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# Lean Manufacturing Planning and Control (LMPC)

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# 1 Lean Manufacturing Planning and Control

This documentation describes the application of the consulting solution Lean Manufacturing Planning and Control (LMPC).

The LMPC package consists of 4 parts:

- The **heijunka detailed scheduling planning board** in ERP with over 130 functions, which is called using transaction [/LMPC/HJPT](#).
- **LMPC Leveling of Planned Orders**, which is called using transaction [/LMPC/NIVELLIERUNG](#).
- The **LMPC timetable** for generating production plans, which is called using transaction [/LMPC/FPL](#).
- **LMPC mass processing of orders**, which is called using transaction [/LMPC/MP](#).

The detailed planning in SAP ERP or SAP S4/HANA with the LMPC HJPT planning table is described by means of simple sample scenarios. The use of the functionalities is shown as an example.

## 1.1 Concept of the Consulting Solution Lean Manufacturing Planning and Control

As the name suggests, the SAP LMPC detailed scheduling planning board not only facilitates traditional detailed planning and order control in SAP ERP and S4/HANA, but also includes tools and methods, such as heijunka, from the area of lean manufacturing.

Both approaches – detailed planning and lean manufacturing – have their place in logistics and manufacturing. Detailed planning is capacity-related, or concerned with the finite planning of capacities based on requirements, from sales planning, for example. This is also referred to as a “push” approach.

Lean manufacturing, on the other hand, is based on a “pull” approach. Strictly speaking, manufacturing should take place only in response to an actual sales order or physical consumption.

Both approaches can be combined to great advantage in an SAP system, and this consulting solution can be used to expand and improve the existing possibilities that are available in the standard SAP system.

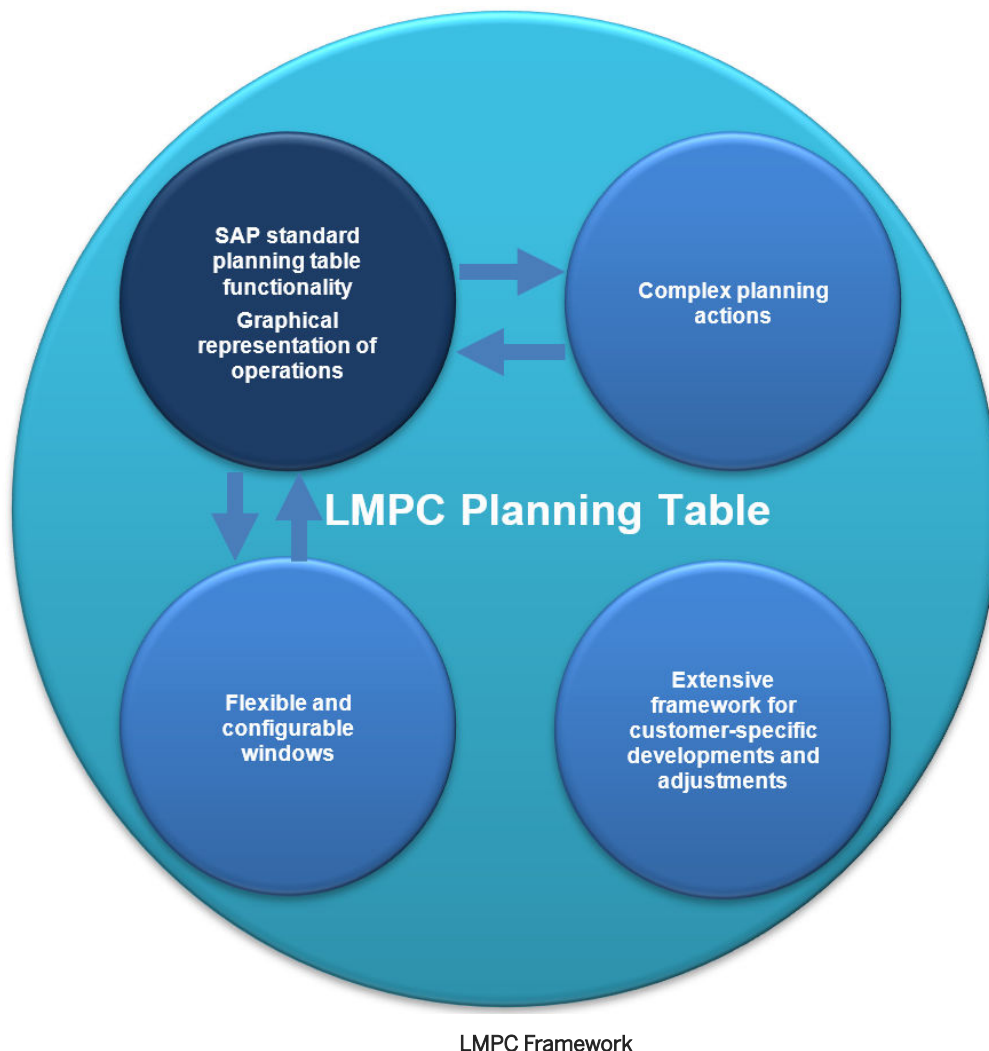
The consulting solution consists of the following application transactions:

**Heijunka Planning Table:** The planning table for detailed scheduling is the central user cockpit and contains a full range of production planning functions that create a variety of possibilities for visualizing data and achieving transparency. It gives users a highly comprehensive view of the current state of production and production planning, and enables them to influence and change these if required.

The HJPT planning table is based on the capacity planning table from the standard SAP system and has been enhanced with a number of elements.



The behavior of the HJPT planning table can be flexibly influenced “externally”. For example, you can create and use customer-specific function modules and classes. You can also develop and use your own functions by means of buttons in the grid.



## 1.3 Advantages of the LMPC HJPT Planning Table

### LMPC Plus Points

The LMPC HJPT planning table offers a range of benefits that make it the ideal planning cockpit for detailed scheduling in business organizations:

- Extensive detailed scheduling solution
- Full integration with SAP R/3 and SAP S/4HANA. No interfaces. This also enables full integration with the SAP MES world and the SAP demand and supply world
- Immediate start of planning possible by delivering a preconfigured solution
- Complete information and transparency for the planner. Almost 1100 data fields. All data for decisions in one place
- Flexible user-specific layouts can be set. Display on one, two, or three screens



- Creating an individual cockpit for each planner using navigation profiles and planning profiles
- Traffic lights and coloring of data allow a quick overview of the planning situation and therefore a short response time
- Display of capacity utilization using charts simplifies planning
- On-hand stock development at a glance
- Mass conversion of orders: ATP, missing parts determination, order release, cleaning orders, change of work center, production version change, printing shop floor papers
- Mass planning functions: Dispatch, move production plans, reschedule
- Variety of planning heuristics. Planning according to any criteria: Bottleneck resources, raw material availability, material groups, planner groups, customer requirement date, and so on.
- Automatic multi-level planning across all low-level codes
- Nightly planning run in the background for the automatic creation of finished production plans
- Smoothing of production using the leveling function
- Various application options: As a planning cockpit for production planners, as an evaluation cockpit for management, as a monitor in production
- Consulting solution: Development of custom planning heuristics in collaboration with SAP is an option
- Comprehensive enhancement options by the customer. Integration of customer coding possible using simple Customizing settings
- Can be used in SAP PP, PP-PI, PP-REM, PM, PS

## 1.4 Prerequisites

Capacity planning is carried out in the HJPT planning table. This means that orders are dispatched to capacities of machines to create a production plan.

The HJPT planning table processes different types of orders.

Examples: Planned orders in discrete manufacturing, planned orders in repetitive manufacturing, production orders, process orders, maintenance orders, orders for networks, orders from collective orders, and so on.

The orders are usually created via material requirements planning using the MRP run. However, they can also be created manually. This data must already exist in the system before it can be processed.

Orders can only be processed if they have capacity requirements. This means that lead time scheduling must be carried out in MRP planning.

Certain master data settings are required to be able to create orders.

For example, the following master data is required for a standard PP scenario:

- Work centers with available capacity and scheduling formulas
- Materials with BOMs
- Routings
- If necessary, production versions for the materials

The settings for the LMPC planning table have been delivered via a Customizing transport. These settings must be imported into the system before planning can begin.

LMPC Customizing consists of the following:

- Settings in LMPC-specific tables
- Example profiles for the capacity planning table

All elements of the delivered example profiles for the capacity planning table are delivered with "LMPC" or "LMP" as the key, so that a unique assignment to the LMPC package is possible.

The delivered settings are only example settings that enable a quick start with the solution. They must be adapted to the situation in the system.

#### → Tip

If you need help adjusting the settings, an LMPC consultant can help you with this.

The following scenario is used in the test examples of the LMPC documentation:

- Finished products
- Routings for the finished products
- Bills of material for the finished products, each with a semifinished product
- Associated production versions
- Semifinished products with BOMs, each with one or two materials as well as associated with routings in production versions
- All the work centers have two individual capacities (capacity categories 001 machine and 002 Human Resources), of which capacity category 001 will be used for scheduling.
- Requirements plan for the materials with different daily quantities per material. The quantities have been selected in such a way that there is sufficient capacity for the production of the total quantity for each day.

## 1.5 Constraints and Further Development

### LMPC Innovation Process

This documentation does not claim to be complete documentation in terms of all overall existing or personalizable options. A standard use case is described for each function.

The standard SAP functionality used is only documented if it is required for the process flow of the scenario. Additional standard SAP functionality is not part of this documentation.

#### ⚠ Caution

LMPC is a solution for SAP GUI for Windows. LMPC can only be used in a Windows environment.

The solution cannot be used in a JAVA or HTML environment. The solution cannot be used with SAP GUI for JAVA. SAP Fiori is not supported either. See SAP Note [312606](#).

LMPC is a consulting solution. Consulting solutions arise from project work in collaboration with customers. The solutions are developed for specific customer scenarios. All the functions described in this documentation are available in the scope of functionality described.

Any scenarios that are not described in this documentation are not supported by LMPC. Therefore, if a use case, planning situation, or functionality available in the standard SAP system is not described, it is not supported by LMPC.

It is possible that an unspecified scenario may work with the LMPC HJPT planning table. If you want to try out such a scenario, LMPC consulting can support you after commissioning.

Linguistic inaccuracies in the documentation may give the impression that LMPC functions are supported that are not actually supported. In such cases, the actual implementation of a function in the solution is always valid and not the description in the documentation.

If you have a planning requirement that is not yet supported by LMPC, LMPC development can work with you to develop a new planning function for a scenario. For functions that might also be of interest to other users, a CO innovation with reduced effort is possible.

If you want to request a new function or enhancement, create a ticket under component XX-PROJ-CON-LMPC and describe your requirements there. We will then create an estimate of the effort required to implement this new requirement.

If you do not have budget for a new development, you can use “Idea Place” to submit proposals for functions.

The LMPC development welcomes your proposals and will check them. Suggestions directly from the user of the solution are very helpful. These suggestions can be implemented in future LMPC versions. However, there is no guarantee that submitted proposals will be implemented.

#### → Remember

The LMPC delivery provides you with sample Customizing for the LMPC functions and for the settings of the capacity planning table. The sample Customizing makes it easier for you to start using the HJPT planning table.

This sample Customizing must be adapted to meet individual customer requirements in the relevant system. The LMPC configuration guide helps you to make settings. [Configuration of the LMPC-HJPT Planning Table](#)

If you require assistance with configuration, contact SAP consulting.

The configurations for the LMPC functions and the settings of the capacity planning table for use in the HJPT planning table are consulting services and not LMPC Support services. LMPC Support does not check the Customizing settings. LMPC Support does not answer any questions about the configuration of the solution. LMPC Support does not explain how the solution works.

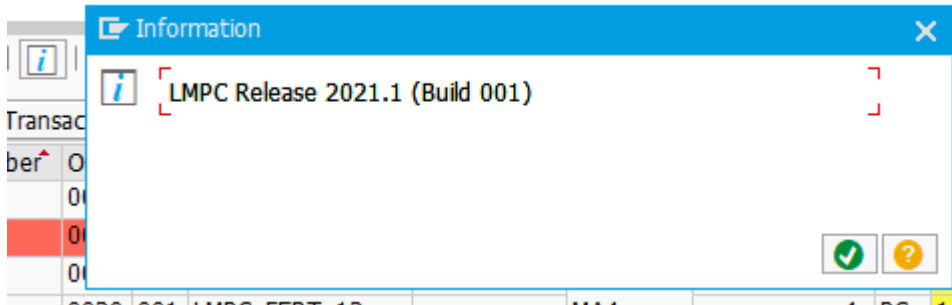
## Related Information

[Idea Place](#) 

## 1.6 LMPC Version

The LMPC package is being developed continuously. Normally, a version (release) with new functions is released once a year. During the year, builds for versions containing errors are released at regular intervals.

You can call up the information about which version is available in your system by simply choosing the information button above the ALV Grid in the HJPT planning table. A popup window appears with information about the release and build.



Example Release and Build Information

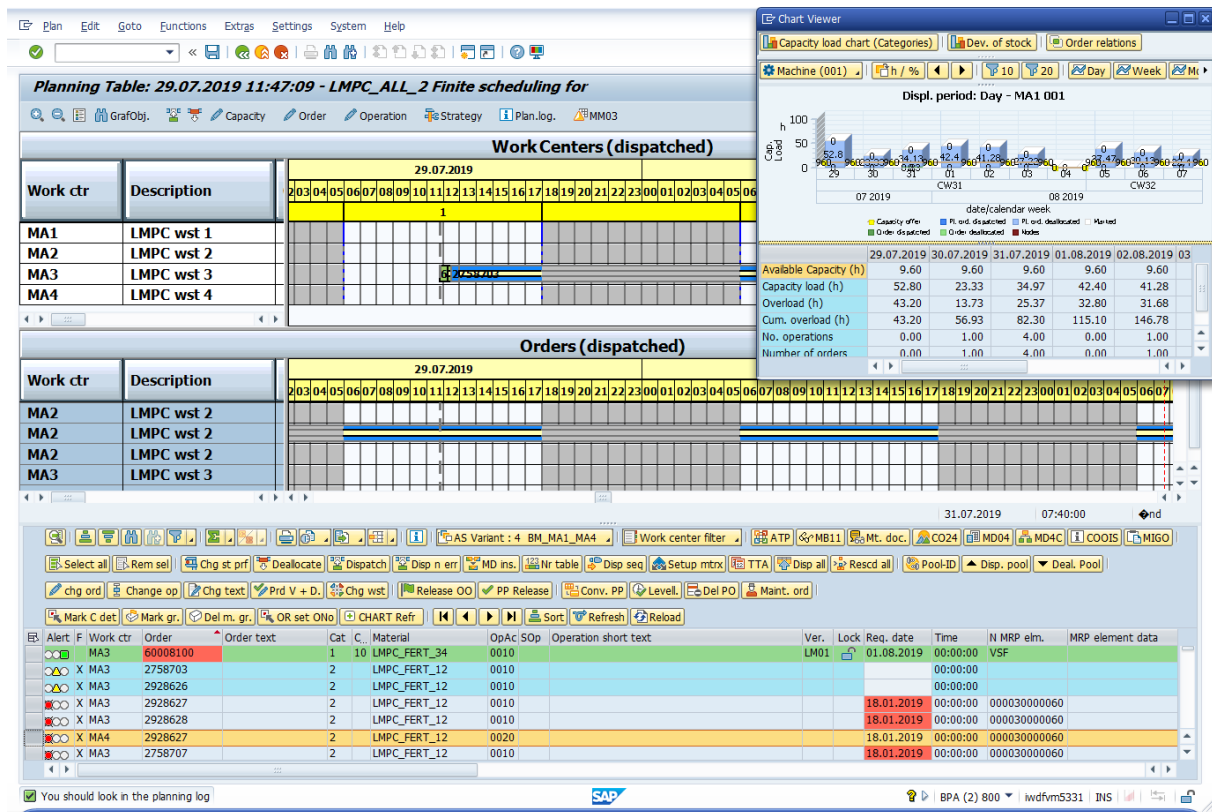
The build is an updated version of a release. The latest build for a release can be downloaded via the SCM delivery platform. Only the last build is available to download since this version contains all previous corrections.

→ Tip

Check regularly to see whether a new build is available for your LMPC release, and if so, import this build into your system. In this way, you keep the solution up-to-date.

## 2 LMPC HJPT Planning Table

Overview of HJPT Detailed Scheduling Planning Board



LMPC HJPT Planning Table

The LMPC HJPT planning table is a further development of the graphical capacity planning table for the enhanced capacity leveling of the standard SAP ERP system.

It consists of the following 3 main areas:

- Graphical planning board (usually at the top)
- ALV Grid with data on the orders (usually nearly 1100 possible fields)
- Charts for displaying the capacity utilization, the stocking situation, and the order relations (usually as a popup window)

Depending on the Customizing settings in your system, the individual elements may be arranged differently.

The SAP LMPC HJPT detailed scheduling planning board provides a large number of planning functions for a wide range of requirements. For example, HJPT standard dispatching can be used to dispatch orders individually. However, they can also be dispatched as a group in a predefined sequence in line with the timetable specifications, or grouped as order pools. A specific planning strategy can be assigned for each planning function. In contrast to the standard SAP system, in which only one planning strategy can be assigned and other planning strategies must be selected again each time.

## → Remember

Planning changes within the HJPT planning table only come into operational effect when you save. Therefore, executed actions that have not been saved can be voided by refreshing the planning table, without you having to exit the transaction. Planning takes place in simulation mode.

## 2.1 Call LMPC HJPT Detailed Scheduling Planning Table

Ways to Call the HJPT Detailed Scheduling Planning Table

There are four transactions with which you can call the LMPC planning table:

- [Transaction /LMPC/HJPT\\_AS LMPC HJPT Planning Table Autostart \[page 16\]](#)
- [Transaction /LMPC/HJPT LMPC Heijunka Planning Table \[page 16\]](#)
- [Transaction /LMPC/HJPT\\_2 LMPC HJPT Planning Table Without Popup Window \[page 19\]](#)
- [Transaction /LMPC/HJPT\\_3 LMPC HJPT Planning Table 1 Selection Screen \[page 19\]](#)

These transactions all start the LMPC HJPT planning table. However, they have different selection parameter entries.

There is also the /LMPC/HJPT program, which can be used to realize a nightly automatic planning run. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

The individual call options are described briefly in the following chapters.

### 2.1.1 Notes on Runtime Behavior

The LMPC HJPT planning table is a detailed planning solution. The HJPT planning table is not intended to be used for rough-cut planning, long-term planning, or mass planning.

**Standards for a Regular Planning Scenario:**

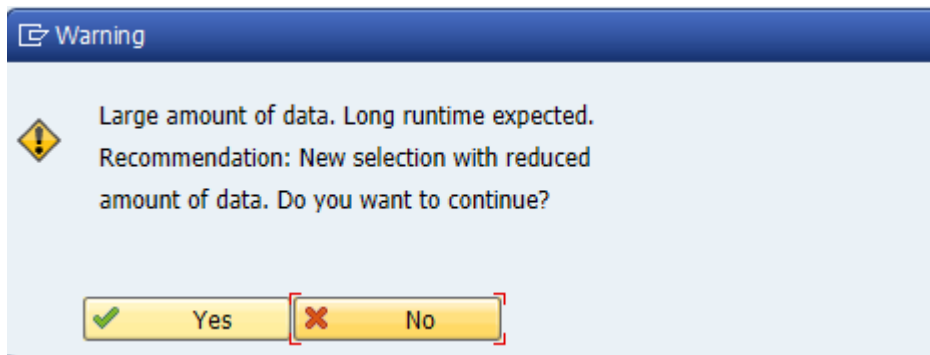
- **The planning period stretches between a few weeks and a few months.**
- **The number of open work centers is below 20.**
- **The number of orders displayed is below 2000.**

Data sets above these standard values can lead to long runtimes when you call the planning table.

It is important that you specify work centers for the data selection, to limit the number of orders that are loaded. It is possible to make a selection with only the plant specified, but this is not recommended. Long runtimes for a plant selection are not a runtime problem; this is normal runtime behavior for large volumes of data.

The source code of the HJPT planning table is already optimized for runtime. It is not possible to accelerate runtime further by making changes to the source code.

The HJPT planning table has a built-in check on the loaded data volume. If you call it with a data volume that is larger than the recommended volume of data, a warning is displayed.



Warning Large Volume of Data

This warning informs the user that they are outside the maximum recommended volume of data for planning in the HJPT planning table. Long runtimes are expected with this volume of data.

If this message appears, a reduction in the volume of data is indicated by adjusting the selection. LMPC consulting can help you create an optimum planning scenario.

You can switch off this warning message using the Customizing settings for the control table. However, this is not recommended. Rather, the planning scenario should be adjusted. [Transaction /LMPC/STEU LMPC Control Parameters](#)

There is a strict restriction on data for production or process orders. A maximum of 4000 data records for production or process orders can be loaded into the planning table. If more data is read, a runtime error occurs. For more information, see SAP Note [39248](#).

If runtime problems occur when you call the planning table, this usually has the following causes:

- The volume of data loaded is too large.
- There are customer enhancements in the system that are blocking the call.

Runtime problems can be reduced by:

- Deactivating LMPC HJPT data providers. The less data loaded, the faster the HJPT planning table. [LMPC HJPT Data Provider \[page 330\]](#)
- By checking and changing the planning processes. The user may be using a planning period that is too large or a selection that is too extensive.
- By optimizing customer enhancements in the system.

### i Note

A runtime check and optimization in a customer system is an individual service provided by LMPC consulting for the customer and is not a task for LMPC support.

### Notes on Runtime Behavior of LMPC HJPT Action Codes

The LMPC HJPT planning table is a detailed planning solution. It is not a solution to perform mass processing of orders.

If you use action codes to process one or a few operations, processing will be very quick. In the HJPT planning table, there is no restriction on the number of processed data records. In theory, you could put all open operations into one function.

If a very large number of operations are transferred to a function, long runtimes may occur.

This is not an error; it is due to the fact that a very large number of operations are being processed.

It is not possible to improve the runtime behavior of individual functions because during programming it is always ensured that the functions are created in a way that optimizes runtime.

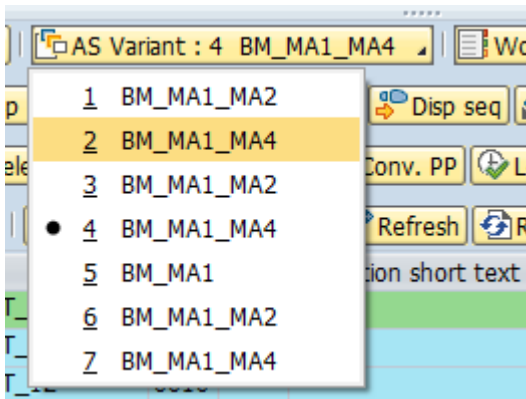
## 2.1.2 Transaction /LMPC/HJPT\_AS LMPC HJPT Planning Table Autostart

HJPT Planning Grid Start with One Click

This is the transaction for automatic starting the LMPC planning table. The planner can access the HJPT planning table without entering selection parameters.

You can only use this transaction if you have defined user variants for the autostart in Customizing. The planning table always opens with the variant that is stored as the autostart variant.

When transaction /LMPC/HJPT\_AS is called, an additional button appears in the menu bar of the ALV Grid, which you can use to select the variants.



Select Autostart Variants

The current variant is indicated by a black dot. The name of the variant consists of the sequential number of the entry and the name of the transaction variant of the transaction /LMPC/HJPT.

Since all data is reloaded when you switch to another variant, a question arises after saving the data in the event of unsaved data.

The settings for the auto start variants are described in the LMPC Configuration Guide. [Transactions /LMPC/AS\\_CUST, /LMPC/AS\\_CUSTS LMPC HJPT Planning Table Auto Start](#)

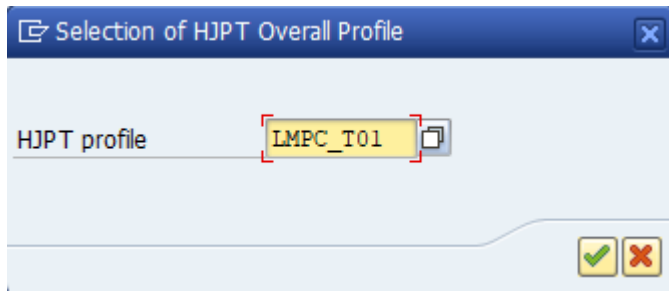
## 2.1.3 Transaction /LMPC/HJPT LMPC Heijunka Planning Table

Standard transaction for calling the HJPT planning table

Transaction /LMPC/HJPT is the standard transaction for opening the LMPC HJPT planning table by entering selection parameters.

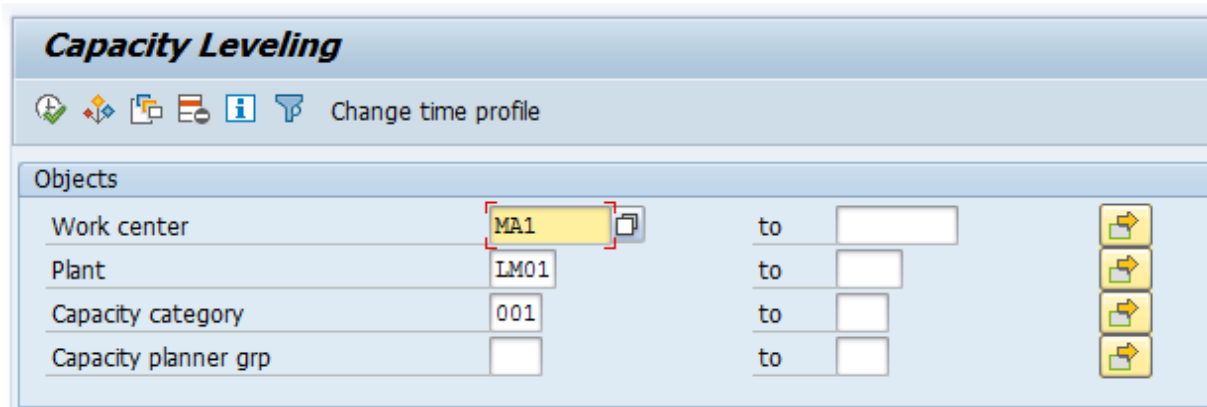
During the call, a popup appears for the selection of the overall HJPT profile.





Selection Overall HJPT Profile

You maintain the selection criteria on the following selection screen.



Selection Screen

A work center and the plant should be specified. At least one of these two parameters must be specified. You can use the optional fields capacity category and planner group to further restrict the selection.

### ! Restriction

There is a pushbutton for filter settings on the selection screen. These additional settings are not supported by the HJPT planning table. Do not use any filters because they have no effect.

You can save variants for the selection screen. This allows you to predefine selection settings for the user. This makes it easier to select the data. Variants can also be used for background processing in the program /LMPC/HJPT. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

From the selection screen, you can branch to the settings for the time profile. The time profile is assigned to the overall profile used for capacity evaluation and is prefilled automatically. It determines the evaluation period and the planning period for the data.

Time profile
✕

Time profile LMPC\_0001 MPC: short-term (2 month)

**Evaluation period**

Entry type	G	Number of calendar days	
Start date	30-		03.04.2021
Finish date	60		02.07.2021

**Planning period**

Entry type	G	Number of calendar days	
Start date	-30		03.04.2021
Finish date	60		02.07.2021

#### Select Time Profile and Change Settings

The **evaluation period** is the period for which the data is read.

The **planning period** is the period in which the data can be changed. Note that orders can never be dispatched in the past. However, it is possible to deallocate orders that are in the past and reschedule them into the future.

You can select a different time profile or change the evaluation or planning period manually. The manual changes to the periods are only valid for this one call of the planning table. They are not stored in the time profile. If you want to permanently change the settings for the time periods, you need to adjust the Customizing of the time profile.

#### → Remember

- It is possible to define a period in which dispatching is not allowed. If, for example, you define the planning period so that it does not start until 14 days in the future, the earliest point at which you can dispatch is two weeks from today. This allows you to prevent replanning in a certain period. You cannot prevent deallocation in this period, only repeated dispatching.
- You can use a user parameter to store a separate time profile for each user. Also see the description of the user parameters in the LMPC Configuration Guide. [Default Time Profile](#)

To go from the selection screen to the capacity planning table, choose *Execute* or F8 or the Enter key. This takes you to the enhanced graphical planning table.

#### → Tip

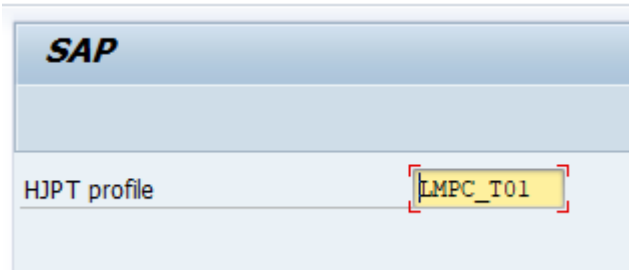
If the work center entered is a node work center of a work center hierarchy, all work centers that are below this node in the hierarchy are opened. The prerequisite for this is that you have defined a work center hierarchy and have set the explosion of the work center hierarchy in the evaluation profile. For details on configuring the hierarchy explosion, see the LMPC Configuration Guide. [Use of Work Center Hierarchies in the HJPT Planning Table](#)

## 2.1.4 Transaction /LMPC/HJPT\_2 LMPC HJPT Planning Table Without Popup Window

Call HJPT Planning Table - No Popup Window

Transaction /LMPC/HJPT\_2 has the same input fields as transaction /LMPC/HJPT with the only difference that the HJPT overall profile is queried in a full window and not in a popup window.

The selection fields are queried on two separate screens. First the overall profile, then the other selection criteria.

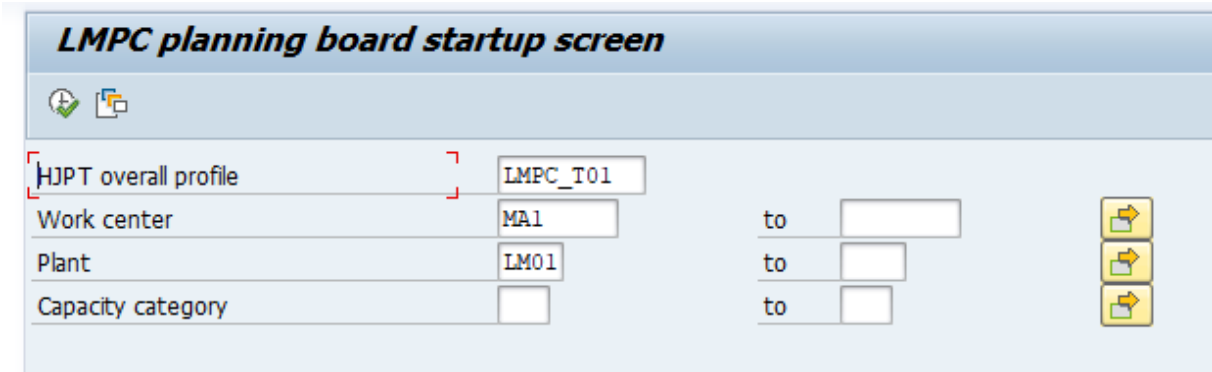


HJPT Overall Profile Selection in Transaction /LMPC/HJPT\_2

## 2.1.5 Transaction /LMPC/HJPT\_3 LMPC HJPT Planning Table 1 Selection Screen

Call HJPT Planning Table - All Input Fields on One Screen

Transaction /LMPC/HJPT\_3 has the same input fields as transaction /LMPC/HJPT with the only difference being that all input fields are displayed in a window.



Selection Screen /LMPC/HJPT\_3

## 2.1.6 Program /LMPC/HJPT Background Processing

Execute the HJPT Planning Table Using a Job in the Background

You can use the program /LMPC/HJPT to apply an action code to all data records of the selection.

This enables mass processing of orders.

The program can be used, for example, to execute a nightly automatic planning run.

After the job for creating new orders has run with the MRP run, the newly generated orders can then be scheduled automatically.

The next day, the planner has a finished production plan and can fine-tune the planning manually.

This helps to reduce planning effort.

The screenshot shows the 'LMPC HJPT Planning Board - Execute Action Code' selection screen. It is divided into several sections:

- Profiles:** HJPT overall profile is set to 'LMPC\_T01'.
- Select options:** A table with four rows: Work center (MA1), Plant (LM01), Capacity category, and Planner group. Each row has a 'to' field and a selection icon.
- Action parameter:** Action Code is set to 'S\_EPTBSQ'.
- Report lock:** A checkbox labeled 'Set report lock' is present.
- Messages issued in background processing:** A checkbox labeled 'Error only as information' is present.

Selection Screen Program /LMPC/HJPT

When the program is executed, all operations that are opened by the HJPT planning table are processed.

The function for the limitation of action codes can be implemented to restrict the data records processed.

[Action Code Limits \[page 71\]](#)

Chains of action codes can be used when calling the action codes in background processing. For details and limitations when using action code chains, see the section on chaining action codes. [Concatenating Action Codes \[page 321\]](#)

In contrast to dialog processing, the data records in background processing are not sorted according to the sort settings of the ALV Grid layout. Therefore, if you want the operations to be processed in a specific sequence, use action codes that have their own sort routine for operations.

→ Tip

If you are searching for a planning function for which you can define the sorting using parameters, we recommend that you use the action code S\_EPSRT.

[S\\_EPSRT Sorted Dispatching \[page 168\]](#)

Only some of the HJPT action codes are suitable for background processing. The following action codes can be used in background processing.

- [S\\_APALL Deallocate All Operations \[page 133\]](#)
- [S\\_APSCG Deallocate Selected Operations and Close Gaps \[page 134\]](#)

- [S\\_APSEL Deallocate Selected Operations \[page 135\]](#)
- [S\\_APSELP Deallocate with Pool ID \[page 221\]](#)
- [S\\_BOMEXP Bill of Material Explosion and Component Quantity Update for Planned Orders \[page 88\]](#)
- [S\\_CHSDV Change to Standard Values \[page 92\]](#)
- [S\\_CRCLOR Create LMPC Clean-Out Orders \[page 98\]](#)
- [S\\_EPALL Dispatch All Operations \[page 142\]](#)
- [S\\_EPBKFG Two-Step Dispatching with Pool ID \[page 226\]](#)
- [S\\_EPFX Dispatching Across Firmed Operations \[page 146\]](#)
- [S\\_EPML, S\\_EPMLBW, S\\_EPMLFW Multilevel Planning \[page 241\]](#)
- [S\\_EPMSQ Dispatching According to Material Master Field \[page 150\]](#)
- [S\\_EPPRL Parallel Planning with Parallel Sequences \[page 211\]](#)
- [S\\_EPRQD Dispatch on Requirement Date \[page 157\]](#)
- [S\\_EPRSIN Insert Setup Optimum Operation \[page 193\]](#)
- [S\\_EPRST Dispatching Using Setup Matrix \[page 191\]](#)
- [S\\_EPSEL Dispatch Selected Operations \[page 159\]](#)
- [S\\_EPSELF Dispatch Selected Orders Without Errors \[page 160\]](#)
- [S\\_EPSELP Single-Level Dispatching with Pool ID \[page 219\]](#)
- [S\\_EPSELT Dispatching for Date \[page 164\]](#)
- [S\\_EPSIM Simultaneous Dispatching \[page 167\]](#)
- [S\\_EPSRT Sorted Dispatching \[page 168\]](#)
- [S\\_EPTBSQ Dispatch by Table \[page 172\]](#)
- [S\\_FIX, S\\_FIXE Firm and remove firming of orders \[page 301\]](#)
- [S\\_FPL Dispatch by LMPC Timetable \[page 174\]](#)
- [S\\_OPL Optimized Dispatching \[page 195\]](#)
- [S\\_ORFIRM, S\\_ORFREL Firm Order Relations and Undo Firming \[page 235\]](#)
- [S\\_OSC Optimum Adjustment of Setup Times \[page 81\]](#)
- [S\\_PBLKFG Pool formation with BOM information \[page 222\]](#)
- [S\\_POOLA Automatically Create Order Pool \[page 218\]](#)
- [S\\_RESCD Reschedule All \[page 190\]](#)

### **i** Note

Refer to the notes on runtime behavior in the section on calling the HJPT planning table. They are also valid for background processing.

[Call LMPC HJPT Detailed Scheduling Planning Table \[page 14\]](#)

For details on creating a background job with the program /LMPC/HJPT, see the LMPC Configuration Guide. [Execute the Program /LMPC/HJPT LMPC HJPT Planning Table in the Background](#)

### **!** Restriction

LMPC background processing was created to execute functions in a nightly planning run. During the day, no background jobs should be executed to schedule operations because this can lead to locking conflicts. Orders cannot be planned by a production planner and a planning program at the same time. Planning functions of the production planner can terminate if locks are set by a background program. Similarly, two or more production planners should not work with the same data at the same time. This is because there

may also be locking conflicts here. Locking conflicts are not errors, but an indication that the planning processes in the company need to be checked and changed.

## 2.2 HJPT Test Profiles

The standard LMPC delivery contains four test profiles, which can be used as a template for HJPT overall profiles in planning.

- LMPC\_T01
- LMPC\_T02
- LMPC\_T03
- LMPC\_T05

### → Remember

These test profiles contain sample profiles for the capacity planning table. These profiles are only examples that must be adjusted in the customer system to the specific requirements of the customer. It is recommended that you use these test profiles as templates for your own profiles.

LMPC consulting can support you in creating individual profiles.

The sample profiles were created for planning with the latest point in time. The bars of the operations display the latest dates of the capacity requirements. For further information on the earliest and latest dates, see the following section: [Layout Groups \[page 41\]](#)

### For LMPC Existing Customers:

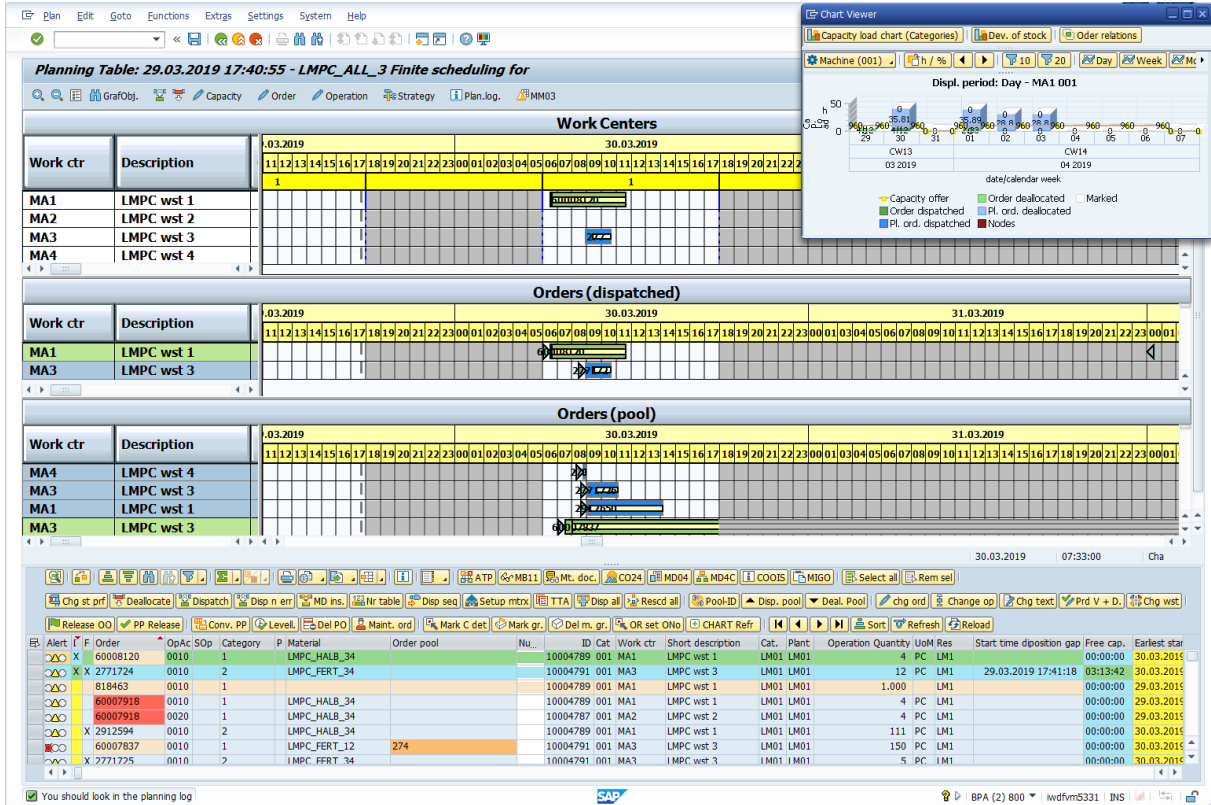
If you want to update the test profiles, the SCM CS Delivery Platform contains a transport for updating the test profiles.

### ! Restriction

- The test profiles of the capacity planning table for LMPC have been created for LMPC and the HJPT planning table. They have been exactly aligned with this solution. These profiles must not be used in other consulting solutions or other SAP applications.
- Profiles of the capacity planning table are Customizing settings. LMPC Support does not check any Customizing settings in your system. If you want to change or check the profiles you use, this is a service provided by LMPC Consulting.

## 2.2.1 LMPC\_T01

### Standard Profile for Planning



### Test Profile LMPC\_T01

The HJPT overall profile LMPC\_T01 is the standard template for planning.

HJPT profile LMPC T01 is divided into three areas. It has an area for the capacity planning table (above). An area for the ALV Grid (below) and a range for the window for charts (dialog box).

The profile of the capacity planning table is set up such that there are three charts.

Chart 1 displays the open work centers. You can see at what time the operations at the work centers are dispatched.

Chart 2 displays a list of operations. It displays the dispatched operations in chronological order.

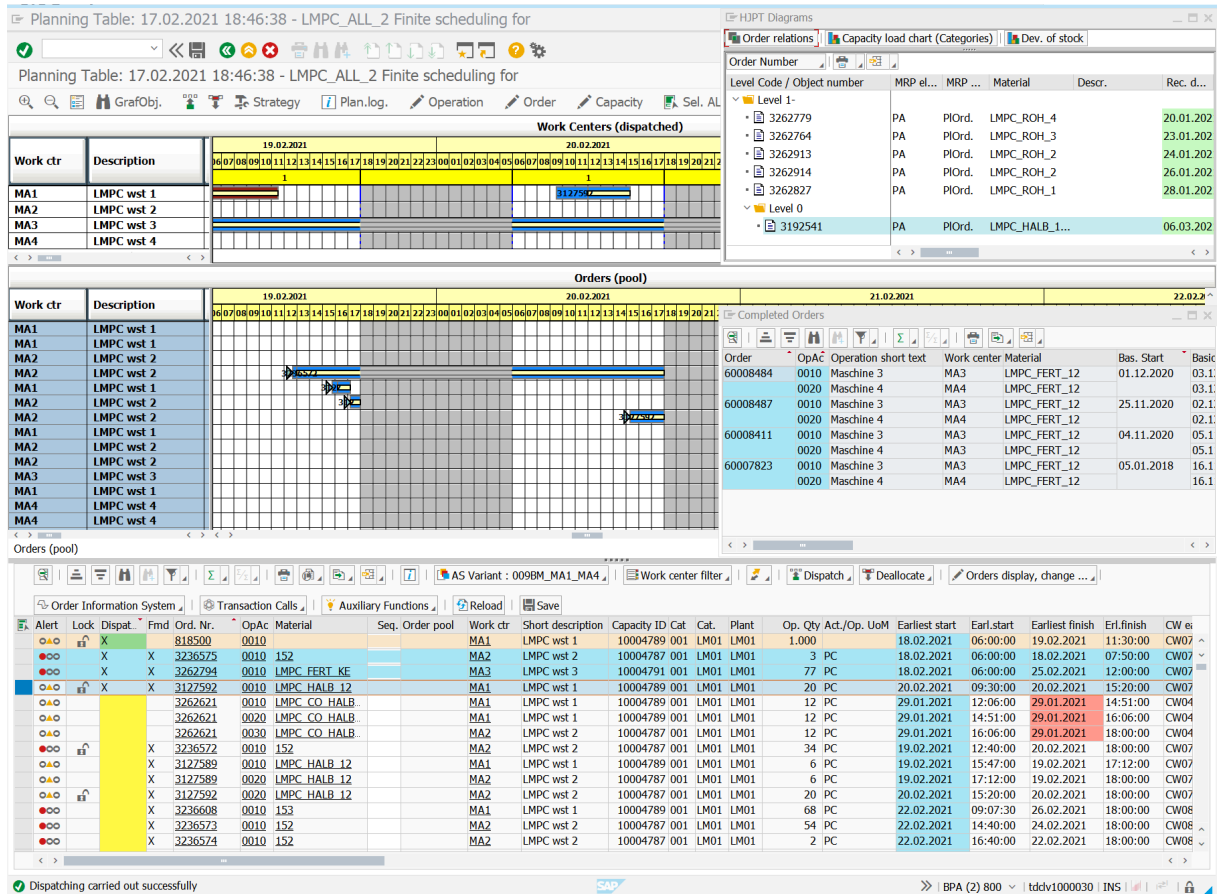
Chart 3 displays the order pool. The list of all open and not yet dispatched operations.

By dragging and dropping operations within the charts and across charts, orders can be dispatched, deallocated, and rescheduled.

When you open the window for charts it displays the capacity load graphically, supplemented with the ALV Grid of the capacity data. You can use the buttons to switch to the development of the stocking situation or to the order relations. [Chart Window \[page 53\]](#)

## 2.2.2 LMPC\_T02

### HJPT Test Profile 2



### Test Profile LMPC\_T02

The HJPT overall profile LMPC T02 is divided into four parts. It has an area for the capacity planning table. An area for the ALV Grid, an area for the HJPT charts, and an area for the window for completed orders.

However, the profile of the capacity planning table is set up such that there are only two charts. The second chart from profile LMPC\_T01 has been removed.

Chart 1 displays the open work centers. You can see at what time the operations at the work centers are dispatched.

Chart 2 displays the order pool. The list of all open and not yet dispatched operations.

By dragging and dropping operations within the charts and across charts, orders can be dispatched, deallocated, and rescheduled.

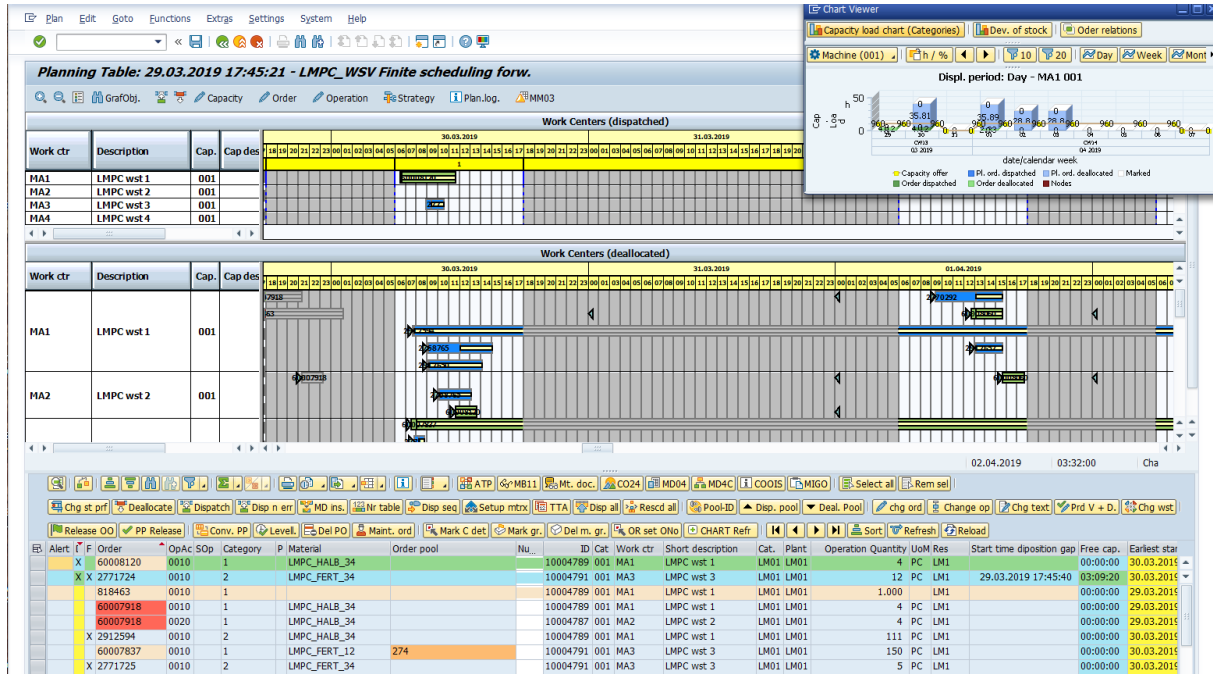
The window for the charts displays the order relations when it is opened. You can use the buttons to switch to the capacity utilization or to the development of the stocking situation. [Chart Window \[page 53\]](#)

The window for completed orders displays information on orders that have been finally confirmed, completed, or technically completed. [Window for Completed Production and Process Orders \[page 67\]](#)



## 2.2.3 LMPC\_T03

### Template for Planning Profile



Test Profile LMPC\_T03

The HJPT overall profile LMPC\_T03 is also a template for a planning profile.

The profile LMPC\_T03 is also divided into three parts. It has an area for the capacity planning table. An area for the ALV Grid and an area for the window for the charts.

The capacity planning table is only divided into two charts here.

Chart 1 shows the work center view with all the operations that are dispatched to the respective work centers.

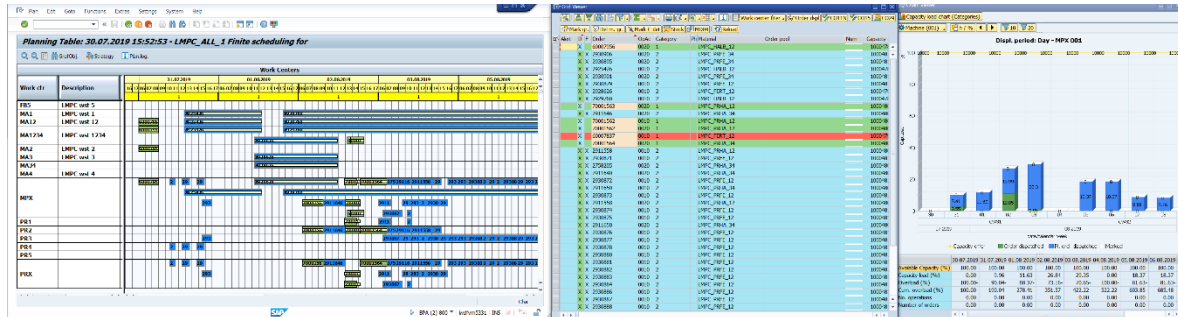
Chart 2 also shows the work center view, but with all operations that have been scheduled for the respective work centers but have not been dispatched. Automatic drilldown shows multiple commitments. Two lines are displayed in chart 2 for each work center and capacity. The first line contains all operations that have been deallocated and that already have a status object. The second line contains all transactions that are new and do not have a status object. Once a planning activity has been executed with an operation, it is given a status.

Dispatching, deallocation, and rescheduling using drag and drop is also possible within the charts as well as across charts. It is only possible to reschedule an operation from one work center to another in the chart of the dispatched operations. It is possible to move operations in the pool of operations not yet dispatched, but only for the same work center. Then the operation in question is rescheduled.

The window for charts displays the development of the stocking situation when it is opened. You can use the buttons to switch to the capacity utilization or to the order relations. [Chart Window \[page 53\]](#)

## 2.2.4 LMPC\_T05

Display Profile for Planning Data



Test Profile LMPC\_T05

The HJPT overall profile LMPC\_T05 is a pure display profile.

You cannot use the settings for this profile to perform planning operations. Planning using drag and drop is not possible here. Otherwise, no changes can be made to the operations.

For example, the profile can be used as a template for a production monitor in manufacturing.

The HJPT profile LMPC\_T05 is also divided into three parts. It has an area for the capacity planning table. An area for the ALV Grid and an area for the window for the charts. All three elements are displayed separately on separate screens. This setting is a view for a wide monitor or a view with 2 or 3 monitors.

The profile of the capacity planning table is set up such that there are only two charts. The work center view of the dispatched operations and operations that have not been dispatched.

The window for charts displays only the capacity utilization. Capacity requirements from the past are added to the current day to be able to identify the backlogs in production. The other charts are hidden. [Chart Window \[page 53\]](#)

The data is refreshed automatically every 180 seconds.

### → Tip

Above the ALV Grid there is a button for saving. This function is used to save the position of the windows, since when you save, the planning table remembers the size and position of the windows.

## 2.3 Bar Chart of HJPT Planning Table

The HJPT planning table uses the bar chart of the capacity planning table (CM21 / CM25) of the standard SAP system.

For each operation of an order, a capacity requirement is displayed in the HJPT planning table. This capacity requirement is assigned to a capacity of a work center.

The bar chart displays the temporal location of the capacity requirements in the capacities of the work centers.

The bar chart is controlled by the standard Customizing settings for the capacity planning table.



- Process orders: Green
- Maintenance order: Reddish brown
- Network: Red
- Split record: Magenta

The Customizing for coloring in the graphic is very complex. It is not recommended to change the basic coloring delivered.

However, you can use LMPC Customizing to modify the color of the bars easily.

Rules are created for this. The rules can be based on all data available in the ALV Grid of the HJPT planning table.

For example, it is possible to color by material number, material group, order status, and so on.

For details on configuring the coloring, see the LMPC Configuration Guide. [Graphic Coloring Method](#)

## 2.3.3 Connecting Lines for Bars in Bar Chart

### Graphical Display of Connections Between Orders

It is possible to display the connections between operations in the bar chart of the HJPT planning table.

The following connections can be displayed:

- Connections between operations of an order
- Connections between operations of an order pool
- Connections between operations that belong together through a requirement relationship. In the LMPC planning table, these are the order relations.

These are displayed as arrows. The start of the arrow has two vertical lines and the end of the arrow has a double tip. This enables the direction to be read.

Arrows are displayed between all operations of an order pool for the connecting lines for order pools. The arrows run between the operations in the direction in which they are scheduled. This means that they do not run from every operation to every other operation, but only throughout the entire pool in terms of time.

If connecting lines between pool orders and operations are active, the pool lines override the lines between the operations. In this case, the lines between the operations are no longer displayed.

The connecting lines of the requirement relationships are only formed between the last operation of the preceding operation and the first operation of the subsequent order. Therefore, if only the lines for order relations are activated, no lines are displayed between the operations of an order.

The colors of the arrows can be defined using LMPC Customizing. The settings are made in the respective LMPC overall profile. This is where you also define whether arrows are displayed for all operations, or only for dispatched or deallocated operations. [Connecting Lines Between Bars](#)

In the case of the order relations, you can also differentiate between the firmed and unfirmed order relations.

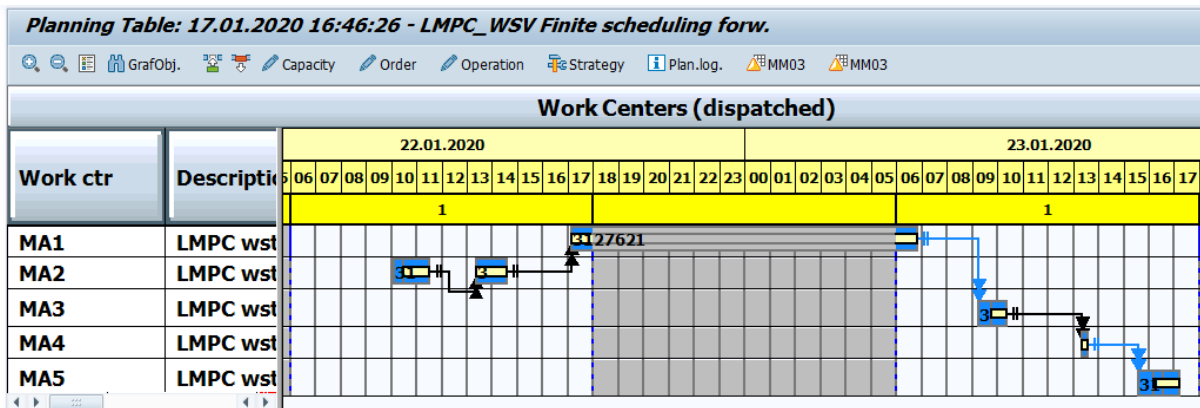
### ! Restriction

The system displays only lines between the capacity requirements that are relevant for scheduling. These are capacity requirements whose capacity is specified as the basis for scheduling in the work center.

### ⚠ Caution

For runtime and clarity reasons, it is recommended that you choose the use of the lines carefully. If you activate all lines, the display will soon become unclear. In addition, calculating a large number of lines can impair runtime.

## Example



Example of Connections Between Operations

In this example, the blue arrows show the relationship between the linked orders. That is, the demand relationships. The direction always goes from the predecessor to the successor in the direction of the finished product.

The black lines show the relationships between the operations of an order.

## Related Information

[List of Order Relations \[page 60\]](#)

[Data Provider /LMPC/CL\\_DP\\_BED LMPC Requirement Date and Order Relations \[page 336\]](#)

[Multilevel Planning via Order Relations \[page 232\]](#)

## 2.3.4 Features of the Bar Chart

Call Options of Functions via the Bar Chart

### i Note

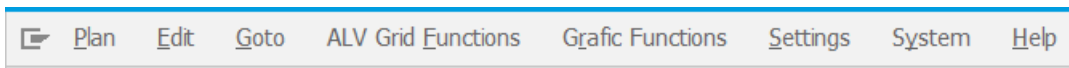
All descriptions in this section refer to the settings that are delivered with the HJPT test profiles. Other functions can be set in your system.

There are three ways of executing action codes on selected operations in the bar chart of the HJPT planning table:

- The menu bar of the capacity planning table
- The functions of the application toolbar
- The context menu for a bar

### Menu Bar

The menu bar at the top of the screen contains both standard functions of the capacity planning table and specific functions of the HJPT planning table.

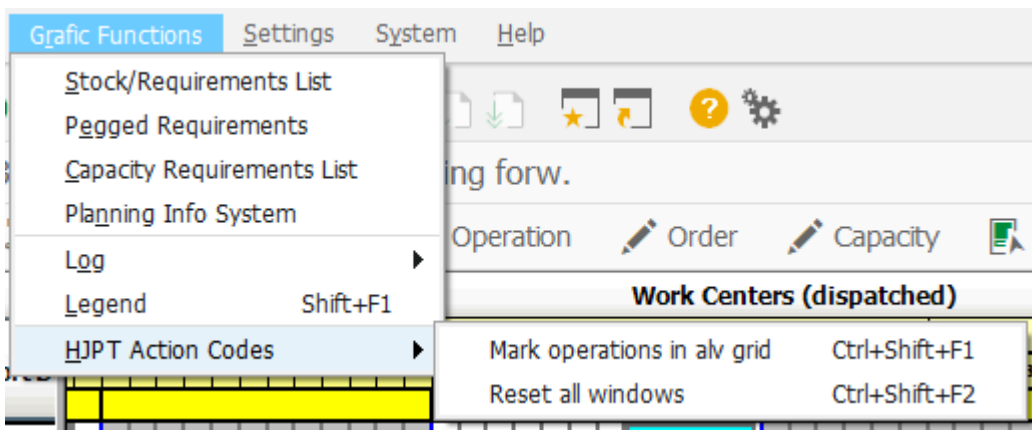


Menu Bar

There are two menu options that contain LMPC HJPT functions:

- Graphic Functions
- ALV Grid Functions

The HJPT functions that are on the application toolbar are listed in the menu option "Graphic Functions" (see the description of the pushbuttons in the next section). You are in the submenu "HJPT Action Codes".



Call Action Code from Menu Bar

The operations for the functions are selected using the graphic. The functions can also be executed using shortcuts. The menu text for the functions contains information about executing the functions using shortcuts.

The second menu option for HJPT functions called ALV Grid Functions contains a list of action codes that are applied to selected operations in the ALV Grid using keyboard shortcuts. The description of these functions is contained in the section on the ALV Grid. [Action Code Call Using Keyboard Commands \[page 50\]](#)

All other functions that are called via the menu bar of the graphic are standard functions of the capacity planning table and require selection via the bar chart.

The following table provides an overview of the available standard functions:

Standard Functions of the Capacity Planning Table

Menu	Function	Description
Plan	Save Ctrl+S	Save the planning.

Menu	Function	Description
	Print -> Chart 1-8	Print function for the charts of the graphic.
	Exit (Shift+F3)	Cancel planning. Exit planning without saving.
Process	Select -> To Row	Select all bars in a row.
	Select -> To Chart	Select all bars of a chart.
	Select -> Related Objects	Select related objects...
	Select -> Selection	Selection of criteria for selecting objects.
	Highlight in Color -> Related Objects	Highlight in color those objects that belong together.  Caution: The colored indicator is not a selection. If you want to execute functions on these objects, you must still select them first.
	Highlight in Color -> Selection...	Define the criteria according to which the bars are to be highlighted.
	Highlight in Color -> Undo	Undo the highlighting.
	Change Sorting	Arrange the bars according to a different sorting.
	Resort	Resort the bars in the graphic.
	Firm Planning Area	Specification of a planning area for all open capacities. A time interval is specified. Select whether planning is not possible there. Or whether only planning can be carried out there.
	Insert Date Marker	Inserts a dashed line in the graphic at a specific day and time.
	Position Time Axis on -> Today -> Date... -> First Graphic Object Shift + F9	The display in the graphic can be moved, starting with the current time, a selected date, or the first graphical object in the display.
	Find	Search function.
	Cancel F12	Exit the planning table. If the current planning status has not yet been saved, the system displays a dialog box asking you to save before the termination.
Goto	Work Center -> Display	Display the work center in the same way as in transaction CR03.

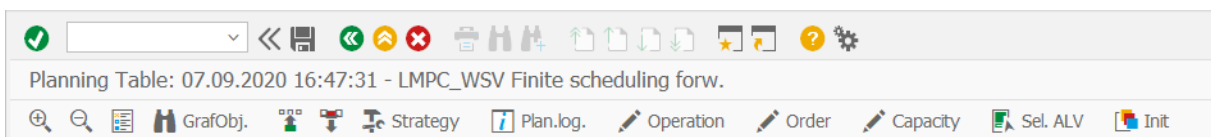
Menu	Function	Description
	Capacity -> Display -> Change Shift + F8	Jump to the display or change of the capacity.
	Person -> Display -> Qualification -> Time Events	Jump to the data on persons.
	Order -> Create -> Display -> Change Shift + F7 -> Sequence Number -> Partial Lot	Branch to creating an order, displaying or changing the selected order. You can also enter the sequence number and form partial lots.  <a href="#">Creation of Simulative Orders [page 36]</a>
	Operation -> Display -> Change Shift+F6 -> Components -> Prod.Resource/Tool -> Inspection Characteristics	Branch to operation of a production order or process order. This function is not possible for planned orders.
	Back F3	Exit planning. If there is unsaved data, the planning table asks whether the data should be saved.
Settings	Strategy... F5	Display and selection of the strategy profile for planning with change option.
	Scale -> Yearly Split -> Monthly Split -> Weekly Split -> Daily Split -> Hourly Split -> Variable	Conversion of the scale for the display.



Menu	Function	Description
	Break Times -> Show -> Hide	Show or hide times without available capacity.
	Time Line -> On -> Off	Activate or deactivate the time line for the mouse pointer when moving over the graphic.
	Select -> Table Objects -> Inverse -> Color Marking	Marking with inverse colors or with the standard color marking.
	Select -> Diagram Objects -> Pick Marking -> Bordered -> Inverse -> Color Markers	Select the colored highlighting of bars. There are various options.
	View -> Zoom In Shift+F11 -> Zoom Out Shift+F12 -> Adjust Chart Area	Functions for influencing the display of the graphic. Enlarge, reduce, and display the entire time period on the GUI width.
	Display Profiles	Display the overall profile of the capacity planning table with the option of branching to the subprofiles.
System		Standard SAP GUI functions.
Help	Application help and other help	You can choose "Application Help" to go to the online documentation for LMPC.

### Application Toolbar

Above the graphic, there are two application toolbars that can be used to execute different functions. Here, you can execute standard functions of the capacity planning table as well as functions of the HJPT planning table. There is a pushbutton for each function. For some functions, it is also possible to execute the respective function using a keyboard shortcut.



Pushbuttons

In the top bar next to the command field, there are the following buttons:

Commands in Menu Bar

Function	Keyboard Command
Save	Ctrl + S
Return	F3
Exit	Shift + F3
Cancel	F12
Create New Session	-
Create Shortcut	-
Help Function	F1
Customize Local Layout	Alt + F12

These functions are standard functions of the SAP GUI.

Below the top menu bar is the title of the transaction, and below that the second application toolbar.

The second application toolbar contains a mixture of standard functions of the capacity planning table and HJPT action codes. A maximum of 12 HJPT action codes can be displayed as pushbuttons on the bar.

In the LMPC test profiles, two of the 12 possible locations are already prefilled with the functions: "Select Operations in ALV Grid" and "Reset All Windows".

The functions of the second application toolbar refer to the graphic. This means that for certain functions, such as changing an order or dispatching and deallocating, the bars must first be selected before the respective function can be executed.

#### → Tip

You can select several bars by holding down the SHIFT key when you click the bars.

#### → Remember

The HJPT action codes for the application toolbar are created via Customizing with the trigger "Menu Bar Graphical Planning Table". For details on the triggers, see the LMPC Configuration Guide. [Action Code Trigger](#)

The following table provides an overview of the functions with their respective keyboard shortcuts.

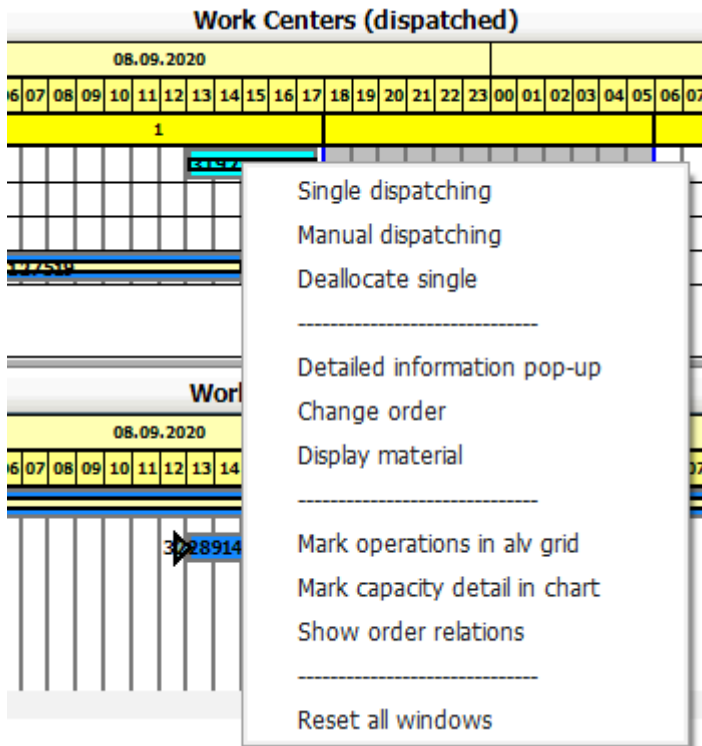
Function	Keyboard Command
Enlarge	Shift + F11
Zoom Out	Shift + F12
Display Legend	Shift + F1
Set Time Line of Graphic to Selected Object	Shift + F9
Dispatch Operation	F5
Deallocate Operation	F6

<b>Function</b>	<b>Keyboard Command</b>
Change Strategy Profile	F7
Display Planning Log	F8
Change Operation	Shift + F6
Change Order	Shift + F7
Change Capacity	Shift + F8
Select Operations in ALV Grid	Ctrl + Shift + F1
Reset All Windows	Ctrl + Shift + F2
Empty Item for HJPT Action Code	Ctrl + Shift + F3
Empty Item for HJPT Action Code	Ctrl + Shift + F4
Empty Item for HJPT Action Code	Ctrl + Shift + F5
Empty Item for HJPT Action Code	Ctrl + Shift + F6
Empty Item for HJPT Action Code	Ctrl + Shift + F7
Empty Item for HJPT Action Code	Ctrl + Shift + F8
Empty Item for HJPT Action Code	Ctrl + Shift + F9
Empty Item for HJPT Action Code	Ctrl + Shift + F10
Empty Item for HJPT Action Code	Ctrl + Shift + F11
Empty Item for HJPT Action Code	Ctrl + Shift + F12

### **Context Menu**

You can use the context menu of a bar to execute HJPT action codes for the operation of this order.

You access the context menu by selecting a bar and then right-clicking.



Context Menu Graphic Bar

The action codes displayed depend on the Customizing settings of the context profiles for the HJPT overall profile. In the delivered sample profiles, action codes are already preset for the context menu of the graphic bars.

→ Remember

The HJPT action codes for the context menu are created using Customizing with the trigger "Context Menu Graphic Bar". For details on the triggers, see the LMPC Configuration Guide. [Action Code Trigger](#)

### 2.3.4.1 Creation of Simulative Orders

**Use**

This function enables you to create simulative production and process orders. The orders are simulative because they do not yet exist in the database. The system does not write the orders to the database until you choose Save.

If you discard the planning without saving, for example by reloading the data, the simulative orders are lost.

**! Restriction**

It is not possible to create simulative planned orders.

This function is a generic function of the capacity planning table. The HJPT action codes have not been aligned with this function. Therefore, if one of the HJPT action codes or data providers with simulative production or process orders does not work, this is not an error, but a function that is not supported.

The following functions cannot be used in conjunction with simulative orders:

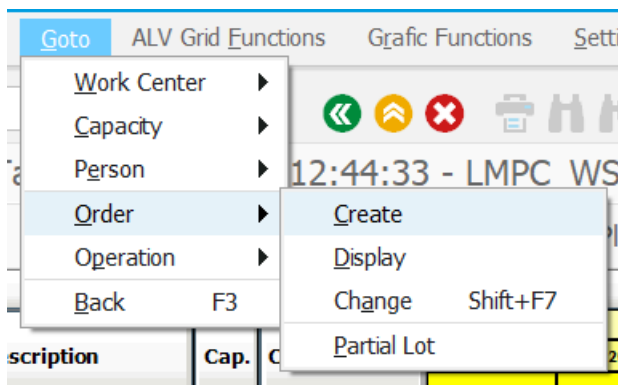
- LMPC HJPT pool IDs that are assigned to simulative orders cannot be saved. All functions that use the LMPC HJPT pool ID must not be used with simulative orders. [Planning with Pool ID \[page 216\]](#)
- The HJPT firming indicator cannot be saved for simulative orders and must therefore not be used for these orders. [S\\_FIX, S\\_FIXE Firm and remove firming of orders \[page 301\]](#)
- The LMPC HJPT order text cannot be saved for simulative orders and must not be used with these orders. [S\\_CORTXT LMPC HJPT Order Text \[page 290\]](#)
- Tasks cannot be saved for simulative orders and cannot be used with simulative orders either. [S\\_MCFMEA S\\_MCFCOM S\\_MCFRES, Tasks, Comments, Resubmissions \[page 309\]](#)
- Since simulative orders do not yet exist in the database, transaction calls for these orders do not work. [Transaction Calls \[page 267\]](#)
- Mass processing calls must not be used for simulative orders because these orders do not exist in the database and are lost as a result of the required reload. [Action Codes for Mass Processing \[page 257\]](#)
- The calculation of order relations and requirement date does not work for simulative orders. The order relations chart also does not work. [Data Provider /LMPC/CL\\_DP\\_BED LMPC Requirement Date and Order Relations \[page 336\]](#)
- Ranges of coverage and MDO4 exception messages cannot be determined. [Data Provider /LMPC/CL\\_DP\\_USER\\_001 Ranges of Coverage and Exception Messages \[page 386\]](#)

If you want to use a function that does not work with the simulative orders, save once. This writes the orders to the database. You can then use the orders as normal orders.

## Procedure

In the menu bar of the capacity planning table, select creation of orders.

Menu -> Goto -> Order -> Create.



Creating Order

The system displays a dialog box for querying the input parameters.

Create RS header

Material: LMPC\_FERT\_12

Reference Operation Set

Type:

Group:

Grp.Countr:

Plant: LM01

Order Type: PP01

Total Qty: 22

PC

Basic Dates

End: 10.05.2022

Start:

Assignments

Sales Order:

### Entering Values

Enter the required data and confirm your entry.

Result:

Alert	Lock HJPT frm.	Dispatched	Order Number	Disp. Se.	Ord. pool	OpAc	SOp	Material	Work ctr	Description	Op.	Qty	UoM	Earliest start	Earl.start
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	%000000000001			0010		LMPC_FERT_12	MA3	LMPC wst 3	22	PC	05.05.2022	09:00:00	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	%000000000001			0020		LMPC_FERT_12	MA4	LMPC wst 4	22	PC	07.05.2022	08:00:00	

### Newly Created Order

The operations of the newly created order appear in the ALV Grid. The order has a temporary order number. A sequence order number from the regular number range is only assigned once you have saved.

## 2.4 ALV Grid

### Overview of LMPC HJPT ALV Grid

Alert	Fr Order	OpAc	Category	Pl Material	Order pool	Nu...	ID	Cat	Work ctr	Short description	Cat.	Plant	SOp	Operation	Quantity	UoM	Res	Start time gap	Free cap.	Earliest start
	X 3127525	0020	2	LMPC_FERT_34	888		10004789	001	MA1	LMPC wst 1	LM01	LM01			10	PC	LM1	00:00:00		01.02.2020
	X 3127581	0010	2	LMPC_HALB_12			10004789	001	MA1	LMPC wst 1	LM01	LM01			6	PC	LM1	00:00:00		15.01.2020
	60008262	0010	1	LMPC_HALB_12			10004789	001	MA1	LMPC wst 1	LM01	LM01			4	PC	LM1	00:00:00		15.01.2020
	X 3127586	0010	2	LMPC_HALB_12			10004789	001	MA1	LMPC wst 1	LM01	LM01			14	PC	LM1	00:00:00		16.01.2020
	X 3127582	0010	2	LMPC_HALB_12			10004789	001	MA1	LMPC wst 1	LM01	LM01			4	PC	LM1	00:00:00		16.01.2020
	X 3127583	0010	2	LMPC_HALB_12			10004789	001	MA1	LMPC wst 1	LM01	LM01			4	PC	LM1	00:00:00		16.01.2020

Example LMPC HJPT ALV Grid

One of the three subareas of the HJPT planning table is the ALV Grid.

The ALV Grid contains the data for the operations of the orders that are open in the HJPT planning table.

There is one line in the ALV Grid for each capacity requirement of an operation on a capacity.

A large number of fields are available in the ALV Grid of the HJPT planning table. The layout settings of the ALV Grid determine which fields are displayed.

You use layouts to define which are displayed.

The LMPC delivery delivers two test layouts that show examples of a field selection:

- /LMPC\_T01
- /LMPC\_T02

You can define and save your own layouts.

Layouts can be saved for all users (standard layout) or on a user-specific basis for the individual user.

Standard layouts that are valid for all users begin with a slash. User-specific layouts begin with a letter.

Save Layout ✕

Save As... Save with

Layout	Layout description	Default setting
<u>/LMPC_T01</u>	<u>LMPC test layout 1</u>	✓
<u>/LMPC_T02</u>	<u>LMPC test layout 2</u>	
<u>/ZMTHDEMO</u>	<u>MTH Layout for Demos</u>	
<u>D056579</u>	<u>LMPC Test Layout D056579</u>	✓

Save Layout D056579

Name:

User-specific  Default setting



### Saving Layouts

You can use the selection field for the default setting to save layouts as initial variants. When you open the planning table, the saved initial variant is selected automatically. The following rule applies: User-specific initial variant before variant for all users.

Layouts can be grouped together. Groups of layouts can be assigned to an HJPT profile so that the layouts are only available to users for a specific HJPT overall profile.

These functions are standard functions of ALV Grids.

In the HJPT planning table, it is also possible to predefine a layout for an HJPT profile. If a layout is predefined, this overrides all other settings. The layout is therefore predefined for all users for this HJPT overall profile.

It is also possible to protect layouts against changes. The respective layout can then no longer be changed by the user.

For the description of grouping, predefining, and protecting ALV Grid layouts, see the LMPC Configuration Guide. [Parameter Settings for the HJPT ALV Grid](#)

The data in the displayed fields is filled using data providers. The data providers and the available data are described in a separate section of the documentation. [LMPC HJPT Data Provider \[page 330\]](#)

The fields of the ALV Grid can be colored using rules in Customizing. This means that you can increase the clarity and make the planner aware of problematic situations. For example, if the requirements date is not met, the field is colored red. [Coloring the ALV Grid \[page 44\]](#)



The configurable toolbar is above the ALV Grid. The buttons in the toolbar can be used to call the functions of the HJPT planning table, which are known as action codes. [Action Code Call Using Buttons in ALV Grid \[page 49\]](#)

Functions can be executed for selected data records in the ALV Grid using keyboard commands. [Action Code Call Using Keyboard Commands \[page 50\]](#)

By right-clicking on the fields of the ALV Grid, you can call the functions of the context menu. Action codes can also be defined here. [Action Code Call via the Context Menu \[page 52\]](#)

By double-clicking or clicking the hotspot on certain fields of the ALV Grid, you can call additional action codes. For example, you can navigate to the material master display using the material number. [S\\_DBCLCK Double-Click and Hotspot Click on Fields in the ALV Grid \[page 298\]](#)

The function options in the HJPT planning table are described in the action codes section. [Action Codes - Functions of the HJPT Planning Table \[page 69\]](#)

## 2.4.1 Layout Groups

Grouping of HJPT Fields of ALV Grid

Currently, more than 1100 fields are available in the ALV Grid of the HJPT planning table.

To make it easier to find fields, ALV Grid layout groups were created.

The following groups are available:

<u>A</u> ll
<u>C</u> apacity Requirement
<u>C</u> ap. Req. Header
<u>P</u> lanned Order
<u>P</u> roduction Order
<u>O</u> rder Operation
<u>P</u> roduction Version
<u>P</u> roduction Resources/Tools
<u>A</u> TP and Status
<u>M</u> aterial Master
<u>P</u> lant Mat.
<u>M</u> aterial Classification
<u>M</u> D04 Data
<u>S</u> tock Information
<u>R</u> outing and Recipe
<u>B</u> OM Data
<u>W</u> ork Center
<u>C</u> apacity
<u>P</u> erson
<u>T</u> imetable
<u>S</u> ales Doc.
<u>P</u> roject System
<u>K</u> anban
<u>M</u> easures
<u>D</u> ate, Time, Number
<u>U</u> ser Fields
<u>H</u> JPT Auxiliary Fields

#### HJPT Layout Groups

The LMPC documentation does not explain every available field of the ALV Grid.

Most of the fields come from the data tables of the capacity planning table. These standard fields are not described.

In addition to the standard fields, the data providers are used to read additional information. The description of the additional fields can be found in the individual chapters for the data provider. [LMPC HJPT Data Provider \[page 330\]](#)

Since the data records in the ALV Grid are based on the capacity requirements of the order operations, the “Capacity Requirements” group is particularly important for planning in the HJPT planning table.

The temporal position of the operations can be read from the fields for the capacity requirements dates. There are fields for the earliest date and fields for the latest date. Both dates are always calculated in scheduling.

If a wait time is maintained in an operation, the date fields differ.

The start times of the latest date start only after the wait time. Meaning an operation must wait before production is started. The wait time cannot be reduced for the latest date. It is not possible to reduce the wait time for the latest date in a dispatching function to start an operation earlier. This is only possible manually by, for example, changing the wait time entered in the operation of the production order before dispatching.

The earliest date of the operations is calculated in PP using backward scheduling with reference to the latest date. It is possible to reduce the wait time. To do this, a reduction is set in the strategy profile used during dispatching. For the explanation of configuring the strategy profile, see the LMPC Configuration Guide.

[Configuration of Strategy Profiles](#)

Which date you use for your production planning is a decision about how to model your processes. An LMPC consultant can be of assistance.

In the HJPT planning table, the bars display the position of the operations according to the latest date. The related fields in the ALV Grid are:

- Latest start/date
- Latest start/time
- Latest end/date
- Latest end/time

If you have not set a wait time for production orders and PP planned orders, these times in these fields are identical to the times of the earliest dates. These can be found in the following fields:

- Earliest start/date
- Earliest start/time
- Earliest end/date
- Earliest end/time

It is possible to display the start time of the earliest date in the graphic. To do this, show additional graphical elements. For the explanations on this, see the LMPC Configuration Guide, in the following section: [Additional Graphic Symbols](#)

#### → Remember

The application updates the fields of the capacity requirements for each planning activity. Other fields that are additionally read can only be updated by saving, for example. This is different for each field. For example, for the basic dates of orders, it depends on the scheduling settings whether the fields are updated during planning or only when planning is saved.

