch stock   1 KG

Note
For more detailed information see chapter "Inventory Management", section "Clear Batches" further down.

2.8.2.2 PDA Operation Data/Input Area

The area of PDA operation data comprises the input area with the fields of the following areas:
— Material data
— Additional data
— Quantities
— Tracking and Tracing
— Customer-specific additional data
— Pair formation for preceding and subsequent order

Material Data

Field Name	Description
Storage location	The location where a material is stored. A plant can have one or more storage locations. The storage location can be taken from the production order, if it has been entered for a specific component.

Field Name	Description
Charge	A certain quantity of the same material which was produced during a specific production run. The batch number can be taken from the production order, if it has been entered for a specific component. *Note* *When you select a batch, a change ID is also transferred for materials requiring a proof of origin and stored in the Change ID field. See the description of the* Change ID *field below.*

Additional Data

Field Name	Description
Work group	An organizational unit in production. This field can be used for evaluation purposes. In the Softproviding Core Customizing function, you can determine whether this field is a mandatory field in the entry screen.
Ext. ident.	External, alphanumeric key with a maximum of 12 characters for identifying a material. **Example** — Batch number — Serial number.
Change ID	This field is displayed if the material (component/product) is subject to proof of origin. In combination with the batch, the field *Change ID* must be filled in this case. An existing Change ID is also found for a batch entered, whereby exactly 1 batch is assigned to each Change ID. **Use** By linking the (output) change ID to the product with all input change IDs of the components, a more differentiated traceability is created. **Background Information** The basic control takes place in the material master (*Slaughtering* tab, *Proof of origin* field). If this *Proof of origin* indicator is set, the following fields are displayed in Further Processing Entry and can be used. **For the component** — Change ID — WIP Change ID — Origin Class — Change ID Control (Check)

Field Name	Description
	For the product to be produced — Change ID — Origin Class — Change ID Control (Assign) **Check vs. Assign** At a check communication point, a change ID is created. The assign communication point accepts a change ID that was previously created during the check. This makes the check the source of the assign.
WIP change ID	The WIP change ID is used for the material components (not for the product to be produced) when Change ID Control is active.
Origin class	The origin class defined in the material master is copied to this field.
Posting date	This field is provided for the explicit entry of a posting date. This date is transferred to the PDA data record. If the field is not explicitly filled, the system date is used as the posting date. It is therefore possible to specify a date that differs from the system date. When the PDA data record is posted, the posting date is transferred to the material document and thus to the accounting documents. **Use** It may be necessary to enter a date that differs from the system date if, for example, PDA data records are created at the end of a month, but the following month is to be used as the posting date of the material documents and therefore also of the AC documents.

Quantities

Field Name	Description
Gross weight EUM	Output of the net weight in the entry unit of measure.
Unit of measure for gross weight	Entry of the unit of measure in which the goods movement is captured (e.g. KG). **Available values** See input help (F4)
Quantity in DUM	In the entry screens for the applications *Disassembly* and *Further Processing*, apart from the entry quantity (*Gross weight* field) a second quantity, the so-called *double unit of measure*, may be entered. This field serves to enter a double unit of measure, making it possible to enter quantities in two units of measure at the same time. This field is available during entry if the double unit of measure is

Field Name	Description
	defined as alternative unit of measure in the Material Master (*Additional Data > Units of Measure*). By making a respective entry in the material master (tab *Disassembly*, field *UoM (double)*) the default value for this field in the data entry screen can be defined. Without having defined a standard value in the material master, the user may select a unit of measure using the input help (F4) during data entry. Conversion of the quantity of the alternative unit of measure (e.g. PC) into the quantity of the entry unit of measure (e.g. kilogram) is carried out on the basis of the conversion ratio defined in material master. It is not possible to adjust during data entry.
Unit for the double unit of measure	Enter the double unit of measure in which the goods movement is entered (for example, piece). **Available values** See input help (F4)
Quantity in BUM	The quantities are displayed in the base unit of measure.
Quantity in DUM	The quantities are displayed in DUM.
Tare weight	The tare weight is the difference between the gross weight and the net weight. The tare weight describes, for example, the weight of a package or a transport container. **Examples** — Crate — Transport hook — Pallet
Unit of measure for tare weight	Specifies the unit of measure for the tare weight.

To the right of these quantity fields you find the following buttons available for entering (posting) the specified quantities:

Button	Description
<Scale>	When you click on this button, data is drawn directly from the entry device, such as a scale, and PDA operations are generated. *Note* *The updating and documentation of recorded data takes place in the registers Analysis and Entered PDAOs.*
Manual entry	This confirms the quantity entered and generates the PDA operation. *Note* *The updating and documentation of recorded data takes place in the registers Analysis and Entered PDAOs.*

Button	Description
Tare weight	In the Tare menu, you can make the following changes to the tare weight: — **Set tare weight** The tare weight is specified manually and passed on to the *Tare weight* field. Using the context menu (on the right-hand end of the button), the following two functions may be called up: — **Delete tare weight** The value in the *Tare weight* field is set to zero. — **Empties** The tare weight is determined using empties. The selection is made via an appropriately maintained empties list. *Note* *The* Empties *function can be used if the corresponding settings for the material are available in the empties list. These settings are made in the Softproviding Core application menu (transaction /SPDGS/EMPT). For further information on this, see the Softproviding Core documentation* Device Gateway System.
Change ID Control (Check) **Change ID Control (Assign)**	The Change ID Change ID Control function is active if the material to be entered is subject to proof of origin. The activation takes place in the material master. **Availability** The two buttons mentioned are available as follows: — **For the components** Change ID Control (Check) — **For the product to be produced** Change ID Control (Assign) With these buttons the batch/change ID combination can be verified. See the detailed description above for the *Change ID* field. The context menu (on the right side of the button) also offers the following 4 functions: — Next change ID (only for products (assign)) — Print label (only for components (check)) — List (only for products (assign)) — Log — Characteristic

Tracking and Tracing

Field Name	Description
Proof of origin (manual)	If this indicator is set, the *Proof of origin* indicator is enabled and can also be selected (see the following description of the *Proof of origin* field).
Proof of origin	If this indicator is set, the two indicators *Operative origin class* and *Minimum origin class* are enabled (see the following description of both fields).
Operative origin class	The operative origin class contains the rules and allowed characteristic values according to which the proof of origin for a production order (disassembly or further processing order) is kept. It is based on the highest-value origin class of all products created in the production order (header material, by-products, co-products). The determination is based on the priorities and relationships of the standard and basic origin classes to each other by the function module /SPMEAT/HK_GET_FOR_FAUF.
(Minimum origin class)	Based on the operative origin class and its determination as the highest value origin class, the minimum origin class is the lowest value origin class of all products created in the production order (header material, by-products, co-products).
Automatically determine origin data	Button. If this function is pressed, the program automatically determines the origin class and writes it into the *Operative origin class* field, which is then displayed.

Customer-specific additional fields
Softproviding delivers fields in the standard system and displays them in this area. A field value can be entered for each field.

Examples are:
— Container ID
— Identification
— Transport unit number
— Change ID
— DP task number
— Work center

Note
Additional fields can be added to suit individual customer requirements. See the explanation in the following documents:

Above these custom fields, buttons are available to edit these fields or apply functions to them as needed.

Pair Formation for Preceding or Subsequent Order

Field Name	Description
Order	Order number of the preceding or subsequent order.

Field Name	Description
	Note *In the case of order pair formation, the order number is entered in this field if there is a unique 1:1 relationship in pair formation. If several orders are available for pair formation, an order can be selected via the input help (F4). With the order, the change ID and batch are also transferred and entered in the respective field.*
Purchasing document.	Specifies the alphanumeric key that uniquely identifies the purchasing document.
Delivery	Number that uniquely identifies the delivery.
Change ID	If necessary, a change ID is entered in this field, which is used in the course of pair formation.
Charge	If necessary, a batch is entered in this field, which is used in the course of pair formation.

These fields are partially filled if an order pair formation for a preceding or subsequent order has been carried out for the current order. This functionality is controlled by the material concerned (see Material master, *Process Data Acquisition* tab – fields *To preceding* or *To subsequent*).

2.8.3 Analysis Tab

This section documents the totals of the entries made as follows:
— Totals in base unit of measure (BAM)
— Totals in double unit of measure (DUM)

The output is as follows for both units of measure mentioned:
For the components
— Target quantity
— Cumulated actual quantities
— Difference

For the product to be produced
— Planned quantity
— Cumulated actual quantities
— Difference

2.8.4 Entered PDAO Tab

This area documents the individual entries for the material (PDA operation data). For a description of these fields, see the "PDA Data Cockpit" chapter in this document.

Above this transaction overview, ALV Grid functions are available with which the list display can be edited.

The following buttons are also available:

— **Refresh**
The PDA operation data display is updated
— **PDA Data Cockpit**
This function calls the PDA Data Cockpit. The data records are displayed that have been marked in advance. Further functions, such as save, delete, reverse or post are then available
— **Labels Printing**
Labels for the data record can be printed
— **Quality check**
You can carry out a quality inspection using this function if it is planned for the material. See description below

2.8.4.1 Quality Inspection

In order to be able to perform quality inspections for the operation, the following prerequisites must be met:

Prerequisites

Customizing
— The function is activated at terminal level in Softproviding Core Customizing for Process Data Acquisition ((IMG: *Softproviding Core > Logistics > Process Data Acquisition >Organization > Terminals,* field *Manual Quality Inspection*).
— All relevant inspection types must be defined (IMG: *Softproviding Core > Logistics > Process Data Acquisition > Orders > Quality Inspection*).

Material master
— In the material master of the material to inspect, the inspection settings in the *Quality Management* tab need to be activated.

Note that the Q inspections in Further Processing Entry work only with inspection type 03 or 89. For inspection type 03, a production order with a valid routing is required since the quality inspection extends to the whole order. For inspection type 89, the individual material is checked. For further information, please see the *Process Data* configuration guide.

Furthermore, the following master data setting must be made in SAP Standard quality inspection:
— The Q inspections can be performed with or without inspection point via an inspection plan. If inspection points are used, the *Inspection point* field in the header of the routing or the inspection plan must be maintained. Then in the *Inspection point completion* item in the operation details, you must choose the option *Automatic valuation based on inspection point definition*.
— If you do not want to use inspection points, you must choose *Quantity, valuation, and confirmation (production)* in Inspection point completion. In addition, you must assign a sampling procedure to the inspection characteristic.

Example

Example 1

In the following example, a quality inspection with the inspection type Z90 is made of the input material via the inspection point. You enter the input material in the input entry screen. A dialog box appears where you must enter the inspection point. You can enter any one to six-digit number (in accordance with the inspection point definition) and then click on the Enter button. In the next dialog box you enter the result of the inspection. You then click on the Save button to continue. The inspection lot is created in the background in the SAP Standard system. Do note that precisely the same inspection can be carried out in further processing output.

Example 2

In the following example, the quality inspection with the inspection type 089 is carried out without the inspection point. You enter the input material in the input entry screen. A dialog box appears where you enter the result of the inspection and then click on the *Save* button to continue. The inspection lot is created in the background in the SAP Standard system. Precisely the same inspection can be carried out in further processing output.

Note

Whether a quality inspection is possible or even mandatory is determined in Customizing in connection with the inspection type of the material. The setting can be influenced through its own logic (BAdI /SPDGS/BADI_PDAQCHK) in dependence of the operation. For further information, please see the respective section in the Process Data *configuration guide.*

2.8.5 PDA Operations

Entering quantities in Further Processing input and output will typically create PDA data records (PDA operations). These data are stored centrally in table /SPDGS/PDAO. Posting these data records and creating the goods movements and material documents is usually done via batch jobs, which verify and process these data records periodically.

You can find more information on the creation, use and processing of PDA operations in the following chapters of this *Process Data* user documentation:
—   "Maintain PDA Job"
—   "Maintain PDA operation"
—   "Posting Goods Movements"
—   "Complete PDA Production Orders"

For further information from the perspective of configuration and enhancement (BAdI), please see the *Process Data* configuration guide.

2.9 Entry Screen (Output)

The screen for the entry of outbound quantities (production order output) is displayed when the material (product) is double-clicked.

The entry screen which then opens can be subdivided into four areas:
— Order Data
— Tab structure with the tabs:
   — *Enter*
      Entry of operation data
   — *Analysis*
      Production progress in totals
   — *Entered PDAO*
      Operation data – details

Apart from a few exceptions, this entry screen, and the respective field available in it are the same as the one in further processing input (see above). You will therefor only find descriptions of the fields that deviate from the input fields.

2.9.1 Expiration Date/SLED and Production Date

The goods receipt posting in Further Processing Entry requires that either one of the following is entered:
— Expiration date/shelf life expiration date (SLED) or a
— Production date

Depending on the settings in the material master of the output material to be entered (tab *Plant Data*/field *Total shelf life*), either the field *Expiration date/SLED* or *Production date* is enabled (mandatory entry) in the application for entries for a goods receipt.

Material master (rules)
— The field *Total shelf life* has an entry. The field *Production date* is displayed in the application. When data for the order are entered, the *production date* which is entered is the actual date of manufacture of the material. Together with the *total shelf life* (e.g. in days) this gives us the *shelf life expiration date* which is stored in the batch after the goods receipt is posted
— Material master data: The field *Total shelf life* has no entry. The field *Expiration date/SLED* is displayed in the application. When the order is entered, the *Expiration date /SLED* must be greater than the current date and the remaining shelf life defined in the material master. If this is not the case, the PDA data record cannot be posted (error message because of exceed remaining shelf life).

Note
If applicable, entries in the above-mentioned fields are populated in advance with today's date (Softproviding-Customizing).

Suppress SLED or Production date fields

If those two fields are not available in the application, displaying them was suppressed by setting this indicator in Customizing. Entries for goods receipt can still be made, though. Posting the PDA data records that are created, however, do require appropriate post-processing work (e.g. entering a production date).

Note

According to the customizing setting mentioned above, said fields (SLED or Production date) also remain hidden if settings for plant and movement type require information for the SLED or production date that also would be needed from the perspective of the process.

Please note the different effects of the settings regarding the movement type (transaction OMJ5) on the SLED with regard to the SLED in the PDA data record and in the material document:

— *__Indicator 1 (enter and check SLED)__*
  The "check" prevents the SLED date from being transferred from the PDA data record to the material document (and, if necessary, to the batch). If necessary, a new, deviating SLED date is determined when the material document is created based on the material master.
— *__Indicator 2 (only enter SLED)__*
  With this indicator, the SLED date is transferred from the PDA data record to the material document and not recalculated.

2.10 Confirming and Closing Orders

Via the *Confirm and/or Close* button or the menu item *Order > Confirm/close*, further processing orders can be confirmed and closed. Orders may be partially or finally confirmed.

The desired orders are highlighted in the application and the above-mentioned function is started. A pop-up screen opens, offering you the following options to process orders:

Input materials
— Post plan = actual
— Post target = actual
— Complete

Output materials
— Post plan = actual
— Post target = actual
— Complete

Order total
— Confirm partially
— Confirm operation
— Final confirmation and completion

General

Confirmation is part of the order monitoring process. It documents the status of operation processing.

A confirmation indicates:
— the work center where the operation was carried out
— who carried out the operation
— the quantity of the yield (production output quantity) and the amount of scrap in an operation
— the (target) default values for the yield (actual) > backflushing

To identify the (target) default values for the yield (actual), the Meat Management processes must be used. A production order can be processed in Further Processing Entry until it is completed (PDA status field: C (completed)).

Note
Co-products and/or by-products can also be included in the confirmed quantity if the appropriate settings are made in the Customizing function. You will find further information in the Process Data *configuration guide.*

A closed order can no longer be processed in Further Processing Entry, unless it is made available for Further Processing Entry using the /SPDGS/AFKORECO program. You can find more information on this subject in the Further Processing documentation in the section "Maintain Production Order Status".

2.10.1   Close Input and Output Materials

Closing input and output materials is achieved using one of the following options:

— Post plan = actual
— Post target = actual
— Complete

Explanation

Post plan = actual
Activate this indicator to post the open item planned=actual. Only items without target quantities are included. An item is considered open if the actual quantity equals zero. This may also be achieved by deleting or canceling PDA operations.

Plan = actual postings can be carries out if a strategy for the output also includes a planned strategy (e.g. IPOP).

Post target = actual
Activate this indicator to post open target items target=actual. An item is considered a target item if target quantities were created by calculation. An item is considered open if the actual quantity equals zero or came into being without actually being entered, meaning it was generated. An actual quantity of zero may also be the result of the deleting or canceling of PDA operations.

Post plan = actual and Post target = actual
If applicable, a further pop-up window is displayed in order to correct incomplete data. The following options are provided:
— **Maintain**
   This button is displayed if the *planned = actual* or the *target = actual* postings would lead to PDA data records that would require post-processing, for instance, because of a missing batch or a missing storage location. If the *Maintain* function is selected, another pop-up for post-processing opens. The components or products to be maintained are listed by row; the fields still to be maintained are marked with an X.

   If a material for a batch is missing or if a batch is to be assigned again, this may be done directly in the material row or via the *Batch split* button. Additionally, a batch stock check may be activated. The stock of the selected batch is then checked against the SAP Standard table MCHB.
— **Post**
   If this button is selected, the *planned = actual* or the *target = actual* postings are carried out. The PDA data records with the calculated target quantities are created as actual quantities. Post-processing these PDA data records will become necessary if the function was selected, and the *maintain* function (if offered) was not executed. This may occur in cases where a component or product is subject to batch management and a batch could not be determined automatically or if the storage location is missing.
— **Cancel**
   The function is canceled if no PDA data records were created or postings made.

Complete
Activate this indicator to complete the items. Complete means that the items get either the *final issue* (input) or the *final delivery* (output) indicator. They are then no longer relevant to MRP and cannot be entered or calculated any more. You still may post goods movements. If necessary, use SAP Standard transactions for this.

2.10.2   Confirm Order

Closing the order total is possible using the following options:

Order total
— Confirm partially
— Confirm operation
— Final confirmation and completion

Explanation

Confirm partially
Activate this indicator to perform a partial confirmation for the selected orders. After confirming with Enter, a further pop-up window is displayed in order to correct incomplete data. The following options are provided:
— Maintain
— Post
— Cancel

For further information see the instructions in the section "Close Input and Output Materials" which apply here too.

If partial confirmation is continued with *Post*, another popup window opens which, if necessary, lets you enter the posting date for the partial confirmation. Partially confirmed orders will be assigned status D (partially confirmed). Additional entries and partial confirmations are still possible. The SAP Standard system status is set to TRÜC (partially confirmed).

Confirm operation
Activate this indicator to perform the operation confirmation for the selected orders. After confirming with Enter a further pop-up window is, if necessary, displayed in order to enter the posting date. After the entries have been confirmed, another pop-up window with operations for the order is displayed. Confirm this pop-up in order to continue and to confirm the operation(s) for the order. A pop-up is displayed for each of the selected orders with the respective operations that need to be confirmed accordingly. Orders whose operations were confirmed are assigned status E (operation confirmed).

Note
If an order has been partially or finally confirmed and you attempt to confirm it again, the following error message appears:
"Order … has already been partially confirmed or the order … has already been finally confirmed."

Final confirmation and completion
Activate this indicator to perform a final confirmation and the completion for the selected orders.

Finally confirming and closing an order in Further Processing Entry:
— Automatically creates PDA operations
— finally confirms the operations
— blocks orders for Further Processing Entry

— sets the *Completely delivered* indicator in the production order for all outputs
— sets the *Final issue* indicator in the production order for all inputs

The PDA status is set to C (completed). The SAP system status of the production order is set to GLFT (delivered) and CNF (finally confirmed).

Items without an actual quantity
Input and/or output materials of a production order can be without actual quantities, i.e. no quantities were entered for the material. For all confirmation functions (levels *Input* and *Output*, *Partial Confirmation* or *Final Confirmation*), these missing quantities can be pointed out. This is controlled via the respective settings in Softproviding Customizing. If the *Warning: Lack of actual entry in production orders* indicator is activated in Customizing, a check is carried out when an order is closed to determine whether it contains items which are intended for entering actual data that do not contain any data

In this case the warning message *Order 1000905 contains entry items without actual quantities* is displayed. Processing can be continued as follows:
— **Details**
  Clicking on the *Details* button will display detail concerning the warning message, meaning, all input and output materials that are without quantities are listed.
— **Continue**
  The function is continued. A pop-up window in which to enter a posting date might be displayed.
— **Cancel**
  The function is terminated, i.e. no order confirmation takes place. The order may be maintained or posted to again.

Checking for tolerances
When the order is confirmed, the system checks the output items whether the quantities entered actual deviate from the planned quantities. These checks are based on the settings for the fields *Underdelivery* and *Overdelivery* in the material master and in the production order. Tolerances in percent may be maintained as follows:
— Material master (*Work Scheduling* tab)
— Production order (*Goods Receipt* tab)

If the quantity entered in actual deviates from the defined tolerances, a respective warning message is displayed when the order is closed.

Example:
— *"Underdelivery tolerance falls short by 90%. Close nonetheless?"*
— *"Overdelivery tolerance exceeded by 10%. Close nonetheless?"*

The confirmation may be continued with; it may also be terminated.

Transactions

Transaction	Description
CO14	This SAP Standard is used to display confirmations.

Transaction	Description
CO13	This SAP Standard is used to cancel confirmations.

3 Repetitive Manufacturing

3.1 Overview

In Softproviding Core, a separate transaction was developed with which to record quantities in repetitive manufacturing.

Repetitive manufacturing or production is the simultaneous or sequential production of a certain quantity of identical finished products. The characteristic of repetitive manufacturing is not the number of products to be manufactured, but the uniformity of these products that makes serial production possible

Prerequisites

The Repetitive Manufacturing functionality operates with planned orders. The following settings are required in order to allow you to call the planned orders using the Softproviding transaction (/N/SPDGS/PE51):
— The *Repetitive manufacturing allowed* indicator must be set in the material master of the material to be produced (tab *MRP 2*).
— In addition, a repetitive manufacturing profile must be entered in the material master (tab *MRP 2*).
— A production version that allows repetitive manufacturing must be created in the material master (tab *MRP 2*).
Note
The production version requires a bill of material, a work center, and a routing.

The planned orders can then be created using an SAP Standard planning run. Transaction /SPDGS/PE51 was developed to capture the quantities.

For further information on the creation of planned orders, please see the SAP Standard documentation.

Result

For data entries for a planned order, so-called PDA data records are created. These data records are stored centrally in table /SPDGS/PDAO. Based on these PDA data records, warehouse stocks are updated either directly or by subsequent processes.

For goods issues, a PDA operation with document group R (for repetitive manufacturing) and document category WA as well as an SAP material document are created. For goods receipts, a PDA operation with document group R (for repetitive manufacturing) and document category WE as well as an SAP material document are created

For further information on the issue of PDA operations please see the following sections in this document:
— "PDA Data Cockpit"
— "Post Goods Movements"

3.2 Executing the Program

Orders for repetitive manufacturing are called up via the Softproviding Core or Softproviding Meat application menu as follows:

SAP Menu	*Softproviding Core > Logistics > Process Data Acquisition > Entry > Repetitive Manufacturing* *Softproviding Meat > Production > Execution > Further Processing > Further Processing Entry > Repetitive Manufacturing*
Transaction	/SPDGS/PE51

Users may select the planned orders based on the following criteria:

Field Name	Description
Plant	The plant is an organizational logistical unit that structures the company from the perspective of production, procurement, maintenance, and materials planning. Materials are produced and goods and services are provided in a plant. The plant is a company's production site.
Planned order	A planned order is sent to a plant and is an MRP request for the procurement of a particular material at a determined time. It specifies when the inward material movement should be made and the quantity of material that is expected.
Material	A material is an item that is the subject of a business transaction. In SAP, materials such as raw materials, semi-finished products, operating supplies, and finished products are identified using a unique material number.
Production version	Key that determines the various production techniques according to which a material can be manufactured. The production version determines the following: — the BOM alternative for a BOM explosion — the task list type, the task list group, and the task list group counter for allocation to task lists — lot-size restrictions for repetitive manufacturing
MRP controller	The number of the MRP controller or MRP controller group that is responsible. This is taken from the material master data for the material that is being produced.
Order start date	Earliest date, according to the planned order, that the production of the planned order quantity starts. The order start date is transferred from the planned order to the production order. For planned orders created by planning runs, the system automatically determines the order start date by either forward or backward scheduling.

Field Name	Description
Order finish date	Date, according to the planned order, that you should expect either the completion or the delivery of the planned order quantity. The order finish date denotes a specific day. However, production also requires a production end date that specifies the time of the day. In order to have the material to be produced available on the order finish date, the production end date must lie before the order finish date 00:00. The basic end date must therefore lie on the day after the production end date to make sure that the material is available on the planned availability date at 00:00.

If, in the material master table, an in-house production time of 0 days is maintained, an exception from this rule is made: it is assumed that the material can be produced in one workday. The production end date the lies before the order finish date 24:00 hours – if no safety time is maintained, that is. The order finish date is on the same day as the production end date

Example
The last operation of an order was completed on Thursday at 17:00. No safety time was maintained for this order:
— If an in-house production time greater than 0 days is maintained in the material master of the material, the order finish date is Friday.
— If an in-house production time of 0 days is maintained in the material master of the material, the order finish date is Thursday. |
| **Work group** | An organizational unit in production. In DGS Customizing, the user can define whether this in a mandatory field in dialog applications. |

Maintain the selection fields and select *Execute* (F8). The planned orders overview is displayed.

Note
In selection fields, an individual value and, where appropriate, a range can be entered in the report selection window. Using the Multiple selection *button, you can:*
— *restrict the entries via selection options (for example, larger or smaller than an individual value and inside or outside a range)*
— *select several individual values or ranges which are to be used when creating a report*
— *exclude several individual values or ranges which are not to be used when creating a report*

For more information about multiple selections, see the SAP standard system documentation.