With your LMPC HJPT delivery, you receive sample layouts for the ALV Grid that show the most important fields for planning.

If you have any questions about available data or the correct field selection, please contact your LMPC consultant.

#### ! Restriction

The system does not supply all the fields of the ALV Grid with data. Since standard structures of the standard SAP system were used in the definition of the basic structure of the ALV Grid, there are fields that are not filled with data. This is not an error, it is due to the architecture of the solution.

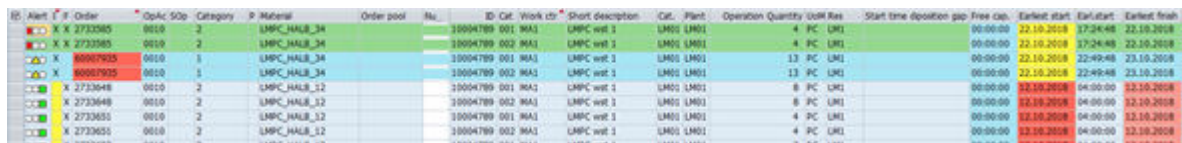
## → Tip

It is possible to create your own groups and to sort fields there. For instructions on this, see the LMPC Configuration Guide. [Transaction /LMPC/GRP Group ALV Grid Fields in Layout Groups](#)

It is possible to rename fields and remove them from the field list. For instructions on this, see the LMPC Configuration Guide. [Adjusting ALV Grid Columns in Transaction /LMPC/FLD](#)

## 2.4.2 Coloring the ALV Grid

The ALV Grid can be colored using freely configurable rules. Individual fields or entire rows can be colored, depending on the data in the ALV Grid.



Item	Order	QdAc	SOs	Category	P	Material	Order pool	No.	ID	Car	Work ct	Short description	Car.	Plant	Operation	Quantity	Unit	Res	Start time	Position	gao	Free cap.	Earliest start	Earl.start	Earliest finish
X	X	2732585	0010	2		LMPC_HALB_34			30004789	001	MA1	LMPC wst 1	LM01	LM01		4	PC	LM1	00:00:00			00:00:00	22.10.2018	17:24:48	22.10.2018
X	X	2732585	0010	2		LMPC_HALB_34			30004789	002	MA1	LMPC wst 1	LM01	LM01		4	PC	LM1	00:00:00			00:00:00	22.10.2018	17:24:48	22.10.2018
X	X	40007925	0010	1		LMPC_HALB_34			30004789	001	MA1	LMPC wst 1	LM01	LM01		13	PC	LM1	00:00:00			00:00:00	22.10.2018	22:49:48	23.10.2018
X	X	40007925	0010	1		LMPC_HALB_34			30004789	002	MA1	LMPC wst 1	LM01	LM01		13	PC	LM1	00:00:00			00:00:00	22.10.2018	22:49:48	23.10.2018
X	X	2733648	0010	2		LMPC_HALB_32			30004789	001	MA1	LMPC wst 1	LM01	LM01		8	PC	LM1	00:00:00			00:00:00	22.10.2018	04:00:00	22.10.2018
X	X	2733648	0010	2		LMPC_HALB_32			30004789	002	MA1	LMPC wst 1	LM01	LM01		8	PC	LM1	00:00:00			00:00:00	22.10.2018	04:00:00	22.10.2018
X	X	2733655	0010	2		LMPC_HALB_32			30004789	001	MA1	LMPC wst 1	LM01	LM01		4	PC	LM1	00:00:00			00:00:00	22.10.2018	04:00:00	22.10.2018
X	X	2733655	0010	2		LMPC_HALB_32			30004789	002	MA1	LMPC wst 1	LM01	LM01		4	PC	LM1	00:00:00			00:00:00	22.10.2018	04:00:00	22.10.2018
X	X	3993683	0010	1		LMPC_HALB_18			30004789	001	MA1	LMPC wst 1	LM01	LM01		1	PC	LM1	00:00:00			00:00:00	22.10.2018	04:00:00	22.10.2018

Example of a Colored ALV Grid

There are two data providers for coloring the fields of the ALV Grid:

- [Data Provider /LMPC/CL\\_DP\\_COLOR ALV Grid Classic Color Customizing \[page 351\]](#)
- [Data Provider /LMPC/CL\\_DP\\_COLOR\\_FORMULA ALV Grid Color Customizing with Formulas \[page 353\]](#)

For a description of using coloring, see the sections for the respective data providers.

## 2.4.3 Sorting the ALV Grid List

Sorting the LMPC ALV Grid

### Prerequisite

The layout settings of the ALV Grid determine which fields the ALV Grid list is sorted by.

### Use

The ALV Grid list can be sorted in two different ways.

- Automatically when calling and updating the HJPT planning table
- Manually by dragging and dropping

Sorting the ALV Grid data records improves clarity.

For dispatching and rescheduling functions, this sequence is used to determine the sequence for dispatching. For many dispatching functions, the selected orders are dispatched in the sequence in which they are sorted in the ALV Grid.

### Procedure

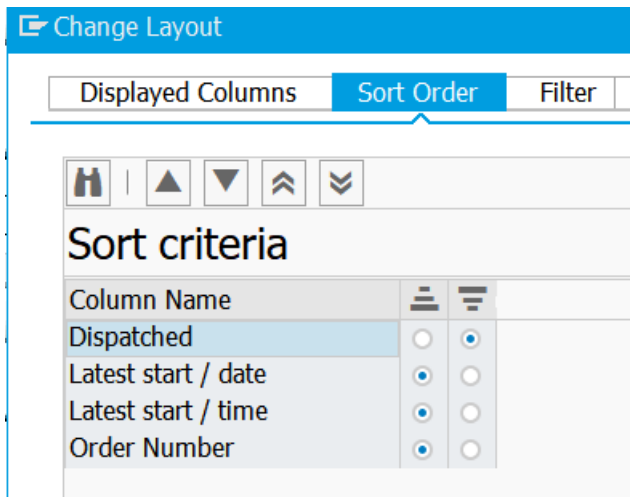
#### Automatic Sorting

Automatic sorting is carried out using the layout settings of the ALV Grid.

All fields available in the layout can be used.

In the header bar of the ALV Grid, call the layout settings and call the “Sorting” tab page.

The LMPC HJPT test profiles provide an example sort setting.



Sorting Example

In the example, sorting is carried out according to the following fields:

- Dispatching status
- Latest start date for the capacity requirement
- Latest start time for the capacity requirement
- Order number

You can adjust the sort settings as required. You can save them using the layout.

When you call the HJPT planning table, the preset layout settings are called. If no user-specific layout is saved, the settings are read from a general layout.

#### → Tip

You can use the settings for the HJPT profile to predefine a layout. This setting overrides all user-specific predefined profiles. For details on this, see the LMPC Configuration Guide. [Parameter Settings for the HJPT ALV Grid](#)

If you want to arrange the data in the ALV Grid according to the predefined sorting, you can do this in four ways:

- Sort the data using the action code S\_SORT.
- Refresh the data using the action code S\_REFR.
- Save the data in the SAP GUI or using the action code S\_SAVE.
- Reload the data using the action code S\_RELOAD.

Note that sorting has an effect on the LMPC planning functions since the data records are transferred to the functions according to the sorting sequence.

### Manual Sorting

You can sort the rows in the ALV Grid manually by selecting rows and moving them by dragging and dropping them.

In this way, you create your own manual sequence. The operations are transferred to the relevant planning function in this sequence.

### → Remember

When you refresh the data, the manually created sequence is lost because the data records are then sorted according to the sort criteria of the ALV Grid.

Select one or more rows in the ALV Grid:

Alert	Dispatched	F...	Last action	CTC	Order pool	Lock	Sequence	Order Number	OpAc	Cat	Material	Mat.Grp	Work ctr	Order Quantity	UoM	Earliest start	Earl.start
●○○	X							3228909	0010	001	LMPC HALB 12	GRH12	MA1	329	PC	07.09.2020	06:00:00
●○○	X							3222005	0010	001	LMPC HALB 12	GRH12	MA1	77	PC	11.09.2020	16:24:00
○△○	X							3192544	0030	001	LMPC HALB 1234	GRH34	MA1	22	PC	12.09.2020	13:25:00
●○○	X							3228914	0010	001	LMPC HALB 12	GRH12	MA1	8	PC	12.09.2020	13:06:00
●○○	X							3192663	0010	001	LMPC HALB 12	GRH12	MA1	33	PC	12.09.2020	17:36:00
●○○	X							3222003	0010	001	LMPC HALB 12	GRH12	MA1	3	PC	14.09.2020	14:36:00
●○○	X							3222006	0010	001	LMPC HALB 12	GRH12	MA1	33	PC	14.09.2020	17:36:00
○△○	X							3127518	0010	001	LMPC FERT 12		MA1	90	PC	15.09.2020	10:37:30
●○○	X							3228912	0010	001	LMPC HALB 12	GRH12	MA1	18	PC	15.09.2020	10:06:00
●○○	X							3228910	0010	001	LMPC HALB 12	GRH12	MA1	14	PC	15.09.2020	11:18:00

Selection

Drag it to the desired position. To do this, click on one of the selection fields at the left-hand edge, hold down the mouse button, and move the rows to the desired position. Then release the mouse button.

Alert	Dispatched	F...	Last action	CTC	Order pool	Lock	Sequence	Order Number	OpAc	Cat	Material	Mat.Grp	Work ctr	Order Quantity	UoM	Earliest start	Earl.start
●○○	X							3228909	0010	001	LMPC HALB 12	GRH12	MA1	329	PC	07.09.2020	06:00:00
●○○	X							3222005	0010	001	LMPC HALB 12	GRH12	MA1	77	PC	11.09.2020	16:24:00
●○○	X		📦					3222003	0010	001	LMPC HALB 12	GRH12	MA1	3	PC	14.09.2020	14:36:00
●○○	X		📦					3222006	0010	001	LMPC HALB 12	GRH12	MA1	33	PC	14.09.2020	17:36:00
○△○	X		📦					3127518	0010	001	LMPC FERT 12		MA1	90	PC	15.09.2020	10:37:30
○△○	X							3192544	0030	001	LMPC HALB 1234	GRH34	MA1	22	PC	12.09.2020	13:25:00
●○○	X							3228914	0010	001	LMPC HALB 12	GRH12	MA1	8	PC	12.09.2020	13:06:00

Result of Move

Result: The data has been moved to the desired position. When the data records are moved, they remain selected so that an action code can be executed on them if necessary. The "Last Action" field displays a drag and drop icon for identifying the moved records.

### i Note

You can only move operations if the work center of the selected operations is identical to the target operation work center that you are moving these operations to. It is only possible to move operations within work centers. If you want to use manual sorting and have several work centers open in the HJPT planning table, it is recommended that you sort the data records by work center. This makes it easier to work with the function.

## 2.4.4 Work Center Filter

### Filtering Data by Work Center

In addition to the generic filter functions of the ALV Grid, there is also an LMPC function for filtering on work centers. You can use this function to filter the data records in the ALV Grid for a single work center. All data records of other work centers are then hidden.

### ⚠ Caution

- The filter only influences the ALV Grid. All order operations are still displayed in the graphic.
- The selected work center filter is saved so that this filter is automatically set again when you enter the LMPC planning table at a later point in time.
- This function should be used with caution. It is only useful for small to medium data volume. This function should not be used to call the HJPT planning table with a plant selection so that you can set a filter for each work center for processing. This is possible, but is not recommended explicitly by LMPC development because an unnecessary volume of data is loaded. If you enter a plant selection in the HJPT planning table, this can result in very long runtimes. Long runtimes for a large data selection are not a performance problem; this is normal runtime behavior.
- It is recommended that you use the HJPT auto start function [Transaction /LMPC/HJPT\\_AS LMPC HJPT Planning Table Autostart \[page 16\]](#) instead of the work center filter. Here, you can also switch between different work centers. However, only the amount of data that is actually required is loaded at the time of the auto start.

## Example

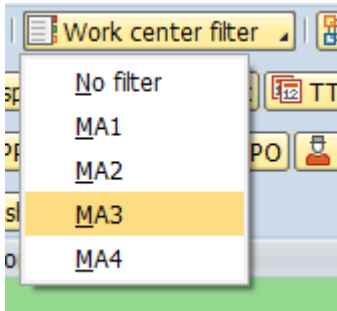
Data records have been loaded for 4 work centers:

Alert	F	Work ctr	Order	Order text	Cat	C..	Material	OpAc	SC
		MA3	60008100		1	10	LMPC_FERT_34	0010	
	X	MA3	2758703		2		LMPC_FERT_12	0010	
	X	MA3	2928626		2		LMPC_FERT_12	0010	
	X	MA3	2928627		2		LMPC_FERT_12	0010	
	X	MA3	2928628		2		LMPC_FERT_12	0010	
	X	MA4	2928627		2		LMPC_FERT_12	0020	
	X	MA3	2758707		2		LMPC_FERT_12	0010	
	X	MA4	2758707		2		LMPC_FERT_12	0020	
	X	MA4	2928628		2		LMPC_FERT_12	0020	

Example Work Center Filter Initial Situation

The planner wants to work only with the data records for work center MA3.

Selecting the work center filter using the relevant button in the ALV Grid:



Selection of Work Center Filter

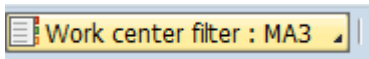
Result:

Alert	F	Work ctr	Order	Order text	Cat	C...	Material	OpAc
		MA3	60008100		1	10	LMPC_FERT_34	0010
	X	MA3	2758703		2		LMPC_FERT_12	0010
	X	MA3	2928626		2		LMPC_FERT_12	0010
	X	MA3	2928627		2		LMPC_FERT_12	0010
	X	MA3	2928628		2		LMPC_FERT_12	0010
	X	MA3	2758707		2		LMPC_FERT_12	0010
	X	MA3	2758707		2		LMPC_FERT_12	0010

Work Center Filter Result

Only order operations for this work center are displayed.

The button for the work center displays the filter:

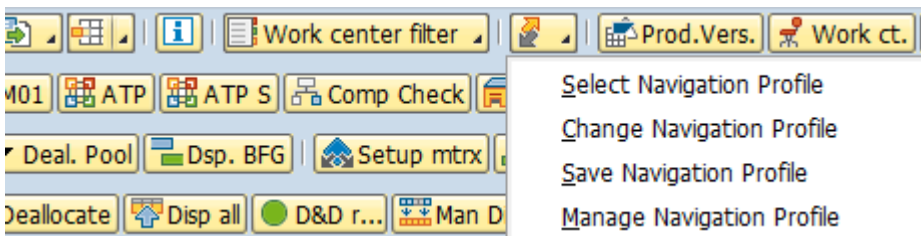


Active Work Center Filter

## 2.4.5 Navigation Profiles

Individual Configuration of ALV Grid Menu Bar and ALV Grid Context Menu

Navigation profiles create an option for adjusting the menu bar of the ALV Grid and the context menu to meet the requirements of the planner.



Selection of Navigation Profile

To be able to use navigation profiles, they must be activated in Customizing for the HJPT overall profile. After lockout/tagout, the button for the navigation profile is next to the standard functions of the ALV Grid as the first or second button. (As a second button, if the optional work center filter is also activated).



For details on configuring the navigation profiles, see the LMPC Configuration Guide. [ALV Grid Navigation Profiles](#)

The advantage of using navigation profiles is that each user can assemble the action codes they need for their daily work.

This allows a user to structure the toolbar above the ALV Grid and the context menu of the ALV Grid itself.

Users with different tasks can use the same HJPT overall profile and only see the functions that are important for them.

In addition to the HJPT action codes, you can add any SAP transactions to the navigation profiles.

#### → Tip

##### **HJPT Planning Table as Central Work Cockpit.**

Navigation profiles allow the individual planner to individually configure the function selection.

This enables the planner to make their own work cockpit from the HJPT planning table, from which all transactions for daily work are accessed.

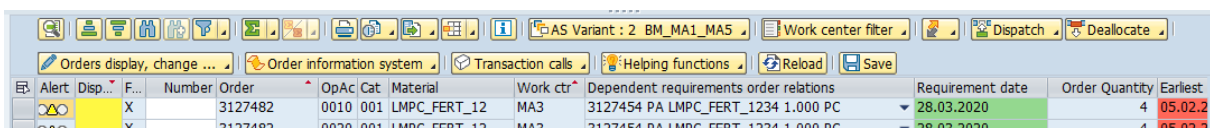
In conjunction with transaction /LMPC/HJPT\_AS for starting the HJPT planning table automatically, the user need only click to start working. [Transaction /LMPC/HJPT\\_AS LMPC HJPT Planning Table Autostart \[page 16\]](#)

## 2.4.6 Action Code Call Using Buttons in ALV Grid

Arrangement of Action Codes Above the ALV Grid

The row with buttons for executing LMPC HJPT functions is located above the ALV Grid. In addition to the standard functions of the ALV Grid, such as sorting, filtering, and so on, the buttons for the LMPC HJPT action codes are displayed.

The functions of the HJPT planning table can be displayed individually or as a group.

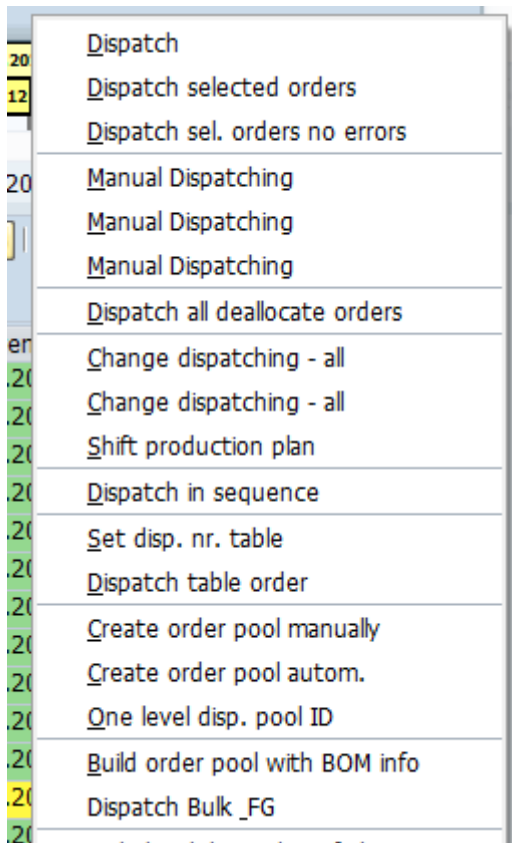


Example of Arrangement of Action Codes

In this example, the functions for reloading the data and saving the data are set to individual buttons. This is also possible for all other LMPC action codes.

All other action codes are grouped according to their functionality in this example.

For example, all the functions for dispatching are behind the Dispatch button.



Grouped Action Codes

The advantage of grouping is that the number of function keys above the ALV Grid can be reduced and therefore display space can be saved.

Whether the LMPC HJPT action codes are displayed or grouped as individual buttons depends on the Customizing settings. The settings are made using the action code triggers.

For details, see the LMPC Configuration Guide. [Action Code Trigger](#)

## 2.4.7 Action Code Call Using Keyboard Commands

Keyboard Commands for HJPT Action Codes

To process operations in the HJPT planning table using the ALV Grid, you can map HJPT action codes to keyboard commands.

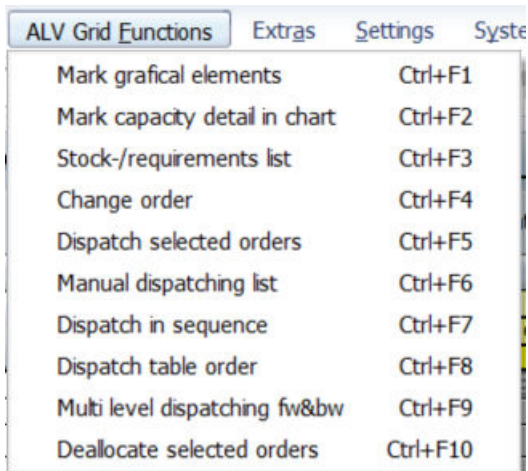
This simplifies and accelerates the execution of action codes. After the operations have been selected in the ALV Grid, the keyboard is executed for the desired action code.

Action codes are assigned to the toolbar commands using action code triggers. For detailed information, see the section on action code triggers in the LMPC Configuration Guide. [Action Code Trigger](#)

The LMPC example profiles provide suggestions for configuration.

You can find out which action codes are mapped to each of the keyboard commands via the menu of the HJPT planning table.

Menu -> ALV Grid Functions.



ALV Grid Functions Using Keyboard Commands

You can also find this information:

- In the quick info for the action code button in the menu bar of the ALV Grid.
- In the function text of the action codes for dropdown function keys in the menu bar of the ALV Grid.
- In the context menu for calling action codes via the operations in the ALV Grid.

#### → Remember

If you are using a navigation profile, enter the keyboard command manually in the quick info text, as this is not filled automatically.

A maximum of 12 HJPT action codes can be mapped to keyboard commands.

In the example profiles, the keyboard commands are mapped as follows:

Keyboard Commands in Example Configuration

Keyboard Command	Action Code
Ctrl + F1	S_MAGR
Ctrl + F2	S_SELCAP
Ctrl + F3	S_MD04
Ctrl + F4	S_AK02
Ctrl + F5	S_EPSEL
Ctrl + F6	S_MANPL
Ctrl + F7	S_EPSEQ
Ctrl + F8	S_EPTBSQ
Ctrl + F9	S_EPML
Ctrl + F10	S_APSEL
Ctrl + F11	Not mapped
Ctrl + F12	Not mapped

## 2.4.8 Action Code Call via the Context Menu

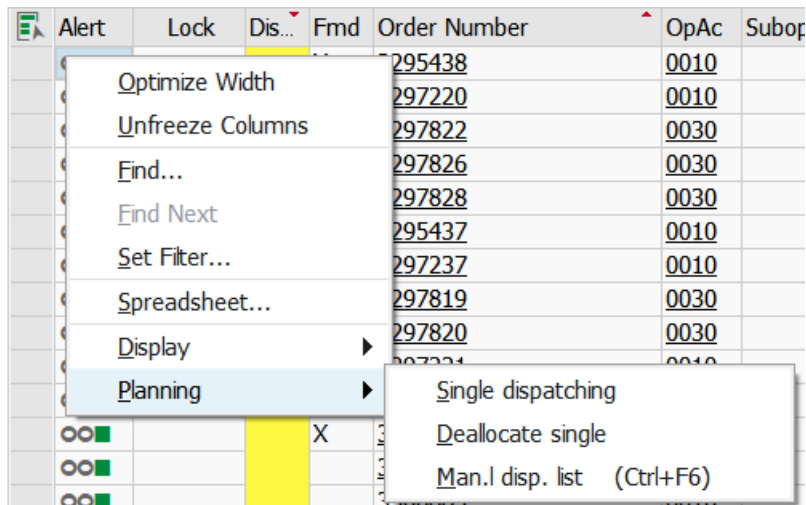
It is possible to define functions of the HJPT planning table in the context profile of the ALV Grid.

To call the context profile, click in a field of the ALV Grid and then press the right-hand mouse button.

The sample profiles delivered for the HJPT planning table contain two menu options in the context profile:

- Display
- Plan

These menu options have further suboptions.



Sample Context Profile for Planning

You can assign any HJPT action codes to the menus.

To execute the respective function, use the mouse to select it.

The field of the data record that you clicked defines the data record that is processed with the selected function.

If you have selected several data records in the ALV Grid, you can also click in any field of these data records and execute the required function. The function is then executed for all selected data records.

## Related Information

[Action Code Trigger](#)

[Nested Context Profiles](#)

## 2.5 Additional Windows

Windows with Additional Information

Windows for displaying additional data are delivered for the LMPC planning table.

There are two windows:

- [Chart Window \[page 53\]](#)
- [Window for Completed Production and Process Orders \[page 67\]](#)

Various charts can be displayed in the window for the charts.

These are charts with additional information on the planning data, such as capacity load, development of the stocking situation, and the list of order relations.

The window for the data for completed production and process orders enables you to display data that is not available in the ALV Grid of the HJPT planning table.

The additional windows can be displayed either as a separate window or integrated in the main window. The display of charts is already configured in the delivered test profiles.

For instructions on showing additional windows, see the LMPC Configuration Guide. [HJPT Window Configuration](#)

### Related Information

[Chart Window \[page 53\]](#)

[Window for Completed Production and Process Orders \[page 67\]](#)

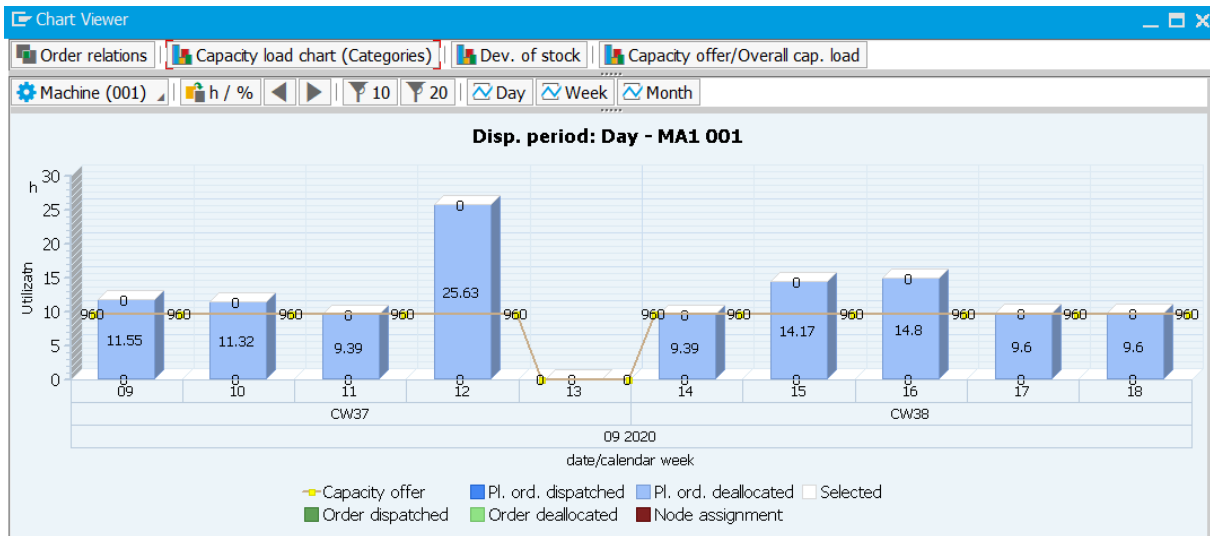
[HJPT Window Configuration](#)

[Transaction /LMPC/VIEW Settings for Additional Windows](#)

### 2.5.1 Chart Window

Additional window for charts.

In the HJPT planning table, there is a window for additional charts. It is possible to display up to four charts there.



Example of Windows with Charts

The following charts can be displayed:

- [Capacity Load \(Categories\) \[page 55\]](#)
- [Capacity Requirements \(Categories\) \[page 57\]](#)
- [Capacity Offer/Overall Capacity Load \[page 57\]](#)
- [Development of the Stocking Situation \[page 59\]](#)
- [List of Order Relations \[page 60\]](#)

For the settings for the charts, see the LMPC Configuration Guide. [Parameter Settings for Chart Window](#)

The window for charts can be displayed as a separate dialog box or integrated into the main window. In the LMPC HJPT sample profiles delivered, the window is displayed as a separate dialog box. For the settings for displaying windows, see the LMPC Configuration Guide. [HJPT Window Configuration](#)

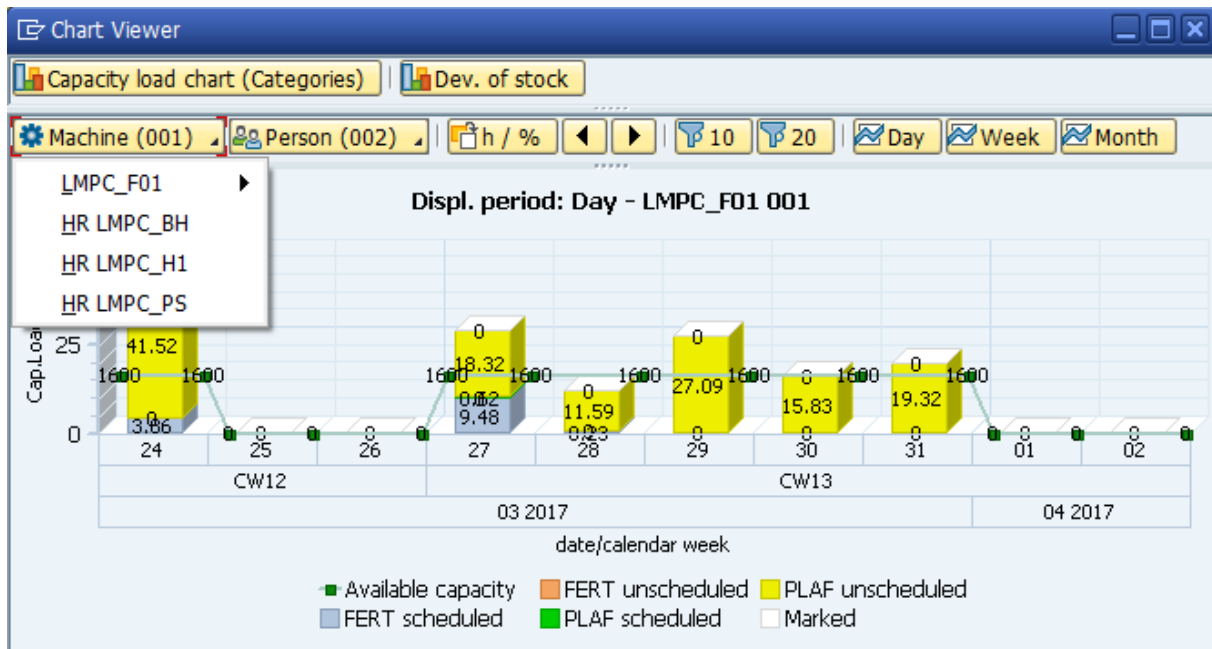
If the window is used as a dialog box, the planning table remembers the position and size of the window when you save. Saving takes place with reference to the user name and the HJPT overall profile. When you reload the data or access the planning table again, the window is displayed in the position in which it was last saved.

→ Tip

If you do not use the window all the time, it is recommended that you close the window and then save it. The window will then no longer open in the future. It can be reopened using the action code S\_RES\_CV.

[S\\_RES\\_CV Reset HJPT Window for Charts \[page 314\]](#)


## 2.5.1.1 Capacity Load (Categories)

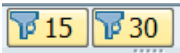


Capacity Load Chart

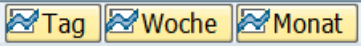
The chart shows the capacity load by category. A maximum of five categories can be configured in Customizing (see LMPC Configuration Guide [Transaction /LMPC/CUSTCAP Define Chart of Capacity Utilization Categories](#)). The capacity requirements for each period are represented by colored bars. The capacity offer is represented by a line. The load can be read by comparing the requirements and the offer.

Each capacity from the planning table selection can be accessed and switched by means of a button. If the corresponding setting has been made in Customizing, data can also be displayed aggregated over the work center hierarchies. A button with the label 'HR' plus the name of the hierarchy is displayed in the selection for each hierarchy ([HJPT Window Configuration](#)).

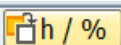
The display always starts with the current date. You can use the forward and backward buttons  to scroll forwards and backwards through time.

You can use the filter buttons  to change the display period. You can define the length of the display period in Customizing.

If you have made the corresponding Customizing settings, you can use the buttons Day, Week, Month

 to choose the data aggregation.

Whenever the display period is changed, the display is always reset to the current period. This is the current day, week, or month.

You can use the button h / %  to switch the axis for the load between hours and percent. Percentages are displayed in the chart as a number with two decimal places.

If you click on a bar in the chart, you select the related operations in the ALV Grid of the LMPC planning table.

Conversely, you can use the action code S\_SELCAP to display the capacity requirements of selected rows of the ALV Grid as a white bar range. [S\\_SELCAP Selecting Detailed Capacity List in the Chart \[page 254\]](#)

### ! Restriction

If bars were marked white using S\_SELCAP, these white bars cannot be used to select the data records in the ALV Grid by clicking them. Selecting data records in the ALV Grid only works for colored bars.

If the HISTORY parameter is set in Customizing, all requirements from the past are aggregated to the current date. The remaining offer for the current date is then also calculated to the exact minute.

The capacity load chart combines the data from the capacity requirements chart with the capacity offer chart.

An ALV Grid with key figures for the chart is displayed below the chart line. This key figure list can be hidden using Customizing settings.

The following key figures are displayed:

- Available capacity (h or %)
- Capacity load (h or %)
- Overload (h or %)
- Cumulative overload (h or %)
- Number of operations
- Number of orders

The cumulated overload adds the overload in the displayed area, not for the entire evaluation period.

The number of operations or orders counts the elements on their start day. If an operation or order is longer than one day, it is counted only on the start day.



## 2.5.1.2 Capacity Requirements (Categories)

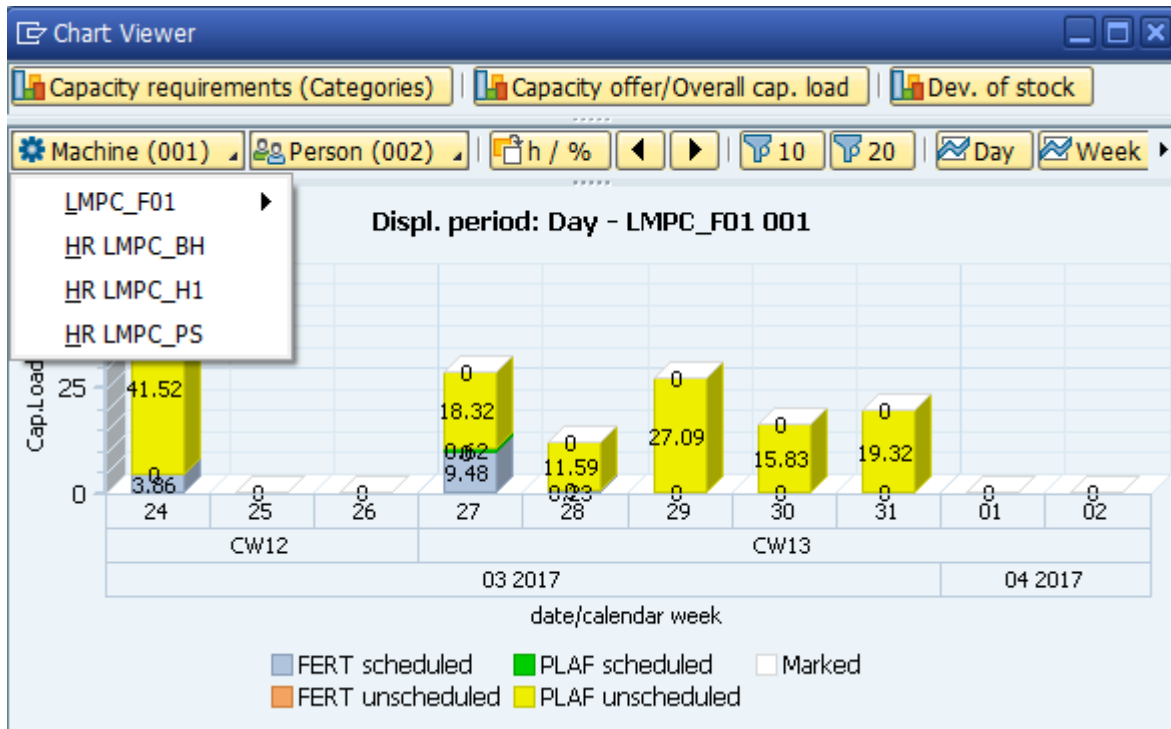
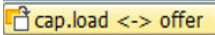


Chart of the Capacity Requirements

The chart shows the capacity requirements by category. A maximum of five categories can be configured in Customizing (see LMPC Configuration Guide). The chart has the same functionality as the chart for the capacity load. However, it does not have the line with the capacity offer.

## 2.5.1.3 Capacity Offer/Overall Capacity Load

This chart contains two display options.

You can use the key "Load<->Offer"  to toggle between the overall capacity load and the pure capacity offer.

All other keys have the same functionality as in the chart for the capacity load. [Capacity Load \(Categories\) \[page 55\]](#)

### Display of Capacity Offer

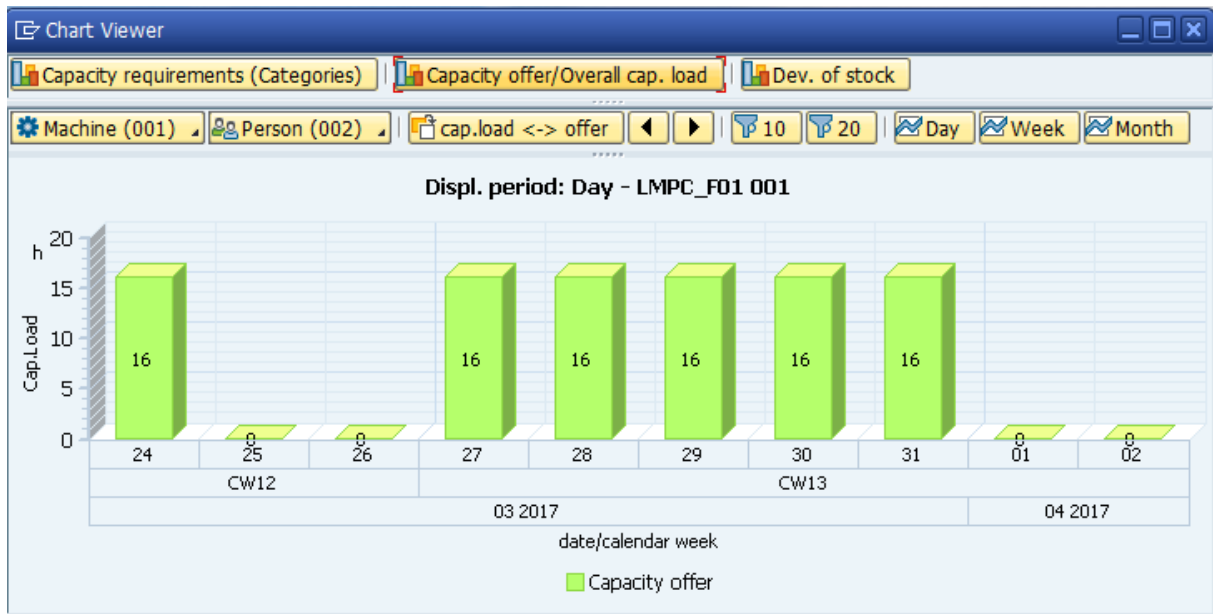


Chart of Capacity Offer

This chart shows the offer of the respective capacity per day. If the 'HISTORY' parameter is set in Customizing, the remaining offer for the current day is displayed; otherwise, the overall offer is displayed.

### Display of Overall Capacity Load

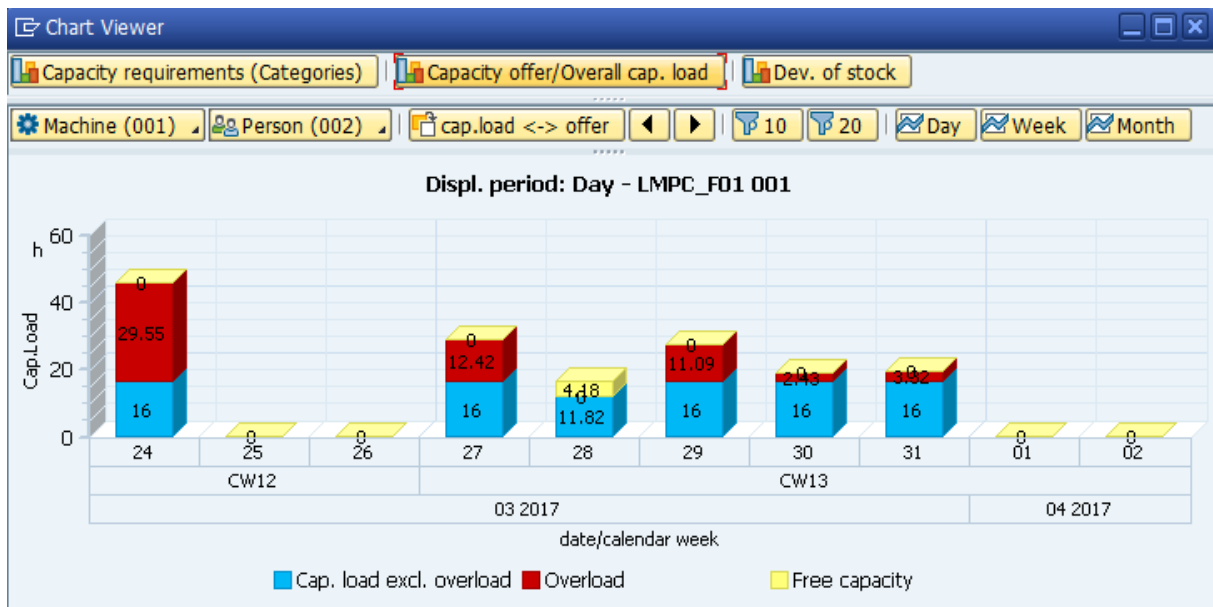


Chart for Overall Capacity Load

This chart shows three categories:

- The free, unused capacity (yellow bars).
- The requirement within the capacity offered (blue bars), which can also be described as normal load.
- The requirement that exceeds the capacity offered (red bars), which is called the overload.

The capacity requirement results from the operations that are scheduled at the respective work center. It does not matter whether an operation has been dispatched.

The assignment of which capacity requirement is counted for the load or overload results from the chronological sequence of the start time of the operations of orders. Depending on the distribution key set, sorting takes place according to either the earliest or latest start times of the capacity requirements.

Clicking on a blue bar in the chart selects the operations of the normal load belonging to the capacity requirement in the ALV Grid of the HJPT planning table.

Clicking on a red bar in the chart selects the overload operations belonging to the capacity requirement in the ALV Grid.

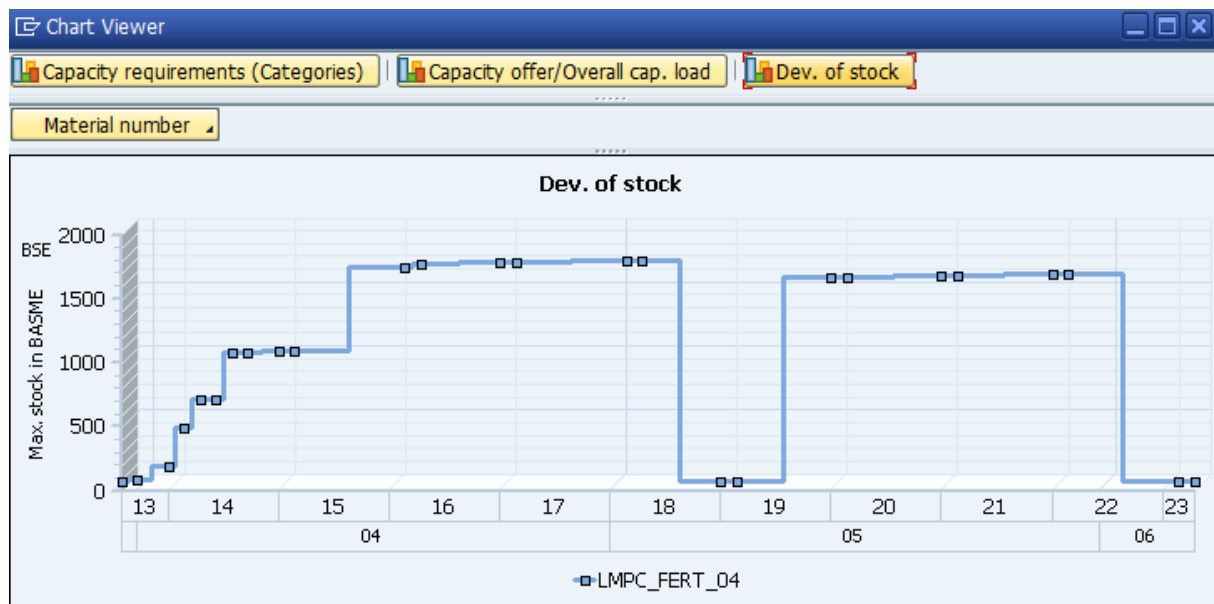
### → Remember

An operation can be counted as both normal load (blue) and overload (red) since the capacity requirements of an operation can exceed the available capacity offer. Therefore, clicking on a blue bar can select the same operation as clicking on a red bar.

### ! Restriction

The action code S\_SELFCAP, with which selected data records from the ALV Grid are marked in white in the chart, cannot be used for this chart. [S\\_SELFCAP Selecting Detailed Capacity List in the Chart \[page 254\]](#)

## 2.5.1.4 Development of the Stocking Situation



LMPC Development of the Stocking Situation

The development of the stocking situation for a selected material number is displayed over time.

The material stock is calculated from the material stock and the material requirement quantities of transaction MD04, against which the receipt quantities of the planned, production, and process orders are calculated that are open in the LMPC planning table.

The date of the MD04 list for the requirement element is used as the requirement dates for a material issue for the calculation.

The earliest end dates of the respective capacity requirement are read as receipt dates from the respective orders (fields FENDD\_KB, FENDU\_KB). The end time is always rounded up to the nearest quarter of an hour. The receipts are displayed for these dates.

The dates of the capacity requirements were intentionally used and not the basic dates of the respective orders or the MRP availability. When dispatching or rescheduling operations in the planning table, the dates of the capacity requirements change in the simulation. By using these dates for the calculation, changes to the stock situation can be displayed approximately in the simulation.

The stock of materials is displayed only for orders open in the HJPT planning table. The stock for component materials of the orders is not displayed.

In Customizing, you can also specify that the materials are aggregated for each storage location. If this is set, the storage location is also used as a selection criterion when selecting the materials.

## 2.5.1.5 List of Order Relations

Overview of Order Relations for an Order

### Use

The list of order relations shows all elements on the preceding and subsequent low-level codes for a selected order. From the raw material to the semifinished products to the sales order or planned independent requirement. In other SAP applications, these order relations are grouped under the term "pegging".

#### → Remember

The order relations planning scenario includes the following elements:

- The order relations display in the list of order relations (this chapter)
- The display of the order relations via lines in the graphical part of the HJPT planning table. Chapter: [Connecting Lines for Bars in Bar Chart \[page 28\]](#)
- The dropdown field in the ALV Grid with the information on the dependent requirements of the order relations. Chapter: [Data Provider /LMPC/CL\\_DP\\_BED LMPC Requirement Date and Order Relations \[page 336\]](#)
- Multilevel planning with the action codes S\_EPML, S\_EPMLBW, and S\_EPMLFW. Chapter: [Multilevel Planning via Order Relations \[page 232\]](#)
- The order relations are firming with the action code S\_ORFIRM. Chapter: [S\\_ORFIRM, S\\_ORFREL Firm Order Relations and Undo Firming \[page 235\]](#)

Only the list of order relations is described here. For a description of the other elements, see the relevant section.

### Overview

Level Code / Object number	MRP...	MRP...	Material	Descr.	Rec. date	Qty	U.	Ava...	U.	Req. Date	RqDt. Cmp.	Avail...	U	Pgr...	U...	Qbv...	U...	Resch.d...	Error	Earliest	Earliest	Earliest	Earliest
Level 2-																							
VVF	PP	IndReq	LMPC_FERT_34							04.03.2019						25 PC	15 PC			00:00:00	00:00:00	00:00:00	00:00:00
VVF	PP	IndReq	LMPC_FERT_34							04.03.2019						25 PC	2 PC			00:00:00	00:00:00	00:00:00	00:00:00
Level 1-																							
2771726	PA	PlOrd.	LMPC_FERT_34		28.03.2019	15 PC	57.0...	PC		04.03.2019	27.03.2019	41-	PC			55 PC	9 PC			27.03.2019	12:30:00	27.03.2019	18:00:00
2771727	PA	PlOrd.	LMPC_FERT_34		02.05.2019	2 PC	70.0...	PC		04.03.2019	30.04.2019	41-	PC			29 PC	1 PC			30.04.2019	16:50:00	30.04.2019	18:00:00
Level 0																							
60007918	FE	PrdOrd	LMPC_HALB_34		25.03.2019	10 PC	31	PC		27.03.2019		196	PC			34 PC	10 PC			22.03.2019	18:02:17	23.03.2019	16:41:02
Level 1																							
10072239	BA	PurRes	LMPC_ROH_3		04.03.2019	347 PC	563	PC		22.03.2019		1006	PC			10 PC	10 PC	07			00:00:00	00:00:00	00:00:00
10072278	BA	PurRes	LMPC_ROH_4		04.03.2019	234 PC	884	PC		27.02.2019		295-	PC			10 PC	10 PC	07			00:00:00	00:00:00	00:00:00

### List of Order Relations

The order relations are created dynamically according to the FIFO principle (First-In-First-Out). The requirements are calculated against the receipts and the receipts are assigned to the requirements in this way.

The display always refers to the cyan-colored order in the chart at level 0. When you open the LMPC HJPT planning table, an order is automatically pre-assigned.

The relationships are always determined in relation to the order at level 0. The relationships are determined using the requirement quantities and receipts of the data in transaction MD04.

The relationships are not only determined with those orders that are currently open in the HJPT planning table, but via all the orders in the system.

In the direction of raw material, there are also links to the warehouse stock, which is visible in MD04.

The system displays the stock with the date of the start of the read period for MD04 data. Since the stock was created before the start of the reading period of the data, it is specified with the date of the start of the reading period.

The reading period for the MD04 data is configured via the control table in LMPC Customizing. This is usually the evaluation period of the HJPT planning table +/- a time extension that has been set. If no read period is specified in the control table, the system does not display the receipt date for the stock.

If a requirement is covered by warehouse stock, the order relations are displayed at the level with the warehouse stock. This is because the requirement coverage element that creates the stock is before the reading period of the MD04 data. In this case, the generating requirement coverage element for the stock cannot be determined.

To see how the on-hand stock is to be structured, the reading period for the MD04 data can be enhanced using the Customizing settings in the control table. Then requirement coverage elements are visible for a longer period in the past.

#### ⚠ Caution

It is important to note that reading MD04 data requires a lot of runtime. Therefore, the reading period for MD04 data should be selected in a reasonable frame.

If, when determining the relations in the direction of the raw materials for individual components, the system does not find quantities linked by orders or stock, an entry with the MRP indicator FMAT = missing material is created for the relevant component. The column for the MD04 error messages also contains a message about the missing material quantity. The material number is colored red.

If the quantity of a component for an order has already been withdrawn, there is no longer any requirement for this component. In this case, no entry is displayed for the component.

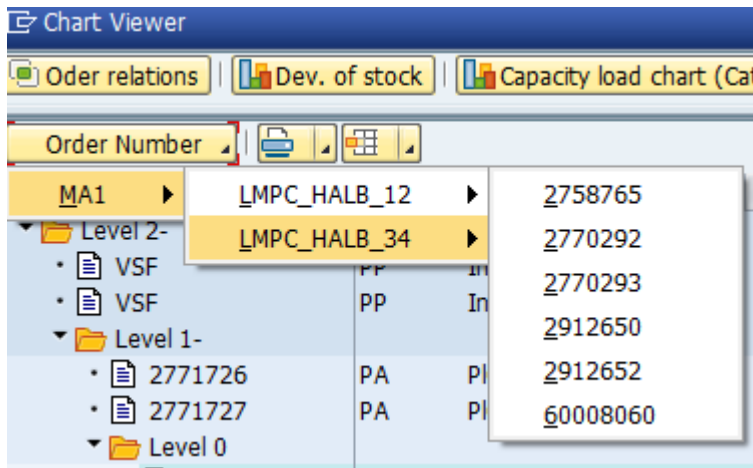
→ Tip

By default, the order relation is displayed from left to right, from the raw material through the semifinished products to the finished products and the requirement element. This display can be reversed using a parameter in Customizing. This means that the display runs from the finished product to the raw material.

### Order Selection

An order can be selected in two ways:

- Using the *Order Number* menu button above the list.
- Using the action code S\_ORSON "Display Order Relations".



Selection of Orders Using the Menu

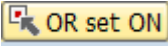
If the parameter ORMM is set in the Customizing settings, the order numbers are grouped according to the work center and the material. This makes it easier to select an order. If the parameter is not set, the selection is made via a simple list of all order numbers.

### Selection of Order Using Action Code S\_ORSON

- Select an order operation in the ALV Grid of the LMPC planning table.

Alert	Disp...	DsptchS	Order	OpAc	Order pool	Material	Work ctr	C
X	X	23.03.2019	60007918	0010	357	LMPC_HALB_34	MA1	2
X	X		2912594	0010		LMPC_HALB_34	MA1	
X	X		2912593	0010		LMPC_HALB_34	MA1	

Order Selection in the ALV Grid

- Execute the action code  (S\_ORSON).
- The selected order will be set to level 0 in the list as the starting point for the order relations.

→ Remember

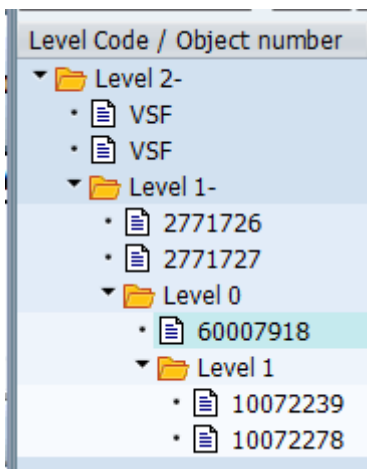
For S\_ORSON to work, the list of order relations must be open. You cannot use the action code S\_ORSON to open the list.

→ Tip

A reverse selection in the direction of the LMPC ALV Grid is also possible. If you double-click on an order number in the list of order relations and this order is open in the planning table, the corresponding line is selected in the ALV Grid of the LMPC HJPT planning table.

**Fields in the Overview**

The display is divided into two areas. On the left-hand side you can see the hierarchy of the elements (orders, purchase requisitions, planned independent requirements, sales orders), and on the right-hand side you can see the data for these elements.



Left Side of Hierarchy

On the right-hand side you can see the data for these MRP elements.

MRP ...	MRP...	Material	Descr.	Rec. date	Qty ...	U..	Ava...	U..	Req. Date	RqDt. Cmp.	Aval...	U	PgR...	U...	Qty...	U..	Resch.d...	Error	Earl.start	Earl.start	Erl.finish	Erl.finish
PP	IndReq	LMPC_FERT_34								04.03.2019					25 PC				00:00:00	00:00:00	00:00:00	00:00:00
PP	IndReq	LMPC_FERT_34								04.03.2019				25 PC					00:00:00	00:00:00	00:00:00	00:00:00
PA	PIOrd.	LMPC_FERT_34		28.03.2019	15 PC	57.0...	PC		04.03.2019	27.03.2019	41-	PC		55 PC				27.03.2019	12:30:00	27.03.2019	18:00:00	18:00:00
PA	PIOrd.	LMPC_FERT_34		02.05.2019	2 PC	70.0...	PC		04.03.2019	30.04.2019	41-	PC		29 PC				30.04.2019	16:50:00	30.04.2019	18:00:00	18:00:00
FE	PrdOrd	LMPC_HALB_34		25.03.2019	10 PC	31	PC		27.03.2019		196	PC		34 PC				22.03.2019	00:00:00	23.03.2019	16:41:02	16:41:02
BA	PurReq	LMPC_ROH_3		04.03.2019	347 PC	563	PC		22.03.2019		1006	PC		10 PC					00:00:00	00:00:00	00:00:00	00:00:00
BA	PurReq	LMPC_ROH_4		04.03.2019	234 PC	884	PC		27.02.2019		295-	PC		10 PC					00:00:00	00:00:00	00:00:00	00:00:00

Data List

The starting point is always the selected order on level 0. This is highlighted in cyan. The upwards direction in this example is the direction of the finished product, planned independent requirements, or sales orders, and so on. Downwards, you see raw materials, purchase requisitions, and so on.

You can use the layout settings of the ALV Grid to show or hide fields. You can use the print function to export the data.

The following fields are available:

- DLEVEL: MRP level order relations
- ORDNR: Number of the MRP element, for example, order number
- DELKZ: MRP element indicator
- DELBO: MRP element short description
- MATNR: Material number

- MAKTX: Material description
- WERKS: Plant
- BERID: MRP area
- BDDAT: Earliest requirement date
- BDDAT\_CMP: Requirement date for components
- RCDAT: Receipt date
- FSTAD: Earliest start/date
- FSTAU: Earliest start/time
- SSTAD: Latest start/date
- SSTAU: Latest start/time
- FENDD: Earliest end/date
- FENDU: Earliest end/time
- SENDD: Latest end/date
- SENDU: Latest end/time
- ZGMNG: Receipt quantity
- ZMEINH: Unit of measure for receipt
- BDMNG: Requirement quantity
- BMEINH: Unit of measure for requirement
- ORELMNG: Relation quantity
- ORELMEINH: Unit of measure for relation
- VFMNG: Available quantity receipt date
- VFMNGEINH: Unit of measure for available quantity
- VRFMGBT: Available quantity for requirement date
- VRFMGBTEINH: Unit of measure for available quantity for requirement date
- UMDAT: Rescheduling proposal MD04
- AUSSL: Key error message receipt element MD04
- MSGXX: Error message receipt element MD04

## Example

View from level 0 down to raw material. Explanation of the fields, from left to right.

Dispostufe / Objektnummer	D..	Disp...	Material	Bezeich	Zugangst.	Zuga...	E...	Ver...	M..	Bedarfster	Bedt. Komp	Verf...	E	Bed...	Ei...	Vk...	E...	S...	Fehler
Stufe 0																			
000002770241	PA	PL-AUF	LMPC_HALB_34	LMPC Halb 34	24.01.2019	5 ST	111-	ST		23.01.2019	12	ST		44 ST		5 ST	07		Endtermin in Vergangenheit
Stufe 1																			
000010071911	BA	BS-ANF	LMPC_ROH_3	LMPC Rohstoff 3	30.01.2019	92 ST	1305	ST		18.01.2019	8-	ST		10 ST		10 ST	06		Starttermin in Vergangenheit
000010071943	BA	BS-ANF	LMPC_ROH_4	LMPC Rohstoff 4	30.01.2019	42 ST	1255	ST		23.01.2019	32-	ST		10 ST		10 ST	06		Starttermin in Vergangenheit

### Data Downwards

Level 0 shows element 60007918. The fields Indicator MRP Element and MRP Element Short Description show that this is a production order. The material LMPC\_HALB\_34 is produced with the material short text LMPC Semi 34.

Transaction MD04 determined the receipt date for this order as March 25, 2019. Since the receipt date is before the requirement date, the field is colored green. The receipt quantity is 10 pieces. At the time of receipt, the available quantity of the material according to MD04 is 31 pieces. The available quantity at the time of receipt already contains the quantity of the order as a receipt. Meaning that there is sufficient coverage for the



material here. The requirement date for the order based on the requirements for the level -1 (not shown here) is March 27, 2019. The requirements date is the earliest requirements date of all requirement elements that are linked to this order. If there are several elements at level -1 that consume the receipt quantity of the order, then the requirement date of the earliest element applies. The field requirement date components is irrelevant for level 0.

The field available quantity for the requirement date is next. The available quantity for the requirements date displays the quantity according to MDO4, after deduction of the material requirements that have already been made for this date. The amount here is 196 pieces.

The next field displays the requirement quantity for the requirement date. In this case, this is 34 pieces. There is a sufficient quantity of material for the requirement date. This is the requirement quantity that was calculated for the requirement date using all MDO4 data for the order. It is not the requirement quantity that results from the requirements of the upstream or downstream orders in the hierarchy of the order relations.

The next field displays the related quantity. The related quantity is always considered upwards. 10 elements are linked here. The order itself has 10 receipt elements. So, all 10 receipt elements of the order are linked to the requirements on level -1.

The next 2 fields display, if available, the error number and the error message from transaction MDO4. In this case, there is no error message for the order.

On level 1 you can see 2 elements: 10072239 and 10072278. These are purchase requisitions for the raw material LMPC\_ROH\_3 or LMPC\_ROH\_4. Both are received on March 4, 2019.

The receipt quantity is 347 or 234 pieces. At the time of receipt, 563 or 884 pieces of this material are available.

The requirement date for material LMPC\_ROH\_3 is March 22, 2019. The requirement date for material LMPC\_ROH\_4 is on February 27, 2019, because the material enters the manufacturing process earlier. The available quantity for the requirement date is negative for material LMPC\_ROH\_4. The field is highlighted in red. Therefore, there are not enough parts to start production.

The related quantity for the respective semifinished material is 10 pieces. According to the MDO4 error message, the deadline for both purchase requisitions is already in the past.

### View data from level 0 upwards towards finished material

Level Code / Object number	MRP...	MRP...	Material	Descr.	Rec. date	Qty...	U..	Avail...	U..	Req. Date	RqDt. Cmp.	Avail...	U	Pgr...	U...	Qty...	U..	Resch.d...	Error	Earl.start	Earl.start	Erl.finish	Erl.finish
Level 2- VSF	PP	IndReq	LMPC_FERT_34		04.03.2019									25	PC	15	PC			00:00:00	00:00:00	00:00:00	00:00:00
Level 1- VSF	PP	IndReq	LMPC_FERT_34		04.03.2019									25	PC	2	PC			00:00:00	00:00:00	00:00:00	00:00:00
Level 0- 2771726	PA	PlOrd.	LMPC_FERT_34		28.03.2019	15	PC	57.0...	PC	04.03.2019	27.03.2019	41-	PC	55	PC	9	PC			27.03.2019	12:30:00	27.03.2019	18:00:00
Level 0- 2771727	PA	PlOrd.	LMPC_FERT_34		02.05.2019	2	PC	70.0...	PC	04.03.2019	30.04.2019	41-	PC	29	PC	1	PC			30.04.2019	16:50:00	30.04.2019	18:00:00
Level 0- 60007918	FE	PrdOrd	LMPC_HALB_34		25.03.2019	10	PC	31	PC	27.03.2019		196	PC	34	PC	10	PC			22.03.2019	18:02:17	23.03.2019	16:41:02
Level 1- 10072239	BA	PurReq	LMPC_ROH_3		04.03.2019	347	PC	563	PC	22.03.2019		1006	PC	10	PC	10	PC	07	Finish date in the past	00:00:00	00:00:00	00:00:00	00:00:00
Level 1- 10072278	BA	PurReq	LMPC_ROH_4		04.03.2019	234	PC	884	PC	27.02.2019		295-	PC	10	PC	10	PC	07	Finish date in the past	00:00:00	00:00:00	00:00:00	00:00:00

Data upwards 1

RqDt. Cmp.	Avail...	U	Pgr...	U...	Qty...	U..	Resch.d...	Error	Earl.start	Earl.start	Erl.finish	Erl.finish
										00:00:00	00:00:00	00:00:00
04.03.2019					25	PC				00:00:00	00:00:00	00:00:00
04.03.2019					25	PC				00:00:00	00:00:00	00:00:00
										00:00:00	00:00:00	00:00:00
27.03.2019	41-	PC			55	PC			27.03.2019	12:30:00	27.03.2019	18:00:00
30.04.2019	41-	PC			29	PC			30.04.2019	16:50:00	30.04.2019	18:00:00
										00:00:00	00:00:00	00:00:00
	196	PC			34	PC			22.03.2019	18:02:17	23.03.2019	16:41:02

Data upwards 2

To make the data easier to read, the data has been displayed in 2 parts.

The order 60007918 of the semifinished material serves 2 orders for the finished material LMPC\_FERT\_34 on level -1. They have different receipt quantities for the finished material.

The requirements dates of the orders on level -1 result from the requirements dates for the components of the planned independent requirements on level -2. On level -2, the related quantities show how many pieces of finished material from level -1 are assigned to the requirements on level -2:  $15 + 2 = 17$  pieces required on level -2. Receipt:  $15 + 2 = 17$  pieces on level -1.

One level further down: The order 60007918 on level 0 has 10 pieces of receipt quantity, which is consumed by the orders for the finished material on level -1. Related quantity here  $9 + 1 = 10$ .

So, looking at the area from level 0 upwards, the related quantity of materials is the link to the level below. In the level 0 area downwards, this is the other way around.

If you want to view the scheduled start times of the orders, you can look at the last columns of the order report. The earliest start of order 60007918 is on March 22, 2019, the earliest end on March 23, 2019. The earliest start and the earliest end dates are the times from the capacity requirements of the order. The earliest start is read from the first operation and the earliest end of the operation is read from the last operation, in order to illustrate the entire production period of an order.

For the sake of completeness, the required quantities from the planned independent requirements on level -2 are displayed in the requirement quantity fields. In the column Requirement Date Components, you can see the dates for these elements. The desired dates for these elements are also the requirement date for their components.

If an order in the HJPT planning table is rescheduled to a different date, the order relations may also change, as it is likely to serve other requirements. Planning takes place in simulation mode. The list of order relations is designed for this purpose. The receipt dates, requirement dates, available quantities, and start times of orders opened adapt to the changed data.

#### Caution

The order relations are only displayed correctly if the orders use the same units of measure across the levels. An automatic quantity conversion is not planned.

#### Note

The order relations chart only depicts data constellations for which it has been developed. This is make-to-stock production within a plant and make-to-order production within a plant. It does not map every customizable use case in the SAP software. If the data for a use case is not displayed correctly, this is not an error. This is a scenario that is not supported. Scenarios that are not supported include cross-plant planning or co-product manufacturing. However, any other cases that are not described in this documentation are not supported either.

## Related Information

[Transaction /LMPC/CUSTOREL Set List of Order Relations](#)

## 2.5.2 Window for Completed Production and Process Orders

### Additional Data

Finally confirmed, completed, and technically completed operations of production and process orders cannot be displayed and processed as planning data in the HJPT planning table. This is because either the capacity requirements are missing or the status settings do not allow planning with these orders.

With this additional window, it is possible to display this data.

The delivered example configuration is designed so that only data for orders with the statuses completed, technically completed, and confirmed is displayed. By changing the Customizing, you can also display the data for orders with other statuses.

The data in this window is independent of the data processing of the remaining HJPT planning table. The window has its own read routines. The data is read from the database and only displayed.

The selection parameters from the initial screen of the HJPT planning table are used to read the data:

- Plant
- Work Centers
- Time Period from Time Profile

### ! Restriction

- The data is for display purposes only. You cannot use the window to change this data. Also, no HJPT action codes can be applied to this data.
- To save runtime, the data is read once only, when the HJPT planning table is started. To refresh the data, you must either save, reload the data (action code S\_RELOAD), or exit the planning table and call it again.
- Only data for production and process orders can be read. Data for other order types, such as planned orders, is not read.
- The data is displayed at the level of operations of the orders. Data for individual phases of process orders is not displayed.

Order	Op.	Operation short text	Work ctr	Material	Bas. Start	Basic fin.	Release	Target qty	Total scrap	Unit	S. status head	U. st. header	MRP ct.	Pr.Superv.	Quantity alt.	UoM 1 AU...
60007823	0010	Maschine 3	MA3	LMPC_FERT_12	05.01.2018	16.11.2021	05.01.2018	7,001	7,000	PC	TECO MSPT PRC CSER SETC	MAT CAP DOC	LM1	LM1	1,000	FT
	0020	Maschine 4	MA4	LMPC_FERT_12	05.01.2018	16.11.2021	05.01.2018	7,001	7,000	PC	TECO MSPT PRC CSER SETC	MAT CAP DOC	LM1	LM1	1,000	FT
60008345	0010	Maschine 1	MA1	LMPC_HALB_12	29.07.2020	30.07.2020	29.07.2020	10	0	PC	TECO PRC MACM SETC		LM1	LM1	1	BT
	0020	Maschine 2	MA2	LMPC_HALB_12	29.07.2020	30.07.2020	29.07.2020	10	0	PC	TECO PRC MACM SETC		LM1	LM1	1	BT
60008346	0010	Maschine 1	MA1	LMPC_HALB_12	28.10.2020	29.10.2020	28.10.2020	6	0	PC	TECO PRC MACM SETC		LM1	LM1	1	BT
	0020	Maschine 2	MA2	LMPC_HALB_12	28.10.2020	29.10.2020	28.10.2020	6	0	PC	TECO PRC MACM SETC		LM1	LM1	1	BT
60008347	0010	Maschine 1	MA1	LMPC_HALB_12	27.10.2020	28.10.2020	27.10.2020	14	0	PC	TECO PRC MACM SETC		LM1	LM1	2	BT
	0020	Maschine 2	MA2	LMPC_HALB_12	27.10.2020	28.10.2020	27.10.2020	14	0	PC	TECO PRC MACM SETC		LM1	LM1	2	BT
60008376	0010	Maschine 1	MA1	LMPC_HALB_12	27.10.2020	28.10.2020	27.10.2020	16	0	PC	TECO PRC MACM SETC		LM1	LM1	2	BT
	0020	Maschine 2	MA2	LMPC_HALB_12	27.10.2020	28.10.2020	27.10.2020	16	0	PC	TECO PRC MACM SETC		LM1	LM1	2	BT
60008419	0010	Cleaning MA1	MA1		30.07.2020	30.07.2020	30.07.2020	1	0	PC	TECO PRC MANC NMAT		LM1	LM1	1	

Window for Completed Orders

There is one row in the ALV Grid for each order number and operation of the order.

Above the ALV Grid there is a toolbar that can be used to execute standard functions of the ALV Grid:

- Details
- Sort in ascending order
- Sort in descending order
- Find

- Set filters
- Print
- Export
- Layout settings

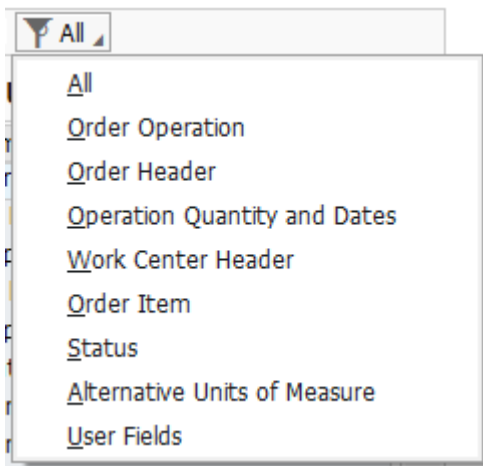
You can use the layout settings to show or hide fields. 145 fields are available.

The fields are divided into the following layout groups:

- Order Operation
- Order Header
- Operation Quantities and Dates
- Work Center Header
- Order Item
- Status
- Alternative Units of Measure

This division corresponds to the tables from which the data is read. The group of user fields is usually empty. This group contains fields only if enhancements have been made to the data in the customer system in the customer namespace.

This makes it easier to find and select fields.



**Layout Groups**

For the window to be displayed, it must be attached to the HJPT overall profile. For instructions, see the LMPC Configuration Guide. [HJPT Window Configuration](#)

It is possible to color fields or rows of the ALV Grid. Data providers are used to color and read the data. If certain data is not required, individual data providers can be deactivated. The example configuration delivered for the data providers is designed so that only data for orders with the statuses completed, technically completed, and finally confirmed is displayed. By changing the Customizing settings, you can also display the data for orders with other statuses.

For instructions on configuring the coloring and the data providers, see the Configuration Guide. [Transaction / LMPC/VIEW Settings for Additional Windows](#)

**→ Tip**

The HJPT planning table remembers the position and size of the window each time you save. If you minimize the window and then save, the HJPT planning table notes that the window should remain

minimized. In the same way as for the chart window, you can also use the action code S\_RESSIZ to reset this window to the initial position and thereby open it again. [S\\_RESSIZ Reset All HJPT Dialog Boxes \[page 313\]](#)

## Related Information

[HJPT Window Configuration](#)  
[Transaction /LMPC/VIEW Settings for Additional Windows](#)  
[S\\_RESSIZ Reset All HJPT Dialog Boxes \[page 313\]](#)

## 2.6 Action Codes - Functions of the HJPT Planning Table

Functions of LMPC HJPT Detailed Scheduling Planning Board

LMPC has a large number of functions (>140), known as action codes. The following description of the LMPC functions is not intended to be exhaustive. For a list of all possible action codes, see the LMPC Configuration Guide. [Catalog of Action Codes](#)

The labels and icons used for the functions are taken from the standard LMPC delivery. Depending on the settings in your system, the labels and icons in your system may differ; the functions may also behave differently. The following descriptions each reflect prototypical behavior of the functions. If you have any questions about functions, please contact your LMPC consultant.

Action codes can be called in different ways:

- The function keys in the header of the ALV Grid enable you to perform the corresponding actions after selecting orders.
- You use the right-hand mouse button to access the functions defined in the context menu of the ALV Grid.
- You can double-click or click the hotspot on individual ALV Grid fields to call functions.
- You can right-click on a graphical element to call functions in the context menu of the graphic.
- In the menu bar of the capacity planning table, you can execute standard functions of the capacity planning table as well as LMPC functions.
- In the capacity planning table, you can use drag and drop to dispatch, reschedule, and deallocate the operations of orders.

For instructions on configuring each access option, see the context profiles in the LMPC Configuration Guide. [HJPT Context Profiles](#)

The action codes are divided into the following 6 groups according to their nature:

- [Displaying and Changing Operations and Orders \[page 72\]](#)
- [Planning Functions \[page 133\]](#)
- [Selection Functions \[page 250\]](#)
- [Action Codes for Mass Processing \[page 257\]](#)
- [Transaction Calls \[page 267\]](#)
- [LMPC HJPT Support Functions \[page 287\]](#)

## 2.6.1 Check for Obsolete Data

Each time an action code is called, the system checks whether the data that is processed in the HJPT planning table is still up to date.

It could be that while planner 1 is working in the planning table, another planner 2 opens the planning table with the same data, changes the data and saves.

To ensure that planner 1 is informed about changes that they cannot see, the system checks whether the data is up to date each time action codes are executed.

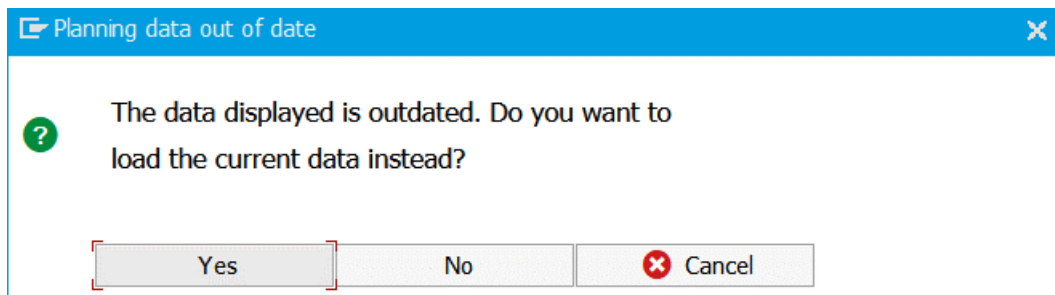
The planning table remembers when the user last updated the data, whether by calling the planning table, saving, or reloading the data. This is done using a time stamp that is kept in the current application.

When you save the data using the planning table, the system uses a time stamp to record in a database table when the data was last saved for each plant and work center.

When an action code is executed, the latest data record of the time stamp for each work center and plant is read from the database and compared with the time stamp available in the current application.

If the time stamp in the application is older than the time stamp in the database, this indicates that the data has changed in the meantime.

The user is informed and asked whether they would prefer to update the data rather than execute the action code.



Information on Obsolete Data

If the user terminates, the function is terminated.

If the user rejects the reload of the data, the action code is executed anyway.

If the user agrees, the action code currently called is not executed and the data is reloaded instead.

This check is not performed when the action code S\_RELOAD for reloading the data is executed. In this case, the user wants to reload the data.

The check also does not take place when the save is executed.

The check for obsolete data can be deactivated in the settings for the control table. [Transaction /LMPC/STEU LMPC Control Parameters](#)

### i Note

Two or more users working with the same data at the same time can be avoided through the structuring of the planning processes in the company. Users who work with the same data at the same time can obstruct each other through locks.

## 2.6.2 Action Code Limits

### Check Data Before Execution of Action Code

You can use Customizing settings to limit the execution of action codes.

The limit is made by evaluating rules. The rules check values of fields of the operations in the ALV Grid.

For details on defining rules, see the LMPC Configuration Guide. [Action Code Limitation](#)

The rule evaluation takes place directly after the selection of operations before executing the logic of the action code.

You can make settings such that if a rule tests positive:

- Processing is terminated
- The operation in question is removed from the quantity of the selected operations

Examples of rules:

- Block the execution of an action code if an operation has a specific status
- Allow execution of action codes only for a specific material group
- Allow execution of action codes only for a specific order type
- Define a time limitation for action codes. Allow conversion of planned orders to production orders only within a certain time horizon.

The restriction of action codes works for certain types of call known as action code triggers:

- ALV Grid menu toolbar
- ALV Grid context menu
- Double click or hotspot click
- ALV Grid keyboard command
- Menu bar: Capacity planning table
- Drag and Drop in the ALV Grid
- Graphic bar context menu
- Navigation profile

Only the listed triggers are supported. All other triggers cannot be used with the action code restriction. [Action Code Trigger](#)

The limitation of action codes can also be applied in LMPC HJPT background processing. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

### ! Restriction

- Before action codes are executed, the rules are evaluated only for the operations that have been selected. If the logic of action codes still reads other orders, these orders are not taken into account in the evaluation.
- Dragging and dropping operations in the graphic to dispatch, deallocate, or reschedule these operations is not action code processing. Therefore, the restriction of action codes for dragging and dropping in the graphic does not work. Even if dragging and dropping in the graphic is replaced by an HJPT action code, the action code restriction does not work for this function because it was not developed for this use.

## 2.6.3 Displaying and Changing Operations and Orders

Overview of the action codes for displaying and changing operations and orders in the SAP LMPC HJPT detailed scheduling planning board.

### 2.6.3.1 Adjusting Setup Times

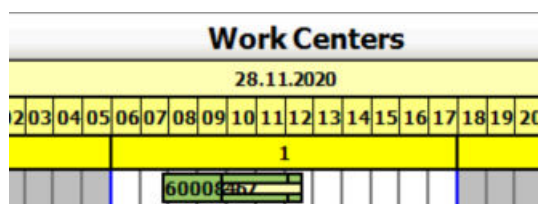
Options for adjusting the setup times of operations

In the HJPT planning table, there are three action codes for adjusting the setup times of operations:

- [S\\_AVRR Change Setup Time Manually \[page 74\]](#)
- [S\\_AVRU Adjust Setup Time Automatically \[page 77\]](#)
- [S\\_OSC Optimum Adjustment of Setup Times \[page 81\]](#)

There are various ways of reading the setup times of the operations in the HJPT planning table.

In the graphic, you can see the setup time for PP planned orders and production orders on the bar of the operation. The bar has a separator between the setup time and the processing time.

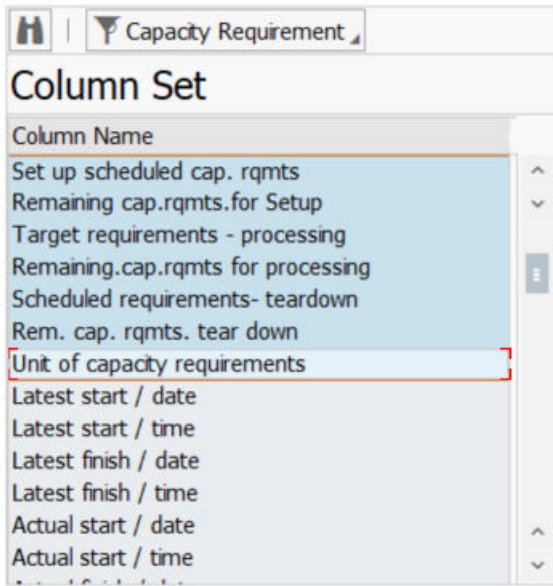


Operation of a Request in the Graphic

#### All Orders in PP

You can read the capacity requirements for setup using the capacity requirements fields.





Capacity Requirements Fields

Setup Schd.	Remaining cap.rqmts.for Setup	Target requirements - processing	Rem.rqmts-Processing	Teardn.Sch	Rem.TearDn	Unit
2.000	2.000	5.333	5.333	0.000	0.000	H
0.500	0.500	29.000	29.000	0.500	0.500	H
2.000	2.000	1.867	1.867	0.000	0.000	H
0.000	0.000	1.867	1.867	0.000	0.000	H
0.500	0.500	0.400	0.400	0.500	0.500	H
0.333	0.333	0.800	0.800	0.000	0.000	H

Capacity Requirements in the ALV Grid

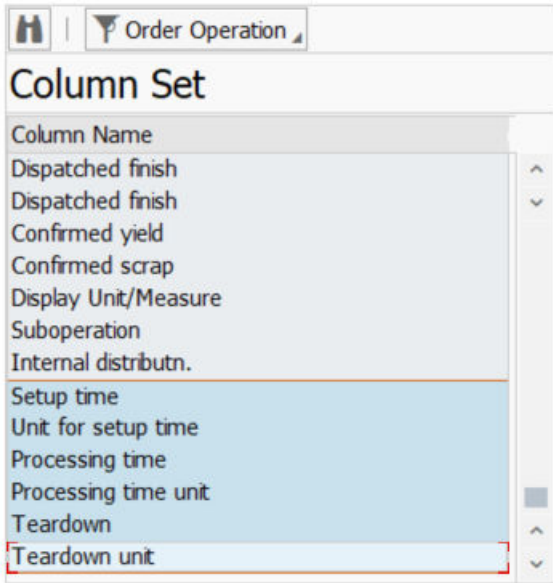
→ Remember

For all orders in PP-PI, only the capacity requirements for processing are filled because only one field for capacity requirements exists in PP-PI. The setup times are not displayed separately.