Note
The variant function offers you the option of saving data entered into programs as variants. This is particularly useful for programs that are frequently started up with identical restrictions. This means that you do not need to enter the same values every time you start the program. When you select the variant, the fields that are already populated with data are used when the program starts.

Any number of variants can be created for each program. After a program starts, input fields are displayed. When you have entered the parameters you want, you can save them by clicking on the Save as variant *button. After adding a variant name and a description and entering data in other fields or highlighting them, you can save your entries.*

By choosing the Goto > Variant *menu option, you can display, modify, and delete existing variants.*

Access the SAP online help to obtain more information about using variants.

3.2.1 User Profile

User profiles may be maintained using the menu path mentioned below. Own parameter IDs may be used to fill a field with default values from the SAP memory.

SAP Menu	*System > User Profile > User Data*

Example

A user has the authorization for plant BP01. This plant is stored under the respective parameter ID in memory a t the start of a transaction. In all of the following screens, fields referring to the data element *Plant* are filled automatically with the value BP01.

Parameter ID	**Parameter Value**	**Description**
WRK	BP01	Plant

3.2.2 Planned Orders Status Management

From the perspective of Process Data Acquisition, all planned orders are assigned a status (see table below). This status does not influence processes in SAP standard, nor is there any connection to the order status.

The following must be considered:
— If the order was partially confirmed (PDA status is set to C (completed)) and the planned quantity of the planned order was reached, the order is not displayed.
— If the planned quantity was not reached and the status is C, the planned order is displayed, nonetheless.
— If the planned order was confirmed finally (independent of whether the planned quantity was reached or not), the *Final confirmation* indicator is set in table /SPDGS/RMAK. The planned order is no longer displayed in the entry transaction.

In the planned order list, there is a field named *PDA status*, which is only displayed to the user after the field included via the *Change Layout* option.

The following production order statuses are available:

Status	Function	Description
Empty	Open	No entries have yet been made for the planned order.
A	In process	Entries were made for the planned order.
B	On hold	The processing of the planned order has been put on hold.
C	Completed	Data entries for the planned order are completed. The planned order is therefore no longer displayed in the transaction for repetitive manufacturing.
D	Partially confirmed	The planned order has been confirmed
E	Operation confirmed	Order is confirmed at operation level

Note
In table /SPDGS/RMAK (Repetitive Manufacturing – Header Data)*, the status of the planned orders, the PDA strategy as well as the order details are documented, among others.*

3.3 Planned Orders

3.3.1 Order List

As a result of the selection made, a list of the orders that were identified is created and displayed with the *ALV Grid Control* tool (ALV stands for SAP List Viewer).

Note
ALV Grid Control (ALV is the SAP List Viewer) is a flexible tool for displaying lists. It is used in a variety of applications both in the SAP Standard system and in Softproviding products.
It consists of a toolbar, a title and the output table that is displayed in a grid control.
The following functions are generally provided. Depending on the program, one or more of these functions may not be provided and special functions not described here may be offered:
— *Choosing details*
— *Sorting in ascending or descending order*
— *Finding terms*
— *Setting and deleting filters*
— *Calculating and deleting subtotals*
— *Printing*
— *Choosing views*
— *Exporting data*
— *Selecting layout*
— *User documentation*

Note
Use the SAP online help to obtain more information about using the buttons.

Moreover, it is possible to jump directly to the actual planned order by clicking on the order number. The individual lines of the ALV Grid are highlighted in a color. These colors tell you whether any inbounds or outbounds have been recorded on the planned order. The planned order features a multitude of columns that may be hidden or unhidden. This document only describes the most important fields.

Field Name	Function
Planning plant	Number uniquely identifying the plant in which the procurement planning, the forecast or the long-term planning takes place.
Production plant	Plant in which the order quantity of the product produced internally will probably be produced.
Planned order quantity	Quantity that is produced or ordered in all according to the planned order.
Production version	A production version determines the various production techniques that can be used to produce a material. The production version defines the following: — The BOM alternative for the BOM explosion — The task list type, the task list group and the group counter used for assignment to the plans — Lot size restrictions for repetitive manufacturing

Field Name	Function
	For further information on production versions, please see the respective SAP Standard documentation.
Target batch size	The target batch size corresponds with the size of the production equipment used to produce the material. In Process Data Acquisition, batches are created for this material until the order quantity is reached. Often the quantity remaining for the final batch is smaller than the target batch size. In this case, the smaller quantity is divided equally between the last two batches. This size is set by the system to be at least the minimum batch size. *Note* *The* Target batch size *field is relevant for the production batch function.*
Batch target	The number of target batches is determined using the production order quantity and target batch size in the material master data (*Process Data Acquisition* tab). The minimum batch size must also be taken into consideration in the calculation.
Batch entry active ind.	Data recording based on the target batch size and minimum batch size is active.

In addition to the existing columns in the ALV Grid, further, customer-specific, columns may be implemented by means of a BAdI (Business Add-In).

Note
BAdIs (Business Add-Ins) serve to create customer-specific program enhancements that can be implemented by the customer if needed. These enhancements are not affected in the case of a release upgrade.

3.3.2 Buttons/Functions

3.3.2.1 Production Inbound/Outbound

After the order selection, the desired planned order to which the inbound or outbound entry is to be made is highlighted. Using the *Inbound* or the *Outbound* button will take you to the next screen on which the input materials (inbound) or output materials (outbound) may be entered.

3.3.2.2 Refresh

Via the *List > Refresh* menu item or the *Refresh* button, the planned order list as well the master data (from table MARC: *Plant Data for Material as well as PLAF: Planned Order*) re-read. An example for a master data record is the production batch lot size. If the latter is changed in the material master, it will be changed too in the planned order after a refresh.

3.3.2.3 Entry Strategy/PDA Strategy

PDA strategies may be used to create (partly automatically) process data (inbound and outbound entry of PDA operations) which reduces data entry work in production considerably. PDA strategies may use planned sales figures as the basics for the postings. There is a multitude of strategies which can be used as needed (e.g. IWOQ, IQOW). The strategy fitting the order best can be select using the *Strategy* button.

The following PDA strategies are available as a standard feature:

PDA Strategy	Name
$SYS	System standard setting (enter everything)
IGOW	Input via output actual – Enter output
IPOP	Input plan = actual – Output plan = actual
IPOW	Input plan = actual – Enter output
IQOW	Input via quote – Enter output
IWOG	Enter input – Output via input actual
IWOP	Enter input – Output plan = actual
IWOQ	Enter input – Output via quote
IWOW	Enter input – Enter output

Note
Additional entry strategies can be defined in Customizing. However, this is usually not necessary since the strategies supplied cover all the usual data entry options.

Examples

IGOW
Using this strategy, the output is captured and a target quantity is generated for the input. When the order is closed, a PDA operation is created for the target quantity. The target quantity is the same as the actual quantity.

Mat.no.	Description	Input / Output	Item type	Plann.qty.	Wght. / enter calc. qty.	Input calculation	Output calculation
13	Mortadella	Output	G	1000 pcs (8 kg = 100 pcs)	1100 pcs	no	no
13a	Mortadella	Output (NP)*	G	12 kg	24 kg	no	no
14	Packaging	Input	L	51,430 M	52 M	no (no weight material)	no
15	Mortadella blank	Input	G	82 kg	112 kg	(8/100 * 1100) + 24 = 112 kg	no

* In this example, the by-product (24 kg) is included in the calculation of the weight of the input material. This setting can be made in the Customizing function under *Softproviding Core > Production > Process Data Acquisition > Plant Settings* (Target from the by-product activated/inactivated)

IPOP

If you choose this strategy, when the order is closed the items in the input and output will automatically be posted as plan = actual and PDA operations will be generated. If you attempt to enter the items, the following error message will appear:

"Upon closing the item will be automatically posted plan=actual."

Mat.no.	Description	Input / Output	Item type	Plann.qty.	Wght. / enter calc. qty.	Input calculation	Output calculation
30	Liver mass	Output	G	137.016 kg	137.016 kg	no	no
31	Pork liver	Input	G	131.116 kg	131.116 kg	no	no
32	Nitrite curing salt	Input	G	3.278 kg	3.278 kg	no	no

IPOW

In this strategy, the output is captured. When the order is closed, plan=actual is posted in the input and PDA operations are generated. If you attempt to enter the items in the input, the following error message will appear:

"Upon closing the item will be automatically posted plan=actual."

Mat.no.	Description	Input / Output	Item type	Plann.qty.	Wght. / enter calc. qty.	Input calculation	Output calculation
30	Liver mass	Output	G	137.016 kg	137,5 kg	no	no
31	Pork liver	Input	G	131.116 kg ⟶	131.116 kg	no	no
32	Nitrite curing salt	Input	G	3.278 kg ⟶	3.278 kg	no	no

IQOW

Using this strategy, the output is captured and a target quantity is generated for the input. When the order is closed, a PDA operation is created for the target quantity. The target quantity is the same as the actual quantity.

Mat.no.	Description	Input / Output	Item type	Plann.qty.	Wght. / enter calc. qty.	Input calculation	Output calculation
16	Ham, packaged	Output	G	700 kg	900 kg	no	no
17	Ham (blank)	Input	G	700 kg	900 kg ◀	(900 / 700) * 700) = 900 kg	no
18	Packaging I	Input	Z (retrograde, no usage in FPE)				
19	Packaging II	Input	Z (retrograde, no usage in FPE)				

IWOG

Using this strategy, the input is captured and a target quantity is generated for the output. When the order is closed, a PDA operation is created for the target quantity. The target quantity is the same as the actual quantity.

Mat.no.	Description	Input / Output	Item type	Plann.qty.	Wght. / enter calc. qty.	Input calculation	Output calculation
13	Mortadella	Output		200 kg	260, 870 kg ← no		(300 * 200 / 230) = 260,870 kg**
13 a	Mortadella	Output (NP)*		30 kg	39,130 kg ← no		(300 * 30 / 230) = 39,130 kg**
14	Packaging	Input	L (retrograde, no usage in FPE)				
15	Mortadella blank	Input	G	205 kg	300 kg	no	no
25	Labels	Input	L (retrograde, no usage in FPE)				
26	Container	Input	L retrograde, no usage in FPE)				
27	Lid	Input	L (retrograde, no usage in FPE)				

** Calculation 230 kg = Total Plan output = Planned quantity Article 13 = 200 kg + planned quantity Article13a = 30 kg => Total plan = 230 kg

IWOP

In this strategy, the input is captured. When the order is closed, plan=actual is posted in the output and PDA operations are generated. If you attempt to enter the items in the output, the following error message will appear:

"Upon closing the item will be automatically posted plan=actual."

Mat.no.	Description	Input / Output	Item type	Plann.qty.	Wght. / enter calc. qty.	Input calculation	Output calculation
30	Liver mass	Output	G	137.016 kg →	137.016 kg	no	no
31	Pork liver	Input	G	131.116 kg	131.2 kg	no	no
32	Nitrite curing salt	Input	G	3.278 kg	3.3 kg	no	no

IWOQ

In this strategy, the input is captured. The quantity entered is transferred to the target quantity. When the order is closed, the target quantity is calculated for the output and entered in the actual quantity and a PDA operation is generated.

Mat.no.	Description	Input / Output	Item type	Plann.qty.	Wght. / enter calc. qty.	Input calculation	Output calculation
114	Lake	Output	G	1000 kg	1001,496 kg	no	((171,496 +830) / (171,240 + 828,760)) * 1000 = 1001,496 kg
117	Salt	Input	G	171,240 kg	171,496 kg	no	no
120	Water	Input	G	828,760 kg	830 kg	no	no

IWOW

If this strategy is selected for the further processing order, both the input and output are captured.

Mat.no.	Description	Input / Output	Item type	Plann.qty.	Wght. / enter calc. qty.	Input calculation	Output calculation
114	Brine	Output	G	1000 kg	1001,900 kg	no	no
117	Salt	Input	G	171,240 kg	172 kg	no	no
120	Water	Input	G	828,760 kg	830 kg	no	no

Note
The IGOW, IPOP, IPOW and IQOW PDA strategies cannot be used in the batch process.

The following error message will be displayed:

"PDA strategy IGOW cannot be used in the batch process."

3.3.2.4 Strategy

Via the menu item *Order > Strategy* or the *Strategy* button the strategy of the planned order can be displayed and may be changed here, too. In order to do this the planned order must be highlighted.

Depending on the settings in the material master database (*Process Data Acquisition* tab) of the header material for the order, the strategy for the order is drawn from the material master. In cases where there is no strategy maintained, it is drawn from the terminal (Customizing). If there is no PDA strategy maintained in neither the material master nor the PDA strategy, the strategy $SYS (enter everything) is used as the default strategy.

3.3.2.5 Strategy Origin

Via the menu item *Order > Strategy Origin* the strategy origin is called up and may be changed here, too. In order to do this the desired planned orders must be highlighted. The strategy origin is purely informational and shows from where the strategy stems.

Example

— 8836: Origin of strategy IWOW: TMP2 terminal (Customizing)
— 8837: Origin of strategy IQOW: PLAF product (material master)
— 8838: Origin of strategy $SYS: System standard setting (enter everything)

As a result, the number of the planned order and the origin are output.

3.3.2.6 Recalculate

The menu item *Order > Recalculate* allows you to recalculate the target quantity in the planned order if, for instance, the requirements are increased or decreased. This function is only for strategies IQOW and IWOQ. In order to do this, the desired planned orders must be highlighted.

Example

The planned order has PDA strategy IQOW, meaning, the output is weighed, and the input is calculated and displayed in the *Target quantity* field. For an example order with PDA strategy IWOQ the input is weighed and out output is calculated.

If the requirement quantity was increased or decreased, values in the input will not change before the Recalculate function was executed. The calculated target quantities are documented in table /SPDGS/RMCT (calculated target from physical entry (REM).

If the planned order was posted target = actual at input level, the target quantity cannot be calculated, since actual postings (PDA operations have already been created from the existing target quantities. The following error message is displayed:

"The target quantities for order (…) can no longer be calculated."

3.3.2.7 Selecting Devices (Scales/Printers)

Scale
In order to enter PDA operations, the weight may be captured by a scale connected to a PDA point. Scales are defined under the menu item specified below. The button in the entry screen will show the name defined there.

SAP Menu	*IMG > Softproviding Core > Logistics > Process Data Acquisition > Definitions > Devices*

After this, a scale is assigned to the plant, the individual document groups and categories, terminal ID, and the username.

SAP Menu	*IMG > Softproviding Core > Logistics > Process Data Acquisition > Control Settings > Entry Operation*

In order to record and transfer the weight from the scale, the DGA_DGC needs to be installed and configured too. The DFA_DGC router receives the data from DGC 5.0 (the weight and the standard counter reading) and passes them on to SAP.

Note
There is also the possibility to simulate a weight for testing purposes. To this end, DGC 5.0 is installed and configured as well.

For further information on connecting devices, see the *Process Data* configuration guide as well as the TechApps Instructions document *DGC 5.0*.

Printer
In the Softproviding Core customizing settings, printers are defined for each PDA process (plant, document group and category, terminal ID, and username).

SAP Menu	*IMG > Softproviding Core > Logistics > Process Data Acquisition > Control Settings > Entry Operation*

Here, an output device, a print program and a form routine with form name need to be defined in order to specify the format of the printout. When the label printer is defined, the *Form name* field is used to either enter the SAP script form name for printing in SAP or, in case of programs with RGC direct print function, the RFC destination for printing via Print Monitor. Please note that the Print Monitor needs to run in the background when an RFC destination is specified to print a label.

For further information on Print Monitor, see the TechApps instructions document *Print Monitor*.

Caution
The F1 help on the field *Form name* (FONAM) gives information on "Smart Forms: Form Name". This is not correct. It should read "SAP Script: Form Name".

In cases where multiple printers are defined, the default printer is used. If no default printer was defined, a pop-up window is displayed, allowing the user to select the desired printer.

For further information on the setting options, please see the *Process Data* configuration guide.

Furthermore, (error) log printers can be set up. The same settings as for the label printer must be made. However, no RFC destination can be specified, only a Smart Forms form name, meaning printing is carried out in SAP.

3.3.2.8 Exit

The transaction is ended via the *List > Exit* menu item. The following message must be confirmed:

"Data have been saved. End the program now?"

3.4 Input via Production Batch

As described earlier in the "Production Inbound/Outbound" section, production batches are created during production, meaning, the total quantity of the planned order is subdivided into smaller quantities to fit the production machinery.

If you want to use repetitive manufacturing via production batch(es), the function needs to be activated in Customizing.

SAP Menu	*IMG > Softproviding Core > Logistics > Process Data Acquisition > Organization > Plants/Storage Locations*

In the *Functions* area, the *Batch Entry* indicator must be activated. For further information, see the *Process Data* configuration guide.

Besides activating the batch entry function in Customizing, the target batch size as well as the minimum batch size need to be defined in the material master of the header material in the *Process Data Acquisition* tab.

3.4.1 Production Batch List

Before the components in Repetitive Manufacturing inbound can be recorded, you need to create production batches. This is done automatically by a system query that the user must confirm:

"There are no batches for the order. Do you want to create the batch list now?"

The production batches are created for the order in Softproviding table /SPDGS/MPBH. For the calculation of the production batches, a Softproviding Core rule is used which can be changed using BAdIs to the customer's specifications.

Once the production batches are created, the user selects the one to which they want to make the data acquisitions.

The following information is shown in the top half of the screen:
— Plant
— Planned order
— Strategy
— Material
— Batch size
— Minimum size
— Target batch size
— Actual batch size

The production batches are displayed in the ALV Grid Control. Fields can be hidden or unhidden.

In addition to the production batches created by the system, the user can newly create, maintain, delete, or complete batches.

After selecting the production batch, the user can access the BOM overview using the *Inbound* button (also see the "Buttons/Functions" section further up).

Note
Production batches to which nothing has been entered and therefore have status A (open) cannot be completed. As soon as PDA operations have been created for a production batch (status B = in process), the production batch can be completed (status C = completed).

Note
The term "batch" or "production batch" has nothing to with SAP Standard batches.

Example

Example 1 – Without remaining quantities, without minimum batch size
A production batch corresponds to a cutter size of 350 kg. This means that the batch size is 350 kg and this is entered in the *Target batch size* field in the material master data. There is no minimum batch size.

If the total quantity of the production order is 3500 kg, 10 production batches will be created as follows:
—   10 production batches of 350 kg

Example 2 – With remaining quantities, without minimum batch size
A production batch corresponds to a cutter size of 350 kg. The target batch size in the material master data has been set to 350 kg. There is no minimum batch size.

If the total quantity of the production order is 3200 kg, 10 production batches will be created as follows:
—   8 production batches of 350 kg
—   2 production batches of 200 kg
—   8 x 350 kg = 2800 kg

The remaining 400 kg of the total quantity is evenly divided into 200 kg batches.

Example 3 – With remaining quantities, with minimum batch size
A production batch corresponds to a cutter size of 350 kg. The target batch size in the material master data has been set to 350 kg. The minimum batch size is 300 kg.

If the total quantity of the production order is 3200 kg, 10 production batches will be created as follows:
—   8 production batches of 350 kg (8 x 350 kg = 2800 kg)

Because of the minimum batch size of 300 kg, the remaining 400 kg cannot be evenly divided. As a result, the system automatically sets the production order quantity to 3400 kg, so that two production batches of the same size (300 kg) are created.

3.5 Inbound

As a result of the previous selection, a list with the input materials is displayed using the ALV Grid Control tool. All the functions described above are available (sorting, filtering, etc.). Here, too, only the most important fields are described.

Field Name	Description
Item no. Of the stock transfer reservation	Specifies the number that uniquely identifies an item in a reservation or a dependent requirement.

Item category (BOM)	Categorization of the items in a BOM according to set criteria, such as whether they refer to an object (for example, material master or document info record) or whether they are kept in stock. This categorization allows you to process data that is relevant to the individual items in a BOM. The item category is used to control field selection, default values for BOM maintenance, triggering of specific system activities, and so on.
	
	Examples
	— **L – Stock item**
	    This item category is used for materials that allow inventory management.
	— **N – Non-stock item**
	    This item category is used for materials that do not allow inventory management
	— **D – Document item**
	    This item category is used to manage document data that allows you to process original application data (for example, graphics created with a graphics program).

Note
In addition to the item categories available in the SAP standard system, separate item categories are created and used for the Softproviding Core and Meat applications. For detailed information, see the Process Data *configuration guide.*

Field Name	Description
Final issue	Indicates that a reservation item is completed. Further goods movements in respect of this reservation item are not anticipated, although they are still possible. The indicator is set automatically for a goods movement when the total reserved quantity has been withdrawn or delivered. In the case of a partial delivery, you can manually set the indicator if no further goods movements are expected in respect of the relevant reservation item.
No goods movement	If this indicator is activated no material movements (GR, GI, transfer posting) will be carried out in Material Management. A

Field Name	Description
	PDA operation is created instead, for which no material document exists.
Batch management requirement	Specifies whether the material is managed in batches. This indicator can be set in the material master record manually or, if batches are valuated individually, it is set automatically for the plants concerned, in which case it cannot be changed. The indicator cannot be changed if stocks exist in either the current period or in the previous period. The reason for checking the previous period is that stocks can be posted to this period when goods movements are entered.
Batch key	If a material is to be processed in batches, the component in the order is given a batch key. The key can have the following characteristics: — **X - batch permitted** This key indicates that the material component is processed in batches. However, no batch split takes place. — **1 - Batch totals record** This key indicates that a batch split was carried out for the material component. On the component overview screen, a line with this key contains the total requirements quantity of the component or the quantity not yet assigned. — **2 - Individual batch record** This key indicates that a batch split was carried out for the material component. On the component overview screen, a line with this key displays the proportion of the requirements quantity that was assigned to a particular batch.
Unit of measure for display	Specifies the unit of measure in which the quantity represented is displayed.
Strategy category	This column shows the name of the strategy category. The strategy category defines the properties of an item and determines the usage of an item in Further Processing Entry in dependence of the PDA strategy. These are the strategy categories that are available: — **Others** Any other item may be used if an item cannot be assigned to another strategy category. — **M = Master item** A master item is a leading item. All other items are calculated dependent on the master item. The master item is normally used in the input. However, it also works for the output. — **W = Weight item** A weight item is always an item or material that is listed in kg. — **X = Additional item**

Field Name	Description
	An additional item is not normally entered. It is used to display an item or material in Further Processing. — **A = Entry item** Items or materials that are not listed in kg are shown under an entry item. — **C = Calculation item** Under a calculation item, the item or material is only calculated and is not weighed or entered. — **P = Planning item** Under a planning item, the planned quantity is used as the actual quantity. The item or material cannot be weighed. The following strategy categories take a special position: — (A) Entry item — (C) Calculation item — (P) Planning item These categories always define the use independent of the data acquisition strategy. *Note* *There are further indicators at item level that influence and restrict the use of the items. These are:* — *Backflushing* — *Goods movement allowed = no* — *Suppress entry* — *Final issue/final delivery* — *Deleted* For further information on the strategy categories see the *Process Data* configuration guide.
Actually entered	This indicator specifies whether actual entries were effectively carried out or not.
Q inspection	This entry controls, per inspection type, how the system reacts during Further Processing Entry. The following settings are possible: — Mandatory — Possible — Recommended — Not recommend *Note* *This control function is only relevant after the quality inspection function to the terminal is active. For further information, see the* Process Data *configuration guide.*
Inspection type	The inspection type defines how an inspection is performed. Several inspection types can be assigned to an inspection lot origin.

Field Name	Description
	There are several control functions for the inspection type that can be set in Customizing.
Mass	This indicator specifies whether this unit of measure is mass (weight unit).
Alternative item group	As soon as you enter an alternative item group, you see an add dialog box with the following data: ranking order, strategy, usage probability. You can maintain alternative items in the following situations: — Alternative positions with specific usage probability — Alternative positions as information For further information on this topic, see the SAP Standard documentation.
Backflushing	Indicator specifying that the material component is backflushed. Each material component is assigned to an operation in the production order. If a material component is backflushed, the system posts the withdrawal only upon confirmation of the operation. The withdrawal is then posted automatically.

Result

Selecting the material and hitting the *Entry* button will take you to the inbound entry screen.

3.6 Entry Screen (Inbound)

The entry screen and the functions in Repetitive Manufacturing are no different from those of Further Processing Entry, which are described in this document in Chapter *Further Processing Entry*, Section Entry Screen (Input). Therefore, please compare the descriptions given above in the above section.

3.7 Outbound

As a result of the previous selection, there will be no list of the output materials, but the user is taken directly to the outbound entry screen.

3.8 Entry Screen (Outbound)

With a few exceptions, the entry screen for Repetitive Manufacturing (Outbound) is similar to the Repetitive Manufacturing (Inbound) entry screen. For this reason, only these deviations are described below.

3.8.1 Clear Batch Stock

This indicator is active when the indicator *Clear batch stock* in the Softproviding Core customizing settings is activated. This function allows you to "clear" batches (i.e. partial quantities of a material) which were recorded as goods issues and were marked as to be cleared. This makes sure that the material stock in the SAP system is set to zero when on the occasion of withdrawing material from the warehouse during production it is noted that the physical stock of a material is zero. For further information on this topic, please see the chapter "Inventory Management" further down in this user guide.

It is the objective of the batch stock clearing function reconcile the physical warehouse stock with the SAP stock.

Example
—   Physical stock   99 KG
—   SAP stock   100 KG
—   Remaining batch stock   1 KG

Note
For more detailed information see chapter "Inventory Management", section "Clear Batches" further down.

3.8.2 Expiration Date/SLED and Production Date

The goods receipt posting in Repetitive Manufacturing Entry requires that either one of the following is entered:
—   Expiration date/shelf life expiration date (SLED) or a
—   Production date

Depending on the settings in the material master of the output material to be entered (tab *Plant Data*/field *Total shelf life*), either the field *Expiration date/SLED* or *Production date* is enabled (mandatory entry) in the application for entries for a goods receipt.