**Production Orders in PP**

You can branch to the order display. There, you can find the setup times in the detail data for the operation.

You can find this data for the ALV Grid in the field group for the order operation.



Fields for the Times of the Capacity Requirements in the Order Operation

Setup time	Set..	Processing time	Un..	Teardown	Tea..
30.000	MIN	24.000	MIN	30.000	MIN
0.000	MIN	8.000	MIN	0.000	MIN
30.000	MIN	12.000	MIN	30.000	MIN
0.000	MIN	4.000	MIN	0.000	MIN
30.000	MIN	1740.000	MIN	30.000	MIN

Fields in the ALV Grid

However, these fields are only filled for production orders. For planned orders, these fields remain empty.

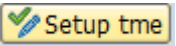
→ Remember

For PP-PI process orders, only the fields for the processing time are filled from these fields, since only one field for the processing time exists in PP-PI.

### 2.6.3.1.1 S\_AVRR Change Setup Time Manually

Change setup time of operations

**Use**

You can use the action code  (S\_AVRR) to adjust the setup time of operations manually by direct input. For this purpose, the system displays a popup window with the selected operations, in which you can adjust the setup times.

The popup window is displayed for each work center. All selected operations for each work center are displayed in a window.

Since adjusting the setup time results in the deallocation of the corresponding operations, the function automatically dispatches previously dispatched operations back to their old position. Automatic dispatching can be deactivated using a parameter.

### ⚠ Caution

- The setup time adjustment is not available for PI planned orders.
- For PI setup optimization, the routing-relevant standard values are determined from the setup matrix (transaction OPDA). Incorrectly maintained setup transitions can therefore result in the system displaying the wrong standard values. The standard values for setup transitions are read in the setup matrix with the material group of the order material via the field subsequent setup group (= material group).

### Procedure

- Situation at start:

The screenshot shows the 'Orders (pool)' interface. At the top, there is a Gantt chart for order 2770241 on 19.01.2019. The chart shows a bar for operation 0010 at work center MA1, which is slightly longer than 1 hour. Below the chart is a table with the following data:

Alert	Dispatc...	Fmd	Order	OpAc	Work ctr	Material	TgtSetup	Earlie
		X	2770241	0010	MA1	LMPC_HALB_34	1.000	19.0

#### Initial Situation

- Order 2770241 operation 0010 has a setup capacity requirement of 1 hour. In the orders pool, you can see a partial bar that is slightly longer than 1 hour. Since the machine only has 80% availability, the partial bar is slightly longer than 1 hour.
- Select the desired operation in the ALV Grid of the LMPC planning table.

The screenshot shows the ALV Grid with the following data:

Alert	Dispatc...	Fmd	Order	OpAc	Work ctr	Material	TgtSetup
		X	2770241	0010	MA1	LMPC_HALB_34	1.000

#### Selection of Operation

- Execute the action code Setup tme (S\_AVRR).
- The system displays a popup window in which you can enter the new setup requirement.

Reduction of Setup Time

Work center: MA1 LMPC wst 1

Plant: LM01

Order op. sub-op.	Mater.set.gr.set.key	Setup	Unit
2770241 0010	LMPC_HALB_34	30	MIN

Continue

Popup Window for Adjusting the Setup Requirement

- Enter the desired new setup time, and confirm the window. In this case, we cut the setup time in half.
- Result:

Orders (pool)

19.01.2019

Work ctr	Description	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18
MA1	LMPC wst 1																	
MA1	LMPC wst 1																	

Alert	Dispatc...	Fmd	Order	OpAc	Work ctr	Material	TgtSetup	Earliest start
		X	2770241	0010	MA1	LMPC_HALB_34	0.500	19.01.2019

Result

The partial bar for the setup time has become shorter. The setup target field displays the requirement of 0.5 hours.

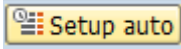
### **i** Note

This guide shows the procedure for a PP scenario. In PP-PI, this is almost identical. However, there is no separate bar for the setup time for process orders.

## 2.6.3.1.2 S\_AVRU Adjust Setup Time Automatically

Adjust the setup time of orders automatically

### Use

The action code  (S\_AVRU) is used for automatic setup time adjustment. It changes the setup time automatically based on the setup matrix for all selected dispatched operations. The setup times are adjusted for all selected operations. The first selected order operation is also adjusted. This is either adjusted according to the preceding, unselected operation or, if there is no predecessor, set to the initial setup time.

When the setup time is changed, the standard SAP system cancels dispatching. However, the action code executes immediate dispatching again so that the orders remain dispatched.

If the operations were planned without gaps before the adjustment, a sequence without gaps will also be created after the adjustment. If the operations are shorter due to the setup time change, the connections are retained and the subsequent operations are brought forward. However, this only applies to a production plan without gaps.

If there are gaps between the operations before the adjustment, these are retained. For a production plan with gaps, the operations are dispatched to the same start time again and the gaps are retained if the gaps are not filled by extending the operations.

### **!** Restriction

- Setup times are only adjusted for dispatched operations. The function has no effect for operations not yet dispatched.
- It is not possible to change the setup time for operations in the past. The operations are rescheduled during the adjustment. Therefore, when the function is executed on past operations, these operations shift to the present.
- The setup time adjustment is not available for PI planned orders.

### → Remember

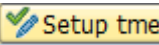
- Automatic redispaching requires a strategy profile, which is transferred to the action code via a Customizing parameter. The LMPC standard delivery includes a strategy profile with a corresponding configuration.
- The prerequisites of action code S\_EPRST are also valid here.

### Procedure

- Situation at start:

Work Centers																																						
22.02.2019																		23.02.2019																				
04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18
1																		1																				
[Gantt chart bars]																		[Gantt chart bars]																				

Initial Situation

- To check the setup time, execute action code  (S\_AVRR) to adjust the setup time manually.

Reduction of Setup Time

Work center: MA1 LMPC wst 1

Plant: LM01

Order op. sub-op.	Mater.set.gr.set.key	Setup	Unit
2770241 0010	LMPC_HALB_34	30	MIN

Continue

Information on Current Setup Time

The current setup time for the order operations is displayed. The function is canceled because the setup time should not be changed manually.

- Settings in setup matrix (Transaction OPDA):

**Change View "Setup Matrix": Overview**

New Entries

Plnt	Pred.group	PreSubgrp	Succ.group	SuccSubgrp	Standard V...	Unit	S..
LM01	GRH12		GRH12			MIN	3
LM01	GRH12		GRH34		30	MIN	3
LM01	GRH34		GRH12		40	MIN	3
LM01	GRH34		GRH34		5	MIN	3
LM01	INI		GRH12		100	MIN	3
LM01	INI		GRH34		120	MIN	3

Setup Matrix

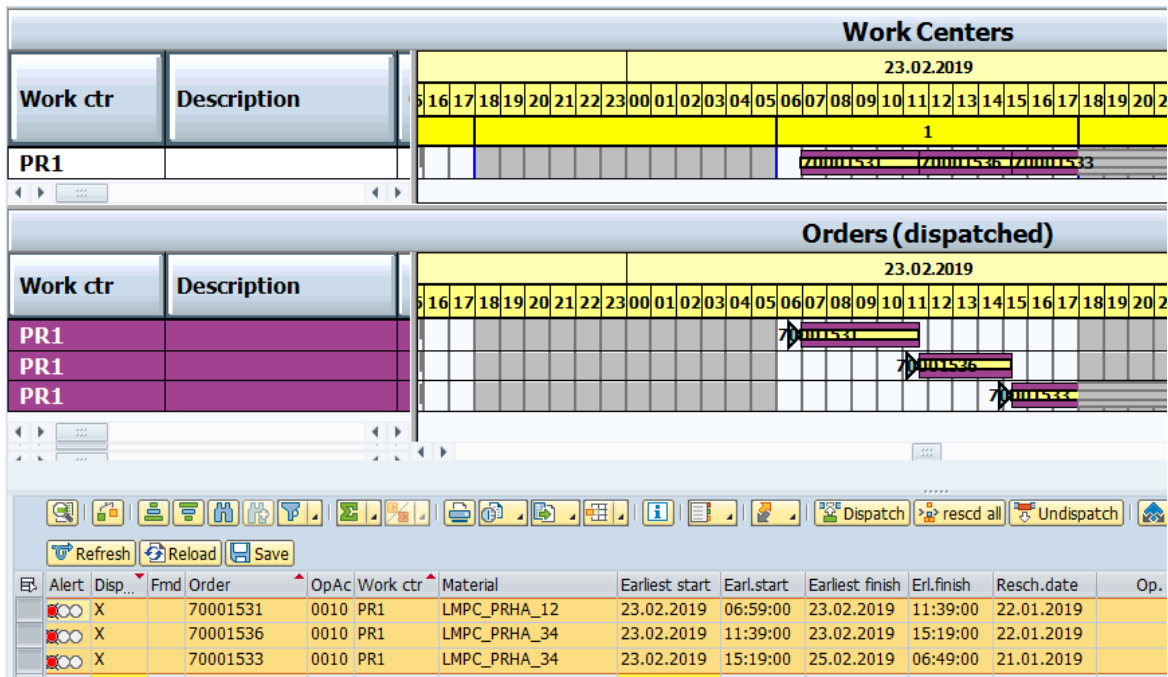
A look at the setup matrix (transaction OPDA) shows the setup times for the transitions. The groups here have the same names as the materials.

- Select the operations for which the setup time is to be adjusted automatically on the basis of the setup matrix settings.

Alert	Disp...	Fmd	Order	OpAc	Work ctr	Material	Earliest start	Earl.start
	X		70001531	0010	PR1	LMPC_PRHA_12	23.02.2019	06:59:00
	X		70001536	0010	PR1	LMPC_PRHA_34	23.02.2019	08:39:00
	X		70001533	0010	PR1	LMPC_PRHA_34	23.02.2019	11:39:00

Selection of Operations

- Execute the action code  (S\_AVRU).
- Result:



Result of Adjustment

The setup times of the operations have been adjusted.

- You can use the action code  (S\_AVRR) for the manual setup time adjustment to check the new setup times.

Order op. sub-op.	Mater.set.gr.set.key	Duration	Unit
70001531 0012	LMPC_PRHA_12 GRH12	100	MIN
70001533 0012	LMPC_PRHA_34 GRH34	5	MIN
70001536 0012	LMPC_PRHA_34 GRH34	30	MIN

Check Changes

Compared with the setup matrix, you can see that the setup times have been adjusted according to the defined settings.



## 2.6.3.1.3 S\_OSC Optimum Adjustment of Setup Times

Adjust setup times according to freely definable rules.

### Use

You use the action code S\_OSC to change the setup times of previously dispatched operations. The rules for the setup time change are defined in Customizing. S\_OSC works in a similar way to S\_AVRR except that the rules for adjusting the setup times can be freely defined and are not based on the setup matrix.

The action code can be used in a scenario in which a production plan was created manually by the planner. After dispatching has been carried out, the correct setup time of the operations is calculated with the action code S\_OSC and the orders are shifted accordingly so that the plan remains gap-free.

This function can also be used in background processing. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

### ! Restriction

- Setup times are only adjusted for dispatched operations. The function has no effect for operations not yet dispatched.
- It is not possible to change the setup time for operations in the past. The operations are rescheduled during the adjustment. If the function is executed on past operations, these operations shift to the present.
- For process orders, the requirements for the design of the individual phases apply in the same way as for PP-PI optimum dispatching.
- The setup time adjustment is not available for PI planned orders.
- The function cannot process parallel operations. The operations must be dispatched to the capacity sequentially.
- The adjustment is carried out for each selected work center. Rules are not taken into account across work centers.

### → Remember

When you change the setup times, the operations are deallocated and then rescheduled. If the operations were previously dispatched without gaps, they are dispatched again without gaps. This prevents gaps from occurring when the setup time is reduced.

Automatic redispaching requires a strategy profile, which is transferred to the action code via a parameter. The LMPC standard delivery includes a strategy profile with a corresponding configuration.

### Procedure

Operations are dispatched to the work center.

Work Centers (dispatched)																																																												
09.10.2020																10.10.2020																11.10.2020																												
04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
1																1																																												
PZASSP																PZASSP																PZ0901																												

Planning Situation in the Graphic

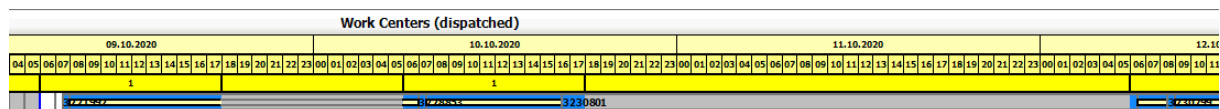
Select the operations for which the setup times are to be adjusted.

Alert	Dis...	F...	Sequence	Order Number	OpAc	WrkCtr...	Material	Work ctr*	Cat	Order Quantity	UoM	TgtSetup	Earliest start	Earl.start	Earliest finish	Erl.finish
○△○	X	X		3221992	0010	10003967	LMPC_FERT_12	MA3	001	11	PC	0.500	09.10.2020	07:30:00	10.10.2020	07:00:00
○△○	X	X		3228853	0010	10003967	LMPC_FERT_12	MA3	001	9	PC	0.500	10.10.2020	07:00:00	10.10.2020	16:30:00
○△○	X	X		3230801	0010	10003967	LMPC_FERT_KE	MA3	001	2	PC	0.500	10.10.2020	16:30:00	12.10.2020	07:00:00
○△○	X	X		3230799	0010	10003967	LMPC_FERT_KE	MA3	001	9	PC	0.500	12.10.2020	07:00:00	12.10.2020	16:30:00
○△○				3230800	0010	10003967	LMPC_FERT_KE	MA3	001	33	PC	0.500	06.10.2020	06:00:00	08.10.2020	15:30:00

Selection of Operations

Execute the action code  (S\_OSC).

Result:



Result of the Setup Time Adjustment in the Graphic

Alert	Dis...	F...	Sequence	Order Number	OpAc	WrkCtr...	Material	Work ctr*	Cat	Order Quantity	UoM	TgtSetup	Earliest start	Earl.start	Earliest finish	Erl.finish
○△○	X	X		3221992	0010	10003967	LMPC_FERT_12	MA3	001	11	PC	0.500	09.10.2020	07:30:00	10.10.2020	07:00:00
○△○	X	X		3228853	0010	10003967	LMPC_FERT_12	MA3	001	9	PC	0.500	10.10.2020	07:00:00	10.10.2020	16:30:00
○△○	X	X		3230801	0010	10003967	LMPC_FERT_KE	MA3	001	2	PC	2.000	10.10.2020	16:30:00	12.10.2020	08:30:00
○△○	X	X		3230799	0010	10003967	LMPC_FERT_KE	MA3	001	9	PC	0.500	12.10.2020	08:30:00	12.10.2020	18:00:00
○△○				3230800	0010	10003967	LMPC_FERT_KE	MA3	001	33	PC	0.500	06.10.2020	06:00:00	08.10.2020	15:30:00

Result of the Setup Time Adjustment in the ALV Grid

The setup times were adjusted. You can see this in the column for the target setup times. You can also see the adjusted setup times when looking at the adjusted bars in the graphic.

Planning remains gap-free.

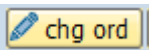
For instructions on configuring the function, see the LMPC Configuration Guide. [S\\_OPL, S\\_OSC Configuration: Optimized Dispatching and Optimized Adjustment of Setup Time](#)

## 2.6.3.2 S\_AK02 Change Order

- Select an order operation, for example, using the ALV Grid.

Stat...	I	F	Work ctr	Order	Cat	C...	Phase Material	OpAc	SOp	Earliest start	Earl.start	Earliest finish	Erl.tinsh	Nu...
⊗	○	○	X X	MA4	1329483	2	0	LMPC_FERT_12	0020	02.08.2017	13:36:51	04.08.2017	09:36:51	
⊗	○	○	X X	MA3	2661885	2	0	LMPC_FERT_12	0010	02.08.2017	13:55:48	03.08.2017	12:25:48	
⊗	○	○	X X	MA3	2661886	2	0	LMPC_FERT_12	0010	03.08.2017	12:25:48	04.08.2017	14:55:48	
⊗	○	○	X X	MA4	1329484	2	0	LMPC_FERT_12	0020	04.08.2017	09:36:51	05.08.2017	07:36:51	
⊗	○	○	X X	MA4	2661884	2	0	LMPC_FERT_12	0020	05.08.2017	07:36:51	10.08.2017	09:36:51	

Select Order Operation

- Execute the action code  (S\_AK02) or double click or hotspot click on the order number.
- The system displays a screen with the order header data. The data can now be changed, for example, the quantity.

### Change Planned Order: Stock order

Accept changes Components Components Bill of material Comp. ATP

LA Stock order: 2661886      E Standard in-house ...

Material: LMPC\_FERT\_12      IPC Fert 12

MRP Area: LM01      Werk: LMPC

Hdr    Assignmnt    Mast. data    Det. scheduling    Production rates

**Quantities**

Order quantity: 14    PC    Scrap quantity:

**Dates**

	BasicDates	Production dates	Other dates
Ord.finish	07.08.2017	05.08.2017 16:55:48	Available for plng: 07.08.2017
Start	03.08.2017	03.08.2017 12:25:48	GR processing time: <input type="text"/>
Plnd open.	03.08.2017		

**Other data**

Producing plant: LM01

Stor. Location: L001

Production Version: LM01

BOM expl.number:

**Firming**

Plnd order

Components

Capacity scheduled

Conversion indicator

#### Order Header

- You use the Back button to exit the screen for changing the order and the changes are adopted.

Change Planned Order: Stock order

Should data be copied ?

#### Popup Window Data Transfer

Stat.	F	Work ctr	Order	Cat	C..	Phase	Material	OpAc	SOp	Earliest start	Earl.start	Earliest finish	Erl.finish
⊗	X	MA4	1329483	2	0		LMPC_FERT_12	0020		02.08.2017	13:36:51	04.08.2017	09:36:51
⊗	X	MA3	2661885	2	0		LMPC_FERT_12	0010		02.08.2017	13:55:48	03.08.2017	12:25:48
⊗	X	MA3	2661886	2	0		LMPC_FERT_12	0010		03.08.2017	12:25:48	04.08.2017	13:55:48
⊗	X	MA4	1329484	2	0		LMPC_FERT_12	0020		04.08.2017	09:36:51	05.08.2017	07:36:51
⊗	X	MA4	2661884	2	0		LMPC_FERT_12	0020		05.08.2017	07:36:51	10.08.2017	09:36:51
⊗	X	MA3	60007633	1	10		LMPC_FERT_KE	0010		09.08.2017	12:36:51	12.08.2017	09:06:51
⊗	X	MA4	2661885	2	0		LMPC_FERT_12	0020		10.08.2017	09:36:51	11.08.2017	07:36:51

#### Result Action Code S\_AK02

Result: The order has been changed and remains dispatched, if it has already been dispatched.

### → Remember

If the order operation was dispatched before the change, forward scheduling to the original start time is performed after the change and dispatching is performed again. This rescheduling is only performed if the order has actually been changed. If the order is exited without a change having been made, there is no rescheduling.

### ⚠ Caution

If an order is for a date in the past and is changed, rescheduling results in the order receiving a new start time. This new start time is in the present because it cannot be scheduled in the past. As a result, it moves in planning.

To prevent this, you could, for example, create a rule with the function of restricting the action code, which prevents orders that are in the past from being changed. [Action Code Limits \[page 71\]](#)

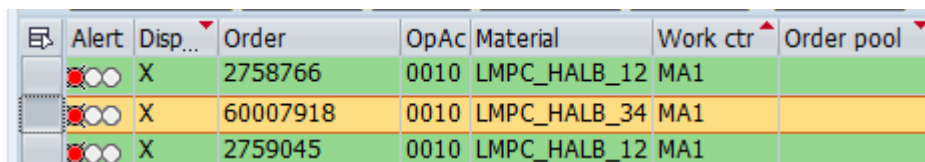
### ! Restriction

The action code can only be executed for a single order. There is no mass processing. It works for planning, production, and process orders.

## 2.6.3.3 S\_AK05 Displaying an Order

You can use this action code to branch to the display of the details for the order header.

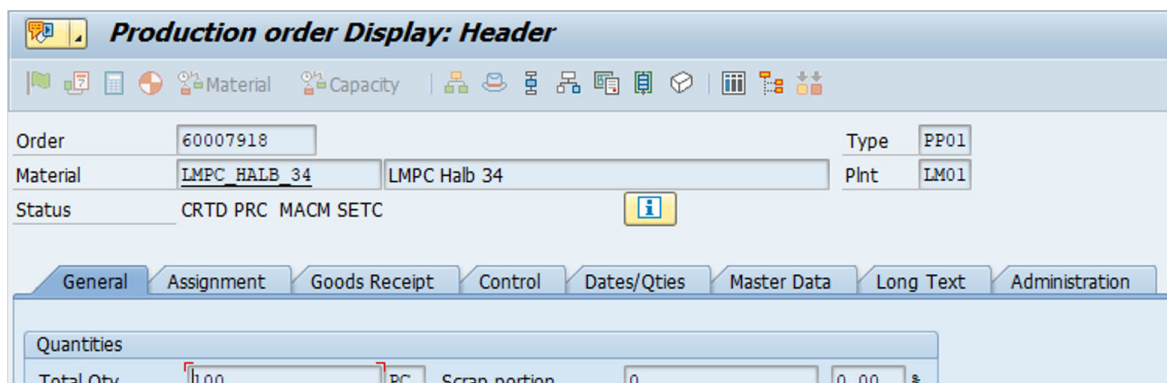
- Select an order operation, for example, using the ALV Grid.



Alert	Disp...	Order	OpAc	Material	Work ctr	Order pool
X	X	2758766	0010	LMPC_HALB_12	MA1	
X	X	60007918	0010	LMPC_HALB_34	MA1	
X	X	2759045	0010	LMPC_HALB_12	MA1	

Select Order Operation

- Execute the action code **Order dsp** (S\_AK05).
- Result:



**Production order Display: Header**

Order: 60007918      Type: PP01  
Material: LMPC\_HALB\_34      LMPC Halb 34      Plnt: LM01  
Status: CRTD PRC MACM SETC

General   Assignment   Goods Receipt   Control   Dates/Qties   Master Data   Long Text   Administration

Quantities

Total Qty	1.00	PC	Scrap portion	0	0.00	€
-----------	------	----	---------------	---	------	---

Display of the Selected Order

The detailed data for the order is displayed. The data cannot be changed.

## 2.6.3.4 S\_AUTEXT Change the Long Text of Production Orders and Process Orders

### Application

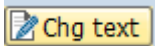
You use this action code to change the long text of production or process orders.

### Procedure

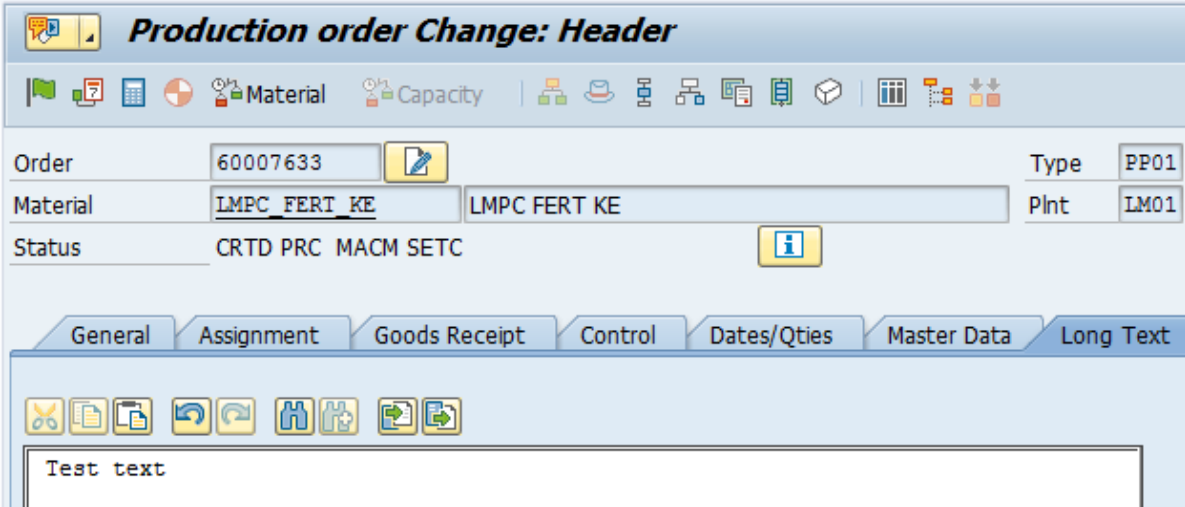
Select an operation of a production order or process order, for example, by means of the ALV Grid.

Stat.	T	F	Work ctr	Order	Cat	C.	Phase Material	OpAc	SOp	Earliest start	Earl.start	Earliest finish	Erl.finish	Nu...	Req. date	Time	Order pool	Order text
...	X	X	MA3	2661885	2	0	LMPC_FERT_12	0010		02.08.2017	13:55:48	03.08.2017	12:25:48		24.07.2017	00:00:00		
...	X	X	MA3	2661886	2	0	LMPC_FERT_12	0010		03.08.2017	12:25:48	04.08.2017	13:55:48		03.04.2017	00:00:00		
...	X		MA3	60007633	1	10	LMPC_FERT_KE	0010		09.08.2017	12:36:51	12.08.2017	09:06:51		09.08.2017	00:00:00		

Select Order Operation

Execute the action code  (S\_AUTEXT).

You can now change the long text for the order.



The screenshot shows the 'Production order Change: Header' dialog box. The 'Long Text' tab is active, and the text input field contains 'Test text'. Other fields include Order: 60007633, Material: LMPC\_FERT\_KE, and Status: CRTD PRC MACM SETC.

Display Long Text

Use the *Back* button to return to the LMPC planning table. The changes are adopted.

Result:

Stat.	T	F	Work ctr	Order	Cat	C.	Phase Material	OpAc	SOp	Earliest start	Earl.start	Earliest finish	Erl.finish	Nu...	Req. date	Time	Order pool	Order text
...	X	X	MA3	2661885	2	0	LMPC_FERT_12	0010		02.08.2017	13:55:48	03.08.2017	12:25:48		24.07.2017	00:00:00		
...	X	X	MA3	2661886	2	0	LMPC_FERT_12	0010		03.08.2017	12:25:48	04.08.2017	13:55:48		03.04.2017	00:00:00		
...	X		MA3	60007633	1	10	LMPC_FERT_KE	0010		09.08.2017	12:36:51	12.08.2017	09:06:51		09.08.2017	00:00:00		Test text

Result

The system displays the newly entered text in the field for the order text.

### i Note

Special feature of process orders: If the long text is still empty, the system automatically displays the order short text. You can simply change the text, which has no effect on the order short text.

### ! Restriction

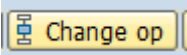
The system only displays the first 72 characters of the first row of the text in the ALV Grid of the HJPT planning table.

## 2.6.3.5 S\_AV02 Changing Operations of the Production Order or Process Order

- Select an order operation, for example, using the ALV Grid.

Stat...	I	F	Work ctr	Order	Cat	C..	Phase	Material	OpAc	SOp	Earliest start	Earl.start	Earliest finish	Erl.finish
	X	X	MA4	1329483	2	0		LMPC_FERT_12	0020		02.08.2017	13:36:51	04.08.2017	09:36:51
	X	X	MA3	2661885	2	0		LMPC_FERT_12	0010		02.08.2017	13:55:48	03.08.2017	12:25:48
	X	X	MA3	2661886	2	0		LMPC_FERT_12	0010		03.08.2017	12:25:48	04.08.2017	13:55:48
	X	X	MA4	1329484	2	0		LMPC_FERT_12	0020		04.08.2017	09:36:51	05.08.2017	07:36:51
	X	X	MA4	2661884	2	0		LMPC_FERT_12	0020		05.08.2017	07:36:51	10.08.2017	09:36:51
	X		MA3	60007633	1	10	0	LMPC_FERT_KE	0010		09.08.2017	12:36:51	12.08.2017	09:06:51
	X	X	MA4	2661885	2	0		LMPC_FERT_12	0020		10.08.2017	09:36:51	11.08.2017	07:36:51

Selection of an Order Operation

- Execute the action code  (S\_AV02).
- You can now change the data of the operation.

**Production Order Change: Operation - Details**

Navigation: Material | Capacity | Operation

Order: 60007633 | Type: PP01  
 Material: LMPC\_FERT\_KE | LMPC FERT KE | Plnt: LM01  
 Operation: 0010 / | Maschine 3 | Seq.: 0  
 Work Center: MA3 / LM01 | Control Key: PP01 | Operation ID: 00000001  
 System Status: CRID DSPT | Confirmation: 119408

General | StandardVals | Ext. Processing | Interop. Times | Standard Value Calc.

**Standard Values**

Base Quantity: 1  
 UoM Operation: PC  
 Break:

Conversion of Units of Measure  
 Rtg 1 Equal to Operat. 1  
 Unit PC Unit PC

	Std Value	Unit
Setup	35	MIN
Machine	60	MIN
Labor	60	MIN

**Operation Detail**

- You use the Back button to return to the LMPC planning table. The changes are adopted.
- Result:

Stat.	I	F	Work ctr	Order	Cat	C	Phase	Material	OpAc	SOp	Earliest start	Earl.start	Earliest finish	Erl.finish
⊗	X	X	MA3	1331027	2	0		LMPC_FERT_34	0010		05.08.2017	12:25:48	08.08.2017	09:55:48
⊗	X	X	MA3	2661887	2	0		LMPC_FERT_12	0010		08.08.2017	09:55:48	08.08.2017	17:25:48
⊗	X	X	MA3	2661891	2	0		LMPC_FERT_12	0010		08.08.2017	17:25:48	09.08.2017	09:55:48
⊗	X		MA3	60007633	1	10	0	LMPC_FERT_KE	0010		09.08.2017	12:36:51	12.08.2017	09:06:51

**Result**

The operation has been changed and remains dispatched, if it has already been dispatched.

**! Restriction**

- The action code only works for production orders and process orders.
- The action code can only be executed for one order.

## 2.6.3.6 S\_AV77 Change Network

Change network operations

### Usage

You can use the action code S\_AV77 to branch to the change mode of the operation view of networks.

### Procedure

Select an operation of a network in the ALV Grid of the HJPT planning table.

Alert	Dis...	F...	Order pool	Seq.	Order Number	Plant	OpAc	Work center	Cat	UoM	Earliest start	Earl.start	Earliest finish	Erl.finish
					904719	LM01	0010	MA2			04.01.2021	06:00:00	04.01.2021	14:00:00
					904720	LM01	0010	MA3		001	04.01.2021	14:00:00	05.01.2021	10:00:00
					904721	LM01	0010	MA3		001	04.01.2021	14:00:00	05.01.2021	10:00:00
					904720	LM01	0020	MA3		001	05.01.2021	10:00:00	05.01.2021	16:00:00

Network Operation Selection

Execute the action code  (S\_AV77).

The operation overview of the network appears.

Change: Network: Basic Data Overview (Basic Dates)

Network: 904719 LMPC Netz 1

Int. Processing | Ext. Processing | Prim. Costs | Total

Ac...	Description	Norm...	N...	Work	U...	Work c...	Plant	Std te...	C...	Bus. Process	Activi...	F..	Int. dist...
0010	Operation 1, project start		8 H		8 H	MA2	LM01		0		LM_MA	06	
0020	Operation 2, project end		6 H		6 H	MA2	LM01		0		LM_MA	06	
0030			DAY		H		LM01		0			01	

Execute Network Changes

You can make the required changes there.

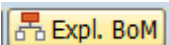
### → Tip

For the processing of networks, see the notes in the section on the project system. [LMPC and Project System \(PS\) \[page 443\]](#)

## 2.6.3.7 S\_BOMEXP Bill of Material Explosion and Component Quantity Update for Planned Orders

Bill of material explosion and component quantity update for planned orders

### Use

The action code  (S\_BOMEXP) performs a BOM explosion and a component quantity update for planned orders. It can be used as a stand-alone action code, or as a follow-up action code for planning



functions. When it is used, orders are always rescheduled completely, together with a BOM update and a component quantity determination.

The BOM explosion and quantity update of the components takes place for dispatched orders with the help of a range of standard SAP function modules. If an order has been dispatched, the BOM explosion and quantity update take place with the planning data of the planned order. If the action code is applied to planned orders, which have not yet been dispatched, the BOM explosion takes place on the date that the MRP run has specified for the order.

### ! Restriction

If the date of an order is in the past, the BOM explosion takes place on the current date. An explosion for times in the past is not possible.

The action code works for planned orders only. If the action code is applied to other order types, such as production orders or process orders, there is no BOM explosion. Orders of these order types are simply ignored.

4 use cases:

- S\_BOMEXP as a standalone action code
- S\_BOMEXP as the subsequent action code for planning functions
- S\_BOMEXP when moving operations in the graphical planning table
- S\_BOMEXP in background processing [Program /LMPC/HJPT Background Processing \[page 19\]](#)

The explosion date can be displayed in the ALV Grid of the HJPT planning table. The technical field name for the field with the explosion date is PLAUF\_KO. It is located in the fields for the capacity requirements header.

### Procedure S\_BOMEXP as a Standalone Action Code

- Select one or more operations in the ALV Grid of the LMPC HJPT planning table.

Icon	L.a.	RtgTransf.	Alert	Co...	F	Work ctr	Order	Nu...	Ord
		01.08.2018			X	PR1	2714700		
		03.07.2018			X	PR1	2714706		
		06.07.2018			X	PR1	2714713		
		05.07.2018			X	PR1	2714711		
		03.07.2018				PR1	70001402		
		03.07.2018				PR1	70001403		
		04.07.2018				PR1	70001404		

Selection of Order Operations

Two planned orders (order numbers 2714713 and 2714711) and two production orders (70001402 and 70001403) are selected. The second column displays the explosion date of the bill of material. The operations have not been dispatched.

- Execute the action code (S\_BOMEXP).

- Result:

Icon	L.a.	RtgTransf.	Alert	Co...	I	F	Work ctr	Order	Nu...	C
		01.08.2018				X	PR1	2714700		
		03.07.2018				X	PR1	2714706		
		30.07.2018				X	PR1	2714713		
		30.07.2018				X	PR1	2714711		
		03.07.2018					PR1	70001402		
		03.07.2018					PR1	70001403		
		04.07.2018					PR1	70001404		

Result S\_BOMEXP

The result shows that the BOM explosion has been performed for the planned orders. The explosion date has changed. The selected production orders have not changed.

### Procedure S\_BOMEXP as the Subsequent Action Code for Planning Functions

For example, you use Customizing settings to combine the action code S\_MANPL for manual planning with the action code S\_BOMEXP.

- Situation before dispatching:

Icon	L.a.	RtgTransf.	Alert	Co...	Dispatched	F	Work ctr	Order	Nu...	Order pool	Operation Qty
		01.08.2018		X		X	PR1	2714698			4

Situation Before Dispatching

The order operation from order 2714698 has not been dispatched. The date of the last explosion BOM is June 29, 2018.

- The operation is selected in the ALV Grid of the LMPC HJPT planning table.

- The action code (S\_MANPL) with automatic successor action code S\_BOMEXP is executed.
- The desired dispatching date is entered.

Start Date and Start Time for Dispatching

- Result:

Icon	L.a.	RtgTransf.	Alert	Co...	Dispatched	F	Work ctr	Order	Nu...	Order pool	Operation Qty
		01.08.2018		X	X	X	PR1	2714698			4

Dispatching Result

The operation of order 2714698 has been dispatched on the desired date. The BOM explosion also took place on this date.

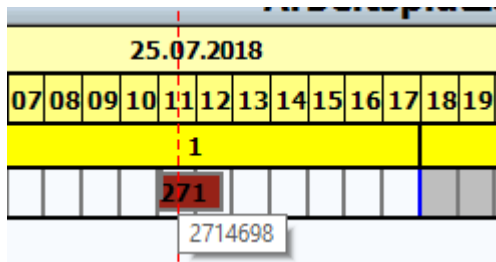
### ⚠ Caution

This combination of action codes does not exist in the LMPC delivery and must be configured in the system if required.

[Concatenation with S\\_BOMEXP \[page 322\]](#)

### Procedure S\_BOMEXP When Moving Operations in the Graphical Planning Table

- Initial situation:



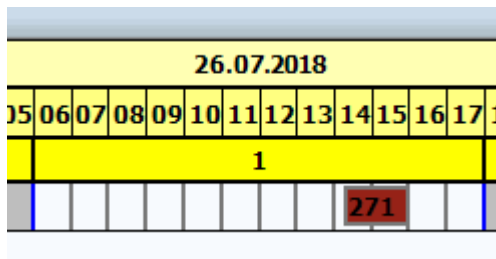
Initial Situation Graphical Planning Table

L.a.	RtgTransf.	Alert	Co...	I	F	Work ctr	Order	Nu...	Order pool	Operation Qty
06.07.2018				X	X	PR1	2714713			31

Initial Situation in the ALV Grid

The order operation from order 2714698 is dispatched on July 25, 2018. The BOM explosion date is June 29, 2018.

- Move the dispatched order in the Dispatched Orders chart to a different date.



Drag and Drop to a New Date

- Result:

L.a.	RtgTransf.	Alert	Co...	I	F	Work ctr	Order	Nu...	Order pool	Operation Qty
30.07.2018				X	X	PR1	2714713			31

Result in the ALV Grid

The BOM has been exploded again. The explosion date is the same date as the new dispatching date.

### ⚠ Caution

The action code S\_BOMEXP is configured for this use case with the trigger for rescheduling in the graphical planning table. This is not supported in the standard delivery of LMPC and must first be configured in the relevant system.

## Related Information

[S\\_BOMEXP Configuration: BOM Explosion and Component Quantities](#)

### 2.6.3.8 S\_CHSDV Change to Standard Values

Change Standard Values of Operations

#### Usage

You can use the action code S\_CHVGW to change the standard values of the selected operations. This changes the duration and capacity requirements of operations (depending on the formulas for scheduling).

The capacity requirements and durations of operations are usually dependent on the quantity produced. However, there may be a requirement to adjust the durations of individual operations independently of the production quantity.

For example, when a new product is introduced, production may take longer initially because workers need to learn the production process. Induction into production is required, which slows down production.

To ensure that the routings of the material do not have to be changed in this initial phase, this action code enables you to adjust the duration and capacity requirements of operations for individual orders.

#### → Remember

The standard values are changed within the (planned) order operation, not in the routing itself. The change only takes place for the selected operations. The routings involved remain unchanged.

You can use this function to change the following orders:

- Planned orders in discrete manufacturing (PP-ERP)
- Manufacturing orders in discrete manufacturing (PP-ERP)
- Planned orders in repetitive manufacturing (PP-REM)
- Process orders in the process industry (PP-PI)

You cannot use this function to change the following orders:

- Planned orders in the process industry (PP-PI).
- Operations of externally locked orders.
- Operations that cannot be processed due to inconsistencies in the standard value configuration.
- All other order types not listed here.

If unchangeable orders are selected, the data is only displayed when the function is called.

#### Procedure

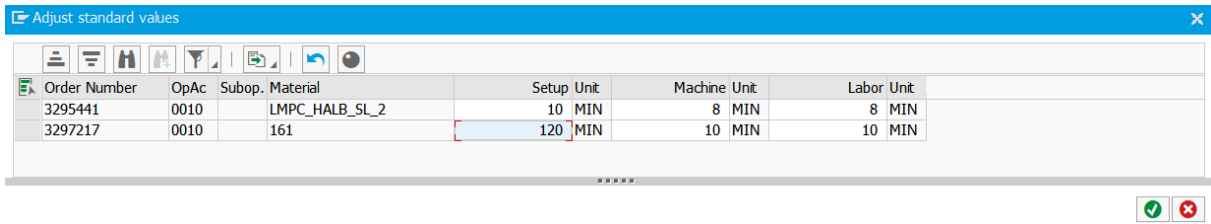
Select one or more operations that are to be changed in the ALV Grid of the HJPT planning table.

Alert	Lock Dis...	Order Number	OpAc	Subop. Material	Work center	Short description	Latest start	Lat. start time	Latest finish	Lat. finish
○○	X	3295441	0010	LMPC HALB SL 2	MA1	LMPC wst 1	03.02.2022	10:20:53	04.02.2022	16:50:53
○○	X	3297217	0010	161	MA1	LMPC wst 1	04.02.2022	16:50:53	05.02.2022	12:20:53
○△○		3297244	0010	LMPC HALB SR	MA1	LMPC wst 1	24.01.2022	06:00:00	24.01.2022	09:01:15
○○		3297220	0010	161	MA1	LMPC wst 1	24.01.2022	06:00:00	24.01.2022	08:30:00

Selection of Operations

Execute the action code  (S\_CHVWG).

A dialog box appears in which the standard values of the selected operations are displayed. You configure which of the standard values of the operations are displayed and which of these standard values can be changed via Customizing for the function. [S\\_CHSDV Configuration: Change to Standard Value](#)



Order Number	OpAc	Subop.	Material	Setup Unit	Machine Unit	Labor Unit
3295441	0010		LMPC_HALB_SL_2	10 MIN	8 MIN	8 MIN
3297217	0010		161	120 MIN	10 MIN	10 MIN

Dialog Box for Changing Standard Values

Only columns for standard values that exist in at least one of the operations are displayed. If the standard value descriptions are identical for all selected operations, they are used as the header of the editable columns, otherwise the columns are labeled with the relevant standard value number.

Enter the desired standard values. During entry, the input rules configured at the respective work center are checked and, if necessary, displayed for the user as a message.

When you confirm the dialog box, the changes are made.

The confirmation can be executed by clicking the mouse or by pressing the F8 or Enter key. You can cancel the window by clicking the mouse or pressing the ESC key.

When the change is made, the operations are rescheduled. The following applies to operations that have already been dispatched: When you change the standard values, the dispatching status is reset. To ensure that the operations remain dispatched, the function dispatches them again on the original start date.

Result:

Alert	Lock Dis...	Order Number	OpAc	Subop.	Material	Work center	Short description	Latest start	Lat. start time	Latest finish	Lat. finish
	X	3295441	0010		LMPC HALB SL 2	MA1	LMPC wst 1	03.02.2022	10:24:54	04.02.2022	14:37:24
	X	3297217	0010		161	MA1	LMPC wst 1	04.02.2022	16:50:53	05.02.2022	14:50:53
		3297244	0010		LMPC HALB SR	MA1	LMPC wst 1	24.01.2022	06:00:00	24.01.2022	09:01:15
		3297220	0010		161	MA1	LMPC wst 1	24.01.2022	06:00:00	24.01.2022	08:30:00

Result

By changing the start times, you can see that the duration of the operations has changed.

The changes are made in the simulation. They only become persistent when they are saved.

Special feature of the process industry:

If operations of process orders are selected, the individual phases of the respective operation are listed in the dialog box. The phases of planned orders of the process industry whose change is not supported are displayed but cannot be changed.

### Additional Functions

There are two additional functions in the popup window:

- Resetting standard values 

- Setting standard values to zero



The functions are only executed on selected values. You can make the selection by:

- selecting one or more rows
- selecting one or more columns
- selecting one or more cells

You can make a multiple selection by pressing the CTRL key while making the selection.

If you do not make a selection and execute one of the two functions, the function is executed on the cell in which the cursor is positioned at this time. This is the first input-enabled field when the window is called.

When you reset the standard values, the standard values are reset to the values of the routing on the explosion date that is in the order header. If this date is in the past, the explosion is carried out with the current date.

In the case of setting the standard values to zero, the selected standard values are set to zero.

Resetting and zeroing standard values is only possible for input-enabled standard values. You use the Customizing settings for the function to define the input enablement for standard values. [S\\_CHSDV Configuration: Change to Standard Value](#)

### Processing Without Dialog Box

Resetting and placing zeroes before standard values can also be done without a dialog box. Corresponding settings need to be made in Customizing for this. [S\\_CHSDV Configuration: Change to Standard Value](#)

When processing without a dialog box, all standard values that are flagged as changeable in Customizing for the action code are reset or set to zero.

### Recording of Changes

As soon as a standard value of an operation is changed, the planning table remembers this change. A change indicator is set and the change time and the user who made the change are saved. You can see this in the following fields:

Changed Standard Value	Standard Value Change Created By	Standard Values Last Changed By	Standard Values First Changed On	Standard Values Last Changed On
X	D056579	D056579	15.09.2021 12:18:27	15.09.2021 12:18:27

Fields for Displaying a Standard Value Change

The fields are in the layout settings in the group of HJPT help fields.

The data provider /LMPC/CL\_DP\_OP\_ADD must be activated for the display to work correctly. [Data Provider / LMPC/CL\\_DP\\_OP\\_ADD Additional Data for Operations \[page 373\]](#)

#### → Remember

If the changes to the standard values were made using the function for resetting standard values for all standard values of an operation, the standard values were reset to the values of the work center. In this case, the fields for displaying a standard value change are emptied. This is because the operation has the original values again.

If only individual standard values are reset to the values of the routing and other standard values of the same operation do not correspond to the values of the routing, the fields for recording changes are not reset because there are still changes to the operation.

If the function for setting the standard values to zero creates the values of the routing, the fields for displaying the change are also emptied.

If the user randomly enters the original standard values through a manual entry, the change is not reset because this is a manual change made by a user.

### ⚠ Caution

- Changing the standard values can lead to inconsistencies if, for example, the standard values are changed in such a way that they do not match the scheduling formulas used. This may mean that operations can no longer be scheduled, no longer dispatched, or that the operations can no longer be processed in the HJPT planning table. The user is responsible for maintaining the standard values correctly.  
The LMPC logic supports the user with a basic check of the rules for input for the standard value. However, incorrect entries cannot be excluded.
- You can use this function to set standard values to zero. Not all standard values of an operation can be set to zero at the same time, since this could result in the capacity requirements of an operation becoming zero. Without capacity requirements, an operation cannot be processed in the HJPT planning table. There is no check that prevents this setting of all standard values to zero. The user must check this themselves.
- Only the standard values of the operations are changed. Not the actual durations of the operations. The duration of operations results from the evaluation of the scheduling formulas when changing the operations.
- In the input-enabled ALV Grid of the popup window, you can use the remove button to delete an entire row. This is a generic function of the ALV Grid and cannot be suppressed. Using the remove button to delete a row is not a supported function. The user is not allowed to use the remove button when maintaining the standard values. If you accidentally press this button, cancel the change of the standard values by closing the window. Then restart.

### → Tip

By creating rules for coloring the bars in the graphic or for coloring the ALV Grid, the change of standard values can be indicated visually.

- [Coloring of Bars of the Bar Chart \[page 27\]](#)
- [Coloring the ALV Grid \[page 44\]](#)

The action code can also be used for background processing using the program /LMPC/HJPT, to reset standard values or to set them to zero. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

## Related Information

[Concatenation with S\\_CHSDV \[page 323\]](#)

[Concatenation with S\\_SETSEL \[page 323\]](#)

## 2.6.3.9 S\_CPV2 Change Production Version and Dispatch

Change the production version of an order.

### Use

You can use this function to change the production version of an order.

When changing production orders, the BOM and the routing can also be re-exploded (not possible for planned orders).

When you change the production version, the standard SAP system revokes dispatching. Therefore, if the parameter settings are set appropriately, this action code can re-dispatch the order immediately.

In addition, parameter settings can be used to exclude the processing of certain order types. For example, you can exclude the changing of the production version for production orders (PPO1).

There is also a status check to prevent changes to orders with certain statuses.

In contrast to action code S\_CPV1, which calls the standard function of the graphical planning table to change the production version of a planned order, this action code can also be executed for production orders and process orders.

### Note

Since the S\_CPV2 function is an enhancement of the S\_CPV1 function, there is no separate documentation for the S\_CPV1 function. The difference being that S\_CPV1 only works for planned orders and does not allow re-dispatching.

### Procedure

		Work Centers																												
Work ctr	Description	16.01.2018												17.01.2018																
		05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09
MA1	LMPC wst 1	1						2						1																
MA3	LMPC wst 3													60007 60007027																

Position of the Orders for the Capacities Before the Change

Select an operation of the order that you want to change:

Alert	Conflict	Dispatch...	F	Work ctr	Order	Operation	Quantity	OpAc	Cat	C...	Phase	SOp	Material	Earliest start	Earl.start	Earliest finish
		X		MA3	60007841	2	0010	1	10	0			LMPC_FERT_12	16.01.2018	11:03:18	16.01.2018
		X		MA3	60007842	2	0010	1	10	0			LMPC_FERT_12	16.01.2018	11:03:18	16.01.2018

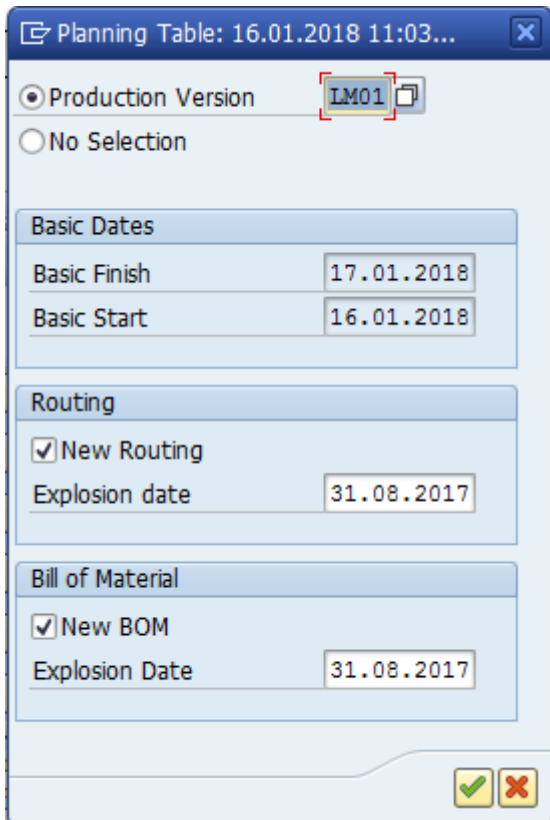
Selection of an Order Operation

Execute the action code  (S\_CPV2).

For production/process orders: If the order operation contains a status that is not allowed (setting via Customizing), the function terminates at this point. If the status check is positive, a selection window for the production version appears next.

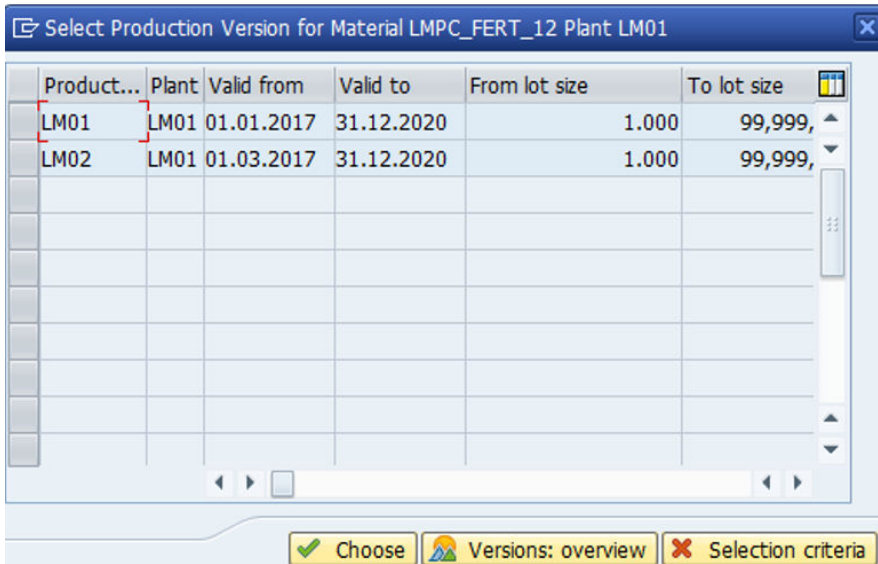
Select a production version in the popup window.





Popup Window for Changing the Production Version

You can use the F4 help to display the possible alternatives:



Selection of Production Version

Decide whether the BOM and the routing are to be exploded.



The LMPC clean-out orders block capacity at the relevant work center. The LMPC clean-out orders are standard production orders or process orders that are used as placeholders to create time for necessary cleaning in the capacities.

The LMPC clean-out orders can be used as an alternative to maintenance orders. Maintenance orders must be created individually by the user using transaction IW31. The LMPC clean-out orders, on the other hand, can be created simultaneously in any number according to predefined rules.

The use of LMPC clean-out orders is useful if no rigid cleaning cycles are required on the machines, for example if cleaning is to be carried out when a material group is changed or after a certain number of operations.

LMPC clean-out orders can be created in three different ways:

- [Creation of clean-out orders during material group transitions. \[page 100\]](#)
- [Creation of Clean-Out Orders After a Number of Operations \[page 104\]](#)
- [Creation of Clean-Out Orders After Time Interval \[page 106\]](#)

If you choose the variant with material groups, the cleaning times when transitioning between materials of one material group to materials of another material group are stored in the transition matrix. The clean-out orders are created based on these times for the transitions.

When creating the clean-out orders according to number of operations, the clean-out orders are always inserted into the production plan after a certain number of operations.

When creating the clean-out orders by time, the clean-out orders are created periodically at the respective work center at predefined time intervals.

Special feature of planning with suboperations: The clean-out orders can only be created between the operations. No clean-out orders can be created between suboperations. During processing for the creation of clean-out orders, only the operations are taken into account. The corresponding suboperations are not taken into account.

#### → Tip

It is possible to execute the action code using a nightly planning run in the background using the program /LMPC/HJPT. This is only possible for the creation of clean-out orders by operation number and time interval. Background processing is not possible during the transition of material groups. During background processing, the clean-out orders are created in the entire planning period. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

For information on settings for the LMPC clean-out orders, see the LMPC Configuration Guide. [S\\_CRCLOR Configuration: LMPC Clean-Out Orders](#)

#### i Note

The topic of clean-out orders is very complex. Extensive Customizing settings and correct master data are required to achieve the desired result. We recommend that you request the support of an LMPC consultant for the setup.

## 2.6.3.10.1 Creation of clean-out orders during material group transitions.

LMPC clean-out orders by material group transitions.

In the transition matrix, the cleaning times for the transitions from one material group to the next are maintained for each work center.

View of the transition matrix:

**Change View "Transition matrix": Overview**

Plant: LM01 Werk: LMPC  
Transit. matrix: MW\_PRX LMPC Setup Group

Transition matrix for resources						
Predecessor group	Successor group	Setup time	Setup unit	Rcp.grp.	Re...	
GRP12	GRP34	20	MIN			
GRP34	GRP12	40	MIN			
GRP34	GRP34	60	MIN			

Example Transition Matrix

Select at least two consecutive dispatched orders in the LMPC planning table. The logic checks the transitions of the material groups from the operations of the selection. Clean-out orders are only created between selected operations.

**Planning Table: 06.09.2017 17:45:52 ZMW\_LMPC**

Work Ctr: MW PR1

Work ctr	Description	08.09.2017																												
		21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	00	
		1																												

Stat.	I	F	Work ctr	Order	OpAc	Cat	C..	Phase	Material	SOp	Earliest start	Earl.start	Earliest finish	Erl.finish	Nu..
X			MW_PR1	70001075	0010	1	40	1	MW_LMPC_PRHA_34		08.09.2017	06:02:00	08.09.2017	06:32:00	
X	X		MW_PR1	2665639	0010	2		1	MW_LMPC_PRHA_34		08.09.2017	06:32:00	08.09.2017	08:22:00	
X	X		MW_PR1	2665640	0010	2		1	MW_LMPC_PRHA_34		08.09.2017	08:22:00	08.09.2017	10:12:00	
X	X		MW_PR1	2665638	0010	2		1	MW_LMPC_PRHA_34		08.09.2017	10:12:00	08.09.2017	12:02:00	
X	X		MW_PR1	2665637	0010	2		1	MW_LMPC_PRHA_34		08.09.2017	12:02:00	08.09.2017	13:52:00	

Selection of Operations

### ! Restriction

The action code generates clean-out orders only between dispatched orders within the same plant and the same work center.

Execute the action code  (S\_CRCLOR).

The clean-out orders are created and dispatched according to the settings in Customizing.

Result:

**Planning Table: 06.09.2017 18:10:07 ZMW\_LMPC**

GrafObj. Capacity Order Operation Strategy Plan.log.

Work ctr	Description	08.09.2017																			
		03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22
MW_PR1																					

Stat...	F	Work ctr	Order	OpAc	Cat	C...	Phase	Material	SOp	Earliest start	Earl.
X		MW_PR1	70001075	0010	1	40	1	MW_LMPC_PRHA_34		08.09.2017	06:00
X	X	MW_PR1	2665639	0010	2		1	MW_LMPC_PRHA_34		08.09.2017	06:00
X	X	MW_PR1	2665640	0010	2		1	MW_LMPC_PRHA_34		08.09.2017	08:00
X		MW_PR1	%0000000000004	0010	1	40	1			08.09.2017	10:00
X	X	MW_PR1	2665638	0010	2		1	MW_LMPC_PRHA_34		08.09.2017	11:00
X		MW_PR1	%0000000000005	0010	1	40	1			08.09.2017	13:00
X	X	MW_PR1	2665637	0010	2		1	MW_LMPC_PRHA_34		08.09.2017	14:00

Two Temporary Clean-Out Orders Have Been Created.

The created clean-out orders are inserted between the existing orders. They are temporary until the planning is saved by the user. The temporary order numbers indicate this. You can delete them by reloading the planning data. After you save the data, the orders are assigned specific numbers.

Save the planning.

Result after saving the planning:

**Planning Table: 06.09.2017 18:18:04 ZMW\_LMPC**

GrafObj. Capacity Order Operation Strategy Plan.log.

Work ctr	Description	08.09.2017																						
		23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21
MW_PR1																								
		1																						

Stat.	F	Work ctr	Order	OpAc	Cat	C..	Phase	Material	SOp	Earliest start	Earl.start	Earliest finish
X		MW_PR1	70001075	0010	1	40	1	MW_LMPC_PRHA_34		08.09.2017	06:02:00	08.09.2017
X	X	MW_PR1	2665639	0010	2		1	MW_LMPC_PRHA_34		08.09.2017	06:32:00	08.09.2017
X	X	MW_PR1	2665640	0010	2		1	MW_LMPC_PRHA_34		08.09.2017	08:22:00	08.09.2017
X		MW_PR1	70001137	0010	1	40	1			08.09.2017	10:12:00	08.09.2017
X	X	MW_PR1	2665638	0010	2		1	MW_LMPC_PRHA_34		08.09.2017	11:12:00	08.09.2017
X		MW_PR1	70001138	0010	1	40	1			08.09.2017	13:02:00	08.09.2017
X	X	MW_PR1	2665637	0010	2		1	MW_LMPC_PRHA_34		08.09.2017	14:02:00	08.09.2017

Clean-Out Orders After Saving

The clean-out orders have been assigned concrete order numbers.

It is possible to replace existing clean-out orders with new clean-out orders. To do this, the the parameter REMOVE must be activated in Customizing for the action code.

Select the existing clean-out orders together with the dispatched orders.

Execute the action code again.



## 2.6.3.10.2 Creation of Clean-Out Orders After a Number of Operations

Clean-out orders after a number of operations.

### → Remember

When creating clean-out orders after a number of operations, only dispatched operations at the work centers are taken into account. The logic only creates clean-out orders between already dispatched operations.

Settings for counting operations have already been made in Customizing for LMPC clean-out orders.

### Maintenance of Number of Operations

Change View "Number of operations": Overview

Action Code	Plnt	Work ctr	Seq.Num. R	No. op.	Duration	Unit	Log. Opr.	Status
*	LM01	*	1	4	360	MIN	And	Inactive
*	LM01	MA1	1	4	120	MIN	And	Active
*	LM01	MA2	1	3	600	MIN	And	Active
*	LM01	MW_PR3	1	10	90	MIN	And	Active
S_CRCLOR	LM01	*	1	1	360	MIN	And	Active

Example of Customizing Settings for Number of Operations

The HJPT planning table has been opened. There are already dispatched operations at the work centers.

There are two options for using the settings to define how the period in which clean-out orders are to be created is to be determined:

- By selecting operations in the ALV Grid
- Using a manual entry in a dialog box

If the function is configured in such a way that no dialog box appears for querying the period, the period is determined using the selected operations. In this case, the period starts with the earliest start time of the first selected operation and ends with the latest end time of the last selected operation.

For the description of the specification of the period using the selection of operations, see the section on logic 3 of the creation of clean-out orders by time intervals. [Logic 3: Creation After Duration of Operations with Rule Check \[page 112\]](#)

In this example, it is configured that the function queries the period for the creation of clean-out orders using a dialog box. In this case, only one operation needs to be selected.

Select the operation from which the logic should start counting the operations.

Alert	Dispatched	F...	CTC	Order pool	Lock Nu...	Order Number	OpAc	Cat	Material	Material Grouping	Work ctr	Total Order Quantity	UoM	Earliest start
●○○	X	X				3192624	0010	001	LMPC HALB 12	GRH12	MA1	10	PC	29.07.2020
●○○	X	X				3192618	0010	001	LMPC HALB 12	GRH12	MA1	14	PC	30.07.2020
●○○	X	X				3192622	0010	001	LMPC HALB 12	GRH12	MA1	10	PC	31.07.2020
●○○	X	X				3192621	0010	001	LMPC HALB 12	GRH12	MA1	4	PC	01.08.2020
●○○	X	X				3192623	0010	001	LMPC HALB 12	GRH12	MA1	2	PC	01.08.2020

Select Operation

Execute the action code  (S\_CRCLOR).



The system displays a dialog box for querying the period in which the operations and clean-out orders are to be created.

Field	Value
Actual start	29.07.2020
Act.start time	15:41:00
Actual finish	07.08.2020
Act.finish time	23:59:59

Dialog Box for Period Selection

The fields in the dialog box are prefilled. The start date and start time of the selected operation are entered as the start date and start time. The end date is the end of the current planning period. The end time is 23:59:59.

#### → Remember

The selected operations are only used as information providers for the work centers and the start time of processing. The period over which processing is to take place is defined in the dialog box and not by the selected operations.

The period can be changed by the user. You can select a date in the past. The counting of operations can start from this date. However, no clean-out orders can be created in the past.

If the result of the function is that a clean-out order is to be created in the past, it does not create it.

When you confirm the window, the rules are read from Customizing. This is used to calculate the times at which a clean-out order is to be created.

By selecting several operations from different work centers, you can also simultaneously create clean-out orders for different work centers. The dialog box appears only once. The data in the dialog box is prefilled with the data of the first selected operation. The evaluation period entered is valid for all work centers in the selection.

The logic works through the work centers from the selection one after the other.

The logic reads all dispatched operations in the selection period and applies the check routines defined in the settings. A check routine can have several rules.

You can use the rules to define which operations are to be taken into account during counting. The rules for a check routine can be linked with AND or OR. AND linked means that all rules for a check routine must apply for an operation to be counted. OR linked means that one of the rules must apply for an operation to be counted. If no counting rules are defined in the check routines, each operation is counted. In this case, rules are not checked. For details on creating the rules, see the LMPC Configuration Guide. [Maintenance of Number of Operations](#)

Whenever the logic has determined the last operation of a counting group, it reads the end time of that operation. This end time is used as the start date/time for dispatching the clean-out order. The clean-out order is created and dispatched on this date. It moves between the operations that have already been dispatched. The prerequisite for this is that the settings for the strategy profile have been made accordingly ("Insert operation").

Result:

Alert	Dispatched	F...	CTC	Order pool	Lock	Nu...	Order Number	OpAc	Cat	Material	Material Grouping	Work ctr	Total Order Quantity	UoM	Earliest start	Earl.start	Earliest finish	Erl.finish
○●○	X	X					3192624	0010	001	LMPC HALB 12	GRH12	MA1	10	PC	29.07.2020	15:41:00	30.07.2020	07:51:00
○●○	X	X					3192618	0010	001	LMPC HALB 12	GRH12	MA1	14	PC	30.07.2020	15:20:00	31.07.2020	08:10:00
○●○	X	X					3192622	0010	001	LMPC HALB 12	GRH12	MA1	10	PC	31.07.2020	13:03:00	31.07.2020	17:13:00
○●○	X						%0000000000..	0010	001			MA1	1	PC	31.07.2020	17:13:00	01.08.2020	06:13:00
○●○	X	X					3192621	0010	001	LMPC HALB 12	GRH12	MA1	4	PC	01.08.2020	08:54:00	01.08.2020	12:04:00
○●○	X	X					3192623	0010	001	LMPC HALB 12	GRH12	MA1	2	PC	01.08.2020	13:49:00	01.08.2020	16:39:00
○●○	X	X					3192619	0010	001	LMPC HALB 12	GRH12	MA1	10	PC	03.08.2020	06:00:00	03.08.2020	10:10:00
○●○	X	X					3192544	0030	001	LMPC HALB 1234	GRH34	MA1	10	PC	04.08.2020	08:38:00	04.08.2020	10:43:00
○●○	X						%0000000000..	0010	001			MA1	1	PC	04.08.2020	10:43:00	04.08.2020	11:43:00
○●○	X	X					3192542	0030	001	LMPC HALB 1234	GRH34	MA1	30	PC	04.08.2020	17:30:00	05.08.2020	11:45:00
○●○	X	X					3192543	0030	001	LMPC HALB 1234	GRH34	MA1	30	PC	05.08.2020	13:51:00	06.08.2020	08:06:00
○●○	X	X					3192540	0030	001	LMPC HALB 1234	GRH34	MA1	30	PC	06.08.2020	10:41:00	06.08.2020	16:56:00

Result: Insertion of Clean-Out Orders

The clean-out orders have been created in the simulation. The temporary order numbers indicate this. The clean-out orders only become persistent in the database when you save.

Depending on the settings, the function can behave differently.

For example, existing clean-out orders can be deleted when the function is executed and replaced by new clean-out orders.

The function can also be set up in such a way that it closes gaps in the production plan when the clean-out orders are inserted, to enable continuous planning.

You can use another setting option to check whether another clean-out order already exists at the point at which a clean-out order is to be created, and skip the creation of this order.

The counting function can also be influenced. It is possible to choose whether operations that do not comply with the rules are simply ignored or whether such operations cause the counter to be reset and counting to be restarted at this point (strict function execution).

### i Note

If you have questions about the settings, please contact your LMPC consultant. The LMPC Configuration Guide can also be of help. [S\\_CRCLOR Action Code Customizing](#)

### → Tip

It is possible to execute the action code using a nightly planning run in the background using the program / LMPC/HJPT. During background processing, the clean-out orders are created in the entire planning period. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

## 2.6.3.10.3 Creation of Clean-Out Orders After Time Interval

With this type of creation, the clean-out orders are created at regular intervals at the work centers.

There are three different logics for creating clean-out orders after time intervals:

- [Logic 1: Creation by Time Interval Without Rule Check \[page 107\]](#)
- [Logic 2: Creation After Time Interval with Rule Check \[page 109\]](#)
- [Logic 3: Creation After Duration of Operations with Rule Check \[page 112\]](#)

The logic is selected using the parameter LOGIC in the settings for the action code. [S\\_CRCLOR Action Code Customizing](#)

→ Tip

It is possible to execute the action code using a nightly planning run in the background using the program /LMPC/HJPT. During background processing, the clean-out orders are created in the entire planning period. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

### 2.6.3.10.3.1 Logic 1: Creation by Time Interval Without Rule Check

Regular clean-out after certain time intervals.

The clean-out orders are created according to the time interval without a rule check regardless of whether operations have already been dispatched at the relevant work center.

The clean-out orders are created and dispatched strictly after a certain time interval, without checking the position of other orders. They are created in the simulation. The orders are not written to the database until the planning is saved.

In Customizing for clean-out orders in transaction /LMPC/CLOR\_CUST, the time interval and the duration of the clean-out order have already been maintained for the work center used.

With this logic, the time interval is maintained in number of days.

Change View "Time interval": Overview

Action Code	Plnt	Work ctr	Seq.Num. R	No.of Days	No. hours	No.of Min.	Duration	Unit	Log. Opr.	Status
*	LM01	*	1	8		30	60	MIN	And	Active
*	LM01	MA1	1	99			60	MIN	And	Active
S_CRCLOR	LM01	MA1	1	3			180	MIN	And	Active
S_CRCLOR	LM01	MA1	2	6			90	MIN	And	Active

Customizing Time Interval Clean-Out Orders

There are two options for using the settings to define how the period in which clean-out orders are to be created is to be determined:

- By selecting operations in the ALV Grid
- Using a manual entry in a dialog box

If the function is configured in such a way that no dialog box appears for querying the period, the period is determined using the selected operations. In this case, the period starts with the earliest start time of the first selected operation and ends with the latest end time of the last selected operation.

In this example, it is configured that the function queries the period for the creation of clean-out orders using a dialog box. In this case, only one operation needs to be selected.

Select an operation in the ALV Grid of the HJPT planning table.

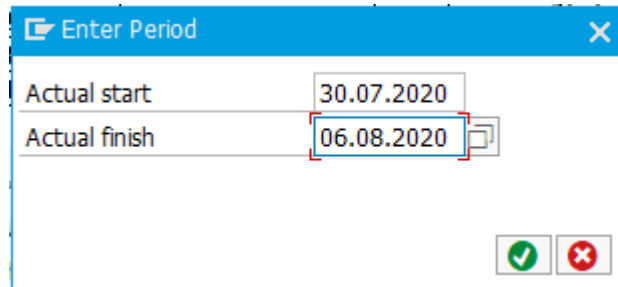
Alert	Dispatched	F...	CTC	Order pool	Lock	Nu...	Order Number	OpAc	Cat	Material	Material Grouping	Work ctr	Total Order Quantity	UoM	Earliest start	Earl.start	Earliest finish	Erl.finish
●○○	X						3192624	0010	001	LMPC HALB 12	GRH12	MA1	10	PC	30.07.2020	12:30:00	30.07.2020	16:40:00
●○○	X						3192620	0010	001	LMPC HALB 12	GRH12	MA1	30	PC	01.08.2020	06:30:00	01.08.2020	14:00:00
●○○	X						3192618	0010	001	LMPC HALB 12	GRH12	MA1	14	PC	01.08.2020	11:18:00	01.08.2020	16:08:00
●○○	X						3192622	0010	001	LMPC HALB 12	GRH12	MA1	10	PC	01.08.2020	12:30:00	01.08.2020	16:40:00

Operation Selection

This operation informs the logic of the work center at which the clean-out orders are to be generated and the start time at which creation is to be started.

Execute the action code  (S\_CRCLOR).

The system displays a dialog box for entering the period in which the clean-out orders are to be created.



Period for Creation of Clean-Out Orders

The fields in the dialog box are prefilled. The start date of the selected operation is entered as the start date. The end date is the end of the current planning period.

The period can be changed by the user. The planner can select a date in the past. The calculation of the time intervals can start from this date. However, no clean-out orders can be created in the past.

If the result of the function is that a clean-out order is to be created in the past, it does not create it.

When you confirm the window, the rules for the time intervals are read from Customizing. This is used to calculate the days on which a clean-out order is to be created.

Only factory calendar days are taken into account, not standard calendar days. The factory calendar used is the factory calendar that is entered in the capacity of the work center. Therefore, non-working days according to the factory calendar are not taken into account when calculating the intervals. For example, if an interval starts on Friday, lasts for two days, and Sunday is a non-working day, the next clean-out order is created on Monday.

The clean-out orders are created and dispatched for the desired duration, on the calculated day.

Alert	Dispatched	F...	CTC Order pool	Lock Nu...	Order Number	OpAc Cat	Material	Material Grouping	Work ctr	Total Order Quantity	UoM	Earliest start	Earl.start	Earliest finish	Erl.finish
oao	X				%0000000000	0010 001			MA1	1	PC	03.08.2020	06:00:00	03.08.2020	09:00:00
oao	X				%0000000000	0010 001			MA1	1	PC	06.08.2020	06:00:00	06.08.2020	09:00:00
oao		X			3192624	0010 001	LMPC_HALB_12	GRH12	MA1	10	PC	30.07.2020	12:30:00	30.07.2020	16:40:00
oao		X			3192620	0010 001	LMPC_HALB_12	GRH12	MA1	30	PC	01.08.2020	06:30:00	01.08.2020	14:00:00

Newly Created Clean-Out Orders

You can use the settings for the action code to activate an additional check using the parameter CHK\_CLOR. If the check is active, before a clean-out order is created, the system checks whether a clean-out order already exists at the relevant point. If a clean-out order already exists, no new clean-out order is created.

The clean-out orders are created in the simulation. This can be seen from the temporary order numbers. Only when you save the planning do the clean-out orders become persistent in the database.

The clean-out orders are generated after a specific time interval for the respective work center and transferred to the standard dispatching function of the capacity planning table with the time specification 00:00:00. As a result, the orders are dispatched to the earliest possible time of the respective day.

The actual position of the orders depends on the available capacity, the settings of the strategy profile used, and the operations already dispatched on this day.

As a rule, the "Insert Operation" checkmark should be set in the strategy profile for the clean-out orders. If other operations have already been dispatched on the relevant day, use this setting to include the clean-out orders in the production plan. They are then the first operation that starts on this day.

The actual duration of the clean-out order results from the interaction between the Customizing settings for the duration, the selected scheduling type, and the scheduling formulas at the work center. For details on this, see the LMPC Configuration Guide. [Maintenance of Time Interval](#)

By selecting several operations from different work centers, you can simultaneously create clean-out orders for different work centers. The dialog box appears only once. The evaluation period entered is valid for all work centers and is taken from the first operation selected.

## Related Information

[S\\_CRCLOR Action Code Customizing](#)

### 2.6.3.10.3.2 Logic 2: Creation After Time Interval with Rule Check

Logic 2 of creating clean-out orders after time interval creates orders after a certain number of days if all dispatched orders in the time interval at this work center adhere to the specified rules.

In the settings for the clean-out orders, check routines are defined with a duration in days after which a clean-out order is to be created.

In addition to this time interval, you can also maintain rules that check the data of the operations. These can be linked using either AND or OR.

With the AND operation, an operation is valid if all maintained rules apply to it. With the OR operation, an operation is valid if one of the maintained rules applies.

For details on maintaining the configuration, see the LMPC Configuration Guide. [Maintenance of Time Interval](#)

There are two options for selecting the operations to be checked:

- A dialog box is used to enter a check period.
- The operations are selected in the ALV Grid.

This can be defined in the settings for the function.

The call variant with dialog box has been described in logic 1, where it can be read. [Logic 1: Creation by Time Interval Without Rule Check \[page 107\]](#)

At this point, the call via the selection of the operations is described.

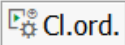
#### → Remember

The check can only be performed using dispatched operations. Operations that have not been dispatched are ignored.

Select the dispatched operations that are to be checked in the ALV Grid.

Alert	Lock	Di...	Fmd	Ord. Nr.	OpAc	SOp	Material	Work...	Description	Cat	Plant	Op. Q...	UoM	Latest start
oo		X	X	3296724	0010		LMPC H UVG 1	MA1	LMPC wst 1	001	LM01	5	PC	06.08.2021
oo		X	X	3296727	0010		LMPC H UVG 1	MA1	LMPC wst 1	001	LM01	18	PC	06.08.2021
oo		X	X	3296726	0010		LMPC H UVG 1	MA1	LMPC wst 1	001	LM01	7	PC	06.08.2021
oo		X	X	3296729	0010		LMPC H UVG 1	MA1	LMPC wst 1	001	LM01	40	PC	06.08.2021

Selection of Operations

Execute the action code  (S\_CRCLOR).

The logic reads the check routines and related rules from the settings.

The selected operations are processed for each work center.

For each work center, the determined check routines are processed in sequence. First, the first check routine is processed for all selected transactions, then the second routine, and so on.

The following description explains the process flow of the check of a check routine with several rules.

The number of days that comprise a check period is defined in the check routine.

If operations that are already in the past have been selected, the check starts in the past. However, no clean-out orders can be created in the past. If the result of the logic is that a clean-out order is to be created in the past, this clean-out order will be omitted.

If the parameter for planning without gaps is activated (CLOSEGAP), first all selected operations are rescheduled without gaps. The start time of the first selected operation serves as the start time. If this is in the past, the current time is used as the start time.

The check routine reads the first selected operation at this work center. The start date of this operation defines the first day of the check period. The check period comprises the defined number of days maintained, whereby the start day is counted. For example, if the check period is over two days, all operations that start on the day of the start operation and on the next day are checked.

The check period only includes working days of the factory calendar in the calculation. The factory calendar stored in the work center is used. This means that non-working days, such as a Sunday, are not included in the check period.

### Note

When the action code is executed without the popup window, only those operations that were selected are considered on the start day. For example, if an operation is before the first selected operation, this operation is not checked, even if it is on the same start day.

The rule check processes the activities in the check period one after the other. It starts at the first operation. If the rules have an **AND operation**, all rules must apply to this operation for the check to be positive. If the rules have an **OR operation**, then only one rule must apply to this operation for the check to be positive.

If the check fails for the first operation, no clean-out order is created and the logic continues to the next operation. It starts the check again from this operation. In this case, the check period shifts and starts with the next operation. The first operation that fulfills the rule check determines the start day for the check routine.

The start time of the operations is determined using the fields of the capacity requirement. It is either the earliest start time or the latest start time, depending on the scheduling settings (FSTAD\_KB, FSTAU\_KB, or SSTAD\_KB, SSTAU\_KB).

All other dispatched operations that start in the check period are checked.

If the rule check is positive for all operations in the check period, a clean-out order is created.

If, during the sequential check, an operation starts in the check period that does not fulfill the rules, the system checks whether the logic has already reached the last day of the check period and whether the previous operation ends on the last day of the check period. In this case, a clean-out order is created after the previous operation. The sequence of the operations that belong together is ended and the condition that all operations in the check period fulfill the rules is met.

If an operation occurs in the sequence of operations that does not fulfill the rules and the last day of the check period has not yet been reached, no clean-out order is created. In this case, the check terminates and the system starts the check again with the next operation in the sequence.

A clean-out order is only created if there is an operation that fulfills the rules on the last day of the check period. If there is no operation on the last day of the check period, no clean-out order is created because the logic assumes that the check period is not completely occupied. A clean-out order is only created for completely occupied periods.

The start time of the clean-out order depends on the following conditions:

- If the last operation considered ends on the last day of the check period, the clean-out order is created after this operation. This means that the end time of the operation is adopted as the start time for the clean-out order.
- If the operation does not end on the last day of the check period because it starts in the check period but lasts longer than one day and ends after the check period, the creation is dependent on the parameter POSITION.
  - If the parameter POSITION has the value BEFORE, the clean-out order is created at the start time of the last operation. As a result, the clean-out order moves before the last operation in the check period. The check for the next sequence starts with the next operation after the clean-out order. The last operation of the previous period is now the start operation of the next period.
  - If the parameter POSITION has the value AFTER, the end time of the operation is used as the start time for the clean-out order. This means that the clean-out order is placed after the last operation considered. The check then continues to the next operation and starts a new check period with this. The start date of this operation is changed to the start date of the next check period.

You can use the settings for the action code to activate an additional check using the parameter CHK\_CLOR. If the check is active, before a clean-out order is created, the system checks whether a clean-out order already exists at the relevant point. If a clean-out order already exists, no new clean-out order is created.

If the end of the calculated check period is greater than the end day of the selection period, the rule evaluation is ended and a clean-out order is no longer created.

Result:

Alert	Lock Di.	Fmd	Ord. Nr.	OpAc	SOp	Material	Work.	Description	Cat	Plant	Op. Q.	UoM	Latest start	Time	Latest finish	Lat.finish
oo	X	X	3296724	0010		LMPC_H UVG_1	MA1	LMPC wst 1	001	LM01	5	PC	06.08.2021	06:00:00	06.08.2021	07:27:30
oo	X	X	3296727	0010		LMPC_H UVG_1	MA1	LMPC wst 1	001	LM01	18	PC	06.08.2021	07:27:30	06.08.2021	11:05:00
oao	X		%0000000	0010			MA1	LMPC wst 1	001	LM01	1	PC	06.08.2021	11:05:00	06.08.2021	14:05:00
oo	X	X	3296726	0010		LMPC_H UVG_1	MA1	LMPC wst 1	001	LM01	7	PC	06.08.2021	14:05:00	06.08.2021	15:52:30
oo	X	X	3296729	0010		LMPC_H UVG_1	MA1	LMPC wst 1	001	LM01	40	PC	06.08.2021	15:52:30	07.08.2021	11:10:00
oao	X		%0000000	0010			MA1	LMPC wst 1	001	LM01	1	PC	07.08.2021	11:10:00	07.08.2021	14:10:00

**Result of Creation of Clean-Out Orders**

Clean-out orders have been created between the operations that have already been dispatched.

The clean-out orders are created in the simulation and can be discarded by reloading the data. The system does not write the orders to the database until you choose Save.

## Related Information

[S\\_CRCLOR Action Code Customizing](#)

### 2.6.3.10.3.3 Logic 3: Creation After Duration of Operations with Rule Check

Logic 3 for the Creation of Clean-Out Orders by Time Interval

Logic 3 of the creation of clean-out orders by time interval contains a check for the duration of orders.

In the settings for the clean-out orders, a duration in days, hours, and minutes is defined in the check routine, after which a clean-out order is to be created.

This time is not the capacity requirements of the operations, but the linear duration of the operations.

In addition to this duration, you can also maintain rules that check the data of the operations. For details on maintaining the configuration, see the LMPC Configuration Guide. [Maintenance of Time Interval](#)

There are two options for selecting the operations to be checked:

- A dialog box is used to enter a check period.
- The operations are selected in the ALV Grid.

This can be defined in the settings for the function.

The call variant with dialog box has been described in logic 1, where it can be read. [Logic 1: Creation by Time Interval Without Rule Check \[page 107\]](#)

At this point, the call via the selection of the operations is described.

Select the dispatched operations that are to be checked in the ALV Grid.

#### → Remember

The check can only be performed using dispatched operations. Operations that have not been dispatched are ignored.

Alert	Lock Di...	Fmd	Ord. Nr.	OpAc	SOp	Material	Work...	Description	Cat	Plant	Op. Q...	UoM	Latest start
	X	X	3296724	0010		LMPC H UVG 1	MA1	LMPC wst 1	001	LM01	5	PC	06.08.2021
	X	X	3296727	0010		LMPC H UVG 1	MA1	LMPC wst 1	001	LM01	18	PC	06.08.2021
	X	X	3296726	0010		LMPC H UVG 1	MA1	LMPC wst 1	001	LM01	7	PC	06.08.2021
	X	X	3296729	0010		LMPC H UVG 1	MA1	LMPC wst 1	001	LM01	40	PC	06.08.2021

Selection of Operations

Execute the action code Cl.ord. (S\_CRCLOR).



If the parameter for planning without gaps is activated (`CLOSEGAP`), first all selected operations are rescheduled without gaps. The start time of the first selected operation serves as the start time. If this is in the past, the current time is used as the start time. If the parameter is not activated, this step is not executed.

In the next step, the logic reads the check routines and related rules from the settings.

The selected operations are processed for each work center.

For each work center, the check routines found are processed in sequence.

The following description explains the process flow of a check for a check routine with several rules.

First, a check period is calculated from the Number of Days, Number of Hours, and Number of Minutes fields, after which a clean-out order is created.

The first selected operation at this work center is checked.

If the setting is such that all rules are linked with AND, the check is only positive if all rules apply to this operation. If the setting is such that all rules are linked with OR, the check is positive if at least one rule applies to the operation. If the check is negative, the logic continues to the next operation.

If the check is positive, the duration of the operation is calculated. The duration is calculated according to the linear time. Depending on the planning setting, the system evaluates either the fields for the earliest start time or the latest start time of the capacity requirements of the operations to calculate the duration. These are the fields `FSTAD_KB`, `FSTAU_KB`, `FENDD_KB`, `FENDU_KB`, or `SSTAD_KB`, `SSTAU_KB`, `SSSEND_KB`, `SENDU_KB`.

When calculating the duration, the available capacity at the work center is not taken into account. Only the linear time is calculated from the start time of the operation to the end time of the operation. For example, if an operation starts on a Friday and ends on a Monday and no work is done at the weekend, Saturday and Sunday are still calculated in full for the duration of the operation.

After the calculation of the operation duration, a comparison is made. If the duration is less than the duration of the check period, the next operation is checked.

If the next operation also fulfills one of the rules of the check routine, its duration is calculated and added to the previous total duration of the operations.

A check is carried out again. If the total duration is still smaller than the check period, the next operation is checked, and so on.

However, if the total duration of the two operations is longer than the check period, a clean-out order is created after the second operation.

Afterwards, the counter is reset for the duration and the next selected operation is checked.

If an operation for which the check is negative occurs in this series of operations, the behavior of the function depends on the settings of the action code.

If the parameter `STRICT` is not set in the settings, the operation is ignored and the next selected operation is checked. In this case, the counter of the duration is not reset.

If the parameter `STRICT` is set, a strict check takes place, as the parameter implies. If the check is negative for an operation, the check is stopped at this point, no clean-out order is created, and the counter is reset for the duration. The system then proceeds with the search for the next operation for which the check is positive. The check then starts again with this operation.

This check continues until the last selected operation has been processed. If, at the end, the sum of the operation durations is longer than the calculated check period, a clean-out order is created after the last selected operation.

It is possible to check whether a clean-out order is to be created. This can be controlled using parameter CHK\_CLOR. If this parameter is active, the system checks whether a clean-out order already exists for this item before each clean-out order is created. If a clean-out order already exists, no new clean-out order is created at this point. Clean-out orders are identified using the parameter ORD\_TECH.

All orders that are identified by the function as clean-out orders are not included in the calculation of the duration.

Result:

Alert	Lock Di.	Fmd	Ord. Nr.	OpAc	SOp	Material	Work.	Description	Cat	Plant	Op. Q.	UoM	Latest start	Time	Latest finish	Lat.finish
oo	X	X	3296724	0010		LMPC H UVG 1	MA1	LMPC wst 1	001	LM01	5	PC	06.08.2021	06:00:00	06.08.2021	07:27:30
oo	X	X	3296727	0010		LMPC H UVG 1	MA1	LMPC wst 1	001	LM01	18	PC	06.08.2021	07:27:30	06.08.2021	11:05:00
oao	X		%000000	0010			MA1	LMPC wst 1	001	LM01	1	PC	06.08.2021	11:05:00	06.08.2021	14:05:00
oo	X	X	3296726	0010		LMPC H UVG 1	MA1	LMPC wst 1	001	LM01	7	PC	06.08.2021	14:05:00	06.08.2021	15:52:30
oo	X	X	3296729	0010		LMPC H UVG 1	MA1	LMPC wst 1	001	LM01	40	PC	06.08.2021	15:52:30	07.08.2021	11:10:00
oao	X		%000000	0010			MA1	LMPC wst 1	001	LM01	1	PC	07.08.2021	11:10:00	07.08.2021	14:10:00

Result of Creation of Clean-Out Orders

Clean-out orders have been created between the operations that have already been dispatched.

The clean-out orders are created in the simulation and can be discarded by reloading the data. The system does not write the orders to the database until you choose Save.

### → Remember

Each time operations are rescheduled, the durations of the operations can change. By inserting a clean-out order, an operation shifts in such a way that it goes over a period without capacity offer and therefore becomes longer, for example. Therefore, the function continuously checks the duration of the operations during processing. The durations of the operations are calculated using the position of the operations that results from the insertion of the clean-out orders, not with the position of the operations before the insertion of the clean-out orders. This ensures that the clean-out orders are dispatched after the desired duration of the operations after the function has been executed.

## Related Information

[S\\_CRCLOR Action Code Customizing](#)

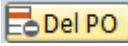
### 2.6.3.11 S\_DELPLA Deleting Planned Orders

Delete planned orders

- Choose one or more planned orders.

Stat...	F	Work ctr	Order	Cat	C...	Phase	Material	OpAc	SOp	Earliest start	Earl.start	Earliest finish	Erl.finish
⊗	X	X	MA3	2661885	2	0	LMPC_FERT_12	0010		02.08.2017	13:55:48	03.08.2017	12:25:48
⊗	X	X	MA3	2661886	2	0	LMPC_FERT_12	0010		03.08.2017	12:25:48	04.08.2017	13:55:48
⊗	X	X	MA3	2661884	2	0	LMPC_FERT_12	0010		02.08.2017	06:00:00	07.08.2017	08:30:00
⊗	X	X	MA3	1329484	2	0	LMPC_FERT_12	0010		03.08.2017	11:06:51	04.08.2017	09:36:51

#### Selection of Operations

- Execute the action code  (S\_DELPLA).
- Result: The planned orders have disappeared from the LMPC HJPT planning board and are thereby deleted.

Stat...	F	Work ctr	Order	Cat	C...	Phase	Material	OpAc	SOp	Earliest start	Earl.start	Earliest finish	Erl.finish
⊗	X	X	MA3	2661885	2	0	LMPC_FERT_12	0010		02.08.2017	13:55:48	03.08.2017	12:25:48
⊗	X	X	MA3	2661886	2	0	LMPC_FERT_12	0010		03.08.2017	12:25:48	04.08.2017	13:55:48
⊗	X	X	MA3	1329484	2	0	LMPC_FERT_12	0010		03.08.2017	11:06:51	04.08.2017	09:36:51
⊗	X	X	MA3	60007645	1	10	LMPC_FERT_12	0010		04.08.2017	15:30:00	09.08.2017	17:00:00

#### Result

#### → Tip

Deletion works in simulation mode. The orders are only actually deleted if you then save.

## 2.6.3.12 S\_DMOORD Create Planned Orders for Tests

Action Code for Generating Test Data

#### Use

You can use the action code S\_DMOORD to create data for testing functions in the HJPT planning table.

For a work center, S\_DMOORD deletes all planned orders loaded to the HJPT planning table and creates new planned orders.

Depending on the settings in the action code, one or more planned orders can be created. The period for creating new orders always starts on the next Monday.

#### → Tip

This action code is suitable, for example, for creating data for testing the LMPC timetable.

#### ! Restriction

Since this is a function for generating test data, it is not intended to be used in productive environments.

#### Procedure

Initially, there are no orders on the machines.

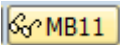


## 2.6.3.13 S\_MB11 Displaying Pegged Requirements

- Select an order operation in the ALV Grid of the LMPC HJPT planning table.

Stat...	I	F	Work ctr	Order	Cat	C..	Phase	Material	OpAc	SOp	Earliest start	Earl.start	Earliest finish	Erl.finish
☉	X	X	MA3	2661885	2		0	LMPC_FERT_12	0010		02.08.2017	13:55:48	03.08.2017	12:25:48
☉	X	X	MA3	2661886	2		0	LMPC_FERT_12	0010		03.08.2017	12:25:48	04.08.2017	13:55:48
☉	X		MA3	60007633	1	10	0	LMPC_FERT_KE	0010		09.08.2017	12:36:51	12.08.2017	09:06:51
☉	X		MA3	2661884	2		0	LMPC_FERT_12	0010		02.08.2017	06:00:00	07.08.2017	08:30:00

Select Operation

- Execute the action code  (S\_MB11).
- Result: The pegged requirements are displayed (as in transaction MD09).

**Pegged Requirements**

Plan.order 0002661884/Stck\*\*

Material: LMPC\_FERT\_12  
 Plant: LM01  
 Receipt Date: 11.08.2017  
 Order Quantity: 50 PC  
 Quantity Without Source: 0 PC

**Pegged Requirements**

Planned dates	Material	Description	Material Memo	MRP Area	El	Data	Recpt/reqd	Quantity	Unit
02.05.2017	LMPC_FERT_12	LMPC Fert 12			PP	VSF	50	37	PC
17.07.2017	LMPC_FERT_12	LMPC Fert 12			PP	VSF	10	10	PC
24.07.2017	LMPC_FERT_12	LMPC Fert 12			PP	VSF	14	3	PC

Pegged Requirements

### ! Restriction

The action code can only be executed for one order.

## 2.6.3.14 S\_ORDCL Closing Individual Production Orders or Process Orders Technically

Technical Completion of Orders

### Use


You can use the action code S\_ORDCL to technically close production orders or process orders individually.

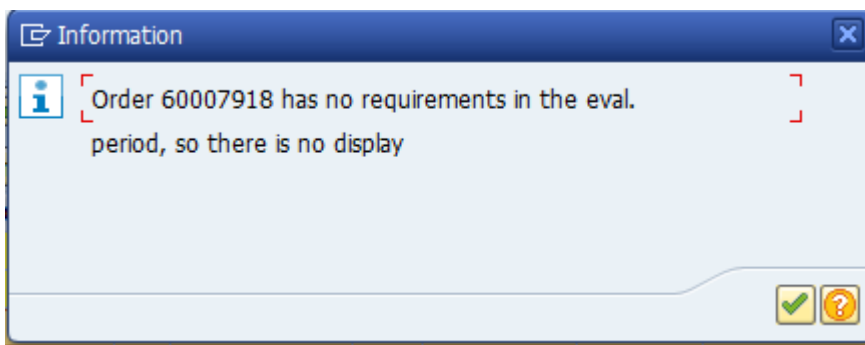
### Procedure

- Select an operation of a production order or process order.

Alert	Dispatc...	Fmd	Order	OpAc	RtgTransf.	Work ctr	Material
☒		X	2758766	0010	18.01.2019	MA1	LMPC_HALB_12
☒		X	2759044	0010	02.11.2018	MA1	LMPC_HALB_12
☒			60007918	0010	27.03.2018	MA1	LMPC_HALB_34
☒		X	2759144	0010	13.12.2018	MA1	LMPC_HALB_34
☒		X	2759145	0010	13.12.2018	MA1	LMPC_HALB_34

Selection of Operation

- Execute the action code  (S\_ORDCL).
- A popup window appears, which shows that the order has been completed since there are no capacity requirements.



Order Completion Message

- Result: The order has disappeared from the LMPC planning table.

Alert	Dispatc...	Fmd	Order	OpAc	RtgTransf.	Work ctr	Material
☒		X	2758766	0010	18.01.2019	MA1	LMPC_HALB_12
☒		X	2759044	0010	02.11.2018	MA1	LMPC_HALB_12
☒		X	2759144	0010	13.12.2018	MA1	LMPC_HALB_34
☒		X	2759145	0010	13.12.2018	MA1	LMPC_HALB_34

Result

→ Tip

The orders are closed in simulation mode and this is only written to the database when you save.

## 2.6.3.15 S\_ORDCLM Completing Production Orders Technically in Mass Processing

Mass Processing: Technical Completion

### Use

You can use the action code S\_ORDCLM to technically complete any number of production orders at the same time.

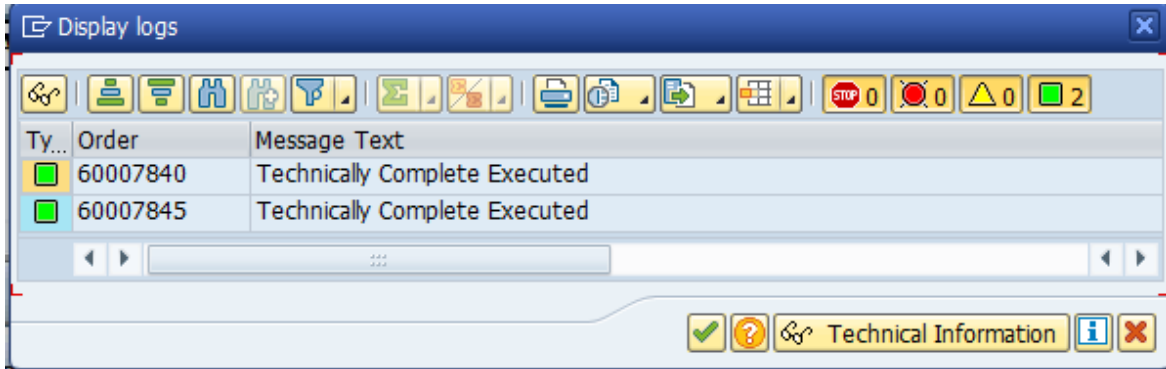
### Procedure

- Select one or more production orders in the HJPT ALV Grid.

Alert	Conflict	I	F	Work ctr	Order	OpAc	Cat	C..	Phase	SOp	Material
				MA3	60007840	0010	1	10	0		LMPC_FERT_12
				MA3	60007845	0010	1	10	0		LMPC_FERT_12

Selection of Production Orders

- Execute the action code (S\_ORDCLM).
- A popup window displays the log for mass processing.



Log with Confirmation in Popup Window

The orders have been completed.

- Confirm the log. The LMPC HJPT planning table executes a reload. The orders then disappear.

## 2.6.3.16 S\_ORDREP LMPC Order Report

LMPC Order Report

### Use

For a production order, the LMPC order report shows an overview of the upstream planned and production orders for all low-level codes of the materials used. It has a similar structure to the material tree of the standard SAP transaction MD4C. You can only access it via a production order. It is not possible to display data for planned and process orders. The order report is called either via the action code S\_ORDREP in the LMPC planning table, or via transaction /LMPC/ORDER\_REP.

In the LMPC standard delivery, the LMPC order report shows the same data as transaction MD4C. However, the difference lies in the fact that an extension is possible via data providers and field enhancements of the underlying ALV structure.

It is possible to color entire rows, as well as individual fields of the ALV Grid. There are 5 status fields that are filled with the status information of the orders depending on the settings made.

### → Tip

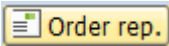
The enhancement and settings options enable the customer to make flexible modifications to the transaction.

### Procedure

- Select an operation for a production order in the ALV Grid of the LMPC HJPT planning table.

Alert	Dispatc...	Fmd	Order	OpAc	Work ctr	Material	Earliest start	Earl.start
			60007918	0010	MA1	LMPC_HALB_34	03.01.2019	07:05:00
			60008059	0010	MA1	LMPC_HALB_34	15.01.2019	14:05:00

Selection

- Execute the action code  (S\_ORDREP).
- Result:

Lev	Stat1	Stat2	Stat3	Stat4	Stat5	Material	Description	Work ctr	Plant	Requirement Element	Requirement Element	Reqmt Element Number	Reqmt Element Item	Error message
0						LMPC_HALB_34	LMPC Halb 34	MA1	LM01	FE	PrdOrd	000060008059	1	Exception Message at Subordinate Level
.1						LMPC_ROH_3	LMPC Rohstoff 3		LM01	AR	OrdRes	0000120159	1	07 Finish date in the past
.1						LMPC_ROH_4	LMPC Rohstoff 4		LM01	AR	OrdRes	0000120159	2	07 Finish date in the past

LMPC Order Report

The LMPC order report is displayed.

## 2.6.3.17 S\_PCONV Partial Conversion of Planned Orders with Subsequent Dispatching

Partial conversion of planned orders

### Use

You use the action code S\_PCONV to convert planned orders into either process orders or production orders. If the planned order was dispatched previously, the newly generated process order or production order is also dispatched after conversion.

### Procedure

- Select an operation of a planned order in the LMPC ALV Grid.

#### ! Restriction

Only one planned order can be converted at a time.

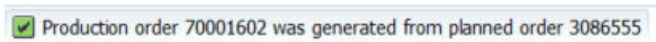






Information Message

- The transaction sends a confirmation message with the new order number.



Conversion Message

- You use the *Back* button to return to the LMPC planning table.
- Now, automatic dispatching is performed, provided the *SKIP* parameter is not set in Customizing.
- Result: The two orders (newly generated order and existing planned order) are dispatched at the start time at which the planned order was scheduled previously. First the new process/production order is dispatched, then the planned order. These make use of the same capacity as the planned order on its own did previously. The two orders are then selected automatically, to make them more visible in the ALV Grid.

Alert	Dispatc...	Fmd	Order	OpAc	RtgTransf.	Work ctr	Material
		X	2758766	0010	18.01.2019	MA1	LMPC_HALB_12
		X	2759044	0010	02.11.2018	MA1	LMPC_HALB_12
		X	2759144	0010	13.12.2018	MA1	LMPC_HALB_34
		X	2759145	0010	13.12.2018	MA1	LMPC_HALB_34

Result of the Conversion

#### → Tip

If the parameter BOMEXPL is set, then after dispatch, a new BOM explosion is performed for the planned order with the remaining quantity on the dispatching date.

## 2.6.3.18 S\_PHCH Change of Duration of a Phase in Process Order

Change Phase Duration of PP-PI Process Orders

### Use

You can use this action code to change the duration of standard values of phases in process orders. In Customizing, you configure which phase of a process order is to be changed, and which standard value in the phase. Several standard values can be changed at the same time.

### Procedure

- Select an operation of a process order in the ALV Grid of the LMPC HJPT planning table.

Alert	Dispa...	F...	Ord. p...	Number	Order	OpAc	Material	Work ctr	Earliest start	Earl.start
		X		3086479	0020	LMPC_PRHA_12	PR2		31.10.2019	23:50:00

Selection

- Execute the action code **Chg. Phase** (S\_PHCH).
- The system displays a popup window in which you can enter the standard values.

The image shows a SAP popup window titled "Enter standard value". It contains two input fields: "Standard Value 1" with the value "100" and "Std value unit 1" with the value "MIN". At the bottom right, there are two buttons: a green checkmark (confirm) and a red X (cancel).

Popup Window for Standard Values

- Here, you can change the time and the unit of the standard value.
- Confirm the popup window.
- Result: The changes are visible immediately in the graphical section of the planning table. This means that the order length is adjusted.

→ Tip

- The changes are made in the buffer of the capacity planning table and only come into effect when the planning result is saved. Changes may be discarded by exiting the planning table without saving, or by reloading the data.
- When a phase is changed, it is deallocated automatically. You can make settings in Customizing so that automatic rescheduling takes place when the change is made.

### Example

- Order length before change:

The image shows a "Work Centers" planning table for the date 03.08.2017. The table has columns for days of the week (08-02) and rows for work centers. A yellow bar indicates an order length of 1. Below the table, there are three numerical values: 2663502, 26635, and 2663504.

Order Before Change

- Change:

This is an identical copy of the popup window shown in the previous section, titled "Enter standard value" with "Standard Value 1" set to "100" and "Std value unit 1" set to "MIN".

- Result:

Work Centers																																
25.07.2018														26.07.2018																		
6	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1														1																		
2714713																																

Operation after the Change

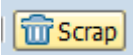
### 2.6.3.19 S\_PLOSS Enter Production Scrap in Order

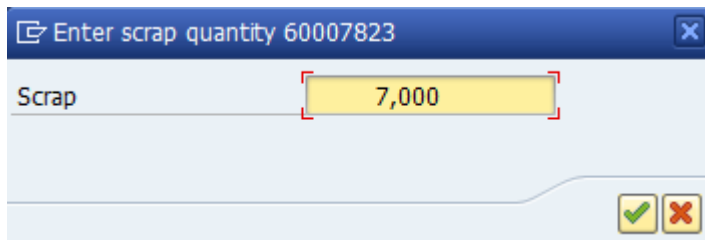
Adjust the Production Scrap in the Order

#### Use

This action code enables you to enter a firm production scrap for planned, production, and process orders. This is possible for both dispatched and deallocated orders. The total quantity of the order is changed by the corresponding amount and also recorded as scrap. The production scrap can be increased and reduced. The order quantity is adjusted accordingly. Note that dispatched orders are deallocated automatically after you change the quantity. However, you can configure automatic re-dispatching. It is also possible to process several orders at the same time. The action code works for planned, production, and process orders. You make the changes in the buffer of the graphical planning table. The system does not write the values to the database until you choose Save. You can discard changes simply by exiting the LMPC planning table without saving, or by refreshing the data.

#### Procedure

- Select one or more orders in the ALV Grid of the LMPC planning table.
- Execute the action code  (S\_PLOSS).
- A popup window with an input option for the production scrap opens for each order. The popup window displays the existing production scrap of the order, which can now be changed.



Enter Production Scrap

- After you confirm your entry, the order quantity is either increased or decreased depending on the production scrap before the change. The production scrap is entered in the order.

For all order types, the following field changes:

- MGVRG\_KB (operation quantity)

For planned orders, the following fields change:

- GSMNG\_PA (total planned order quantity)
- AVMNG\_PA (fixed quantity of scrap from production)

For production and process orders, the following fields change:

- GAMNG\_FA (total order quantity/target quantity)
- GASMG\_FA (total scrap quantity in the order)

Order	Operation Quantity	Planned order qty	Scrap quantity	Total order quantity	Total scrap
2703323	49	49	4		
2703322	22	22	2		
2703327	17	17	0		
60007781	13			13	3
60007647	10			10	2
60007809	7			7	0

Order Quantities of Planned and Production Orders

After the quantity has been changed, the orders are rescheduled since the capacity requirements change as a result of the change. Orders that have already been dispatched are automatically deallocated by the quantity change. The parameter settings determine whether orders already dispatched are dispatched again.

→ Tip

The changes are transferred to the system after you save, or can be discarded via a refresh.

## Related Information

[S\\_PLOSS Configuration: Enter Production Scrap in Order](#)

### 2.6.3.20 S\_SARBPL and S\_HARBPL Change the Work Center for Operations of Production and Process Orders

Change of work center in the order operation

#### Use

You can use the action codes S\_SARBPL and S\_HARBPL to change the work centers used in operations of production and process orders. Only the work center assignment is changed in the operation. The production version is not checked or changed. You can move operations to any work centers. The change is made in the simulation mode.

You can select work centers in four different ways:

- By entering them manually in a popup window (S\_SARBPL).
- By making a selection from a proposal list. The list is derived from a parameter for the action code S\_SARBPL.
- By making a selection from the work center hierarchy, which is stored in the overall profile of the capacity planning table. Provision of all work centers that are not leaf nodes (S\_SARBPL).

- By making a selection from the work center hierarchy, which is stored in the overall profile of the graphical planning table. Provision of all work centers that are at the same level as the current work center plus the work center leaf node one level higher (S\_HARBPL).

### ⚠ Caution

If dispatched operations are changed, they lose their dispatching and must be dispatched to the new work center again after the change.

### → Tip

The change is possible for several operations at the same time. All operations are moved to the same work center.

### ! Restriction

This function is not possible for planned orders. If the settings in the strategy profile allow it, you can move planned orders to any work centers for which no production versions exist by dragging and dropping them in the graphic. However, these moves are not stable. When the planned order is rescheduled, these operations return to the original work center. Therefore, the option to reschedule planned orders has been deactivated for the action codes S\_SARBPL and S\_HARBPL. If you want to move operations from planned orders to other work centers, you should change the production version. A description of this can be found in action code S\_SARBFV. [S\\_SARBFV Change of Work Center for Operations by Changing the Production Version \[page 128\]](#)

### Procedure

- Select an operation of a production order or process order.

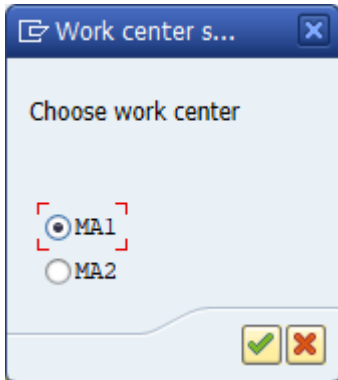
Alert	Dispatc...	Fmd	Order	OpAc	Work ctr	Material	Earliest start
			60007918	0020	MA2	LMPC_HALB_34	04.01.2019
			60008059	0010	MA1	LMPC_HALB_34	15.01.2019
			60008059	0020	MA2	LMPC_HALB_34	15.01.2019

Selection

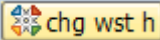
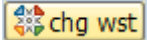
- Execute the relevant action code.
- If the action code (S\_SARBPL) was executed without a parameter list, the system displays a popup window with an entry field.

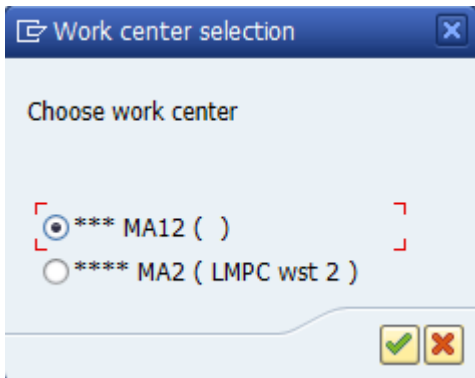
Manual Entry of Work Center

- Enter the desired work center and confirm the popup window.
- If the action code (S\_SARBPL) was executed with a parameter list, the system displays a selection list.



Selection List with Parameters

- If the action code  (S\_HARBPL) has been executed, or the action code  (S\_SARBPL) with the settings for the hierarchy has been selected, the system displays the selection list from the work center hierarchy.



Selection List Work Center Hierarchy

- Select a work center from the selection list and confirm the popup window.
- Result: The operation has been moved to the desired work center. If the work center is open in the LMPC HJPT planning table, you can see the move immediately.

Alert	Dispatc...	Fmd	Order	OpAc	Work ctr	Material	Earliest start
			60007918	0020	MA2	LMPC_HALB_34	04.01.2019
			60008059	0010	MA2	LMPC_HALB_34	15.01.2019
			60008059	0020	MA2	LMPC_HALB_34	15.01.2019

Result Change of Work Center

→ Tip

When you save the LMPC HJPT planning table, the result is written to the database. You can refresh the data without saving to discard the changes.

⚠ Caution

Note that the system logic for determining the work centers in the hierarchy differs depending on the selected action code. For details, see the LMPC Configuration Guide.

## Related Information

[S\\_SARBPL, S\\_HARBPL Configuration: Change of Work Center at Operation](#)

### 2.6.3.21 S\_SARBFV Change of Work Center for Operations by Changing the Production Version

Change of work center by changing the production version

#### Use

You can use the action code S\_SARBFV to change the work center used for operations in planned, production, and process orders. The change is made by changing the production version. Therefore, the change is also possible for planned orders.

For planned orders, there is also the standard function of the capacity planning table. You can change the production version for planned orders by simply rescheduling using drag and drop. This is a standard function of the capacity planning table and not an LMPC function. This function is documented here because it can be categorized here thematically.

#### Prerequisite


There are production versions for the material, which contain different work centers. The function reads the work center selection for the operation from the production versions.

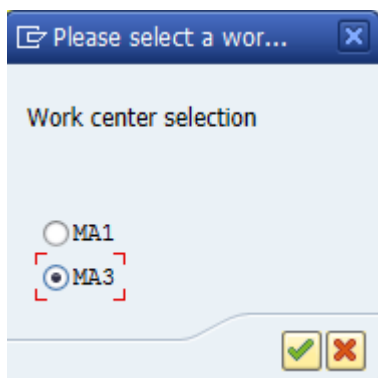
#### Procedure for Changing the Production Version Using an Action Code

- Select one or more data records with the same operation number and the same material in the ALV Grid of the LMPC HJPT planning table.

Stat...	F	Work ctr	Order	OpAc	Cat	C...	Phase	Material	SOp	Earliest start	Earl.start	Earliest finish	Erl.finish
⊖	○	X MA1	1329483	0010	2		0	LMPC_FERT_12		04.08.2017	14:30:00	05.08.2017	13:00:00
⊖	○	X MA1	2661885	0010	2		0	LMPC_FERT_12		05.08.2017	10:00:00	05.08.2017	15:30:00

Selection of Order Operations

- Execute the action code  **chg wst** (S\_SARBFV).
- The system displays a popup window with the possible work centers.



Work Center Selection Dialog Box

- Select the desired work center and confirm the popup window.



- A popup window with the result of the move appears.

Status	MRP element	Message
✓	1329483	Planned order 0001329483 successfully changed to prod.vers. LM01 with work.cntnr MA3
✓	2661885	Planned order 0002661885 successfully changed to prod.vers. LM01 with work.cntnr MA3

Result Dialog Box

- Confirm the popup window.
- Result

Stat...	F	Work ctr	Order	OpAc	Cat	C..	Phase	Material	SOp	Earliest start	Earl.start	Earliest finish	Erl.finish
☉	X	MA3	1329483	0010	2	0	LMPC_FERT_12			02.08.2017	13:30:00	04.08.2017	10:00:00
☉	X	MA3	2661885	0010	2	0	LMPC_FERT_12			04.08.2017	09:30:00	05.08.2017	08:00:00

Result in the ALV Grid

The operations have been moved to the desired work center. If this work center is open in the HJPT planning table, the changes are visible immediately.

### ⚠ Caution

The move to another work center does not take place in simulation mode, it is implemented in the database and therefore cannot be undone by refreshing the data. If the orders have been dispatched, they will be deallocated by the change. Automatic dispatching after the change is not possible.

### Procedure for Changing the Production Version Using Drag and Drop

If you want to reschedule an operation to another work center and you want to change the production version, you can also do this using drag and drop in the graphic.

This is only possible:

- For planned orders
- When rescheduling operations that have already been dispatched to other capacities
- For routings in which the work center is only used in one operation

Drag an operation from the chart of operations not yet dispatched to a capacity in the first chart of the capacity planning table. The first chart is the chart for dispatching.

You can also use drag and drop to reschedule an operation that has already been dispatched to another capacity.

If the new target work center exists in a valid production version for this material, the production version in the planned order is changed.

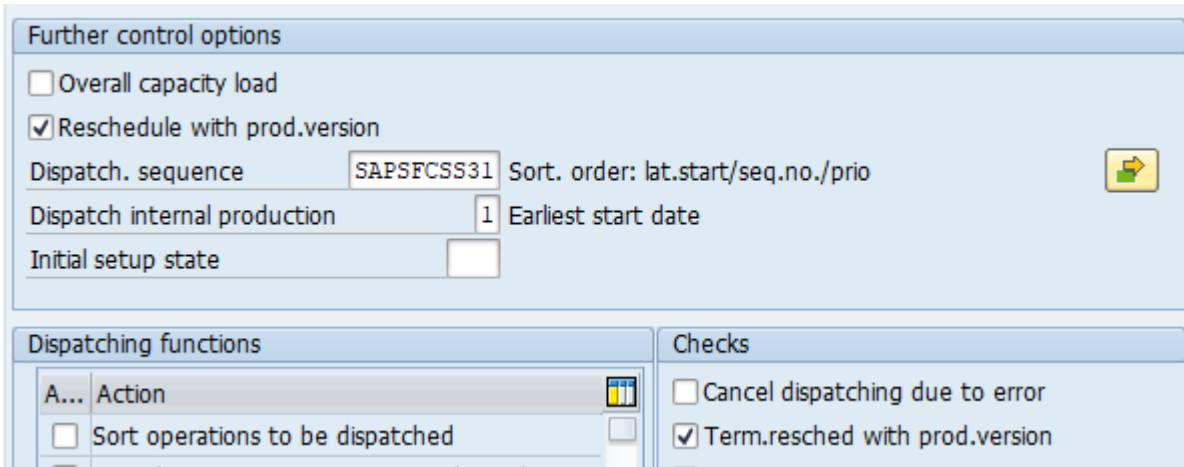
If the new target work center does not exist in a valid production version, planning is either terminated or the work center is changed without changing the production version.

The system behavior depends on the settings of the strategy profile used. In the HJPT planning table, when dragging and dropping in the graphic, the strategy profile used is the one stored in the overall profile as the strategy profile for drag and drop.

Two settings are important in the strategy profile:

- “Rescheduling with Production Version” in the “Further Control Options” section.

- "Termination During Rescheduling with Prod.Vers." in the "Checks" section.



Section: Strategy Profile Transaction OPDB

For the production version to be changed, the "Reschedule with Production Version" checkbox must be set. The system response in the event of an error is controlled by the "Cancel on Rescheduling with Prod.Vers." checkbox.

If the checkmark is set, the planned order cannot be rescheduled to a work center for which no production version exists. Planning terminates with an error message in the planning log.

If the checkmark is not set, the planned order can be rescheduled. However, since no new production version exists for the new work center, the previous production version is retained and the operation is scheduled with the previous standard values using the formulas at the work center.

### ! Restriction

The check for the change of the production version when dragging and dropping in the graphic only works for planned orders. For production or process orders, on the other hand, the production version is not changed. For these orders, there is also no check to see whether a production version exists for the desired target work center. You cannot prevent operations from being moved to another work center via drag and drop. This means that you can switch these orders to other work centers as you wish.

## 2.6.3.22 S\_SPLIT Distribute Capacity Requirements to Individual Capacities Manually

Split capacity requirements

### Use

With this function, the capacity requirements of the operations of production orders are distributed manually from main capacities to individual capacities.

### Planning Scenario

This action code is used in a scenario with individual capacities. The main capacity of a work center contains further subordinate individual capacities here.

The capacity requirements are created infinitely by the MRP run on the main capacity. As a result, this can be over-used several times. The operations are dispatched infinitely to the main capacity.

In the next step, the planner uses the action code S\_SPLIT to manually assign the capacity requirements that are on the main capacity to the subordinate individual capacities. As a result, finite planning is carried out on the individual capacities.

### ! Restriction

- Only operations of production orders can be processed. Planned orders cannot be processed.
- The function requires work centers with individual capacities.
- It is not possible to split an operation into several operations.

### ⚠ Caution

This action code is only listed in the HJPT documentation for the sake of completeness. This is a special function for very rare use cases.

To distribute capacity requirements to individual capacities, you can only use the S\_SPLIT function in the HJPT planning table.

With all other HJPT planning functions, direct dispatching to individual capacities is not possible. The planning functions of the HJPT planning table all use the standard dispatching function of the capacity planning table. This does not support dispatching to individual capacities. This is a technical restriction that cannot be lifted by changing the programming.

The LMPC profiles for the capacity planning table, which are contained in the standard LMPC delivery, do not support the display and processing of individual capacities either.

If you want to work with individual capacities, you must define your own profiles for the capacity planning table and activate the display of individual capacities there.

Due to these restrictions, the use of a planning scenario with individual capacities in the HJPT planning table is not recommended by LMPC development.

Since the display and processing of individual capacities is not planned in the standard LMPC delivery, such a scenario is also not supported by LMPC Support.

It is recommended that you map the machines as separate work centers with main capacities instead of individual capacities. You can then also use all standard planning functions of the HJPT planning table.

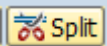
However, if you want to implement a planning scenario with individual capacities, it is recommended that you request consulting from SAP.

### Procedure

- Select an operation of a production order in the ALV Grid.

Alert	Dispatc...	Fmd	Order	OpAc	Work ctr	Material	Earliest start	Earl.start
X			60007918	0010	MA1	LMPC_HALB_34	02.01.2019	15:13:36

Selection

- Execute the action code  (S\_SPLIT).
- The popup window for defining splits appears.

Define Splits

Work center MA1 / LM01 LMPC wst 1  
 Capacity cat. 001 Machine  
 Order 60007918 LMPC\_HALB\_34 Type PP01  
 Seq. 0 Oper./Act. 0010 Suboperation Maschine 1

Splits  
 Planned splits 0  Req. splitting  
 Scheduled splits 1

Latest dates/start 02.01.2019 15:13 Op. Qty 100 Reqmts PC 100.33 H

Sp1	D	Capacity	Date	Time	Split quantity	Reqmts
<input type="checkbox"/> 1	<input type="checkbox"/>		02.01.2019	15:13		0.00
<input type="checkbox"/> 2	<input type="checkbox"/>		02.01.2019	15:13		0.00
<input type="checkbox"/> 3	<input type="checkbox"/>		02.01.2019	15:13		0.00
<input type="checkbox"/> 4	<input type="checkbox"/>		02.01.2019	15:13		0.00
<input type="checkbox"/> 5	<input type="checkbox"/>		02.01.2019	15:13		0.00

Remaining 100 100.33

Split

Screen for Defining Order Splits

- Enter the desired capacity for the order split and the split quantity.
- Confirm your selection.
- Result: The orders have been split. The selected individual capacities have order operations with the desired split quantity.

→ Remember

Function S\_SPLIT is a function of the capacity planning table. The function is standard to SAP and cannot be changed or influenced by the HJPT planning table. Since this function is a standard function of the capacity planning table, this function is not described in detail in the LMPC documentation. For more information about the functions of order splits, prerequisites, and restrictions, see the standard SAP documentation.

## 2.6.4 Planning Functions

The following chapters introduce, all planning functions of the SAP LMPC HJPT detailed scheduling planning board.

### Note

If you require help with selecting or configuring planning functions to achieve your planning goal, please contact LMPC Consulting. LMPC Support does not provide any information about the function or the correct configuration of planning functions. These are consulting topics.

### 2.6.4.1 S\_APALL Deallocate All Operations

Deallocate all dispatched operations

#### Use

You can use this function to deallocate all dispatched operations. You do not have to select any operations. All open dispatched operations are simply deallocated.

This function can be used to undo all dispatches with one click.

#### Procedure

Situation at start:

Alert	Dis...	F...	Order pool	Seq.	Order Number	Cat	OpAc	OpAc	WrkCtr...	Material	Work ctr	Cat	Ord. ...	UoM	Earliest start	Earl.start	Earliest finish	Erl.finish
●○○	X	X			3228917	2	0020	0020	10003965	LMPC HALB 12	MA2	001	6	PC	27.10.2020	17:43:20	28.10.2020	06:31:20
○△○	X	X			3231756	2	0010	0010	10003967	LMPC FERT 34	MA3	001	7	PC	27.10.2020	17:43:20	28.10.2020	07:25:20
○△○	X	X			3228916	2	0020	0020	10003965	LMPC HALB 12	MA2	001	34	PC	28.10.2020	06:31:20	28.10.2020	11:03:20
○△○	X	X			3231756	2	0020	0020	10003968	LMPC FERT 34	MA4	001	7	PC	28.10.2020	07:25:20	28.10.2020	07:39:20
○△○	X	X			3231755	2	0010	0010	10003967	LMPC FERT 34	MA3	001	4	PC	28.10.2020	07:25:20	28.10.2020	08:49:20
○△○	X	X			3228977	2	0010	0010	10003966	LMPC HALB 12	MA1	001	3	PC	27.10.2020	17:43:20	28.10.2020	08:43:20
○△○	X	X			3231755	2	0020	0020	10003968	LMPC FERT 34	MA4	001	4	PC	28.10.2020	08:49:20	28.10.2020	08:57:20
○△○	X	X			3231754	2	0010	0010	10003967	LMPC FERT 34	MA3	001	3	PC	28.10.2020	08:49:20	28.10.2020	10:07:20

Initial Situation

Many operations are dispatched.

Execute the action code  (S\_APALL).

Result:

Alert	Dis...	F...	Order pool	Seq.	Order Number	Cat	OpAc	OpAc	WrkCtr...	Material	Work ctr	Cat	Ord. ...	UoM	Earliest start	Earl.start	Earliest finish	Erl.finish
●○○	X				3230583	2	0010	0010	10003968	LMPC TDUMY1	MA4	001	40	PC	03.11.2020	06:00:00	04.11.2020	07:20:00
○△○	X				3231113	2	0010	0010	10003967	LMPC FERT KE	MA3	001	77	PC	03.11.2020	06:00:00	10.11.2020	12:00:00
○△○	X				3231114	2	0010	0010	10003967	LMPC FERT KE	MA3	001	33	PC	03.11.2020	06:00:00	05.11.2020	16:00:00
○△○	X				3231115	2	0010	0010	10003967	LMPC FERT KE	MA3	001	2	PC	03.11.2020	06:00:00	03.11.2020	09:00:00
○△○	X				3231747	2	0010	0010	10003967	LMPC FERT 34	MA3	001	1	PC	03.11.2020	06:00:00	03.11.2020	07:06:00
○△○	X				3231748	2	0010	0010	10003967	LMPC FERT 34	MA3	001	7	PC	03.11.2020	06:00:00	03.11.2020	07:42:00
○△○	X				3231749	2	0010	0010	10003967	LMPC FERT 34	MA3	001	2	PC	03.11.2020	06:00:00	03.11.2020	07:12:00
○△○	X				3231750	2	0010	0010	10003967	LMPC FERT 34	MA3	001	3	PC	03.11.2020	06:00:00	03.11.2020	07:18:00
○△○	X				3231751	2	0010	0010	10003967	LMPC FERT 34	MA3	001	4	PC	03.11.2020	06:00:00	03.11.2020	07:24:00
○△○	X				3231752	2	0010	0010	10003967	LMPC FERT 34	MA3	001	6	PC	03.11.2020	06:00:00	03.11.2020	07:36:00

Result

All operations have been deallocated.

Since the action code makes the selection itself, the action code limitation function cannot be applied.

→ Tip

This action code can also be used in background processing to deallocate all operations. [Program /LMPC/ HJPT Background Processing \[page 19\]](#)

## 2.6.4.2 S\_APSCG Deallocate Selected Operations and Close Gaps

### Use

You can use this action code to deallocate operations. The gaps that would arise in the production plan due to the deallocation of operations are closed immediately. A production plan without gaps is retained.

### Procedure

Initial situation:

Work ctr	Description	Cap.	Cap des	08.11.2021	09.11.2021	10.11.2021	11.11.2021
MA1	LMPC wst 1	001		1	1	1	1
MA2	LMPC wst 2	001					
MA3	LMPC wst 3	001					
MA4	LMPC wst 4	001					
MA5	LMPC wst 5	001					

Production plan without gaps

The operations are dispatched to the work center without gaps.

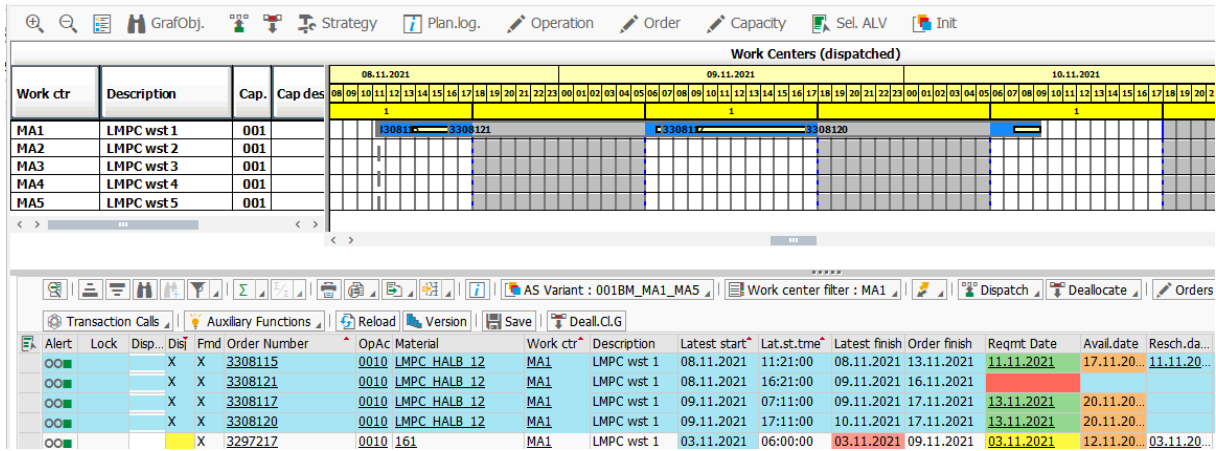
Select one or more operations that are to be deallocated.

Alert	Lock	Disp...	Disj	Fmd	Order Number	OpAc	Material	Work ctr	Description	Latest start	Lat.st.tme	Latest finish	Order finish	Reqmt Date
OO		X	X		3308115	0010	LMPC HALB 12	MA1	LMPC wst 1	08.11.2021	11:21:00	08.11.2021	13.11.2021	11.11.2021
OO		X	X		3308116	0010	LMPC HALB 12	MA1	LMPC wst 1	08.11.2021	16:21:00	09.11.2021	15.11.2021	13.11.2021
OO		X	X		3308119	0010	LMPC HALB 12	MA1	LMPC wst 1	09.11.2021	11:31:00	10.11.2021	16.11.2021	03.11.2021
OO		X	X		3308121	0010	LMPC HALB 12	MA1	LMPC wst 1	10.11.2021	09:01:00	10.11.2021	16.11.2021	
OO		X	X		3308117	0010	LMPC HALB 12	MA1	LMPC wst 1	10.11.2021	11:51:00	11.11.2021	17.11.2021	13.11.2021
OO		X	X		3308120	0010	LMPC HALB 12	MA1	LMPC wst 1	11.11.2021	09:51:00	11.11.2021	17.11.2021	13.11.2021

Selection

Execute the action code  (S\_APSCG).

Result:



Planning result

The operations have been deallocated. The gaps have been closed, the subsequent operations have been brought forward.

### → Remember

How the function behaves depends on the strategy profile settings. You can configure that gaps are closed only up to the next gap, or to the end of the planning period. [Configuration of Strategy Profiles](#)

This action code can also be used in background processing. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

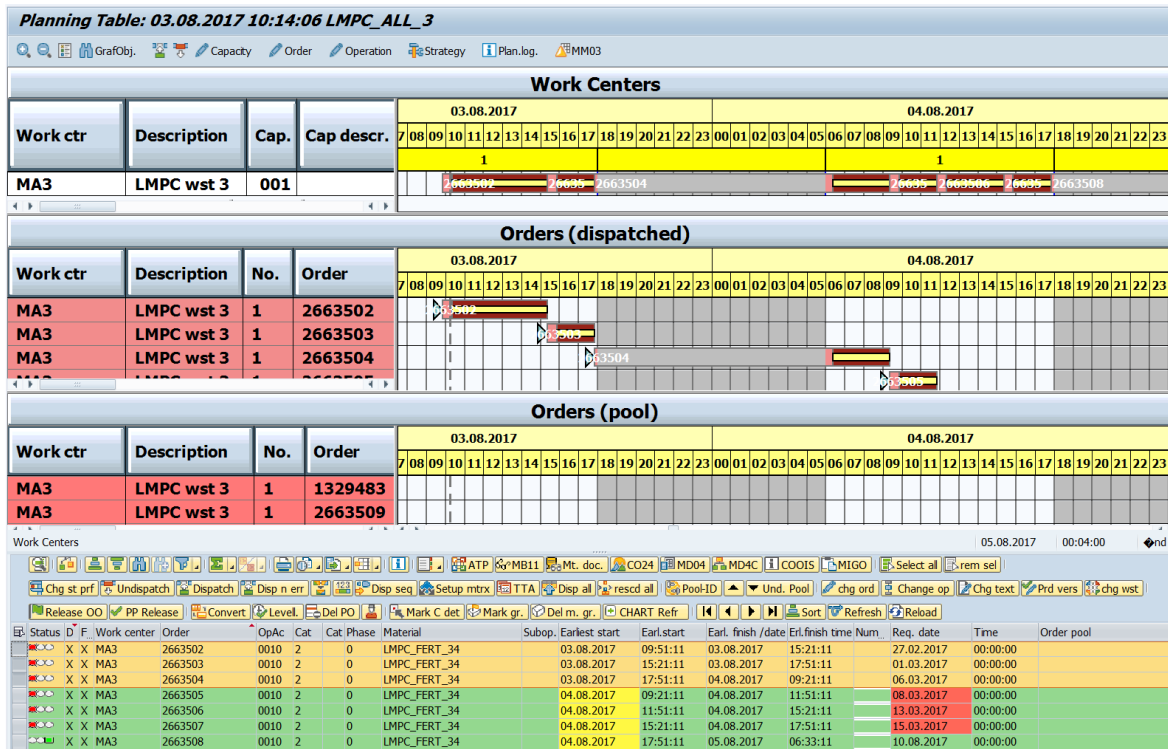
## 2.6.4.3 S\_APSEL Deallocate Selected Operations

### Use

This is the standard function for deallocating order operations. Operations are selected and then deallocated.

### Procedure

- Select one or more operations in the ALV Grid.

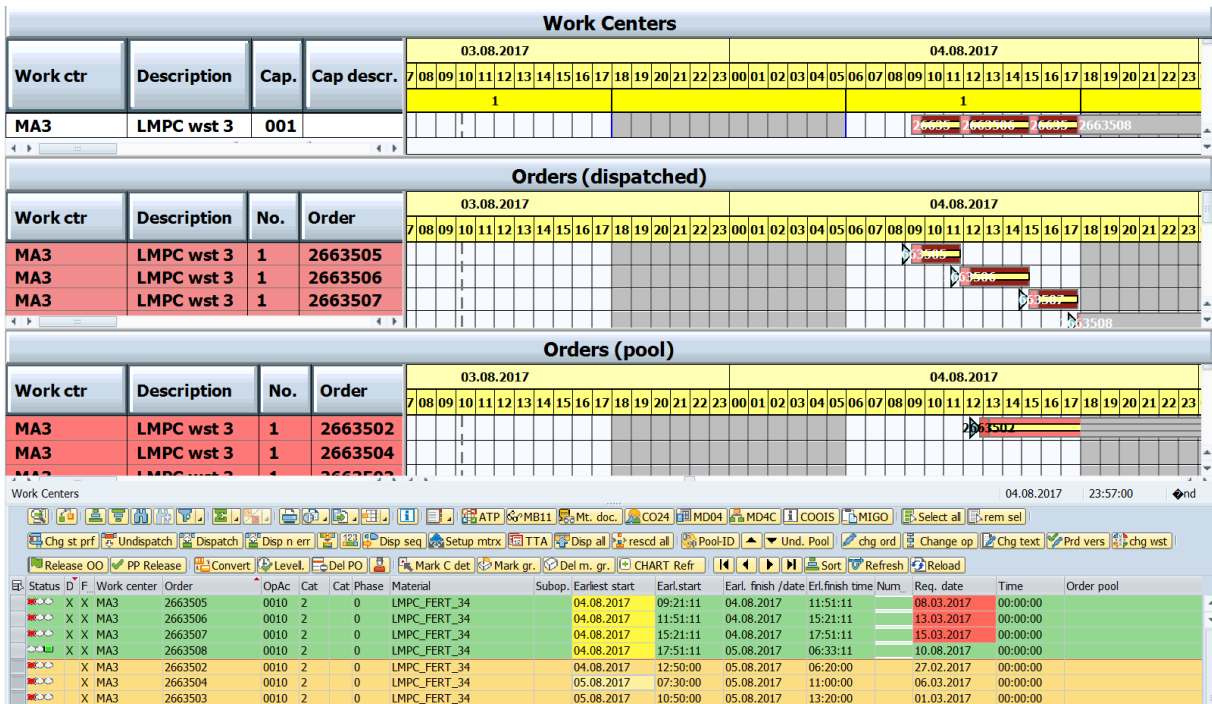


Select Operations

- The charts of the work centers and dispatched orders show the capacity situation of the orders.

- Execute the action code  (S\_APSEL).

Result:



Result of Deallocation

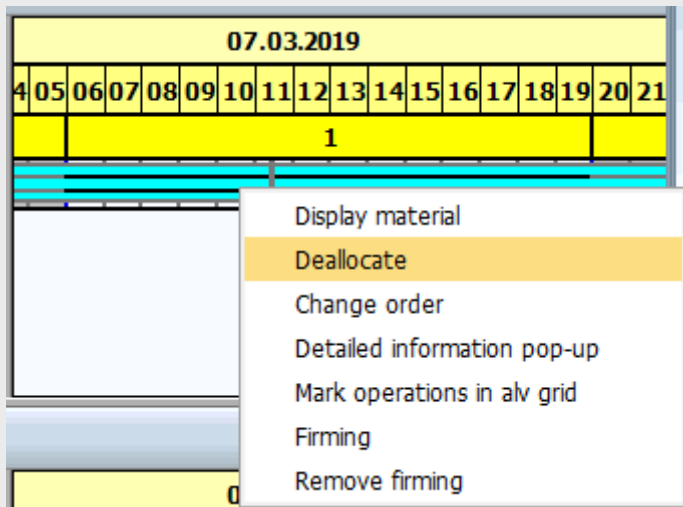


The operations have been deallocated. In the ALV Grid, the orders are now marked as deallocated (flag "dispatched" - 2nd column is not set). The orders are moved down because the dispatched orders are displayed first. In charts 1 (work centers) and 2 (orders dispatched) of the capacity planning table capacities have become free. Chart 3 (orders pool) displays the deallocated orders.

### → Remember

There are other ways of deallocating operations:

- You can deallocate orders by dragging and dropping them from the chart of dispatched orders to a chart of the order pool in the graphic.
- You can also call deallocation from the context menu of a graphic bar.



Context Menu Graphic

- You can also call this action code using a job in background processing to deallocate all operations. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

## 2.6.4.4 S\_AV06 Dispatching Operations Individually

### Use

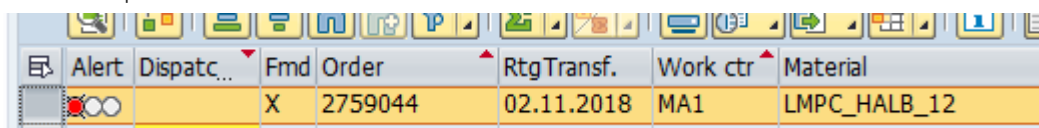
You can use this function to dispatch order operations individually to the next possible point in time.

### ! Restriction

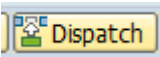
It is not possible to process several operations at the same time.

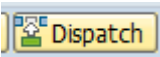
### Procedure

- Select an operation in the ALV Grid.



Select Operation

- Execute the action code  (S\_AV06).
- Result: The operation has been dispatched at the next possible point in time.



Alert	Dispatc...	Fmd	Order	RtgTransf.	Work ctr	Material
	X	X	2759044	02.11.2018	MA1	LMPC_HALB_12

Result

## 2.6.4.5 S\_AV07 Deallocating Operations Individually

### Use

You can use this function to deallocate individual order operations.

#### ! Restriction

It is not possible to process several operations at the same time.

### Procedure

- Initial situation:

Alert	Dispatc...	Fmd	Order	RtgTransf.	Work ctr	Material	Earliest start	Earl.start
	X		60007918	27.03.2018	MA1	LMPC_HALB_34	21.12.2018	14:33:07
	X		60008059	29.10.2018	MA1	LMPC_HALB_34	04.01.2019	13:58:07
	X	X	2758763	17.12.2018	MA1	LMPC_HALB_12	04.01.2019	16:53:07
	X	X	2759144	13.12.2018	MA1	LMPC_HALB_34	08.01.2019	12:48:07
	X	X	2759145	13.12.2018	MA1	LMPC_HALB_34	08.01.2019	18:13:07
		X	2759044	02.11.2018	MA1	LMPC_HALB_12	19.12.2018	09:15:00
		X	2758766	18.01.2019	MA1	LMPC_HALB_12	21.12.2018	06:00:00

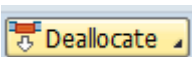
Situation at Start

Several operations are dispatched.

- Select an operation.

Alert	Dispatc...	Fmd	Order	RtgTransf.	Work ctr	Material	Earliest start	Earl.start
	X		60007918	27.03.2018	MA1	LMPC_HALB_34	21.12.2018	14:33:07
	X		60008059	29.10.2018	MA1	LMPC_HALB_34	04.01.2019	13:58:07
	X	X	2758763	17.12.2018	MA1	LMPC_HALB_12	04.01.2019	16:53:07

Selection

- Execute the action code  (S\_AV07).
- Result: The operation has been deallocated.

Alert	Dispatc...	Fmd	Order	RtgTransf.	Work ctr	Material	Earliest start	Earl.start	Earliest finish
🔴🟡🟢	X		60008059	29.10.2018	MA1	LMPC_HALB_34	04.01.2019	13:58:07	04.01.2019
🟡🟢	X	X	2758763	17.12.2018	MA1	LMPC_HALB_12	04.01.2019	16:53:07	08.01.2019
🔴🟡🟢	X	X	2759144	13.12.2018	MA1	LMPC_HALB_34	08.01.2019	12:48:07	08.01.2019
🔴🟡🟢	X	X	2759145	13.12.2018	MA1	LMPC_HALB_34	08.01.2019	18:13:07	09.01.2019
🟡🟢		X	2759044	02.11.2018	MA1	LMPC_HALB_12	19.12.2018	09:15:00	31.12.2018
🟡🟢		X	2758766	18.01.2019	MA1	LMPC_HALB_12	21.12.2018	06:00:00	21.12.2018
🔴🟡🟢			60007918	27.03.2018	MA1	LMPC_HALB_34	21.12.2018	06:35:00	03.01.2019

Result

## 2.6.4.6 S\_D&D Dispatching Operations with Drag and Drop in the ALV Grid

### Use

You can use this function to move order operations not yet dispatched in the ALV Grid between dispatched operations using drag and drop, to then dispatch them there.

### ! Restriction

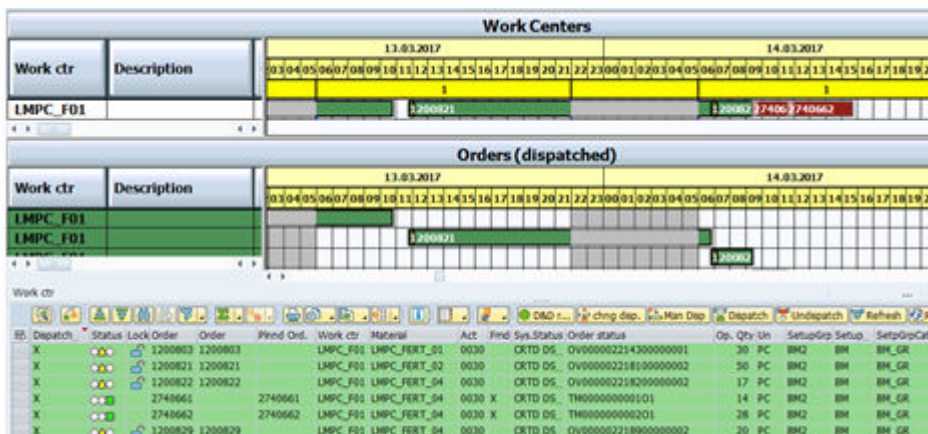
You can only reschedule one operation at a time. If you select and move several operations, only the first operation is dispatched.

Depending on the setting of the action code in Customizing, two planning variants can be realized:

- Immediate dispatch automatically at the point to which the operation was dragged.
- Two-step procedure: First move the operation to the required position, then dispatch by manually triggering the action code.

### Procedure

Initial situation:



Initial Situation

A range of operations has already been dispatched.

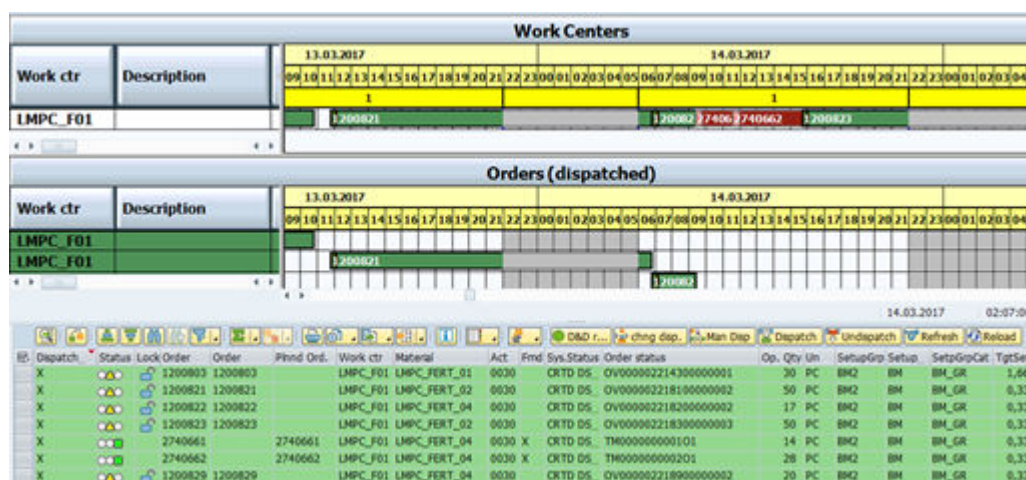
Select an operation that has not been dispatched and drag it between the dispatched operations.

The further behavior of the action code depends on the action code trigger set. The trigger for the action code is set in the LMPC configuration. For instructions on configuring the action code, see the LMPC Configuration Guide. [S\\_D&D Configuration: Dispatching Operations with Drag and Drop in the ALV Grid](#)

### Immediate Dispatching

If the action code with the trigger “Drag and Drop in the ALV Grid” is set in the context profile, dispatching immediately takes place at the target point. No further action is required by the user. Dispatching is done.

Result:



### Result

The operation was inserted into the production plan at the target point. The following operations have been moved. The operation receives the start time of the operation to which it was dragged. The operation to which an operation was dragged is moved and is dispatched immediately after the newly dispatched operation.

With the immediate dispatching setting, operations can also be moved to other items individually and rescheduled immediately. Therefore, this function can be used for both initial dispatching and rescheduling.

There are two planning logics for this function:

- The operations are always scheduled without gaps. If you insert an operation, all subsequent operations are connected without gaps.
- The operation to be inserted is inserted at the desired position. The inserted operation starts at the same time as the operation that was previously at this position. As a result, the operation that was previously dispatched is moved into the future and follows the new operation directly. Other operations that lie further in the future and are not affected by the shift remain where they have already been dispatched. Gaps in the production plan are retained.

You select the planning logic using a parameter in the configuration.

### Note

In the standard delivery of LMPC, the action code is not configured in this way. If you want to use this type of planning, you must first configure this.

## ⚠ Caution

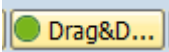
If this function is set, you can no longer use drag and drop to sort the operations in the ALV Grid. Dispatching is always executed during drag and drop. If dispatching is not possible, drag and drop is not executed and the operation jumps back to its previous position.

## Two-Step Procedure

The operation was moved between operations that have already been dispatched using drag and drop:

Dispatch	Status	Lock	Order	Pflnd Ord.	Work ctr	Material	Act	Fmd Sys	Status	Order status	Op. Qty	Un	SetupGrp	Setup	SetpGrpCat	TgtSet
X	▲	🔒	1200803	1200803	LMPC_F01	LMPC_FERT_01	0030	CRTD DS	OV000002214300000001		30	PC	BM2	BM	BM_GR	1,66
X	▲	🔒	1200821	1200821	LMPC_F01	LMPC_FERT_02	0030	CRTD DS	OV000002218100000002		50	PC	BM2	BM	BM_GR	0,33
X	▲	🔒	1200822	1200822	LMPC_F01	LMPC_FERT_04	0030	CRTD DS	OV000002218200000002		17	PC	BM2	BM	BM_GR	0,33
X	▲	🔒	1200823	1200823	LMPC_F01	LMPC_FERT_02	0030	CRTD DS	OV000002218300000003		50	PC	BM2	BM	BM_GR	0,33
X	▲	🔒	2740661	2740661	LMPC_F01	LMPC_FERT_04	0030	X CRTD DS	TM000000000101		14	PC	BM2	BM	BM_GR	0,33
X	▲	🔒	2740662	2740662	LMPC_F01	LMPC_FERT_04	0030	X CRTD DS	TM000000000201		28	PC	BM2	BM	BM_GR	0,33
X	▲	🔒	1200829	1200829	LMPC_F01	LMPC_FERT_04	0030	CRTD DS	OV000002218900000002		20	PC	BM2	BM	BM_GR	0,33

Moving Operations

Now select the moved order and execute the action code  (S\_D&D).

Result:

Work ctr	Description	13.03.2017	14.03.2017
LMPC_F01		1200821	120082 27406 2740662 1200823

Work ctr	Description	13.03.2017	14.03.2017
LMPC_F01		1200821	120082

Dispatch	Status	Lock	Order	Pflnd Ord.	Work ctr	Material	Act	Fmd Sys	Status	Order status	Op. Qty	Un	SetupGrp	Setup	SetpGrpCat	TgtSet
X	▲	🔒	1200803	1200803	LMPC_F01	LMPC_FERT_01	0030	CRTD DS	OV000002214300000001		30	PC	BM2	BM	BM_GR	1,66
X	▲	🔒	1200821	1200821	LMPC_F01	LMPC_FERT_02	0030	CRTD DS	OV000002218100000002		50	PC	BM2	BM	BM_GR	0,33
X	▲	🔒	1200822	1200822	LMPC_F01	LMPC_FERT_04	0030	CRTD DS	OV000002218200000002		17	PC	BM2	BM	BM_GR	0,33
X	▲	🔒	1200823	1200823	LMPC_F01	LMPC_FERT_02	0030	CRTD DS	OV000002218300000003		50	PC	BM2	BM	BM_GR	0,33
X	▲	🔒	2740661	2740661	LMPC_F01	LMPC_FERT_04	0030	X CRTD DS	TM000000000101		14	PC	BM2	BM	BM_GR	0,33
X	▲	🔒	2740662	2740662	LMPC_F01	LMPC_FERT_04	0030	X CRTD DS	TM000000000201		28	PC	BM2	BM	BM_GR	0,33
X	▲	🔒	1200829	1200829	LMPC_F01	LMPC_FERT_04	0030	CRTD DS	OV000002218900000002		20	PC	BM2	BM	BM_GR	0,33

Result

All orders are dispatched according to the list sequence without having to be deallocated.

## ! Restriction

- You can only move operations if the work center of the selected operation is identical to the target operation work center to which you are moving this operation. It is only possible to move and dispatch operations within work centers.
- Planning with this action code only works if the operations in the ALV Grid are sorted according to the work center and the start time.
- It is only possible to store operations on the target entry if the target entry has already been dispatched.

## 2.6.4.7 S\_EPALL Dispatch All Operations

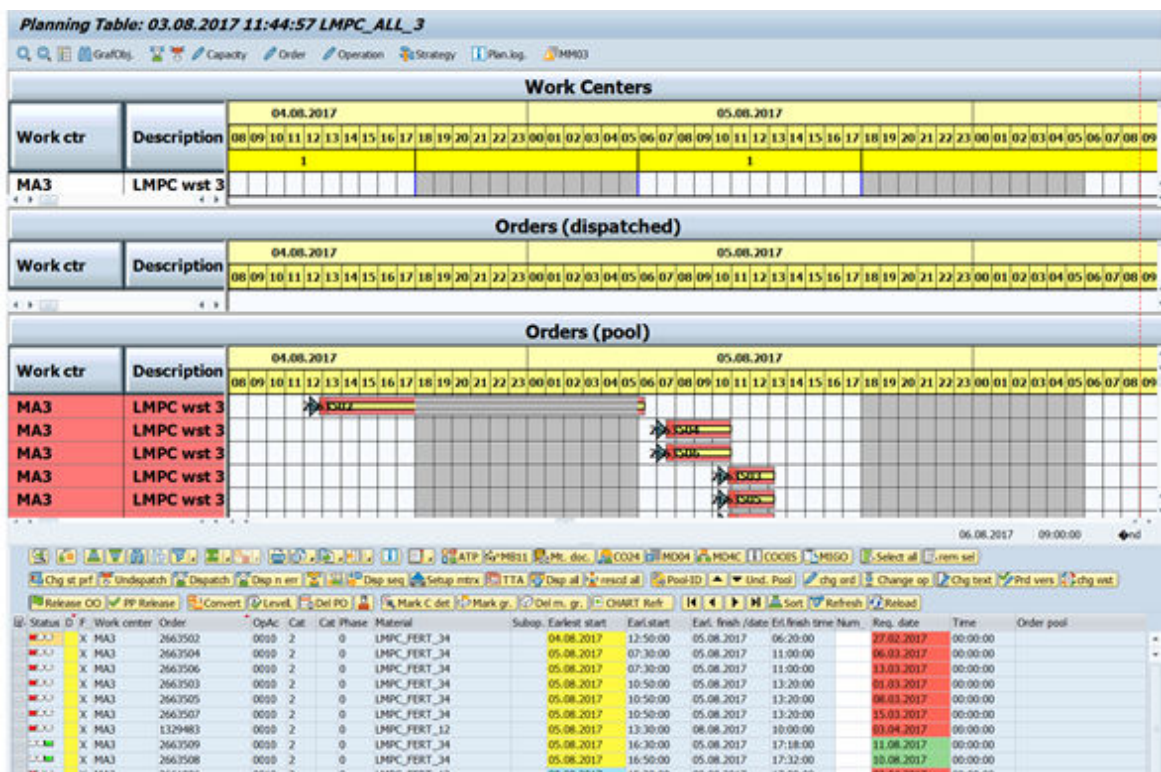
### Use

Action code for dispatching all order operations immediately. You can use this function to quickly generate a production plan. It can also be used to dispatch all operations automatically in a nightly planning run. This means that the planner has a suggestion for a production plan the next morning.

All operations that have not yet been dispatched are dispatched at the earliest possible time; a plan without gaps is generated.

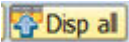
### Procedure

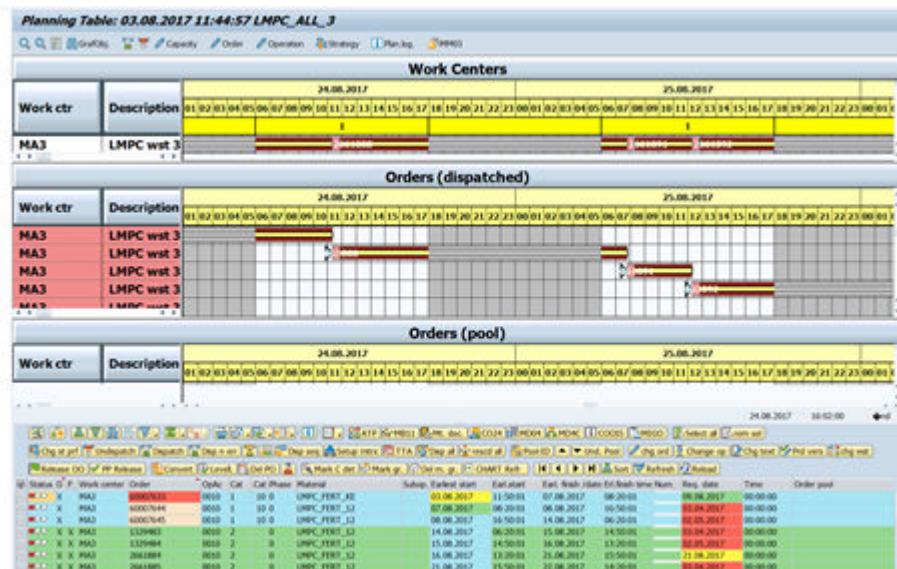
- Initial situation:



Situation at Start

All operations are in the pool. No operation is dispatched (second column with indicator for dispatching in ALV Grid is empty, no operation in charts 1 and 2).

- You do not need to select operations. The action code  (S\_EPALL) can be executed directly.
- Result:



Dispatching Result

The third chart of the pool is empty. All operations are dispatched. The capacity commitment can be read in the first and second chart of the capacity planning table. In the ALV Grid the dispatching indicator is set in all rows.

→ Tip

- If you remove the option for earliest dispatch in the strategy profile used, the planning function tries to dispatch the operations at the times at which the operations are scheduled. If the operations have not been adjusted since the MRP run, the operations are dispatched as intended by the MRP run. However, the prerequisite for this is that there is sufficient capacity at the work centers. [Configuration of Strategy Profiles](#)
- The action code can also be used in background processing. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

! Restriction

Since the action code has its own selection routine, the action code limitation function does not work for this action code. [Action Code Limits \[page 71\]](#)

## 2.6.4.8 S\_EPALV Dispatching by Entering Dates in the ALV Grid

Entering Start Times in the ALV Grid

Use

This function enables you to dispatch operations by entering planning dates in the LMPC HJPT ALV Grid.

Either a start date or an end date can be entered. The function can therefore be used for forward and backward scheduling.

## Procedure

The ALV Grid of the HJPT planning table contains four input-enabled fields for operation times:

- Start Date for Dispatching
- Start Time for Dispatching
- End Date for Dispatching
- End Time for Dispatching

These fields are in the ALV Grid layout group of the HJPT help fields.

In this example, forward scheduling is used. Therefore, the start times of the operations are entered.

In the input-enabled fields, enter the desired start times for the operations. Multiple fields can be maintained.

You can enter the times directly or use input help. The input help for the date allows you to select the date using a calendar.

Ord. Nr.	OpAc	Start Date for Dispatching	Start Time Disp.	End Date for Dispatching	End Time for Dispatching	Latest start	Lat.st.tme
3308151	0010	22.11.2021	00:00:00		00:00:00	20.11.2021	08:37:30
3308152	0010	23.11.2021	16:00:00		00:00:00	20.11.2021	10:05:00
3308149	0010		15:00:00		00:00:00	22.11.2021	07:10:00
3308050	0010				00:00:00	22.11.2021	17:15:00
3308054	0010				00:00:00	24.11.2021	17:42:30
3308052	0010				00:00:00	25.11.2021	08:57:30
3308053	0010				00:00:00	26.11.2021	07:10:00
3308051	0010				00:00:00	27.11.2021	06:02:30
3297248	0010				00:00:00	27.11.2021	15:10:00
3297218	0010				00:00:00	29.11.2021	15:55:00
3297219	0010				00:00:00	29.11.2021	15:55:00
60008675	0010				00:00:00	30.11.2021	12:50:00
3297221	0010				00:00:00	01.12.2021	15:05:00
3308118	0010				00:00:00	04.12.2021	09:50:00
3308055	0010				00:00:00	04.12.2021	12:12:30
3308115	0010				00:00:00	06.12.2021	13:00:00
3297217	0010				00:00:00	07.12.2021	10:30:00
3295597	0010				00:00:00	07.12.2021	13:30:00
3308150	0010				00:00:00	08.12.2021	11:32:30
3297245	0010				00:00:00	09.12.2021	10:40:00
3308116	0010				00:00:00	09.12.2021	10:50:00
3297244	0010				00:00:00	10.12.2021	11:28:45
3297246	0010				00:00:00	10.12.2021	13:06:15

The image shows a 'Calendar' dialog box with a close button (X) in the top right corner. The date '23.11.2021' is displayed at the top. Below it is a calendar grid with columns for days of the week (WN, MO, TU, WE, TH, FR, SA, SU) and rows for months (2021/10, 2021/11, 2021/12). The date 23 is highlighted in the Wednesday column of the November 2021 row. At the bottom of the dialog are two buttons: a green checkmark and a red X.

Enter a Start Time

If you enter a start date and start time, the operation is dispatched at this time, provided there is sufficient capacity at the work center.

If you only enter a start date, 00:00 is transferred to the dispatching function as the start time. The operation is then dispatched on this day at the earliest possible time.

If you only enter a start time, the latest start date of the operation from the capacity requirement data is automatically used as the date for dispatching.

Operations that have already been dispatched can be rescheduled by entering new planning dates.

For backward scheduling, the description applies in the same way, with the difference being that if a start time 23:59:59 is missing and if a date is missing, the latest end date of the operation is transferred to the dispatching function. It is not possible to dispatch into the past. If the function recognizes that an operation is to be planned into the past, it either terminates with an error message or dispatches the operation as early as possible. This depends on the settings in the strategy profile.



→ Remember

The times entered are always valid for the latest dates of the operations. Planning in the HJPT planning table always uses the latest date. The operations are dispatched in such a way that the operation dates of the latest dates are set to the desired dates. For more information, see the section on the layout groups.

[Layout Groups \[page 41\]](#)

Dispatching is only started when you choose the Enter key. This allows you to maintain the times for multiple operations and to start dispatching for all operations with one key. You do not need to select any data records. It is sufficient if the cursor is positioned in one of the fields that are ready for input. All data records are processed that have data in one of the fields for date or time.

Start dispatching by choosing the Enter key.

Result:

The screenshot shows the 'Work Centers (dispatched)' view in SAP HJPT. It displays a grid for two dates: 22.11.2021 and 23.11.2021. The grid has columns for days of the week (00-08) and rows for work centers. Below the grid, a table shows the result of the planning:

on	Ord. Nr.	OpAc	Start Date for Dispatching	Start Time Disp.	End Date for Dispatching	End Time for Dispatching	Latest start	Lat.st.tme
	3308151	0010		00:00:00		00:00:00	22.11.2021	06:00:00
	3308149	0010		00:00:00		00:00:00	22.11.2021	15:00:00
	3308152	0010		00:00:00		00:00:00	23.11.2021	16:00:00
	3308050	0010		00:00:00		00:00:00	22.11.2021	17:15:00

Result of Planning

The operations have been dispatched at the specified start time.

→ Tip

Instead of entering the start times in the fields, manual dispatching can be used as an alternative. [S\\_MANP Manual Dispatching \[page 183\]](#)

⚠ Caution

The ALV Grid does not check whether data has changed only when you choose the Enter key. The system also checks for changed data when you execute action codes using other triggers, for example, when you click a pushbutton above the ALV Grid. For technical reasons, the check for changed data is always run before all other actions. Therefore, if you "Maintain Times" and do not execute "Enter" and then execute a different action code, the system first dispatches to the maintained data and then executes the other action code. This is a technical restriction. Changed data in the ALV Grid always takes precedence and is always executed.

## Related Information

[S\\_EPALV Configuration: Dispatching by Entering Dates in the ALV Grid](#)

### 2.6.4.9 S\_EPFX Dispatching Across Firmed Operations

#### Use

This function is a planning function for very specific requirements.