Material master (rules)
—   The field *Total shelf life* has an entry. The field *Production date* is displayed in the application. When data for the order are entered, the *production date* which is entered is the actual date of manufacture of the material. Together with the *total shelf life* (e.g. in days) this gives us the *shelf life expiration date* which is stored in the batch after the goods receipt is posted
—   Material master data: The field *Total shelf life* has no entry. The field *Expiration date/SLED* is displayed in the application. When the order is entered, the *Expiration date /SLED* must be

greater than the current date plus the remaining shelf life defined in the material master. If this is not the case, the PDA data record cannot be posted (error message because of exceed remaining shelf life).

Note
If applicable, entries in the above-mentioned fields are populated in advance with today's date (Softproviding-Customizing).

Suppress SLED or Production date fields

If those two fields are not available in the application, displaying them was suppressed by setting this indicator in Customizing. Entries for goods receipt can still be made, though. Posting the PDA data records which are created, however, do require appropriate post-processing work (e.g. entering a production date).

Note
*According to the customizing setting mentioned above, said fields (*SLED *or* Production date*) also remain hidden if settings for plant and movement type require information for the SLED or production date which also would be needed from the perspective of the process.*

Please note the different effects of the settings regarding the movement type (transaction OMJ5) on the SLED with regard to the SLED in the PDA data record and in the material document:

— *Indicator 1 (enter and check SLED)*
  The "check" prevents the SLED date from being transferred from the PDA data record to the material document (and, if necessary, to the batch). If necessary, a new, deviating SLED date is determined when the material document is created based on the material master.
— *Indicator 2 (only enter SLED)*
  With this indicator, the SLED date is transferred from the PDA data record to the material document and not recalculated.

3.9 Confirming and Closing Orders

Via the *Close* button or the menu item *Order > Close*, planned orders for Repetitive Manufacturing can be confirmed and closed. Orders may be partially or finally confirmed.

The desired orders are highlighted in the application and the above-mentioned function is started. A pop-up screen opens, offering you the following options to process orders:

Input materials
— Post plan = actual
— Post target = actual

Output materials
— Post plan = actual
— Post target = actual

Order total
— Confirm partially
— Final confirmation and completion

General

Confirmation is part of the order monitoring process. It documents the status of operation processing.

A confirmation indicates:
— the work center where the operation was carried out
— who carried out the operation
— the quantity of the yield (production output quantity) and the amount of scrap in an operation
— the (target) default values for the yield (actual) > backflushing

To identify the (target) default values for the yield (actual), the Meat Management processes must be used. A production order can be processed in Further Processing Entry until it is completed (PDA status field: C (completed)).

Note
Co-products and/or by-products can also be included in the confirmed quantity if the appropriate settings are made in the Customizing function. You will find further information in the configuration guide.

Undoing Confirmation
A completed order can no longer be processed in repetitive manufacturing unless it is made available again for repetitive manufacturing via the /SPDGS/REMRECO program.

This program can be called up in the application menu as follows:

SAP Menu	*Softproviding Core > Logistics > Process data Acquisition > Orders > Planned Orders (Repetitive Manufacturing) > Undo Final Confirmation (Repetitive Manufacturing)*
Transaction	/SPDGS/REMRECO

After starting the transaction, enter the desired planned order and confirm the selection with *Execute* (F8).

The following message is displayed: *"Order XXXX is open again for process data acquisition."*

A closed order can no longer be processed in Repetitive Manufacturing, unless it is made available for Repetitive Manufacturing using the /SPDGS/REMRECO program.

3.9.1 Close Input and Output Materials

Closing input and output materials is achieved using one of the following options:
— Post plan = actual
— Post target = actual

Explanation

Post plan = actual
Activate this indicator to post the open item planned=actual. Only items without target quantities are included. An item is considered open if the actual quantity equals zero. This may also be achieved by deleting or canceling PDA operations.

Plan = actual postings can be carries out if a strategy for the output also includes a planned strategy (e.g. IPOP).

Post target = actual
Activate this indicator to post open target items target=actual. An item is considered a target item if target quantities were created by calculation. An item is considered open if the actual quantity equals zero or came into being without actually being entered, meaning it was generated. An actual quantity of zero may also be the result of the deleting or canceling of PDA operations.

Post plan = actual and Post target = actual
If applicable, a further pop-up window is displayed in order to correct incomplete data. The following options are provided:
— **Maintain**
This button is displayed if the *planned = actual* or the *target = actual* postings would lead to PDA data records that would require post-processing, for instance, because of a missing batch or a missing storage location. If the *Maintain* function is selected, another pop-up for post-processing opens. The components or products to be maintained are listed by row; the fields still to be maintained are marked with an X.

If a material for a batch is missing or if a batch is to be assigned again, this may be done directly in the material row or via the *Batch split* button. Additionally, a batch stock check may be activated. The stock of the selected batch is then checked against the SAP Standard table MCHB.
— **Post**
If this button is selected, the *planned = actual* or the *target = actual* postings are carried out. The PDA data records with the calculated target quantities are created as actual quantities. Post-processing these PDA data records will become necessary if the function was selected, and the *maintain* function (if offered) was not executed. This may occur in cases where a component or

product is subject to batch management and a batch could not be determined automatically or if the storage location is missing.

— **Cancel**
The function is canceled if no PDA data records were created or postings made.

3.9.2 Confirm Order

Closing the order total is possible using the following options:

Order total
— Confirm partially
— Final confirmation and completion

Explanation

Confirm partially
Activate this indicator to perform a partial confirmation for the selected orders. After confirming with Enter, a further pop-up window is displayed in order to correct incomplete data. The following options are provided:
— Maintain
— Post
— Cancel

For further information see the instructions in the section "Close Input and Output Materials" which apply here too.

If partial confirmation is continued with *Post*, another popup window opens which lets you enter the posting date for the partial confirmation. Partially confirmed orders will be assigned status D (partially confirmed). Additional entries and partial confirmations are still possible. The SAP Standard system status is set to TRÜC (partially confirmed).

Final confirmation and completion
Activate this indicator to perform a final confirmation and the completion for the selected orders.

Finally confirming and closing an order in Further Processing Entry:
— Automatically creates PDA operations
— finally confirms the operations
— blocks orders for Further Processing Entry
— sets the *Completely delivered* indicator in the production order for all outputs
— sets the *Final issue* indicator in the production order for all inputs

The PDA status is set to C (completed). The SAP system status of the production order is set to GLFT (delivered) and CNF (finally confirmed).

Items without an actual quantity

Input and/or output materials of a production order can be without actual quantities, i.e. no quantities were entered for the material. For all confirmation functions (levels *Input* and *Output*, *Partial Confirmation* or *Final Confirmation*), these missing quantities can be pointed out. This is controlled via the respective settings in Softproviding Customizing. If the *Warning: Lack of actual entry in production orders* indicator is activated in Customizing, a check is carried out when an order is closed to determine whether it contains items which are intended for entering actual data that do not contain any data

In this case, the warning message *Order 1000905 contains entry items without actual quantities* is displayed. Processing can be continued as follows:

— **Details**
Clicking on the *Details* button will display detail concerning the warning message, meaning, all input and output materials that are without quantities are listed.

— **Continue**
The function is continued. A pop-up window in which to enter a posting date might be displayed.

— **Cancel**
The function is terminated, i.e. no order confirmation takes place. The order may be maintained or posted to again.

4 Enter Process Order

4.1 Overview

Production orders are used in process manufacturing. The process order servers to produce materials or render services at an agreed date and in a certain quantity. It is used to plan resources, control process order processing, and define the rules for accounting and settlement.

Process orders can be created as follows, for example:
—   Conversion of a planned order in the stock/requirements list (transaction MD04).
—   Manual creation of an order in the SAP standard menu (Logistics - Production Process)

In the case of data entries for order via Process Data Cockpit, so-called PDA data records are created. These data records are stored centrally in table /SPDGS/PDAO. Based on these PDA data records, warehouse stocks are either updated directly or through downstream processes.

For goods issues, a PDA operation with document group P (for process order) and document category WA as well as an SAP material document are created. For goods receipt, a PDA operation with document group P (for process order) and document category WE as well as an SAP material document are created.

For further information on PDA operations please refer to the following chapters in this document:
—   "PDA Data Cockpit"
—   "Post Goods Movements"

4.2 Executing the Program

The Process Orders function can either be started using the central Process Data Cockpit transaction or via the *Softproviding Core* or *Softproviding Meat* application menu as follows:

Application Menu	*Softproviding Core > Logistics > Process Data Acquisition > Entry > Process Data Cockpit* *Softproviding Meat > Production > Execution > Further Processing > Further Processing Entry > Process Data Cockpit*
Transaction	/N/SPDGS/PDAON

After starting the cockpit, various functional areas are offered for selection, with the Further Processing Entry application being preset. By selecting the appropriate radio button, you can switch to the *Enter Process Order* area. The following selection parameters are displayed. In addition to the plant, you must enter at least one other parameter.

Prerequisites

The following prerequisites must be met if you want to be able to make entries for a process order:
— The necessary customizing settings (for instance, in Softproviding Core) have been made.

Note
The required customizing settings are described in detail in the Process Data *and* Disassembly *configuration guides listed further down. The required settings are table entries, particularly in the following areas:*
— *Order Type*
— *Item Categories*
— *Entry Operation*
— *Data Entry Subscreen*
— *Goods Movement*
— *Operation Generation*
—
For entries in the areas of Order Type, Entry Operation, Entry Screen Subscreen and Goods Movement see the Process Data *configuration guide. The descriptions generally refer to further processing orders. They are, however, equally valid for process orders.*
—
The necessary settings in the areas of Operation Generation are described in the Disassembly *configuration guide. The descriptions generally refer to disassembly orders. They are, however, equally valid for process orders*

— The process order must be released and must not completed, technically completed, or deleted.

Selection Parameters

Field Name	Description
Plant	The plant is an organizational logistical unit that structures the company from the perspective of production, procurement, maintenance, and materials planning. Materials are produced and goods and services are provided in a plant. The plant is a company's production site.
Order	The order number of the further processing order. Further processing orders are SAP Standard production orders. Existing further processing orders can be accessed by pressing the F4 help key. You enter an asterisk (*) to display all the orders.
Material	A material is an item that is the subject of a business transaction. In SAP materials such as raw materials, semi-finished products, operating supplies, and finished products are identified using a unique material number. The material entered here is the header material to be produced (material with BOM).
Further processing group	The further processing group is used as a selection criterion in Further Processing Entry. It can be assigned to the material to be produced (= output material) in the material master data. When selecting an order in Further Processing Entry, orders can then be explicitly selected or excluded from the selection using the further processing group. Further processing groups are defined in Customizing under *Softproviding Core > Logistics > Process Data Acquisition > Definition > Further Processing Groups*.
MRP controller	The number of the MRP controller or MRP controller group that is responsible. This is taken from the material master data for the material that is being produced.
Production supervisor	The group that is responsible for production scheduling for a material.
Scheduled start	The date on which the execution of the further processing order will start.
Scheduled finish	The date on which the execution of the further processing order will end.
Basic start date	The basic start/finish date indicates how long the further processing order will be processed for.
Basic finish date	The basic start/finish date indicates how long the further processing order will be processed for.
Selection profile status	Optional input of a selection profile status.
System status	Optional input of a system status.

Field Name	Description
	Note *When selecting orders, please note that orders with the status Created (EROF) are not displayed in the Process Data Cockpit, since order release (status REL) is a prerequisite for data entry.*
Excl.	*Excluded* indicator. Flag indicating that objects satisfying the selection condition are ignored by the system.
Resource	Key identifying the work center.
Without those on hold	By setting this indicator, you can deselect further processing orders that have been put on hold. They will not be displayed. This indicator is always set by default, but you can deactivate it. *Note* *After the selection, orders can be highlighted and using the function Hold order or Reactivate order, be processed.*
No assembly orders	By setting this indicator, assembly orders are excluded from the selection. Assembly orders for a material can be created automatically via a forward order (VA02). Here, an assembly order can be created for a production order (PP01), e.g. with order type PP04, and an assembly order can be created for a process order (PI01), e.g. with order type PI04.
Work group	A work group is an organizational unit within production. It is used for evaluation purposes in Softproviding Core. In Softproviding Core Customizing, you can define whether this field is a mandatory field in dialog applications. **Example** A specific shift or group of workers can be defined as a work group. This allows you to evaluate how the group has worked.

The program is started with the *Execute* button (F8). The results of the selection are displayed in a new overview. If there are no results, the message *"No data for chosen selection"* is displayed.

4.2.1 Order Status Management

Process orders are assigned with a proprietary Softproviding status from the perspective of Process Data Acquisition. This status has no effect on processes in SAP Standard; there is also no connection to the order status.

Note
For closer information on this, please see the respective passages in the "Further Processing Entry" chapter. The descriptions on status management are also valid for process orders.

4.2.2 Representation: Orders in the Explorer

Selection Result

In the left-hand screen area, the order numbers of the process orders are listed within an explorer folder (tree) structure in the *Process Orders* folder.

For each order, the folder elements *components* and *products* are listed with their material numbers. Double-clicking on one of those structural elements (e.g. the order, the component, or the production batch) will display the respective details in the right screen half.

Example
Order 100470
— Component (material 120)
— Component (material 130)
— Component (material 140)
— Product (material 600)

In the explorer, the materials are represented using different colors:

Color	Description
Light blue	The material can be entered.
Red	The material cannot be entered (for instance, because backflushing is intended).

ALV Grid Toolbar

In the general overview in chapter 1, the toolbar functions like *Find* and *Print* that are universally available were introduced. Apart from these functions, there is a range of further buttons available for use with the order overview on the left-hand side:

Button	Description
Collapse subtree	This button allows you to collapse individual orders or the whole order list.
Select layout	The representation of the order data can be modified by adjusting the layout (selecting, changing, saving, managing the layout).
List	This function lists all orders in the right-hand screen area by row in descending order.
Overview off	This button allows you to hide the left-hand screen area. A button, *Overview on*, will then be displayed which allows you to unhide the screen area.

4.2.3 Representation: Order List and Details

Note
For information on the representation of the order list and details, see the description in the chapter "Further Processing Entry" further up. The explanations found there do also apply to process orders.

4.2.4 Functions and Buttons

Compared to Further Processing Entry, not all functions are relevant for the entry of process orders. Functionalities which are relevant for process orders are listed in the following table:

Functions	Description
Update	Available for process orders. Please see the description in the chapter "Further Processing Entry"; it also applies to process orders.
Change strategy	Available for process orders. Please see the description in the chapter "Further Processing Entry"; it also applies to process orders.
Confirmation	Available for process orders. Please compare the descriptions in the chapter "Further Processing Entry", which apply also to process orders.
Label printing	Available for process orders. Please see the description in the chapter "Further Processing Entry"; it also applies to process orders.
Preceding and Subsequent	Available for process orders. Please see the description in the chapter "Further Processing Entry"; it also applies to process orders.
Hold order/Reactivate	Available for process orders. Please see the description in the chapter "Further Processing Entry"; it also applies to process orders.
Recalculate target	Available for process orders. Please see the description in the chapter "Further Processing Entry"; it also applies to process orders.
Origin of strategy	Available for process orders. Please see the description in the chapter "Further Processing Entry"; it also applies to process orders.
Maintain origin class	Available for process orders. Please compare the descriptions in the chapter "Further Processing Entry", which apply analogously to process orders.
Order pair formation	Available for process orders. Please see the description in the chapter "Further Processing Entry"; it also applies to process orders.

Functions	Description
Batch staging	Available for process orders. Please see the description in the chapter "Further Processing Entry"; it also applies to process orders.
Component replacement	Available for process orders. Please see the description in the chapter "Further Processing Entry"; it also applies to process orders.
Unplanned material	Available for process orders. Please see the description in the chapter "Further Processing Entry"; it also applies to process orders.
Production batches	Available for process orders. Please see the description in the chapter "Further Processing Entry"; it also applies to process orders.

4.2.5 Entries via Component and Product

Note
For information on the entry of quantities via component and product, see the description in the chapter "Further Processing Entry" further up. The explanations found there do also apply to process orders.

4.2.6 Entry Screen (Input)

Note
For information on the input entry screen (goods issue from warehouse), see the description in the chapter "Further Processing Entry" further up. The explanations found there do also apply to process orders.

4.2.7 Entry Screen (Outbound)

Note
For information on the output entry screen (goods receipt into warehouse), see the description in the chapter "Further Processing Entry" further up. The explanations found there do also apply to process orders.

5 Goods Receipt for Purchase Order

5.1 Overview

The *Goods Receipt for Purchase Order* program is available in the Softproviding Core Process Data Cockpit for the entry of purchase order quantities. This application allows you to enter goods movements for previously created purchase orders.

When you enter goods receipts using this program, so-called process data acquisition (PDA) data records are created which, later in the process, are typically posted with previously created batch jobs. This makes it possible to temporarily separate the entry of the goods receipts from quantity- and value-based stock update.

The acquisition data are stored in the following tables:
—   /SPDGS/PDAO (PDA Operation)
—   /SPDGS/PDAS (PDA Operations for Stock Determination)
—   /SPDGS/PDAT (PDA Stock Update)

Note
For further information on the above-mentioned tables, see the following chapters in this document:
—   *"PDA Data Cockpit"*
—   *"Inventory Management"*

5.2 Prerequisites

5.2.1 Application

In order to be able to enter goods receipts for a purchase order, the desired materials for a purchase order must be created beforehand. This is done with SAP standard transaction ME21N

5.2.2 Customizing

Data entries for a goods receipt with the above-mentioned entry screen are only possible if the following table entries are maintained in the Softproviding customizing settings. The Softproviding Core Customizing is started as follows:

IMG Menu	*Softproviding Core > Logistics > Process Data Acquisition > Control Settings >Entry Operation*

In this table for the entry operation, the relevant plant, an entry for document group B (purchase order) and for document category WE (goods receipt) must be maintained. Further settings (e.g. an entry device) might be required.

Also further customizing settings are required, for instance
— Goods movement control, and
— Subscreen entry screen

Note
Further information is provided in the Softproviding Core configuration Guide Process Data.

5.3 Process Overview

The individual steps with which to enter a purchase order can be summarized as follows:

— **Create purchase order**
 Transaction M21N
— **Data entries for the purchase order (Process Data Cockpit)**
 PDA data records with status A are created
— **Completing the purchase order (Process Data Cockpit)**
 Purchase order items are set to *final delivery completed*
— **Posting the PDA data records**
 Transaction /SPDGS/GMBT (program /SPDGS/GMOVBTCH)PDA)
 Data records are set from status A to C

Graphic representation of the individual process steps:
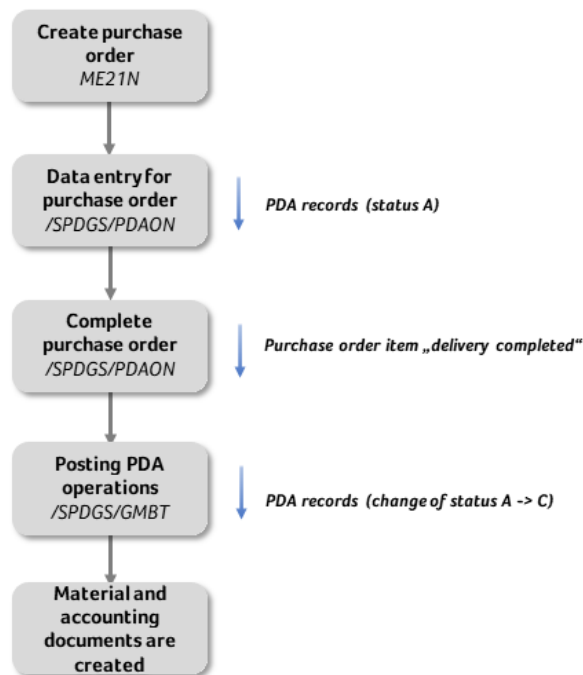
Goods receipt for purchase order

5.3.1 Executing the Program

The data entry for purchase order functionality can be called using the Process Data Cockpit transaction or via the Softproviding Core or Softproviding Meat application menu:

Application Menu	*Softproviding Core >Logistics, Process Data Acquisition > Entry > Process Data Cockpit*

	Softproviding Meat > Production > Execution > Further Processing > Further Processing Entry > Process Data Cockpit
Transaction	/N/SPDGS/PDAON

Once the Process Data Cockpit is started, the different functional areas are listed one below the other with the Further Processing Entry application preselected by default. By selecting the respective radio button, the user may switch to the *Goods Receipt for Purchase Order* function. The following selection parameters are displayed.

Selection Parameters

Field Name	Description
Plant	The plant is an organizational logistical unit that structures the company from the perspective of production, procurement, maintenance, and materials planning. Materials are produced and goods and services are provided in a plant. The plant is a company's production site.
Storage location	The storage location is an organizational unit that allows a distinction to be made between the different stocks within a plant.
Purch. Organization	The purchasing organization is an organizational logistical unit that the company structures according to the needs of purchasing. A purchasing organization procures materials or services, negotiates purchasing terms with vendors and is responsible for these transactions.
Purchasing group	The purchasing group is the code for a purchaser or a group of purchasers responsible for specific purchasing activities.
Material group	The material group is a code that allows several materials or services with the same properties to be grouped together.
Purchasing document	A purchasing document is a tool used by the purchasing department to procure materials or services. This field is used to enter the number of the purchase order.
Item	The purchasing item is the item number on the purchasing document. It is the unique identifier of an item in a purchasing document.
Vendor	A vendor is a business partner who supplies materials or services. An obligation is incurred to the vendor for deliveries made or services rendered.
Material	A material is an item that is the subject of a business transaction. In SAP, materials such as raw materials, semi-finished products, operating supplies, and finished products are identified using a unique material number.
Delivery date	The delivery date is the date on which the goods are to be delivered. It is entered in the purchase order item.

Field Name	Description
Purchasing doc. type	The purchasing document type is an identifier that allows a distinction to be made between the different variants of purchasing documents in the SAP system. *Note* *The F4 input help for this field shows all purchasing document types of category F (purchase order). If you want to use the document types in this report, they also need to be entered in the Softproviding customizing table /SPDGS/TWBS.*
Work group	A work group is an organizational unit within production. In Softproviding Core, it is used for evaluation purposes.

Note
In selection fields, an individual value and, where appropriate, a range can be entered directly in the selection window for the report. Using the Multiple selection *button, you can:*
— *restrict the entries via selection options (for example, larger or smaller than an individual value and inside or outside a range)*
— *select several individual values or ranges that are to be used when creating a report*
— *exclude several individual values or ranges that are not to be used when creating a report*

For more information about multiple selections, see the SAP standard system documentation.

Click on the *User documentation* button or access the SAP online help to obtain more information about using variants.

5.4 Purchase Order Document in the Explorer

Selection Result

In the left screen half, information on the previously selected purchase order document is displayed within the explorer folder structure (tree structure/folder *Purchasing Documents*). These are the document number of the purchase order and the respective material for which a purchase order item was created. By double-clicking on one of these structural elements, the respective detailed information is displayed in the right screen half.

Generally available functions are displayed above the explorer structure in the form of an ALV grid. These are:

— **Collapse subtree**
  This button allows you to collapse the purchase order documents.
— **Find**
  Searches for purchase order documents within the list.
— **Print**
  Prints the display or the hierarchy.
— **Select layout**
  The representation of the purchase order documents can be altered by adjusting the layout (select, change, save, manage).
— **List**
  This function lists all the purchase order documents by line in the right screen half.
— **Overview off**
  This button hides the screen area to the left; then, the *Overview on* button with which to unhide the screen area again becomes available).

5.5 Purchase Order Components

As a result of the previous selection, the purchasing documents with its inventory items is listed in the right screen half. The list is displayed with the ALV Grid Control.

Note on the ALV Grid Control
ALV Grid Control (ALV is the SAP List Viewer) is a flexible tool for displaying lists. It is used in a variety of applications both in the SAP standard system and in Softproviding products. It consists of a toolbar, a title and the output table which is displayed in a grid control.

The following functions are generally provided. Depending on the program, one or more of these functions may not be provided and special functions not described here may be offered:
— *Choosing details*
— *Sorting in ascending or descending order*
— *Finding terms*
— *Setting and deleting filters*
— *Calculating and deleting total/average/maximum/minimum*
— *Calculating and deleting subtotals*
— *Printing*
— *Choosing views*
— *Exporting data*
— *Selecting layout*
— *Displaying list graphics*
— *User documentation*

Use the SAP online help to obtain more information about using the buttons.

The list with the purchasing documents (upper screen area) and purchasing document items (lower screen area) has a great number of columns, which may be hidden or displayed. In this document, only the important and most useful fields are described.

Purchasing Documents

Field Name	Description
Purchasing document	Here, the purchase order number is displayed.
Purchasing document cat.	The purchasing document category allows you to distinguish between different purchasing documents. Purchasing document categories can be further subdivided by purchasing document types. **Example** — F = Purchase order purchasing document
Document type	Identifier that allows a distinction to be made between the different variants of a purchasing document in the SAP System. **Example** — NB = standard order
Created on	Date on which the purchase order was created.

Field Name	Description
Vendor	Account number of the vendor with whom the purchase order was agreed on.

Items for the Purchasing Document

Field Name	Description
Item	This is the unique identifier of an item in a purchasing document.
Material short text	Short description of the material
Info record	The purchasing info record serves as a source of information for the purchasing of a certain material from a certain vendor. If an info record exists for a purchase order, the respective number is displayed here.
Purchase order quantity	Quantity ordered by the buyer, to be supplied by the vendor.
Storage location	Name of the location the material was stored at.
Base unit of measure	Unit of measure in which stocks of the material are managed. The system converts all the quantities you enter in other units of measure (alternative units of measure) to the base unit of measure, for instance, pieces.