It is used in connection with the LMPC function for setting the HJPT firming indicator. [S\\_FIX, S\\_FIXE Firm and remove firming of orders \[page 301\]](#)

In the HJPT planning table, you can set an HJPT firming indicator for operations of orders. If this indicator is set and these operations have been dispatched, this is the information for the planning function S\_EPFX that these operations must never be rescheduled. They must not be moved in time and must remain fixed in their position.

If you dispatch operations without the HJPT fixing indicator with S\_EPFX, the planning function S\_EPFX creates the operations to be dispatched in parallel to the operations that have the HJPT fixing indicator as if these operations were breaks. They lay across the HJPT fixed operations as it were.

The operations with HJPT firming indicators are treated like breaks during dispatching, that is, as areas in planning in which no capacity offer is available.

As a result, an operation that is that is above an HJPT-fixed operation becomes longer. Its capacity requirement remains unchanged.

This function enables you to create a production plan without gaps and to fulfill the condition that individual operations are fixed to specific dates from the outset.

Technical explanation for planning: When planning is executed, the HJPT-fixed operations are deallocated as a first step, and their times are defined as breaks. The operations that are to be dispatched are then dispatched using the standard function. In the last step, the defined breaks are removed and the fixed operations are re-dispatched infinitely to the removed break times. With this method, the operations that have the HJPT firming indicator remain unchanged in their positions.

#### ⚠ Caution

This function cannot be used in conjunction with other HJPT planning functions. If you reschedule an operation that was dispatched with this function using a different HJPT planning function, this special planning situation will be resolved. Conversely, this means that you must always use the function S\_EPFX to dispatch and reschedule operations that must fulfill this special scenario. Various setting options have been created to enable you to plan extensively with this function.

The following application options are possible for S\_EPFX:

- Dispatching operations at the earliest possible time.
- Manual planning by entering a desired start time.
- Dispatching operations on the dates that are currently in the operation.
- Dispatching and rescheduling operations in the graphic using drag and drop.

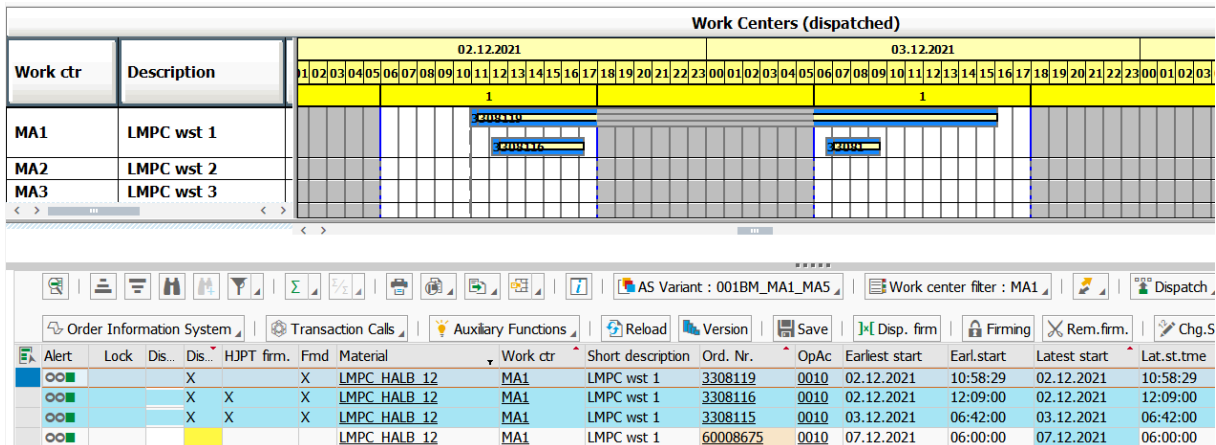


Dispatching is executed.

### Note

If the selection contains operations that contain the HJPT firming indicator, these operations are removed from the pool of selected operations. Operations that have the HJPT firming indicator cannot be dispatched or rescheduled.

Result:



### Planning result

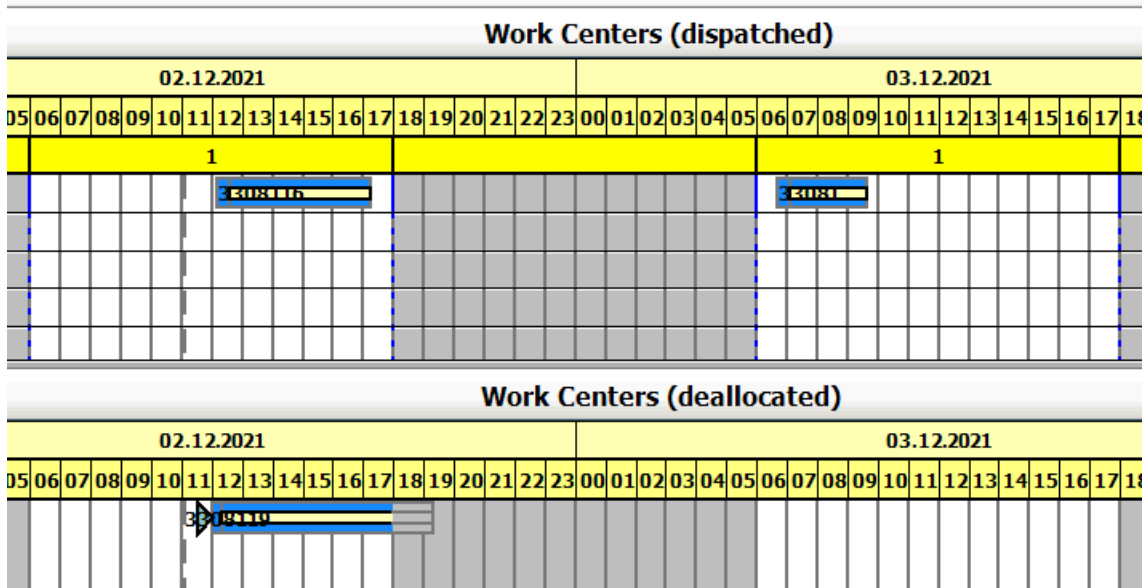
Using the graphic, you can see that the operation to be newly dispatched has been set over the operations that have the HJPT firming indicator. The operations with the HJPT firming indicator remain unchanged in their positions. The new operation to be dispatched is parallel. Its duration has been adjusted.

### Note

Since the HJPT-fixed operations are treated like breaks during dispatching, only the duration of the operation that is placed over these operations is extended. Its capacity requirement remains unchanged. This means there are no overloads. The capacity utilization of the work center is correct.

### Planning using drag and drop in the graphic

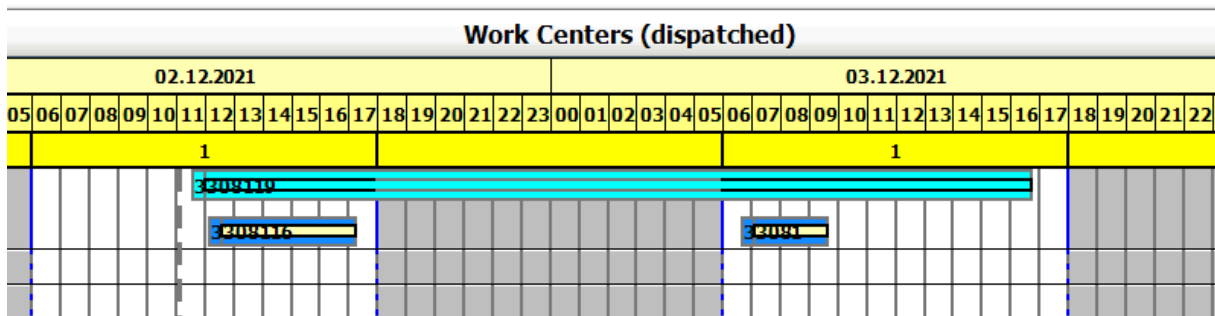
Select an operation that has not yet been dispatched and that does not have an HJPT firming indicator.



Initial Situation Before Drag & Drop

Drag this operation from the chart for the dispatched operations to the dispatched operations that have an HJPT firming indicator.

Result:



Drag & Drop Result

The operation is above the two firming operations.

It is also possible to reschedule operations that have already been dispatched using drag and drop. For this, an operation that has already been dispatched and does not have an HJPT firming indicator is dragged over operations that have the HJPT firming indicator.

It is not possible to use drag and drop to move or deallocate operations that have the HJPT firming indicator.

#### → Remember

To be able to use the function when dragging and dropping in the graphic, it must first be activated for the graphic. This is done using the Drag & Drop trigger in the capacity planning table. Thus, the standard function for dispatching is replaced in the graphic using drag and drop. For details on this, see the LMPC Configuration Guide.

[S\\_EPFX Configuration: Dispatching Across Firming Operations](#)

[Action Code Trigger](#)

### ! Restriction

An operation that is planned beyond an HJPT-fixed operation must start before the fixed operation. It is not possible to dispatch an operation in such a way that it starts at the same time as a fixed operation or in the middle of a fixed operation. HJPT-fixed operations are treated like breaks by this planning function. No operation can start at the same time as a break or within a break for other planning functions.

The function requires explanation due to its complexity. If you want to use this function, please request consulting support from SAP.

## 2.6.4.10 S\_EPMSQ Dispatching According to Material Master Field

### Use

This action code allows operations to be dispatched according to a sequence defined in the material master. The system reads a Z field that is stored in the database table of the material master for the order material. The sequence of operations is determined according to this Z field.

The action code allows five planning variants:

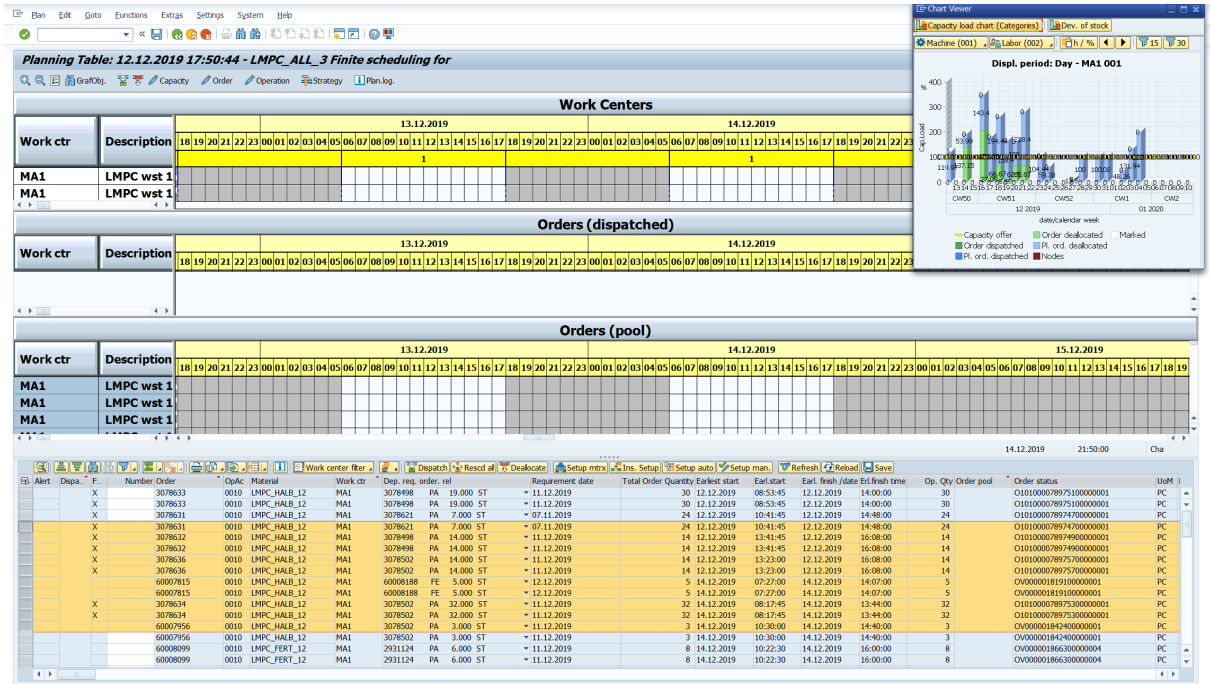
- Assignment of a sequence number by field in the material master.
- Dispatching according to material master sequence at the earliest point in time.
- Dispatching according to material master sequence with entry of a start time.
- Dispatching according to material master sequence with entry of an end time.
- Dispatching according to material master sequence in background processing.

To ensure that the relevant planning variant works correctly, settings must be made in the action code and in the strategy profile. For the explanations for this, see the LMPC Configuration Guide. [S\\_EPMSQ Configuration: Dispatch Using Material Master Sequence](#).

### Procedure

#### **Dispatching according to material master sequence at the earliest point in time.**

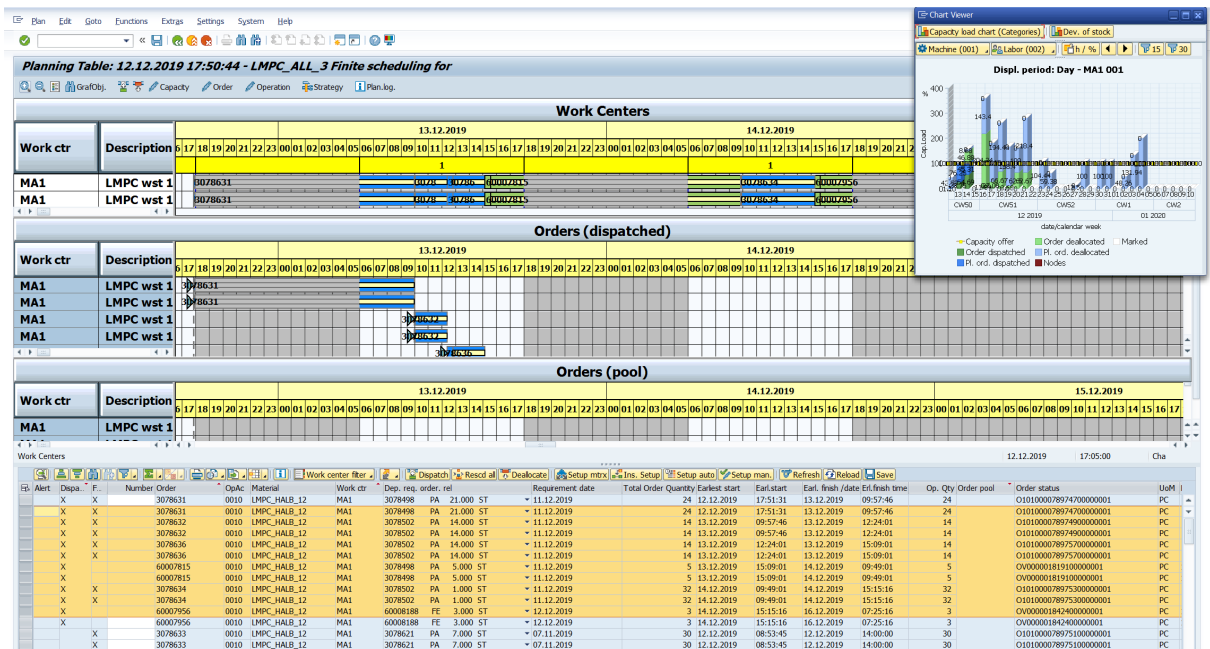
Select the operations that are to be dispatched.



Selection

Execute the action code  (S\_EPMSQ).

Result:



Dispatching Result

The operations have been dispatched according to the order specified in the material master.

Assignment of a sequence number by field in the material master

Instead of direct dispatching, it is only possible to assign a sequence for dispatching. You can do this using the parameter settings for the action code. Once the action code has been executed, the determined sequence is displayed in the field with the column header "Sequence". This field is input-enabled. If the field is not shown, you can find it in the layout group of the HJPT help fields.

Alert	Dispa...	F...	Number	Order	OpAc	Material	Work ctr	Dep. req. order. rel	Requirement date
X			3078633		0010	LMPC_HALB_12	MA1	3078498 PA 19.000 ST	11.12.2019
X			3078633		0010	LMPC_HALB_12	MA1	3078498 PA 19.000 ST	11.12.2019
X			3078631		0010	LMPC_HALB_12	MA1	3078621 PA 7.000 ST	07.11.2019
X			3078631		0010	LMPC_HALB_12	MA1	3078621 PA 7.000 ST	07.11.2019
X			3	3078632	0010	LMPC_HALB_12	MA1	3078498 PA 14.000 ST	11.12.2019
X			3	3078632	0010	LMPC_HALB_12	MA1	3078498 PA 14.000 ST	11.12.2019
X			4	3078636	0010	LMPC_HALB_12	MA1	3078502 PA 14.000 ST	11.12.2019
X			4	3078636	0010	LMPC_HALB_12	MA1	3078502 PA 14.000 ST	11.12.2019
			1	60007815	0010	LMPC_HALB_12	MA1	60008188 FE 5.000 ST	12.12.2019
			1	60007815	0010	LMPC_HALB_12	MA1	60008188 FE 5.000 ST	12.12.2019
X			2	3078634	0010	LMPC_HALB_12	MA1	3078502 PA 32.000 ST	11.12.2019
X			2	3078634	0010	LMPC_HALB_12	MA1	3078502 PA 32.000 ST	11.12.2019
				60007956	0010	LMPC_HALB_12	MA1	3078502 PA 3.000 ST	11.12.2019

No Dispatching Sequencing Only

The planner can change this sequence manually. Dispatching can then be performed using the action code S\_EPSEQ. [S\\_EPSEQ Dispatch According to the Sequence Entered \[page 165\]](#)

### Manual planning with entry of a start time

The action code can be set in such a way that the user can enter a start time for dispatching. In this case, when you execute the action code, the system displays a dialog box for entering the start time for the first operation.

Start Time Dialog Box

The function dispatches the selected operations in the determined sequence from the field in the material master in such a way that the end time of the predecessor is also the start time for the subsequent operation. The operations are dispatched directly one after the other without gaps.

With this logic, it is also possible to realize a sequence across several work centers. The next operation at a work center does not start until the previous operation has been completed at another work center.

During dispatching, only the times of the capacity requirements of the operations are taken into account. Meaning the start and end times of the operations.

### Manual dispatching with entry of an end time

The action code can be set in such a way that the user can enter an end time for dispatching. In this case, when you execute the action code, the system displays a dialog box for entering the end time for the last operation.



### End date and end time for dispatching

End Date	21.10.2021
End Time	17:30:00



End Time Dialog Box

The function dispatches the selected operations in the determined sequence from the field in the material master in such a way that the end time of the predecessor is also the start time for the subsequent operation.

The operations are dispatched in such a way that the last operation in the sequence ends on the desired end date.

With this logic, it is also possible to realize a sequence across several work centers. The next operation at a work center does not start until the previous operation has been completed at another work center.

During dispatching, only the times of the capacity requirements of the operations are taken into account. Meaning the start and end times of the operations.

#### → Remember

If the capacity offer is not sufficient and the operations must be dispatched in the past, dispatching terminates and does not dispatch the operations.

#### Dispatching according to material master sequence in background processing

The action code can be used in background processing. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

## 2.6.4.11 S\_EPNP Dispatching Operations of Networks

Planning Function for Networks

#### Usage

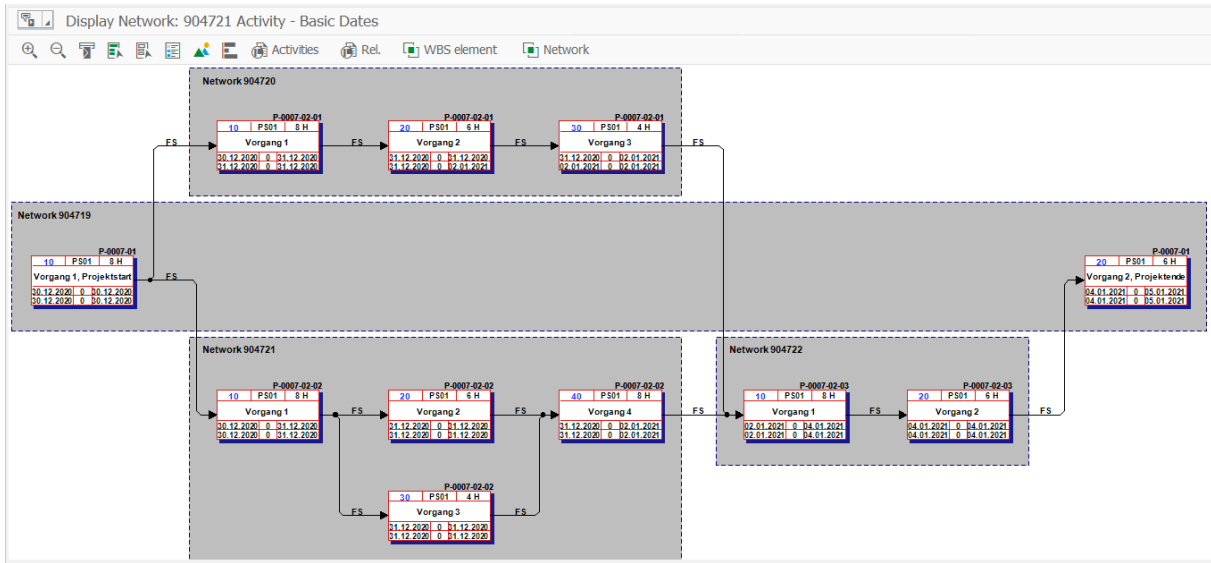
You can use this action code to dispatch network operations in the correct sequence.

#### → Remember

For the planning function to work, the data provider for the PS data must be activated. [Data Provider / LMPC/CL\\_DP\\_PS\\_AFAB Relationships \[page 375\]](#)

#### Procedure

There is a project with the following networks and operations.



Network Overview Transaction CN23

These operations should be dispatched in the correct sequence.

For each operation of a network, there is a row in the ALV Grid of the HJPT planning table. The operations were scheduled in the correct sequence by the standard SAP system when they were created. The operations are sorted in the ALV Grid by the earliest start date and time. As a result, the first operation of the entire project is first in the ALV Grid.

Select the first operation of the project in the ALV Grid.

Alert	Dis...	Order Number	Oper./Act.	Work center	Earliest start	Earl.start	Earliest finish	Erl.finish	Order pred.	Op. Pred.	Order succ.	Op. Succ.	L.e.e.Pred	L.e.e.Pred
		904719	0010	MA2	30.12.2020	06:00:00	30.12.2020	14:00:00			904721	0010		00:00:00
		904720	0010	MA3	30.12.2020	14:00:00	31.12.2020	10:00:00	904719	0010	904720	0020	30.12.2020	14:00:00
		904721	0010	MA3	30.12.2020	14:00:00	31.12.2020	10:00:00	904719	0010	904721	0030	30.12.2020	14:00:00
		904720	0020	MA3	31.12.2020	10:00:00	31.12.2020	16:00:00	904720	0010	904720	0030	31.12.2020	10:00:00
		904721	0020	MA3	31.12.2020	10:00:00	31.12.2020	16:00:00	904721	0010	904721	0040	31.12.2020	10:00:00
		904721	0030	MA4	31.12.2020	10:00:00	31.12.2020	14:00:00	904721	0010	904721	0040	31.12.2020	10:00:00
		904720	0030	MA3	31.12.2020	16:00:00	02.01.2021	08:00:00	904720	0020	904722	0010	31.12.2020	16:00:00
		904721	0040	MA3	31.12.2020	16:00:00	02.01.2021	12:00:00	904721	0020	904722	0010	31.12.2020	16:00:00
		904722	0010	MA1	02.01.2021	12:00:00	04.01.2021	10:00:00	904721	0040	904722	0020	02.01.2021	12:00:00
		904722	0020	MA1	04.01.2021	10:00:00	04.01.2021	17:30:00	904722	0010	904719	0020	04.01.2021	10:00:00
		904719	0020	MA2	04.01.2021	17:30:00	05.01.2021	11:30:00	904722	0020			04.01.2021	17:30:00

Selection of First Operation

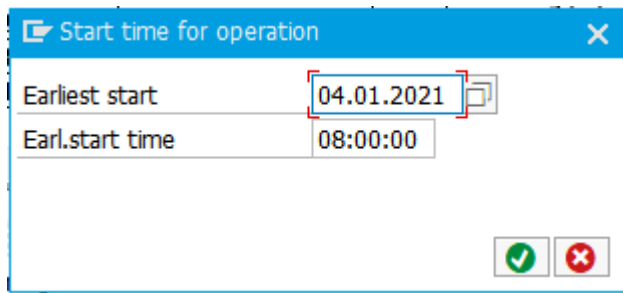
The operations must be dispatched individually in this planning function. If you select more than one operation, only the first operation is dispatched.

→ Tip

You can only dispatch operations that have not yet been dispatched. If the operation has already been dispatched, the function terminates. If you want to reschedule the networks of a project to another time, first deallocate all operations and then start dispatching again.

Execute the action code  (S\_EPNP).

If you have set manual dispatching, a window appears to query the required start time of the operation.



Query Start Time

The input fields are preset with the scheduled start time of the operation.

If the scheduled start time is already in the past, the current date and time are preset, since earlier dispatching is not possible.

You can enter the desired start time and confirm the window.

If manual dispatching is not set, the current scheduled start time of the operation is transferred to the dispatching function as the start time.

→ Tip

If you do not want the operation to be dispatched at the current scheduled start time, but as early as possible, set the strategy profile accordingly. For details on configuring strategy profiles, see the separate section on strategy profiles. [Configuration of Strategy Profiles](#)

Result:

Alert	Dis...	Order Number	Oper./Act.	Work center	Earliest start	Earl.start	Earliest finish	Erl.finish	Order pred.	Op. Pred.	Oder succ.	Op. Succ.	L.e.e.Pred	L.e.e.Pred
○▲○	X	904719	0010	MA2	04.01.2021	08:00:00	04.01.2021	16:00:00			904721	0010		00:00:00
○▲○		904720	0010	MA3	04.01.2021	16:00:00	05.01.2021	12:00:00	904719	0010	904720	0020	04.01.2021	16:00:00
○▲○		904721	0010	MA3	04.01.2021	16:00:00	05.01.2021	12:00:00	904719	0010	904721	0030	04.01.2021	16:00:00
○▲○		904720	0020	MA3	05.01.2021	12:00:00	05.01.2021	18:00:00	904720	0010	904720	0030	05.01.2021	12:00:00
○▲○		904721	0020	MA3	05.01.2021	12:00:00	05.01.2021	18:00:00	904721	0010	904721	0040	05.01.2021	12:00:00
○▲○		904721	0030	MA4	05.01.2021	12:00:00	05.01.2021	16:00:00	904721	0010	904721	0040	05.01.2021	12:00:00
○▲○		904720	0030	MA3	07.01.2021	06:00:00	07.01.2021	10:00:00	904720	0020	904722	0010	05.01.2021	18:00:00
○▲○		904721	0040	MA3	07.01.2021	06:00:00	07.01.2021	14:00:00	904721	0020	904722	0010	05.01.2021	18:00:00
○▲○		904722	0010	MA1	07.01.2021	14:00:00	08.01.2021	12:00:00	904721	0040	904722	0020	07.01.2021	14:00:00
○▲○		904722	0020	MA1	08.01.2021	12:00:00	09.01.2021	07:30:00	904722	0010	904719	0020	08.01.2021	12:00:00
○▲○		904719	0020	MA2	09.01.2021	07:30:00	09.01.2021	13:30:00	904722	0020			09.01.2021	07:30:00

Result of Dispatching the First Operation

The first operation has been dispatched to the desired start time.

You can see that the scheduled start times of the other operations of the same project have changed. When an operation of a project is dispatched, the times of all other operations in the project are updated automatically. The times at which the operations can be dispatched are stored in the operations.

It does not make sense to dispatch earlier than the updated times, since otherwise the operation sequence cannot be adhered to.

Now select the second operation that has not yet been dispatched.

Alert	Dis...	Order Number	Oper./Act.	Work center	Earliest start	Earl.start	Earliest finish	Erl.finish	Order pred.	Op. Pred.	Oder succ.	Op. Succ.	L.e.e.Pred	L.e.e.Pred
○▲○	X	904719	0010	MA2	04.01.2021	08:00:00	04.01.2021	16:00:00			904721	0010		00:00:00
○▲○		904720	0010	MA3	04.01.2021	16:00:00	05.01.2021	12:00:00	904719	0010	904720	0020	04.01.2021	16:00:00
○▲○		904721	0010	MA3	04.01.2021	16:00:00	05.01.2021	12:00:00	904719	0010	904721	0030	04.01.2021	16:00:00
○▲○		904720	0020	MA3	05.01.2021	12:00:00	05.01.2021	18:00:00	904720	0010	904720	0030	05.01.2021	12:00:00
○▲○		904721	0020	MA3	05.01.2021	12:00:00	05.01.2021	18:00:00	904721	0010	904721	0040	05.01.2021	12:00:00

Selection of Second Operation

Run the planning function again.

If manual dispatching was chosen, the window for entering the start time appears again.

The input fields are prefilled with the currently scheduled time of the operation. Dispatching is not possible earlier. If you enter an earlier time, the dispatching function corrects the time to this earliest possible time automatically.

Enter the desired start time.

Start Time of Second Operation

→ Tip

Manual planning is useful if you want to create gaps between the operations and want to dispatch an operation later than specified by scheduling. If you want to dispatch the operations as early as possible, you do not need to activate manual planning. In this case, the operations are dispatched after the scheduled dates, as early as possible.

If you have not set manual planning, the current scheduled time of the operation is transferred to the dispatching function.

Result:

Result of Dispatching of Second Operation

Alert	Dis...	Order Number	Oper./Act.	Work center	Earliest start	Earl.start	Earliest finish	Erl.finish	Order pred.	Op. Pred.	Oder succ.	Op. Succ.	L.e.e.Pred	L.e.e.Pred
	X	904719	0010	MA2	04.01.2021	08:00:00	04.01.2021	16:00:00			904721	0010		00:00:00
	X	904720	0010	MA3	04.01.2021	16:00:00	05.01.2021	12:00:00	904719	0010	904720	0020	04.01.2021	16:00:00
		904721	0010	MA3	04.01.2021	16:00:00	05.01.2021	12:00:00	904719	0010	904721	0030	04.01.2021	16:00:00
		904720	0020	MA3	05.01.2021	12:00:00	05.01.2021	18:00:00	904720	0010	904720	0030	05.01.2021	12:00:00
		904721	0020	MA3	05.01.2021	12:00:00	05.01.2021	18:00:00	904721	0010	904721	0040	05.01.2021	12:00:00
		904721	0030	MA4	05.01.2021	12:00:00	05.01.2021	16:00:00	904721	0010	904721	0040	05.01.2021	12:00:00
		904720	0030	MA3	07.01.2021	06:00:00	07.01.2021	10:00:00	904720	0020	904722	0010	05.01.2021	18:00:00
		904721	0040	MA3	07.01.2021	06:00:00	07.01.2021	14:00:00	904721	0020	904722	0010	05.01.2021	18:00:00
		904722	0010	MA1	07.01.2021	14:00:00	08.01.2021	12:00:00	904721	0040	904722	0020	07.01.2021	14:00:00
		904722	0020	MA1	08.01.2021	12:00:00	09.01.2021	07:30:00	904722	0010	904719	0020	08.01.2021	12:00:00
		904719	0020	MA2	09.01.2021	07:30:00	09.01.2021	13:30:00	904722	0020			09.01.2021	07:30:00

The second operation is dispatched.

You can use the relationship fields to check that dispatching is correct. The explanations for these fields can be found in the chapter on the data provider. [Data Provider /LMPC/CL\\_DP\\_PS\\_AFAB Relationships \[page 375\]](#)

Repeat these steps until all operations of the project are dispatched at the desired times.

i Note

This function was developed to enable dispatching in the correct sequence. Follow the procedure described above. If operations are dispatched before their predecessors have been dispatched, this can lead to an

incorrect sequence. The planning function does not check for a correct sequence and cannot correct user errors.

## Related Information

[S\\_EPNP Configuration: Dispatch Networks](#)

### 2.6.4.12 S\_EPRQD Dispatch on Requirement Date

Use

You can use this action code to dispatch orders in such a way that the material receipt occurs on time for the requirement date.

In this planning function, dispatching does not take place for each operation, but always for all operations of an order.

The planning function dispatches the orders as late as possible. The idea is to only produce a material when it is needed, thus avoiding unnecessary warehousing.

Only operations that have a requirement date are dispatched. Operations without dates are not dispatched.

#### → Tip

Using settings for the action code, dispatching can also take place for the rescheduling date instead of for the requirement date. The documentation only describes dispatching on the requirement date. The action code is used in the same way for the rescheduling date. For the differences between the requirement date and the rescheduling date, see the section on the data provider /LMPC/CL\_DP\_BED. [Data Provider / LMPC/CL\\_DP\\_BED LMPC Requirement Date and Order Relations \[page 336\]](#)

#### Procedure

Select an operation of an order.

Alert	Lock	Dis...	Fmd	Order Number	OpAc	Material	Requirement date	Latest start	Lat.st.tme	Latest finish	Order finish	Avail.date
oo				3308115	0010	LMPC HALB 12	08.11.2021	03.11.2021	06:00:00	03.11.2021	04.11.2021	08.11.2021
oo				3308116	0010	LMPC HALB 12	11.11.2021	03.11.2021	06:00:00	03.11.2021	08.11.2021	11.11.2021
oo				3308119	0010	LMPC HALB 12	03.11.2021	03.11.2021	06:00:00	03.11.2021	30.10.2021	04.11.2021

Select Operation

In this example, the requirement date for the order is 11/11/2021.

Execute the action code  (S\_EPRQD).

Result:

The screenshot shows a SAP planning table for Work Centers (dispatched). The table has columns for dates from 02.11.2021 to 03.11.2021. The rows represent work centers MA1 to MA4. A specific order, 3308116, is highlighted in the MA1 row on 11.11.2021. Below the table, a list of orders is shown with columns for Alert, Lock, Dis., Fmd, Order Number, OpAc, Material, Requirement date, Latest start, Lat.st.tme, Latest finish, Order finish, and Avail.date.

Work ctr	Description	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17
MA1	LMPC wst 1																												
MA2	LMPC wst 2																												
MA3	LMPC wst 3																												
MA4	LMPC wst 4																												

Alert	Lock	Dis.	Fmd	Order Number	OpAc	Material	Requirement date	Latest start	Lat.st.tme	Latest finish	Order finish	Avail.date
	X	X		3308116	0010	LMPC HALB 12	11.11.2021	02.11.2021	10:50:00	02.11.2021	08.11.2021	11.11.2021
				3308115	0010	LMPC HAIB 12	08.11.2021	03.11.2021	06:00:00	03.11.2021	04.11.2021	08.11.2021

### Planning result

The order consists of only one operation. This operation has been dispatched in time so that the MRP availability of the material is on 11/11/2021. The requirement date was met exactly. For this, the operation had to be dispatched at the end of the day on November 2, 2021.

It is possible to dispatch several orders at the same time. For each order, it is sufficient to select one operation of an order. The function automatically reads the other operations of the order that are also open in the planning table.

If several orders are transferred to planning, the orders are presorted first. Orders with an earlier requirement date are dispatched first. This follows the assumption that earlier orders are more important than later orders. The closer a requirement date is, the more urgent production becomes.

If orders have the same requirement date, the orders that are scheduled earlier are dispatched before the orders that are scheduled later. This follows the assumption that earlier orders are also to be dispatched earlier.

For dispatching, the function calculates a date on which the operations must end for the receipt to be on time. For dispatching, this date is transferred to the planning function that performs dispatching using backward scheduling. If there is not sufficient capacity offer at the work center, the function can either cancel dispatching or change the search direction to forward scheduling and thus choose the next possible dispatching date. The behavior depends on the settings of the strategy profile. For details on this, see the LMPC Configuration Guide. [S\\_EPRQD Configuration: Dispatch on Requirement Date](#)

### ! Restriction

- The planning function only runs correctly if all operations of an order are open in the planning table, because then all operations are also taken into account during dispatching. Only operations that are open in the planning table are dispatched. If operations are not open in the planning table, it is possible that the order will be dispatched too late.
- When planning orders for make-to-stock production, note the following: Since the requirement date is updated for each planning activity, the requirement date may have changed after dispatching. Due to a shift in the sequence of the orders, this order may now be assigned to a different requirement date. For details on calculating the requirement date, see the section on the data provider /LMPC/CL\_DP\_BED. [Data Provider /LMPC/CL\\_DP\\_BED LMPC Requirement Date and Order Relations \[page 336\]](#)
- When dispatching, the wait time from the scheduling margin key and the goods receipt processing time are also taken into account. The function uses the factory calendar of the plant for these days. The factory calendar of the work center should have the same workdays as the factory calendar of the plant. The capacity offer at the work center must match the working days of the factory calendar of the

plant. Days that are declared working days in the factory calendar of the plant must also be declared working days in the factory calendar of the work center. Otherwise, the goods receipt processing time and the wait time from the scheduling margin key may be calculated incorrectly.

- This function does not enable manual planning for which the planner can assign an end time for the operations. The action code S\_MANP can be used for the entry of an end time. [S\\_MANP Manual Dispatching \[page 183\]](#)

→ Tip

The function can also be used for automatic dispatching in the background. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

## 2.6.4.13 S\_EPSEL Dispatch Selected Operations

### Use

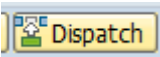
The selected operations of the orders are dispatched at the earliest possible time. This ensures seamless planning. The capacities of the work centers are utilized fully.

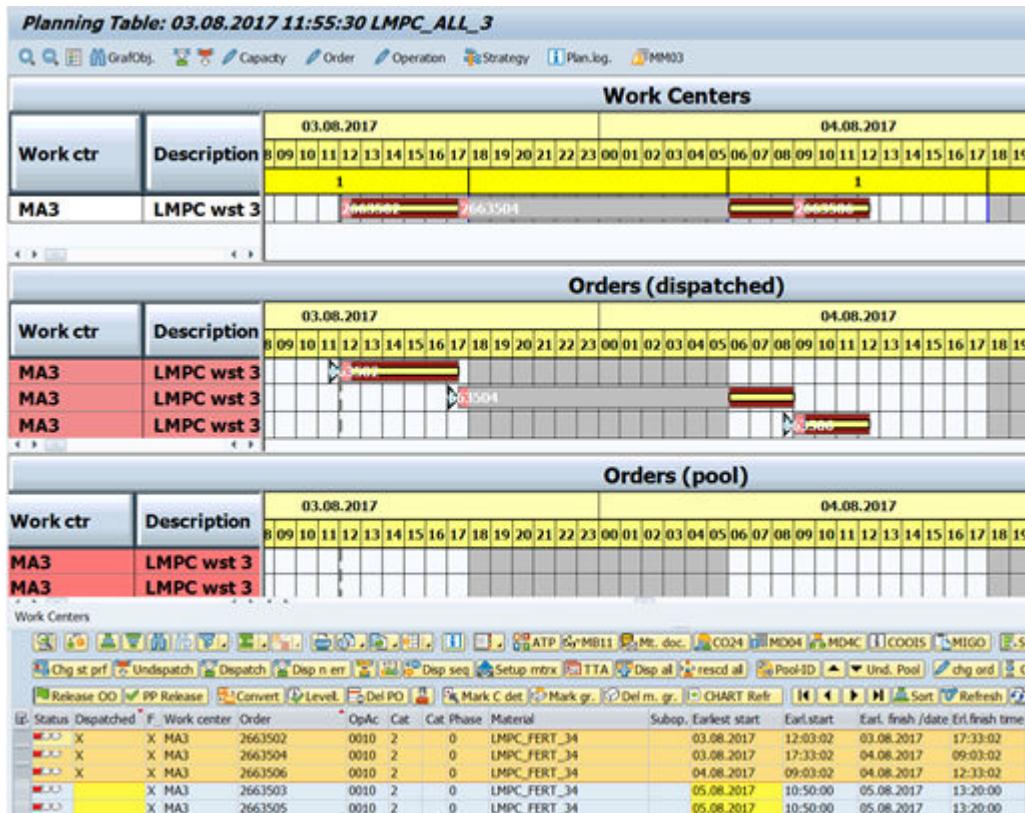
### Procedure

- Select the desired operations in the ALV Grid.

EP	Status	D	F	Work center	Order	OpAc	Cat	Cat Phase	Material	Subop.	Earliest start	Earl.start	Earl. finish /date	Erl.finish time
	X			MA3	2663502	0010	2	0	LMPC_FERT_34		04.08.2017	12:50:00	05.08.2017	06:20:00
	X			MA3	2663504	0010	2	0	LMPC_FERT_34		05.08.2017	07:30:00	05.08.2017	11:00:00
	X			MA3	2663506	0010	2	0	LMPC_FERT_34		05.08.2017	07:30:00	05.08.2017	11:00:00
	X			MA3	2663503	0010	2	0	LMPC_FERT_34		05.08.2017	10:50:00	05.08.2017	13:20:00
	X			MA3	2663505	0010	2	0	LMPC_FERT_34		05.08.2017	10:50:00	05.08.2017	13:20:00
	X			MA3	2663507	0010	2	0	LMPC_FERT_34		05.08.2017	10:50:00	05.08.2017	13:20:00

Selection of Operations

- Execute the action code  (S\_EPSEL).
- Result:



Dispatching Result

In chart 2, you can see the current timeline 2 as a vertical line. All operations are dispatched without gaps at the earliest point in time.

→ Tip

- The function can be used for background processing. [Program /LMPC/HJPT Background Processing \[page 19\]](#)
- The function contains additional logic for operations with timetable allocation. The function recognizes that the operations have a timetable allocation and schedules these operations using the strategy profile for timetable dispatching, which is maintained per parameter in the action code. For operations with timetable allocation, dispatching does not take place on the earliest date, but on the date that the timetable allocation specifies. For more information, see the description of the LMPC timetable. [S\\_FPL Dispatch by LMPC Timetable \[page 174\]](#)

## 2.6.4.14 S\_EPSELF Dispatch Selected Orders Without Errors

This action code has the same processing logic as the action code S\_EPSEL. The difference is in the strategy profile used for dispatching. Here, you select the "Cancel dispatching due to error" indicator. Meaning that if errors occur during dispatching, the respective order is not dispatched.



## 2.6.4.15 S\_EPSELL Dispatching with Check on Gaps and Pool Orders

### Use

You use this function to dispatch orders into gaps.

### Procedure

Initial situation:

ID	Alert	Conflict	F	Work ctr	Order	Operation	Quantity	OpAc	Cat	C	Phase	SOp	Material	Earliest start	Earl.start	Earliest finish	Earl.finish	No.	Order pool	Start time disposition gap	Free capacity gap
			X	MA3	60007871		33	0010	1	10	0		LMP_C_FERT_12	02.02.2018	12:29:08	05.02.2018	17:59:08				00:00:00
			X	MA3	60007873		8	0010	1	10	0		LMP_C_FERT_12	05.02.2018	17:59:08	06.02.2018	12:29:08				00:00:00
			X X	MA3	2663505		18	0010	2	0			LMP_C_FERT_34	07.02.2018	18:59:08	08.02.2018	07:17:08			06.02.2018 12:29:08	20:30:00
			X	MA3	60007841		2	0010	1	10	0		LMP_C_FERT_12	08.02.2018	07:17:08	08.02.2018	09:47:08				00:00:00
			X	MA3	60007868		2	0010	1	10	0		LMP_C_FERT_34	08.02.2018	09:47:08	08.02.2018	10:29:08				00:00:00
			X	MA3	60007822		1	0010	1	10	0		LMP_C_FERT_34	08.02.2018	10:29:08	08.02.2018	11:05:08				00:00:00

HJPT Planning Table Before Dispatch

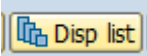
The operations in the ALV Grid are sorted according to the start time and the work center. There are dispatched operations. There are gaps between operations with free capacity.

In the column **Start time disposition gap**, the start time of the gap can be read. The column **Free capacity gap** displays the free capacity.

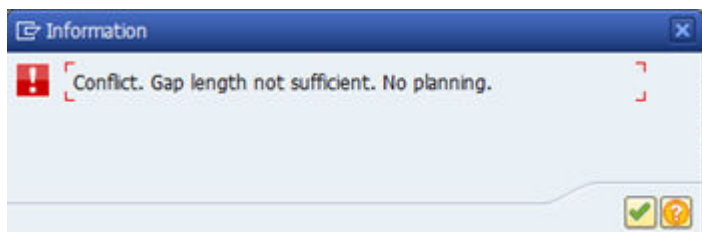
The planner uses drag and drop to drag order operations that have not yet been dispatched to the place with the gap to fill this gap. The shifted operations belong to the same work center as the operation that displays a gap.

ID	Alert	Conflict	F	Work ctr	Order	Operation	Quantity	OpAc	Cat	C	Phase	SOp	Material	Earliest start	Earl.start	Earliest finish	Earl.finish	No.	Order pool	Start time disposition gap	Free capacity gap
			X	MA3	60007871		33	0010	1	10	0		LMP_C_FERT_12	02.02.2018	12:29:08	05.02.2018	17:59:08				00:00:00
			X	MA3	60007873		8	0010	1	10	0		LMP_C_FERT_12	05.02.2018	17:59:08	06.02.2018	12:29:08				00:00:00
				MA3	2719667		5	0010	2	0			LMP_C_FERT_12	30.01.2018	06:00:00	30.01.2018	11:30:00				00:00:00
				MA3	2719669		9	0010	2	0			LMP_C_FERT_12	30.01.2018	06:00:00	30.01.2018	15:30:00				00:00:00
				MA3	2719670		10	0010	2	0			LMP_C_FERT_12	30.01.2018	06:00:00	30.01.2018	16:30:00				00:00:00
				MA3	2719671		14	0010	2	0			LMP_C_FERT_12	30.01.2018	06:00:00	31.01.2018	08:30:00				00:00:00
			X X	MA3	2663505		18	0010	2	0			LMP_C_FERT_34	07.02.2018	18:59:08	08.02.2018	07:17:08			06.02.2018 12:29:08	20:30:00
			X	MA3	60007841		2	0010	1	10	0		LMP_C_FERT_12	08.02.2018	07:17:08	08.02.2018	09:47:08				00:00:00
			X	MA3	60007868		2	0010	1	10	0		LMP_C_FERT_34	08.02.2018	09:47:08	08.02.2018	10:29:08				00:00:00
			X	MA3	60007822		1	0010	1	10	0		LMP_C_FERT_34	08.02.2018	10:29:08	08.02.2018	11:05:08				00:00:00
				MA3	2719659		20	0010	2	0			LMP_C_FERT_12	30.01.2018	06:00:00	31.01.2018	14:30:00				00:00:00
				MA3	2719661		10	0010	2	0			LMP_C_FERT_12	30.01.2018	06:00:00	30.01.2018	16:30:00				00:00:00
				MA3	2719662		14	0010	2	0			LMP_C_FERT_12	30.01.2018	06:00:00	31.01.2018	08:30:00				00:00:00

Moving Orders Using Drag and Drop

The shifted orders are highlighted and the action code  (S\_EPSELL) is executed.

The function now checks whether the capacity requirements of the operations fit into the planning gap. If the gap is not large enough, the system displays an error message and aborts planning.



Error Message

If the gap was large enough, the operations will be dispatched. The function determines the end of the capacity requirement of the predecessor order operation and dispatches the operations into the gap at this time. If the operations have been moved to the first position in the ALV Grid, no predecessor can be determined. In this

case, the current date and time are transferred to the planning function as the start time for the operations. A gap check is also performed in this case.

If the predecessor operation ends at a time that is in the past, then the current date and time are used as the start time for dispatching. It is not possible to dispatch into the past.

The function can also process pool orders. If pool orders are to be processed, only orders from one order pool can be dispatched. It is sufficient to move one order operation of an order pool. The other related operations are read automatically.

### ! Restriction

- The operations to be dispatched must be in a single block, only then can they process the function. This means that the operations in the ALV Grid must be directly one after the other.
- The function is always oriented to the operation that is directly before the new operations to be dispatched in the ALV Grid. The size of the dispatching gap is read from this operation.
- You can only dispatch operations that belong to the same work center.
- Since the start time and the work center are relevant for this planning function, it is recommended that you sort the ALV Grid according to the start time and the work center of the operations.

### → Remember

You use the [Data Provider /LMPC/CL\\_DP\\_GAP Calculate Dispatching Gaps \[page 366\]](#) to calculate planning gaps.

## 2.6.4.16 S\_EPSELX Dispatching Insert in Gaps with and Without Pool Orders

### Use

This function enables order operations to be inserted between dispatched orders or to be inserted at the beginning of planning. The action code works in a similar way to the action code S\_EPSELL, except that there is no gap check.

### Procedure

Initial situation:

Er.	Alert	Conflict	i	F	Work ctr	Order	Operation	Quantity	OpAc	Cat	C.	Phase	SOp	Material	Earliest start	Earl.start	Earliest finish	Erl.finish
			X		MA3	60007871		33	0010	1	10	0		LMPC_FERT_12	02.02.2018	13:42:01	05.02.2018	19:12:01
			X		MA3	60007873		8	0010	1	10	0		LMPC_FERT_12	05.02.2018	19:12:01	06.02.2018	13:42:01
			X	X	MA3	2663505		18	0010	2		0		LMPC_FERT_34	06.02.2018	13:42:01	06.02.2018	16:00:01
			X		MA3	60007841		2	0010	1	10	0		LMPC_FERT_12	06.02.2018	16:00:01	06.02.2018	18:30:01
			X		MA3	60007868		2	0010	1	10	0		LMPC_FERT_34	06.02.2018	18:30:01	06.02.2018	19:12:01
			X		MA3	60007822		1	0010	1	10	0		LMPC_FERT_34	06.02.2018	19:12:01	06.02.2018	19:48:01

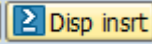
ALV Grid Before Planning

Operations are dispatched. The operations are sorted by work center, start date, and start time.

One or more operations are dragged and dropped either at the beginning of planning or between dispatched operations.

Ep	Alert	Conflict	F	Work ctr	Order	Operation	Quantity	OpAc	Cat	C	Phase	SOp	Material	Earliest start	Earl.start	Earliest finish	Erl.finish
			X	MA3	60007871		33	0010	1	10	0		LMPC_FERT_12	02.02.2018	13:42:01	05.02.2018	19:12:01
			X	MA3	60007873		8	0010	1	10	0		LMPC_FERT_12	05.02.2018	19:12:01	06.02.2018	13:42:01
			X X	MA3	2663505		18	0010	2	0			LMPC_FERT_34	06.02.2018	13:42:01	06.02.2018	16:00:01
				MA3	2719667		5	0010	2	0			LMPC_FERT_12	30.01.2018	06:00:00	30.01.2018	11:30:00
				MA3	2719669		9	0010	2	0			LMPC_FERT_12	30.01.2018	06:00:00	30.01.2018	15:30:00
				MA3	2719670		10	0010	2	0			LMPC_FERT_12	30.01.2018	06:00:00	30.01.2018	16:30:00
				MA3	2719671		14	0010	2	0			LMPC_FERT_12	30.01.2018	06:00:00	31.01.2018	08:30:00
			X	MA3	60007841		2	0010	1	10	0		LMPC_FERT_12	06.02.2018	16:00:01	06.02.2018	18:30:01
			X	MA3	60007868		2	0010	1	10	0		LMPC_FERT_34	06.02.2018	18:30:01	06.02.2018	19:12:01
			X	MA3	60007822		1	0010	1	10	0		LMPC_FERT_34	06.02.2018	19:12:01	06.02.2018	19:48:01

### Moving Orders to a New Position Using Drag and Drop

The shifted operations are highlighted and the action code  (S\_EPSELX) is executed.

Result:

Ep	Alert	Conflict	F	Work ctr	Order	Operation	Quantity	OpAc	Cat	C	Phase	SOp	Material	Earliest start	Earl.start	Earliest finish	Erl.finish
			X	MA3	60007871		33	0010	1	10	0		LMPC_FERT_12	02.02.2018	13:42:01	05.02.2018	19:12:01
			X	MA3	60007873		8	0010	1	10	0		LMPC_FERT_12	05.02.2018	19:12:01	06.02.2018	13:42:01
			X X	MA3	2663505		18	0010	2	0			LMPC_FERT_34	06.02.2018	13:42:01	06.02.2018	16:00:01
			X X	MA3	2719667		5	0010	2	0			LMPC_FERT_12	06.02.2018	16:00:01	07.02.2018	07:30:01
			X X	MA3	2719669		9	0010	2	0			LMPC_FERT_12	07.02.2018	07:30:01	07.02.2018	17:00:01
			X X	MA3	2719670		10	0010	2	0			LMPC_FERT_12	07.02.2018	17:00:01	08.02.2018	13:30:01
			X X	MA3	2719671		14	0010	2	0			LMPC_FERT_12	08.02.2018	13:30:01	09.02.2018	14:00:01
			X	MA3	60007841		2	0010	1	10	0		LMPC_FERT_12	09.02.2018	14:00:01	09.02.2018	16:30:01
			X	MA3	60007868		2	0010	1	10	0		LMPC_FERT_34	09.02.2018	16:30:01	09.02.2018	17:12:01
			X	MA3	60007822		1	0010	1	10	0		LMPC_FERT_34	09.02.2018	17:12:01	09.02.2018	17:48:01
				MA3	2719659		20	0010	2	0			LMPC_FERT_12	30.01.2018	06:00:00	31.01.2018	14:30:00
				MA3	2719661		10	0010	2	0			LMPC_FERT_12	30.01.2018	06:00:00	30.01.2018	16:30:00
				MA3	2719662		14	0010	2	0			LMPC_FERT_12	30.01.2018	06:00:00	31.01.2018	08:30:00

### Dispatching Result

The order operations have been dispatched at the designated position.

The function determines the end of the capacity requirement of the immediately preceding operation at the work center and dispatches the orders for this time. The orders are inserted and the subsequent operations moved.

If the orders have been moved to the first position, no predecessor can be determined. In this case, the current date and time are transferred to the planning function as the start time for the orders.

If the predecessor ends at a time that is in the past, then the start time is the current date and time for dispatching. It is not possible to dispatch into the past.

The function can also process pool orders. If pool orders are to be processed, only orders from one order pool can be dispatched. It is sufficient to move one order operation of an order pool. The other related operations are read automatically.

The operations should be sorted by work center and start time in the ALV Grid, but this is not necessary. The function is always based on the previous order of the same capacity.

If the operations to be dispatched are dragged before operations already in the past, these dispatched operations are automatically included in the list of operations to be scheduled. Thus, these operations are rescheduled after the new orders to be dispatched. The production plan is shifted.

### ! Restriction

The operations to be dispatched must be in a single block, only then can they be processed by the function.

## 2.6.4.17 S\_EPSELT Dispatching for Date

Dispatching operations without changing production times

### Use

You can use this action code to dispatch the selected operations to the times at which the order is currently scheduled.

For example, if you want to dispatch the orders in the same way that the MRP run scheduled the orders, you do not have to do anything more than dispatch the orders after creation by the MRP run with this action code. This can also be done using an automatic nightly planning run with program /LMPC/HJPT.

It is also possible that with the function for shifting orders, S\_MVEORD, you have already moved the orders in the order pool as they are to be dispatched. You can use S\_EPSELT to simply dispatch the orders to the scheduled times after the shift.

The action code uses the same logic as the action code S\_EPSEL. The contrast with S\_EPSEL is in the settings of the strategy profile used. The strategy profile delivered is set in such a way that dispatching takes place on the date that is stored in the operation.

### Procedure

An MRP run has been carried out at night. Now, you simply want to dispatch the operations on the dates specified by the MRP run, to meet the requirement dates for the orders.

Select one or more operations in the ALV Grid:

Alert	Dispatched	F...	CTC	Order pool	Lock	Nu...	Order Number	OpAc	Cat	Material	Mat.Grping	Work ctr*	Order Quantity	UoM	Earliest start	Earl.start	Earliest finish	Erl.finish
	X						3127519	0020	001	LMPC_FERT_12		MA4	9	PC	12.08.2020	09:00:00	12.08.2020	18:00:00
	X						3228961	0020	001	LMPC_FERT_12		MA4	6	PC	13.08.2020	12:00:00	13.08.2020	18:00:00
	X						3222001	0020	001	LMPC_FERT_12		MA4	4	PC	14.08.2020	10:30:00	14.08.2020	14:30:00
	X						3228841	0020	001	LMPC_FERT_12		MA4	6	PC	15.08.2020	12:00:00	15.08.2020	18:00:00
	X						3222000	0020	001	LMPC_FERT_12		MA4	4	PC	15.08.2020	14:00:00	15.08.2020	18:00:00
	X						3228840	0020	001	LMPC_FERT_12		MA4	4	PC	15.08.2020	14:00:00	15.08.2020	18:00:00

Selection of Operations

Execute the action code  (S\_EPSELT).

Result:

The operations were dispatched at exactly the times at which they were already scheduled. The times of the operations have not changed. However, they are now dispatched and occupy the capacity.

Alert	Dispatched	F...	CTC	Order pool	Lock	Nu...	Order Number	OpAc	Cat	Material	Mat.Grping	Work ctr*	Order Quantity	UoM	Earliest start	Earl.start	Earliest finish	Erl.finish
	X	X					3127519	0020	001	LMPC_FERT_12		MA4	9	PC	12.08.2020	09:00:00	12.08.2020	18:00:00
	X	X					3228961	0020	001	LMPC_FERT_12		MA4	6	PC	13.08.2020	12:00:00	13.08.2020	18:00:00
	X	X					3222001	0020	001	LMPC_FERT_12		MA4	4	PC	14.08.2020	10:30:00	14.08.2020	14:45:00
	X	X					3228841	0020	001	LMPC_FERT_12		MA4	6	PC	15.08.2020	12:00:00	15.08.2020	18:00:00
	X	X					3222000	0020	001	LMPC_FERT_12		MA4	4	PC	15.08.2020	14:00:00	15.08.2020	18:00:00
	X	X					3228840	0020	001	LMPC_FERT_12		MA4	4	PC	15.08.2020	14:00:00	15.08.2020	18:00:00

Result of Selection

### → Remember

The strategy profile for the action code is set in such a way that finite planning takes place. Always remember that a capacity check is carried out. If an operation has already been dispatched to the corresponding capacity at the scheduled time of the operation, the new operation to be dispatched cannot be dispatched there and moves to the next available capacity. Since the "Insert Operation" setting is set in the strategy profile, it is also possible that a new operation to be dispatched moves an operation that has already been dispatched. If you want to plan infinitely, that is, without checking the available capacity, you can change the settings in the strategy profile accordingly.

The function can be used for background processing. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

→ Tip

**Special Planning Scenarios:**

- **Pool Orders:** You can also use this function to dispatch operations of an order pool. In contrast to the action code S\_EPSELP for pool dispatching, only those operations of the order pool that were selected are dispatched. For the action code S\_EPSELP, however, it is sufficient to select an operation of an order pool to dispatch all operations of this pool. When dispatching operations with a pool ID, the function recognizes that these are orders of this type and dispatches the operations using the strategy profile for pool dispatching that is stored in the HJPT overall profile.  
[S\\_EPSELP Single-Level Dispatching with Pool ID \[page 219\]](#)
- **Timetable Orders:** Using this function, you can dispatch operations that have already been assigned a distribution according to the LMPC timetable. For more information, see the description of the LMPC timetable. The function recognizes that the operations have a timetable allocation and dispatches these operations using the strategy profile for timetable dispatching, which is maintained per parameter in the action code. If no strategy profile has been maintained, dispatching is carried out using the strategy profile for timetable dispatching, which is stored in the HJPT overall profile.  
[S\\_FPL Dispatch by LMPC Timetable \[page 174\]](#)

## 2.6.4.18 S\_EPSEQ Dispatch According to the Sequence Entered

### Use

You can use this action code to dispatch operations in the sequence that has been entered in an input-enabled field in the ALV Grid.

There are three possible planning variants for this action code:

- Planning at the earliest possible time
- Manual planning with entry of a start time
- Manual planning with entry of an end time

To ensure that the relevant planning variant works correctly, settings must be made in the action code and in the strategy profile. For the explanations for this, see the LMPC Configuration Guide. [S\\_EPSEQ Configuration: Dispatch According to Sequence Entered](#)

### Procedure

#### Planning at earliest point in time

The ALV Grid of the LMPC HJPT planning table contains a column ready for input with the heading "Dispatching Sequence". If the field is not shown, you can find it in the layout group of the HJPT help fields.

The planner can enter the desired dispatching sequence of the orders.

Alert	Dispatched	Dispatching Sequence	Ord. Nr.	OpAc	Material	Work ctr	Lat.st.tme	Latest start
●○○			3292331	0010	LMPC HALB 12	MA1	06:00:00	22.03.2021
●○○			3292332	0010	LMPC HALB 12	MA1	06:00:00	22.03.2021
●○○			3292333	0010	LMPC HALB 12	MA1	06:00:00	22.03.2021
●○○			3292334	0010	LMPC HALB 12	MA1	06:00:00	22.03.2021
●○○			3292335	0010	LMPC HALB 12	MA1	06:00:00	22.03.2021

### Specifying the Sequence of Orders

The order operations are selected according to this:

Alert	Dispatched	Dispatching Sequence	Ord. Nr.	OpAc	Material	Work ctr	Lat.st.tme	Latest start
●○○		1	3292331	0010	LMPC HALB 12	MA1	06:00:00	22.03.2021
●○○		3	3292332	0010	LMPC HALB 12	MA1	06:00:00	22.03.2021
●○○		2	3292333	0010	LMPC HALB 12	MA1	06:00:00	22.03.2021
●○○			3292334	0010	LMPC HALB 12	MA1	06:00:00	22.03.2021
●○○			3292335	0010	LMPC HALB 12	MA1	06:00:00	22.03.2021

### Selection of Operations

The action code  (S\_EPSEQ) is executed:

Result:

Alert	Dispatched	Dispatching Sequence	Ord. Nr.	OpAc	Material	Work ctr	Lat.st.tme	Latest start
○△○○	X		3292331	0010	LMPC HALB 12	MA1	10:15:37	23.03.2021
○△○○	X		3292333	0010	LMPC HALB 12	MA1	06:15:37	24.03.2021
○△○○	X		3292332	0010	LMPC HALB 12	MA1	09:15:37	24.03.2021
●○○			3292334	0010	LMPC HALB 12	MA1	06:00:00	22.03.2021
●○○			3292335	0010	LMPC HALB 12	MA1	06:00:00	22.03.2021

### Dispatching Result

The selected orders have been dispatched in the desired sequence at the earliest possible time.

#### → Tip

It is possible to set the action code in such a way that dispatching is triggered when you choose the Enter key. All data records that have a sequence number are then processed. With this setting, it is no longer necessary to select the data records and then choose the pushbutton for the action code. For details on this, see the LMPC Configuration Guide. [S\\_EPSEQ Configuration: Dispatch According to Sequence Entered](#)

### Manual planning with entry of a start time

The action code can be set in such a way that the user can enter a start time for dispatching. In this case, when you execute the action code, the system displays a dialog box for entering the start time for the first operation.

Start time first operation
✕

Start Date	<input style="width: 90%;" type="text" value="15.03.2021"/>
Start Time	<input style="width: 90%;" type="text" value="06:00:00"/>

Start Time Dialog Box

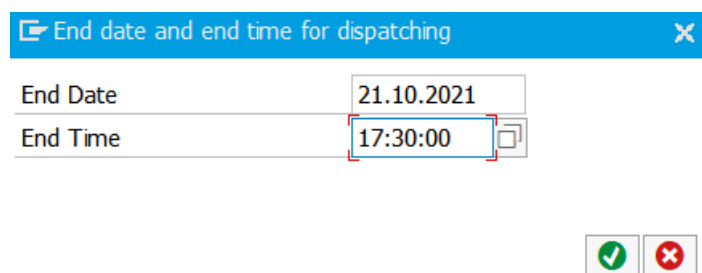
The function dispatches the selected operations sequentially in such a way that the end time of the predecessor is also the start time for the subsequent operation. The operations are dispatched directly one after the other without gaps.

With this logic, it is also possible to realize a sequence across several work centers. The next operation at a work center does not start until the previous operation has been completed at another work center.

During dispatching, only the times of the capacity requirements of the operations are taken into account. Meaning the start and end times of the operations.

### Manual dispatching with entry of an end time

The action code can be set in such a way that the user can enter an end time for dispatching. In this case, when you execute the action code, the system displays a dialog box for entering the end time for the last operation.



End date and end time for dispatching	
End Date	21.10.2021
End Time	17:30:00

End Time Dialog Box

The function dispatches the selected operations sequentially in such a way that the end time of the predecessor is also the start time for the subsequent operation.

The operations are dispatched in such a way that the last operation in the sequence ends on the desired end date.

With this logic, it is also possible to realize a sequence across several work centers. The next operation at a work center does not start until the previous operation has been completed at another work center.

During dispatching, only the times of the capacity requirements of the operations are taken into account. Meaning the start and end times of the operations.

#### → Remember

If the capacity offer is not sufficient and the operations must be dispatched in the past, dispatching terminates and does not dispatch the operations.

## 2.6.4.19 S\_EPSIM Simultaneous Dispatching

### Use

The action code S\_EPSIM is a planning function in which all selected operations are transferred to the standard planning function of the capacity planning table simultaneously. Dispatching is executed without additional LMPC logic, solely on the basis of the settings of the strategy profile.

When you use this function, all settings of the strategy profile apply as they can be defined in the standard SAP system of the capacity planning table. This means that you can only plan in the same way as the standard capacity planning table, without additional logic.

This planning function can be used, for example, if the sequence of operations during dispatching is to be created using the sort sequence that is defined in the strategy profile. For all other LMPC HJPT planning functions, the dispatching sequence of the strategy profile has no effect because the operations are transferred individually to the dispatching function.

→ Tip

You can also use the “Date Entry During Dispatching” option in the assigned strategy profile to carry out manual planning with a dialog box for entering the desired start date.

## Related Information

[Configuration of Strategy Profiles](#)

### 2.6.4.20 S\_EPSRT Sorted Dispatching

#### Use

The action code S\_EPSRT is a planning function. Before dispatching, the orders are sorted into a sequence that is configured in Customizing. Any field in the ALV grid of the HJPT planning board can be used as a sort criterion. You can use any number of sort criteria.

The action code allows five planning variants:

- Assignment of a sequence number.
- Sorted dispatching at earliest point in time.
- Sorted dispatching with entry of a start time.
- Sorted dispatching with entry of an end time.
- Sorted dispatching in background processing.

To ensure that the relevant planning variant works correctly, settings must be made in the action code and in the strategy profile. For the explanations for this, see the LMPC Configuration Guide. [S\\_EPSRT Configuration: Sorted Dispatching](#)

#### Procedure

##### Assignment of a sequence number

Select the desired operations in the ALV Grid.

Alert	Dispatched	F...	CTC	Order pool	Lock	Sequence	Order Number	OpAc	Cat	Material	Mat.Grp	Work ctr	Order	Quantity	UoM	Earliest start	Earl.start
○▲○	X	X				3127519		0020	001	LMPC_FERT_12		MA4		9	PC	04.09.2020	16:17:54
●○○	X					60008415		0020	001	LMPC_FERT_12		MA4		1	PC	05.09.2020	13:38:19
○▲○		X				3228961		0020	001	LMPC_FERT_12		MA4		6	PC	13.08.2020	12:00:00
○▲○		X				3222001		0020	001	LMPC_FERT_12		MA4		4	PC	14.08.2020	10:30:00
○▲○		X				3228841		0020	001	LMPC_FERT_12		MA4		6	PC	15.08.2020	12:00:00
○▲○		X				3222000		0020	001	LMPC_FERT_12		MA4		4	PC	15.08.2020	14:00:00
○▲○		X				3228840		0020	001	LMPC_FERT_12		MA4		4	PC	15.08.2020	14:00:00
○▲○		X				3228842		0020	001	LMPC_FERT_12		MA4		4	PC	15.08.2020	14:00:00
○▲○		X				3228843		0020	001	LMPC_FERT_12		MA4		3	PC	15.08.2020	15:00:00

Selection of Operations




Execute the action code  (S\_EPSRT).

Result:

Alert	Dispatched	F...	CTC	Order pool	Lock	Sequence	Order Number	OpAc	Cat	Material	Mat.Grpng	Work ctr	Order Quantity	UoM	Earliest start	Earl.start
	X	X					3127519	0020	001	LMPC FERT 12		MA4	9	PC	04.09.2020	16:17:54
	X						60008415	0020	001	LMPC FERT 12		MA4	1	PC	05.09.2020	13:38:19
		X				4	3228961	0020	001	LMPC FERT 12		MA4	6	PC	13.08.2020	12:00:00
		X				1	3222001	0020	001	LMPC FERT 12		MA4	4	PC	14.08.2020	10:30:00
		X				5	3228841	0020	001	LMPC FERT 12		MA4	6	PC	15.08.2020	12:00:00
		X				2	3222000	0020	001	LMPC FERT 12		MA4	4	PC	15.08.2020	14:00:00
		X				3	3228840	0020	001	LMPC FERT 12		MA4	4	PC	15.08.2020	14:00:00
		X					3228842	0020	001	LMPC FERT 12		MA4	4	PC	15.08.2020	14:00:00
		X					3228843	0020	001	LMPC FERT 12		MA4	3	PC	15.08.2020	15:00:00

Result of Number Assignment

The function determined the sequence in the "Sequence" field. The "Sequence" field is input-enabled. The planner can now adjust the sequence and, for example, use the function for dispatching by sequence entered

 (S\_EPSEQ) to dispatch the sequence. [S\\_EPSEQ Dispatch According to the Sequence Entered \[page 165\]](#)

→ Tip

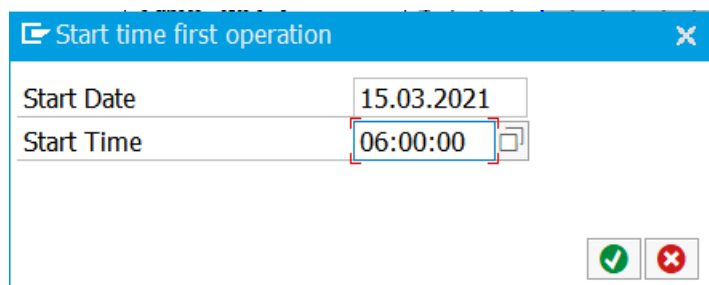
If the field for the sequence is not shown, you can find it in the layout group of the HJPT help fields.

**Sorted dispatching at earliest point in time**

If the setting for dispatching is set and manual planning is not activated, the numbers are not assigned. The operations are immediately dispatched in the determined sequence at the earliest point in time.

**Manual planning with entry of a start time**

The action code can be set in such a way that the user can enter a start time for dispatching. In this case, when you execute the action code, the system displays a dialog box for entering the start time for the first operation.



The dialog box titled "Start time first operation" contains two input fields: "Start Date" with the value "15.03.2021" and "Start Time" with the value "06:00:00". There are green checkmark and red X buttons at the bottom right.

Start Time Dialog Box

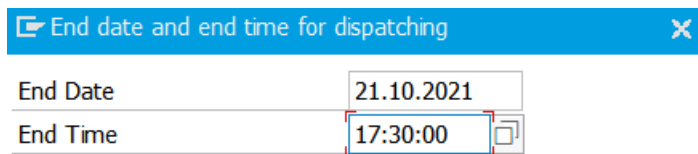
The function dispatches the selected operations in the determined sequence in such a way that the end time of the predecessor is also the start time for the subsequent operation. The operations are dispatched directly one after the other without gaps.

With this logic, it is also possible to realize a sequence across several work centers. The next operation at a work center does not start until the previous operation has been completed at another work center.

During dispatching, only the times of the capacity requirements of the operations are taken into account. Meaning the start and end times of the operations.

**Manual dispatching with entry of an end time**

The action code can be set in such a way that the user can enter an end time for dispatching. In this case, when you execute the action code, the system displays a dialog box for entering the end time for the last operation.



End Time Dialog Box

The function dispatches the selected operations in the determined sequence in such a way that the end time of the predecessor is also the start time for the subsequent operation.

The operations are dispatched in such a way that the last operation in the sequence ends on the desired end date.

With this logic, it is also possible to realize a sequence across several work centers. The next operation at a work center does not start until the previous operation has been completed at another work center.

During dispatching, only the times of the capacity requirements of the operations are taken into account. Meaning the start and end times of the operations.

#### → Remember

If the capacity offer is not sufficient and the operations must be dispatched in the past, dispatching terminates and does not dispatch the operations.

#### Sorted dispatching in background processing.

The action code can be executed in a nightly planning run using the program /LMPC/HJPT. For details, see the separate section on background processing. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

## 2.6.4.21 S\_E\_TBSQ Assign Number by Table

### Use

You can use this action code to create a scheduling sequence for dispatching order operations. The sequence is determined by means of a heuristic, which takes a material sequence that is stored in a Customizing table into account.

### Description of Customizing Settings

A sequence of materials or material groups is maintained for this action code, using the LMPC Customizing transaction /LMPC/MAT\_SEQ.

**Display View "Maintain LMPC material sequence": Overview**

Plnt	Work ctr	Seq.no.	Material	Material Grouping	Max. iter.
LM01	MA1	1	LMPC_HALB_*		10
LM01	MA1	2	LMPC_FERT_*		5
LM01	MA3	1	LMPC_FERT_34		5
LM01	MA3	2	LMPC_FERT_12		3
LM01	MA3	3	LMPC_FERT_KE		1

Transaction /LMPC/MAT\_SEQ Table Dispatching Sequence

For each work center, the system determines the sequence in which the order operations for particular materials are to be dispatched.

The "Maximum Number" field specifies the maximum number of order operations that can be dispatched consecutively.

You can use wildcards (\*) when you enter the materials and material groups.

The logic of the action code S\_E\_TBSQ processes the selected order operations and assigns a sequence number for the order in the "Sequence" column of the ALV Grid of the HJPT planning table, taking the Customizing table into account.

In the LMPC delivery, the action code is configured such that numbers are assigned for all order operations. The logic runs until all order operations have been assigned a number. Order operations that cannot be assigned based on the table are assigned a sequence number at the end.

**Procedure**

Select the desired order operations:

Alert	Dispatched	F...	CTC	Order pool	Lock	Sequence	Order Number	OpAc	Cat	Material	Mat.Grpng	Work ctr	Order Quantity	UoM	Earliest start	Earl.start
	X						3127519	0020	001	LMPC_FERT_12		MA4	9	PC	05.09.2020	09:00:00
	X						3192524	0020	001	LMPC_FERT_KE		MA4	2	PC	05.09.2020	16:00:00
	X						3228830	0010	001	LMPC_TDUMY1		MA4	14	PC	07.09.2020	13:20:00
	X						3127510	0020	001	LMPC_FERT_12		MA4	2	PC	07.09.2020	16:00:00
	X						3127511	0020	001	LMPC_FERT_12		MA4	2	PC	07.09.2020	16:00:00
	X						3127508	0020	001	LMPC_FERT_12		MA4	7	PC	08.09.2020	11:00:00
	X						3127509	0020	001	LMPC_FERT_12		MA4	7	PC	08.09.2020	11:00:00
	X						3127507	0020	001	LMPC_FERT_12		MA4	4	PC	08.09.2020	14:00:00
	X						3127514	0020	001	LMPC_FERT_12		MA4	5	PC	09.09.2020	13:00:00
	X						3127515	0020	001	LMPC_FERT_12		MA4	5	PC	09.09.2020	13:00:00
	X						3127506	0020	001	LMPC_FERT_12		MA4	4	PC	09.09.2020	14:00:00
	X						3127504	0020	001	LMPC_FERT_12		MA4	3	PC	09.09.2020	15:00:00


Selection of Operations

Execute the action code  (S\_E\_TBSQ).

Result:

Alert	Dispatched	F...	CTC	Order pool	Lock	Sequence	Order Number	OpAc	Cat	Material	Mat.Grpng	Work ctr	Order Quantity	UoM	Earliest start	Earl.start
	X					9	3127519	0020	001	LMPC_FERT_12		MA4	9	PC	05.09.2020	09:00:00
	X					7	3192524	0020	001	LMPC_FERT_KE		MA4	2	PC	05.09.2020	16:00:00
	X					6	3228830	0010	001	LMPC_TDUMY1		MA4	14	PC	07.09.2020	13:20:00
	X					3	3127510	0020	001	LMPC_FERT_12		MA4	2	PC	07.09.2020	16:00:00
	X					4	3127511	0020	001	LMPC_FERT_12		MA4	2	PC	07.09.2020	16:00:00
	X					5	3127508	0020	001	LMPC_FERT_12		MA4	7	PC	08.09.2020	11:00:00
	X					2	3127509	0020	001	LMPC_FERT_12		MA4	7	PC	08.09.2020	11:00:00
	X					8	3127507	0020	001	LMPC_FERT_12		MA4	4	PC	08.09.2020	14:00:00
	X					1	3127514	0020	001	LMPC_FERT_12		MA4	5	PC	09.09.2020	13:00:00
	X						3127515	0020	001	LMPC_FERT_12		MA4	5	PC	09.09.2020	13:00:00
	X						3127506	0020	001	LMPC_FERT_12		MA4	4	PC	09.09.2020	14:00:00

A sequence for the order operations was generated in the "Sequence" column. The planner can adjust this

sequence and then use the action code  (S\_EPSEQ) to dispatch the sequence.

You can use Customizing settings to adjust the behavior of the action code. If you have any questions, contact your LMPC consultant.


### ! Restriction

- In sequencing, either the material number or the material group is taken into account. The material number takes precedence. The material group is checked only if no material number is specified for an entry. A combination of entries with material number and material group is possible.
- The logic is not suitable for the sequencing of orders that have operations at different work centers. This logic cannot check the sequence of the order operations at the different work centers. You can only use this logic to dispatch orders that have only one operation or that only have operations at the same work center.
- If an order has several operations at the same work center and all of them are selected, the same sequence numbers are assigned for all operations of the order. Sequencing takes place per order per work center.

## Related Information

[S\\_EPTBSQ & S\\_E\\_TBSQ Configuration: Dispatch by Table Order](#)

### 2.6.4.22 S\_EPTBSQ Dispatch by Table

The action code  (S\_EPTBSQ) uses the same class as action code S\_E\_TBSQ. However, the Customizing settings are such that the operations are immediately dispatched in the determined sequence.

Four planning variants are possible:

- Dispatching at the earliest possible time.
- Manual planning with entry of a start time.
- Manual planning with entry of an end time.
- Dispatching at the earliest point in time with the maximum gap from the requirement date.

#### Dispatching at the earliest possible time

The operations are dispatched in the determined sequence as early as possible.

The action code can be set in such a way that the user can enter a start time for dispatching. In this case, when you execute the action code, the system displays a dialog box for entering the start time for the first operation.

Start Time Dialog Box

The function dispatches the selected operations sequentially in such a way that the end time of the predecessor is also the start time for the subsequent operation. The operations are dispatched directly one after the other without gaps.

During dispatching, only the times of the capacity requirements of the operations are taken into account. Meaning the start and end times of the operations.

### Manual dispatching with entry of an end time

The action code can be set in such a way that the user can enter an end time for dispatching. In this case, when you execute the action code, the system displays a dialog box for entering the end time for the last operation.

End Time Dialog Box

The function dispatches the selected operations sequentially in such a way that the end time of the predecessor is also the start time for the subsequent operation.

The operations are dispatched in such a way that the last operation in the sequence ends on the desired end date.

During dispatching, only the times of the capacity requirements of the operations are taken into account. Meaning the start and end times of the operations.

### → Remember

If the capacity offer is not sufficient and the operations must be dispatched in the past, dispatching terminates and does not dispatch the operations.

### Dispatching at the earliest point in time with the maximum gap from the requirement date

In Customizing, you can set a check for the requirement date.

If this logic is activated, the operations that are suitable for the selection of operations according to the logic are dispatched. Directly after dispatching, the system checks how many days before the actual requirement date an operation starts. The start date of the operation is compared with the requirement date.

If the operation exceeds a certain gap from the requirement date, the system resets dispatching for this operation. The system then searches for the next operation that can be dispatched. Further iterations are carried out for the quantity of the selected operations until either all operations have been dispatched or dispatching can no longer be performed.

The aim of the logic is to dispatch the operations on time, but not unnecessarily early. This can help to keep the on-hand stock low for a product.

#### ! Restriction

- This is a logic that searches for an approximate result using iterations. Therefore, the set quantities of operations for each material may not always be achieved in the sequence.
- The logic for checking the requirement date works only for immediate dispatching. It cannot be used for pure sequencing.
- This logic cannot be combined with manual planning.

#### → Tip

The action code can also be used in background processing. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

## Related Information

[S\\_EPTBSQ & S\\_E\\_TBSQ Configuration: Dispatch by Table Order](#)

### 2.6.4.23 S\_FPL Dispatch by LMPC Timetable

#### Use

The function for dispatching by LMPC timetable reads the timetable settings from the LMPC customizing (transaction /LMPC/FPL) and then distributes the selected operations to the capacity based on these settings.

The operations are assigned a start date and a start time and can be dispatched either immediately or later (using the standard dispatching function S\_EPSEL).

Two different logics are available for the distribution. The logic used is chosen via a parameter in Customizing (see LMPC Configuration Guide).

#### → Tip

- The LMPC timetable can be used in background processing. [Program /LMPC/HJPT Background Processing \[page 19\]](#)
- The LMPC timetable can also be used in the consulting solution CTC - Capable to Confirm. When a sales order is created, the availability of a material can be checked using CTC. If there is not sufficient availability on the requested date, CTC can use the LMPC timetable to search for a possible production window and create and dispatch a planned order there, so that a delivery date can be confirmed when the sales order is created.  
CTC is a separate consulting solution that is not delivered with LMPC. [Capable to Confirm \(CTC\)](#)

For CTC, logic 2 of the timetable is applied.

## ! Restriction

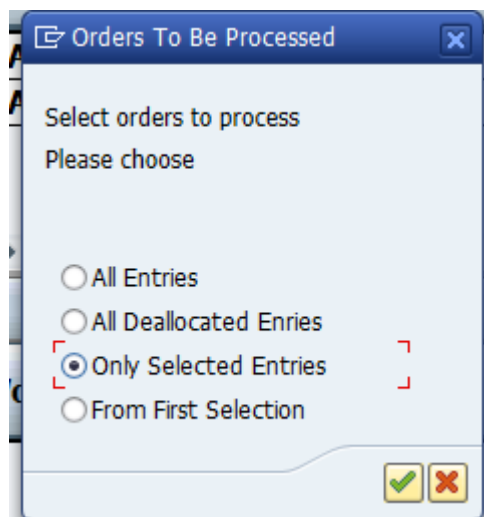
When you set the operations to the time slots, no operation sequences are taken into account. Planning with timetable should therefore not be used with orders that have several operations. An application of the timetable with such orders is only possible if only the operation of the bottleneck resource is planned for each order. If you have any questions, contact your LMPC consultant.

## Procedure

To execute the function, first select the desired order operations in the ALV Grid. However, this is not mandatory.

Then execute the action code  (S\_FPL).

In the following dialog box, you specify which order operations are to be processed:



Selection of Operations

After confirmation, the operations are loaded into the processing queue. The system checks whether all selected operations belong to one capacity. If not, the logic terminates. Only operations that have not been dispatched are processed, all dispatched operations are removed from the list of operations.

Next, the settings window appears. This varies depending on the logic used. There are two different logics:

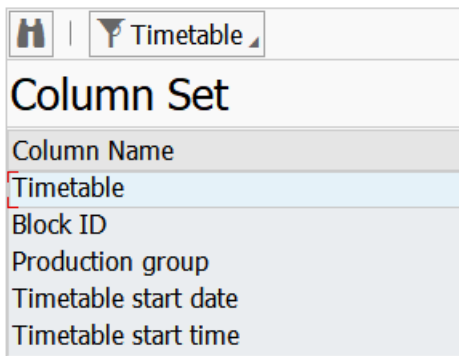
- [Timetable Logic 1 - Dispatching to the Earliest Point in Time \[page 177\]](#)
- [Timetable Logic 2 - Dispatching on Target Point in Time \[page 180\]](#)

## Fields in the ALV Grid

The timetable allocation action code S\_FPL fills 5 fields in the ALV Grid:

- Timetable Number (TT\_ID\_TT)
- Block ID (BLOCK\_ID\_TT)
- Production Group ID (PR\_GRP\_TT)
- Timetable Start Date (STDATE\_TT)
- Timetable Start Time (STTIME\_TT)

The fields are in the ALV Grid layout group "Timetable".



Timetable Layout Group

Timetable	Block ID	Prd. Group	Tmtbl Stdate	Tmtbl St t	Alert	Dis...	F...	Lock	Ord. pool	Seq. Ord. Nr.	OpAc	Material	Work ctr
TEST1	TEST1#LM01#MA1#000...	TEST3	17.03.2021	06:00:00	●○○				934	60008558	0010	LMPC HALB 12	MA1
TEST1	TEST1#LM01#MA1#000...	TEST3	17.03.2021	09:50:00	○○■				934	60008556	0010	LMPC HALB 12	MA1
TEST1	TEST1#LM01#MA1#000...	TEST3	19.03.2021	06:00:00	●○○					60008552	0010	LMPC HALB 12	MA1
TEST1	TEST1#LM01#MA1#000...	TEST3	20.03.2021	06:00:00	●○○					60008553	0010	LMPC HALB 12	MA1
TEST1	TEST1#LM01#MA1#000...	TEST3	19.03.2021	09:30:00	●○○					60008550	0010	LMPC HALB 12	MA1
TEST1	TEST1#LM01#MA1#000...	TEST3	24.03.2021	06:00:00	●○○		X			3127613	0010	LMPC HALB 12	MA1
TEST1	TEST1#LM01#MA1#000...	TEST3	26.03.2021	06:00:00	●○○					60008554	0010	LMPC HALB 12	MA1

Timetable Fields in ALV Grid

The fields are only filled if immediate dispatching was not selected when the function was executed. Only then does the function "simulate" the distribution of the orders and display the calculated start times and the assignment of the operations to the timetable blocks.

The block ID indicates the block to which the operation was assigned. The block ID consists of 5 elements separated by a '#'. The first element is the timetable. The second element is the plant. The third element is the work center. The 4th element is the block number. The fifth element is the day of the week. 1 stands for Monday, 2 for Tuesday, and so on.

The start date and start time indicate the time calculated by the logic for which the operation is to be dispatched. With immediate dispatching, this time is transferred to the planning function as the start time.

If you really want to dispatch the orders after this simulation, you have two options:

- Execute the action code S\_FPL again and select immediate dispatching this time.
- Select the operations to which a distribution by timetable was assigned and execute the action code S\_EPSEL or the action code S\_EPSELT. Both action codes recognize the timetable assignment and schedule the operations according to the calculated start times.

[S\\_EPSEL Dispatch Selected Operations \[page 159\]](#)

[S\\_EPSELT Dispatching for Date \[page 164\]](#)

### ! Restriction

The data in the timetable fields is not saved to the database. If you reload the data or terminate planning, this data is lost.

### i Note

#### Planning with Several Individual Capacities

It is possible to use the timetable functionality with work centers that have several individual capacities.



However, this is not possible for every use case.

The design of the formulas at the work center is particularly important here.

While the formulas for calculating capacity requirements may not be dependent on the number of individual capacities, the formulas for scheduling must be explicitly dependent on the number of individual capacities in order to calculate the correct duration of the operations.

The specific individual case must be checked and, if necessary, the settings in the system must be changed in order to use the LMPC timetable with several individual capacities.

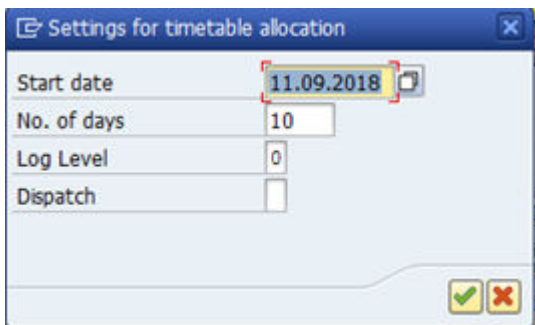
Your LMPC consultant can explain the details.

## Related Information

[Configuration of the LMPC Timetable](#)

### 2.6.4.23.1 Timetable Logic 1 - Dispatching to the Earliest Point in Time

Logic 1 LMPC timetable



Settings

Input fields in the window for the settings:

- Start date: Specifies the date from which the logic should start.
- No. of days: Number of days from the start date for which a distribution is to be made. This value can be preset via a parameter (see LMPC Configuration Guide).
- Log Level: Defines which messages are to be displayed after the generation of the allocation. 0 = all messages (green, yellow, and red), 1 = error and warning messages (yellow and red), 2 = only error messages (red). This value can be preset via a parameter (see LMPC Configuration Guide).
- Dispatch: Empty = The timetable allocation is generated and displayed in the corresponding ALV fields. 'X' = The timetable allocations are created and the selected operations are dispatched immediately according to the specifications from the timetable. This value can be preset using a parameter (see LMPC Configuration Guide).

After this window is confirmed, the logic for creating the distribution by timetable starts.

If the corresponding setting is made in Customizing, the system checks whether firmed order operations exist in the processing queue. These may then be removed from the queue.

Logic 1 loops over the days. The number of days is calendar days, not days of the factory calendar. The logic therefore also runs for days without production.

First, the logic calculates the capacity-related situation in the calculated time period. It reads the available capacity at the relevant work center. This available capacity is reduced by the capacity consumption of the orders that have already been dispatched. The logic notes the times at which there is available capacity.

The distribution logic then starts with the first day.

It reads the timetable settings from Customizing for the day in question.

The blocks of a day are sorted in ascending order by time.

A loop runs over the blocks. The production groups in the respective block are read.

There is a loop over the production groups.

There is then a loop over the pool of operations.

The operations are processed in the sequence in which they are passed to the function. No additional sorting exists. In dialog processing, this is the sequence in which the operations are displayed in the ALV Grid. In background processing, this is the sequence in which the operations are provided by the database.

The loops are nested.

The system checks whether the respective order fits the respective production group. If so, this order is assigned to the respective block. The available capacity is taken into account. You can only assign as many operations in a block as free capacity is available for dispatching.

An operation is only assigned if it fits completely into a free capacity gap. The logic does not move operations that have already been dispatched.

If operations have already been dispatched to the capacities, gaps may occur in the production plan because the operations of the selection do not fit exactly into these gaps. It is therefore recommended that you only use the timetable to plan days on which no orders have yet been dispatched.

The loop over the operations continues until a termination condition is reached.

The termination conditions are defined in Customizing using the production groups: Minimum and maximum order quantity, or minimum and maximum number of orders, or minimum and maximum capacity requirements in minutes.

You can set whether the termination conditions are "critical". If the conditions for the quantities are "not critical", only warning messages are created in the application log when the order quantity, number of orders, or capacity requirement falls short of or exceeds the specified limits.

If, on the other hand, the conditions are "critical", the limits are adhered to strictly. This means that if the lower limit for a production group in a block is not reached, no operations are distributed during this pass. For the upper limit, the "critical" setting means that only as many operations are assigned from the production group per pass until the maximum limit is reached.

If no termination condition applies, the loop continues until all operations have been checked once.

Then the same logic runs for the next production group in the block. When all production groups in a block have been processed, the entire process is repeated until the maximum number of repetitions for a block has been reached, or until no further operation can be assigned.

The next block on this day is then processed.

If all blocks of a day have been processed and there are still operations that were not yet able to be distributed, the system continues to the next day.

This continues until either no more operations can be distributed or until the maximum number of days has been reached. At this point the logic ends.

During processing, messages are created for the application log.

These are output at the end of processing. The selected log level determines whether messages are displayed.

The screenshot shows a window titled 'Plantafel: 31.07.2020 14:44:17 - LMPC\_WSV Lückenlose Kettung ohne Prüf'. The main content is a table titled 'Fahrplanprotokoll' with two columns: 'Nam...' and 'Meldungstext'. The table contains the following entries:

Nam...	Meldungstext
■	Generiere Daten zur Kapazitätsbelegung.
■	Starte die Verteilung der Vorgänge nach Fahrplan.
■	Zeitraum: 31.07.2020 - 19.08.2020
■	31.07.2020 : Block ID TEST_MA4#LM01#MA4#0001#5 . Wiederholung Nr: 1
▲	31.07.2020 : Vorgang 000003228837/0020 kann nicht auf dieses Datum vorgezogen werden.
▲	31.07.2020 : Vorgang 000003228839/0020 kann nicht auf dieses Datum vorgezogen werden.
▲	31.07.2020 : Vorgang 000003228959/0020 kann nicht auf dieses Datum vorgezogen werden.
■	31.07.2020 : Vorgang 000003228961/0020 Einteilung erzeugt. Start: 06:00:00Uhr
■	31.07.2020 : Vorgang 000003222000/0020 Einteilung erzeugt. Start: 09:00:00Uhr
■	31.07.2020 : Vorgang 000003222001/0020 Einteilung erzeugt. Start: 11:00:00Uhr
■	31.07.2020 : Vorgang 000003127512/0020 Einteilung erzeugt. Start: 16:00:00Uhr
■	31.07.2020 : Block ID TEST_MA4#LM01#MA4#0001#5 . Wiederholung Nr: 2
▲	31.07.2020 : Vorgang 000003228837/0020 kann nicht auf dieses Datum vorgezogen werden.
▲	31.07.2020 : Vorgang 000003228839/0020 kann nicht auf dieses Datum vorgezogen werden.
▲	31.07.2020 : Vorgang 000003228959/0020 kann nicht auf dieses Datum vorgezogen werden.
■	31.07.2020 : Keinen weiteren passenden Vorgang gefunden.

At the bottom right of the table, there is a toolbar with icons for: checkmark, list, filter, print, and help.

Example Application Log

After confirming the timetable log, depending on the selected setting:

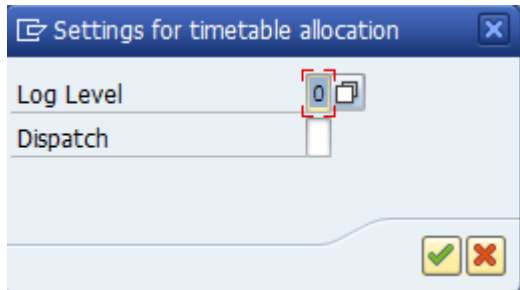
- The generated distributions are written to the fields of the ALV Grid, or
- The operations are dispatched immediately

### ! Restriction

Logic 1 can only process order operations with a duration shorter than one day, because the capacity check is only performed for the blocks of one day.

## 2.6.4.23.2 Timetable Logic 2 - Dispatching on Target Point in Time

Description of the Second Logic of the LMPC Timetable



Settings

Input fields in the window for the settings:

- Log Level: Defines which messages are to be displayed after the generation of the dispatching proposals. 0 = all messages (green, yellow, and red), 1 = error and warning messages (yellow and red), 2 = only error messages (red). (Can be preset via a parameter – see LMPC Configuration Guide).
- Dispatch: Empty = The timetable is generated and displayed in the corresponding ALV Grid fields. 'X' = The dispatching proposals are generated and the selected operations are dispatched immediately according to the allocation target times. (Can be preset via a parameter – see LMPC Configuration Guide).

After this window is confirmed, the logic for creating the dispatching proposals starts.

If the corresponding setting is made in Customizing (see Customizing – “hard firming”), the system checks whether firmed order operations exist in the processing queue. These may then be removed from the queue.

In logic 2, unlike in logic 1, it is possible to process order operations with a duration that is longer than one day. For this purpose, the concept of planning time windows was developed. A planning time window can last several days and summarizes the available capacity in the blocks in this period. The bracket for a planning time window is the production group. Logic 2 first generates a table of planning windows (for more details, see the LMPC Configuration Guide).

The allocation logic for the operations comprises two steps.

In the first step, the operations are assigned to the planning time windows. The system compares the available capacity with the demand. In the second step, the operations assigned to the planning time windows are sorted, and then the dispatching proposals are generated for the operations.

### 1st Step: Distribute Operations to Planning Time Windows

There is a loop over the order operations. The logic attempts to set the order operations such that they end at the desired target time.

The target time is a date and time that come from the LMPC ALV Grid data. For example, the earliest end date, the earliest end time, or basic dates. You can use parameter settings on the action code to define which fields are to be read for the target time. (see the LMPC Configuration Guide).

You can also use the implementation of a BAdI method in the customer system to implement your own logic to determine the target time.

If no parameters have been set and no BAdI method has been implemented, the planning times earliest/latest end date and earliest/latest end time are used by default (depending on the planning settings).

The logic tries to place the relevant operation into the blocks of a planning time window that belongs to the target time.

If this is not possible, the search will continue going back in time until the earliest end of the search period is reached. This can either be the current date, or a day calculated from the parameter settings for the maximum period in days, which is to be considered backwards.

When this period has been reached, the logic switches to searching into the future. It will continue to search into the future until the end of the search period is reached. The end is either the end of the planning period or a day calculated using parameter settings for the maximum period in days, which is to be considered going forward.

As soon as a suitable time window has been found, the order operation is assigned to this time window.

If no time window is found, the logic generates a message for the application log and proceeds to the next operation.

Special case "soft firming": If the soft firming has been set in Customizing, only the time windows that exist on the date of the target time will be considered for the order operation with status "firmed". There is no search in time either backwards or forwards. The operation can only be processed on the date of the target time.

When searching for a suitable planning time window, the logic considers the timetable settings.

Here, in contrast to logic 1, the logic only checks whether the order operation matches the production group and whether there is enough capacity in the respective planning time window. Order quantities, order count, and so on have no influence.

Operations already dispatched before execution of the action code S\_FPL reduce the available capacity in the planning time window. This ensures that only as much capacity load is placed on a window as is available.

In the overload Customizing setting, an overload can be defined at the end of the planning time window for each production group.

If an overload has been maintained, this overload is calculated as an additional capacity offer if the capacity supply of a planning time window is not sufficient for an order operation.

If the overload is used and the overload extends into a subsequent block, the available capacity of the following block is reduced accordingly.

After all order operations have been processed in step 1, the logic executes the second step.

## **2nd Step: Sorting per Planning Time Window and Generating Dispatching Proposals**

In this step there is a loop over the planning time windows.

The loop takes place forward from the present into the future. Per planning time window, all the order operations that were assigned to this window in step 1 are collected.

The orders already dispatched, which are located in this window, are added to the order queue. However, dispatched orders are only considered, if they match the production group of the planning time window.

Then sorting is applied to these collected order operations per planning time window.

The sorting parameters are usually specified in Customizing. You also have the option of using a BAdI method to sort the orders in the Z namespace in the customer system. If no parameters have been maintained or no BAdI method has been implemented, sorting remains unchanged. Then the operations are processed in the sequence in which they exist in the queue table.

After the sorting, the start times of the order operations are calculated per planning time window.

The logic starts with the start date and the start time of the first planning time window. The start time is the first available capacity offer in the window. This is the starting point for the first order operation.

Then the end time of this order operation is calculated, considering the available capacity at the work center and the block limits from the timetable settings.

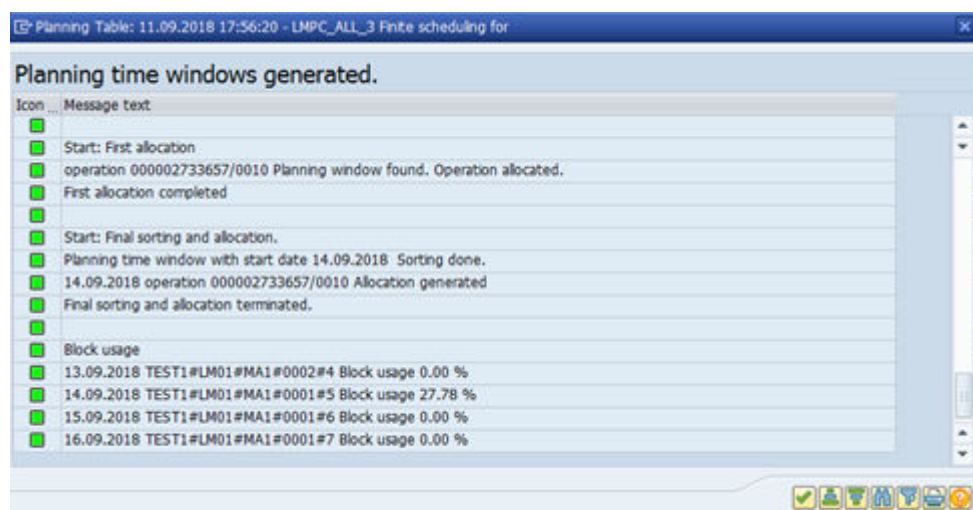
This end time is the start time for the next operation.

The logic continues until all operations in the planning time window have been processed.

Then the logic proceeds to the next planning time window and processes the order operations of this window. First sorting, then calculating the start times.

The end time of the last operation of the previous planning time window has been saved. The logic now checks whether this time is later than the start time of the current planning time window. If so, then the end time is used as the new start time for the allocation. If not, then the new start time is the start time of the planning time window. That way, the order operations are placed correctly one behind the other and there is no overlap.

At the end of the second step, the capacity utilization is calculated for the blocks of the days and one message per block is generated in the application log. The application log is displayed depending on the selected log level.



Example Application Log

After confirming the application log, the generated dispatching proposals are written to the associated fields of the ALV Grid and, if this has been selected beforehand, immediate dispatching is performed.

Since orders already dispatched can be rescheduled, dispatching proposals can also be generated for dispatched order operations that have not been selected. Then the corresponding fields for these order operations are also filled in the ALV Grid.

This is necessary so that the user can also execute dispatching manually, using the standard S\_EPSEL action code.

#### → Tip

Special Case "No Rescheduling": You can use parameter settings to define that order operations already dispatched are not to be rescheduled.

If this setting is selected, operations already dispatched will not be considered. This can lead to gaps within the planning time windows, since it is likely that the new orders to be allocated cannot be placed exactly around the orders already dispatched. In this case, the block utilization is not evaluated.

For this special case it is recommended that you use the setting "Insert Operation" in the strategy profile. However, this will result in operations that have already been dispatched being moved slightly in order to obtain a production plan without gaps. This is a conflict of objectives. Either you get a gap-free production plan, or you prevent operations that have already been dispatched from being rescheduled and thereby create gaps. Both are not possible at the same time because new operations to be dispatched fit exactly into the gaps in rare cases only.

[Settings in the Strategy Profile for Use with the Timetable](#)

## 2.6.4.24 S\_MANP Manual Dispatching

### Use

In manual dispatching, you can enter the desired start or end times for an operation in a popup window. The selected operation is then dispatched accordingly.

The entry depends on the scheduling direction configured in the strategy profile used:

- If forward scheduling is configured, enter the desired start date and time.
- If backward scheduling is configured, enter the requested end date and time.

Whether a dispatched operation ends up starting or ending at the desired time also depends on the settings of the strategy profile. If it is configured that an operation is to be inserted, the operation to be dispatched moves between the operations already dispatched. If this setting is not set, the operation is dispatched to the next time with free capacity.

For the settings for the strategy profile, see the LMPC Configuration Guide. [Configuration of Strategy Profiles](#)

### → Tip

It is also possible to dispatch several order operations simultaneously with the action code.

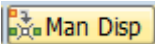
### Procedure

The following description shows dispatching with forward scheduling.

- Select an order operation.

Stat	F	Work ctr	Order	OpAc	Cat	C	Phase	Material	SOp	Earliest start	Earl.start	Earliest finish	Erl.finish
X	MA3	2663502	0010	2	0	LMPC_FERT_34	04.08.2017	12:50:00	05.08.2017	06:20:00			
X	MA3	2663504	0010	2	0	LMPC_FERT_34	05.08.2017	07:30:00	05.08.2017	11:00:00			

Select Order Operation

- Execute the action code  (S\_MANP).
- A popup window for setting the desired start time appears. Enter the desired start time.

Enter Start Time

Start Date: 16.08.2017  
 Start Time: 12:50:00



Start Time Popup Window

- Confirming the window triggers dispatching.
- Result:

**Planning Table: 03.08.2017 17:43:30 LMPC\_ALL\_3**

Work Centers

Work ctr	Description	16.08.2017																												
Work ctr	Description	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09
MA3	LMPC wst 3	1																												

Orders (dispatched)

Work ctr	Description	16.08.2017																												
Work ctr	Description	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09
MA3	LMPC wst 3	2663502																												

Description

ATP, MB11, Mt. doc., CO24, MD04, Select all, rem sel, Chg st prf, Undispatch, Dispatch, Disp n err, Nr table, Disp seq, Setup mtrx, TTA, Dis, chg ord, Change op, Chg text, Prd vers, chg wst, Release OO, PP Release, Convert, Level, Del PO, Mark C det, Mark gr., Del m. gr., CHART Refr, Sort, Refresh, Reload

Stat	I	F	Work ctr	Order	OpAc	Cat	C.	Phase	Material	SOp	Earliest start	Earl.start	Earliest finish	Erl.finish	Nu...
XX	XX	MA3	2663502	0010	2	0			LMPC_FERT_34		16.08.2017	12:50:00	17.08.2017	06:20:00	
XX	XX	MA3	2663504	0010	2	0			LMPC_FERT_34		05.08.2017	07:30:00	05.08.2017	11:00:00	

Dispatching Result

The operation was dispatched at the desired start time.

→ Remember

The times entered are always valid for the latest dates of the operations. Planning in the HJPT planning table always uses the latest date. The operations are dispatched in such a way that the operation dates of the latest dates are set to the entered dates. For more information, see the section on the layout groups.

[Layout Groups \[page 41\]](#)



## Related Information

[S\\_MANP Configuration: Manual Dispatching](#)

### 2.6.4.25 S\_MANPL Manual Dispatching List with Gap Check

#### Use

You can use the action code S\_MANPL to dispatch orders at any time in the future. The planner assigns the start time of the order manually via a popup window. The function checks whether sufficient work center capacity is available at the desired time. If not, dispatching is aborted.

The function also checks for the pool ID. If a selected order has a pool ID, all orders with the same pool ID are dispatched. You can use the function to reschedule dispatched orders.

#### ! Restriction

- You can only dispatch orders for one pool ID at the same time.
- You can only dispatch operations for one work center at the same time.
- The function was developed for inserting one or a few operations into an existing production plan. The function is not suitable for mass dispatching a large number of operations. This can lead to long runtimes.

#### Procedure

There are two options for planning with this action code.

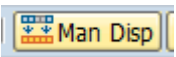
- Manual planning
- Drag and drop with manual planning

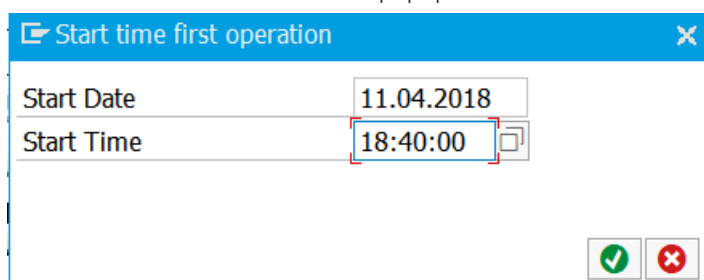
#### Manual planning

- Select one or more operations

0000/918	80	ST	0020	1	10	0	10004787	MA2	LMPC_HALB_34	00:00:00	09.04.2018	14:00:00
60007818	10	ST	0020	1	10	0	10004787	MA2	LMPC_HALB_12	00:00:00	10.04.2018	07:40:00
2733586	12	ST	0020	2	10	0	10004787	MA2	LMPC_HALB_34	00:00:00	10.04.2018	12:00:00

#### Selection

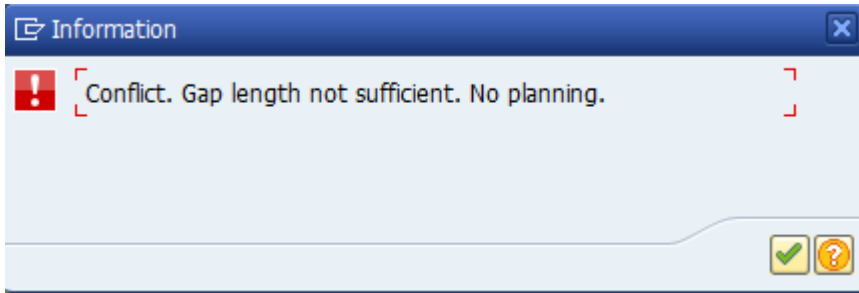
- Execute the action code  (S\_MANPL).
- Enter the desired start time in the popup window.



The popup window titled "Start time first operation" has a blue header with a close button. It contains two input fields: "Start Date" with the value "11.04.2018" and "Start Time" with the value "18:40:00". At the bottom right, there are two buttons: a green checkmark and a red X.

#### Time Input Popup Window

- If the gap is not large enough, the system issues a warning message and dispatching is terminated.



**Error Message**

- If the gap is large enough, the operations are dispatched into the gap.

Ep	Alert	Dispatc	Fimd	Order	Nu.	Ord. pool	Operation	Quantity	UoM	OpAc	Cat	C	Phase	SOp	ID	Work ctr	Material	Start time	dposition	gap	Free cap. gap	Earliest start
	X	X	X	2733647			50	PC	0020	2	0	0		10004787	MA2	L MPC_HALB_12				00:00:00		06.04.2018
	X	X	X	2733634			2	PC	0020	2	0	0		10004787	MA2	L MPC_FERT_12				00:00:00		11.04.2018
	X	X	X	2719698			2	PC	0020	2	0	0		10004787	MA2	L MPC_HALB_34		11.04.2018	17:59:32	00:00:28		12.04.2018
	X	X	X	2719695			8	PC	0020	2	0	0		10004787	MA2	L MPC_HALB_12		12.04.2018	07:00:00	00:14:32		12.04.2018
	X	X	X	2719693			8	PC	0020	2	0	0		10004787	MA2	L MPC_HALB_12				00:00:00		12.04.2018

**Result of Planning**

**Drag and drop with manual planning**

- Initial Situation

	X		X	2733586			12	PC	0020	2	0	0		10004787	MA2	L MPC_HALB_34				00:00:00		10.04.2018
	X		X	2719698			2	PC	0020	2	0	0		10004787	MA2	L MPC_HALB_34				00:00:00		10.04.2018
	X		X	2733585			2	PC	0020	2	0	0		10004787	MA2	L MPC_HALB_34				00:00:00		11.04.2018

**Initial Situation**

- Select one or more operations

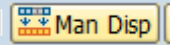
	X		X	2733586			12	PC	0020	2	0	0		10004787	MA2	L MPC_HALB_34				00:00:00		10.04.2018
	X		X	2719698			2	PC	0020	2	0	0		10004787	MA2	L MPC_HALB_34				00:00:00		10.04.2018
	X		X	2733585			2	PC	0020	2	0	0		10004787	MA2	L MPC_HALB_34				00:00:00		11.04.2018

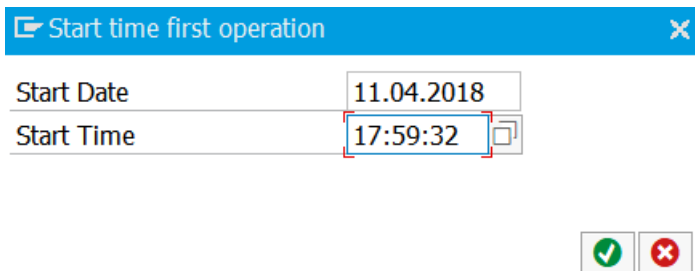
**Selection**

- Drag the orders to a planning gap. The following order always displays the gap that exists before it.

	X		X	2733586			12	PC	0020	2	0	0		10004787	MA2	L MPC_HALB_34				00:00:00		10.04.2018
	X		X	2719698			2	PC	0020	2	0	0		10004787	MA2	L MPC_HALB_34				00:00:00		10.04.2018
	X		X	2733585			2	PC	0020	2	0	0		10004787	MA2	L MPC_HALB_34				00:00:00		11.04.2018

**Drag and Drop**

- Select the operations and execute the action code  (S\_MANPL).
- Since in this case the parameter PRETPROP is set, the system reads the end of the operation from the predecessor operation and transfers it to the popup window. The system fills the popup window correctly and you only need to confirm it.



**Popup**

- If the gap was large enough, the operations are now scheduled without gaps to the predecessor. If not, planning is terminated.
- Result:

ES	Alert	Dispatch	Prod Order	No.	Ord. pool	Operation	Quantity	Unit	OpAc	Cat	C	Phase	SOp	ID	Work ctr	Material	Start time	duration	gap	Free cap. gap	Earliest start	Earliest start	Earliest finish	Earliest finish
	X	X	2733647			39	PC	0020	2	0				10004787	MA2	LMPC_HALB_12	00:00:00			08.04.2018	15:29:33	11.04.2018	17:59:32	
	X	X	2733634			2	PC	0020	2	0				10004787	MA2	LMPC_FERT_12	00:00:00			11.04.2018	17:59:32	11.04.2018	17:59:32	
	X	X	2719698			2	PC	0020	2	0				10004787	MA2	LMPC_HALB_34	00:00:00			11.04.2018	17:59:32	12.04.2018	06:59:32	
	X	X	2719695			8	PC	0020	2	0				10004787	MA2	LMPC_HALB_12	12.04.2018 06:59:32	00:15:00		12.04.2018	07:14:32	12.04.2018	15:14:32	
	X	X	2719693			8	PC	0020	2	0				10004787	MA2	LMPC_HALB_12	00:00:00			12.04.2018	15:14:32	13.04.2018	11:14:32	
	X	X	2733654			1	PC	0020	2	0				10004787	MA2	LMPC_HALB_12	00:00:00			13.04.2018	11:14:32	13.04.2018	12:14:32	
	X	X	2719691			3	PC	0020	2	0				10004787	MA2	LMPC_HALB_12	00:00:00			13.04.2018	12:14:32	13.04.2018	15:14:32	
	X	X	2719694			7	PC	0020	2	0				10004787	MA2	LMPC_HALB_12	00:00:00			13.04.2018	15:14:32	14.04.2018	10:14:32	

### Result

The order was planned to the predecessor without gaps. Since the order does not completely fill the gap, there is still free capacity after the order.

#### → Remember

The function can be executed with one or more orders.

You use the [Data Provider /LMPC/CL\\_DP\\_GAP Calculate Dispatching Gaps \[page 366\]](#) to calculate planning gaps.

## 2.6.4.26 S\_MANPLX Manual Dispatching with Insert

### Use

You can use the action code S\_MANPLX to dispatch operations at any time in the future. The user assigns the start time for all selected operations manually via a popup window.

In contrast to the S\_MANPL function, this function does not check whether sufficient work center capacity is available at the desired time. The operations are inserted at the desired position. If operations have already been dispatched at this position, they are moved to the future.

### Procedure

The planning can be done in two ways, as for the action code S\_MANPL ([S\\_MANPL Manual Dispatching List with Gap Check \[page 185\]](#)).

However, the system does not perform a gap check and the operations are inserted at the desired time. Subsequent operations are moved if necessary.

#### ! Restriction

- You can only dispatch orders for one pool ID at the same time.
- You can only dispatch operations for one work center at the same time.
- The function was developed for inserting one or a few operations into an existing production plan. The function is not suitable for mass dispatching a large number of operations. This can lead to long runtimes.

## 2.6.4.27 S\_MVEORD Move Order Operations in the Pool

### Use

You can use this action code to move operations in the order pool of the LMPC HJPT planning table. The operations get new start times.

## ! Restriction

You can only move operations in the pool, meaning operations that have not been dispatched.

### Procedure

You have two options for moving orders.

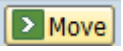
- Move using the action code
- Move using drag and drop in the graphical part of the LMPC HJPT planning table

#### Move using the action code

- Select an operation

Alert	Dispatc...	Fmd	Order	OpAc	Work ctr	Material	Earliest start	Earl.start	Earliest finish	Erl.finish
		X	2758766	0010	MA1	LMPC_HALB_12	28.12.2018	06:00:00	28.12.2018	13:55:00
			60007918	0010	MA1	LMPC_HALB_34	28.12.2018	15:35:00	01.01.2019	19:55:00

#### Selection

- The operation is currently scheduled for December 28, 2018 at 06:00 a.m. It is to be moved to 04:00 p.m.
- Execute the action code  Move (S\_MVEORD).
- In the popup window, enter the new required start time.

Start time first operation

Start Date

Start Time

#### Enter New Start Time

- Result:

Alert	Dispatc...	Fmd	Order	OpAc	Work ctr	Material	Earliest start	Earl.start	Earliest finish	Erl.finish
			60007918	0010	MA1	LMPC_HALB_34	28.12.2018	15:35:00	01.01.2019	19:55:00
		X	2758766	0010	MA1	LMPC_HALB_12	28.12.2018	16:00:00	28.12.2018	22:20:00
		Y	2759044	0010	MA1	LMPC_HALB_12	31.12.2018	09:15:00	10.01.2019	17:40:00

#### Result

The order operation has been scheduled for the desired start time. Dispatching has not been performed.

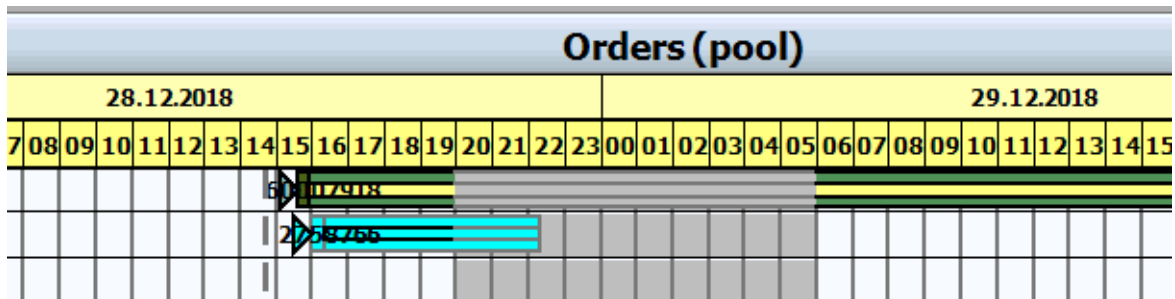
## ⚠ Caution

You can move several operations at the same time, all of which then receive the same start times. The available capacity in the resource is not taken into account.

#### Move using drag and drop in the graphical part of the LMPC HJPT planning table

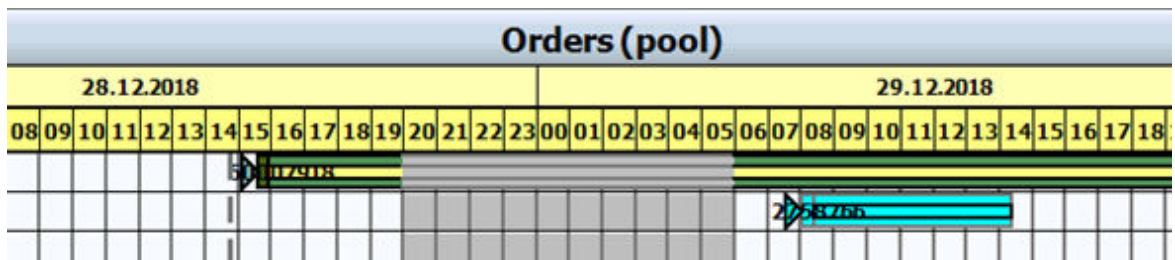
You can also use drag and drop to move operations manually in the order pool of the graphical planning table. This is the same function.

- Select a bar of the operation in chart 3 (Orders (pool)) of the graphical planning table.



Select Bar in Graphical Planning Table

- Drag the bars to the desired new start time.



Moved Operation

- Result: The order operation has been rescheduled for the desired time.

Operations are always moved in simulation mode. The system does not write the changed data to the database until you choose Save.

### i Note

The operations are moved by scheduling the operations infinitely and then revoking the scheduling status. With infinite planning, the available capacity on the resource is taken into account, but not the capacity commitment of orders that have already been dispatched. Dispatching uses a special strategy profile called "LMP\_MVEORD", which is contained in the LMPC standard delivery. This strategy profile is set up in such a way that dispatching is also possible in nonworking times. This means you can move the operations in the graphic as you wish. You can change the settings of this strategy profile at any time so that it is only possible to move operations in working times. As with all LMPC HJPT planning functions, moving operations into the past is not possible.

### ⚠ Caution

Do not move an operation of an order if another operation of the same order has already been dispatched. When you move the operation that has not been dispatched, the system reschedules the entire order, which resets the dispatching indicator of the operation that has already been dispatched. The operation that has already been dispatched is deallocated.

## Related Information

[S\\_MVEORD Configuration: Moving Operations in the Pool](#)

## 2.6.4.28 S\_RESCD Reschedule All

### Use

You can use the function “Reschedule All” to deallocate orders that have already been dispatched and dispatch them again in the same order at the earliest possible time. For example, you can thereby update a production plan that has been run in the past.

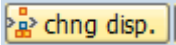
This action code can also be used to dispatch the operations in a new sequence if you have previously used drag and drop to change the sequence of the dispatched operations.

### Procedure

- Select an order operation in the ALV Grid of the LMPC HJPT planning table, as of which rescheduling is to be performed.

EP	Status	D	F	Work center	Order	OpAc	Cat	Cat Phase	Material	Subop	Earliest start	Earl.start	Earl. finish /date	Erl.finish time
	X			MA3	60007653	0010	1	10 0	LMPC_FERT_34		25.08.2017	13:42:01	25.08.2017	17:12:01
	X			MA3	60007653	0010	1	10 0	LMPC_FERT_34		25.08.2017	13:42:01	25.08.2017	17:12:01
	X	X		MA3	2663506	0010	2	0	LMPC_FERT_34		25.08.2017	17:12:01	26.08.2017	08:42:01
	X	X		MA3	2663506	0010	2	0	LMPC_FERT_34		25.08.2017	17:12:01	26.08.2017	08:42:01
	X	X		MA3	2663503	0010	2	0	LMPC_FERT_34		26.08.2017	08:42:01	26.08.2017	11:12:01
	X	X		MA3	2663503	0010	2	0	LMPC_FERT_34		26.08.2017	08:42:01	26.08.2017	11:12:01
	X	X		MA3	2663505	0010	2	0	LMPC_FERT_34		26.08.2017	11:12:01	26.08.2017	13:42:01
	X	X		MA3	2663505	0010	2	0	LMPC_FERT_34		26.08.2017	11:12:01	26.08.2017	13:42:01

Select Order Operation

- Execute the action code  (S\_RESCD).
- Result:

EP	Status	D	F	Work center	Order	OpAc	Cat	Cat Phase	Material	Subop	Earliest start	Earl.start	Earl. finish /date	Erl.finish time
	X			MA3	60007653	0010	1	10 0	LMPC_FERT_34		29.08.2017	17:11:00	30.08.2017	08:41:00
	X			MA3	60007653	0010	1	10 0	LMPC_FERT_34		29.08.2017	17:11:00	30.08.2017	08:41:00
	X	X		MA3	2663506	0010	2	0	LMPC_FERT_34		30.08.2017	08:41:00	30.08.2017	12:11:00
	X	X		MA3	2663506	0010	2	0	LMPC_FERT_34		30.08.2017	08:41:00	30.08.2017	12:11:00
	X	X		MA3	2663503	0010	2	0	LMPC_FERT_34		30.08.2017	12:11:00	30.08.2017	14:41:00
	X	X		MA3	2663503	0010	2	0	LMPC_FERT_34		30.08.2017	12:11:00	30.08.2017	14:41:00
	X	X		MA3	2663505	0010	2	0	LMPC_FERT_34		30.08.2017	14:41:00	30.08.2017	17:11:00

Result

All dispatched orders have been rescheduled. You can recognize this from the start date of the orders.

In the outbound delivery, the action code is configured such that all operations as of the first selected operation are rescheduled. In Customizing, you can make settings so that all dispatched orders are rescheduled.

Special feature of pool ID: If an operation with a pool ID is found during processing, all operations with the same pool ID are dispatched after this operation. The function combines operations with a pool ID.

#### → Tip

The action code can also be used in background processing. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

#### → Remember

The planning function processes the operations in the sequence in which they are displayed in the ALV Grid. For the planning function to work correctly, the operations in the ALV Grid must be sorted according to the start times of the capacity requirements. Since sorting by the ALV Grid does not exist in background processing, the operations in background processing are automatically sorted according to the start times of the capacity requirements before processing.

## 2.6.4.29 Planning Taking Account of Setup Time

Action codes for dispatching taking into account the setup time of operations.

In the HJPT planning table, there are three dispatching functions for which the setup time of the operations is taken into account and, if necessary, changed:

- [S\\_EPRST Dispatching Using Setup Matrix \[page 191\]](#)
- [S\\_EPRSIN Insert Setup Optimum Operation \[page 193\]](#)
- [S\\_OPL Optimized Dispatching \[page 195\]](#)

### 2.6.4.29.1 S\_EPRST Dispatching Using Setup Matrix

#### Use

You can use this function to dispatch operations using a heuristic for minimizing the setup times.

The action code S\_EPRST does two things:

- It dispatches the selected operations in a sequence that minimizes the total setup time.
- It adjusts the setup time of the operations according to the settings of the setup matrix.

Order operations from several work centers can be processed simultaneously. Dispatching always takes place per work center. Dispatched operations can be rescheduled. They can, therefore, be included in the selection and are then rescheduled together with all other selected operations.

The optimum dispatching sequence is determined from the settings in the setup matrix (transaction OPDA) using a heuristic. The heuristic for PI follows the heuristic for PP.

The setup time of the operations to be dispatched is adjusted automatically according to the transitions in the setup matrix.

If no valid setup sequence can be determined for the order operations, since setup transitions were prohibited in the setup matrix, no dispatching takes place.

The operations to be dispatched are always placed after the last dispatched operation. Already dispatched operations that have not been selected are not changed.

If there is no dispatched operation for the respective resource, or if the last dispatched operation is in the past, the order operations are dispatched at the current time. Then the dispatching is seen as initial dispatching. The setup time of the first operation is adjusted if an initial state has been maintained via the strategy profile (see Initial Setup State checkbox).

#### → Remember

- Action codes S\_AVRU and S\_AVRR can be used to adjust the setup time of operations already dispatched.
- If no entry was maintained in the matrix for a transition, then no change is made to the setup time for this transition.
- To ensure that setup-optimized dispatching works, the strategy profiles used must be configured correctly. The LMPC delivery includes preconfigured strategy profiles that can be used.

## ! Restriction

No setup time adjustment is possible for PI planned orders (planned orders for the process industry). However, PI planned orders can be scheduled in an optimum setup time sequence. This means that PI planned orders, if they are processed with this function, are dispatched in an optimum setup time sequence, but the setup times are not adjusted. This is a technical restriction and cannot be changed. These restrictions do not apply to process orders.

### Prerequisites

PP Production planning:

- You have defined setup type keys in transaction OP38 (Customizing).
- You have defined setup group categories in transaction OP43 (Customizing).
- You have defined a setup matrix in transaction OPDA.
- You have defined the setup group in the routing settings.
- You have defined setup times in the routing of your materials.

PP-PI Process industry:

- You have defined a default value for the setup time.
- You have adjusted the master recipes.
- You have adjusted the scheduling formulas for the resources.
- You have created material groups as setup groups in the material master.
- You have defined a setup matrix in transaction OPDA.

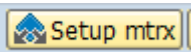
For information about the prerequisites and corresponding settings, see the LMPC Configuration Guide.

### Procedure

- Select a number of orders.

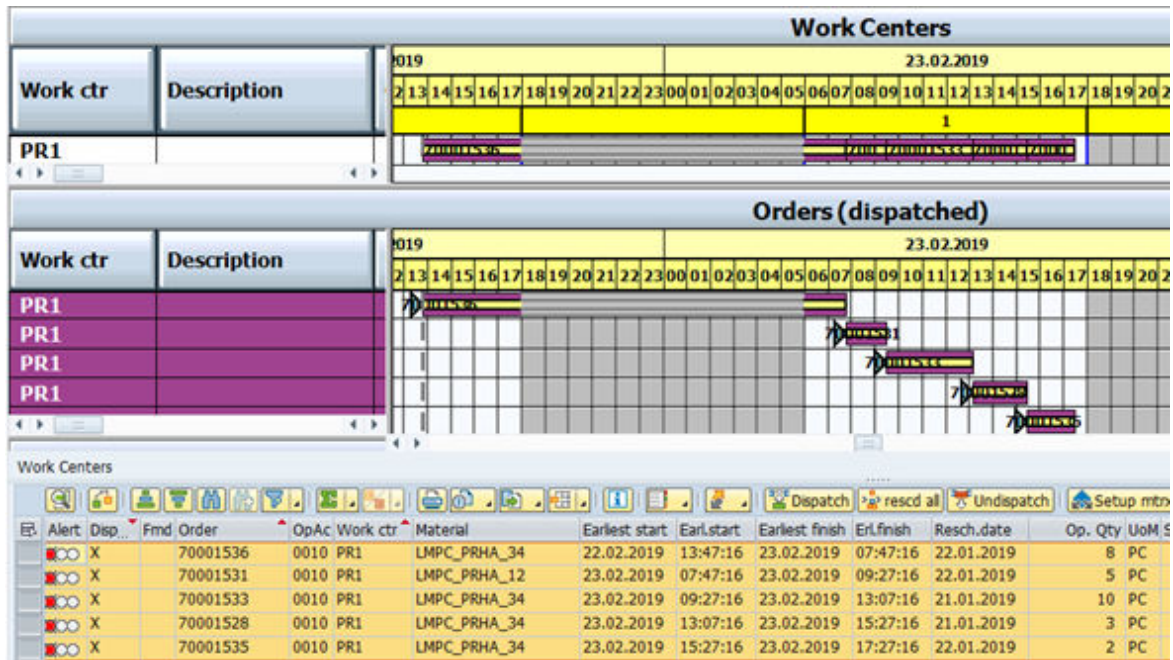
Er	Alert	Disp.	Fmd	Order	OpAc	Work ctr	Material	Earliest start	Earl.start	Earliest finish	Earl.finish	Resch.date	Op. Qty	UoM
				70001531	0010	PR1	LMPC_PRHA_12	23.02.2019	06:00:00	23.02.2019	07:00:00	22.01.2019	5	PC
				70001533	0010	PR1	LMPC_PRHA_34	23.02.2019	14:20:00	23.02.2019	18:00:00	21.01.2019	10	PC
				70001536	0010	PR1	LMPC_PRHA_34	23.02.2019	14:40:00	23.02.2019	17:40:00	22.01.2019	8	PC
				70001528	0010	PR1	LMPC_PRHA_34	23.02.2019	16:40:00	23.02.2019	18:00:00	21.01.2019	3	PC
				70001535	0010	PR1	LMPC_PRHA_34	23.02.2019	17:00:00	23.02.2019	18:00:00	22.01.2019	2	PC

#### Selection

- Execute the action code  (S\_EPRST).
- Based on the settings in the setup matrix, the heuristic for the dispatching function of the graphical planning table generates an optimum dispatching sequence for the orders and dispatches the orders as soon as possible. The heuristic proceeds sequentially. The logic looks for an optimum dispatching time for dispatching operations sequentially at the target work center. It also searches for a minimum total setup time across all operations. If there are multiple equally good transitions for an operation to be dispatched, the operation is dispatched on the latest date.



- Result:



Result

The operations have been dispatched in an optimum setup time sequence. The entire setup time over all operations, including the initial setup transition, has been minimized.

## Related Information

[S\\_EPRST and S\\_EPRSN Configuration: Dispatching and Inserting Using Setup Matrix](#)

### 2.6.4.29.2 S\_EPRSN Insert Setup Optimum Operation

LMPC planning function for adding orders to a position at which the setup time is minimized

#### Use

This action code inserts the selected operations one after the other into an existing production plan. For each adjacent pair of dispatched operations, it calculates how the total setup time would change if the operation to be dispatched were placed between these two operations. The dispatching position chosen is the position at which the difference between the current total setup time and the future total setup time is the lowest, and the operation is dispatched there. If this is the best place for dispatching, the operation can also be dispatched before the first or the last dispatched operation. If several items are equally good, the last item is chosen.

Dispatching considers the following conditions:

- The sequence of operations within the order is respected
- Planning is not performed in the fixed planning period

- Operations are not dispatched in the past

### ! Restriction

When inserting, the setup time is not adjusted, neither for the operation to be dispatched, nor for its new successor after dispatching. You can use the action codes S\_AVRU and S\_AVRR for setup time adjustment.

### → Remember

- Special feature when dispatching at the beginning: If the function finds out that the new operation to be dispatched is to be set at the beginning before all operations already dispatched, it dispatches the new operation at the start time of the order that is dispatched first. This will postpone this operation.
- If the setup transitions are prohibited for all possible dispatching positions in the setup matrix, the operation is placed after the last dispatched operation in the work center, even if this transition is prohibited in the setup matrix.
- If one of the transitions in question is not maintained in the setup matrix, the current setup times from the operation are accepted in PP. In PP-PI, on the other hand, a setup time of 0 is assumed in this case.
- The same prerequisites apply as for action code S\_EPRST

### Procedure

- Situation at start:

Work Centers																																						
22.02.2019														23.02.2019																								
04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18
1														1																								

Initial Situation

Orders are already dispatched. An operation should be inserted into the production plan in such a way that the overall setup time increases as little as possible.

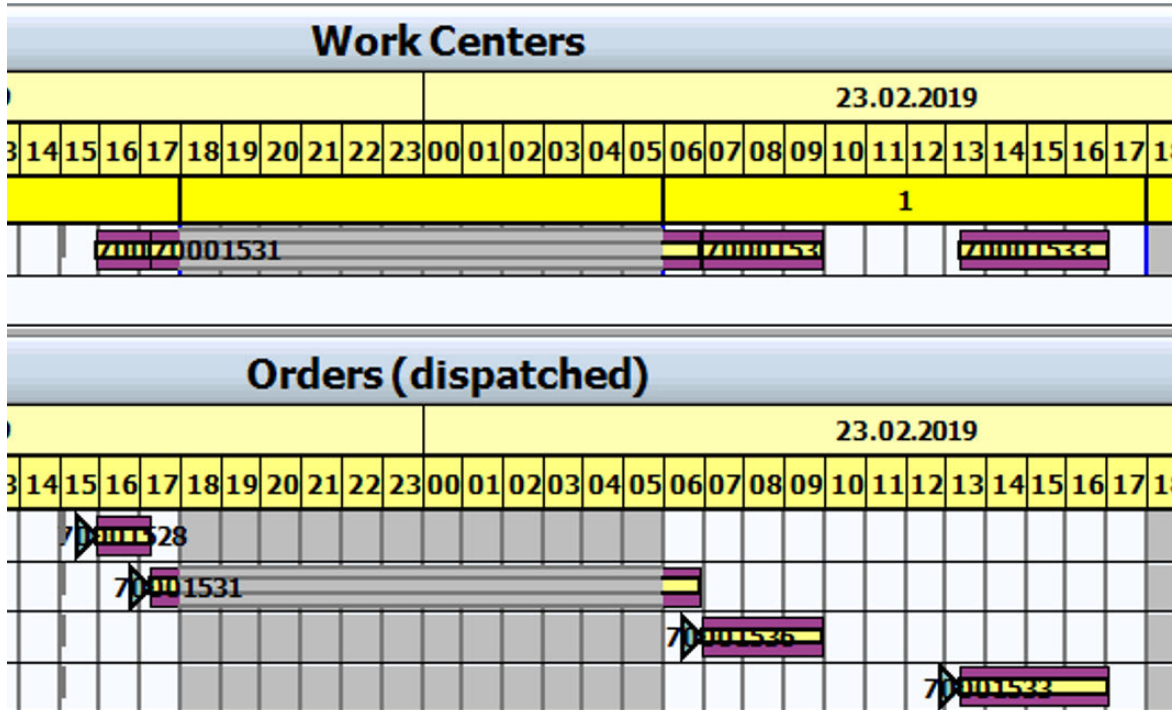
- Select the operation that is to be dispatched.

Alert	Disp...	Fmd	Order	OpAc	Work ctr	Material	Earliest start	Earl.start	Earliest finish	Erl.finish
			70001528	0010	PR1	LMPC_PRHA_34	23.02.2019	16:40:00	23.02.2019	18:00:00
			70001535	0010	PR1	LMPC_PRHA_34	23.02.2019	17:00:00	23.02.2019	18:00:00

Selection

- Execute the action code (S\_EPRSIN).

- Result:



Planning result

In this case, the best position for insertion was the first position before all other operations. The order operation was dispatched there.

## Related Information

[S\\_EPRST and S\\_EPRSIN Configuration: Dispatching and Inserting Using Setup Matrix](#)

### 2.6.4.29.3 S\_OPL Optimized Dispatching

Dispatching with an algorithm for sequencing with or without adjustment of setup times

#### Use

You can use this function to optimize the dispatching of operations and adjust the setup times of the operations. The dispatching function uses a heuristic to determine the dispatching sequence in such a way that the setup times of the operations become minimal.

For the function, rules must be defined in Customizing that are evaluated to determine the optimum sequence.

The adjustment of the setup times can also be deactivated. You can do this using the parameter settings for the action code. In this case, the setup times defined in Customizing serve as costs for the optimization.

The behavior of the function can be adjusted using a variety of settings. For the possible settings, see the LMPC Configuration Guide. [S\\_OPL, S\\_OSC Configuration: Optimized Dispatching and Optimized Adjustment of Setup Time](#)

→ Tip

Since the configuration for this function is very complex, it is recommended that you contact SAP for consulting to set up the function.

! Restriction

You can use this function to process operations of planned orders, production orders, and process orders. For planned orders in the process industry (PP-PI), the adjustment of setup times is excluded due to technical restrictions. Only sequencing is possible for PP-PI planned orders. For orders in the process industry, the requirements for the design of the individual phases apply in the same way as for PP-PI optimum dispatching.

Procedure

Select the operations that are to be dispatched.

Alert	Dis...	F...	Sequence	Order Number	OpAc	WrkCtr...	Material	Work ctr	Cat	Order Quantity	UoM	TgtSetup
○△○				3230799	0010	10003967	LMPC FERT KE	MA3	001	77	PC	0.500
○△○				3230800	0010	10003967	LMPC FERT KE	MA3	001	33	PC	0.500
○△○				3230801	0010	10003967	LMPC FERT KE	MA3	001	2	PC	0.500
●○○				60008411	0020	10003967	LMPC FERT 12	MA3	001	4	PC	0.500
○△○		X		3221992	0010	10003967	LMPC FERT 12	MA3	001	11	PC	0.500
○△○		X		3228853	0010	10003967	LMPC FERT 12	MA3	001	9	PC	0.500

Selection of Operations

Execute the action code (S\_OPL).

If you have specified that you want to execute manual dispatching or/and specify the number of iterations for the optimization run, a popup appears.

**Start time / Number of Iterations**

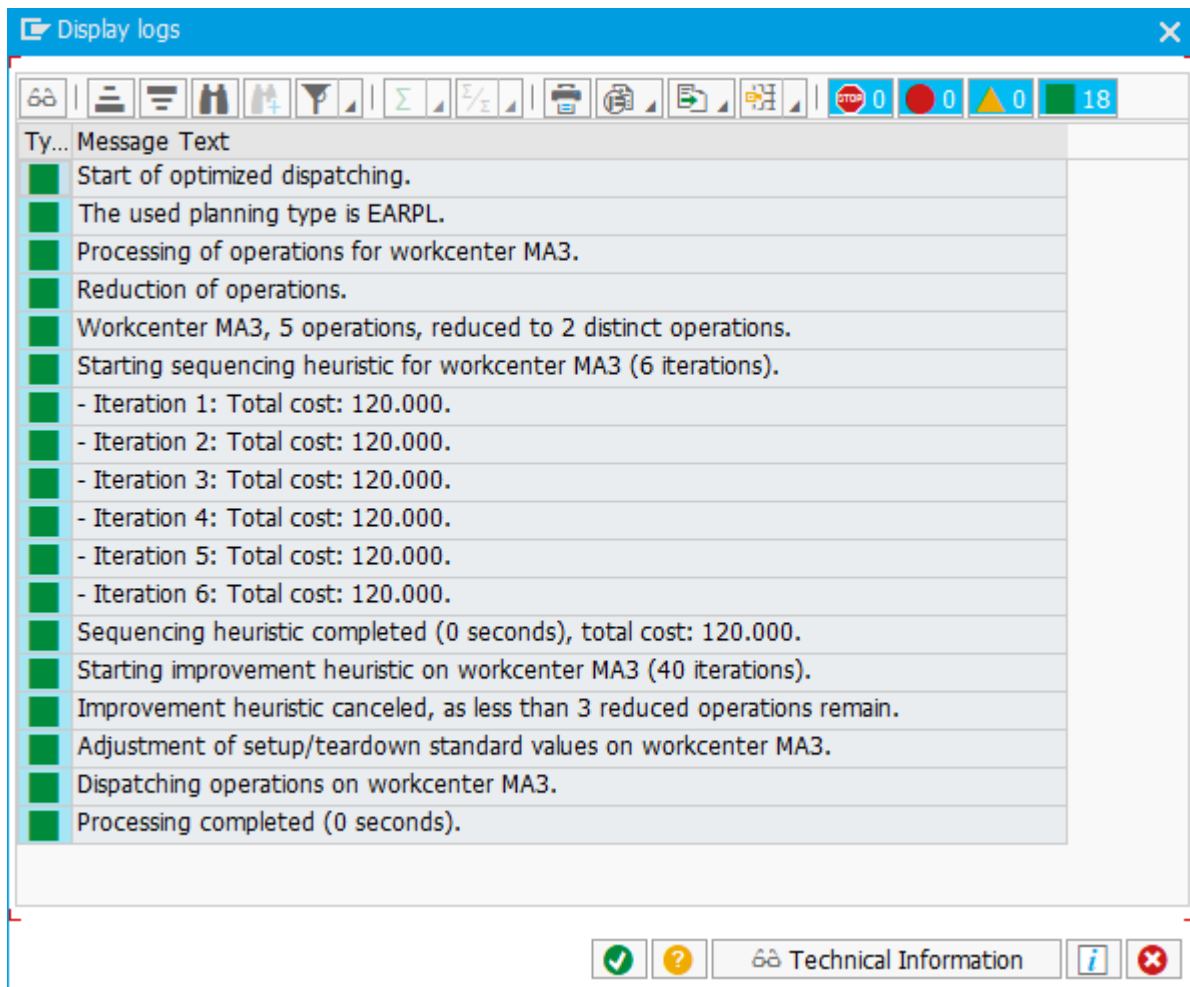
Start Date	12:10:2020
Start Time	17:21:29
Iter. sequencing	6
Iter. improvement	100

Selection Start Time / Number of Iterations

Choose the required start time and/or the required number of iterations for the sequence heuristic or improvement heuristic. Confirm your selection.

Processing starts.

If you have specified that the application log is to be displayed, a dialog box appears.



Application Log Popup Window

The messages in the application log show the process flow of the function.

The operations of the orders are always processed for each work center.

### Preprocessing

First, preprocessing is started. The rules for the work center are read.

The selected operations are reduced to different operations with regard to the rules. For the same operations, it is sufficient if only one operation is entered as a representative for all other operations in the sequence optimization. This saves runtime. After the sequence has been optimized, the operations that were sorted out are included in the number of operations again and are sorted where the representative operation is.

### Sequence Heuristic

After preprocessing, the sequence heuristic starts.

This randomly selects an operation from the quantity of reduced operations as the start operation. Now, another operation is selected randomly. All possible positions of this operation are checked and the operation is placed where the fewest additional costs are incurred. In the case of two operations, there is only before or after. If there are several operations, there are therefore more possible positions. This procedure continues

until all operations are put into a sequence. This positioning results in total costs, which are output as a message in the log. This is the first iteration.

The placement process is now repeated as many times as the number of iterations set in the settings. The total costs are calculated each time.

At the end of sequencing, the sequence that has the lowest total costs is selected. If the costs are the same for different sequences, the first sequence with the lowest total costs is selected.

If there are already dispatched operations at the work center, the last dispatched operation is determined and also taken into account in the heuristic. This operation is then assumed to be a fixed start operation. The determination of the start operation depends on the configured dispatching strategy: as early as possible, last dispatched operation on the resource, or block planning. The system searches for the operation that the new operations to be dispatched are to follow.

#### → Remember

If you want to dispatch operations in a dispatching gap, note that the logic determines the last dispatched operation at the start of the gap and takes this into account. However, it does not take into account which operations are already dispatched at the end of the gap. This means that the logic is not aligned with the operations that follow. Only ever with the preceding operations.

### Improvement Heuristic

If an improvement of the result is set using the improvement heuristic, it is executed next.

The improvement heuristic is only recommended for very complex planning scenarios. As a rule, the improvement heuristic is not required because sequencing will already deliver a very good result.

The improvement heuristic works according to the following principle: Cut and paste.

It selects a random section of a random number of operations from the determined sequence. This section is removed from the sequence and an attempt is made to insert this section into all remaining possible positions. All possible positions are tried out and the position with the lowest total costs is selected. This is an iteration.

A new section with a random number of operations is selected for each iteration.

If the improvement heuristic is used, it should be set with a high number of iterations. An improvement can only be made if many alternatives are tried out.

The total costs of the respective iteration are written to the log. In this way, you can see whether the total costs improve at all with additional iterations.

The improvement heuristic can only be executed if there are at least three different operations in the reduced selection.

### Application Log

It is recommended that you only use the log when setting up the function. The log will probably not be relevant for a user who wants to dispatch operations.

The log is not lost. It is stored in the database each time the function is called. When you save, the system transfers an expiration date that is six months in the future.

You can use transaction SLG1 to view the saved logs.

Log object /LMPC/OPL.

Analyze Application Log	
Object	/LMPC/OPL
Subobject	*
External ID	*

### Evaluation of Log for Planning Function

You can use the application log to find out how the total costs or the total setup time for each iteration improve. This enables you to identify the number of iterations that make sense in the respective system for each maintained rule set. There is always a conflict of aims between the runtime and the improvement of the result. As the number of iterations increases, the result will usually improve further, but the runtime of the function will increase. By choosing Try Out, you define a number of iterations in which an acceptable runtime is achieved with a sufficiently good solution.

### Adjustment of Setup Time and Sequence

After sequencing and improvement have been completed, the setup times of the operations are adjusted if this is activated via a parameter in Customizing.

If you have specified that only one sequence is to be created, you see the proposal for the dispatching sequence in the "Sequence" column.

Alert	Dis...	F...	Sequence	Order Number	OpAc	WrkCtr...	Material	Work ctr	Cat	Order Quantity	UoM	TgtSetup
▲▲○			4	3230800	0010	10003967	LMPC FERT KE	MA3	001	33	PC	0.500
▲▲○			5	3230801	0010	10003967	LMPC FERT KE	MA3	001	2	PC	0.500
●○○			1	60008411	0020	10003967	LMPC FERT 12	MA3	001	4	PC	0.500
▲▲○		X	2	3221992	0010	10003967	LMPC FERT 12	MA3	001	11	PC	0.500
▲▲○			3	3230799	0010	10003967	LMPC FERT KE	MA3	001	77	PC	2.000
▲▲○		X		3228853	0010	10003967	LMPC FERT 12	MA3	001	9	PC	0.500

### Example of Dispatching Sequence

If the change to the setup times is set, you see the changed setup requirements in the column for the target setup values. The bars in the graphic are adjusted accordingly.

If the sequence of the orders meets your requirements, you can now dispatch them using the action code for dispatching by sequence entered (S\_EPSEQ). [S\\_EPSEQ Dispatch According to the Sequence Entered \[page 165\]](#)

### Immediate Dispatching

If you have set direct dispatching in the action code, the operations are dispatched immediately in the determined sequence and, if set, the setup times are also adjusted.

Alert	Dis...	F...	Sequence	Order Number	OpAc	WrkCtr...	Material	Work ctr	Cat	Order Quantity	UoM	TgtSetup
●○○	X			60008411	0020	10003967	LMPC FERT 12	MA3	001	4	PC	0.500
▲▲○	X	X		3221992	0010	10003967	LMPC FERT 12	MA3	001	11	PC	0.500
▲▲○	X	X		3230799	0010	10003967	LMPC FERT KE	MA3	001	77	PC	2.000
▲▲○	X	X		3230800	0010	10003967	LMPC FERT KE	MA3	001	33	PC	0.500
▲▲○	X	X		3230801	0010	10003967	LMPC FERT KE	MA3	001	2	PC	0.500
▲▲○		X		3228853	0010	10003967	LMPC FERT 12	MA3	001	9	PC	0.500

### Result of Dispatching with Setup Time Adjustment

The time at which the operations are dispatched depends on the selected planning type and the settings in the strategy profile used. Different dispatching categories can be used:

- Dispatch as early as possible.
- Dispatching after the last dispatched operation at the work center.
- Manual dispatching by entering the start time.
- Block planning.

In block planning, the earliest start time is determined from the currently scheduled times of the selected operations and dispatching begins at this time. The operations thus remain in the “block” for which the first operation was scheduled. The dispatching strategies are defined using a parameter in Customizing.

Optimized dispatching can also be executed in the background via a nightly planning run. For this, a job is defined for the program /LMPC/HJPT. You can use transaction SLG1 to evaluate the log for dispatching. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

The functionality described here is only an example. The behavior may differ depending on the selected settings in your system.

#### → Tip

You can temporarily save the sequence that the function created in the LMPC HJPT function of the planning version. This enables you to save a plan that the function has created for later use. This is useful if the function is executed repeatedly to generate and compare different production plans. [S\\_PLVERS HJPT Read/Save Plan Version \[page 213\]](#)

#### ! Restriction

- The planning logic is always executed per work center. Relationships between operations at different work centers cannot be taken into account. This is particularly important if an order exists with operations at different work centers. For such planning, it is recommended that you only execute optimized dispatching on the bottleneck machine. Due to midpoint scheduling, the operations at the other work centers are scheduled correctly in the time sequence.
- The planning logic is pure sequencing. During sequencing, dates, such as MRP availability or requirement date, cannot be taken into account. This is a technical restriction and cannot be changed. This function is a heuristic. A mathematical optimization, which would be required to take dates into account, cannot be provided in the LMPC HJPT planning table.

## 2.6.4.30 Planning with Parallel Operations and Tool Planning

### Parallel Planning and Tool Planning

With the HJPT planning table, it is possible to plan operations in parallel for capacities of work centers.

Most HJPT action codes are intended for sequential planning, for which operations are in sequence and cannot overlap. However, with a few action codes, it is possible to plan operations in parallel.

There are different use cases as to why operations must lie in parallel. Parallel operations can be used, for example, to map the occupancy of tools. Tools that are used in the production of different materials are mapped as work centers for this purpose.



During dispatching, the planning function searches for a planning window in which all parallel operations can lie in parallel. This ensures that the tool for producing the order is available and is not occupied by another order.

In the HJPT planning table, there are three different approaches for implementing parallel dispatching:

- [Parallel Planning with Several Individual Capacities \[page 201\]](#)
- [Parallel Planning with Suboperations \[page 208\]](#)
- [S\\_EPPRL Parallel Planning with Parallel Sequences \[page 211\]](#)

→ Tip

If you have any questions about the configuration of the master data and the configuration of the planning functions for setting up parallel planning, please contact LMPC Consulting.

## 2.6.4.30.1 Parallel Planning with Several Individual Capacities

### Use

You can set the capacities of work centers in such a way that several operations can be planned at the work centers in parallel.

To do this, you need to make several settings:

- The capacity offer must have several individual capacities.
- The capacity must be set as being able to be used by several operations.
- The scheduling formulas must be set in such a way that the duration of an operation is not dependent on the number of individual capacities.

If these settings are made in this form, the number of individual capacities specifies how many operations can be parallel.

Planning Table: 13.12.2021 16:53:23 - LMPC\_WSV LMPC Dispatching Graph.

Work ctr		Description	15.12.2021														16.12.2021																																					
MA6		LMPC WST 6	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21
			1														1																																					
			3309057														3309056																																					
			3309055																																																			

Alert	Lock	Dis...	Dis...	HJPT firm.	Fmd	Material	Plant	Usa...	ARB.	Explosion date	Work ctr	Short description	Ord. Nr.	OpAc	Subop.	Op.	Qty	UoM
			X		X	LMPC_PRL HALB_1	LM01	1	1	13.12.2021	MA6	LMPC WST 6	3309055	0010			3	PC
			X		X	LMPC_PRL HALB_1	LM01	1	1	13.12.2021	MA6	LMPC WST 6	3309056	0010			6	PC
			X		X	LMPC_PRL HALB_1	LM01	1	1	13.12.2021	MA6	LMPC WST 6	3309057	0010			9	PC
					X	LMPC_PRL HALB_1	LM01	1	1	14.12.2021	MA6	LMPC WST 6	3309058	0010			22	PC
					X	LMPC_PRL HALB_1	LM01	1	1	13.12.2021	MA6	LMPC WST 6	3309059	0010			3	PC

Example: Parallel Assignment of a Capacity

You can use the following LMPC HJPT dispatching functions to dispatch operations in parallel to a capacity that contains several individual capacities:

- [S\\_AV06 Dispatching Operations Individually \[page 137\]](#)
- [S\\_EPALL Dispatch All Operations \[page 142\]](#)
- [S\\_EPALV Dispatching by Entering Dates in the ALV Grid \[page 143\]](#)
- [S\\_EPRQD Dispatch on Requirement Date \[page 157\]](#)
- [S\\_EPSEL Dispatch Selected Operations \[page 159\]](#)
- [S\\_EPSELF Dispatch Selected Orders Without Errors \[page 160\]](#)
- [S\\_EPSELT Dispatching for Date \[page 164\]](#)
- [S\\_EPSIM Simultaneous Dispatching \[page 167\]](#)
- [S\\_MANP Manual Dispatching \[page 183\]](#)
- [S\\_RESCD Reschedule All \[page 190\]](#)
- [S\\_EPSELP Single-Level Dispatching with Pool ID \[page 219\]](#)
- [S\\_EPPRLP Parallel Dispatching with Pool ID \[page 204\]](#)

You should pay particular attention to the function S\_EPPRLP. This function dispatches operations with the same pool ID so that they start at the same start time. The creation of the order pools for this function and the function itself are described in the following chapters.

No other planning functions can be used for this planning scenario. If you have questions about the selection and functioning of the LMPC HJPT planning functions, please contact LMPC Consulting.

### ! Restriction

Planning with several individual capacities should not be confused with planning on the individual capacities. It is not possible to use an HJPT planning function to plan the operations to individually defined individual capacities and to assign the operations to a specific individual capacity. Planning is only possible for a total capacity that contains several individual capacities.

## 2.6.4.30.1.1 S\_PBPRL Form Order Pool for Parallel Dispatching with Pool ID

### Use

The function S\_PBPRL belongs to the function for parallel dispatching with pool ID S\_EPPRLP, which is described in the following section. Function S\_PBPRL forms the order pools for the dispatching function.

Using the pool ID that is assigned to the order operations, you define which operations are to start at the same time later when dispatching.

A maximum of as many operations of a work center as individual capacities are available for the scheduling-relevant capacity of the work center can be added to an order pool.

S\_PBPRL and S\_EPPRLP can be used for PP planned and production orders, as well as for PP-PI planned and process orders.

### Procedure

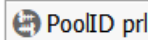
Select the order operations that are to be dispatched in parallel.

Alert	Lock	Dis...	Order pool	Order Number	Material	Plant	Work center	Short description
oo				60008509	LMPC FERT KE	LM01	MA4	LMPC wst 4
oo				3309671	LMPC FERT 34	LM01	MA4	LMPC wst 4
oo				60008677	LMPC HALB 34	LM01	MA4	LMPC wst 4
oo				3307471	LMPC FERT 12	LM01	MA4	LMPC wst 4
oo				3233582	LMPC FERT KE	LM01	MA4	LMPC wst 4
oo				3233562	LMPC FERT KE	LM01	MA4	LMPC wst 4

Selection of Operations

You can only select operations for the same work center. If this condition is violated, the function terminates processing.

In this example, there are four individual capacities for the scheduling-relevant capacity of the machine, so up to four operations can be selected.

Execute the action code for forming order pools for parallel dispatching  (S\_PBPRL).

Result:

Alert	Lock	Dis...	Order pool	Order Number	Material	Plant	Work center	Short description
oo			1032	60008509	LMPC FERT KE	LM01	MA4	LMPC wst 4
oo			1032	3309671	LMPC FERT 34	LM01	MA4	LMPC wst 4
oo			1032	60008677	LMPC HALB 34	LM01	MA4	LMPC wst 4
oo			1032	3307471	LMPC FERT 12	LM01	MA4	LMPC wst 4
oo				3233582	LMPC FERT KE	LM01	MA4	LMPC wst 4
oo				3233562	LMPC FERT KE	LM01	MA4	LMPC wst 4

Result of Pool Formation

The operations have all been assigned the same pool ID.

You can only use this function to set the pool ID. You can use the function S\_POOLID to remove the pool ID. [S\\_POOLID Create Order Pool Manually \[page 217\]](#)

### ! Restriction

- Only data records without a pool ID can be processed. The function terminates if operations with a pool ID were selected. It is not possible to add operations to an existing order pool.
- It is not possible to manually assign a pool ID by making an entry in a popup window. The pool ID is determined using a number range. If no number range is maintained, a 12-digit random number is generated.
- Only data records for the same work center can be processed.
- It is not intended that more than one operation for the same order is processed at the same work center. Only orders that have exactly one operation at the work center can be processed.
- The number of individual capacities is checked using the capacity offer at the work center. The offer is determined on the first day of the planning period. If the first day of the planning period is in the past, the user's local date is used. If the day being checked does not have capacity offer, the next day with capacity offer is checked. The number of individual capacities should be identical throughout the planning period. When forming the pool IDs, the time at which the operations of the order pool are dispatched is not yet defined. During later dispatching, operations can be dispatched in the entire planning period. The planning function can only work correctly if the number of individual capacities is constant in the entire planning period.

- The pool ID is always assigned for the entire order. All order operations receive the pool ID, even if only one operation was selected. However, in this planning scenario, it is not intended for orders to have more than one operation. Note also the restrictions for processing in the associated planning function.

## 2.6.4.30.1.2 S\_EPPRLP Parallel Dispatching with Pool ID

### Use

You can use this function to dispatch operations from the order pool in such a way that all operations with the same pool ID have the same start time.

Operations are grouped in an order pool for this function using the function S\_PBPRL, which was described in the preceding section. [S\\_PBPRL Form Order Pool for Parallel Dispatching with Pool ID \[page 202\]](#)

S\_PBPRL and S\_EPPRLP can be used for PP planned and production orders, as well as for PP-PI planned and process orders.

Certain settings must be made in the master data so that this planning function can be used. The settings are described in the section on parallel planning with several individual capacities. [Parallel Planning with Several Individual Capacities \[page 201\]](#)

The function has two different logics:

- Logic 1: Connect to dispatched operations.
- Logic 2: Manual dispatching with insert.

You use parameter settings to define the logic used. [S\\_EPPRLP Configuration: Parallel Dispatching with Pool ID](#)

### Logic 1

Several order pools can be dispatched at the same time. The function searches for the last dispatched operation at the work center. At its end time, the new operations to be dispatched are connected without gaps. If there are no dispatched operations at the work center, dispatching takes place at the current time. Operations with a pool ID that have already been dispatched can be included in the selection. They will be rescheduled.

### Logic 2

A popup window is used to query the desired start time for the selected operations. If an operation has already been dispatched at the desired start time, the behavior of the function depends on the parameter settings.

For the standard logic, the start time is corrected to the end time of the operation that has already been dispatched. The selected order pools are inserted after this operation. All operations that are dispatched after this time are shifted.

You can use a parameter to activate a special logic for insertion. If the special logic is active, the selected operations are inserted at the desired start time. The operations that have already been dispatched at this point are also shifted to all subsequent operations.

Operations that have already been dispatched are moved in order pools in such a way that the operations have parallel start times. Operations that have not been assigned a pool ID are rescheduled sequentially. This means that they are scheduled one after the other.

Operations that have already been dispatched are rescheduled without gaps. All operations that lie after the desired time are rescheduled. The operations then connect to the newly dispatched operations without gaps.

Operations with a pool ID that have already been dispatched can be included in the selection. They will be rescheduled.

### ! Restriction

- With this function, only forward scheduling is possible. Backward scheduling is not supported.
- You can only use this dispatching function to dispatch operations with a pool ID. All operations that do not have a pool ID are removed from the selection and are not taken into account during planning. With logic 2, operations without a pool ID are also processed for the insertion of order pools into an existing production plan, but only for moving operations that have already been dispatched.
- The system does not check whether there is a sufficient number of individual capacities for parallel dispatching of the operations. This check is already implemented in the function for creating the order pool S\_PBPRL. Therefore, this planning function can only be used to process order pools that were formed with the action code S\_PBPRL.
- Both logics were developed for dispatching operations at a work center. Dispatching across work centers is not supported. Therefore, it is also not possible to dispatch all operations of an order to different work centers at the same time. If you want to process orders with several operations at different work centers, it is recommended that you only plan the bottleneck work center. Using midpoint scheduling, the times of the operations at the other work centers are adjusted automatically.
- Both logics have been developed in such a way that only one operation per order exists at a work center.
- Operations from several work centers can be planned at the same time, but the operations are only processed for each work center. The order pools are only created for operations of a work center. For the function for inserting for each work center, the system displays a dialog box for querying the start time.
- Using the LMPC action code limitation is only possible for this function with limitations because the function reads operations independently and no check for action code limitation is applied to these operations that have been read. [Action Code Limits \[page 71\]](#)

## Procedure

### Logic 1

Initial situation:

**Work Centers (dispatched)**

Work ctr	Description	Cap.	Cap des	22.01.2022																											
				16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
MA4	LMPC wst 4	001																1													

Planning table initialized

Work center filter : MA4

Alert	Lock	Disj	Order pool	Ord. Nr.	Material	Plant	Work ctr	Description	Dis...	HJPT fir...	Fmd	OpAc
OO		X	1035	3233582	LMPC FERT KE	LM01	MA4	LMPC wst 4			X	0020
OO		X	1035	3295829	LMPC HALB 34	LM01	MA4	LMPC wst 4			X	0030
OO		X	1035	3309674	LMPC FERT 34	LM01	MA4	LMPC wst 4			X	0020
OO			1032	60008509	LMPC FERT KE	LM01	MA4	LMPC wst 4				0020
OO			1032	60008677	LMPC HALB 34	LM01	MA4	LMPC wst 4	X			0030

Initial Situation

To start with, an order pool with three operations has already been dispatched.