ALV Grid Toolbar

Above this delivery document list, a toolbar with various functions like *Sort, Find, Print* or *Select Layout* is integrated. These functions have already been mentioned in the "Overview" section in chapter 1 and are generally know which is why no further explanation is given at this point.

5.6 Starting the Purchase Order Entry Screen

The screen for the entry of purchase order quantities opens upon double-clicking on a material number (left hand side screen area) or by double-clicking on a purchasing document number (lower right hand side screen area).

The entry screen can be subdivided into four screen areas:
— *Purchase Order Data*
— Tab structure with the tabs:
    — *Enter*
      Entry of operation data
    — *Analysis*
      Production progress in totals
    — *Entered PDAO*
      Operation data – details

5.6.1 Purchase Order Data

The following purchase order data are displayed in the upper screen area:
— Plant
— Purchasing document
— Item (number of the purchasing document item)
— Vendor
— Material

In the upper screen area, the purchasing document, the purchasing document item, the plant, the vendor, and the material for which the purchase order quantity is to be entered are displayed.

These fields are not described in detail since they are either self-explanatory or have been dealt with already in previous chapters.

Goods Receipt for Purchase Order / Functions
The entry screen and the functions for Goods Receipt for Purchase Order are no different from those for Further Processing Entry Outbound. For this reason, please refer to the function descriptions in the chapter "Further Processing Entry".

Depending on the application, the following field or buttons are added to the screen for Goods Receipt for Purchase Order:
— *Enter* **tab**
    — *Delivery note* field
— *Entered PDAO* **tab**
    — *Final delivery* button
      A PDA data record can be marked and the final delivery confirmed. This sets the Final Delivery indicator in the PDA data record. When this data record is posted, the order item is marked as finally delivered.
    — *Returns* button

PDA data record can be marked and the return confirmed. This sets the Returns Item indicator in the PDA data record.

5.6.2 Complete Purchase Order

In the right screen area, there is a *Complete purchase order* button just above the purchasing documents overview. With the completion of a purchase order, the purchase order items are considered as "finally delivered". This sets the *Final delivery* indicator for all purchase order items in the purchase orders. The item is considered as completed, and no further goods receipts are expected.

In order to do this, the purchase orders are highlighted and the above-mentioned button is selected. The following prompt that is either confirmed or canceled is displayed:

"Do you really want to complete the purchase order? This function cannot be undone."

If the prompt is confirmed, another pop-up window informs the user that all purchase order items have been finally delivered.

This completion is typically carried out when the purchase orders are completed and no more entries are made for the purchase order. The PDA data records of the completed purchase order are then available with status A for the posting of the goods movement. This is done with the report *Post Goods Movement* (/SPDGS/GMOVBTCH). Also see the detailed description in the "PDA Operation" section further down.

Note
Please note that once the purchase order is completed, it is no longer displayed in the Process Data Cockpit.

5.6.3 Complete Item

After double-clicking on a purchasing document, the corresponding purchase order items are displayed on the right-hand side of the screen.

Above this overview, the button *Complete item* is available. This function is only relevant for stock transfer orders. The stock in transit can be completely cleared after marking the items and selecting the button. The order items are set to *final delivery*.

Notes
Purchase orders can only be called up in the Process Data Cockpit with the Goods Receipt for Purchase Order program if the corresponding purchasing document type has been specified in the /SPDGS/TWBS table (e.g. standard purchase orders (NB), stock transfer orders (UB)).

The Complete item *button is displayed for all orders, including purchase orders. However, it is only relevant for stock transfer orders. If the function is executed for normal orders, a corresponding error message is displayed.*

5.6.4 PDA Operation

As a result, a PDA data record with document group B (purchase order) and document category WE (goods receipt) as well as goods movement status A (open) is created. This status is stored, among other places, in table /SPDGS/PDAO.

After this, the PDA operations may be posted. This is done with report /SPDGS/GMOVBTCH (Post Goods Movement) which is called up via the Softproviding Core menu item *Logistics > Process Data Acquisition > Processing > Post Goods Movement*. This report is typically executed via batch job and scheduled accordingly.

Note
The PDA Data Cockpit (Transaction /SPDGS/PDAON) can also be used to post the PDA operations.

You can find more information on the creation, use and processing of PDA operations in the following chapters in this document:
— "PDA Data Cockpit"
— "Posting Goods Movements"

For further information from the perspective of configuration and enhancement (BAdI), please see the *Process Data* configuration guide.

5.6.5 Confirmation-Related Goods Receipt - Inbound Delivery

The program *Goods Receipt for Purchase Order* in the Process Data Cockpit can also be used to map a goods receipt for a purchase order if confirmation control is provided for the purchase order. This is the case if a confirmation control key has been stored in the purchase order and an inbound delivery has been created for this purchase order.

At goods receipt for a purchase order in the Process Data Cockpit, the inbound delivery is selected for entry in the explorer of the order overview. The data of the inbound delivery (number and item of the delivery) is written to the PDAO data records created during the data entry process.

If an entry is made directly for the material in this process, it is *rejected* with error message M7036 (*"No goods receipt is possible for purchase order XXXXXXXXXX XXXXX"*). The same error message is issued if an inbound delivery has not yet been created for the purchase order.

Note
For confirmation control, a confirmation control key with the confirmation category LA (inbound delivery) must be used.

This functionality is also available in DPS-RAF (GR for purchase order).

6 Goods Movement for Delivery

6.1 Overview

A delivery generally describes the process of providing goods or services to a customer based on an order.

Deliveries in the protein industry usually are created with reference to a sales order or a stock transport order. The delivery quantities can be entered with Softproviding SAP GUI application *Goods Movement for Delivery* as part of the delivery process. Typically, our customers use the Softproviding DPS-RAF solutions for these data entry operations.

Note
This document describes the functions based on the Softproviding entry screen in the SAP GUI.

When entering with the Goods movement for Delivery application, so-called PDA data records are created. These data records are given the status F (waiting for release) during quantities entry. In a next process step this the status of these PDA records are converted from F to A (open) and the data records are then posted. This is usually done as soon as the delivery is complete, i.e. all delivery quantities for all delivery items are entered.

The acquisition data are stored in the following tables:
—   /SPDGS/PDAO (PDA Operation)
—   /SPDGS/PDAS (PDA Operations for Stock Determination)
—   /SPDGS/PDAT (PDA Stock Update)

Note
For further information on the above-mentioned tables, see the following chapters of this document:
—   *"PDA Data Cockpit"*
—   *"Inventory Management"*

Besides updating the entry data in the tables PDAS and PDAT, another reason for to use said Softproviding application is the option to create order pairs. Here, for instance, order pairs between inbound deliveries (F/WE) or outbound deliveries (F/WA) and Further Processing production can be formed as well as between those delivery processes and disassembly processes.

Note
For more information on pair formation, see the section "Order Pair Formation" further down in this document.

6.2 Prerequisites

6.2.1 SAP-Standard Customizing

In SAP- Standard Customizing, the following points should be considered within the context of the *Relevant for picking* indicator. This indicator can be set for the item categories that are used.

Indicator *Relevant for picking*
This indicator determines whether delivery items are relevant for picking or putaway:

— **Case 1 (indicator is set)**
If this indicator is set, the picking quantity in the delivery needs to be maintained after the goods issue has been posted. The *Picking quantity* field is ready for input, and it is expected that a quantity be entered. If no quantity is entered, subsequent posting of the PDA records with report /SPDGS/GMOVBTCH (post goods movement) is not possible. In this case, the following error message is displayed when the report is started:

"Delivery has not been picked (completely)."

— **Case 1 (indicator is not set)**
If the indicator is not set, the program module will only adjust the delivery quantity in the delivery. The *Picking quantity* field in the delivery is not ready for input, and it is not expected that a quantity is entered. In a further process step, the posting of the goods movement can be carried out without problem.

The Customizing table in which to set the above-mentioned indicator can be called as follows:

IMG Menu	*Logistics Execution > Shipping > Deliveries >Define Delivery Item Categories*
Transaction	*0VLP*

Recommendation

Do discuss these setting options with your Softproviding consultant during project works.

Batch split
A further prerequisite that must be met if you want to deploy the Softproviding application for delivery is that no batch split for a delivery item is carried out for a delivery item, since the called program module does not yet support this function.

Note
This functionality is scheduled to become available in a future release.

Batch split/workaround and recommendation
The following workaround can be used for this process: after picking a PDA data record is created for each batch split item. These may be created via batch job.

Note

Currently, this procedure must be developed in the Z namespace. Do discuss this issue with your Softproviding consultant within the scope of the project.

6.2.2 Softproviding Customizing

Data entries for the delivery with Softproviding data entry screen are only possible if the following table are maintained in the Softproviding customizing settings. The Softproviding Core Customizing menu is called as follows:

IMG Menu	*Softproviding Core > Logistics > Process Data Acquisition > Control Settings > Entry Operation*

The following entry must be maintained in the table for the plant:
— Document group   F
— Document category   GI
— Material document   Batch/job (V3)

In addition, at least one data acquisition dev ice must be created and activated in this table.

IMG Menu	*Softproviding Core > Logistics > Process Data Acquisition > Control Settings > Goods Movement*

The following entry must be maintained in this table:
— Document group   F
— Document category   GI
— Stock type   Unrestricted use
— BAPI GM code (normal)   Delivery confirmation

IMG Menu	*Softproviding Core > Logistics > Process Data Acquisition > Control Settings > Data Entry Subscreen*

The following entry must be maintained in this table:
— Document group   F
— Document category   GI
— Function group   /SPDGS/SAPLWSC2N
— Screen   1003
— PDAON indicator   X (=yes)

Note

If you want to enable order pair formation for the delivery, this function must be activated in Softproviding Core Customizing under Plants/Storage Locations.

For further information on the settings, please see the Softproviding Core Process Data *configuration guide.*

6.3 Process Overview

A delivery can be created with or without reference to a sales order. The sales order can be, for example, a standard sales order or a returns order.

The individual steps with which to enter a delivery can be summarized as follows:
— **Create sales order**
Transaction VA01
— **Create delivery**
Transaction VL01N
— **Data entries for delivery (Process Data Cockpit)**
Transaction /SPDGS/PDAON; PDA records with status F are created.
— **Releasing the PDA data records (option 1)**
Transaction /SPDGS/PDAON (Process Data Cockpit)
Posting PDA data cords (status F to status A)
— **Releasing the PDA data records (option 2)**
Transaction /SPDGS/PDAON (Process Data Cockpit)
Transaction /SPDGS/DP_RUNTIME (execute standard DPS process)
— **Posting PDA data records**
Transaction /SPDGS/GMBT (program /SPDGS/GMOVBTCH)
PDA data records (status A to status C)

Graphic representation of the individual process steps:
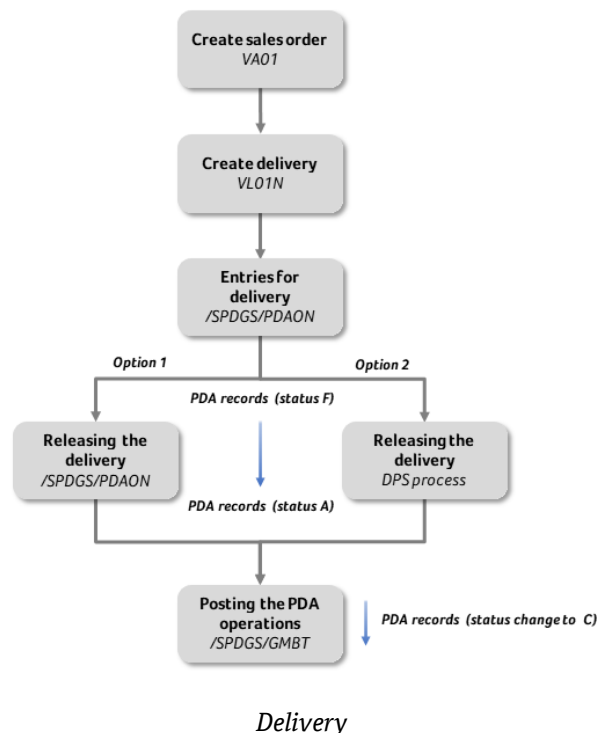
Delivery

6.3.1 Executing the Program

The data entry for delivery functionality can be called using the Process Data Cockpit transaction or via the Softproviding Core or Softproviding Meat application menu:

Application Menu	*Softproviding Core >Logistics, Process Data Acquisition > Entry > Process Data Cockpit*
	Softproviding Meat > Production > Execution > Further Processing > Further Processing Entry > Process Data Cockpit
Transaction	*/N/SPDGS/PDAON*

Once the Process Data Cockpit is started, the different functional areas are listed one below the other with the Further Processing Entry application preselected by default. By selecting the respective radio button, the user may switch to the *Goods Movement for Delivery* function. The following selection parameters are displayed.

Selection Parameters

Field Name	Description
Plant	The plant is an organizational logistical unit that structures the company from the perspective of production, procurement, maintenance, and materials planning. Materials are produced and goods and services are provided in a plant. The plant is a company's production site.
Sales organization	An organizational unit responsible for the sale of certain products or services.
Distribution channel	The way in which products or services reach the customer. Typical examples of distribution channels are — Wholesale — Retail — Direct sales
Division	A way of grouping materials, products, or services. The system uses divisions to represent a certain product group. **Example** If a sales organization sells food and non-food products through both retail and wholesale distribution channels, each distribution channel could then be further split into food and non-food divisions.
Delivery	This field shows the field that uniquely identifies the delivery.
Shipping point/receiving point	The location at which the deliveries are processed. This may be a physical location (for example, a warehouse or collection of loading ramps) or a logical grouping (e.g. a group of persons that are responsible for shipping activities).

Field Name	Description
Route	Route by which the delivery item is to be delivered to the customer. You can use the route in a delivery to represent the following situations: — One or more legs — Connection between point of departure and destination point — Target area
Picking date	The date by which picking must begin for the delivery item to reach the customer on time. This is the picking date of the delivery document header.
Transportation planning date	The date by which you must arrange transportation so that the delivery can reach the customer on time.
Loading date	The date by which picking and packing must be completed so that the goods are ready for loading and for the delivery to reach the customer on time.
Goods issue date	The date on which the goods must physically leave the shipping point to reach the customer on time.
Delivery date	The date by which the delivery should be received by the customer.
Delivery block	Indicates if an entire sales document (e.g. a sales order) is blocked for delivery.
Loading point	The exact physical location where the loading of a delivery item takes place (for example, the number of a specific loading bay).
Ship-to party	The party who receives delivery of the goods.
Number of packages	The total number of packages for all items in the delivery.
Picking status	This status indicates whether picking or putting away the delivery already started, was partially carried out or whether it already has been completed.
WM activity status	Displays the status of processing in the warehouse management system (WM). The status line tells you whether a transfer order for WM is required not, and, if required, whether it is confirmed or still open for processing.
SD document category	A classification for the different types of documents that you can process in the sales and distribution system (for example, quotations, sales orders, deliveries, and invoices).

Work group	A work group is an organizational unit in production. It is used for evaluation. An entry in this field is optional; it is used as a default value in the entry screen.

Note
In selection fields, an individual value and, where appropriate, a range can be entered directly in the selection window for the report. Using the Multiple selection *button, you can:*
— *restrict the entries via selection options (for example, larger or smaller than an individual value and inside or outside a range)*
— *select several individual values or ranges that are to be used when creating a report*

— *exclude several individual values or ranges that are not to be used when creating a report*

For more information about multiple selections, see the SAP standard system documentation.

Click on the *Execute* (F8) button to start the report and search for results based on the criteria you specified.

6.4 Delivery Document in the Explorer

Selection Result

In the left screen half, information on the previously selected delivery document is displayed within the explorer folder structure (tree structure/folder *Deliveries*). These are the document number of the delivery and the respective material for which a delivery item was created. By double-clicking on one of these structural elements, the respective detailed information is displayed in the right screen half

Generally available functions are displayed above the explorer structure in the form of an ALV grid. These are:

— **Collapse subtree**
This button allows you to collapse the delivery documents.
— **Find**
Searches for delivery documents within the list.
— **Print**
Prints the display or the hierarchy.
— **Select layout**
The representation of the delivery documents can be altered by adjusting the layout (select, change, save, manage).
— **List**
This function lists all the delivery documents by line in the right screen half.
— **Overview off**
This button hides the screen area to the left; then, the *Overview on* button with which to unhide the screen area again becomes available).

6.5 Delivery Components

As a result of the previous selection, the delivery documents with its inventory items are listed in the right screen half. The list is displayed with the ALV Grid Control.

Note on the ALV Grid Control
ALV Grid Control (ALV is the SAP List Viewer) is a flexible tool for displaying lists. It is used in a variety of applications both in the SAP standard system and in Softproviding products. It consists of a toolbar, a title and the output table that is displayed in a grid control.

The following functions are generally provided. Depending on the program, one or more of these functions may not be provided and special functions not described here may be offered:
— *Choosing details*
— *Sorting in ascending or descending order*
— *Finding terms*
— *Setting and deleting filters*
— *Calculating and deleting total/average/maximum/minimum*
— *Calculating and deleting subtotals*
— *Printing*
— *Choosing views*
— *Exporting data*
— *Selecting layout*
— *Displaying list graphics*
— *User documentation*

Click on the User Documentation *button or access the SAP online help to obtain more information about using the buttons.*

The list with the delivery documents (upper screen area) and delivery items (lower screen area) has a great number of columns, which may be hidden or displayed. In this document, only the important and most useful fields are described.

Deliveries

Field Name	Description
Delivery	The number that uniquely identifies the delivery.
Created by	The name of the person who created the delivery.
Created on	Date on which the record was added
Sold-to party	The customer who orders the goods or services. The sold-to party is contractually responsible for sales orders.
Ship-to party	The ship-to party displayed here is the partner who receives the delivery of goods.

Items for Delivery

Field Name	Description
Delivery item	All items within a document or list are assigned a number allowing them to be uniquely identified. The numbers are consecutively assigned when a document is entered or a list is created.

Field Name	Description
Delivery item category	A classification that distinguishes between different types of delivery items (for example, return items and text items). The delivery item category determines how the system processes an item.
Created by	The name of the person who created the object.
Created on	Date on which the record was added
Material	Alphanumeric key uniquely identifying the material. This is the material for the respective delivery item.
Charge	A batch is a material subset that is handled separately from other subsets of the same material. Each batch is not only identified by its material number but also by its special batch number.
Delivery quantity	This is the quantity entered in the delivery for the delivery item.
Base unit of measure	Unit of measure in which stocks of the material are managed. The system converts all the quantities you enter in other units of measure (alternative units of measure) to the base unit of measure, for instance, pieces.
Material availability date	Date on which a sufficient quantity of the item must be available in order to start picking.
Billing relevance	Indicator that specifies the basis to be used for billing. **Example** A Delivery related billing document B Order-related billing document - status according to order quantity
Picking control indicator	This indicator specifies whether pick is to take place, and if yes how. **Example** Blank there will be no picking A picking will not be performed using WMS. C Picking via WMS transfer order
Material type	Key that assigns the material to a group of materials such as raw materials, operating supplies, or trading goods.
Batch management	Indicator that specifies that the material be managed in batches.

ALV Grid Toolbar

Above this delivery document list, a toolbar with various functions like *Sort, Find, Print* or *Select Layout* is integrated. These functions have already been mentioned in the "Overview" section in chapter 1 and are generally know which is why no further explanation is given at this point.

6.6 Entry Screen

The screen for the entry of delivery quantities opens upon double-clicking on a material number (left hand side screen area) or by double-clicking on a delivery item number (lower right hand side screen area).

The entry screen can be subdivided into four screen areas:
— *Purchase Order Data*
— Tab structure with the tabs:
   — *Enter*
      Entry of operation data
   — *Analysis*
      Production progress in totals
   — *Entered PDAO*
      Operation data – details

6.6.1 Delivery Data

The following purchase order data are displayed in the upper screen area:
— Plant
— Delivery
— Item (number of the delivery item)
— Ship-to party
— Material

These fields are not described in detail since they are either self-explanatory or have been dealt with already in previous chapters.

Goods Movement for Delivery / Functions
The entry screen and the functions for Goods Issue for Delivery are no different from those for Further Processing Entry Outbound. For this reason, please refer to the function descriptions in the chapter "Further Processing Entry".

6.6.1.1 Status Change – Option 1

In the right screen area, there is a *Release PDA records* button just above the purchasing documents overview. This button will change the status of the created PDA data records for the desired delivery from status F (waiting for release) to status A (open).

Once the delivery is completed, all data entries are released automatically, i.e. they are assigned status A (open). In order to do this, the deliveries are highlighted and the above-mentioned button is selected. The following prompt is displayed:

"Do you really want to release these data records? This function cannot be undone."

If the prompt is confirmed with *Yes*, another pop-up window informs the user on the number of PDA data records that have been released.

This status change is typically carried out when the delivery is completed and no more entries are made. The PDA data records of the completed deliveries are then available with status A for the posting of the goods movement. This is done with the report *Post Goods Movement* (/SPDGS/GMOVBTCH). Also see the detailed description in the "PDA Operation" section further down.

Note
Please note that once the PDA data records are posted with program /SPDGS/GMOVBTCH, the delivery is no longer displayed in the Process Data Cockpit.

6.6.1.2 Status Change – Option 2

As an alternative to using option 1 (see above), a standard DPS process is available. This can be called up in the Softproviding Core menu as follows: *Softproviding Core > DPS - Data Processing System > Start DPS Process*. The relevant process area is called *Core: PDA Administration*. Within this area the release of the PDA processes is called up as follows: *Administration > Release Delivery*.

6.6.2 Posting – PDA Operation

As a result of the entry of delivery quantities, a PDA data record with document group F (delivery) and document category WA (goods issue) as well as goods movement status F (waiting for release) is created. This status is stored, among other places, in table /SPDGS/PDAO.

If data entries for all delivery items is completed as described above, the status of the PDA transactions can be set from status F to status A using options 1 or 2.

After this, the PDA operations may be posted in SAP. This is done with report /SPDGS/GMOVBTCH (Post Goods Movement) which is called up via the Softproviding Core menu item *Logistics > Process Data Acquisition > Processing > Post Goods Movement*. This report is typically executed via batch job and scheduled accordingly.

Once these PDA data records have been processed successfully, it is made sure that the data are updated with the following means:
— The document flow in the delivery is updated with the document number of the goods movement
— The material document is stored in the PDA data record
— Financial documents are created

Note
The PDA data records for the delivery cannot be posted with the PDA Data Cockpit (Transaction /SPDGS/PDAON). This is done with the report Post goods movements *mentioned above whereby all PDA data records must be posted (collective posting).*

Once the PDA data records have been posted, the delivery is no longer displayed in the Process Data Cockpit.

6.6.3 Reversal

Goods issues can be reversed in the SAP standard menu using the transaction VL09. The deliveries may then be displayed again in the Process Data Cockpit. However, it should be noted this information is not stored in the process data table /SPDGS/PDAO since the reversal was performed outside the Softproviding application.

It is also possible to revert PDA data records that have been posted and bear status C (Completed) in the PDA data cockpit. Here, it is possible to revert individual data records of a delivery. The reversal will create new PDA data records (status A), which may then be posted with the afore-mentioned report *Post Goods movements*. This procedure ensure that goods movements are fully documented in the Softproviding tables. The delivery may then again be displayed in the Process Data Cockpit.

Note
In order to ensure the seamless documentation of all goods movements (document flow for PDA data records), Softproviding recommends performing reversals with the PDA Data Cockpit rather than with the SAP standard transaction VL09.

For further information from the perspective of configuration and enhancement (BAdI), please see the *Process Data* configuration guide.

7 Inventory Count Data Entry

7.1 Overview

Inventory is a count or recording of all existing stocks in different storage locations of the company. The objective of inventory count/entry is a physical check of the current warehouse stocks as well as entering the quantities into the SAP system.

In order to record quantities of meat, a dedicated inventory count data entry screen is provided. When data entries are made, PDA data records are created as well as entries in the two tables /SPDGS/PDAS (PDA operations for stock determination) and /SPDGS/PDAT (PDA stock update) are made. At first, the PDA data records are assigned status F (waiting for release). In a next step, by executing a function module or a DPS application, this status is set to A (open) and these data records are posted.

The tables /SPDGS/PDAS and /SPDGS/PDAT were created to realize inventory management with double units of measure which, from the point of view of logistics, is not feasible in SAP Standard without SAP CWM (Catch Weight Management). If, besides the base unit of measure, one or multiple alternative units of measure are defined and used for materials, this is called double inventory management. With double inventory management, quantities (units) and weights (e.g. kilogram) are kept independent of each other.

Note
For further information on those two tables as well as on the issue of double inventory management with or without CWM, please refer to "Inventory Management" section further down.

Basically, data acquisition is possible in SAP GUI as well as with the Softproviding applications DGA or DPS-RAF. In this document, however, the focus is on data acquisition using the Softproviding data entry screen in SAP GUI.

7.2 Prerequisites

In order to undertake a physical inventory, an inventory document for the respective material needs to be created first using the SAP Standard transactions MI01 or MI31 (Batch Input: Create Physical Inventory Documents).

Inventorying using the Softproviding is only possible if the following entries do exist in the Softproviding Core customizing settings (*Process Data Acquisition > Control Settings> Data Entry Sub-screen* or *Entry Operation)*:

— Table /SPDGS/TWSC (view /SPDGS/V_TWSC) must be maintained with the following parameters:

    — Document group: I
    — Document category: I1
    — Function group: /SPDGS/SAPLWSC2N
    — Screen: 1003
    — PDAON indicator   X (=yes)

— Table /SPDGS/TDEC (view: /SPDGS/V_TDEC) must be maintained with the following parameters:

    — Document group: I
    — Document category: I1
    — Material document   (value X = not relevant)

    In addition, at least one data acquisition device must be created and activated for this table.