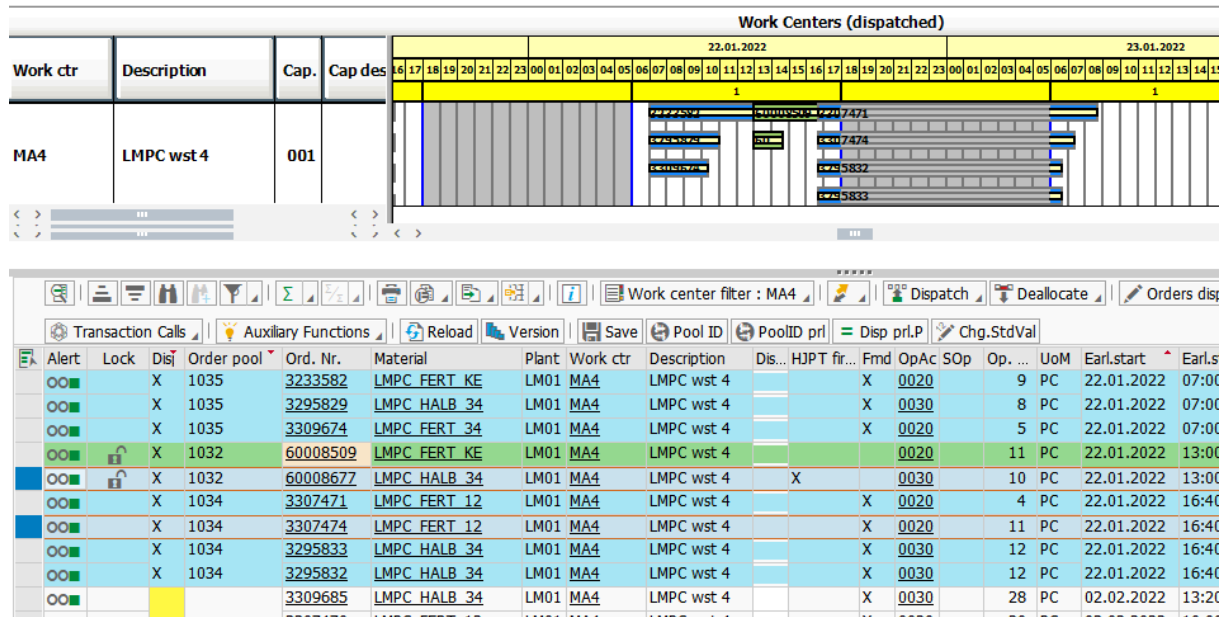
Select one or more operations from order pools. It is sufficient to select only one operation for each order pool. The function reads all operations that belong to an order pool and have not been selected.

Alert	Lock	Disj	Order pool	Ord. Nr.	Material	Plant	Work ctr	Description
OO		X	1035	3233582	LMPC FERT KE	LM01	MA4	LMPC wst 4
OO		X	1035	3295829	LMPC HALB 34	LM01	MA4	LMPC wst 4
OO		X	1035	3309674	LMPC FERT 34	LM01	MA4	LMPC wst 4
OO			1032	60008509	LMPC FERT KE	LM01	MA4	LMPC wst 4
OO			1032	60008677	LMPC HALB 34	LM01	MA4	LMPC wst 4
OO			1034	3307474	LMPC FERT 12	LM01	MA4	LMPC wst 4
OO			1034	3307471	LMPC FERT 12	LM01	MA4	LMPC wst 4
OO			1034	3295833	LMPC HALB 34	LM01	MA4	LMPC wst 4

Selection of Operations

Execute the action code **Disp prl.P** (S\_EPPRLP).

Result:

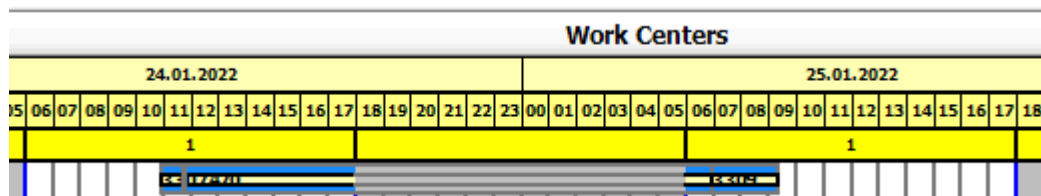


Dispatching Result

The two selected order pools have been dispatched in such a way that they connect directly to the order pool that has already been dispatched. The operations of the subsequent order pool do not start until all operations of the preceding order pool have been completed.

## Logic 2

Initial situation:



Situation at Start

Some operations have already been dispatched sequentially.

Two order pools are to be inserted between the operations that have already been dispatched.

Select at least one operation per order pool.

Alert	Lock	Disj	Order pool	Ord. Nr.	Material	Plant	Work ctr	Description
OO		X		3307470	LMPC FERT 12	LM01	MA4	LMPC wst 4
OO		X		3309675	LMPC FERT 34	LM01	MA4	LMPC wst 4
OO			1032	60008509	LMPC FERT KE	LM01	MA4	LMPC wst 4
OO			1035	3309674	LMPC FERT 34	LM01	MA4	LMPC wst 4
OO			1034	3307471	LMPC FERT 12	LM01	MA4	LMPC wst 4

Selection of Operations

Execute the action code **= Disp prl.P** (S\_EPPRLP).

A popup window for entering the desired start time appears.

Popup Window for Entering Start Time

In this example, the start time is chosen so that it is during the first dispatched operation.

The logic automatically corrects the start time internally to the end of the operation that has already been dispatched, and inserts the new operations to be dispatched after this operation.

→ Tip

A parameter can be used to change the logic in such a way that the operations are dispatched exactly at the start time entered. [S\\_EPPRLP Configuration: Parallel Dispatching with Pool ID](#)

Result:

Work ctr	Description	Cap.	Cap des	24.01.2022	25.01.2022	26.01.2022
MA4	LMPC wst 4	001				

Alert	Lock	Disj	Order pool	Ord. Nr.	Material	Plant	Work ctr	Description	Dis...	HJPT fir...	Fmd	OpAc	SOp	Op. ...	UoM	Earl.start	Earl.start*	Latest start	Lat.s
OO		X		3307470	LMPC_FERT_12	LM01	MA4	LMPC wst 4			X	0020		8	PC	24.01.2022	10:55:54	24.01.2022	10:5
OO		X	1032	60008509	LMPC_FERT_KE	LM01	MA4	LMPC wst 4				0020		11	PC	25.01.2022	06:55:54	25.01.2022	06:5
OO		X	1032	60008677	LMPC_HALB_34	LM01	MA4	LMPC wst 4	X			0030		10	PC	25.01.2022	06:55:54	25.01.2022	06:5
OO		X	1035	3233582	LMPC_FERT_KE	LM01	MA4	LMPC wst 4			X	0020		9	PC	25.01.2022	10:35:54	25.01.2022	10:3
OO		X	1035	3295829	LMPC_HALB_34	LM01	MA4	LMPC wst 4			X	0030		8	PC	25.01.2022	10:35:54	25.01.2022	10:3
OO		X	1035	3309674	LMPC_FERT_34	LM01	MA4	LMPC wst 4			X	0020		5	PC	25.01.2022	10:35:54	25.01.2022	10:3
OO		X		3309675	LMPC_FERT_34	LM01	MA4	LMPC wst 4			X	0020		36	PC	25.01.2022	16:35:54	25.01.2022	16:3

Dispatching Result

The operations of the two order pools were inserted into the production plan in parallel. An operation that has already been dispatched has been moved.

## 2.6.4.30.2 Parallel Planning with Suboperations

### Usage



In parallel planning with suboperations, suboperations are created for the main operations via the routing for the respective material.

The suboperations, for example, occupy the capacity of a tool that is mapped as a separate work center.

A large number of LMPC HJPT planning functions can be used for orders with suboperations.

You can use the following functions to plan operations with suboperations:

- [S\\_APALL Deallocate All Operations \[page 133\]](#)
- [S\\_APSEL Deallocate Selected Operations \[page 135\]](#)
- [S\\_AV06 Dispatching Operations Individually \[page 137\]](#)
- [S\\_AV07 Deallocating Operations Individually \[page 138\]](#)
- [S\\_D&D Dispatching Operations with Drag and Drop in the ALV Grid \[page 139\]](#)
- [S\\_EPALL Dispatch All Operations \[page 142\]](#)
- [S\\_EPMSQ Dispatching According to Material Master Field \[page 150\]](#)
- [S\\_EPSEL Dispatch Selected Operations \[page 159\]](#)
- [S\\_EPSELF Dispatch Selected Orders Without Errors \[page 160\]](#)
- [S\\_EPSELT Dispatching for Date \[page 164\]](#)
- [S\\_EPSELX Dispatching Insert in Gaps with and Without Pool Orders \[page 162\]](#)
- [S\\_EPSEQ Dispatch According to the Sequence Entered \[page 165\]](#)
- [S\\_EPSIM Simultaneous Dispatching \[page 167\]](#)
- [S\\_EPSRT Sorted Dispatching \[page 168\]](#)
- [S\\_EPTBSQ Dispatch by Table \[page 172\]](#)
- [S\\_MANP Manual Dispatching \[page 183\]](#)
- [S\\_MANPLX Manual Dispatching with Insert \[page 187\]](#)
- [S\\_MVEORD Move Order Operations in the Pool \[page 187\]](#)
- [S\\_RESCD Reschedule All \[page 190\]](#)
- [S\\_EPRST Dispatching Using Setup Matrix \[page 191\]](#)
- [S\\_EPRSIN Insert Setup Optimum Operation \[page 193\]](#)
- [S\\_OPL Optimized Dispatching \[page 195\]](#)
- [S\\_EPSELP Single-Level Dispatching with Pool ID \[page 219\]](#)
- [S\\_APSELP Deallocate with Pool ID \[page 221\]](#)
- [S\\_SHFTPP Shift Production Plan \[page 248\]](#)

The following functions **cannot** be used to plan operations with suboperations:

- [S\\_EPNP Dispatching Operations of Networks \[page 153\]](#)
- [S\\_EPSELL Dispatching with Check on Gaps and Pool Orders \[page 161\]](#)
- [S\\_FPL Dispatch by LMPC Timetable \[page 174\]](#)
- [S\\_MANPL Manual Dispatching List with Gap Check \[page 185\]](#)
- [S\\_EPBKFG Two-Step Dispatching with Pool ID \[page 226\]](#)
- [S\\_EPML, S\\_EPMLBW, S\\_EPMLFW Multilevel Planning \[page 241\]](#)

### ! Restriction

The functions can only be used with suboperations if the capacities of the work centers are only utilized by one operation each. The functions do not support multiple utilization of capacities.

### Example



- Unlike other planning functions, dispatching also takes place if the work center of the suboperation is not open in the planning table. The operation and suboperation always have the same dispatching status.
- It is recommended that you open all work centers in the planning table that contain the suboperations for the operations. When dispatching, only the capacity offer of open work centers can be taken into account. If you dispatch an operation and the work center of the suboperation is not open, the capacity offer of the unopened work center is not taken into account. Dispatching takes place infinitely for the suboperation. This can lead to an overload on the unopened work center.
- It is not possible to dispatch suboperations if the work center of the related operation is not open in the planning table. It is not possible to dispatch only suboperations without the corresponding operation.

### 2.6.4.30.3 S\_EPPRLL Parallel Planning with Parallel Sequences

Action code for planning parallel sequences.

#### Use

You can use this action code to dispatch operations in parallel. If you have defined parallel sequences in the routing, this action code ensures that the operations of the parallel sequences are actually dispatched in parallel to the corresponding operation of the standard sequence.

#### ! Restriction

The function can only be used for planned orders and production orders in PP. This function is not available for PP-PI (planned and process orders).

#### Procedure

Select one or more data records in the ALV Grid. You can dispatch one or more orders at the same time. All operations for an order are always dispatched if they are open in the HJPT planning table. It is therefore sufficient to select one operation of an order.

Alert	Fmd	Di...	Lock	Ord. Nr.	OpAc	Material	Wor...	Requirement date	Earliest start	Earl.start
●∞				3294924	0010	LMPC PARALL 1	MA1	03.05.2021	26.04.2021	14:30:00
●∞				3294924	0020	LMPC PARALL 1	MA2	03.05.2021	27.04.2021	06:45:00
●∞				3294924	0041	LMPC PARALL 1	MA3	03.05.2021	27.04.2021	06:45:00

Select Operation

Execute the action code  (S\_EPPRLL).

If you have configured manual planning, the system displays a popup window for querying the start time.

Start time first operation
✕

Start Date	26.04.2021
Start Time	14:30:00

Popup Window for Querying Start Time

Enter the desired start time, and confirm the window.

It is possible to reschedule orders that have already been dispatched.

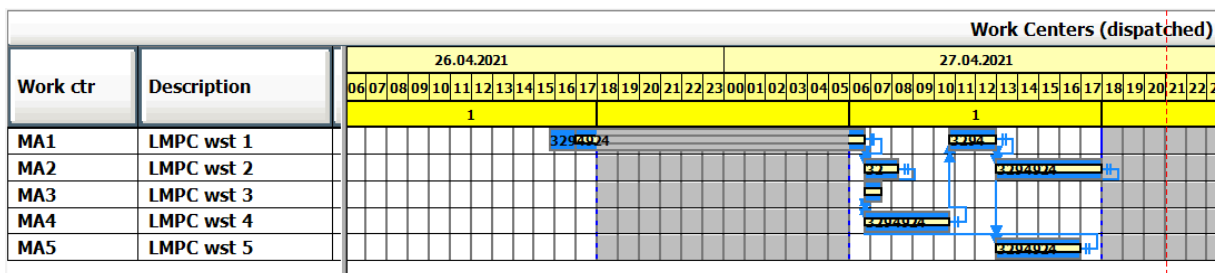
Dispatching is executed.

Result:

Alert	Fmd	Di...	Lock	Ord. Nr.	OpAc	Material	Wor...	Requirement date	Earliest start	Earl.start
●∞	X	X		3294924	0010	LMPC PARALL 1	MA1	03.05.2021	26.04.2021	14:30:00
●∞	X	X		3294924	0020	LMPC PARALL 1	MA2	03.05.2021	27.04.2021	06:45:00
●∞	X	X		3294924	0041	LMPC PARALL 1	MA3	03.05.2021	27.04.2021	06:45:00
●∞	X	X		3294924	0020	LMPC PARALL 1	MA4	03.05.2021	27.04.2021	06:45:00
●∞	X	X		3294924	0030	LMPC PARALL 1	MA1	03.05.2021	27.04.2021	10:45:00
●∞	X	X		3294924	0040	LMPC PARALL 1	MA2	03.05.2021	27.04.2021	13:00:00
●∞	X	X		3294924	0040	LMPC PARALL 1	MA5	03.05.2021	27.04.2021	13:00:00
●∞				60008613	0010	LMPC PARALL 1	MA1	01.06.2021	25.05.2021	17:45:00
●∞				60008613	0020	LMPC PARALL 1	MA2	01.06.2021	26.05.2021	09:33:45
●∞				60008613	0041	LMPC PARALL 1	MA3	01.06.2021	26.05.2021	09:33:45

Result in the ALV Grid

In the ALV Grid, you can see that all operations of the selected order have been dispatched.



Result in the Graphic

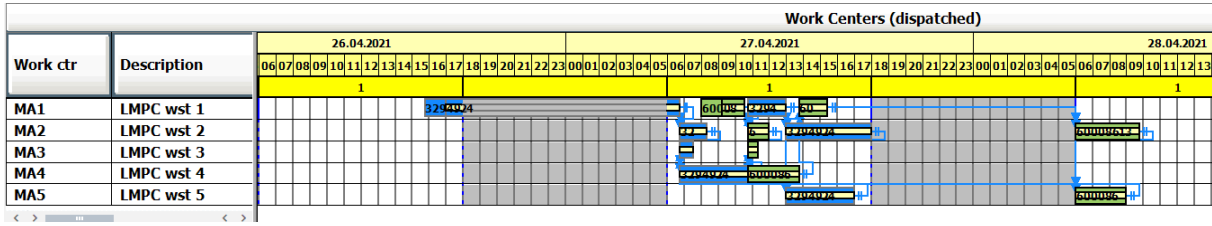
In the graphic, you can see that operations were dispatched in parallel. The parallel operations all start at the same start time.

The second operation of the order, which is dispatched to machine 2, has an additional parallel operation on machine 3 and an additional parallel operation on machine 4.

The fourth operation, which is also dispatched to machine 2, has an additional parallel operation on machine 5.

The function has a capacity check that searches for a time slot for which the parallel operations can be placed on the capacities in parallel. Dispatching only takes place if the parallel operations for an event can be dispatched in parallel. Otherwise, the function terminates dispatching and informs the user which order could not be dispatched.

If you schedule another order for the same material at the same start time, the following screen appears:



Planning Result 2 Orders at Same Start Time

You can see that the operations of the second order have been placed in the planning gaps. The condition that the operations must lie in parallel is adhered to.

The function can also be executed in background processing. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

For the settings for the function and other SAP Notes, see the LMPC Configuration Guide. [S\\_EPPRL Configuration: Parallel Dispatching and Tool Planning](#)

## 2.6.4.31 S\_PLVERS HJPT Read/Save Plan Version

Save Production Plans as Version

### Use

In the HJPT planning table, planning is simulated. This means that all planning steps can be discarded. The configured planning is not written to the database until you save.

You can use the action code S\_PLVERS to create up to 5 different versions of a production plan during the simulation without having to save these versions to the database.

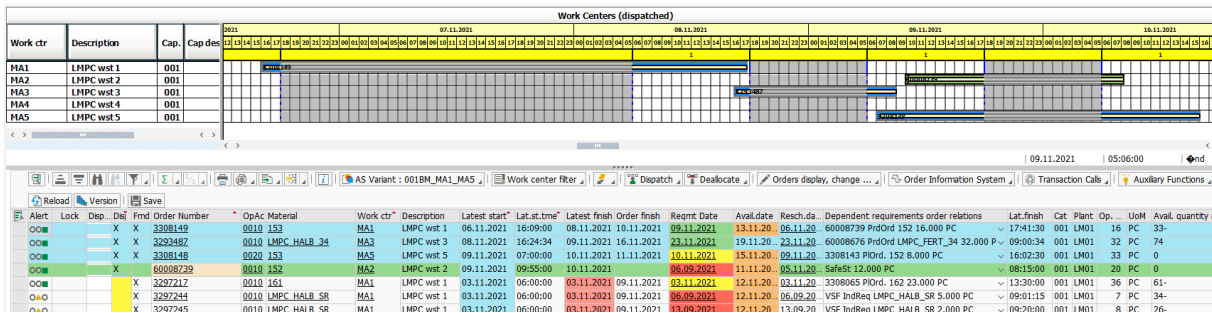
This allows production planners to try out different sequences of orders at the same time.

In one version, the start times of the operations are stored for each user name and selection criteria of the HJPT planning table.

### Procedure

#### Create Version

A production plan has been created.

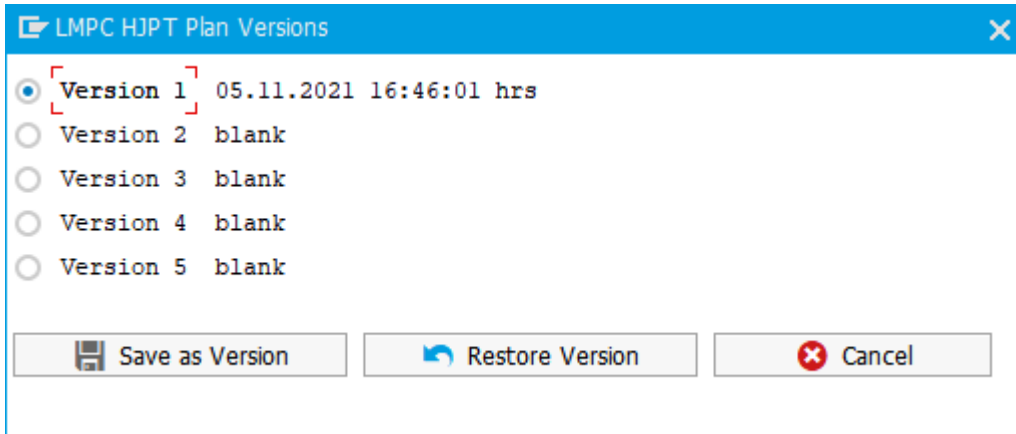


Example Production Plan

This production plan is to be stored as a test version.

Execute the action code  (S\_PLVERS).

A selection screen for plan versions appears.



Selection Screen for Plan Versions

The created production plan can be saved in one of the five possible versions.

If data already exists for a version, the date and time at which this version was created is displayed. If no data is stored for a version, the relevant version is empty.

The data of a version is always saved per user name and per selection criteria. If you want to restore a saved version when you call the HJPT planning table later, you must use the same selection criteria. This means that you can only restore the data for the version if you reenter with exactly the same work center selection.

The data for a version is stored for 28 days. It is then deleted automatically.

To save the data, use the radio buttons to select a version and choose the Save button.

The start times of the operations are stored in the respective version for recovery at a later point in time.

### Restore Version

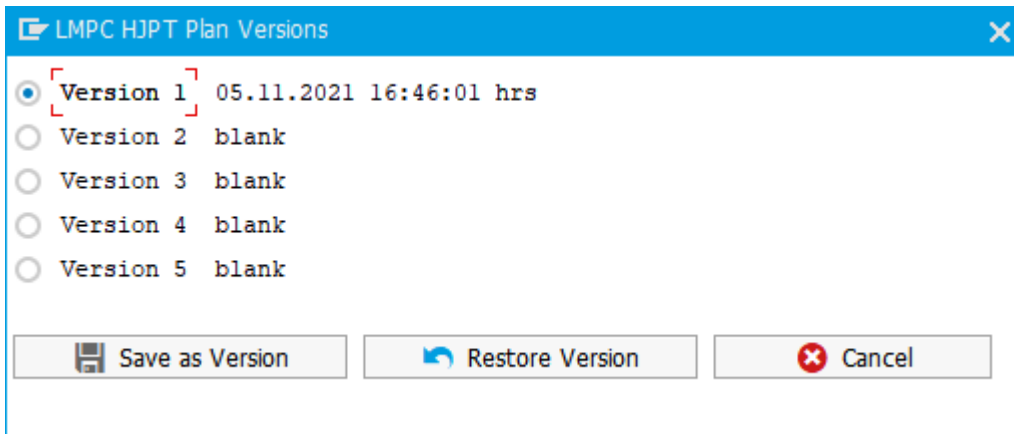
Initial situation:

				Work Centers (dispatched)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Work ctr	Description	Cap.	Cap des	08.11.2021														09.11.2021														10.11.2021																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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You want to restore the planning status of a version.

Execute the action code  (S\_PLVERS).

A selection screen for plan versions appears.



Selection Screen for Plan Versions

Use the radio buttons to select the version you want to restore and click the Restore button.

Result:

Alert	Lock	Dep.	Dis	Fnd	Order Number	OpAc Material	Work ctr	Description	Latest start	Lat.st.time	Latest finish	Order finish	Reqmt Date	Avail.date	Resch.da	Dependent requirements order relations	Lat.finish	Cat	Plant	Op.	UsM	Avail. quantity
		X	X		3308149	0010 153	MA1	LMPC wst 1	06.11.2021	16:09:00	08.11.2021	10.11.2021	09.11.2021	13.11.20	06.11.20	60008739 PrdOrd 152 16.000 PC	17:41:30	001	LM01	16	PC	33
		X	X		3293487	0010 LMPC_HALB_34	MA3	LMPC wst 3	08.11.2021	16:24:34	09.11.2021	16.11.2021	23.11.2021	19.11.20	23.11.20	60008676 PrdOrd LMPC_FERT_34 32.000 P	09:00:34	001	LM01	32	PC	74
		X	X		3308148	0020 153	MA5	LMPC wst 5	09.11.2021	07:00:00	10.11.2021	11.11.2021	10.11.2021	15.11.20	09.11.20	3308143 PlOrd. 152 8.000 PC	16:02:30	001	LM01	33	PC	0
		X			60008739	0010 152	MA2	LMPC wst 2	09.11.2021	09:55:00	10.11.2021		06.09.2021	11.11.20	05.11.20	Safest 12.000 PC	08:15:00	001	LM01	28	PC	0
		X			3297212	0010 161	MA1	LMPC wst 1	03.11.2021	06:00:00	03.11.2021	09.11.2021	03.11.2021	12.11.20	03.11.20	3308965 PlOrd. 162 23.000 PC	13:30:00	001	LM01	36	PC	61
		X			3297244	0010 LMPC_HALB_SR	MA1	LMPC wst 1	03.11.2021	06:00:00	03.11.2021	09.11.2021	06.09.2021	12.11.20	06.09.20	VSF IndReq LMPC_HALB_SR 5.000 PC	09:01:15	001	LM01	7	PC	34
		X			3297245	0010 LMPC_HALB_SR	MA1	LMPC wst 1	03.11.2021	06:00:00	03.11.2021	09.11.2021	03.09.2021	12.11.20	13.09.20	VSF IndReq LMPC_HALB_SR 2.000 PC	09:01:00	001	LM01	8	PC	26

Restored Production Plan

The production plan from the planning version has been restored.

The function restores not only the times of the dispatched operations. It also restores the dates of the non-dispatched operations if these are not in the past.

If planned orders have been converted to production orders or process orders since a version has been saved, the new orders are set to the defined start times of the earlier planned orders.

If you now want to use this production plan for production, use the standard save function to save it. This writes it to the database.

### ! Restriction

- Restoring a planning version involves dispatching operations to saved start times in the simulation.
- The plan versions are not a function for completely restoring a dataset. This function can only be used to restore the planning sequence of operations. To do this, the operations are scheduled for the times stored in the plan version.
- It is not possible to dispatch into the past. If the times of the operations that are stored in the version are already in the past, these times are transferred to the dispatching function anyway. Since the

dispatching function does not dispatch into the past, the operations are dispatched in the saved sequence into the future, from the current point in time. As a result of this procedure, the saved production plan of the version is moved to the present.

- When operations are moved to the present, no planning logic of other LMPC HJPT planning functions are taken into account, such as the LMPC HJPT timetable, two-step dispatching, or dispatching by setup matrix. The function reschedules the operations strictly in the defined sequence, starting from the current time. Therefore, the shift to the present can also lead to planning gaps being closed.
- The data of the orders is saved for the user name and the selection of the work centers. A version can only be determined if exactly the same work centers have been specified in the selection when the planning table is called at a later point in time. If, for example, only some of the work centers or more work centers are selected than in an existing version, this version cannot be found.
- No version is saved using the regular save process. Data is only stored in a version using the action code.
- The change in operation quantity of an order is not taken into account. Changing the operation quantity usually changes the duration of an operation. If the quantities of an order have been changed since a version has been saved, this can lead to shifts or gaps in the restored production plan because dispatching takes place with the quantity currently valid.
- It is not possible to restore the change of the production version or the rescheduling of operations to other work centers. During recovery, the operations are dispatched to the work centers to which they are currently assigned.
- Deleted orders cannot be restored.
- The conversion of planned orders into production or process orders cannot be reset.
- Status changes to orders that are a result of orders being released or the material availability check being executed, for example, cannot be reversed.
- The changes to standard values, such as setup times, cannot be undone.
- The function of the work center filters can have a negative effect on the saving of planning versions. In contrast to filters of the ALV Grid that only hide the data records, the work center filters' function filters out the data records in such a way that they cannot be processed by action codes. This means that all data records that are filtered by work center filters are not stored in a plan version. Therefore, it is recommended to avoid the use of work center filters when working with plan versions. [Work Center Filter \[page 46\]](#)

## 2.6.4.32 Planning with Pool ID

HJPT Planning with Pool ID

When planning with pool ID, orders are grouped using an indicator, the pool ID. These groups can then be dispatched using planning functions.

There are three different types of planning with pool IDs:

- [Single-Level Planning with Pool ID \[page 217\]](#)
- [Two-Step Planning with Pool ID \[page 222\]](#)
- [Parallel Dispatching with Pool ID \[page 232\]](#)



## 2.6.4.32.1 Single-Level Planning with Pool ID

There are four action codes for single-level planning with pool ID:

- [S\\_POOLID Create Order Pool Manually \[page 217\]](#)
- [S\\_POOLA Automatically Create Order Pool \[page 218\]](#)
- [S\\_EPSELP Single-Level Dispatching with Pool ID \[page 219\]](#)
- [S\\_APSELP Deallocate with Pool ID \[page 221\]](#)

### 2.6.4.32.1.1 S\_POOLID Create Order Pool Manually

Create LMPC Order Pool Manually

#### Use

You can use this action code to assign a shared identification, the pool ID, to orders. The pool ID is always assigned per order. This means that all operations of an order have the same pool ID.

#### Procedure

The procedure is explained using an example. There are, for example, several planned orders for the materials LMPC\_FERT\_01 and LMPC\_FERT\_02 on multiple days. Instead of using the start dates resulting from requirements planning, you want to dispatch all orders, each for one material, for the coming days in immediate succession. To do this, you create an order pool for each material.

The data in the ALV Grid list is as follows at the beginning of planning:

Erp	Dispatched	Status Lock	Earliest start	Earl.start	Earliest finish	ErL.finish	Order	Material
			03.04.2017	10:35:37	03.04.2017	11:51:37	2741200	LMPC_FERT_01
			04.04.2017	11:00:00	04.04.2017	18:00:00	1200821	LMPC_FERT_02
			04.04.2017	11:00:00	04.04.2017	18:00:00	1200821	LMPC_FERT_02
			05.04.2017	06:00:00	05.04.2017	06:10:00	1200868	LMPC_FERT_03
			05.04.2017	06:00:00	05.04.2017	06:10:00	1200868	LMPC_FERT_03
			05.04.2017	11:00:00	05.04.2017	18:00:00	1200826	LMPC_FERT_02
			05.04.2017	11:00:00	05.04.2017	18:00:00	1200826	LMPC_FERT_02
			05.04.2017	12:40:00	05.04.2017	18:00:00	1200840	LMPC_FERT_03
			05.04.2017	12:40:00	05.04.2017	18:00:00	1200840	LMPC_FERT_03
			05.04.2017	17:21:49	19.04.2017	10:37:49	2741552	LMPC_FERT_04
			05.04.2017	17:21:49	19.04.2017	10:37:49	2741552	LMPC_FERT_04

Operations Before Scheduling

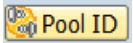
Now select all the operations for the first material. You can also sort the list by material before selecting.

You then choose the button  (S\_POOLID) and confirm the popup window.

Order operations that are assigned to the same order pool are assigned the same identification number in the field "Order Pool". If the field is not shown, you can find it in the group of the HJPT help fields.

Then repeat the selection and pool generation for the next material.

If you forgot operations when forming a pool, you can simply add them to an existing pool. To do this, you must select at least one order operation from the order pool and the operations that you want to add. Then execute

the function  (S\_POOLID) again.

**Result:** You have now created two order pools. The start dates for the orders have not been changed.

EB	Dispatched	Status	Lock	Earliest start	Earl.start	Earliest finish	ErL.finish	Order	Material	Order pool
				27.03.2017	11:05:20	28.03.2017	06:05:20	2740560	LMPC_FERT_02	39
				27.03.2017	11:05:20	28.03.2017	06:05:20	2740561	LMPC_FERT_02	39
				27.03.2017	11:05:20	28.03.2017	06:05:20	2740562	LMPC_FERT_02	39
				27.03.2017	11:05:20	28.03.2017	06:05:20	2740563	LMPC_FERT_02	39
				27.03.2017	11:05:20	28.03.2017	06:05:20	2740564	LMPC_FERT_02	39
				27.03.2017	11:05:20	28.03.2017	06:05:20	2740565	LMPC_FERT_02	39
				27.03.2017	11:05:20	28.03.2017	06:05:20	2740566	LMPC_FERT_02	39
				27.03.2017	11:05:20	28.03.2017	06:05:20	2740567	LMPC_FERT_02	39
				24.03.2017	06:00:00	24.03.2017	07:20:00	2740639	LMPC_FERT_03	38
				24.03.2017	06:00:00	24.03.2017	07:20:00	2740640	LMPC_FERT_03	38
				24.03.2017	06:00:00	24.03.2017	07:20:00	2740641	LMPC_FERT_03	38
				24.03.2017	06:00:00	24.03.2017	07:20:00	2740642	LMPC_FERT_03	38

Order Operations with Pool Assignment

## Removing Pool IDs

The pool ID is removed in the same way as an order pool is formed.

Select the orders for which you want to remove the pool ID.

Execute the action code  (S\_POOLID).

If the function is executed on orders that already have a pool ID, the pool IDs are removed from these orders.

## Related Information

[S\\_POOLID, S\\_POOLA Configuration: Creation of Order Pools](#)

### 2.6.4.32.1.2 S\_POOLA Automatically Create Order Pool

Automatically Assign Pool ID

#### Use

This action code enables you to group orders according to rules. These rules are predefined in the Customizing settings.

This makes it possible to simplify and accelerate the creation of order pools.

Rules are defined by specifying grouping fields. For example, orders can be grouped in order pools automatically by work center and material number.

The action code is usually used in dialog processing. However, it can also be used to execute the pool ID assignment at regular intervals using a job in the background. This can be useful, for example, if there are new orders in the system after an MRP run. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

For details on configuring the action codes, see the LMPC Configuration Guide.

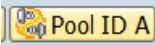
#### Procedure

Initially, no pool IDs have been assigned. In this example, the settings in Customizing are set in such a way that the orders are grouped for each work center and material number.

Select the orders that you want to receive a pool ID.

Alert	Dispat...	Order pool	Order	Material	Work ctr	Operation Qty	Req. date
			2770241	LMPC_HALB_34	MA2	5	22.08.2019
			2929760	LMPC_HALB_12	MA1	80	17.08.2019
			2929763	LMPC_HALB_12	MA1	62	17.08.2019
			2925426	LMPC_HALB_12	MA1	9	11.06.2019
			2925427	LMPC_HALB_12	MA1	23	11.06.2019
			2928618	LMPC_HALB_34	MA2	5	22.08.2019
			2925426	LMPC_HALB_12	MA2	9	11.06.2019
			2928618	LMPC_HALB_34	MA2	5	22.08.2019

Initial Situation

Execute the action code for automatic pool generation.  (S\_POOLA)

Result:

Alert	Dispat...	Order pool	Order	Material	Work ctr	Operation Qty	Req. date
		459	2770241	LMPC_HALB_34	MA2	5	22.08.2019
		459	2928618	LMPC_HALB_34	MA2	5	22.08.2019
		458	2929760	LMPC_HALB_12	MA1	80	17.08.2019
		458	2929763	LMPC_HALB_12	MA1	62	17.08.2019
		458	2925426	LMPC_HALB_12	MA1	9	11.06.2019
		458	2925427	LMPC_HALB_12	MA1	23	11.06.2019
			2925426	LMPC_HALB_12	MA2	9	11.06.2019
			2928618	LMPC_HALB_34	MA2	5	22.08.2019

Result of Automatic Pool Formation

You can see that a pool ID has been assigned for each work center and material number.

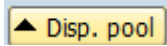
## Related Information

[S\\_POOLID, S\\_POOLA Configuration: Creation of Order Pools](#)

### 2.6.4.32.1.3 S\_EPSELP Single-Level Dispatching with Pool ID

Dispatch Order Pools

#### Use

The action code  (S\_EPSELP) can be used to dispatch order pools. Orders with the same pool ID are dispatched consecutively.

The prerequisite for this function is that you have previously used a function for creating order pools to assign a pool ID for the respective operations. Order pools are created manually by the planner or automatically according to predefined properties of the operations.

- [S\\_POOLID Create Order Pool Manually \[page 217\]](#)
- [S\\_POOLA Automatically Create Order Pool \[page 218\]](#)

This function allows you to dispatch operations that have the same properties in a block.

## Procedure

Select at least one operation in an order pool:

S\_EPSELP Selection

Alert	Dispat..	Order pool	Order	Material	Work ctr	Operation Qty	Req. date	
		459	2770241	LMPC_HALB_34	MA2	5	22.08.2019	S
		459	2928618	LMPC_HALB_34	MA2	5	22.08.2019	S
		458	2929760	LMPC_HALB_12	MA1	80	17.08.2019	S
		458	2929763	LMPC_HALB_12	MA1	62	17.08.2019	S
		458	2925426	LMPC_HALB_12	MA1	9	11.06.2019	S
		458	2925427	LMPC_HALB_12	MA1	23	11.06.2019	S

Execute the action code  (S\_EPSELP).

Result:

Alert	Dispat..	Order pool	Order	Material	Work ctr	Operation Qty	Req. date	
	X	458	2929760	LMPC_HALB_12	MA1	80	11.06.2019	S
	X	458	2929763	LMPC_HALB_12	MA1	62	03.09.2019	S
	X	458	2925426	LMPC_HALB_12	MA1	9	03.09.2019	S
	X	458	2925427	LMPC_HALB_12	MA1	23	09.09.2019	S
		459	2770241	LMPC_HALB_34	MA2	5	22.08.2019	S
		459	2928618	LMPC_HALB_34	MA2	5	22.08.2019	S
			2928618	LMPC_HALB_34	MA2	5	22.08.2019	S
			2929767	LMPC_HALB_12	MA1	30	29.08.2019	S

### Dispatching Result

All operations that belong to the same pool ID were dispatched at the same time. They were dispatched at the earliest possible time.

You can dispatch several different order pools at the same time. If you select several order pools at the same time, the system sorts by pool ID before dispatching. Operations with a lower pool ID are dispatched first, then the operations with the higher pool ID.

Within an order pool, the operations are sorted according to their start time before dispatching. The assumption behind this is that operations that are scheduled earlier should also be dispatched earlier.

During dispatching, the end time of the operation is determined after each operation has been dispatched, and this time is used as the start time for the next operation.

If you have operations in the pool grouping that belong to different work centers, you can use this function to carry out cross-work-center planning. Subsequent operations do not start until the operations are finished. Only the times of the operations are taken into account, meaning the times of the capacity requirements.

### → Remember

You can use a parameter in Customizing to activate manual planning. In this case, the function first asks for the desired date for dispatch in a dialog box. Depending on the settings in the strategy profile used, this is the start date or the end date for dispatching.

Start time first operation
✕

Start Date	<input style="width: 90%;" type="text" value="15.03.2021"/>
Start Time	<input style="width: 90%;" type="text" value="16:00:00"/>

Entry of Start Date and Start Time

In backward scheduling, note the following: If the capacity offer is not sufficient and the operations must be dispatched in the past, dispatching terminates and does not dispatch the operations.

## Related Information

[S\\_EPSELP Configuration: Single-Level Dispatching with Pool ID](#)

### 2.6.4.32.1.4 S\_APSELP Deallocate with Pool ID

Deallocate Pool Orders

#### Use

You can use this action code to deallocate orders that have a pool ID collectively. This means you can deallocate by group.

#### Procedure

Select at least one order in an order pool:

Alert	Dispat...	Order pool	Order	Material	Work ctr	Operation Qty	Req. date
	X	458	2929760	LMPC_HALB_12	MA1	80	11.06.2019
	X	458	2929763	LMPC_HALB_12	MA1	62	03.09.2019
	X	458	2925426	LMPC_HALB_12	MA1	9	03.09.2019
	X	458	2925427	LMPC_HALB_12	MA1	23	09.09.2019
		459	2770241	LMPC_HALB_34	MA2	5	22.08.2019
		459	2928618	LMPC_HALB_34	MA2	5	22.08.2019

Selection

Execute the action code Deal. Pool (S\_APSELP).

Result:

Alert	Dispat...	Order pool	Order	Material	Work ctr	Operation Qty	Req. date
		459	2770241	LMPC_HALB_34	MA2	5	22.08.2019
		459	2928618	LMPC_HALB_34	MA2	5	22.08.2019
		458	2929760	LMPC_HALB_12	MA1	80	11.06.2019
		458	2929763	LMPC_HALB_12	MA1	62	03.09.2019
		458	2925426	LMPC_HALB_12	MA1	9	03.09.2019
		458	2925427	LMPC_HALB_12	MA1	23	09.09.2019
			2928618	LMPC_HALB_34	MA2	5	22.08.2019
			2929767	LMPC_HALB_12	MA1	30	29.08.2019

Result of Deallocation

All orders with this pool ID have been deallocated.

#### → Tip

Dispatching and deallocation of pools is also possible for more than one order pool at a time. It is also possible to use background processing. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

This action code can also be used to deallocate two-level order pools.

## 2.6.4.32.2 Two-Step Planning with Pool ID

Planning with Orders from 2 Low-Level Codes

The function for two-step planning with pool ID, also known as the combined planning of semifinished and finished products, consists of two action codes:

- S\_PBLKFG Pool formation with BOM information
- S\_EPBKFG Scheduling semifinished and finished goods

In the first step, a pool of semifinished and finished product orders is created, using the action code S\_PBLKFG.

In the second step, you use the action code S\_EPBKFG to schedule the previously formed pool.

#### → Tip

This type of planning is highly complex and has a large number of setting options. Therefore, it is recommended that you commission consulting support for the implementation of this action code.

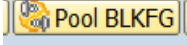
### 2.6.4.32.2.1 S\_PBLKFG Pool formation with BOM information

Create LMPC order pool from orders of two low-level codes

Select one or more orders of a semifinished product in the LMPC ALV Grid.

Alert	D	F	Work ctr	Order	OpAc	Cat	Cat Phase	Material	Subop	Earliest start	Earl.start	Earl. finish /date	Earl.finish time	Num.	Operation	Quantity	Order pool
X			MA1	2662026	0010	2	0	LMPC_HALB_12		12.11.2017	01:16:30	18.11.2017	15:40:00			24	
X			MA1	2678640	0010	2	0	LMPC_HALB_12		13.11.2017	14:20:19	18.11.2017	08:40:00			33	
X			MA1	2662035	0010	2	0	LMPC_HALB_12		14.11.2017	03:37:27	14.11.2017	11:40:00			6	

### Selection of Orders in the ALV Grid

You then execute the action code for forming the order pool  (S\_PBLKFG).

The function performs the following steps:

- Check if the selected orders have already been dispatched. Termination if this is not allowed by the parameter settings.
- Check whether the orders have already been assigned to a pool. Termination or removal of the orders with pool ID from the selection, depending on the parameter settings of the parameter `SELCCORR`.
- If adding to a pool via the parameter `SELCCORR` is allowed, check whether all selected operations contain a maximum of one pool ID. Different pool IDs are not allowed in the selection. Termination if this condition has been violated.
- Check whether the orders all have the same material number. Termination if this condition is not met.
- If adding to a pool is activated via the parameter `SELCCORR` and an order pool is available in the selection, it is checked whether all orders of the order pool that belong to this material have been selected. If not, the missing orders for this material are added to the selection. This is necessary so that the quantities of the semifinished material of a pool can be correctly assigned to the quantities of the finished material.
- Collect all orders that use this material as input and are open in the HJPT planning table for the orders of the semifinished product using the BOM information. Only orders that do not have a pool ID and have not yet been dispatched are selected. You can use parameter settings to allow orders that have already been dispatched and orders with the same pool ID as in the selection.
- Use the sort criteria from Customizing to sort the orders found, if criteria exist.
- Create the cumulative requirement quantity of the orders for the popup window.
- If the orders are to be added to an existing pool ID (parameter `SELCCORR`) and orders of the finished material already have the same pool ID, these operations are also displayed in the popup window. They are displayed in the first position and preselected.
- If the parameter `SELFG` is set, the checkboxes are additionally preselected in the popup window. The system proposes which orders are to be added to the pool. Since the quantities of the orders are rarely exactly the same, you can use parameter settings to specify a rule for the quantity selection. For example, you can assign at least the same quantity to the preselection ( $\geq$ ) or no more than the same quantity ( $\leq$ ).

Then the popup window for selecting the finished goods orders for pool formation is displayed.

Checkbox	Inp. Qty.	Rel. Qty	Cum.r.amt.	Unit	Order	Work ctr	Plant	Material	Earliest start	Earl.start	Earliest finish	Erl.finish	BOM comp. 1	BOM mdsr1	Batch 1	Reqm q
<input checked="" type="checkbox"/>	7	1	1	PC	60008153	MA1	LM01	LMPC_FERT_12	12.10.2019	16:30:00	12.10.2019	17:45:00	LMPC_HALB_12			
<input checked="" type="checkbox"/>	7	1	2	PC	2758698	MA3	LM01	LMPC_FERT_12	24.09.2019	15:30:00	24.09.2019	17:00:00	LMPC_HALB_12			
<input checked="" type="checkbox"/>	7	2	4	PC	2928627	MA3	LM01	LMPC_FERT_12	22.08.2019	13:30:00	22.08.2019	16:00:00	LMPC_HALB_12			
<input checked="" type="checkbox"/>	7	2	6	PC	2928632	MA3	LM01	LMPC_FERT_12	04.09.2019	13:30:00	04.09.2019	16:00:00	LMPC_HALB_12			
<input type="checkbox"/>	7	2	8	PC	2928639	MA3	LM01	LMPC_FERT_12	14.09.2019	13:30:00	14.09.2019	16:00:00	LMPC_HALB_12			
<input type="checkbox"/>	7	2	10	PC	2758699	MA3	LM01	LMPC_FERT_12	24.09.2019	13:30:00	24.09.2019	16:00:00	LMPC_HALB_12			
<input type="checkbox"/>	7	2	12	PC	60008189	MA3	LM01	LMPC_FERT_12	07.10.2019	13:30:00	07.10.2019	16:00:00	LMPC_HALB_12			
<input type="checkbox"/>	7	2	14	PC	60007837	MA4	LM01	LMPC_FERT_12	14.08.2019	06:00:00	14.08.2019	08:00:00	LMPC_HALB_12			
<input type="checkbox"/>	7	3	17	PC	2758696	MA3	LM01	LMPC_FERT_12	24.09.2019	11:30:00	24.09.2019	15:00:00	LMPC_HALB_12			
<input type="checkbox"/>	7	3	20	PC	2928640	MA3	LM01	LMPC_FERT_12	14.09.2019	11:30:00	14.09.2019	15:00:00	LMPC_HALB_12			
<input type="checkbox"/>	7	4	24	PC	2928637	MA3	LM01	LMPC_FERT_12	11.09.2019	09:30:00	11.09.2019	14:00:00	LMPC_HALB_12			
<input type="checkbox"/>	7	4	28	PC	2758697	MA3	LM01	LMPC_FERT_12	24.09.2019	09:30:00	24.09.2019	14:00:00	LMPC_HALB_12			
<input type="checkbox"/>	7	4	32	PC	2758700	MA3	LM01	LMPC_FERT_12	24.09.2019	09:30:00	24.09.2019	14:00:00	LMPC_HALB_12			
<input type="checkbox"/>	7	5	37	PC	2758701	MA3	LM01	LMPC_FERT_12	25.09.2019	07:30:00	25.09.2019	13:00:00	LMPC_HALB_12			
<input type="checkbox"/>	7	7	44	PC	2758693	MA3	LM01	LMPC_FERT_12	20.09.2019	15:30:00	21.09.2019	11:00:00	LMPC_HALB_12			
<input type="checkbox"/>	7	8	52	PC	60008099	MA1	LM01	LMPC_FERT_12	03.09.2019	10:22:30	03.09.2019	16:00:00	LMPC_HALB_12			
<input type="checkbox"/>	7	10	62	PC	2758691	MA3	LM01	LMPC_FERT_12	18.09.2019	09:30:00	19.09.2019	08:00:00	LMPC_HALB_12			
<input type="checkbox"/>	7	10	72	PC	2928635	MA3	LM01	LMPC_FERT_12	09.09.2019	09:30:00	10.09.2019	08:00:00	LMPC_HALB_12			
<input type="checkbox"/>	7	10	82	PC	2758694	MA3	LM01	LMPC_FERT_12	20.09.2019	09:30:00	21.09.2019	08:00:00	LMPC_HALB_12			
<input type="checkbox"/>	7	11	93	PC	2758695	MA3	LM01	LMPC_FERT_12	21.09.2019	07:30:00	22.09.2019	07:00:00	LMPC_HALB_12			

Popup window for selecting orders for finished products

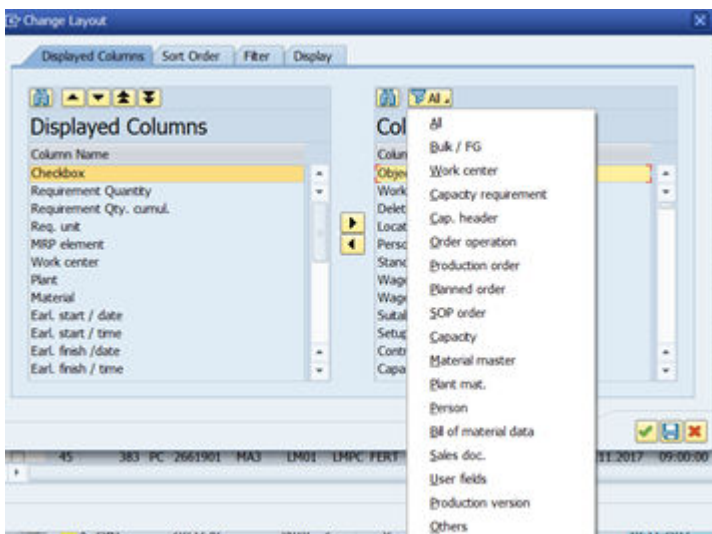
You can use the layout settings of the ALV Grid to select the fields that are to be displayed. The ALV Grid contains all fields of the LMPC ALV Grid.

This ALV Grid also contains the additional fields:

- Checkbox
- Input quantity
- Related quantity
- Cumulated related quantity
- Unit of related quantity

The layout also contains the layout groups of the LMPC ALV Grid to facilitate selection of the fields. Users can create and save their own profiles.

For this ALV Grid there is an additional group for the fields of the pool formation.



Layout settings popup window



Users can use the checkboxes in the first column of the ALV Grid to select the orders that are to be grouped in a pool.

Bulk Total. Qty. Production							39	PC
Checkbox	Req.	Req.cumul.	Unit	MRP elem.	Work ctr	Plant	Material	
<input checked="" type="checkbox"/>	6	6	PC	2661896	MA3	LM01	LMPC_FERT_12	
<input checked="" type="checkbox"/>	9	15	PC	2661897	MA3	LM01	LMPC_FERT_12	
<input checked="" type="checkbox"/>	9	24	PC	2678184	MA3	LM01	LMPC_FERT_12	
<input checked="" type="checkbox"/>	10	34	PC	2661894	MA3	LM01	LMPC_FERT_12	
<input type="checkbox"/>	16	50	PC	2661898	MA3	LM01	LMPC_FERT_12	
<input type="checkbox"/>	16	66	PC	2678185	MA3	LM01	LMPC_FERT_12	
<input type="checkbox"/>	17	83	PC	2678186	MA3	LM01	LMPC_FERT_12	
<input type="checkbox"/>	17	100	PC	2661899	MA3	LM01	LMPC_FERT_12	
<input type="checkbox"/>	28	128	PC	2678187	MA3	LM01	LMPC_FERT_12	

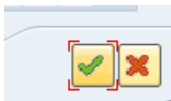
Selection of Orders

The input quantity column returns the quantity that originates from the selected orders. In this example, this is the cumulated quantity of the orders of the semifinished material.

The "Related Quantity" column returns the quantity that comes from the order in question in the popup window. In this example, this is the requirement quantity of semifinished materials that this order requires for the production of the finished product.

The "Cumulated Related Quantity" column is the sum from the top to the bottom of the related quantity via the orders. This makes it easier to select the orders for pool formation. The user can easily see which orders he needs to add for the input quantity to be the same as the related quantity.

The user chooses the OK button at the bottom right of the popup window to confirm the selection.



After confirmation, a check is performed. If the setting is set so that operations can be added to an existing pool (parameter SELCORR) and if orders were previously assigned to the order pool and are now no longer assigned, the pool ID is removed from the relevant order.

All orders that were selected using the selection field for creating the order pool are now combined into one order pool.

If a pool ID already exists in one of the orders in the selection, this is transferred to all orders. If a pool ID does not yet exist, a new pool ID is generated and entered in the selected orders.

As in the single-level pool function, the new pool ID is read from the number range that is maintained in the overall profile. If no number range is maintained there, a random GUID is generated. The pool ID is not intended to be assigned manually.

Finally, the system selects the operations of the orders that were grouped in a pool in the LMPC ALV Grid. Operations for which the pool ID was removed are not selected.

Alert	D	F	Work ctr	Order	OpAc	Cat	Cat Phase	Material	Subop	Earliest start	Earl.start	Earl. finish /date	Erl.finish time	Num.	Operation	Quantity	Order pool
				X MA3	2661892	0000	2	0	LMPC_FERT_12	06.11.2017	06:00:00	06.11.2017	16:30:00			34	
				X MA3	2661894	0000	2	0	LMPC_FERT_12	06.11.2017	06:00:00	06.11.2017	16:30:00			10	73
				X MA3	2661896	0000	2	0	LMPC_FERT_12	06.11.2017	06:00:00	06.11.2017	12:30:00			6	73
				X MA3	2661897	0000	2	0	LMPC_FERT_12	06.11.2017	06:00:00	06.11.2017	15:30:00			9	73
				X MA3	2661898	0000	2	0	LMPC_FERT_12	06.11.2017	06:00:00	07.11.2017	10:30:00			16	
				MA3	2678184	0000	2	0	LMPC_FERT_12	06.11.2017	06:00:00	06.11.2017	15:30:00			9	73
				MA3	2678185	0000	2	0	LMPC_FERT_12	06.11.2017	06:00:00	07.11.2017	10:30:00			16	
				MA3	2678186	0000	2	0	LMPC_FERT_12	06.11.2017	06:00:00	07.11.2017	11:30:00			17	

Selected Operations in the ALV Grid

The pool ID is entered in simulation mode. Only after planning has been saved in the HJPT planning table are the values actually stored in the database tables.

In this example, the pool formation was performed from the semifinished product to the finished product.

Pool formation is also possible in the opposite direction, from the finished product to the semifinished product. This can be controlled using a parameter.

It is possible to automate the combination of the orders. It can be set that the orders are automatically selected and added by the logic. In this case, the system no longer displays a popup window. This is semi-automatic execution.

Full automation using background processing, such as a planning job at night, is also possible. Grouping settings can be used to control the grouping of orders in order pools. This is similar to the automatic pool formation of the action code S\_POOLA. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

For details on the configuration options, see the LMPC Configuration Guide.

## Related Information

[S\\_PBLKFG Configuration: Pool Formation with BOM](#)

### 2.6.4.32.2.2 S\_EPBKFG Two-Step Dispatching with Pool ID

Dispatching Using Two Low-Level Codes with Pool ID

#### Use

You can use this action code to dispatch an order pool that was created with the function "Pool Formation with BOM Information" (S\_PBLKFG).

This order pool consists of orders that are used to produce materials that are linked to one another through the bill of material. For example, these are manufacturing orders of a semifinished material that are included in the manufacturing orders of a finished product.

The logic dispatches these orders according to a complicated set of rules.

#### Procedure

Select one or more order operations of one or more order pools.

Alrt	D	F	Work ctr	Order	OpAc	Cat	Cat Phase	Material	Subop	Earliest start	Earl.start	Earl. finish /date	Erl.finish time	Num	Operation	Quantity	Order pool
X			MA1	2678191	0000	2	0	LMPC_HALB_12		15.11.2017	07:50:47	17.11.2017	09:40:00			20	102
X			MA2	2678191	0000	2	0	LMPC_HALB_12		17.11.2017	09:40:00	18.11.2017	17:40:00			20	102
X			MA3	2661896	0000	2	0	LMPC_FERT_12		17.11.2017	17:30:00	18.11.2017	12:00:00			6	102
X			MA3	2661891	0000	2	0	LMPC_FERT_12		18.11.2017	09:30:00	18.11.2017	14:00:00			4	102
X			MA4	2661896	0000	2	0	LMPC_FERT_12		18.11.2017	12:00:00	18.11.2017	18:00:00			6	102
X			MA4	2661891	0000	2	0	LMPC_FERT_12		18.11.2017	14:00:00	18.11.2017	18:00:00			4	102

### Selection of Operations

Execute the action code  (S\_EPBKFG).

The function performs the following steps:

- Check whether all selected order operations have a pool ID. Operations without a pool ID are removed from the selection.
- Collect all pool IDs from the selected operations.
- Process the following steps for each Pool ID found. The processing sequence of the pool IDs depends on their order in the ALV Grid or (depending on the configuration) the planning order defined in transaction / LMPC/MAT\_SEQ.
- Start with the first pool ID found and collect all order operations for the pool ID.
  - If parameter CHECKFIX is set, the pool is ignored if it contains at least one fixed order. Note that dispatched planned orders are always fixed, meaning that planned orders cannot be rescheduled if the parameter is set.
- Identify which orders are semifinished products and which orders are finished goods orders. The orders are identified using the BOM components from the ALV Grid. If a particular component number has been specified in Customizing, only this single component is checked. If not, then all components are taken into account during the check.
- If it is not possible to identify the orders (for example, there is no semifinished product order in the pool), the function terminates with an error message.
- Determine the dispatching distribution of the order between start and end date. Dispatching is to be the earliest or the latest point in time. The setting is determined from the pool order. It is assumed that the planning settings are the same for all open work centers. The function uses either the earliest or the latest date for planning.
- The function allows planned orders to be rescheduled: Check whether operations of the orders in the pool have been planned. If so, unplan these order operations first.
- If a sort order has been specified via the parameter SRTFLD, the semifinished goods and finished goods orders are sorted according to this sort order before dispatching.
- If the parameter EPTBSQ is set, the semifinished goods orders are presorted for dispatching using the function for sorting the orders according to the table order S\_EPTBSQ.
- If neither parameter SRTFLD nor parameter EPTBSQ was used, the orders remain in the same dispatching sequence as they were read from the LMPC ALV Grid.
- First, dispatch the orders of the semifinished product. Dispatching uses the strategy profile, from the Customizing parameter STRBLK. If no strategy profile has been transferred, dispatching uses the strategy profile for single planning from the HJPT overall profile. If the checkbox "Dispatching at the earliest point in time" is set in the strategy profile, the semifinished goods orders are dispatched as early as possible. Otherwise, at the point in time defined by the MRP run (note the following exceptions). There are exceptions to this logic, if specific parameters are set:
  - If the parameter MANP is set, the function uses a popup window to query a start date and a start time for dispatching the orders. This start time is transferred to the first operation of the semifinished products for dispatching. The other operations are dispatched accordingly after this first operation. If the parameter MANP is used, planning must not be set at the earliest point in time in the strategy profile.

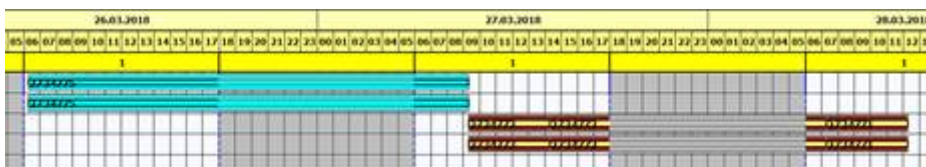
Start time ✕

Start Date	16.06.2021
Start Time	12:00:00 <input type="checkbox"/>



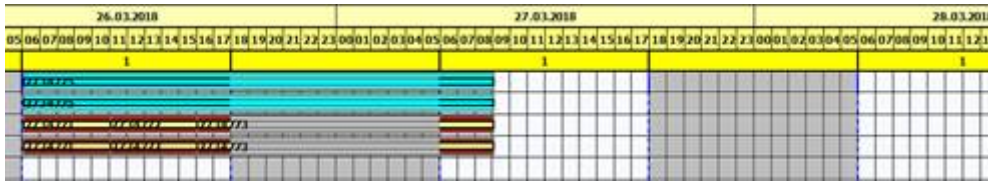
**Query Start Time**

- If parameter `DAYPLAN` is set, the date assigned by the MRP run will be used, however, the time for dispatching will be set to 00:00. This allows per-day planning.
- If parameter `DAYPLAN` is set along with parameter `DAYRESC`, planning is per-day. In addition, all orders that have already been dispatched on the day on which the respective selected semifinished product order is to be dispatched, are loaded into the planning pool. This means that all planned orders on that day are rescheduled. This parameter is particularly useful in conjunction with the `EPTBSQ` parameter, for planning all orders of one day in the sequence from the Customizing table.
- If the parameter `CONSEFG` is set along with the parameter `DAYPLAN`, the pool is always dispatched directly after the latest dispatched pool on the respective day. If the dispatched pool is in the past, the current time is used instead.
- If the parameter `CONSEFG` is set and the parameter `DAYPLAN` is not set, the pool order will be dispatched directly after the latest dispatched pool. If the dispatched pool is in the past, the current time is used instead.
- If the parameter `FIND_GAP` is set to "X", the system searches for a planning gap large enough in which to plan semifinished and finished goods. If the parameter is set to `P` (only useful for planning with drag and drop), planning is aborted if the selected gap is too small. This parameter causes semifinished and finished goods orders and operations always to be planned contiguously.
- If the parameter `FG_NOGAP` is set, the order pool is only planned into slots in which gaps between semifinished and finished goods cannot occur (for `ENST` relationship only).
- After dispatching the semifinished product orders, the dispatching date/time for the finished goods orders is determined. There are two options (settings in parameter `DISPREL`):
  - End-Start-Relationship (bulk to finished goods): Parameter `DISPREL`, value `ENST` or initial/not set. The order dispatched as the last semifinished material order in terms of time is determined. Depending on the situation, the end date (`FENDD` earliest end / date or `SENDD` latest end / date) and the end time (`FENDU` earliest end / date, or `SENDU` latest end / time) are read from this order. This is where dispatching starts for the associated finished goods.



**End-Start Relationship (Semifinished Material Order Cyan)**

- Start-Start-Relationship (semifinished to finished goods): Parameter `DISPREL`, value `STST`. The order dispatched as the last semifinished material order in terms of time is determined. Depending on the situation, the start date (`FSTAD` earliest start / date or `SSTADD` latest start / date) and the start time (`FSTAU` earliest start / date, or `SSTAU` latest start / time) are read from this order. This is where dispatching starts for the associated finished goods, meaning in parallel.



### Start-Start Relationship (Semifinished Material Order Cyan)

- Finished goods are dispatched using the strategy profile that was transferred using the Customizing parameter `STRFG`. If no strategy profile has been transferred, dispatching uses the strategy profile from the HJPT overall profile.
- The planning result of the finished product orders comes from the connection between the settings from the strategy profile and the parameter `INVERS`. If this parameter is set, the planning order is reversed.
- The finished products are dispatched in their assigned work centers/resources. If there are finished product orders in different work centers/resources, dispatching for the respective resource always starts with the end date and time of the semifinished goods orders. This results in parallel dispatching.
- Inserting an order pool into existing planning could result in shift effects for order pools already dispatched. To avoid these effects, parameter `RESCFOL` was developed. If the parameter `RESCFOL` is set, after a pool has been dispatched the system checks whether there are dispatched pools that are after the newly dispatched pool in terms of time. These will all be rescheduled.

Result (here end-start relationship):

OpAc	Mat	Subop	Earliest start	Earl.start	Earl. finish / date	Earl. finish time	Op. Num	Operation Quantity	Order pool
0010	LMPC_HALB_12	13.11.2017	16:59:30	14.11.2017	18:34:43		20	102	
0020	LMPC_HALB_12	15.11.2017	06:00:00	16.11.2017	14:00:00		20	102	
0010	LMPC_FERT_12	16.11.2017	14:00:00	17.11.2017	08:30:00		6	102	
0010	LMPC_FERT_12	17.11.2017	08:30:00	17.11.2017	13:00:00		4	102	
0020	LMPC_FERT_12	16.11.2017	14:00:00	17.11.2017	06:00:00		6	102	
0020	LMPC_FERT_12	17.11.2017	08:00:00	17.11.2017	12:00:00		4	102	

### Dispatching Result

The semifinished material orders have been dispatched as early as possible. The finished goods orders start at the end of the last semifinished material order of the order pool.

#### → Tip

The action code can also be configured for background processing using the program `/LMPC/HJPT`.  
[Program /LMPC/HJPT Background Processing \[page 19\]](#).

#### ! Restriction

- The function can only be used for precisely the use cases described here. The function cannot be used for other cases that are not described here.
- Individual capacities are not supported.
- There are basically two different variants for dispatching:
  - The operations of the semifinished materials of an order pool start in parallel with the operations of the finished products of an order pool.
  - The operations of the semifinished product of an order pool start first and are processed completely. The operations of the finished materials of an order pool do not start until all operations of the semifinished material for this pool have been completed. The production of the finished materials therefore starts at the end of the last operation of the semifinished materials of the order pool.
  - Other planning situations of the operations, such as starting the finished products offset while the production of semifinished products is still running, are not possible. Overlapping of orders is not supported.

- It is not possible to plan operations with suboperations.
- The planning of operations only works with the following data configuration:
  - All operations of the semifinished materials of an order pool are dispatched to the same work center.
  - All operations of the finished materials of an order pool are dispatched to a different work center than the semifinished materials.
  - The operations of the finished materials of an order pool are also all dispatched only to the same work center.
  - The orders of the semifinished material each consist of only one operation. It is not possible to use this function to plan orders that have two or more operations that are in different work centers. The same applies to all operations of the finished material for an order pool.

## Related Information

[S\\_EPBKFG Configuration: Two-Step Dispatching](#)

### 2.6.4.32.2.2.1 Two-Level Planning Using Drag and Drop

Planning in the Graphical Planning Chart Using Two Low-Level Codes

If context profile and action code are configured accordingly, two-level planning can be performed using drag and drop in the graphical planning chart.

#### ! Restriction

The logic supports dispatching and rescheduling, but not deallocating and shifting the orders in the order pool. The standard logic remains available for these actions.

Drag and drop behaves as follows for order pools:

1. **A semifinished product order operation is dispatched or rescheduled using drag and drop.**  
 When rescheduling, the operation can be moved to the same capacity. But it can also be rescheduled from one resource to another resource's capacity.  
 Important: Moving operations always calculates the time by which a task shifts. The whole order pool will also be shifted by this time.  
 This is independent of whether the operation is moved to the same capacity or to a capacity of another resource. So if you want to move an operation to another capacity, it is sufficient to move it up or down in the graphical planning chart.  
 The time at which it is then dispatched depends on the start time of the order pool, the sequence of the operations, and whether operations of the same pool are already in the capacity to which it is dragged. If there are multiple semifinished product operations in an order pool, the sequence of these operations cannot be changed using drag and drop.  
 You use drag and drop to specify only the time shift and the capacity for the operation. The sequence of the operations is determined by the sorting of the operations, which is set via the parameter `SORTFLD`.  
 Result:  
 The entire pool is rescheduled.

If an operation is moved to a capacity of another resource, only that operation is rescheduled to the new resource. The other operations of the order pool remain in their existing resources and are shifted only in terms of time.

All semifinished goods operations are given the same start time for the dispatching function.

If an order pool consists of several semifinished goods order operations, when an operation is shifted to another resource, the operations will be parallel in time, if no relationships are maintained between the orders, since they all have the same start time.

The operations on the same capacity will be in succession because parallel dispatching is not possible on the same capacity.

If finished goods orders have been moved individually, these changes will be lost. The finished goods are dispatched or rescheduled according to the set logic.

2. **A finished goods order operation of a dispatched pool is rescheduled/moved**

Result:

The finished goods order will be rescheduled, but not the entire pool. The finished goods orders can be moved to any position. They can be moved to the same capacity or to a capacity of another resource.

3. **A finished goods order operation of a pool not dispatched is dispatched**

Result:

The whole pool will be dispatched to the new date. If you drag a finished goods order from subscreen 3 to subscreen 1 or 2, the whole pool is dispatched.

All other cases are handled by the default LMPC HJPT logic.

### ! Restriction

Using drag and drop to dispatch an order pool between other order pools that have been dispatched is not supported. When using drag and drop, the subsequent order pools are not rescheduled or scheduled. The insertion of pools into an existing production plan can result in the operations of a subsequent pool being moved in such a way that the start dates of the semifinished products and finished products are no longer correct.

### i Note

Also note the restrictions in the unit on two-level dispatching. These are also valid. [S\\_EPBKFG Two-Step Dispatching with Pool ID \[page 226\]](#)

## 2.6.4.32.3 Multi-Level Planning with Pool ID

Only one pool ID can be saved for each order.

Since an order often supplies several other orders in multilevel hierarchies of orders, the pool ID cannot be used in a multilevel scenario to determine a dispatching hierarchy across multiple levels.

If you want to plan orders across several low-level codes, use multilevel planning via order relations.

[Multilevel Planning via Order Relations \[page 232\]](#)

### → Remember

- Although the pool ID cannot be used to define a scheduling hierarchy over several levels, it can be used to combine orders on one level into groups. In this way, groups of orders can be formed that are

simultaneously transferred to the dispatching function to be dispatched in a block. A description of this can be found in action code S\_EPML. [S\\_EPML, S\\_EPMLBW, S\\_EPMLFW Multilevel Planning \[page 241\]](#)

- The pool ID can also be used to form firmed order relations. [S\\_ORFIRM, S\\_ORFREL Firm Order Relations and Undo Firming \[page 235\]](#)

## 2.6.4.32.4 Parallel Dispatching with Pool ID

For a description of the parallel dispatching of operations with a pool ID, see the section on parallel planning in the HJPT planning table.

- [S\\_PBPRL Form Order Pool for Parallel Dispatching with Pool ID \[page 202\]](#)
- [S\\_EPPRLP Parallel Dispatching with Pool ID \[page 204\]](#)

## 2.6.4.33 Multilevel Planning via Order Relations

Planning Using All Low-Level Codes

It is often the case that a product is manufactured in several levels. Semifinished products are produced from the output materials, which are then included in the production of the finished product.

For production, orders are created at each stage for each intermediate and end material.

In the LMPC HJPT planning table, the order connections are determined using FIFO (first-in-first-out) logic via the MD04 data. These are updated dynamically each time data is changed.

However, it is also possible for the planner to define the links between the orders in order to establish links between the orders and their predecessors and successors.

In the LMPC HJPT planning table, several elements exist that can be used to read the order relations using the low-level codes.

Using the list of the order relations, you can use the low-level codes to display the production route with all upstream and downstream elements, starting from an order.



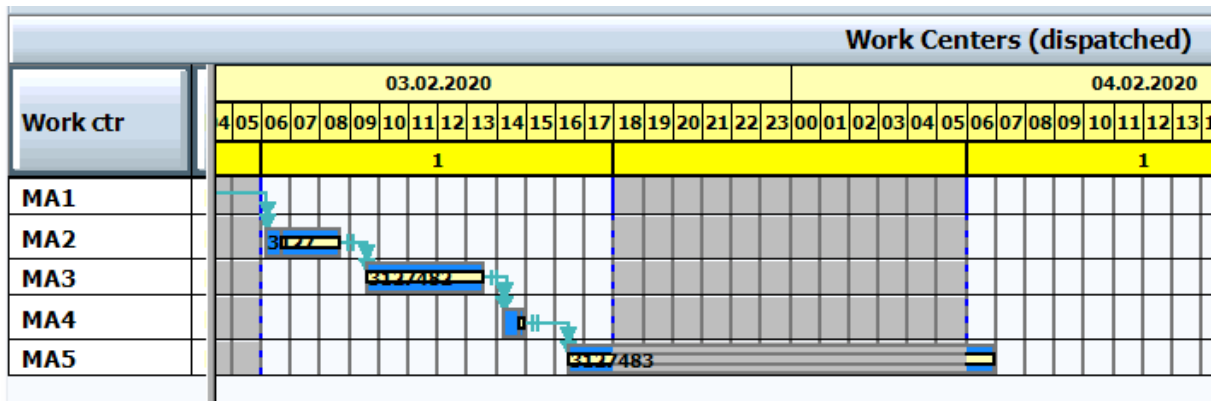
Level Code / Object number	MRP ...	MRP...	Material	Descr.	Rec. date	Qty ...	U..	Ava...	U..	Req. Date	RqDt. Cmp.	Avail...	U	PgR...	U...
3127796	PA	PIOrd.	LMPC_ROH_2		14.01.2020	3 PC	28	PC		19.03.2020		870	PC		12 PC
3127797	PA	PIOrd.	LMPC_ROH_2		14.01.2020	7 PC	35	PC		17.03.2020		870	PC		12 PC
3127798	PA	PIOrd.	LMPC_ROH_2		14.01.2020	28 PC	63	PC		17.03.2020		870	PC		12 PC
Level 1-															
3127600	PA	PIOrd.	LMPC_HALB_12		26.03.2020	6 PC	194-	PC		10.01.2020		189-	PC		30 PC
3127601	PA	PIOrd.	LMPC_HALB_12		27.03.2020	6 PC	194-	PC		10.01.2020		189-	PC		30 PC
3127602	PA	PIOrd.	LMPC_HALB_12		02.04.2020	8 PC	192-	PC		10.01.2020		189-	PC		30 PC
3127603	PA	PIOrd.	LMPC_HALB_12		03.04.2020	8 PC	192-	PC		10.01.2020		189-	PC		30 PC
3127604	PA	PIOrd.	LMPC_HALB_12		07.04.2020	14 PC	186-	PC		10.01.2020		189-	PC		30 PC
Level 0															
3127480	PA	PIOrd.	LMPC_FERT_12		15.01.2020	15 PC	108	PC		14.01.2020		110	PC		17 PC
Level 1															
3127443	PA	PIOrd.	LMPC_FERT_...		15.01.2020	5 PC	0.000	PC		13.01.2020	14.01.2020	12-	PC		10 PC
3127442	PA	PIOrd.	LMPC_FERT_...		15.01.2020	4 PC	5.000-	PC		07.01.2020	14.01.2020	8-	PC		8 PC
3127441	PA	PIOrd.	LMPC_FERT_...		15.01.2020	8 PC	9.000-	PC		02.01.2020	14.01.2020	0	PC		16 PC
Level 2															
VSF	PP	IndReq	LMPC_FERT_...								02.01.2020				8 PC
VSF	PP	IndReq	LMPC_FERT_...								07.01.2020				4 PC
VSF	PP	IndReq	LMPC_FERT_...								13.01.2020				5 PC

Production Hierarchy View

List of Order Relations [page 60]

You can see which successor order is delivered by which predecessor.

The links to the orders in the graphical part of the HJPT planning table can also be used to read the connections.



Graphic Link Lines

Connecting Lines for Bars in Bar Chart [page 28]

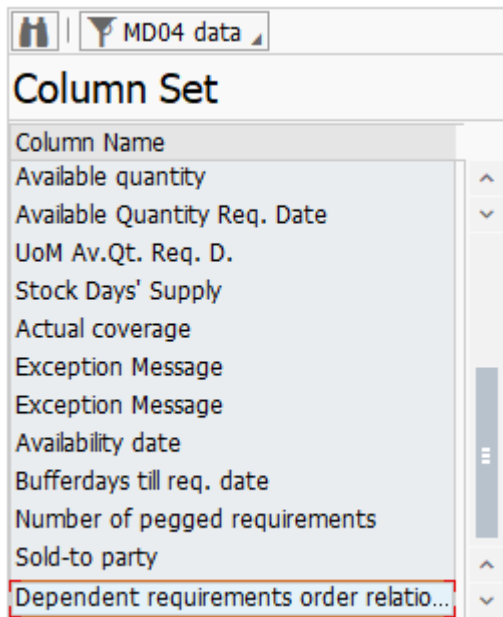
In the ALV Grid, you can display a dropdown field that contains the current assigned dependent requirements for each order.

Alert	Disp...	F...	Number	Order	OpAc	Cat	Material	Work ctr*	Dependent requirements order relations	R
	X	X		3127480	0010	001	LMPC_FERT_12	MA3	3127441 PA LMPC_FERT_1234 8.000 ST firm'd	1
	X	X		3127480	0020	001	LMPC_FERT_12	MA4	3127441 PA LMPC_FERT_1234 8.000 ST firm'd	1
	X	X		3127441	0010	001	LMPC_FERT_1234	MA5	3127442 PA LMPC_FERT_1234 4.000 ST firm'd	0
	X	X		3127442	0010	001	LMPC_FERT_1234	MA5	3127443 PA LMPC_FERT_1234 3.000 ST firm'd	0

Dropdown Field with Dependent Requirements

The field is called *Dependent Requirements Order Relations* and is in the layout group of the MD04 data.

**Dependent Requirements Order Relations** field



Dependent Requirements Order Relations Field

It contains the following data:

- MRP element number, for example, order number
- MRP element short description
- Material number
- Linked quantity
- Unit of measure
- Firming indicator

The field is filled using the data provider `/LMPC/CL_DP_BED`. [Data Provider /LMPC/CL\\_DP\\_BED LMPC Requirement Date and Order Relations \[page 336\]](#)

There are two functions for planning the order operations via the low-level codes that can be adapted to the planning requirements using extensive configuration options.

- [S\\_ORFIRM, S\\_ORFREL Firm Order Relations and Undo Firming \[page 235\]](#)
- [S\\_EPML, S\\_EPMLBW, S\\_EPMLFW Multilevel Planning \[page 241\]](#)

The two action codes are explained in the following chapters.

You can use the LMPC elements for multilevel planning to ensure that:

- The planner has an overview of delays, bottlenecks, or free production capacities at the respective low-level codes at all times.
- Dispatching is such that preliminary products are completed on time before the production of the finished materials is started.
- The correct quantity of preliminary product that is required for the production of the finished product is produced. This can help to reduce stockholding.

## 2.6.4.33.1 S\_ORFIRM, S\_ORFREL Firm Order Relations and Undo Firming

Establish Firmed Relations Between Orders. Across Low-Level Codes

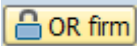
### Use

In the HJPT planning table, "order relations" are the relationships between the orders across low-level codes. In other SAP solutions, this is called "pegging".

For order relations, the (partial) quantity of one or more orders of a semifinished material is assigned to the requirement quantity of the components of one or more orders of a finished material. The relation is determined via the material BOM. The relationships can run on multiple levels via all low-level codes.

The HJPT planning table calculates the order relations using the material BOMs dynamically according to the first-in-first-out principle and displays these in the list of the order relations, in the ALV Grid field of the dependent requirements, and as lines between orders in the graphic.

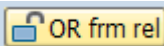
However, you may want certain orders of a component material to be firmly assigned to higher-level orders independently of first-in-first-out.

You can use the action code for firming order relations  (S\_ORFIRM) to establish precisely this firm relation between orders.

These firm relations are then taken into account when calculating the order relations for the order relations list and for the ALV Grid field of the dependent requirements.

The firm quantities of these orders can then no longer be used to create relations to other orders.

In multilevel dispatching, these firm relations are also taken into account to determine the correct sequence of the orders and their dispatching dates. ([S\\_EPML](#), [S\\_EPMLBW](#), [S\\_EPMLFW](#) [Multilevel Planning \[page 241\]](#))

You can use the action code for undoing the firm order relations  (S\_ORFREL) to undo the firm relations.

### → Tip

During the order conversion of planned to production or process orders, the order relations are retained.

### ! Restriction

- The firming of the order relation works only between orders. It is not possible to firm the warehouse stock or a sales order.
- Firm relationships can only be formed between operations that are open in the HJPT planning table.

### ⚠ Caution

The firming of order relations affects the "available quantity" field for an order in the ALV Grid. When the order is received, if it is linked to a dependent requirement, the linked quantity is not added to the available quantity because the quantity has already been assigned.

It is only counted as a receipt for the order to which it is linked.

On the other hand, when the dependent requirement retires the quantity, this quantity is then subtracted from the outgoing quantity and reduced so that the dependent requirement only consumes the quantity that has not yet been firm.

### Prerequisites

To firm using a suggestion list, the data provider must be active for the BOMs and the corresponding materials must be displayed in the BOM data so that they are found.