For further information on these settings, please see the *Process Data* configuration guide.

Note
With BADI /SPDGS/BADI_GMOV (method: CREATE_BEFORE3), the creation date of the PDA operation may be the same as the count date. As standard setting in Softproviding Core, the creation date of the PDA record is the system date. Further information is provided in the Softproviding Core configuration Guide Process Data.

7.3 Process Overview

The different steps of inventory count data entry can be summarized as follows:
— **Create inventory document**
   Transaction MI01
— **Inventory count data entry (Process Data Cockpit)**
   Transaction /SPDGS/PDAON
   PDA data records are created with status F
— **Execute function module (option 1)**
   Transaction SE37 (module /SPDGS/GMOV_RELEASE_INVENTORY)
   Posting PDA data records: from status F to A
— **Execute DPS function (option 2)**
   Transaction /SPDGS/DP_RUNTIME
   Posting PDA data records: from status F to A
— **Posting PDA data records**
   Transaction /SPDGS/GMBT (program /SPDGS/GMOVBTCH)
   PDA data records: from status A to C
— **Posting the differences**
   Transaction MI20 (list of inventory differences): shows the difference between the count and the book inventory;
   Transaction MI07 (carry out difference postings)

Graphical representation of the different process steps:
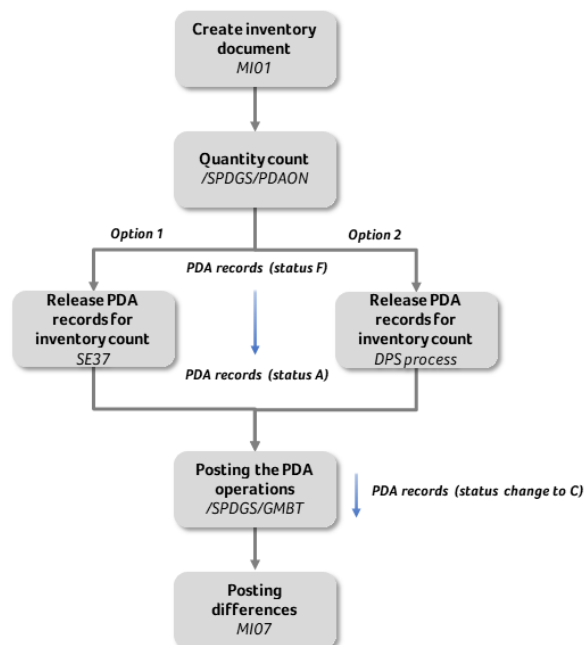
Inventory Count Data Entry

7.3.1 Executing the Program

The inventory count data entry can be called using the Process Data Cockpit transaction or via the Softproviding Core application menu:

Application Menu	*Softproviding Core >Logistics, Process Data Acquisition > Entry > Process Data Cockpit*
	Softproviding Meat > Production > Execution > Further Processing > Further Processing Entry > Process Data Cockpit
Transaction	*/N/SPDGS/PDAON*

Once the Process Data Cockpit is started, the different functional areas are listed one below the other with the Further Processing Entry application preselected by default. By selecting the respective radio button, the user may switch to the *Inventory Count Data Entry* function. The following selection parameters are displayed.

Selection Parameters

Field Name	Description
Physical inventory document	**Use** The physical inventory document is the central element of the inventory process (mandatory field) and is identified by an alpha-numeric key which is used to — Plan and execute physical inventory — Record count data — Clear inventory differences **Finding the inventory document** If the inventory document is not known, the F4 input help will start the SAP standard transaction MI22 that allows you search for it using various selection criteria (e.g. material, plant, storage location or batch). *Note* *In transaction MI22, you have the option of multiple selection. For further information on the topic of multiple selection, please see the respective section right after this table.* An inventory document number can be filled into the *Physical inventory document* field. To do so, set the cursor on this document t number and select the *Accept document no.* button
Fiscal year	As a rule, the fiscal year is a period of twelve months for which the company is to create its inventory and balance sheet. The fiscal year can be the same as the calendar year but need not be.

Field Name	Description
	The fiscal year that is entered must be the fiscal year of the inventory document. Prepopulating this field is possible via individual user data with parameter ID *GJR* (e.g. GJR = 2020).
Work group	A work group is an organizational unit in production. It is used for evaluation purposes. An entry in this field is used as preselection in the entry screen. **Example** One possible group is the group of employees who carried out the inventory.

Note – Multiple Selection
In selection fields, an individual value and, where appropriate, a range can be entered in the pop-up selection window. Using the Multiple selection *button, you can:*
— *restrict the entries via selection options (for example, larger or smaller than an individual value and inside or outside a range)*
— *select several individual values or ranges which are to be used when creating a report*
— *exclude several individual values or ranges which are not to be used when creating a report*

For more information about multiple selections, see the SAP standard system documentation.

The *Execute* button (F8) will start the report and search for results using the entered criteria

7.4 Inventory Document in the Explorer

Selection Result

In the left screen half, information on the previously selected inventory document is displayed within the explorer folder structure (tree structure/folder *Inventory Components*). These are the material number and the respective material batches. By double-clicking on one of these individual elements (e.g. by double-clicking on a purchase order), the respective detailed information is displayed in the right screen half.

Generally available functions are displayed above the explorer structure in the form of an ALV grid. These are:

— **Collapse/expand subtree**
This button allows you to collapse or expand the inventory documents.
— **Find**
Searches for inventory documents within the list.
— **Print**
Prints the display or the hierarchy.
— **Select layout**
The representation of the inventory components can be altered by adjusting the layout (select, change, save, manage).
— **List**
This function list all the inventory document item by line in the right screen half.
— **Overview off**
This button hides the left-hand screen area; then, the *Overview on* button with which to unhide the screen area again becomes available).

7.5 Inventory Components

As a result of the previous selection, the inventory document with its inventory items is listed in the left screen half. The list is displayed with the ALV Grid Control.

Note on the ALV Grid Control
ALV Grid Control (ALV is the SAP List Viewer) is a flexible tool for displaying lists. It is used in a variety of applications both in the SAP standard system and in Softproviding products.
It consists of a toolbar, a title and the output table that is displayed in a grid control.
The following functions are generally provided. Depending on the program, one or more of these functions may not be provided and special functions not described here may be offered:
— *Choosing details*
— *Sorting in ascending or descending order*
— *Finding terms*
— *Setting and deleting filters*
— *Calculating and deleting total/average/maximum/minimum*
— *Calculating and deleting subtotals*
— *Printing*
— *Choosing views*
— *Exporting data*
— *Selecting layout*
— *Displaying list graphics*
— *User documentation*

Click on the User Documentation *button or access the SAP online help to obtain more information about using the buttons.*

The list with the inventory components has a great number of columns, which may be hidden or displayed. In this document, only the important and most useful fields are described.

Field Name	Description
Physical inventory document	This is the document number entered when the Inventory Count Data Entry application was started
Item	All items included in a document or on a list are assigned a number enabling them to be uniquely identified and found. The numbers are assigned consecutively when the document is entered or the list generated.
Batch	A batch is a material subset that is handled separately from other subsets of the same material. Each batch is not only identified by its material number but also by its specific batch number.
Special stock	Specifies the special stock type. If you need to manage certain stock (for example, consignment stock) of a material separately, the stock type in question is defined using this specials stock indicator.
Stock type	Shows the stock type for which a physical inventory is to be carried out. It is possible to carry out a physical inventory for the following material stock types:

Field Name	Description
	— Unrestricted-use — Quality inspection — Blocked
Alternative unit	Indicates that the unit of entry is proposed as a default value for the entry of physical inventory count results.
Book quantity	The book quantity indicates the book inventory for this physical inventory item at the time of the count. The quantity counted is not adopted as the new book inventory balance until any differences have been corrected by means of an inventory adjustment posting.
Zero count	Indicates that the quantity counted is 0. If you do not enter this indicator in the event of a zero count, the item will be treated as uncounted.
Quantity	Portion of total purchase order quantity that you wish to allocate to this account assignment item. The quantity entered determines which portion of the costs you wish to distribute to this account assignment item.
Base unit of measure	Unit of measure in which stocks of the material are managed. The system converts all the quantities you enter in other units of measure (alternative units of measure) to the base unit of measure.
Quantity in unit of entry	Specifies the quantity to be moved in the unit of entry. The quantity is automatically converted to the stockkeeping unit (base unit of measure).
Difference amount	Indicates the value of the difference quantity. The difference quantity is valuated at the following price: — Valuation price from the material master record if the material is not subject to split valuation and is not part of consignment stock — Valuation price from the valuation record if the material is subject to split valuation — Valuation price from the consignment record if the material is part of consignment stock.
Currency	Currency key for amounts in the system.
Book value at sales price	Book value at sales prices for this physical inventory item at time of count. This counted value is not adopted as the new book value at sales prices until any inventory differences have been corrected by means of an inventory adjustment posting.
Counted by	Name of the user who last entered the count results for this physical inventory item.
Adjustment posting made by	Name of the user who made the adjustment posting for this item.
Posting date	Date that is used when entering the document in Financial Accounting or Controlling. The fiscal year and the period for which an update of the accounts specified in the document or cost elements is made, are derived from the posting date. When entering

Field Name	Description
	documents, the system checks whether the posting date entered is allowed by means of the posting period permitted.
Physical inventory reference number	Specifies the number of a system-external document that refers to a physical inventory transaction.
Item counted	Indicates that the count results have already been entered for the item. As soon as the PDA operation changes from A to C, the field is marked with an X.
Difference posted	Indicates that the inventory differences have already been posted. The inventory difference is the quantity by which the counted stock determined by weighing, measuring, or estimating deviates from the book inventory balance.
Recount	Indicates that the item has been included in another physical inventory document for the purposes of a recount.
Material document	Number of the material document with which a goods movement was posted. Together with the material document year, the document number constitutes the key via which a material document is accessed.
Material document item	Specifies the number that uniquely identifies an item in of a material document.
Recount document	Indicates the number of the physical inventory document in which the item to be recounted was recorded. The corresponding item in the original physical inventory document is no longer active.
Reason for inventory difference	Specifies the reason for the physical inventory difference. For example, the material may have been placed in storage incorrectly. If you enter a difference without reference to the corresponding document, the default value you maintained in Customizing for Inventory Management is displayed.

ALV Grid Toolbar

Above this inventory components list, a toolbar with various functions like *Sort, Find, Print* or *Select Layout* is integrated. These functions have already been mentioned in the "Overview" section in chapter 1 and are generally know which is why no further explanation is given at this point.

7.6 Data Entry Screen

The screen for the entry of inventory quantities opens upon double-clicking on a batch number (left hand side screen area) or by double-clicking on an inventory document number (right hand side screen area).

The entry screen can be subdivided into four screen areas:
— *Inventory Document Data*
— Tab structure with the tabs:
    — *Enter*
      Entry of operation data
    — *Analysis*
      Production progress in totals
    — *Entered PDAO*
      Operation data – details

7.6.1 Inventory Document Data

The following purchase order data are displayed in the upper screen area:
— Material
— Batch

These are not described in detail since they are either self-explanatory or have been dealt with already in previous chapters.

Functions

The entry screen and the functions for Inventory Count Data Entry are no different from those for Further Processing Entry Outbound. For this reason, please refer to the function descriptions in the chapter "Further Processing Entry".

7.6.2 PDA Operation

Quantities are entered manually for each inventory item; zero quantities can also be entered. The result of the entry process is a PDA operation with document group I (Inventory) and document category I1 (Inventory) with goods movement status F (waiting for release).

7.6.2.1 Status Change (Option 1)

After they have been entered, these inventory PDA operations are set from status F to A using function module /SPDGS/GMOV_RELEASE_INVENTORY.

The transaction is called via transaction SE37. The following fields are ready for entry:

Import Parameters

Field	Field Name	Example
I_WERKS	Plant	0001
I_LGORT	Storage location	0001
I_IBLNR	Inventory document number	100000020
IV_LOCK	Lock/unlock	«blank»

After entering these parameters, the program can be executed with F8. If the conversion is successful, export parameters are output as follows:

Export Parameters

Field	Field Name	Example
E_NUMB_OF_RECORDS	Number of released operations	3

As a result, the number of released operations is output (in this example 3). The status of the PDA records has been set from F to A.

7.6.2.2 Status Change (Option 2)

As an alternative to using this function module, a standard DPS process is available. This can be called up in the Softproviding Core menu as follows: *Softproviding Core > DPS > Start DPS Process*. The relevant process area is called *Core: PDA Management*. Within this area, the release of PDA records is called as follows: *Management > Release inventory*.

7.6.2.3 Postings

Posting PDA Operations
Once the status has been changed, PDA operations are posted in SAP. This is done with report /SPDGS/GFMOVBTCH (*Post Goods Movement*) which is started via the Softproviding Core menu *Logistics > Process Data Acquisition > Processing*.

Note
With the PDA Cockpit (transaction /SPDGS/PDAO), PDA operations for inventory cannot be posted. Do use the above-mentioned report Post Goods Movements *for this task.*

Note
The conversion of the PDA records from status F to status A (see options 1 and 2 above) should only be executed after all entries for inventory were made.

After successfully posting the PDA data records (status A to status C), the inventory document status is set from *Not yet counted* to *Counted*.

Differential Posting

Material, accounting and financial documents are created and the inventory status set to *counted*, *cleared* if any differences are posted (transaction MI20 and MI07).

For further information on creating, using, and processing PDA operations, see the following sections in this document:
—   "PDA Data Cockpit"
—   "Post Goods Movements"

For further information from the perspective of configuration and enhancement (BAdI), see the *Process Data* configuration guide.

8 PDA Data Cockpit

8.1 Overview

The Softproviding Core transaction /SPDGS/PDAON is used to call so-called PDA operations. PDA operations are data records that are created in different processes. PDA stands for Process Data Acquisition. These data records are stored in table /SPDGS/PDAO.

In the meat industry, a great number of data entries are carried out in various applications (e.g. disassembly and production) within a short period of time. Instantaneous posting of these data entries would immediately cause stock-related postings. However, this is not desired. In order to prevent this, the PDA operations created with the data entries are stored in table /SPDGS/PDAO. These PDA operations are posted at a later time. Typically this done via batch jobs. Similar PDA operations (e.g. same plant, same storage location, same material) are collected and posted periodically according to the definition in the job. This collective update guarantees a clear separation between data entry and stock update.

Manual updating of these PDA operations is also possible within the PDA Cockpit but not standard practice since updating is usually carried via batch job as described above. The Process Data Acquisition Cockpit may also be used to verify and possibly edit individual PDA operations and to check for inconsistencies.

Note
See chapter "Post Goods Movements" for a description of how to create batch jobs and update PDA operations.

PDA operations are created in the following processes:
— Sales orders
— Purchase orders
— Further processing entry
— Disassembly entry
— Transfer orders
— Deliveries
— Picking
— Repetitive manufacturing
— Process orders
— Inventory

Entries for these processes are possible in the SAP GUI as well as in the DGAs and DPS/DPS-RAF applications provided by Softproviding. Depending on the process, different fields in the PDA data record are filled.

8.2 Executing the Program

The *PDA Data Cockpit* is called with the central transaction of the Process Data Cockpit or via the application menu as follows:

Application Menu	*Softproviding Core > Logistics > Process Data Acquisition > Entry > Process Data Cockpit*
Transaction	*/N/SPDGS/PDAON*

If the cockpit is started using the transaction the following functional areas will be offered for selection with the Further Processing Entry application preset as default:
— Further Processing Entry
— Enter Process Order
— Goods Movement for Purchase Order
— Goods Movement for Delivery
— Inventory Count Data Entry
— PDA Data Cockpit

The *PDA Data Cockpit* may now be selected accordingly. The selection parameters valid for this area are displayed.

Selection Parameters

Process Control

Field Name	Description
Plant	The plant is an organizational, logistical unit, which structures the company from the perspective of production, procurement, maintenance, and materials planning. Materials are produced and goods and services are provided in a plant.
PDA operation	Number that together with the plant uniquely identifies a PDA Operation. For each process data acquisition a PDA operation (PDA number) is created.
Document group	This field combines documents in one group which are treated uniformly from the PDA (Process Data Acquisition) view: — empty = w/o reference — A = Sales order — B = Purchase order — C = Disassembly order — D = Further processing order — E = Transport — F = Delivery — G = Picking order — I = Inventory — K = Customer — L = Inspection lot — P = Process order

Field Name	Description
	— R = Repetitive manufacturing
Document category	The document category is determined by the data entry. A data entry in Further Processing Order Outbound will, for instance, result in a PDA operation with document category WE (goods receipt).
Storage location	Place at which a material is stored. A plant can have one or multiple storage locations.
Terminal-ID	In Windows, the terminal ID corresponds to the computer name and uniquely identifies the computer in the local network.
Identification	Identification
Transport unit number	The number of the transport unit.
Change ID	Change ID

Document Status

Field Name	Description
Goods movement status	In many cases, a PDA operation triggers a goods movement, such as a goods receipt. This field contains information about the status of the PDA operation for goods movement. The following statuses are possible: — A = open (the PDA operation has not yet been posted) — B = canceled (the PDA operation has been canceled) — C = completed (the PDA operation has been completed) — D = faulty (the PDA operation is faulty) — E = for post-processing — F = waiting for release
Deleted	If the indicator (X) is set in this field, only PDA data records with status *Deleted* are displayed.
Reversal document	If this indicator is set, only reversed/canceled PDA operations are selected and displayed.

Material

Field Name	Description
Material	Alphanumeric key uniquely identifying the material.
Batch	A batch is defined as a subset or partial quantity of a material that is managed separately from other subsets of the same material. Each batch is identified not only by its material identification but also by a separate batch number.

Date

Field Name	Description
Created by	If the username is entered, only the PDAs that were created by this user are selected and displayed.
Created on	Date on which the PDA operation was created.

Field Name	Description
Time	Time at which the PDA operation was created.

Documents

Field Name	Description
Order	Number that identifies the order within the client.
Order item number	Uniquely identifies the order item.
Reservation	Indicates an alphanumeric key uniquely identifying the document.
Item no. of reservation	Specifies the number that uniquely identifies an item in a reservation or a dependent requirement.
Cut number	Cuts are Softproviding Meat-specific master data in Disassembly. They are used to create cut lists. If in Disassembly Entry quantities are entered with reference to cuts (and not only to material), the cut number in the PDA operation is stored in this field.
Sales order	Unambiguously identifies a sales order.
Sales order item	Enter the item number of the sales order (sales document item)
Purchasing document	The purchasing document number is an alphanumeric key uniquely identifying the document.
Item	Specifies the number that uniquely identifies an item in a purchasing document.
Delivery	The number that uniquely identifies the delivery.
Item	The number that uniquely identifies the item in a delivery.
Warehouse number	Number that identifies a complex, physical warehouse structure within the Warehouse Management system.
Transfer order number	Number that identifies the transfer order within a warehouse.
Transfer order item	Uniquely identifies a movement within a transfer order.
External ID	The external identifier is entered together with the slaughtering date when the quantities are recorded. In this context, this ID is the *external animal number*. This number allows you to unambiguously identify the animal and guarantee traceability. **Background information** As soon as the *Check slaughtering date* field in the material master database is activated, the *External ID* field becomes mandatory.

Posting Documents

Field Name	Description
Material document year	The material document year indicates the calendar year in which the material document was posted.
Material document	Number of the material document with which a goods movement was posted.
Physical inventory document	The inventory document is a central element of inventory processing. It serves to: — Plan and carry out physical inventory

Field Name	Description
	— Enter count data — Clear differences
Fiscal year	Period, 12 months as a rule, for which the company is to create its inventory and balance sheet. The fiscal year can be the same as the calendar year but does not have to be.

Dependencies

Field Name	Description
Source operation	Preceding operation of the PDA operation. Preceding and subsequent PDA operations are created when a PDA operation is cancelled.
Subsequent	The successor. Preceding and subsequent PDA operations are created when a PDA operation is cancelled.
Predecessor	Preceding and subsequent PDA operations are created when a PDA operation is cancelled.

Partner

Field Name	Description
Vendor	Indicates an alphanumeric key uniquely identifying the vendor in the SAP system.
Customer	Indicates an alphanumeric key uniquely identifying the customer in the SAP system.

Transfer Posting

Field Name	Description
Receiving plant	Indicates the receiving or issuing plant.
Receiving storage location	Indicates the receiving or issuing plant.
Receiving material	Indicates the receiving/issuing material.
Receiving batch	Indicates the receiving or issuing batch.
Valuation type of transfer batch	Key used to indicate the valuation type of the transfer batch.

Further Data

Field Name	Description
PDA strategy	Data entry strategies (PDA strategies) are a central function in Further Processing Entry
Confirmed	Operation has status CONFIRMED
Container ID	The container ID
DP task number	The number of the DPS task.
Work center	Key identifying the work center.
Stock type	Specifies the stock to which the material is posted for goods receipt (or from which it is posted for goods issue).

Field Name	Description
Special stock	Indicator which specifies of which type of special stock this stock is. If you need to separately manage certain stock (for example, consignment stock) of a material, the stock type in question is defined using this indicator.
SLED/BBD	The date is set at the time of goods receipt. The following options are available: — You enter the shelf life expiration or best-bevor date. — You enter a production date, and the system calculates the shelf life expiration or best-before date using the production date and the expiry date in days (from the material master database).
Date of manufacture	This date may be shown during data entry. Together, the production date (date of manufacture) and the total shelf life of the material drawn from the material master database add up to the shelf life expiration or best-before date. *Note* *This field is only displayed during data entry if the* Batch Management Requirement *indicator is displayed in the material master view* Plant Data/Storage 1. *This field is only a mandatory field if the* Total Shelf Life *and* Remaining Shelf Life *fields are maintained in the material master view* Plant Data/Storage 1.
Object	The *Object* field may be filled within the scope of object determination. Objects can for instance be pigs, halves, cow, young cow. They are freely definable. Each object has a class and certain characteristics (inputs).
Device	A device may be a scanner, a scale, a flow meter, or an external system. The exact characteristics are defined in Softproviding Core Customizing. **Examples** ITEC, BANS, AutoFOM
Work group	A work group is an organizational unit in production. It is used in Softproviding Core for evaluation purposes. In addition, you have to specify a name for the work group. In Softproviding Core Customizing you may define whether this field is used as a mandatory field in dialog applications.
Manual operation	If this indicator is activated only manually created PDA operations are selected.
Generated operation	If this indicator is activated only generated PDA operations are selected.

Field Name	Description
Delivery completed	Indicates that the item is to be regarded as closed.
Final issue	Indicates that a reservation item is completed.

After the desired selection parameters have been entered, the application may be started using the function button *Execute* (F8). The results of the selection are the displayed in split screen in the form of an ALV grid.

8.2.1 Selection Results

Selection Results/Display in the Explorer

On the left-hand side of the screen, the PDA data records are display within an explorer folder (tree) structure. The selected PDA data records are listed in the appropriate folders. Possible folders are:
— W/o reference
— Purchase order
— Disassembly process
— Further processing
— Process order
— Delivery
— Physical inventory

Note
Only those folders are shown (e.g. the folder Physical inventory*), for which PDA data records were found via data selection.*

Above the ALV grid, the following buttons are available:

Button	Description
Provide input fields/Lock input fields	It is possible to switch between *Change* and *Display* mode. This allows you to adjust certain field contents of PDA records.
Display	This button allows you to display stocks for a material. Transaction MMBE is called if you select a PDA record (and with it a material) by double-clicking.

When a folder is selected or "opened", the respective PDA data records are displayed with their PDA numbers and an icon. This icon shows the status in which the PDA record finds itself:

Icon	Goods Movement Status
Cross on rectangle	Deleted (blank)
White circle	Open (A)
Red dot	Reversed (B)
Checkmark on green dot	Completed (C)

Black dot	With error (D)
Bar in rectangle	For post-processing (E)
Question mark	Waiting for release (F)

ALV Grid Toolbar

In the overall overview in chapter 1, the generally available toolbar functions like finding and printing were mentioned. Apart from these features, there are a number of special buttons that are only available in the left-hand side screen area of the PDA Data Cockpit:

Button	Description
Legend	This button displays an overview of the icons for the various goods movement statuses of the PDA data records.
Optimize column width	The columns and the information contained within are displayed in optimum width.
Change sort order	This function allows you to change structure display. Either the folders and the PDA data records contained within are displayed or the data records are displayed (without folders) in ascending order.
PDAO overview	This function lists all PDAOs in the right-hand screen area in rows by descending order. The same result is achieved by double-clicking on the *Processes* folder.
Overview on/off	This button hides the left part of the screen; afterwards, the *Overview on* button is available to show this part of the screen again.

Mass Processing

If allowed in Softproviding Customizing, mass processing PDA data records is possible. This option may be activated in Customizing by terminal ID and user. Once the activation is made, the following buttons are made available:

— Delete
— Reverse
— Post
— Print

This allows you to select multiple PDA data records and process, i.e. delete, reverse, post or print them accordingly.

Caution
Please note that deleted data records cannot be restored.

Show Field Content Details

If you choose list representation (*PDAO Overview* button), the PDA data records are displayed line by line in the right half of the screen. Depending on the process (e.g. further processing, disassembly, or purchase order), the fields are filled or remain empty.

Examples are:
—   Order
—   Material
—   Batch
—   Purchase order
—   Material document
—   Reservation
—   Inventory document
—   Inspection lot

It is possible to show the details of these fields by clicking which will take you to the respective transaction.

Selection Result/Details

Double-clicking on a PDA record will display the respective detailed information in the screen area to the right. Depending on the status of the selected PDA data record, further buttons are displayed or hidden in the right half of the screen. They are positioned to the right of the standard ALV grid toolbar functions (e.g. Sort, Find, and Refresh).

The following table gives an overview of the possible goods movement statuses of a PDA operation as well as the relationships or dependencies with the *Delete, Post* or *Reverse* functions.

Depending on the process (e.g. further processing), each PDA operation is assigned a goods movement status. Only PDA operations with status A (open) and D (with errors) can be posted.

Only PDA operations with status C may be reversed. They will then get goods movement status B (reversed). A further PDA operation (a so-called subsequent operation) is created automatically and, if successfully posted, set to status C (completed). The number of the respective precursor or successor PDA operation is noted in both PDA operations.

For information on which PDA operations may be deleted see the table above. Each deleted PDA operation is assigned goods movement status *Blank*. This will check the *Deleted* indicator.

PDA-Status table

PDA Record Status	Description	*Delete* Button	*Post* Button	*Reverse* Button
Blank	Statistical PDA operation. No goods movement possible	No	No	No
A	Open = PDA operation has not been posted yet	Yes	Yes	No

PDA Record Status	Description	*Delete* Button	*Post* Button	*Reverse* Button
B	*Reversed* = PDA operation is cancelled	No	No	No
C	*Completed* = PDA operation is posted	No	No	ja
C	*Completed* = PDA operation is posted (as reversal document), or PDA operation is an inventory document	No	No	No
D	*With errors* = PDA operation with errors	Yes	Yes	No
E	*For post-processing*. This PDA operation was saved in inconsistent state and needs to be post-processed manually. In this state, creating a goods movement is not possible.			
F	Waiting for release	Yes	No	No

Additionally, the button *Set status to open* is available with status D (with errors) in the detail view of the data record. This allows you to revert the status easily to A (open).

Note
ALV Grid Control (ALV is the SAP List Viewer) is a flexible tool for displaying lists. It is used in a variety of applications both in the SAP standard system and in Softproviding products.
It consists of a toolbar, a title and the output table that is displayed in a grid control.
The following functions are generally provided. Depending on the program, one or more of these functions may not be provided and special functions not described here may be offered:
— *Choosing details*
— *Sorting in ascending or descending order*
— *Finding terms*
— *Setting and deleting filters*
— *Calculating and deleting total/average/maximum/minimum*
— *Calculating and deleting subtotals*
— *Printing*
— *Choosing views*
— *Exporting data*
— *Selecting layout*
— *Displaying list graphics*
— *User documentation*

Click on the User Documentation *button or access the SAP online help to obtain more information about using the buttons.*

8.2.2 Results Representation in Tabs

Depending on the customizing settings or processes performed, contents is output in the following tabs:

— PDA Operation
— Customer-Specific Additional Fields
— PDAO Stock Update
— PDA Operation Flow
— Calculated Target from Physical Data Entries
— Generated PDA Operations

Note

In Softproviding Core Customizing (Logistics > Process Data > Organization > Terminal) settings are made as to whether the contents of these tables are to be output or not. Table contents for the PDA operation is always output, i.e. the PDA Operation *tab is always displayed.*

PDA Operation Tab

All PDA data records (i.e. PDA operations) that created in the various processes are displayed in this tab. These data records are stored in table /SPDGS/PDAO. For each field, (or rather, the field name), the field value, the unit (unit of measure or currency), the name of the field value is entered if these data were created in the process.

The represented fields and the selection screen fields are identical. They were already described in the "Executing the Program" section. For these reasons they are not treated with here in detail.

Customer-Specific Additional Fields Tab

Table /SPDGS/PDAOE1 (PDAO custom extension 1) is supplied by Softproviding as standard with the fields listed below. The table may be extended may the customer for individual purposes:

— Container ID
— Identification
— TU number
— Change ID
— DP task number
— Work center

If fields in this table were filled during data entry, this tab is displayed when the PDA data record is called up. In change mode, entries that have been made can be adjusted. If no field contents are available yet, the fields mentioned can be displayed with the Customer-specific additional fields' button and filled and saved as required.

PDA Stock Update Tab

Table /SPDGS/PDAT (PDA stock update) is closely related and dependent on the table for process data entry /SPDGS/PDAO (PDA operation). This table is filled under certain circumstances. Entries in table /SPDGS/PDAT serve the purpose of genuine inventory management in the double unit of measure and may be used for evaluations accordingly.

Note
For further details, see the "Inventory Count Data Entry" chapter in this document.

Table Fields

Field Name	Description
Client	The client is the highest level in the SAP system hierarchy. A client is defined as a self-contained commercial, organizational, and technical unit within an SAP System. It features records of tables and data handled separately from other clients.
Plant	The plant is an organizational logistical unit that the company structures from the perspective of production, procurement, maintenance, and materials planning. Materials are produced and goods and services are provided in a plant.
Storage location	Place at which a material is stored. A plant can have one or multiple storage locations.
Material	A material is an item that is the subject of a business transaction. In SAP materials such as raw materials, semi-finished products, operating supplies, and finished products are identified using a unique material number.
Batch	A certain quantity of homogenous material that is manufactured during a certain production run: The batch number can be drawn from the production order if it is filled for a certain component.
Unit of measure	Information on the unit of measure for the quantity.
Quantity	The quantity of the material is cumulatively written to this field. Do not that the quantities that the quantities can be summed up by batch.
Yield group schema	This field is no longer relevant.
Yield group	This field is no longer relevant.
Stock type	This field is no longer relevant.

PDA Operation Flow Tab

Table /SPDGS/PDOF (PDA operation flow) documents the operation flow of entered source and target quantities. This table is only filled if certain DPS processes are used.

Field Name	Description
Plant	The plant is an organizational logistical unit that the company structures from the perspective of production, procurement, maintenance, and materials planning. Materials are produced and goods and services are provided in a plant.
Operation	The system assigns an operation number to each entered PDA operation. This number unambiguously identifies a PDA operation.
Subsequent	Subsequent PDA operations are generated when a PDA operation is reversed

Calculated Target from Physical Data Entries Tab

In Further Processing Entry, so-called target values are created for certain PDA strategies like IQOW, IGOW, IWOQ, IWOG after actual quantities have been captured and are then stored in table /SPDGS/MPCT. When the production order is closed, PDA records are created using the target values stored in table /SPDGS/MPCT.

Note
It is possible to immediately generate PDA data records without having to create target values and making entries in table /SPDGS/MPCT. However, this setting must be made explicitly in the Softproviding customizing settings.

Field Name	Description
Client	The client is the highest level in the SAP system hierarchy. A client is defined as a self-contained commercial, organizational, and technical unit within an SAP System. It features records of tables and data handled separately from other clients.
Order number	Order number in Further Processing Entry.
Item category	With this indicator, the item category specifies whether the material is an input or output material. The following indicators are possible: — A = Product (AFPO item) — R = Requirement (RESB item) — N = By-product — P = Product from repetitive manufacturing (PLAF)
Item number	The item number specifies the BOM item of the reservation. For the product to be produced, the value 0001 is always defined.
Activity source (source PDA)	The activity source is the PDA data record used to create the target quantities.
Document group	In SAP, business transactions are represented by documents. This field combines documents in one group which are treated uniformly from the PDA (Process Data Acquisition) view: — empty = w/o reference — A = Sales order — B = Purchase order — C = Disassembly order — D = Further processing order — E = Transport — F = Delivery — G = Picking order — I = Inventory — K = Customer — L = Inspection lot — P = Process order — R = Repetitive manufacturing
Quantity	The calculated target quantity is written into this field.
Base unit of measure	Specifies the unit of measure for the quantity.
Target=act relevant ind.	This field is filled with Blank or X.
Follow-up operation (target=actual posting))	The PDA number of the data record is entered in this field if a PDA was created for it, i.e. a target quantity was "posted."
Date on which the record was added	Displays the date on which the record was added.

Field Name	Description
Time of entry	Displays the time at which the record was added.
Source operation	The source operation is the PDA data record on the basis of which the source PDA is created

Generated PDA Operations Tab

Generated PDAOs are automatically generated by the program. This is for instance the case when a data record is reversed. Then the reversal document is created.

Example
— PDA data record number 2040 (goods issue in Further Processing) is created and posted manually. However, data record 2040 was not correct and is therefore reversed.
— The follow-up PDA record with number 2055 is generated.
— For PDA data record 2040, the table *Generated PDAOs* is displayed and data record 2055 is defined.

Note
Generated PDA operations are normal PDA operations. Their fields correspond to the fields of the PDA operations (see above). For this reason, it is not necessary to describe these fields again.

8.2.3 PDA Strategies

The material to be produced in in Further Processing may be assigned a PDA strategy. This assignment takes place in the material master (*Process Data Acquisition* tab and/or on the terminal (Softproviding Core Customizing). Assignment on the material has priority. If there is no strategy maintained in either of the two, the system default strategy ($SYS) is used. The strategy may be changed in the process if the *Fixed strategy* indicator in the plant in the Process Data Acquisition Customizing is not activated.

9 Order Pair Formation

9.1 Overview

This section describes the Order Pair Formation function. A combination of physical data entries and generated processes allows you to represent the entire production process chain. In those process steps in which physical data entry is not necessary or possible, so-called generated process data are created, creating links between the orders (order pair formation).

With order pair formation, the individual orders are linked either automatically or, manually, by the user, thus creating generated data entries. The order pair formation function allows you to considerably reduce manual data entry work.

The generated PDA operations are created by executing the Meat Management partial completion (Confirm and End). This partial completion is carried out in intervals and in the form of a background job.

Example

The following example shows all the process steps of a production order (FAUF):
— Standard raw material (FAUF 1)
— Sausage meat production (FAUF 2)
— Filling (FAUF 3)
— Smoking/curing (FAUF 4)
— Slicing (FAUF 5)
— Packaging (FAUF 6).

Order pair formation may be undertaken for preceding or a subsequent order. In our example, FAUF 3 and FAUF 6 are the central orders.
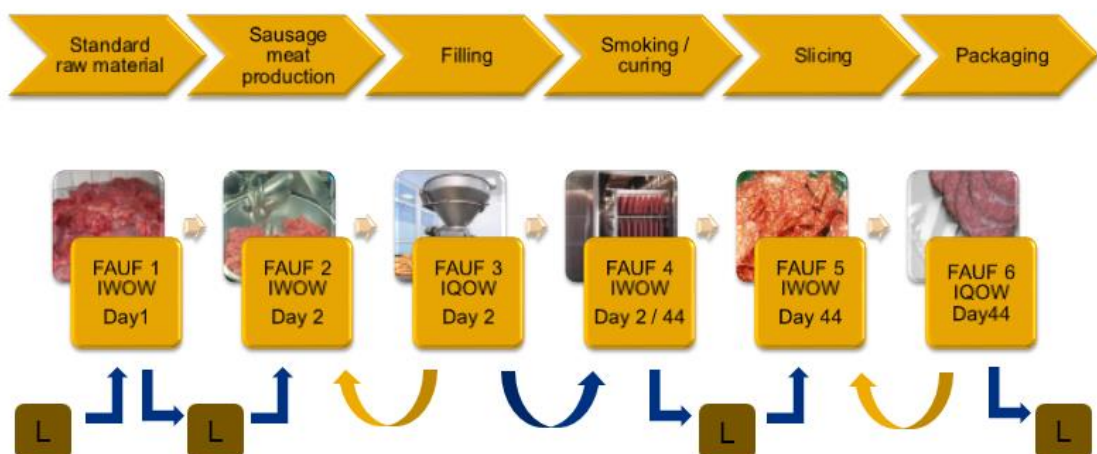
In the case of pair formation with the process preceding FAUF3 (sausage meat production), outbound of FAUF 2is not recorded. The filled sausage (FAUF3) is entered manually and, for instance, posted to warehouse stock.

This is followed by the order closing of FAUF3, when the PDA strategy will create an inbound entry of FAUF3 based on the target quantities in the background. At the same time, the system will (automatically) search for an order pair. If an order pair is found, an automatic PDA operation to the outbound of FAUF2 is created.

For order pair formation with the process following FAUF3 (i.e. for FAUF 4), the inbound is not entered manually either, but order pair formation will automatically create a PDA operation.

In the case of order pair formation with the process preceding FAUF5 (i.e. for FAUF 4), the outbound, again, is not captured, but the sliced sausage is posted to warehouse stock instead, thus creating a manual entry.

With the subsequent order closing of FAUF6, the PDA strategy will create an inbound entry of FAUF6 based on the target quantities in the background. At the same time, the system will (automatically) search for an order pair. If an order pair is found, an automatic PDA operation to the outbound of FAUF5 is created.

9.2 Prerequisites

Prerequisite for a working order pair formation are settings in Softproviding Core Customizing (on plant and terminal level) and in the material master, as well as the assignment of the correct PDA strategy.

9.2.1 Customizing

Menu	*Softproviding Core > Logistics > Process Data Acquisition > Organization*
Transaction	SPRO

9.2.2 Plants/Storage Locations

In order to make automatic pair formation work, the following customizing parameters must be set at plant level:

Field Name	Description
Order pair	This parameter activates the order pair function and, at the same time, determines the degree of the match between the orders needed for an order pair formation. The following assignments may be defined: — Inactive — Active. assigned via material and batch — Active. assigned via material and batch or only material The *Order pair* function can be set to inactive at the same location.
Order exclusion	Exclusion criteria for production orders during pair formation. This setting option can be used to specify which production orders are not to be considered in pair formation. The following settings can be made for this field: — "_" All released orders are taken into account — "C" Production orders with status "Completed" are excluded (table /SPDGS/MPAK) — "T" Production orders with status "Technically completed" are excluded. — "X" Both statuses (Completed and TO) are checked for exclusion. The production orders can also be checked using their own customer-specific logic in method /SPDGS/BADI_ORDER_PAIR-FILTER_ORDER.

Field Name	Description
Manual order pair formation	This parameter is used to define how order pair formation is carried out. If the *Manual order pair formation* indicator is set, the user forms the order pairs by manually assigning them. The respective function is displayed, e.g. in the Further Processing entry overview, where the preceding and subsequent orders may be defined. For further information, refer to the section on manual order pair formation further down.
DAO pair formation allowed	Activating this parameter allows order pair formation between disassembly orders and further processing orders.
Production order	Pair formation can be activated or inactivated for the production order. In case of activation, assignment is possible as follows: — Basic start date = basic start date — Scheduled start = scheduled start — Customer-specific For further information, see the *Process Data* configuration guide.
Goods receipt for purchase order	Pair formation can be activated or inactivated for goods receipts for purchase order. In case of activation, assignment is possible as follows: — Delivery date = basic start date — Delivery date = scheduled start — Customer-specific For further information, see the *Process Data* configuration guide.
Goods issue for deliver	Pair formation can be activated or inactivated for goods issues for delivery. In case of activation, assignment is possible as follows: — Man. Staging date = basic start date — Man. Staging date = scheduled start — Customer-specific For further information, see the *Process Data* configuration guide.

9.2.2.1 Terminals

At terminal level, a further parameter may be set.

Field Name	Description
Order pairs: Always select order manually	If there are multiple potentially matching preceding or subsequent production orders (1:n, n:n or n:1 relationship) available for order pair formation, a pop-up window is displayed in which the user must manually select one preceding or subsequent order. This production order is then used to post the PDA operations to. In the case of multiple data entries, this activity is repeated every time.

Field Name	Description
	If, however, this indicator is activated, the production order needs only to be selected once. As a result, the PDA operations are automatically posted to the selected production order, regardless of how often data are entered.

For further details on Customizing, see the *Process Data* configuration guide.

9.2.3 Material Master

9.2.3.1 Automatic Pair Formation

The *Process Data Acquisition* tab of the material master database is the place where you define whether the order to be found is a preceding or subsequent order.

Apart from the periodic general conditions, it is specified in the Process Data (PDA) master data view whether the order to be searched for is a preceding or a subsequent order.

Field Name	Description
Preceding	If, for instance, a material is used in a Further Processing order as input, the system will automatically refer to the output of a matching preceding production order. This means, input entries for this material are posted to the output of the preceding order. *Note* *The activation of this indicator only works if automatic pair formation is set to active in the DGS Customizing. For manual pair formation, this indicator is of no consequence.*
Subsequent	If, for instance, a material is used in a Further Processing order as output, the system will automatically refer to the input of a matching subsequent production order. Output entries for this material are at the same time posted to the input of the subsequent order. *Note* *The activation of this indicator only works if automatic pair formation is set to active in the DGS Customizing. For manual pair formation, this indicator is of no consequence.*

9.2.3.2 Data Acquisition Strategies (PDA Strategies)

The data acquisition strategy (PDA strategy) is used in Further Processing entry. It defines whether an input material (component) or an output material (product, semi-finished good) is captured, calcu-

lated, or only displayed. PDA strategies are based on planned and target quantities that are transferred to the PDA operation. There is a multitude of strategies that may be used according to requirements.

Assignment is carried out on the output material (header material) in the Process Data Master Data view and/or in the customizing settings for the terminal. The assignment on the material has greater priority. If no strategy is maintained at either of the two points, a system default setting ($SYS) is used.

Note
The strategy may be changed in the process if the Strategy fixed *indicator in the plant settings of Process Data entry is not set.*

The following PDA strategies are relevant for order pair formation:

PDA Strategy	Description
IQOW	Input via quote – enter output
IWOQ	Enter input – output via quote
IWOW	Enter input – Enter output

For more detailed information on the topic of PDA strategies please see the "Further Processing Entry" chapter in this document.

9.3 Automatic Order Pair Formation

As stated under "Prerequisites", for the automatic order pair formation function, the system will find matching order pairs based on certain criteria (like basic start date, scheduled start, or customer-specific parameters.

See below for some examples illustrating automatic order pair formation.

Example

Example 1 (Preceding)
The following example uses two further processing orders. Production order 1 has PDA strategy IWOW, production order 2 PDA strategy IQOW. In the *Process Data Acquisition* tab, the *Preceding* indicator must be set for material 4711.

The first order is used to produce ham sausages. In the second order, *Cold cuts deli tray in KG* is the finished product.
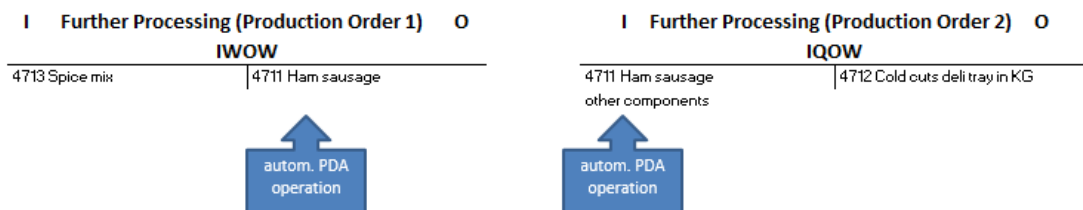
Procedure
The finished product is entered manually on production order 2 which is then closed. Based on PDA strategy IQOW, the planned/target quantities for the components are then calculated. In case of a 1:1 relationship of the orders, the order pair is found by the system at the same time, and material 4711 is posted as output to production order 1 (automatic PDA operations).

In table /SPDGS/MPCT, the calculated target quantities from manual data entries as well as source and target PDA operations are documented for the individual orders.

If the system finds multiple matching preceding production orders, a pop-up window titled *Order Pair* is displayed in which the user must select one preceding production order by double-clicking.

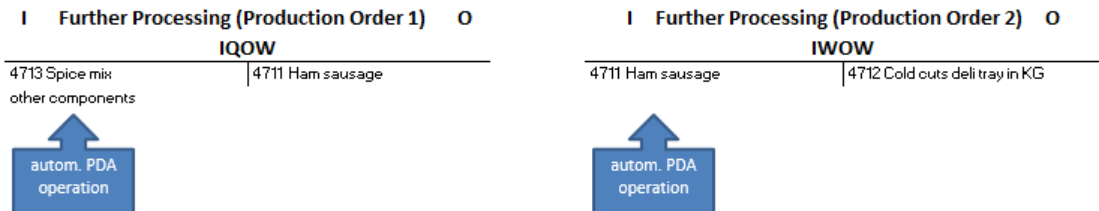If the *Cancel* button is selected, the following error message is displayed:

"When terminating, no target PDA record is created on the production order."

Example 2 (Subsequent)
The following example also uses two further processing orders. Production order 1 has PDA strategy IQOW, production order 2 PDA strategy IWOW. In the *Process Data Acquisition* tab of, the *Subsequent* indicator must be set for material 4711.

The first order is used to produce ham sausages. In the second order, *Cold cuts deli tray in KG* is the finished product.
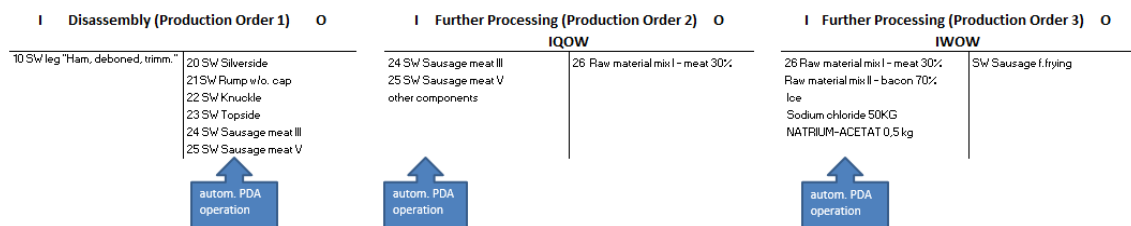
Further Processing (Production Order 1)
I   O
IQOW

4713 Spice mix other components	4711 Ham sausage

autom. PDA operation

Further Processing (Production Order 2)
I   O
IWOW

4711 Ham sausage	4712 Cold cuts deli tray in KG

autom. PDA operation

Procedure

The finished product (material 4711) is entered manually on production order 1. Due to automatic order pair formation, this material is posted to the input of production order 2 with the same quantity. Subsequent order closing will cause the planned/target quantities of production order 1 to be calculated written in table /SPDGS/MPCT. In addition, automated PDA operations are created.

Example 3 (Preceding and Subsequent)

In this example, there are one disassembly and two further processing orders. The disassembly order (production order 1) does not have a PDA strategy. In Disassembly, everything is entered manually. Production order 2 has PDA strategy IQOW, production order 3 strategy IWOW. In the material master database for materials *sausage meat III* and *V* the indicator, *Preceding* is maintained. For material *Raw material mix – meat 30%* indicator *Subsequent* is maintained. In Customizing, the *DAO/FPO all.* indicator should be active, so order pair formation between disassembly and further processing orders is possible.

A pork leg, *Ham, deboned and trimmed,* is cut into six cuts, two of which will be reintroduced into production (Further Processing). The raw material which was produced in Further Processing will be posted to input in the next process step.

Disassembly (Production Order 1)
I   O

10 SW leg "Ham, deboned, trimm."	20 SW Silverside 21 SW Rump w/o. cap 22 SW Knuckle 23 SW Topside 24 SW Sausage meat III 25 SW Sausage meat V

autom. PDA operation

Further Processing (Production Order 2)
I   O
IQOW

24 SW Sausage meat III 25 SW Sausage meat V other components	26 Raw material mix I – meat 30%

autom. PDA operation

Further Processing (Production Order 3)
I   O
IWOW

26 Raw material mix I – meat 30% Raw material mix II – bacon 70% Ice Sodium chloride 50KG NATRIUM–ACETAT 0,5 kg	SW Sausage f.frying

autom. PDA operation

Procedure

The material, *raw material mix I – meat 30%* for production order 2 is entered manually. Automatic order pair formation will cause this material to be posted with the same quantity into in the input of production order 3. If there is no 1:1 relationship, the user, again, will be prompted by a pop-up window to select the desired order (see example 1).

With order closing of production order 2, the planned/target quantities of production order 2 are calculated, written in table /SPDGS/MPCT. In addition, automated PDA operations are created. At the

same time, automatic order pair formation will cause the same quantities for materials *Sausage meat III* and *V* to be written to the output of production order 1.

9.4 Manual Order Pair Formation

Manual order pair formation basically works the same as automatic order pair formation. The only difference is that the order pairs have to be formed by the user.

Activating the *Manual order pair formation* indicator in Customizing will unhide the additional buttons, *Preceding* and *Subsequent*, in the Further Processing Entry task bar. This allows the user to select individual orders and specify the preceding and subsequent orders.

Order pairs may also be defined using the following transaction:

SAP Menu	*Softproviding Core > Production > Execution > Process Data Acquisition > Order Pairs*
Transaction	/SPMEAT/MPPA

Here, the orders (disassembly or further processing orders), the use as input/output as well as the item must be defined. If the item number is left empty, the entry is valid for all items of the order.

Order	I/O	Item no.	Order	Created on	Time	Created by
Order2	Input	0	Order1	06.05.2020	11:42:29	XXXXX
or						
Order1	Output	0	Order2	06.05.2020	11:42:29	XXXXX

Note
Disassembly and further processing orders may be linked with each other. However, it should be noted that for disassembly orders only the output is to be maintained in the table, otherwise order pair formation will not work, since only the output of a disassembly order may be the input of a further processing order.

9.5 Customer-Specific Order Pair Formation

By setting a Customizing indicator at plant level, a customer-specific pair formation may be defined. In Softproviding standard, orders with the same basic start date and/or scheduled date may be used for pair formation as described above.

If these variants provided with SAP Meat Management by msg should not be enough, customer-specific parameters (like, for instance, release date, MRP controller, etc.) may be implemented with BAdI /SPDGS/BADI_ORDER_PAIR.

9.6 PDA Operations

The result of data acquisition, PDA operations are created and stored in table /SPDGS/PDAO. When recording data in Further Processing inbound or outbound, for instance, PDA records with document group D and document category WA or WE with status A (posting still open) are created. Depending on the customizing settings, PDA operations may be created with goods movement status *Blank* (See the *Process Data* configuration guide).

A regularly repeating posting job sets the open PDA operation to status C (completed) and, at the same time, creates an SAP material document as well as subsequent documents in Financials.

For further information on PDA operations, see the *Process Data* configuration guide as well as these chapters in this user documentation:
— "PDA Data Cockpit"
— "Post Goods Movements"
— "Maintain Production Order Status"

9.7 Correction of PDA Operations

Whether a PDA record can be reversed or deleted depends on the PDA status:
— A reversal is only possible if the PDA operation has status C (completed). A reversal document number is documented in the reverted PDA operation.
— PDA data records with status A (open) or D (with error) can be deleted. The deletion indicator is then set in the data records.

Note
In this context (order pairing or quota calculation), the so-called chain reversal must be considered. This is activated or deactivated in Softproviding Core Customizing for each terminal.

If the "Check chain" indicator is set there, it is not possible to manually delete or reverse generated PDA data records. These data records are automatically deleted or reversed if the source PDA data record is deleted or reversed.

If the function is set to inactive, deletions and reversals are also possible manually without a check.

10 Component Replacement

10.1 Overview

In Further Processing, the Component Replacement functionality allows you to replace one or several BOM components intended for production with other components (replacement materials).

For further details, please the respective description in the following documents:
— Softproviding Core user documentation *Process Data*, "Further Processing Entry", section "Component Replacement"
— Softproviding Core configuration guide *Process Data*, "Configuration/Process Data Acquisition", section "Component Replacement
— Softproviding Core configuration guide *Process Data*, "Miscellaneous", section "Component Replacement

11 Control Settings for Period Batch

11.1 Overview

The period batch describes the functionality with which the system, independent of the production order, can always assign the same batch number to an output material within the same period (e.g. within the same day).

To activate this functionality, the *Period batch* indicator in the material master is set. In addition, in the *Period Batch Control* master data table, the material is assigned and the period batch type is defined. No further settings in Customizing are required.

Use

Once activated, the *Period Batch* functionality is available in the following processes:
— Further Processing Entry (outbound)
— Process Order (outbound)
— Disassembly Process Entry (outbound)

11.2 Settings

The Period Batch functionality can be used if, firstly, the indicator for the period batch was set in the material master database and secondly an entry for the material was made in the master data table.

11.2.1   Material Master

In the application menu, the material master can be called as follows:

Procedure

Menu	*Softproviding Meat Application Menu > Production > Master Data > Material > Change*
Transaction	*MM02*

In the initial screen, enter the desired material number and confirm with Enter. In the *Process Data Acquisition* tab, the *Period batch* field is available for selection.

Note
The tab names in the material master database (here the Process Data Acquisition *tab) may be named individually by the customer.*

Goods Movements

Field Name	Description
Period Batch	Indicator specifying that for this material only one batch number is created per period (day, week, month, year, or customer-specific). By default, this indicator is not set.

11.2.2   Master Data Table

The table can be called via the application menu as follows:

Procedure

Menu	*Softproviding Core Application Menu > Logistics > Process Data Acquisition > Processing > Control Settings for Period Batch*
Transaction	/N/SPDGS/TDCH

The following fields are provided for the settings to be made

Field Name	Description
Plant	The plant is an organizational logistical unit that structures the company from the perspective of production, procurement, maintenance, and materials planning. Materials are produced and goods and services are provided in a plant. The plant is a company's production site.
Material	A material is an item that is the subject of a business transaction. In SAP, materials such as raw materials, semi-finished products, operating supplies, and finished products are identified using a unique material number.
Period Batch	The following settings can be made for the period batch: — Day — Week — Month — Year — Customer-specific *Function module /SPDGS/API_PR_DAILY_BATCH which was used up to including release v2.60 was replaced with function module /SPDGS/API_PR_PERIOD_BATCH in release v2.70. Module /SPDGS/API_PR_DAILY_BATCH can still be used but is no longer maintained. It is therefore recommended to use the new module /SPDGS/API_PR_PERIOD_BATCH.* *The posting date of the period batch can be adjusted in function module /SPDGS/API_PR_PERIOD_BATCH.* *The period batches are stored in the Softproviding table /SPDGS/D_BATCH.*

11.3 Executing the Program

If the indicator is set in the material master and there is an entry for the output material in the master data table, the Period Batch functionality is activated and batches are allocated according to the specified batch period.

Batches are allocated automatically when quantities are entered in Disassembly Process outbound (= goods receipt) and Further Processing outbound (= goods receipt).

If the functionality is active, the system will assign the same batch number to the output entered within the same period (e.g. day or month). This is done independent of the production order, meaning the same batch is allocated for multiple production orders (e.g. per day) producing the same material.

This may also be used in Disassembly if the same disassembly material is produced in different processes – and, possibly, in multiple disassembly orders.

Note
Period batches are stored in Softproviding table /SPDGS/D_BATCH with the following information:
— *Client*
— *Plant*
— *Material*
— *Date on which the period batch was created*
— *Period batch*

12   Post Goods Movements

12.1 Overview

The Softproviding Core transaction/SPDGS/GMBT (program /SPDGS/GMOVBTCH) allows you to post to so-called PDA operations. This posting may be carried out as individual or collective posting.

PDA operations are data records that are created in different processes of Process Data Acquisition. "PDA" stands for Process Data Acquisition. These data records are stored in table /SPDGS/PDAO, among others. This posting is used to create goods movements in standard SAP.

Program /SPDGS/GMOVBTCH is designed to process selected data records per batch job, i.e. to collect and post a multitude of similar data records (collective posting).

It is necessary to create *variants* for this program. These will be needed when the batch jobs are defined.

The collective posting per batch job provides the guarantee that data acquisition and stock update be carried out at different points in time.

PDA operations are created in the following processes:
— Sales orders
— Purchase orders
— Further Processing Entry
— Disassembly Process Entry
— Transfer orders
— Delivery
— Picking
— Repetitive Manufacturing
— Physical Inventory

Data entries for these processes are possible in SAP GUI as well as via the various DGAs provided by Softproviding. Depending on the process, various fields in the PDA data record are filled automatically.

For collective postings data records that share plant, storage location, material and batch are collected together. This procedure was developed with the aim of not having to create a material document for each PDA data record (with all the respective follow-on documents in financial and cost accounting) but to cumulate similar data records.

Note
Although it is possible to execute the program manually – as it is described in this section –, it is not standard procedure and is typically not done by customers.

12.2 Collective Run: Post Goods Movements

SAP Menu	*Softproviding Core > Logistics > Process Data Acquisition > Processing > Post Goods Movements*
Transaction	/SPDGS/GMBT

Procedure

Call the activity *Post Goods Movements* via one of the above-mentioned options. The following fields are displayed:

Field Name	Description
Plant	The plant is an organizational unit that structures the company from the perspective of production, procurement, maintenance, and materials planning. Materials are produced and goods and services are provided in a plant.
Goods movement status	In many cases, a PDA operation triggers a goods movement, e.g. a goods receipt. This field contains information on the status of the PDA operation for the goods movement. *Note* *This program only processes PDA records with status A (open) and D (faulty). The input help (F4) will show all PDA data record statuses, but they are not relevant for this program.*
Storage Location	The storage location is an organizational unit that makes it possible to differentiate between stocks within the same plant.

Field Name	Description
PDA operation	Number that, together with the plant, uniquely identifies a PDA operation. A PDA operation (number) is automatically created for each process data acquisition.
Document group	In SAP, business transactions are represented by documents. This field combines documents of the same group, which have to be treated equally from the perspective of Process Data Acquisition. These are the document groups: Blank = without reference A = Sales order B = Purchase order C = Disassembly order D = Further processing order E = Transportation F = Delivery G = Picking order K = Customer L = Inspection lot I = Inventory R= Repetitive manufacturing
Document category	The document category is determined by the entry. **Example** If a data entry is carried out in further processing outbound (goods receipt), a PDA operation with document category GR (goods receipt) is created.
Stock type	Indicator, specifying to which stock the material is posted at goods receipt (or from which stock at goods issue).
Special stock	Indicator specifying which type of special stock it is. If for a material certain stocks (e.g. consignment stock) are to be kept apart from the regular warehouse stock, this stock type features this special stock indicator.
Terminal ID	In Windows, the terminal ID corresponds to the computer name and uniquely identifies the computer in local networks.
Created on	Date on which the data record was created.
Physical inventory document	The inventory document is a central element of inventory processing. It serves to: — Plan and carry out physical inventory — Enter count data — Clear differences As soon as all items of the inventory document are counted and cleared the document may be archived.

Field Name	Description
PDA: Collective posting	If this indicator is set, PDA data records are cumulated with report /SPDGS/GMOVBTCH and posted in total. This collective posting is typically not intended for individual postings. However, single postings are still possible. *Note* *With this individual posting, a material document is created for each PDA record. Please check whether individual postings should be made in your company.* *The following conditions must be fulfilled if this individual posting is to be carried out:* — *Indicator PDA: Collective posting must not be set.* — *Method SPLIT_CRITERIA in BADI in /SPDGS/BADI_GMOV must be implemented.* *Example for an implementation coding:* check iv_collect eq space. xv_spcri = is_gmit-pdaox.
Number of PDAOs for plant lock	The Softproviding Core program /SPDGS/GMOVBTCH (post goods movements) is designed to process selected data records by batch job, i.e. to combine and post a large number of similar data records (collective posting). For this reason, it necessary to create variants for the program that will be needed for the definition of the batch jobs. Within the program, a distinction is made between direct locks at PDA data record level and plant locks. The plant lock applies if the batch jobs mentioned select and update more than 5,000 PDA data records. The specified value of 5,000 records is preset in this field and can be overridden by entering a lower or higher value. Without an entry in this field, the plant lock is activated within the program for 5,000 data records or more. **Recommendation** The default value is 5,000. It is recommended to keep this setting.
Number of selected PDAOs	By entering a value in this field, you can limit the number of PDA data records to be updated. If, due to a selection, more PDA data records than the value entered here are actually waiting to be updated, the number of data records to be updated is limited to the value entered. If no value is entered, there is no restriction. **Recommendation** The default value is 4,999. It is recommended to keep this setting.

Make your entries in the respective fields.

12.2.1   Manual Program Execution

Carry your selection out by selecting *Execute* (F8).

The message, *"Predecessors with document group R are excluded from selection".* Confirm the message by hitting Enter.

The value R (repetitive manufacturing) will then be excluded from selection for the *Document group* field. The reason for this is that PDA data records from repetitive manufacturing are generally not posted.

Result

If no data records were found for manual program execution, the following message is displayed: *"No data for selection".* Confirm this message with Enter.

If PDA data records were successfully updated, a corresponding message is displayed (e.g. Count PDAOs "number of data records"). If due to errors certain data records could not be posted, respective messages will be displayed on the screen.

12.2.2   Program Execution via Batch Job

As mentioned in the "Overview" chapter, this program was designed to be executed via batch job. This makes it necessary to create variants for this program. These will be needed in order to define the batch jobs.

Typically, customers will create multiple variants, which will be processed with their own job definition.

These variants mainly differ in
—   Plant
—   Goods movement status
—   Document group
—   Document category

Examples (Plant/Status/Document Group/Document Categories)
—   Variant: 0001/A/C/WE and WA
—   Variant: 0001/A/D/WE and WA

As mentioned above, this program only processes PDA data records with status A (open) and status D (faulty). It does not process data records from document group R (repetitive manufacturing).

The following note on variants describes how to create a variant for a program.

The definition and execution of batch jobs is standard SAP activity. For further information, refer to the respective standard SAP documentation.

Note – Variant
The variant function offers you the option of saving data entered into programs as variants. This is particularly useful for programs that are frequently started up with identical restrictions. This means that you do not need to enter the same values every time you start the program. When you select the variant, the fields that are already populated with data are used when the program starts.

Any number of variants can be created for each program. After a program starts, input fields are displayed. When you have entered the parameters you want, you can save them by clicking on the Save as variant *button. After adding a variant name and a description and entering data in other fields or highlighting them, you can save your entries.*

By choosing the Goto > Variant *menu option, you can display, modify, and delete existing variants.*

Click on the User Documentation *button or access the SAP online help to obtain more information about using variants.*

Note – Job management
The job overview is used to manage jobs and is the central area for running a variety of job monitoring and management tasks, such as searching, scheduling, repeating, cancelling, and deleting jobs, checking the job status, and displaying job reports.

The job overview can be accessed using transaction SM37.

See the relevant SAP standard system documentation for more information about the extensive job overview options.

Result

The result of the collective posting is displayed in the job overview (spool list).

12.3 Batch Jobs / Preventing Errors

If a batch job for program /SPDGS/GMOVBTCH is scheduled, it is possible that this batch job is executed again, although the batch that was started earlier is still running.

Such situations may occur if the repetition frequency of the batch job is too high and/or a great number of batch jobs needs to be processed. As a consequence, the data records are processed repeatedly which results in the creation of duplicate material documents and duplicate follow-on documents in Accounting.

Such an error situation is prevented by the coordinated scheduling of batch jobs for programs /SPDGS/GMOVBTCH and /SPDGS/R_JOB_CYCLE_START.

The procedure for scheduling these programs is explained in the configuration guide *Process Data*.

13 Inventory Management

13.1 Double Inventory Management

13.1.1 Overview

This section gives an overview of the use of the two Softproviding table described below as well as of the activities leading to entries or changes in these tables:
—   /SPDGS/PDAS (PDA Operations for Stock Determination)
—   /SPDGS/PDAT (PDA Stock Update)

Tables /SPDGS/PDAS and /SPDGS/PDAT, hereinafter called PDAS and PDAT, were created to realize inventory management with double units of measure, which was not possible in standard SAP without making use of SAP CWM (Catch Weight Management).

If, in addition to the base unit of measure, one or more alternative units of measure are defined and used for materials, this is called *double inventory management*. With double inventory management, the units of measure quantities (piece) and weights (e.g. kilogram) are independent of each other.

Example
One bovine animal (= 1 piece) may weigh 300 kg, another bovine animal (= 1 piece) may weigh 310 kg.

UoM Type	Unit
Base unit of measure	Kilogram
Alternative (= double) unit of measure	Piece
Valuation unit of measure (CWM only)	Kilogram

Process data acquisition with Softproviding data entry screens in SAP GUI or on a DGA (Device Gateway Applet; these are touchscreen applications) allows you to capture quantities (e.g. piece) as well as weights for *defined alternative units of measure*.

Note
In standard SAP, double inventory management is only possible if CWM is used. For closer information on this, see the "CWM (Catch Weight Management)" chapter further down in this document.

13.1.2 Tables PDAS and PDAT

The PDAS and PDAT tables are closely related with and in dependency to the process data acquisition table /SPDGS/PDAO (PDA operation). In Softproviding Meat and Core applications like data entries in Disassembly and Further Processing inbound and outbound or GR for purchase order, so-called PDA records are created. These are stored centrally in table /SPDGS/PDAO.

These process data may be updated for actual inventory management of the double unit of measure to tables PDAS and PDAT. This double inventory management and the available data evaluations concerning these tables provide the guarantee for correct inventories

Note – valuation unit of measure
If an alternative unit of measure instead of the base unit of measure is to be used for valuation in standard SAP, SAP CWM must be activated.

If a material is not marked as a CWM material. The base unit of measure is automatically used as valuation unit of measure.

13.1.3 Updating PDAS and PDAT

Prerequisites

The prerequisites for updating are described in the *Process Data* configuration guide. Once these settings have been made, data entries in dependency of the goods movement status of the created PDA record will lead to entries in tables PDAS and PDAT. These dependencies are also described in this document.

Data are only updated for the data entries mentioned above if a batch was included with the material. For data entries without batch, no data are updated to tables PDAS and PDAT.

13.1.3.1 Table Fields and Contents

Table /SPDGS/PDAS
The following fields are updated to table /SPDGS/PDAS:
— Client
— Plant
— Storage location
— Material
— Batch
— PDA operation

Table /SPDGS/PDAT
The following fields are updated to table /SPDGS/PDAT:
— Client
— Plant
— Storage location
— Material
— Batch
— Unit of measure
— Quantity
— YG structure (this field is no longer relevant)
— Yield group (this field is no longer relevant)
— Stock type (this field is no longer relevant)

13.1.4　Required Settings

The conditions that must be fulfilled so that data may be updated to tables PDAS and PDAT are explained below.

These are settings concerning the units of measure in the material master as well as the Customizing in Softproviding Core where the updating of data to tables PDAS and PDAT is generally allowed.

13.1.4.1　Material Master

In order to enable the entry of double units of measure function, the following settings need to be made in the material master for the appropriate materials:

1.　Apart from the base unit of measure, the desired double unit of measure needs to be defined as alternative unit of measure. These settings are made in the material master under *Additional data*. There, you enter the alternative unit of measure as well as the factor for the conversion into the base unit of measure.

    Example: Material 2.001.01 (S-HALS O/B)
    —　　Base unit of measure = KG (kilogram)
    —　　Alternative unit of measure = PC (pieces)
    —　　Other alternative unit of measure = CR (crate)

    1 piece of this material weighs 2.00 kilograms, 1 crate is 14 kilograms.

2.　For entries in Disassembly and Further Processing, the double unit of measure may be pre-assigned in the Softproviding Meat tabs in material master. The units of measure stored in the tabs below will be used per default for data entries in the SAP GUI or on the DGA:
    —　　Material master tab *Disassembly*　　　　　　Field: *UoM (double)*
    —　　Material master tab *Process Data Entry*　　　Field: *Double UoM*

Note
The material master tabs may be named individually in Customizing.

Procedure

1.　Start the *Change material master* activity using one of the options mentioned below.

Menu	*Logistics > Materials Management > Material Master >Material > Change > Immediately*
Transaction	MM02

2.　Enter the desired material number and confirm with Enter.

3.　Select at least the following views:
    —　　Meat Disassembly

— Core Process Data Acquisition

4. Select the desired plant and confirm with Enter

5. Select the *Units of Measure* button and make the entries for the alternative unit of measure.

6. Then, select the main data and make the entries for the double unit of measure in the fields mentioned above.

13.1.4.2 Customizing

In order to update quantities according to double inventory management to tables PDAS and PDAT, the following settings must be made in Softproviding Core Customizing:
— Activating inventory management for the double unit of measure and updating to tables PDAS and PDAT.
— Updating of stock update in PDAT (synchronous/asynchronous)

Menu	*Softproviding Core > Logistics > Process Data Acquisition > Organization > Plants/Storage Locations*
Transaction	*SPRO*

For a detailed description of how to make this setting, please refer to the *Process Data* configuration guide.

13.1.5   Updating PDAS and PDAT

13.1.5.1 Overview – PDA Data Records Statuses

If updating is allowed in Customizing, newly created PDA data records will lead to entries in PDAS and PDAT if the goods movement status of these created PDA data records is A (open)

Data records with status *Blank*, *E* or *F* will not automatically lead to entries in PDAS and PDAT.

For an overview, see the following table:

PDA Status	Description	Entries in PDAS/PDAT are created or modified
Blank	*Blank: Statistical PDA operation* No goods movement possible.	No
A	*Open*: PDA operation has not yet been updated.	Yes
B	*Canceled:* PDA operation was canceled. Status B is – after cancelation – the follow-on status of status C.	Yes

C	*Completed*: PDA operation is completed.	No
D	*With error*: PDA operation is faulty. Status D is, for instance in case of an update error, follow-on status of status A.	No
E	*For post-processing*: This PDA operation was saved in an inconsistent state and needs to be post-processed manually. Creating a goods movement in this state is not possible.	No
F	*Waiting for release*: This status is set if GIs for a delivery or data entries within the framework of inventory are performed. Once the delivery item or inventory management is completed all entries are released, i.e. status F is set to status A.	No

13.1.5.2 Updating PDAT Stocks

In order to update the stock in table PDAT, program /SPDGS/R_PDAT_UPDATE needs to be scheduled as a batch job if the update type is set to *asynchronous* in the customizing settings.

Procedure

Call the *PDAT Update (Decoupled)* activity using one of the following options:

Menu	*Softproviding Core > Logistics > Process Data Acquisition > Organization > Processing > PDAT Update (Decoupled)*
Transaction	/SPDGS/PDAT_UPDATE

A selection screen with the following fields is displayed:

Field Name	Description
SELECT block size	Number of data records in table /SPDGS/PDAT_DELT to be processed in a LUW (logical unit of work). Default value = 1000.
Background processing	Processing is carried out in the background via batch job (indicator is set) or online (indicator is not set).
Waiting time	When the DGS stocks are updated in table /SPDGS/PDAT, the determined stock changes (deltas) are first stored in the temporary table /SPDGS/PDAT_DELT. With the regularly running program (/SPDGS/R_PDAT_UPDATE), the deltas are read from the temporary table and posted to table /SPDGS/PDAT. This parameter defines how long the program should wait after posting or after a read attempt for table /SPDGS/PDAT_DELT until the next read attempt is made.

Field Name	Description
	Note *The value should not be too small, since a database access takes place each time this time has elapsed.*
End loop at	By entering a time, the update of the contents of table /SPDGS/PDAT_DELT may be halted. This means the update is stopped when the specified time is reached even if there are still data for updating remaining. **Use** This function may for instance be used to prevent the collision with other performance-intensive batch jobs. Entering a time is optional. An entry 00:00:00 means that the time will not be considered and the whole content of table /SPDGS/PDAT_DELT will be processed and deleted from the table.

Note
For detailed information on the use of batch jobs, please refer to the respective standard SAP documentation.

Report /SPDGS/R_PDAT_UPDATE may be started manually. For this, the *Background processing* field must be deselected.

The settings for the update (synchronous/asynchronous) have no influence on table PDAT. Data entries are automatically written to this PDAS table.

Follow-on activities like the update of PDA operations started via batch job that create the material documents and further follow-on documents (FI/CO) have no influence on tables PDAS and PDAT.

13.1.5.3 Deleting/Canceling Data Records

PDA data records that are deleted or canceled will lead to amendments to existing table entries in tables PDAS and PDAT.

If a PDA data record is deleted, the respective entry is removed from table PDAS. The entry in PDAT remains intact, and the total batch quantity in PDAT is adjusted by the deleted batch accordingly.

If a PDA data record is canceled, a follow-on cancelation data record is created, and the new PDA data record is added to table PDAS. In table PDAT, the total batch quantity is adjusted accordingly.

Note
PDA data records always have a status for the goods movement. Data records with status A (open) and D (with errors) may be deleted, and data records with status C (completed) may be canceled.

13.1.5.4 Rebuild Stock Update

Tables PDAS and PDAT may be rebuilt with program /SPDGS/PDATADJU *(Rebuild Stock Update (PDAT/PDAS))*.

This means that PDA operations selected according to the entered criteria are re-read into tables PDAS and PDAT. This program provides guarantee that the contents of tables PDAS and PDAT are always as up to date as possible.

Procedure

1. Call the *Rebuild Stock Update (PDAT/PDAS)* activity via one of the options listed below.

Menu	*Softproviding Core > Logistics > Process Data Acquisition > Processing > Rebuild Stock Update (PDAT/PDAS)*
Transaction	/SPDGS/PDATADJU

A selection screen with the following fields is displayed:

Field Name	Description
Plant	The plant is an organizational unit that structures the company from the perspective of production, procurement, maintenance, and materials planning. Materials are produced and goods and services are provided in a plant. The plant serves as a production site for a company.
Storage location	The storage location is an organizational unit that allows a distinction to be made between the different stocks within a plant.
Material	A material is an item that is the subject of a business transaction. In SAP, materials such as raw materials, semi-finished products, operating supplies, and finished products are identified using a unique material number.
Batch	A batch is a material subset that is handled separately from other subsets of the same material. Each batch is not only identified by its material number but also by its specific batch number.
PDAO created on	Date on which the PDA operation was created.
Test run without update	If this indicator is set. A test run is carried out. No data in the database will be changed or deleted.

2. Enter the desired selection values directly into the entry fields or via the *Multiple selection* buttons

3. Start the program by selecting the *Execute* button (F8).

Note – Multiple Selection
In selection fields, an individual value and, where appropriate, a range can be entered in the pop-up selection window. Using the Multiple selection *button, you can:*

— *restrict the entries via selection options (for example, larger or smaller than an individual value and inside or outside a range)*
— *select several individual values or ranges which are to be used when creating a report*
— *exclude several individual values or ranges which are not to be used when creating a report*

For more information about multiple selections, see the SAP standard system documentation.

Result

For test run as well as for update run, a log concerning processing will be output.

Recommendation

This program should be set to run regularly (e.g. once daily as a night batch job). Take note that this program should be scheduled after the jobs for program /SPDGS/GMOVBTCH.

13.1.6   Evaluations

Evaluation for tables PDAS and PDAT may be carried out with Softproviding Core application DPS (Distribution Process System).

If SAP CWM is used, these stock evaluations may also be carried out in standard SAP. Tables PDAS and PDAT may also be updated if CWM is used allowing you to continue using Distribution Process System for your evaluations.

Note
Quantities in table PDAT may be positive or negative. They are represented as a positive figure with a negative indicator.

PDA data records for entries for GI are written to this table with a negative sign, entries for GR with a positive sign.

Goods receipts and goods issues for the same batch are netted in PDAT.

The tables PDAS and PDAT are updated immediately after the PDA records have been entered (prerequisite: synchronous updating is set – see the "Customizing" section above).

13.2 Clear Batch Stock

13.2.1 Overview

Under the Softproviding Core user menu item *Process Data Acquisition,* you will find the option *Clear Batch Stock*. This program allows you to clear batches (i.e. partial quantities of a material) which were captured and marked as "to be cleared" at the time of goods issue.

If during production a physical stock of zero is detected for a material, this function allows you to set the material stock in the SAP system to zero too, in order to reflect the physical stock.

If this function is activated, an additional *Completed* button is added to the entry screens in the applications (e.g. further processing entry input (=goods issue)) which allows you to select the desired batch.

By confirming the batch with this button, it is written to table /SPDGS/GMBA and thus flagged for clearing (consumption posting or disposal).

The updates will then be carried out with program /SPDGS/SCRPBTCH.

13.2.2 Customizing

The *Clear Batch Stock* function is activated in Softproviding Core Customizing.

This customizing item is called in the SAP Reference IMG under *Softproviding Core > Logistics > Process Data Acquisition > Control Settings > Entry Operation*. The function is activated by setting the *'Clear remaining batch' function active* indicator.

This setting is optional and is made in combination of
— Plant
— Document group (e.g. further processing, disassembly)
— Document category (goods issue)
— Terminal ID
— Username

This function does not make sense in the context with good receipts and is therefore only available for goods issue processes.

For further information on these settings, do refer to the Softproviding Core *Process Data* Configuration Guide.

13.2.3 Clear Remaining Batch Stock

In order to clear remaining batch stocks, the following two steps have to be carried out:
— Select the *Completed* button in the entry screen of a goods issue process
— Start program /SPDGS/SCRPBTCH (Updates are being performed)

Step 1
If this functionality is set to active in the customizing settings, the *Completed* button is shown in the entry screen of goods issues.

By selecting this button, the batch is written to table /SPDGS/GMBA and thus marked for clearing (consumption posting or disposal). In the application, the following message is displayed (example):

"Batch XXXXXX1245 (Plant 0001/StorLoc. 0001) flagged for clearing."

If a batch flagged for clearing is selected again (*Completed* button) the following message is displayed:

"Batch XXXXXX1245 (Plant 0001/StorLoc. 0020) is already flagged for clearing."

This function is only available for goods issue processes since it does not make sense in the context of good receipts.

Note
With the Clear Batch Stock *function, the following fields in table /SPDGS/GMBA are filled:*
— *Client*
— *Plant*
— *Storage location*
— *Material*
— *Batch*
— *PDA operation*

Step 2
Program /SPDGS/SCRPBTCH (collective run: clear remaining batch stock) allows you to clear flagged remaining batch stocks.

Prerequisites

In order to be able to clear those flagged batches with this program, the following conditions must be fulfilled:
— All PDA operations with one must be completed, i.e. material documents were created and the goods movement status for these PDA data records was changed to C (completed.

Note
PDA operations that were deleted do also fulfil these prerequisites.

Procedure

Menu	*Softproviding Core > Logistics > Process Data Acquisition > Processing > Clear Batch Stock*
Transaction	/SPDGS/GMSC

1. In the application, call the *Clear Batch Stock* activity.

   A selection screen with the following fields is displayed:

Field Name	Description
Plant	The plant is an organizational logistical unit that the company structures from the perspective of production, procurement, maintenance, and materials planning. Materials are produced and goods and services are provided in a plant. The plant serves as a production site for a company.
Storage location	The storage location is an organizational unit that allows a distinction to be made between the different stocks within a plant.
Material	A material is an item that is the subject of a business transaction. In SAP, materials such as raw materials, semi-finished products, operating supplies, and finished products are identified using a unique material number.
Batch	A batch is a material subset that is handled separately from other subsets of the same material. Each batch is not only identified by its material number but also by its specific batch number.
Material type	A material type is a grouping of materials with the same basic properties, e.g. raw materials, semi-finished products, or finished products.
Warehouse group	The warehouse group is a key used to group multiple materials or services with the same properties.
MRP Controller	The person who is responsible for a group of materials in requirements planning for a plant.
For positive stocks	For clearing, movement type 551 (= GI scrapping) is preassigned. Via input help, another movement type may be chosen.
For negative stocks	For posting, movement type 501 (= goods receipt without purchase order) is preassigned. Via input help, another movement type may be chosen.

2. Directly enter the desired selection values into the entry fields or via the *Multiple selection* buttons.

3. Start the program by selecting the *Execute* button (F8).

Note
In selection fields, an individual value and, where appropriate, a range can be entered in the report selection window. Using the Multiple selection *button, you can:*

— *restrict the entries via selection options (for example, larger or smaller than an individual value and inside or outside a range)*
— *select several individual values or ranges which are to be used when creating a report*
— *exclude several individual values or ranges which are not to be used when creating a report*

For more information about multiple selections, see the SAP standard system documentation.

Result

The batch stocks flagged for clearing in table /SPDGS/GMBA are displayed in an overview.

Apart from the se batch stocks, information on plant, storage location, material *and* batch are displayed. This stock is the unrestricted-use stock that may be cleared.

Batches that, for instance, are in quality inspection stock or in blocked stock are not selected with this program and are not cleared.

13.2.3.1 Posting

In order to post, mark the desired rows and select the *Post* button. When you clear the batch stock, the following postings will be made:
— Goods issue (scrapping) with movement type 551 (if the stock was positive)
— Goods receipt (consumption posting) with movement type 501 (if the posting was negative)

This resets batch stock in the SAP system to zero.

Note
Material documents that were created may be searched for and displayed with transaction MB51 (material documents list).

After the batch stock has been cleared, the respective entries are removed from the following tables:
— /SPDGS/GMBA (Reservation for Consumption Posting in Night Batch)
— /SPDGS/PDAS (PDA Operations for Stock Determination)
— /SPDGS/PDAT (PDA Stock Update)

Note
Program/SPDGS/SCRPBTCH should be scheduled as a batch job. For further information on scheduling and using batch jobs please, refer to the respective standard SAP documentation.

For more information on tables /SPDGS/PDAS and /SPDGS/PDAT, please refer to section "Double Inventory Management" further up in this chapter.

13.2.3.2 Error Handling

If the conditions mentioned above are not fulfilled, i.e. there are still PDA records that have not been updated yet, the following message is displayed after the program is started:

"For batch XXXXXXXXXX first all PDAO records must be completed."

In this case, all PDA records must be processed, meaning, they must be updated or deleted. Start the program again once the errors are corrected. If there are no further errors the *Messages* button is no longer displayed.

Once the update is successful, the batch stock is reset to zero and the entries are removed from this list.

13.3 Inventory Adjustment

13.3.1 Overview

The Softproviding Core program *Clear or Adjust Warehouse Stocks* allows you to adjust stocks in the SAP system so they match the actual physical stocks in the warehouse. Warehouse stocks may be cleared entirely. In the meat processing industry, for example, this report is used to account for quantity differences that arise during storage (e.g. drip loss).

HUs (handling units) and materials managed with WM are not processed by this program.

This program may be executed in dialog or as a background batch job.

13.3.2 Executing the Program

Prerequisites

Please see the respective section in the *Process Data* configuration guide.

Procedure

SAP Menu	*Softproviding Core > Logistics > Process Data Acquisition > Processing > Warehouse Stock Cleanup*
Transaction	/SPDGS/STOCK_CORR

1. Call the *Warehouse Stock Cleanup* activity using one of the options mentioned above.

   The following fields are displayed:

Selection Criteria **Tab**

Field Name	Description
Material	Alphanumeric key uniquely identifying the material.
Batch	Uniquely assigns a material that was produced in batches, lots, or production lots to a specific batch.
Plant	The plant is an organizational logistical unit that structures the company from the perspective of production, procurement, maintenance, and materials planning. Materials are produced and goods and services are provided in a plant.
Storage location	The storage location is an organizational unit that allows a distinction to be made between the different stocks within a plant.
Special stock	Indicator specifying which type of special stock it is.

Field Name	Description
	If for a material certain stocks (e.g. consignment stock) are to be kept apart from the regular warehouse stock, this stock type features this special stock indicator.
Stock type	Indicator, specifying to which stock the material is posted at goods receipt (or from which stock at goods issue).
Customer	Alphanumeric key uniquely identifying the customer within the SAP system.
Vendor	Alphanumeric key uniquely identifying the vendor within the SAP system.
Old material number	Number under which you have so far managed the material, for instance in another system or another file system.
EAN/UPC	EAN (European Article Number) A standardized unit that uniquely identifies a material relating to a unit of measure or type of packaging. The International Article Number (EAN) is assigned by the manufacturer of the material. In this case, the EAN identifies the manufacturer uniquely. A company can assign EANs using "in-store" numbering techniques known only to the company. The equivalent of the EAN in America is the Universal Product Code (UPC).
Material description	Text with a maximum of 40 characters describing the material. The material description is the name of the material.
Material type	Key assigning the material to a group of materials like raw materials, operational supplies, or trading goods. The material type defines the properties of the material and has important controlling functions.
Material group	Key that is used to collect multiple materials and services with the same properties and assign them to a certain material group.
DF at client level	If this indicator is set, the archiving and delete program checks whether the material may be deleted at client level. If yes, the program deletes the data on this and all subordinate levels.
Base unit of measure	Unit of measure in which stocks of the material are managed. The system converts all quantities you enter in other units of measure (alternative units of measure) into the base unit of measure.
Alternative unit of measure	Unit of measure in which quantities can be entered alternatively to the base unit of measure/stockkeeping unit.
Purchasing group	Key for a buyer or a group of buyers who is/are responsible for certain purchasing activities.
MRP group	The MRP group contains all materials from the point of view of MRP for assigning special control parameters for the total planning run. The control parameters contain, for example, the strategy group, the consumption mode, and the planning horizon.
MRP controller	Indicates the number of the MRP controller or group of MRP controllers responsible for the requirement planning for the material.

Field Name	Description
Production controller	Group responsible for the production control of a material.
Inspection lot	Number uniquely identifying the inspection lot.
Profit center	Key that, together with the controlling area, uniquely identifies a profit center.
Sales document	Number that uniquely identifies the sales, shipping, or billing document.
Item (SD)	Number that uniquely identifies the item in the sales, shipping, or billing document.
Warehouse stock	The warehouse stock can be used as a further selection criterion (single values or intervals). The result list is built up for all selected materials according to this restriction.
No simulation	This indicator is set by default when the program is started. **Indicator is set** If the program is started in the *No simulation* mode, the status determination must be executed explicitly after the results determination. For this purpose, the result lines are marked and the button *Simulate* is selected. **Indicator is not set** If the indicator is not set when the program is started, the status is determined and output for each results row (icon: red/green). If the status of a data line is green, a stock correction can be made. If the status is red, information or error messages are present that prevent a stock correction.

List Display Tab

Field Name	Description
Show negative stock	Shows materials with a negative stock.
Show zero stock	Shows materials with zero stock.
Layout	The layout controls the formatting of the list. The following information can be saved in a layout: — Column structure of the list — Sort criteria Filter conditions
Maximum no. of hits	When you access the database, the number of lines specified here is the maximum to be read. This can significantly reduce system response time if the selection is not specific enough or contains errors.

13.3.2.1 Manual Program Execution

Procedure

Once you have entered the selection criteria, start the by program via the *Execute* button (F8). Depending on the selections you made, the result (list of materials) is displayed in the form of an ALV grid.

Note
The lists layout may be adjusted by the user. Select the Select layout *and then the* Save layout *button to save the new order of the columns.*

Note
For further information on the use of the ALV grid, please refer to the respective standard SAP documentation.

Below, only the *Status* column of the result list is displayed. All other fields are known and need not be elaborated upon:

Field Name	Description

Status	A data record can assume one of two different statuses:
	— **Red**
	  The data record cannot be processed.
	— **Green**
	  The data record can be processed.
	
	If the report is started in the *No simulation* mode, no status is determined for the data rows yet. This can be achieved after marking the result rows and selecting the *Simulate* button.
	
	By double-clicking on a status, the error messages for the data line can be called up for the *Red* status.
	
	Example
	"There are open PDA data records for the material".

Functions for the Results list
Above the list with the results, the following functions are available:
— **Save**
  Data rows with status green can be marked and subsequently posted. A material document is created.
  A popup with information on material, batch, plant, storage location and message text (material document and material document year) are displayed.
— **Reverse**
  The posted material document may be reversed. After marking the desired record, the reversal can be made. This button is then displayed after of a data record was posted.
  A popup with information on material, batch, plant, storage location and message text (material document and material document year) are displayed.

— **Simulate**
 A check as to whether the line may be posted is carried out. For this. The rows with the results must be marked
— **Output log**
 Displays all material documents in a popup with the posted fields.
— **Select all/Deselect all**
 All data records are selected or deselected
— **Refresh**
 Rereads the data from the database.
— **Additional data**
 It is possible to edit additional data in the results list if lines with the same stock type have been selected. This additional data (e.g. reason for movement, cost center) is transferred to the material document and accounting document after posting.

Information on the *Additional data* fields

Field Name	Description
Document data	The document data specifies the date of issue of the original document.
Posting date	Date under which the document is entered in Accounting or Cost Accounting.
Reason for the movement	Assignment of a key with the reason of the movement (e.g. shrinkage, goods spoiled).
Text	Explanatory text on the document item.
Recipient	Specifies the recipient the material or service is intended for.
Unloading point	Specifies the location where the material must be unloaded (e.g. Bay 1).
Cost center	Key uniquely identifying a cost center.
Plant	The receiving or issuing plant.
Receiving batch	Indicates the receiving or issuing batch.
Receiving storage location	Indicates the receiving or issuing storage location.

13.3.2.2 Program Execution via Batch Job

This program may be executed in the background. The execution takes place according to the defined job with its steps (incl. variant) and start conditions. If processing is successful, the batch stock is cleared and a material document is created. Material documents can be canceled with transaction MIGO.

14 Maintain Production Orders Status

14.1 Overview

The Softproviding Meat application *Disassembly Entry* uses disassembly orders to enter input and output materials.

The Softproviding Core application *Further Processing Entry* uses standard SAP production orders (further processing orders) to enter input and output materials.

After the initial entry of quantities for the order, an internal status is set for both disassembly (disassembly orders Softproviding Meat) and production orders (production orders in Softproviding Core). This is a Softproviding status that, together with the order number, is stored in Softproviding table /SPDGS/MPAK.

Status changes resulting from data entries or other activities (e.g. putting on hold or partially confirming orders) to these orders will lead to a status adjustment in table /SPDGS/MPAK. The purpose of this internal order status is to document order progress and specially to exclude orders with completed data entries from selection and further data entry.

Once data entry is completed, the order is closed and is no longer available for data entry. However, operational conditions may make it necessary to change the order status again in order to carry out further data entries.

These adjustment options are described for disassembly orders as well as for production orders in this document

Transaction /SPDGS/AFKOCOMP allows you to process multiple orders. Also, status C (completed is set automatically and cannot be chosen by the user. Transaction /SPDGS/AFKORECO is used to change the statuses of individual orders. The status may be selected freely. Default status is empty (open).

Note
For further information on the entry of quantities and orders as well as on status administration see the sections "Disassembly Entry" and Further Processing Entry".

14.2 Transaction /SPDGS/AFKOCOMP

Procedure

1. Call activity *Status "PDA Completed" > set* via one of the following options. This transaction allows you to use mass processing.

SAP Menu	*Softproviding Core > Logistics > Process Data Acquisition > Orders > Production Orders > Status "PDA Completed" > Set*
Transaction	/SPDGS/AFKOCOMP

The following fields are displayed:

Field Name	Description
Plant	The plant is an organizational unit that structures the company from the perspective of production, procurement, maintenance, and materials planning. Materials are produced and goods and services are provided in a plant.
Order	Number, uniquely identifying the production order within the client.
Status	These are possible order statuses (internal system status or user status) which may be selected via the input help. **Example** — FREI = Released — TRÜC = Partially confirmed
Basic start date	Basic start date for the order
Basic finish date	Basic end date for the order
Scheduled start	Scheduled start date for the order
Scheduled finish	Scheduled finishing date for the order

2. Make the desired entries the respective fields

3. Execute the transaction by selecting the *Execute* button or the F8 key.

4. If you entered an order number which does exist in table /SPDGS/MPAK and the other selection parameters return a selection result the following information message is displayed: *"n orders set to completed"*.

5. If you entered an order number that does exist in table /SPDGS/MPAK, or selection parameters that do not lead to a selection result, the following information message is displayed: "No data for chosen selection".

Note
Please note that this transaction does not perform any confirmation or changes to the PDA strategy. It does not make sense to plan this transaction as a batch job.

14.3 Transaction /SPDGS/AFKORECO

Procedure

1. Call activity *Status "PDA Completed" > Cancel* via one of the following options. This transaction allows you to edit orders individually.

SAP Menu	*Softproviding Core > Logistics > Process Data Acquisition > Orders > Production Orders > Status "PDA Completed" > Cancel*
Transaction	/SPDGS/AFKORECO

The following fields are displayed:

Field Name	Description
Order	Number, uniquely identifying the production order within the client. Disassembly orders as well as further processing orders may be input.
PDA Status	This is the status of the entire order from the perspective of process data acquisition. This status has no impact on processes in standard SAP, and there is no connection to the object status. Caution The status entered here will be set for the order in table /SPDGS/MPAK Feld MPAST. **Example** The order has status C. By entering status A in this field, the status is set to A in table /SPDGS/MPAK. *Note* *For a detailed description of the PDA status, see the respective section further down in this chapter.*

2. Make the desired entries the respective fields

3. Execute the transaction by selecting the *Execute* button or the F8 key.

4. If you entered an order number that does exist in table /SPDGS/MPAK, the following information message is displayed: *"Order (…) is open again for process data acquisition"*.

5. If you entered an order number that does exist in table /SPDGS/MPAK, the following information message is displayed: *"Order (…) does not exist"*.

Note
Please note that this transaction does not perform any confirmation or changes to the PDA strategy. It does not make sense to plan this transaction as a job.

14.4 Table: PDA Order Status

The following table gives you an overview of the possible statuses for the production orders from the perspective of process data acquisition. The statuses listed below are relevant for both disassembly orders and further processing orders. The status influences the usability of the order in Further Processing Entry and Disassembly Entry.

PDA Status	Comment
Blank	**Open** There are no entries on the production order / further processing order.
A	**In process** There already are entries in the production order/disassembly order.
B	**On hold** The production order /disassembly order has been put on hold, which means that you can choose to exclude it from the selection process in further processing entry. This 'putting on hold' may be done in the entry transaction.
C	**Completed** The entries in the production order /disassembly order are closed. The production order /disassembly order is no longer displayed in further processing entry/disassembly entry.
D	**Order confirmation** The order has been partially or finally confirmed. (only for further processing orders)
E	**Order operation level confirmation** The order has been confirmed on the operation level (only for further processing orders)

15   PDA Evaluation

15.1 Overview

This program allows you to evaluate the PDA records (PDA operations) created in the various applications. To this end, a selection screen with a number of fields is provided which allows you to restrict your selection.

PDA operations are data records that are created in the different processes of Process Data Acquisition (PDA). These data records are stored in table /SPDGS/PDAO, among other places.

PDA data records are created in the following processes:
— Sales orders
— Purchase orders
— Further processing entry
— Disassembly process entry
— Transport requests
— Delivery
— Picking
— Repetitive manufacturing
— Inventory

Data entries for these processes are possible in the SAP GUI as well as using the various DGAs provided by Softproviding. Depending on the process, different fields in the PDA record are filled.

Typically, these data records are processed with program /SPDGS/GMOVBTCH. To this end, batch jobs are created which collect and post (collective posting) a multitude of similar data records. Together with the posting, the system will create the goods movements in SAP Standard.

For the collective posting, the data records are combined with regard to plant storage location, material, and batch. This collective posting was developed with the aim of not having to create a material document (and the respective follow-on documents in Financial Accounting and Cost Accounting) for each PDA record, but to cumulate similar data records.

15.2 Starting the Program Selection

Procedure

The *PDA Evaluation* can be called up via one of the following options:

SAP Menu	*Softproviding Core > Logistics > Process Data Acquisition > Processing > PDA Evaluation*
Transaction	/SPDGS/WGAU

In the selection screen, various selection fields for data entry are displayed.

They are available in the following selection areas:
— Cross Selections
— Production Order Selections
— Variances
— Process Data Selection

In what follows, not all fields are mentioned but only those deemed important enough for selection.

In the *Cross Selection* area
— Plant
— Material
— Material type
— Material group

In the *Production Order Selection* area
— Order
— MRP controller
— Order type
— Created on (order)

In the *Process Data Selection* area
— Document category
— Document group
— Terminal ID
— Indicator: *Deleted*
— Storage location
— Reversal document
— Purchasing document
— Delivery

Note
It is highly recommended to restrict the selection by entering more field information before the report is started. This will prevent long runtimes and deliver results that are more accurate.

15.3 Program Execution

Once you have entered the selection criteria, start the by program via the Execute *button* (F8).

Result

As a result of the previous selection, a list with the orders that were found is displayed. The list is displayed in an ALV Grid Control (ALV is the SAP List Viewer).

ALV Grid Control is a flexible tool for displaying lists. It is used in a variety of applications both in the SAP Standard system and in Softproviding products. It consists of a toolbar, a title and the output table which is displayed in a grid control.

The following functions are generally provided:
— Choosing details
— Sorting in ascending or descending order
— Finding terms
— Setting and deleting filters
— Calculating and deleting total/average/maximum/minimum
— Calculating and deleting subtotals
— Printing
— Choosing views
— Exporting data
— Selecting layout
— Displaying list graphics
— User documentation

Note
Use the SAP online help to obtain more information about using the buttons.

Example

This evaluation may, for instance be used for the following checks:
— Check whether PDA records were reversed for the production orders

Note
This check can also be made with the PDA Data Cockpit.

Note
Checks concerning the posting status of PDA records can be made using the PDA Data Cockpit.

16 HU Management, WM and EWM

16.1 Overview

A handling unit is a physical unit consisting of packaging materials (load carriers/packing material like e.g. crates, containers, or pallets) and the goods contained on or in it. A handling unit is always a combination of products and packaging materials. When the HU is created, it is assigned a unique identification number. It is made up of header and item and is maintained via the general status maintenance function.

In the protein industry, too, handling units can be used in various processes. Softproviding supports the SAP Standard functionality in handling unit processes through integration of Process Data Acquisition.

Central element and at the core of Process Data Acquisition is the creation of so-called PDA data records. PDA stands for Process Data Acquisition. These data records are stored in the central table /SPDGS/PDAO, among other places.

PDA data records are created in the following processes:
— Sales orders
— Purchase orders
— Further processing entry
— Disassembly process entry
— Transport requests
— Delivery
— Picking
— Repetitive manufacturing
— Inventory

Data entries for these processes are possible in the SAP GUI as well as using the various DGAs provided by Softproviding. Depending on the process, different fields in the PDA record are filled

For further information on the creation, use and processing of PDA operations see the following sections in the Softproviding Core user documentation *Process Data*:
— "PDA Data Cockpit"
— "Post Goods Movements"

16.2 Process Flow

Together with the posting of the PDA data records, the status of the goods movement of these data records is typically set from A (open) to C (completed), a material document is created, and this information is written in the data record.

The process flow with handling units (with or without WM/EWM) or, also, the process without HU but with WM/EWM deviates from this "standard" processing. This is relevant for processes of inbound deliveries into the own warehouse which, for instance, are based on a purchase order.

The following example illustrates how the procedure changes as soon as HU Management is used:

Example

Delivery to warehouse with HU Management (i.e. for a production order or for a purchase order)

1. Quantities for a production order (further processing order) or for a purchase order are entered.

2. Together with the data entry, PDA data records are created.

   E.g. D/WE = goods receipt in Further Processing, or B/WE = goods receipt for a purchase order.

3. The data records are assigned goods movement status a (open).

4. Posting of these data records (typically periodically via batch job).

   Together with the posting, an inbound delivery is created (the number of the delivery is stored in the PDA data record).

   Also together with the posting, said goods movement status is set from A to E (for post-processing).

At this stage of the exemplary process, the following do exist:
— Production order, or purchase order
— PDA data record
— Delivery

Note: Outbound Deliveries
This procedure that deviates from the standard procedure does not count for outbound deliveries. If these are created in EWM or WM, picking is executed in SAP Standard or by means of load carriers. No PDA data records are used.

Other Processes

Subsequent processes like, for instance, the formation of handling units or the packaging for inbound delivery must be executed in SAP Standard. The same goes for activities in WM (Warehouse Management) or EWM (Extended Warehouse Management).

When posting the material document for an inbound delivery (goods receipt), BAdI MB_DOCU-MENT_BADI must be used

The following methods are available for this BAdI:
— MB_DOCUMENT_BEFORE_UPDATE
  — *When writing a material document. Not in "update task"*
— MB_DOCUMENT_UPDATE
  — *When writing a material document. Not in "update task"*

This is necessary in order to write information on the material document into the PDA data records.

The following information must be heeded:

Note
There is currently no program coding in standard Softproviding Core for this BAdI. It is planned to deliver a standard include in a future Softproviding Core release.

For this reason, the BAdI must be programmed and activated at the customer's, whereby the following changes must be made to the PDA data records:
— *Setting the goods movement status in the PDA data record from E (for post-processing) to C (completed).*
— *Enter material document number and material document year into the PDA data record.*

Do take note of the reverse program logic in the case of a reversal. Whether a reversal is the case or not may be determined in table MSEG (document segment Material). There, taken into consideration the movement type, the account side can be determined on which the debits and credits were updated (e.g. movement type 101 (goods receipt): debit = goods receipt, credit = reversal).

The process flow (no material document when posting the PDA data records) is controlled via the storage location for which the indicator HU requirement *is set.*

17   CWM (Catch Weight Management)

17.1 Overview

The requirements of the food industry in terms of units of measure (UoM) are mainly determined by the fact that the materials used throughout the entire supply chain are carried in two independent units of measure (for example, in the units of measure piece and kilogram). This is also the case in the meat industry, where the unit of measure *kilogram* (kg) is the most important variable. For this reason, the UoM *kilogram* is also normally used as the base unit of measure. It is also necessary in many of the processes in the meat industry to manage other units of measure in parallel with the base UoM. In this process, known as dual inventory management, the weights (e.g. kilograms) and the quantities (e.g. piece) are independent of one another.

The applications provided by Softproviding allow you to perform dual inventory. If SAP is used without SAP CWM, dual inventory management is not possible in SAP Standard. However, the use of Softproviding components makes this possible. If SAP is used without SAP CWM, dual inventory management is not possible in SAP Standard. However, the use of Softproviding components makes this possible.

For further details on this matter, please see the recommendations and descriptions on units of measure in the following document:

— "(CWM) Catch Weight Management", in: Softproviding Meat configuration guide *Material Master*