### Procedure

There are three ways of firming order relations:

- Selection of orders
- Automatic firming
- Firming using suggestion list

The action code can also only be used for the following actions:

- Display only existing relations
- Perform a consistency check on existing firming order relations

### Application Example:

Select one or more operations of orders in the LMPC ALV Grid.

Alert	Disp...	F...	Number	Order	OpAc	Cat	Material	Work ctr	Dependent requirements order relations
X			60008264	0010 001	LMPC_FERT_12	MA3	VSF PP LMPC_FERT_12 3.000 ST		
			3127441	0010 001	LMPC_FERT_12	MA3	VSF PP LMPC_FERT_12 1.000 ST		

Selection

Execute the action code  (S\_ORFIRM).

### Display Existing Relationships

If the action code is set so that it only displays the existing order relations, then the system determines all firming order relations for the selected operations forwards towards the finished material and backwards towards the starting material. This is displayed in a popup window.

Order Number	Material	Order Quantity	RQty. Comp.	Comp.Ord.Nr.	Comp. Material	Quantity Component	Qty related	BUn
3127441	LMPC_FERT_1234	8	8	60008264	LMPC_FERT_12	3	3	PC
60008264	LMPC_FERT_12	3	6	3127580	LMPC_HALB_12	6	6	PC

Display Firming Order Relations

The window contains the following fields:

- Order number of higher-level order
- Material number of higher-level order
- Order quantity of higher-level order
- Requirement quantity of component
- Order number of the assigned order for the component
- Material number of component
- Quantity of the order of the component

- Firmed linked quantity
- Unit of measure

### Form Firmed Relation via Selection

If the action code is set in such a way that the system searches for relationships between the selected operations, the BOMs of the orders are evaluated and relationships are created. The system searches for components for an order with a specific material. These quantities are then linked together.

The relation is only between the selected orders.

The relationships found are displayed.

Select.	Order Number	Material	Order Quantity	RQty. Comp.	Comp.Ord.Nr.	Comp. Material	Quantity Component	Qty related	BUn
<input checked="" type="checkbox"/>	3127441	LMPC_FERT_1234	8	8	60008264	LMPC_FERT_12	3	3	PC
<input checked="" type="checkbox"/>	60008264	LMPC_FERT_12	3	6	3127580	LMPC_HALB_12	6	6	PC

### Proposal for Firming of Order Relations

The user can now decide whether these relationships are to be firmed. You can use the checkbox in the first column to select or deselect entries.

The maximum possible quantity of an order for the component material is always linked to the higher-level order. It is not possible to change the quantity.

If the window is confirmed, the relations are firmed.

You can then see the firmed relationships in the ALV Grid field of the "dependent requirements order relations" and in the list of the order relations.

Dependent Requirements Order Relations Field:

Dependent requirements order relations	
60008264 FE LMPC_FERT_12 6.000 ST	firmed
60008264 FE LMPC_FERT_12 6.000 ST	firmed
3127481 PA LMPC_FERT_12 14.000 ST	

### Dependent Requirements Order Relations Field

This field shows all dependent requirements that are assigned to an order. These can be orders, planned independent requirements, and sales orders.

The field contains the following information:

- Order number of dependent requirements
- MRP element of dependent requirements
- Material number of dependent requirements
- Linked quantity
- Unit of measure
- Relation firmed or not.

List of Order Relations

Level Code / Object number	MRP ...	MRP ...	Material	Descr.	Rec. date	Qty ...	U..	Ava...	U..	Req. Date	RqDt. Cmp.	Aval...	U	PgR...	U...	Qty...	U..	Frm. OR
3127799	PA	PIOrd.	LMPC_ROH_2		14.01.2020	778 PC	884	PC		22.01.2020		712	PC	40 PC		40 PC		
Level 1-																		
3127580	PA	PIOrd.	LMPC_HALB_12		27.01.2020	20 PC	33	PC		24.01.2020		43	PC	6 PC		6 PC		X
Level 0																		
60008264	FE	PrdOrd	LMPC_FERT_12		27.01.2020	3 PC	29	PC		18.01.2020		31	PC	8 PC		3 PC		
Level 1																		
3127441	PA	PIOrd.	LMPC_FERT_...		20.01.2020	8 PC	9.000-	PC		02.01.2020	18.01.2020	0	PC	16 PC		3 PC		X
Level 2																		
VSF	PP	IndReq	LMPC_FERT_...								02.01.2020				8 PC		8 PC	

List of Order Relations

In the list of order relations, there is a column that shows whether the linked quantities are firming or not firming.

### Firming Using Suggestion List

If the action code is set to display a selection list, the system searches for suitable orders for each operation selected. Depending on the setting, the system searches either backwards in the direction of the source material only, forwards in the direction of the finished material only, or in both directions. The system always searches for each selected operation.

A popup window displays the orders for selection.

Qty Rel. u	F.Qty.Cmp.	Qty.Cmp.	R.RQt.Cmp.	RQty.Cmp.	Ord. Qty.	Unit	Ord. Nr.	Material	Comp. Material	Ord. Comp.	Earliest start	Earl.start	Earliest finish	Erl.finish
2	2	3	4	4	4	PC	3127442	LMPC_FERT_1234	LMPC_FERT_12	60008264	18.01.2020	16:15:00	18.01.2020	18:00:00
0	2	3	5	5	5	PC	3127443	LMPC_FERT_1234	LMPC_FERT_12	60008264	18.01.2020	16:07:30	18.01.2020	18:00:00
0	2	3	3	3	3	PC	3127444	LMPC_FERT_1234	LMPC_FERT_12	60008264	23.01.2020	16:22:30	23.01.2020	18:00:00
0	2	3	2	2	2	PC	3127445	LMPC_FERT_1234	LMPC_FERT_12	60008264	25.01.2020	16:30:00	25.01.2020	18:00:00
0	2	3	1	1	1	PC	3127446	LMPC_FERT_1234	LMPC_FERT_12	60008264	01.02.2020	16:37:30	01.02.2020	18:00:00
0	2	3	7	7	7	PC	3127447	LMPC_FERT_1234	LMPC_FERT_12	60008264	08.02.2020	15:52:30	08.02.2020	18:00:00
0	2	3	8	8	8	PC	3127448	LMPC_FERT_1234	LMPC_FERT_12	60008264	15.02.2020	15:45:00	15.02.2020	18:00:00
0	2	3	9	9	9	PC	3127449	LMPC_FERT_1234	LMPC_FERT_12	60008264	22.02.2020	15:37:30	22.02.2020	18:00:00
0	2	3	10	10	10	PC	3127450	LMPC_FERT_1234	LMPC_FERT_12	60008264	29.02.2020	15:30:00	29.02.2020	18:00:00
0	2	3	2	2	2	PC	3127451	LMPC_FERT_1234	LMPC_FERT_12	60008264	07.03.2020	16:30:00	07.03.2020	18:00:00
0	2	3	3	3	3	PC	3127452	LMPC_FERT_1234	LMPC_FERT_12	60008264	14.03.2020	16:22:30	14.03.2020	18:00:00
0	2	3	4	4	4	PC	3127453	LMPC_FERT_1234	LMPC_FERT_12	60008264	21.03.2020	16:15:00	21.03.2020	18:00:00

Selection List: Firming of Order Relations

For each order selected, the system displays all the orders that can be linked.

One line is generated per component and per assignable order.

Since the relations can be over several levels depending on the layout of the BOMs, a dialog box appears for each level.

In the first column of the window, you can specify which quantity is to be linked firmly. The system generates a proposal.

The window contains the following fields:

- Related quantity: Ready for input to define firming
- Quantity of component that can be firming: Quantity of the component material that is still free. It is therefore not yet firmly linked to another order.

- Component quantity: Quantity of the order of the component material
- Remaining requirement quantity components: Requirement quantity for components of the higher-level order, which is not yet firmly linked to other component orders.
- Requirement quantity components: Requirement quantity of higher-level order
- Order quantity Quantity of higher-level order
- Unit of measure
- Order number of higher-level order
- Material number of higher-level order
- Material number of component material
- Order number of component order

In addition to the fields listed, all fields of the ALV Grid of the HJPT planning table are also available.

You can use the layout settings to define the sequence of the fields and to show and hide fields.

If more than one component can be firmed for each order, the system first displays all orders for the first component in the window and then all orders for the next component, and so on.

If an order is already fully firmed, it is no longer available in the selection list. Existing firmings are also no longer displayed in the selection list.

After firmed relationships are defined, the logic checks the quantities that are to be linked and corrects them to the maximum possible quantity.

The system then displays another window that displays the selected firmed relationships.

Select.	Order Number	Material	Order Quantity	RQty. Comp.	Comp.Ord.Nr.	Comp. Material	Quantity Component	Qty related	BU
<input checked="" type="checkbox"/>	3127441	LMPC_FERT_1234	8	8	60008264	LMPC_FERT_12	3	3	PC
<input checked="" type="checkbox"/>	60008264	LMPC_FERT_12	3	6	3127580	LMPC_HALB_12	20	6	PC

#### Firmings for Installation

The generated firmings can be checked. You can use the selection field to deselect individual elements. The firmed order relations are created via the confirmation of the window.

#### Automatic Creation of Firmed Relationships

If the action code is set to automatic determination of the connections, the system searches for suitable orders for the selected operations using the BOM. In this way, the number of orders is linked in a forward and downstream process until the total order quantity is served.

Depending on the action code setting, the search can only be performed backwards in the direction of the starting material, or only forwards in the direction of the finished material, or in both directions.

The logic searches for suitable orders here, in the same way as for the list of the order relations, using FIFO (first-in-first-out) logic. The orders that are linked forwards and backwards can be read beforehand using the list of the order relations, since the same logic is applied here. ([List of Order Relations \[page 60\]](#))

If it is not deactivated in Customizing, the popup window that displays the relationships to be created opens before the installation.

#### Consistency check

A consistency check is performed automatically after each installation. The system checks whether the related quantities correspond to the maximum possible quantities.

The system checks all new relationships to be created and all existing relationships in the system.

If an overbooking of the quantities is determined, the data records that are too much are offered for deletion. New data records take precedence over old data records. This means that the older data record is deleted if there is a conflict.

The underlying idea is that a user can create new data records without first having to delete old data records. The consistency check automatically deletes the data for the user.

The incorrect firm order relations are displayed in a popup window.

Select.	Order Number	Material	Order Quantity	RQty. Comp.	Comp.Ord.Nr.	Comp. Material	Quantity Component	Qty related	BUn
<input checked="" type="checkbox"/>	3127441	LMPC_FERT_1234	8	8	3127477	LMPC_FERT_12	24	8	PC

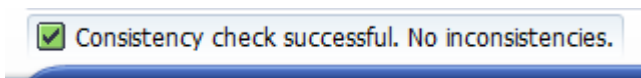
### Consistency Check Result: Overbooking

If the user does not want certain data records to be deleted, they can use the checkbox at the beginning of the line to deselect those data records.

When you confirm, the selected firm order relationships with errors are deleted.

The consistency check can be deactivated in Customizing. The function can also be set in such a way that only the consistency check is executed.

If the consistency check is successful, a message is displayed in the status bar.



### Successful Consistency Check

## Resolving Order Relations

Resolving firm order relations works in the same way as creating these.

Select one or more operations in the ALV Grid.

Alert	Disp...	F...	Number	Order	OpAc	Cat	Material	Work ctr	Dependent requirements order relations
<input checked="" type="checkbox"/>	X		60008264	0010 001	LMPC_FERT_12	MA3	VSF PP LMPC_FERT_12 3.000 ST		
			3127441	0010 001	LMPC_FERT_12	MA2	VSF PP LMPC_FERT_12 1.000 ST		

### Selection

Execute the action code  (S\_ORFREL).

Depending on the logic you set, the system searches for the firm order relations either forwards and backwards, or only forwards, or only backwards.

A dialog box with the firm order relations appears. The user can select which firm order relationships are to be resolved.



Select.	Order Number	Material	Order Quantity	RQty. Comp.	Comp.Ord.Nr.	Comp. Material	Quantity Component	Qty related	BUn
<input checked="" type="checkbox"/>	3127441	LMPC_FERT_1234	8	8	3127477	LMPC_FERT_12	24	8	PC
<input checked="" type="checkbox"/>	3127442	LMPC_FERT_1234	4	4	3127477	LMPC_FERT_12	24	4	PC
<input checked="" type="checkbox"/>	3127443	LMPC_FERT_1234	5	5	3127477	LMPC_FERT_12	24	5	PC
<input checked="" type="checkbox"/>	3127444	LMPC_FERT_1234	3	3	3127477	LMPC_FERT_12	24	3	PC
<input checked="" type="checkbox"/>	3127445	LMPC_FERT_1234	2	2	3127477	LMPC_FERT_12	24	2	PC
<input checked="" type="checkbox"/>	3127446	LMPC_FERT_1234	1	1	3127477	LMPC_FERT_12	24	1	PC
<input checked="" type="checkbox"/>	3127447	LMPC_FERT_1234	7	7	3127477	LMPC_FERT_12	24	1	PC
<input checked="" type="checkbox"/>	3127477	LMPC_FERT_12	24	48	3127580	LMPC_HALB_12	20	20	PC

### Select to Resolve Firmed Relations

If you confirm the window, the relations are resolved.

#### ⚠ Caution

- If the order quantity in the order is changed, this information is not passed on to the firming order relations. Therefore, when the order quantity is changed, the firmings must be adjusted.
- The logic of the automatic creation and the logic for the selection can be used to resolve the firming. The logic for the selection list cannot be used.

#### → Tip

- The creation and resolving of the firming order relations both take place in simulation mode. The firmings are only written to the database when you save.
- If you do not want to check the firmings to be created and firmings to be resolved, you can deactivate the dialog box in Customizing.
- You can also create the firming order relations in the background using a job. [Program /LMPC/HJPT Background Processing \[page 19\]](#)
- The creation and resolving of the firming order relations can both take the LMPC pool ID into account. This can be activated using a parameter in the action code. The system then searches for all other operations of the same pool ID for the pool ID of the selected operations and includes them in the selection for processing. Only the operations are included in processing; the pool ID does not have any other functions. It is not used to define a hierarchy. The pool ID can be used, for example, if the orders are to be grouped before the firming relations are created.

## Related Information

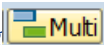
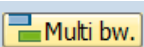
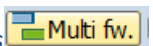
[S\\_ORFIRM, S\\_ORFREL Configuration: Firm order relations and undo firming](#)

## 2.6.4.33.2 S\_EPML, S\_EPMLBW, S\_EPMLFW Multilevel Planning

Simultaneous Planning Across Several Low-Level Codes

### Use

You can use the action codes for

- *Multilevel Dispatching*  (S\_EPML),
- *Multilevel Dispatching Backwards*  (S\_EPMLBW), and
- *Multilevel Dispatching Forwards*  (S\_EPMLFW)

to dispatch operations across multiple low-level codes so that preliminary products are completed before finished products are produced.

For each operation selected, the logic is used to create a dispatching hierarchy for the selected operation. Depending on the setting, the logic searches either backwards from the finished product in the direction of the raw material, or forwards from the raw material in the direction of the finished product, or in both directions. The corresponding orders are searched for according to the logic of the order relations. ([List of Order Relations \[page 60\]](#)).

The order relations are usually created dynamically according to first-in-first-out logic via the material BOM. However, the system also considers the firmed order relations that can be created by the user. The firmed order relations override the first-in-first-out logic. ([S\\_ORFIRM, S\\_ORFREL Firm Order Relations and Undo Firming \[page 235\]](#))

Several operations can be selected. In this case, a dispatching hierarchy is created for each operation selected. If one of the selected operations belongs to a pool ID and the replenishment of the selection with pool ID orders is switched on via a parameter, all operations for this pool ID are included in the selection.


If several orders were selected and one of the orders is already contained in a dispatching hierarchy of another order operation, no separate hierarchy is created for this operation. The underlying principle is that an order is planned only once for each call of the function.

All three action codes are based on the same logic. The action code S\_EPML plans starting from the selected operation in both directions. The other action codes plan in only one direction at a time.

### ! Restriction

Only operations and orders that are open in the HJPT planning table are determined for the action code, since only these operations can be planned.

### Procedure

Multilevel planning is explained using an example in the use of the action code  (S\_EPML).

In the list of order relations, you can see a hierarchy of related orders across the low-level codes.

Order Number	Level Code / Object number	MRP el...	MRP e...	Material	Descr.	Rec. date	Qty Rec.	U...	Avali...	U...	Req. Date	R
10076844	10076844	BA	PurRqs	LMPC_ROH_3		05.11.2019	662	PC	1644	PC	07.11.2019	
10076843	10076843	BA	PurRqs	LMPC_ROH_3		05.11.2019	284	PC	982	PC	19.11.2019	
10076843	10076843	BA	PurRqs	LMPC_ROH_3		05.11.2019	284	PC	982	PC	20.11.2019	
10076798	10076798	BA	PurRqs	LMPC_ROH_2		05.11.2019	321	PC	861	PC	20.11.2019	
10076751	10076751	BA	PurRqs	LMPC_ROH_1		08.11.2019	4	PC	973	PC	07.12.2019	
3086520	3086520	PA	PIOrd.	LMPC_ROH_2		14.11.2019	14	PC	945	PC	05.12.2019	
3086521	3086521	PA	PIOrd.	LMPC_ROH_2		15.11.2019	476	PC	1407	PC	05.12.2019	
3086521	3086521	PA	PIOrd.	LMPC_ROH_2		15.11.2019	476	PC	1407	PC	05.12.2019	
Level 2-												
3082866	3082866	PA	PIOrd.	LMPC_HALB_34		15.11.2019	164	PC	23	PC	16.11.2019	
2916138	2916138	PA	PIOrd.	LMPC_HALB_34		18.11.2019	4	PC	35-	PC	16.11.2019	
3082865	3082865	PA	PIOrd.	LMPC_HALB_34		20.11.2019	16	PC	81-	PC	16.11.2019	
3082868	3082868	PA	PIOrd.	LMPC_HALB_34		25.11.2019	86	PC	95-	PC	16.11.2019	
3078518	3078518	PA	PIOrd.	LMPC_HALB_12		25.11.2019	176	PC	171-	PC	11.11.2019	
3078632	3078632	PA	PIOrd.	LMPC_HALB_12		09.12.2019	14	PC	457-	PC	18.11.2019	
3078633	3078633	PA	PIOrd.	LMPC_HALB_12		09.12.2019	30	PC	427-	PC	18.11.2019	
Level 1-												
3078623	3078623	PA	PIOrd.	LMPC_FERT_12		13.11.2019	8	PC	40-	PC	04.11.2019	
3078547	3078547	PA	PIOrd.	LMPC_FERT_34		18.11.2019	31	PC	14-	PC	04.11.2019	
3078514	3078514	PA	PIOrd.	LMPC_FERT_12		20.11.2019	7	PC	42-	PC	04.11.2019	
Level 0												
2931120	2931120	PA	PIOrd.	LMPC_FERT_1234		05.11.2019	5	PC	45-	PC	30.09.2019	
Level 1												
VSF	VSF	PP	IndReq	LMPC_FERT_1234								30.1
VSF	VSF	PP	IndReq	LMPC_FERT_1234								01.

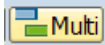
Overview of a Hierarchy of Related Orders

You want to dispatch this hierarchy completely in such a way that all operations at a lower low-level code are already completed before production of the next order is started at the next highest low-level code.

In this example, the order is selected at the highest low-level code.

Alert	Dispat...	F...	Order pool	Order	OpAc	Material	Work ctr	Earliest start	Earl.start	Earl. finish /date t
		X		2931120	0010	LMPC_FERT_1234	MA5	04.11.2019	06:00:00	04.11.2019
		X		2931121	0010	LMPC_FERT_1234	MA5	04.11.2019	06:00:00	04.11.2019

Selection of Order Operation at Highest Low-Level Code

The action code  (S\_EPML) is executed.

The flow of the function depends on the Customizing settings.

If you have defined that the dispatching start is to be defined manually, a dialog box for entering the start time appears.

**Start time first operation** ✕

Start Date

Start Time

Input Window for Start Time

It may also be the case that the start time is taken from the selected order. Or, that dispatching should take place as early as possible. In these cases, the dialog box would not appear.

In the next step, the logic determines the hierarchy of the order relations across all low-level codes. For action code S\_EPML, the hierarchy is always determined forwards in the direction of the finished product and backwards in the direction of the raw material. In this case, the system does not find a further order when looking forwards because the order has already been selected with the finished product. If a different action code is selected, the determination can also only take place forwards or only backwards.

You can make settings in Customizing so that only orders of firmed relationships are taken into account during determination. This means that you can only dispatch the orders that were previously linked together.

The start time entered or the start time determined from the selected order is used for dispatching. This depends on which dispatching logic has been set in Customizing. If logic 1 is used, the start time is the dispatching time for the first determined operation of a hierarchy. If logic 2 is used, the start time is the dispatching time for the first operation of the selected order.

In this example, logic 2 is used.

In logic 2, the system first checks whether it is possible to dispatch the hierarchy so that the selected operation can be positioned on the desired date.

If this is not possible because, for example, there is not enough available capacity available and, according to the calculation, an operation has to be dispatched in the past, a warning appears. The warning contains the number of the order from the hierarchy for which dispatching is no longer possible. It is also queried whether dispatching is to be as early as possible instead.



Warning for Date Problems

If this note is confirmed, all orders in the determined hierarchy early are dispatched as early as possible. If the note is not confirmed, the function terminates without dispatching.

In this example, there is sufficient capacity. Dispatching takes place on the desired date.

In the ALV Grid, you can see that the selected operation has been dispatched for the desired start time:

Alert	Dispat...	F...	Order pool	Order	OpAc	Material	Work ctr	Earliest start	Earl.start	Earl. finish /date	Erl.finish tim
	X	X		2916138	0020	LMPC_HALB_34	MA2	02.12.2019	09:32:00	02.12.2019	11:32:00
	X	X		3078632	0020	LMPC_HALB_12	MA2	02.12.2019	11:32:00	02.12.2019	13:24:00
	X	X		3078633	0020	LMPC_HALB_12	MA2	02.12.2019	13:24:00	02.12.2019	17:24:00
	X	X		3078514	0010	LMPC_FERT_12	MA3	02.12.2019	17:24:00	03.12.2019	12:54:00
	X	X		3078547	0010	LMPC_FERT_34	MA3	03.12.2019	12:54:00	03.12.2019	16:30:00
	X	X		3078514	0020	LMPC_FERT_12	MA4	03.12.2019	16:58:00	04.12.2019	11:58:00
	X	X		3078623	0010	LMPC_FERT_12	MA3	03.12.2019	16:30:00	04.12.2019	13:00:00
	X	X		3078547	0020	LMPC_FERT_34	MA4	04.12.2019	11:58:00	04.12.2019	13:00:00
	X	X		3078623	0020	LMPC_FERT_12	MA4	04.12.2019	13:00:00	05.12.2019	09:00:00
	X	X		2931120	0010	LMPC_FERT_1234	MA5	05.12.2019	09:00:00	05.12.2019	10:15:00
	X	X		2770241	0020	LMPC_HALB_34	MA2	04.11.2019	06:00:00	04.11.2019	06:45:00

Result in ALV Grid of HJPT Planning Table

All other related orders have also been dispatched.



- An order is only ever processed in a hierarchy of the dispatching hierarchies for each call of the planning function. If an order belongs to more than one hierarchy, it is processed in the first hierarchy to which it was assigned.
- It is not possible to combine two or more orders into one hierarchy. A dispatching hierarchy is always created for each order, provided the order does not already exist in another hierarchy.

## Related Information

[S\\_EPML, S\\_EPMLBW, S\\_EPMLFW Configuration: Multilevel Dispatching](#)

### 2.6.4.34 S\_SETSTR Change Strategy Profile Settings

#### Use

You can use this action code to temporarily adjust the settings of strategy profiles to be able to perform subsequent dispatching with changed settings.

The changes are only retained for as long as the planning table is open and until the planning table is reloaded. The changes are not stored in the database.

Changing the settings of strategy profiles is helpful for production planners who want to plan in the traditional way, as they do in the capacity planning table.

#### → Tip

It is not usually necessary to adjust the settings of strategy profiles. A parameter can be used to transfer a strategy profile for each planning function. This allows you to predefine the most diverse planning functions.

Using predefined planning functions instead of adjusting the settings of the strategy profiles before each dispatching saves production planners a lot of time. It is therefore recommended that you use predefined planning functions.

#### Procedure

Call the action code  Chg st prf (S\_SETSTR).

If no strategy profile is defined using a parameter for the action code, the system displays a dialog box for selecting the strategy profile that is to be changed:

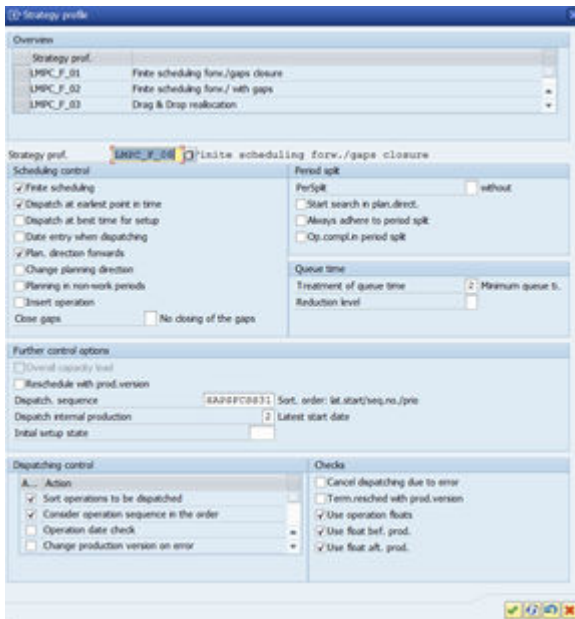


Select Strategy Profile

You can choose from the strategy profiles that are defined in the HJPT overall profile.

Choose a strategy profile and confirm the popup window.

The system displays a window for adjusting the settings.



Strategy Profile

The selected profile or the profile that was specified using a parameter is stored in the window.

You can change the settings.

If you want to change a different strategy profile, you can switch strategy profile.

When you then execute the planning function, the changed settings are taken into account.

#### → Tip

Also see the section on the configuration options for strategy profiles in the LMPC Configuration Guide.  
[Configuration of Strategy Profiles](#)





The orders have been moved. The gaps between the orders remain the same, at approximately 1 ½ hours.

- The same shift is also possible in the other direction.

Start date and time for first order
✕

Start date	<input type="text" value="09.11.2017"/>
Start Time	<input type="text" value="13:00:00"/>

New Start Time Backwards

- Result:

		Work Centers																																																																
		09.11.2017																10.11.2017																11.11.2017																																
Work ctr	Description	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17
MA2	LMPC wst 2																																																																	
MA3	LMPC wst 3																																																																	

Result Movement to the Left

The orders have been moved to the left, meaning backwards. The gap is still approximately 1 ½ hours.

### ! Restriction

- It is only possible to move operations up to the present point in time. It is not possible to shift to the past because it is not possible to schedule operations in the past.
- The shift only takes place for selected operations. All operations that were not selected are not moved.
- Based on the shift time, the function calculates the new start times of the operations and transfers the operations with this new start time to the dispatching function. The function does not check whether there is free capacity at the point to which the operations are to be moved. The planner must first check whether the capacities are free and not occupied by other operations. If operations are moved to times for which other operations already exist, the production plan can be mixed up.
- The shift is only possible for dispatched operations. If you wish to shift operations that have not yet been dispatched, use the action code S\_MVEORD. [S\\_MVEORD Move Order Operations in the Pool \[page 187\]](#)

### → Tip

The data provider /LMPC/CL\_DP\_GAP calculates the free capacity in the dispatching gaps. You can use these fields to ensure that the gaps remain the same when they are shifted.

[Data Provider /LMPC/CL\\_DP\\_GAP Calculate Dispatching Gaps \[page 366\]](#)

Order	Earliest start	Earl.start time	Start time gap	Free capacity gap
60005349	21.12.2020	08:00:00	17.12.2020 11:25:33	28:34:27
920376	21.12.2020	18:36:00	21.12.2020 16:30:00	02:06:00
920352	22.12.2020	13:48:00	22.12.2020 07:46:00	06:02:00
920403	23.12.2020	06:48:00	22.12.2020 18:08:00	04:40:00
920377	23.12.2020	15:50:00	23.12.2020 08:38:00	07:12:00
920353	08.12.2020	17:40:00		00:00:00

Fields with Information About the Planning Gaps

## 2.6.5 Selection Functions

This section provides an overview of the action codes with which orders or order operations are selected in the SAP LMPC HJPT detailed scheduling planning table.

### 2.6.5.1 S\_CASORT Sort Upwards

You can use this action code to sort all selected rows in the ALV Grid of the HJPT planning table upwards to the top. If, for example, you have clicked on a bar in the capacity chart to select the corresponding operations in the ALV Grid, you can then move these data records to the top collectively.

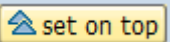
You can use the action code to sort the data records for later dispatching.

Initial situation:

Alert	Dispatc...	Fmd	Order	RtgTransf.	Work ctr	Material	Earliest start	Earl.start
X			2758766	18.01.2019	MA1	LMPC_HALB_12	21.12.2018	06:00:00
X			2759044	02.11.2018	MA1	LMPC_HALB_12	22.12.2018	09:15:00
			60007918	27.03.2018	MA1	LMPC_HALB_34	04.01.2019	06:35:00
X			2759144	13.12.2018	MA1	LMPC_HALB_34	05.01.2019	06:17:05
X			2759145	13.12.2018	MA1	LMPC_HALB_34	05.01.2019	11:42:05
			60008059	29.10.2018	MA1	LMPC_HALB_34	16.01.2019	14:05:00
X			2758763	17.12.2018	MA1	LMPC_HALB_12	17.01.2019	15:45:00
			60008060	29.10.2018	MA1	LMPC_HALB_12	19.01.2019	12:45:00
X			2759045	05.12.2018	MA1	LMPC_HALB_12	22.01.2019	14:15:00

Initial Situation

Three operations have been selected in the ALV Grid.

The action code  (S\_CASORT) is executed.

Result:

Alert	Dispatc...	Fmd	Order	RtgTransf.	Work ctr	Material	Earliest start	Earl.start
			60007918	27.03.2018	MA1	LMPC_HALB_34	04.01.2019	06:35:00
			60008059	29.10.2018	MA1	LMPC_HALB_34	16.01.2019	14:05:00
			60008060	29.10.2018	MA1	LMPC_HALB_12	19.01.2019	12:45:00
X			2758766	18.01.2019	MA1	LMPC_HALB_12	21.12.2018	06:00:00
X			2759044	02.11.2018	MA1	LMPC_HALB_12	22.12.2018	09:15:00
X			2759144	13.12.2018	MA1	LMPC_HALB_34	05.01.2019	06:17:05
X			2759145	13.12.2018	MA1	LMPC_HALB_34	05.01.2019	11:42:05

Result

The data records have been moved to the top of the ALV Grid collectively.

### ⚠ Caution

Sorting is not to be confused with dispatching. Here, only the data records within the ALV Grid are shifted, similar to a manual drag and drop. This does not have any impact on the planning situation.

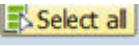
## 2.6.5.2 S\_MALL, S\_RMALL Select All Operations in ALV Grid and Remove Selection










### Use

You can use the action code S\_MALL to set all data records in the ALV Grid to selected.

You can use the action code S\_RMALL to undo the selection.

### Procedure

- Execute the action code  (S\_MALL).
- Result:

Status	D	F...	Work center	Order	OpAc	Cat	Cat	Phase	Material
	X		MA3	60007653	0010	1	10	0	LMPC_FERT_34
	X		MA3	60007653	0010	1	10	0	LMPC_FERT_34
	X	X	MA3	2663506	0010	2		0	LMPC_FERT_34
	X	X	MA3	2663506	0010	2		0	LMPC_FERT_34
	X	X	MA3	2663503	0010	2		0	LMPC_FERT_34
	X	X	MA3	2663503	0010	2		0	LMPC_FERT_34
	X	X	MA3	2663505	0010	2		0	LMPC_FERT_34
	X	X	MA3	2663505	0010	2		0	LMPC_FERT_34
	X	X	MA3	2663507	0010	2		0	LMPC_FERT_34

Selection of All Operations

All data records in the ALV Grid are selected.

- Now execute the action code  (S\_RMALL).

- Result:

Status	D	F...	Work center	Order	OpAc	Cat	Cat	Phase	Material
	X		MA3	60007653	0010	1	10	0	LMPC_FERT_34
	X		MA3	60007653	0010	1	10	0	LMPC_FERT_34
	X	X	MA3	2663506	0010	2		0	LMPC_FERT_34
	X	X	MA3	2663506	0010	2		0	LMPC_FERT_34
	X	X	MA3	2663503	0010	2		0	LMPC_FERT_34
	X	X	MA3	2663503	0010	2		0	LMPC_FERT_34
	X	X	MA3	2663505	0010	2		0	LMPC_FERT_34
	X	X	MA3	2663505	0010	2		0	LMPC_FERT_34
	X	X	MA3	2663507	0010	2		0	LMPC_FERT_34
	X	X	MA3	2663507	0010	2		0	LMPC_FERT_34
	X		MA3	60007654	0010	1	10	0	LMPC_FERT_12
	X		MA3	60007654	0010	1	10	0	LMPC_FERT_12

Result

The selection has been undone.

### 2.6.5.3 S\_MAGR, S\_MAGRD Selecting Orders in the Graphic, Removing the Selection

Selecting Operations in the Graphic of the LMPC Planning Table

#### Use


You can use the action code S\_MAGR to select the corresponding bars in the graphical part of the LMPC planning table for the data records selected in the ALV Grid. You use the action code S\_MAGRD to remove this selection.

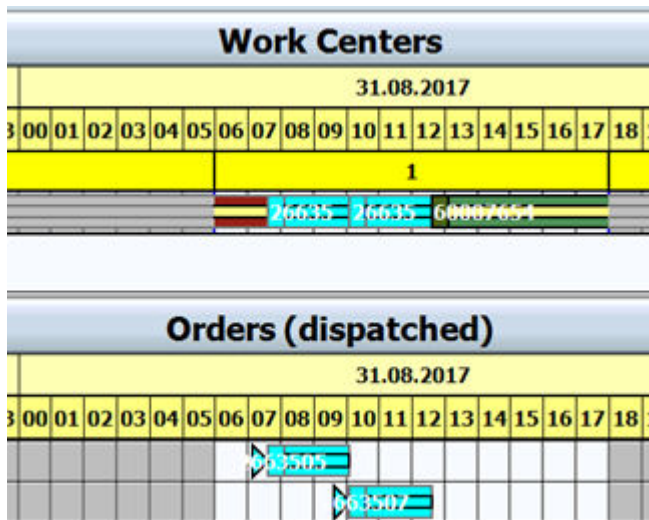
#### Procedure

- Select data records in the ALV Grid.

Status	D	F...	Work center	Order	OpAc	Cat	Cat	Phase	Material
	X		MA3	60007653	0010	1	10	0	LMPC_FERT_34
	X	X	MA3	2663506	0010	2		0	LMPC_FERT_34
	X	X	MA3	2663503	0010	2		0	LMPC_FERT_34
	X	X	MA3	2663505	0010	2		0	LMPC_FERT_34
	X	X	MA3	2663507	0010	2		0	LMPC_FERT_34
	X		MA3	60007654	0010	1	10	0	LMPC_FERT_12
	X		MA3	60007665	0010	1	10	0	LMPC_FERT_34

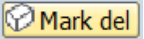
Selection of Operations

- Execute the action code  (S\_MAGR).
- Result:



Result

The bars for the order operations have been highlighted in light blue in the graphical part of the LMPC planning table.

- To remove the selection, execute the action code  (S\_MAGRD).

## 2.6.5.4 S\_MALV Selecting Operations in ALV Grid

Finding Data Records in the ALV Grid

### Use

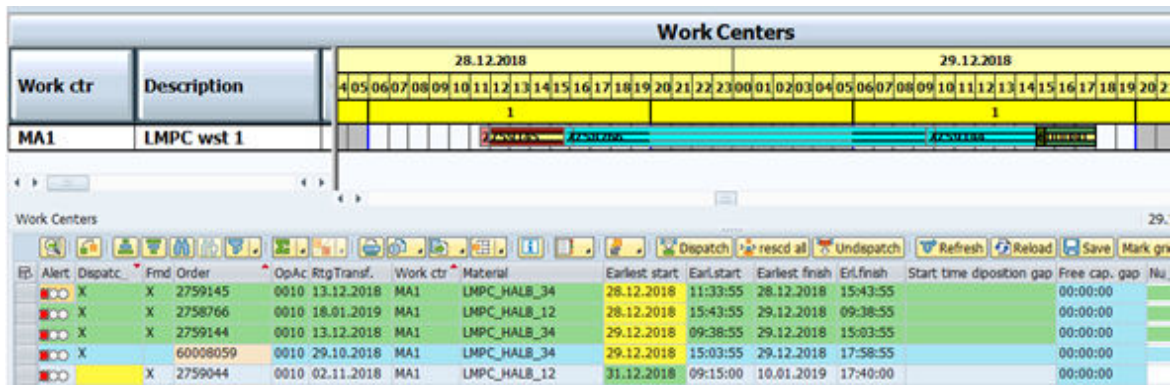
You can use the action code S\_MALV to find the data for the operations that you have selected in the graphical table in the ALV Grid.

### Procedure

- Select one or more bars in the graphical table.

#### → Tip

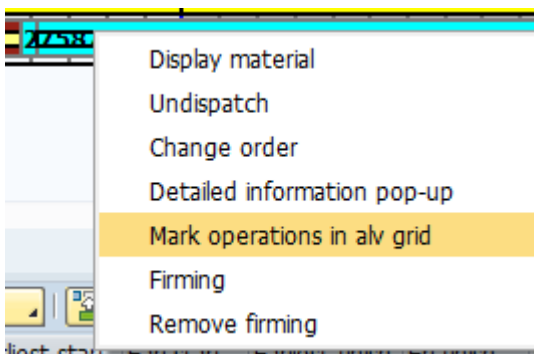
You can use the SHIFT key and mouse click to select multiple bars.



Selected Bars in the Graphic

Two operations are selected.

- Right-click on the bars and in the context menu, choose: "Mark operations in alv grid".



Context Menu of the Graphic Bars

- Result:

Alert	Dispatc...	Fmd	Order	OpAc	RtgTransf.	Work ctr	Material	Earliest start
X	X	X	2759145	0010	13.12.2018	MA1	LMPC_HALB_34	28.12.2018
X	X	X	2758766	0010	18.01.2019	MA1	LMPC_HALB_12	28.12.2018
X	X	X	2759144	0010	13.12.2018	MA1	LMPC_HALB_34	29.12.2018
X			60008059	0010	29.10.2018	MA1	LMPC_HALB_34	29.12.2018

Result

The corresponding operations have been selected in the ALV Grid.

## 2.6.5.5 S\_SELCPAP Selecting Detailed Capacity List in the Chart

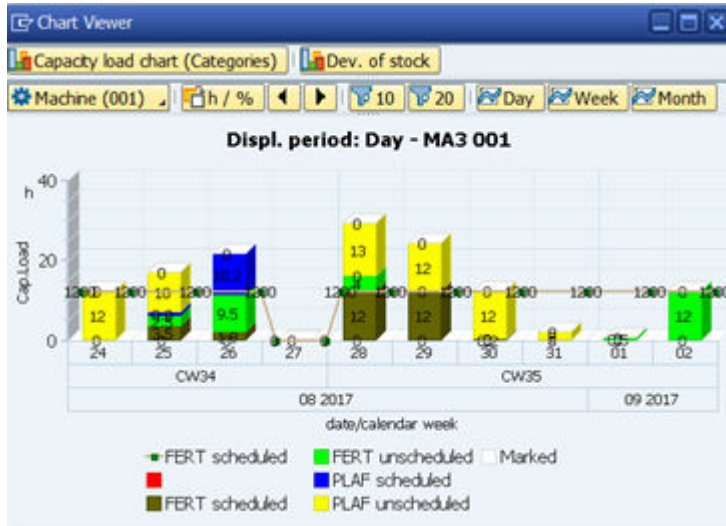
Selecting the Detailed Capacity List in the Chart

### Use

You can use this function to make the capacity requirements of data records from the ALV Grid visible in the chart for [Capacity Load \(Categories\) \[page 55\]](#) and in the chart for [Capacity Requirements \(Categories\) \[page 57\]](#). The action code has no effect for other charts.

## Procedure

Capacity utilization chart before executing the function:



Capacity Utilization Chart at the Beginning

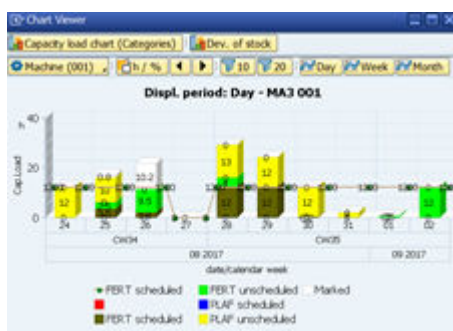
Select operations in the ALV Grid.

EP	Status	D	F	Work center	Order	OpAc	Cat	Cat Phase	Material	Subop.	Earliest start	Earl.start	Earl. finish /date	Erl.finish time
	X			MA3	60007653	0010	1	10 0	LMPC_FERT_34		25.08.2017	13:42:01	25.08.2017	17:12:01
	X	X		MA3	2663506	0010	2	0	LMPC_FERT_34		25.08.2017	17:12:01	26.08.2017	08:42:01
	X	X		MA3	2663503	0010	2	0	LMPC_FERT_34		26.08.2017	08:42:01	26.08.2017	11:12:01
	X	X		MA3	2663505	0010	2	0	LMPC_FERT_34		26.08.2017	11:12:01	26.08.2017	13:42:01
	X	X		MA3	2663507	0010	2	0	LMPC_FERT_34		26.08.2017	13:42:01	26.08.2017	16:12:01
	X			MA3	60007654	0010	1	10 0	LMPC_FERT_12		26.08.2017	16:12:01	29.08.2017	12:42:01

Selection of Operations

Execute the action code  (S\_SELCAP).

Result:



Result

The capacity requirements of the selected operations are displayed as white bars in the chart.

### Note

The chart has a function for selecting the orders that are behind the colored bars in the ALV Grid. To do this, a user clicks on the desired colored bar. However, this selection only works for colored bars. Selection does not work for white bars. [Capacity Load \(Categories\) \[page 55\]](#)

## 2.6.5.6 S\_UMTMSG Display Rescheduling Proposals

Display information about the required rescheduling

### Use

You can use this function to check whether there are operations scheduled at times at which other orders have already been dispatched.

These operations can then no longer be dispatched at the scheduled times because the capacity intended for these operations is already in use at these times. The operations must therefore be scheduled for a different period.

You can execute this action code either automatically when the LMPC planning table is called (trigger PBO) or manually via a button or the context menu.

The action code compares all dispatched operations with all not dispatched operations.

### ! Restriction

The capacity of the operations is not taken into account. Therefore, this action code is only suitable for an application in which only one work center is open.

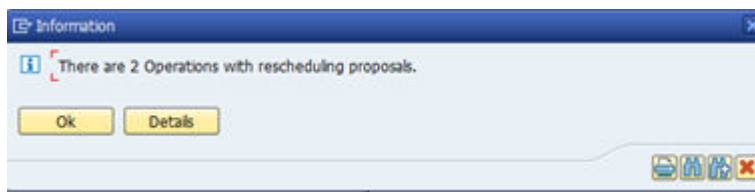
The latest start and end times of the operations are compared with each other in the logic.

### Procedure

#### → Tip

Manual execution is described here. The action code can be configured such that it is executed automatically each time you launch the HJPT planning table. Then, when you start the application, the planner is made aware of the required rescheduling.

- Execute the action code **Res. prop.** (S\_UMTMSG). No operations need to be selected. The logic checks all operations in the ALV Grid.
- If there are operations that are scheduled at times at which other operations have already been dispatched, a popup window appears.



Popup Window: Number of Operations

The system displays the number of operations that collide with operations already dispatched.

- You can use the button “Details” to display the operation details.



Information					
MRP No.	OpAc	Material	Work ctr	Plant	Operation short text
000060008059	0010	LMPC_HALB_34	MA1	LM01	Maschine 1
000002759044	0010	LMPC_HALB_12	MA1	LM01	Maschine 1

#### Details

- If a conflict occurs, the fields "Earliest Start Date" and "Latest Start Date" are colored red to indicate the conflict.

Alert	Dispatc...	Fmd	Order	OpAc	Work ctr	Material	Earliest start	Earl.start
			60007918	0010	MA1	LMPC_HALB_34	03.01.2019	07:05:00
			60008059	0010	MA1	LMPC_HALB_34	15.01.2019	14:05:00
		X	2759044	0010	MA1	LMPC_HALB_12	16.01.2019	09:15:00

#### Coloring in the ALV Grid

#### i Note

This coloring takes place directly using the action code. If an additional ALV Grid color routine is set for one of the fields using the data provider, the coloring may be overridden. This is because coloring using the data providers runs after the action code has been colored.

## Related Information

[S\\_UMTMSG Configuration: Issue rescheduling proposal](#)

## 2.6.6 Action Codes for Mass Processing

The action codes described in this section use the program PPIO\_ENTRY, which calls mass processing of the order information system. The program PPIO\_ENTRY is the basis for standard SAP transactions for mass processing, such as COHV, COHVPI, COOIS, and COOISPI.

The program is called from the HJPT planning table. A variant and order numbers are transferred to this program.

#### i Note

To call the program PPIO\_ENTRY, a variant is required that is transferred via parameter. The LMPC delivery provides you with example variants that you can use as a template for your own variants.

Checking and adjusting program variants is not a service provided by LMPC Support. An LMPC consultant can support you when you create variants.

#### ! Restriction

The program PPIO\_ENTRY is an SAP standard program and cannot be changed or adjusted by LMPC development. Processing a large number of orders using this program may require a certain amount of

runtime. In particular, it is time consuming to convert planned orders to production orders or process orders. Long runtimes are not an error, but the result of time-consuming processes running while orders are being processed in program PPIO\_ENTRY.

Note that after mass processing is called, the data is usually reloaded using the chain of the action code S\_RELOAD. This is necessary to load the changed data. This means that the function runs at least as long as it takes to newly access the planning table.

## Related Information

[Create Program Variants for the Action Codes of the Order Information System](#)

### 2.6.6.1 S\_ATP ATP Check in Mass Processing

Mass ATP Check

#### Use

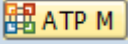
You use this action code to perform an availability check for the components of orders.

#### Procedure

- Select the desired data records in the ALV Grid.

<input checked="" type="checkbox"/>	X	X	MA3	2663507	0010	2	0	LMPC_FERT_34
<input checked="" type="checkbox"/>	X		MA3	60007654	0010	1	10	LMPC_FERT_12
<input checked="" type="checkbox"/>	X		MA3	60007665	0010	1	10	LMPC_FERT_34
<input checked="" type="checkbox"/>	X		MA3	60007648	0010	1	10	LMPC_FERT_34
<input checked="" type="checkbox"/>	X		MA3	2663503	0010	2	0	LMPC_FERT_34

Selection of Order Operations

- Execute the action code  (S\_ATP).
- If there are missing quantities in production orders or process orders, they are displayed as a log:

Ty...	Order	Message Text
	60007654	Itm 0010 LMPC_HALB_12 : Shortage: 20 PC (0010/0 )
	60007665	Itm 0010 LMPC_HALB_34 : Shortage: 50 PC (0010/0 )

Log for Missing Quantities

#### ! Restriction

This log is only displayed for production and process orders. No log can be issued for planned orders.

- After the availability check has been performed, the data is reloaded to load the results of the availability check to the fields of the ALV Grid.

The following fields display the results of the ATP check:

Overall commitment	Available quantity	S. status head	Availability confirm
08.09.2017	10		1
15.09.2017	78-	CRTD MSPT PRC SETC	
13.09.2017	4-	CRTD MSPT PRC SETC	
19.09.2017	60	CRTD PRC MACM SETC	

ATP Fields in ALV Grid

- Date of overall commitment, field GSBTR\_SU
- Available quantity, field VFMNG\_SU
- System status order header, field SSKOX\_SU (production and process orders only)
- Confirmation of availability, field MDPBV\_PA (planned orders only)

→ Tip

If the availability check for orders has already been performed, you can use action code S\_C024 to access the overview of missing parts for an order. [S\\_C024 Missing Parts Info System \[page 272\]](#)

## 2.6.6.2 S\_ATPA Individual Availability Check

Availability check, capacity planning table

### Use

You use this action code to execute the standard availability check of the capacity planning table. This is only possible for production orders or process orders. It does not work for planned orders. This check does not make use of mass processing. However, the documentation was inserted at this point due to the thematic link. The advantage of this check is that it can be executed in simulation mode. Therefore, the current planning situation does not have to be saved before the check can be executed.

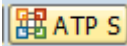
### Procedure

- Initial situation:

Alert	Disp.	Order	OpAc	Material	Work ctr	Ov.commitment	Available quantity	S. status head
X		60008060	0010	LMPC_HALB_12	MA1	08.01.2019	364-	CRTD MSPT PRC MANC SETC

Situation at Start

An operation of a production order has been dispatched, planning has not yet been saved. According to the header status, the material availability has not been confirmed.

- Select the operation and execute the action code  (S\_ATPA).
- If there are missing quantities, the logic jumps to the display of the availability check.

Availability Check									
No. of components checked: 2									
Missing parts: 2									
Overall confirmation date: 07.01.2019									
Mat.	Material	Material Description	Plnt	Stor.	Requirement quantity	Reqmt. Date	Conf./Allocated qty. Comm. Date	ATP/avail. Qty. Mes. Part.	T
	LMPC_ROH_1	LMPC Rohstoff 1	LM01	L001	2	21.12.2018	0 02.01.2019	0 X	
	LMPC_ROH_2	LMPC Rohstoff 2		L001	2	19.12.2018	0 02.01.2019	0 X	

#### Display Missing Parts

- If there are no missing quantities, this step is skipped and only the header status of the order is updated. You can read the information in the corresponding fields in the ALV Grid.
- Result (no missing parts):

Alert	Disp...	Order	OpAc	Material	Work ctr	Ov.commitment	Available quantity	S. status head
	X	60008060	0010	LMPC_HALB_12	MA1	08.01.2019	364-	CRTD PRC MACM SETC

#### Result Without Missing Parts

The status MACM (material committed) has been set.  
The following fields display the results of the ATP check:

Ov.commitment	Available quantity	S. status head
08.01.2019	364-	CRTD PRC MACM SETC

#### ATP Fields in ALV Grid

- Date of overall commitment, field GSBTR\_SU
- Available quantity, field VFMNG\_SU
- System status order header, field SSKOX\_SU

#### → Tip

If the availability check for orders has already been performed, you can use action code S\_C024 to access the overview of missing parts for an order. [S\\_C024 Missing Parts Info System \[page 272\]](#)


## 2.6.6.3 S\_ATPPIO ATP Check and Order Conversion

Combination of ATP check and order conversion

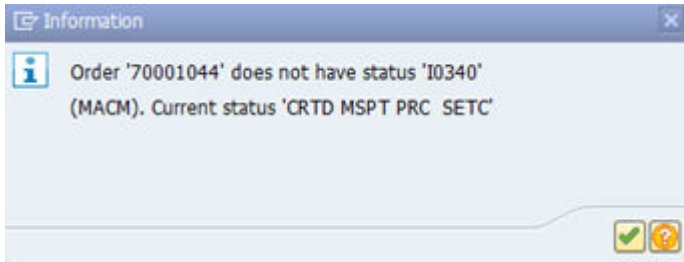
### Use

When you execute the action code S\_ATPPIO, an ATP check is performed for the production or process orders of the group of selected orders. If the ATP check for the orders finds the required status in the Customizing settings of the action code, the planned orders of the group of selected orders are converted into production orders or process orders.

### Procedure

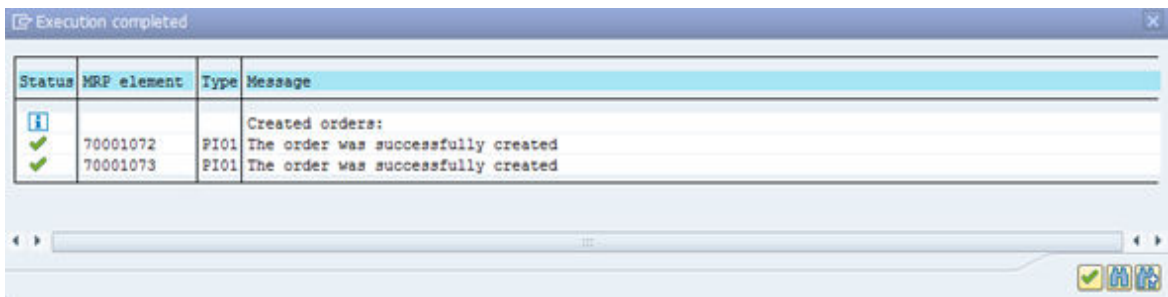
- Select one or more orders in the ALV Grid.
- Execute the action code  (S\_ATPPIO).
- First, the ATP check is performed for the production or process orders in the selection. If an order status is specified in Customizing, the system then checks the status.

- If the system cannot find the specified status, it issues an error message and aborts the function immediately. The check aborts when the first error is found.



Error Message

- If the system does not find any errors, it converts planned orders into production orders or process orders. Popup window with message about the conversion:

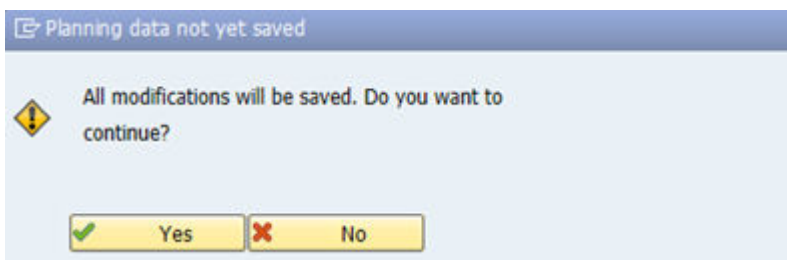


Successful Creation of Orders

### ⚠ Caution

The system converts the orders immediately. There is no simulation.

- Afterwards, saving (S\_SAVE) or reloading (S\_RELOAD) the data is triggered to load the newly generated orders to the LMPC HJPT detailed scheduling planning board.
- If you execute the action code and there are still changes that have not yet been saved, the system displays a warning message.



Note That All Changes Are Saved

## Related Information

[S\\_ATPPIO Configuration: ATP Check and Conversion](#)

## 2.6.6.4 S\_CONVPI Mass Conversion of Planned Orders to Process Orders

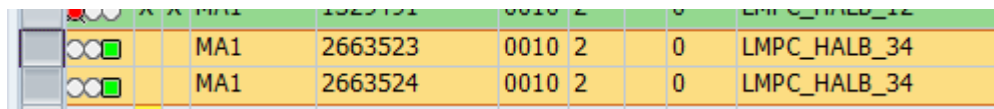
Mass Conversion of Planned Orders in Process Industry

### Use

You can use this function to convert any number of planned orders into process orders at the same time.

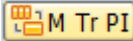
### Procedure

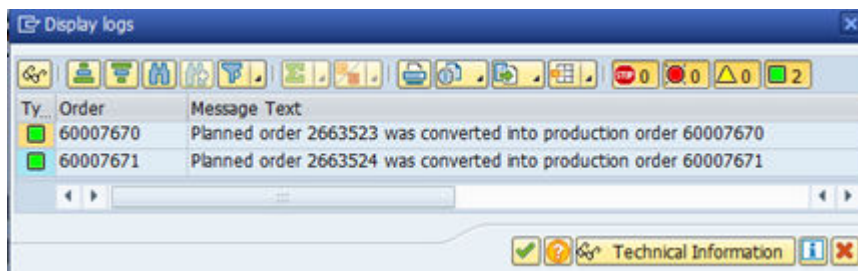
- Select the desired planned orders.



Order Type	Order Number	Material	Plant	Quantity	Conversion Date	Conversion Status	Conversion Reason
MA1	2663523		0010	2	0		LMPC_HALB_34
MA1	2663524		0010	2	0		LMPC_HALB_34

Selection of Operations

- Execute the action code  (S\_CONVPI).
- After the conversion, the system displays a log from which you can take the new numbers of the process orders.



Ty	Order	Message Text
0	60007670	Planned order 2663523 was converted into production order 60007670
0	60007671	Planned order 2663524 was converted into production order 60007671

Conversion Log

- After confirming the log, the data is reloaded automatically, to load the new process orders into the worklist.

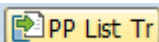
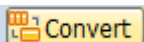
### Note

The message text uses the term “production order” instead of “process order”. The log is generated in the standard SAP system and only read in the LMPC HJPT planning table, therefore, it is not possible to influence the terms.

## 2.6.6.5 S\_CONVPP and S\_CONVPL Mass Conversion of Planned Orders to Production Orders

Mass Conversion of Planned Orders PP

### Use

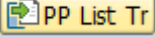
You can use the action codes  (S\_CONVPL) and  (S\_CONVPP) to convert any number of planned orders into production orders simultaneously.

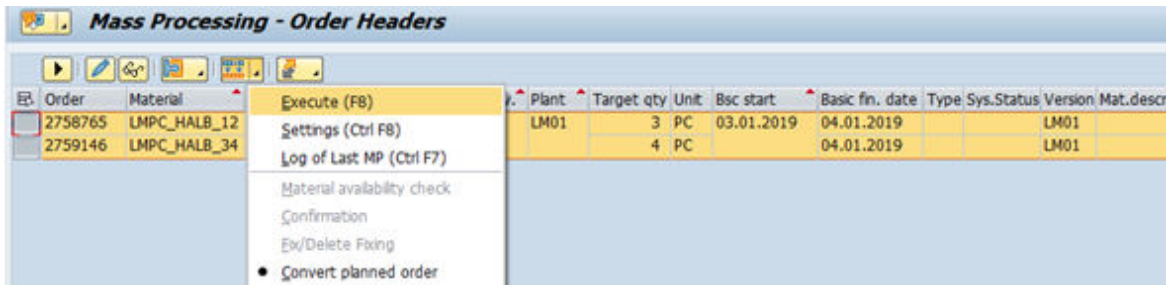
### Procedure

- Select the desired planned orders.

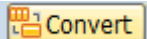
	MA1	2663521	0010	2	0	LMPC_HALB_34
	MA1	2663522	0010	2	0	LMPC_HALB_34

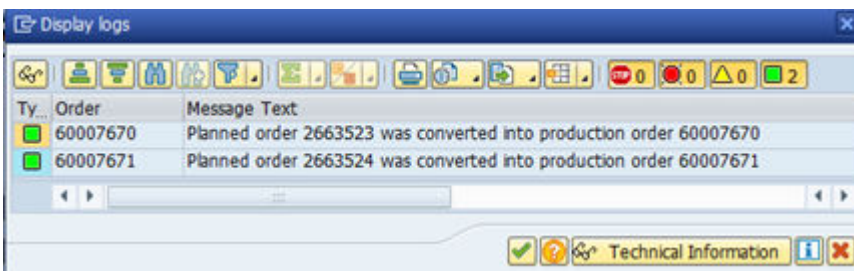
Selection of Operations

- Execute the action code  (S\_CONVPL).
- An overview screen with the selected orders appears.



Overview Mass Processing

- You can use the menu or the function key F8 to execute the conversion.
- If you want to execute the conversion immediately without displaying the list, execute the action code  (S\_CONVPP). The orders are converted immediately.
- After the conversion, the system displays a log from which you can take the new numbers of the production orders.



Log

- After confirming the log, the data is reloaded automatically, to load the new production orders into the worklist.

## 2.6.6.6 S\_COOIS Information System for Production Orders

Call production order information system

### Use

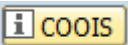
You can use this action code to display production orders in the production order information system.

### Procedure

- Select one or more production orders.

	MA1	60007666	0010	1	10	0	LMPC_HALB_34
	MA1	60007667	0010	1	10	0	LMPC_HALB_34
	MA1	60007668	0010	1	10	0	LMPC_HALB_34
	MA1	60007669	0010	1	10	0	LMPC_HALB_34
	MA1	60007670	0010	1	10	0	LMPC_HALB_34
	MA1	60007671	0010	1	10	0	LMPC_HALB_34

Selection of Operations

- Execute the action code  (S\_COOIS).
- The system displays the screen for the production order information system.

Order	Material	Icon	Order Type	MRP ctrl	Pr. Superv.	Plant	Target qty	Unit	Bsc start	Basic fin. date	Type	System Status	Version	Mat. descrptn
60007666	LMPC_HALB_34		PP01	LM1	LM1	LM01	170	PC	01.09.2017	27.09.2017	CRTD MSPT PRC	SETC	LM01	LMPC Halb 34
60007667			PP01	LM1			2	PC		04.09.2017	CRTD MSPT PRC	SETC	LM01	LMPC Halb 34
60007668			PP01	LM1			3	PC		04.09.2017	CRTD MSPT PRC	SETC	LM01	LMPC Halb 34
60007669			PP01	LM1			4	PC		04.09.2017	CRTD MSPT PRC	SETC	LM01	LMPC Halb 34
60007670			PP01	LM1			6	PC		04.09.2017	CRTD MSPT PRC	SETC	LM01	LMPC Halb 34
60007671			PP01	LM1			7	PC		04.09.2017	CRTD MSPT PRC	SETC	LM01	LMPC Halb 34

Order Information System

- You can call additional functions here.

Number of Entries (Shift F1)
Operation Overview (Ctrl F9)
Component Overview (Ctrl F11)
Status (Ctrl F5)
Long Text (Shift F9)
Configuration
Stock/requirements list (Shift F11)
Stock Overview (Shift F12)
Saved Logs (Ctrl F4)

Functions of the Order Information System

## 2.6.6.7 S\_COOISP Information System for Process Orders

Process Order Information System

The action code S\_COOISP calls the information system for process orders. The process flow is identical to that of action code S\_COOIS, only for process orders.

### Related Information

[S\\_COOIS Information System for Production Orders \[page 263\]](#)



## 2.6.6.8 S\_MFREI Mass Release of Orders

Releasing of Orders in Mass Processing

### Use

You can use this function to release production orders.

### Procedure

- Select one or more production orders.

		MA1	60007666	0010	1	10	0	LMPC_HALB_34
		MA1	60007667	0010	1	10	0	LMPC_HALB_34

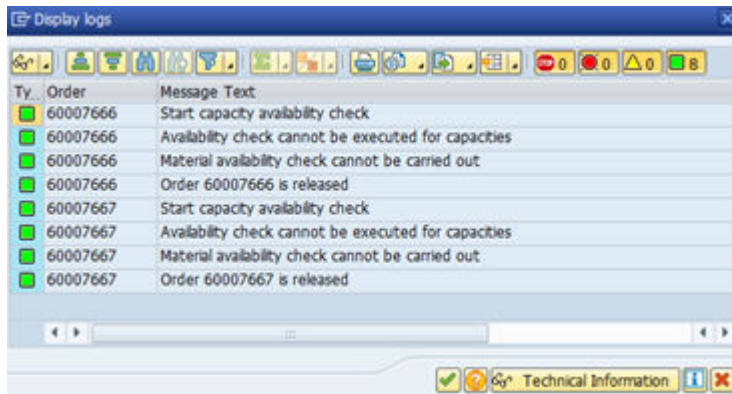
Selection of Operations

- Execute the action code (S\_MFREI).
- Confirm the warning that all unsaved changes will be lost.



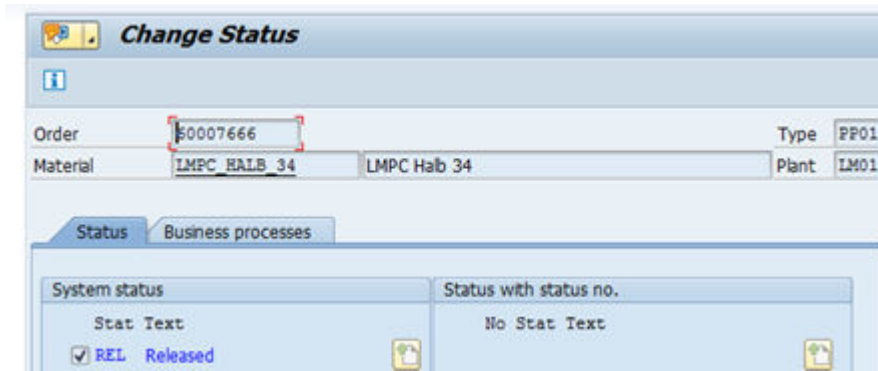
Warning

- The system displays a log of the steps performed.



Log

- The orders have been released. The system sets the status REL in the header of the respective order.



Status Information in the Order Header

## 2.6.6.9 S\_V\_FREI Release of Operation in Production Order

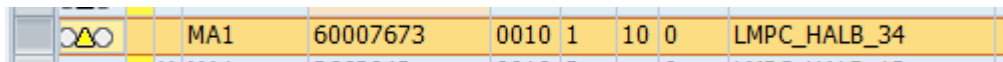
Release of Operation in Production Order - Mass Processing

### Use

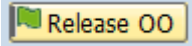
You can use this action code to release at operation level in the production order.

### Procedure

- Select one or more operations.



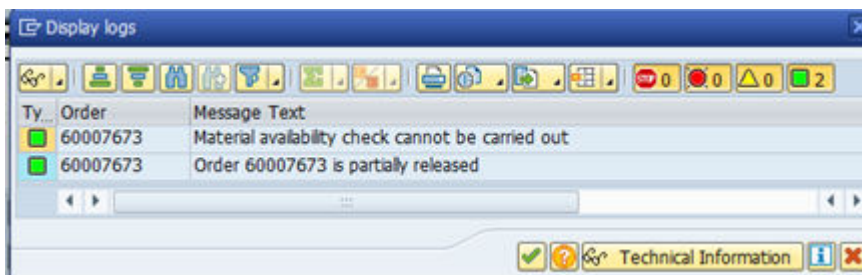
Selection of Operations

- Execute the action code  (S\_V\_FREI).
- Confirm any warning message that may appear



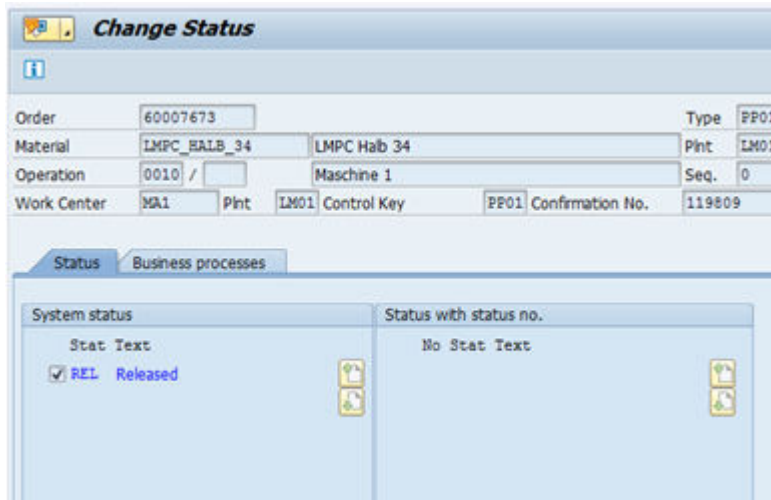
Warning

- The system displays a log that displays the steps performed.



Log

- The order has been released at operation level. The system status at operation level is "REL Released".



Status in the Operation

## 2.6.7 Transaction Calls

In Customizing for the SAP LMPC HJPT detailed scheduling planning board, you can create action codes for calling standard SAP transactions.

The LMPC delivery includes a range of these transactions to reduce the customizing effort for customers.


### i Note

These are preconfigured settings. It is possible that these settings may need to be adjusted in your system. For support with changing the configuration, contact LMPC Consulting.

### 2.6.7.1 S\_C203 Display Master Recipe

Display Master Recipe from Process Industry.

#### Use

You can use the action code  (S\_C203) to call the transaction for displaying the master recipe.

#### Procedure

Select an operation in the LMPC ALV Grid.

Alert	Disp...	F...	Number	Order	OpAc	Material	Work ctr	Dep. req.	order. rel	Requirement date
		X	3086561	0010	LMPC_PRHA_34	PR1	3086546	PA	1.000 ST	28.12.2019
		X	3086561	0020	LMPC_PRHA_34	PR2	3086546	PA	1.000 ST	28.12.2019

Selection

Execute the action code  (S\_C203).

Result:

Oper...	P...	Sup...	De...	Resource	Co...	L...	Stand...	Description
0010	<input type="checkbox"/>			PR1	PI01	<input type="checkbox"/>		PR 1
0012	<input checked="" type="checkbox"/>	0010	L1	PR1	PI01	<input type="checkbox"/>		PR1 Phase 0012
0014	<input checked="" type="checkbox"/>	0010	L1	PR1	PI01	<input type="checkbox"/>		PR1 Phase 0014
0020	<input type="checkbox"/>			PR2	PI01	<input type="checkbox"/>		PR2
0022	<input checked="" type="checkbox"/>	0020	L1	PR2	PI01	<input type="checkbox"/>		PR2 Phase 0022
0024	<input checked="" type="checkbox"/>	0020	L1	PR2	PI01	<input type="checkbox"/>		PR2 Phase 0024

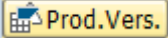
Recipe Display

The master recipe for the material of this order is displayed.

## 2.6.7.2 S\_C223\_D Display Production Version

Production Version Display

### Use

You can use the action code  (S\_C223\_D) to call the transaction for displaying the production version.

### Procedure

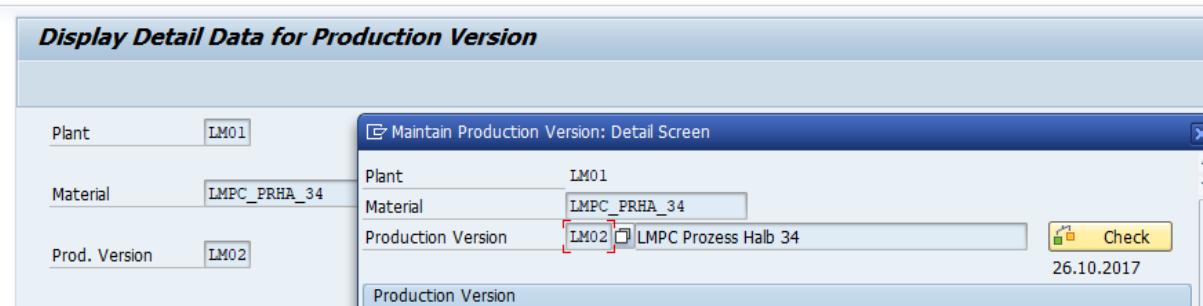
Select an operation in the LMPC ALV Grid.

Alert	Disp...	F...	Number	Order	OpAc	Material	Work ctr	Dep. req. order. rel	Requirement date
		X	3086561	0010	LMPC_PRHA_34	PR1	3086546 PA 1.000 ST	28.12.2019	
		X	3086561	0020	LMPC_PRHA_34	PR2	3086546 PA 1.000 ST	28.12.2019	

Selection

Execute the action code  (S\_C223\_D).

Result:



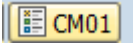
Production Version Display

The production version for the selected order is displayed.

## 2.6.7.3 S\_CM01 Overview of Capacity Planning

Call CM01

### Use

You can use the action code  (S\_CM01), to call the capacity evaluation transaction CM01.

### Procedure

- Select an operation in the HJPT ALV Grid.

Alert	Dispatc...	Fmd	Order	RtgTransf.	Work ctr	Material	Earliest start	Earl.start
		X	2758766	18.01.2019	MA1	LMPC_HALB_12	21.12.2018	06:00:00
		X	2759044	02.11.2018	MA1	LMPC_HALB_12	22.12.2018	09:15:00
			60007918	27.03.2018	MA1	LMPC_HALB_34	04.01.2019	06:35:00

Selection of Operation

- Execute the action code  (S\_CM01).

- Result:

**Capacity Planning: Selection**

Standard overview   Detailed cap. list   Variable overview

		Operator
Work center	MA1	<input type="checkbox"/>
Capacity planner group	<input type="checkbox"/>	<input type="checkbox"/>
Plant	LM01	<input type="checkbox"/>

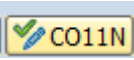
Initial Screen CM01 Prefilled

- The initial screen of transaction CM01 is called, the selection fields have been prefilled.

## 2.6.7.4 S\_CO11N Entering Time Tickets

Call transaction CO11N

### Use

You can use the action code  (S\_CO11N) to enter a time ticket for the production order via transaction CO11N.

### Procedure

- Select an operation of a production order.

Alert	Dispatc...	Fmd	Order	RtgTransf.	Work ctr	Material	Earliest start	Earl.start
		X	2759044	02.11.2018	MA1	LMPC_HALB_12	22.12.2018	09:15:00
			60007918	27.03.2018	MA1	LMPC_HALB_34	04.01.2019	06:35:00
		X	2759144	13.12.2018	MA1	LMPC_HALB_34	05.01.2019	06:17:05
		X	2759145	13.12.2018	MA1	LMPC_HALB_34	05.01.2019	11:42:05
			60008059	29.10.2018	MA1	LMPC_HALB_34	16.01.2019	14:05:00
		X	2758763	17.12.2018	MA1	LMPC_HALB_12	17.01.2019	15:45:00
			60008060	29.10.2018	MA1	LMPC_HALB_12	19.01.2019	12:45:00

Selection

- Execute the action code  (S\_CO11N).

- Result:


Transaction CO11N

You branch to the initial screen for transaction CO11N. Important fields have been prefilled.

## 2.6.7.5 S\_CO15 Enter Production Order Confirmation

Call transaction CO15

Use

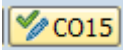
You use the action code  (S\_CO15) to enter confirmations for production orders.

Procedure

- Select an operation of a production order in the ALV Grid.

Alert	Dispatc...	Fmd	Order	OpAc	RtgTransf.	Work ctr	Material
		X	2758766	0010	18.01.2019	MA1	LMPC_HALB_12
		X	2759044	0010	02.11.2018	MA1	LMPC_HALB_12
			60007918	0010	27.03.2018	MA1	LMPC_HALB_34
		X	2759144	0010	13.12.2018	MA1	LMPC_HALB_34
		X	2759145	0010	13.12.2018	MA1	LMPC_HALB_34

Selection

- Execute the action code  (S\_CO15).
- You can now enter the confirmation for the production order.

**Confirmation of Production Order Enter : Actual Data**

Goods Movements

Order: 60007918      Status: REL PRC MANC SETC  
 Material Number: LMPC\_HALB\_34      LMPC Halb 34

Confirmation Type

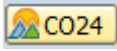
Partial Confirm.     Final Confirm.     Aut. Final Conf.     Clear Reservation

CO15 Entering a Confirmation

## 2.6.7.6 S\_CO24 Missing Parts Info System

Call transaction CO24

### Use

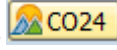
You can use the action code  (S\_CO24) to call the missing parts info system for production orders and process orders.

### Procedure

- Select one or more order operations in the ALV Grid.

Order	Reservatio	Material	ReqmtsDate	Reqmts qty	Committed qty	Unit	Plant	SELc	MRPC	Sales Order	SO It.	Serial no.	Material short text
60007671	105880	LMPC_ROH	02.09.2017	2	0	PC	LM01	L001	LM1				LMPC_HALB_34
60007669	105880	LMPC_ROH		2	0	PC	LM01	L001	LM1				LMPC_HALB_34
60007668	105881	LMPC_ROH		3	0	PC	LM01	L001	LM1				LMPC_HALB_34
60007667	105882	LMPC_ROH		4	0	PC	LM01	L001	LM1				LMPC_HALB_34

Selection of Operations

- Execute the action code  (S\_CO24).
- The result of the missing parts check is displayed.

**Missing Parts Info System**

Order	Reservatio	Material	ReqmtsDate	Reqmts qty	Committed qty	Unit	Plant	SELc	MRPC	Sales Order	SO It.	Serial no.	Material short text
60007667	105880	LMPC_ROH	02.09.2017	2	0	PC	LM01	L001	LM1				LMPC_HALB_34
60007669	105880	LMPC_ROH		2	0	PC	LM01	L001	LM1				LMPC_HALB_34
60007668	105881	LMPC_ROH		3	0	PC	LM01	L001	LM1				LMPC_HALB_34
60007667	105881	LMPC_ROH		3	0	PC	LM01	L001	LM1				LMPC_HALB_34
60007669	105882	LMPC_ROH		4	0	PC	LM01	L001	LM1				LMPC_HALB_34
60007668	105882	LMPC_ROH		4	0	PC	LM01	L001	LM1				LMPC_HALB_34
60007671	105884	LMPC_ROH		7	0	PC	LM01	L001	LM1				LMPC_HALB_34
60007671	105884	LMPC_ROH		7	0	PC	LM01	L001	LM1				LMPC_HALB_34


Result



## 2.6.7.7 S\_CO40 Conversion of Planned Order to Production Order

Call transaction CO40

### Use

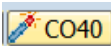
You can call transaction CO40 using the action code  (S\_CO40) to convert a planned order selected in the ALV Grid list into a production order directly in the planning table. This opens production order creation.

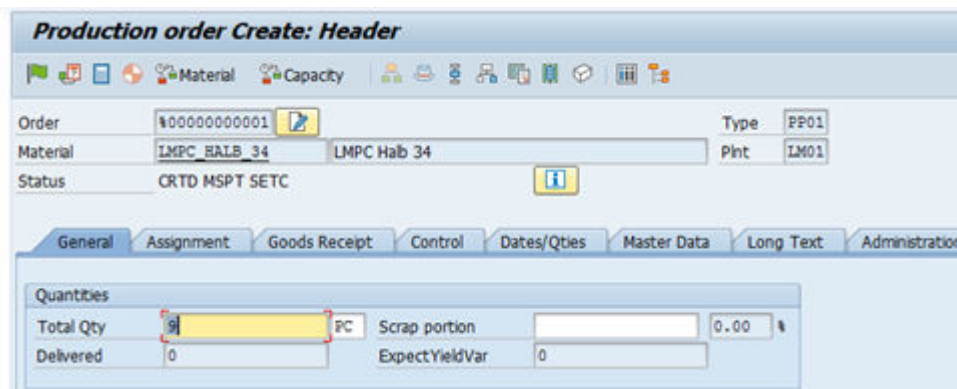
### Procedure

- Select a planned order in the ALV Grid list.

	X	MA1	2662033	LMPC_HALB_12	
	Y	MA1	2662035	LMPC_HALB_12	


Operation Selection

- Execute the action code  (S\_CO40).
- The screen of transaction CO40 for creating a production order appears.



Create production order

- Save the production order.
- You return to the capacity planning table automatically. The status bar shows the number of the newly generated order.

 Order number 60007678 saved

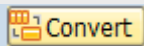
Message Status Bar

- Save the planning in the LMPC HJPT planning table.
- The changes are saved to the database and the display refreshed. The new production order is displayed.

		MA1	60007678	LMPC_HALB_12	
	Y	MA1	2662035	LMPC_HALB_12	

Result

### → Tip

This action code is provided for the individual conversion of planned orders. The mass conversion of planned orders is performed with the action code  (S\_CONVPP).

## 2.6.7.8 S\_COR5 Releasing Individual Process Orders

Call transaction COR5

### Use

You can use the action code  (S\_COR5) to release individual process orders.

### Procedure

- Select an operation of a process order in the ALV Grid.

Alert	Dispatc...	Fmd	Order	OpAc	Work ctr	Material	Earliest start	Earl.start
	X		70001513	0010	PR3	LMPC_PRFE_34	18.01.2019	15:07:32
		X	2768666	0010	PR3	LMPC PRFE 34	19.01.2019	12:20:00

Selection

- Execute the action code  (S\_COR5).

- Result:

The system displays the screen for releasing process orders of transaction COR5. The selected process order is entered. The release can be executed.

**Release Process Order: List**

---

Selection parameters

Plant	LM01	MRP Controller	<input type="checkbox"/>
Order Type	PI01	Prodn Supervisor	<input type="checkbox"/>
Material			
Release date from	18.01.2019	to	18.01.2019

---

Process Order: Overview

Process order	D. C.	Material Number	Quantity	O...	Sched. rel...	System Status	Description
70001513		LMPC_PRFE_34		12PC	18.01.2019	CRTD.PRC_MANC.SETC	LMPC Prozess Fert 34

Transaction COR5


## Related Information

[S\\_COR5 Configuration: Release Process Orders Individually](#)

## 2.6.7.9 S\_COR7 Creating Process Orders

Call transaction COR7

### Use

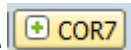
You can use the action code  (S\_COR7) to convert a planned order into a process order.

### Procedure

- Select an operation in the ALV Grid.

Alert	Dispatc...	Fmd	Order	OpAc	RtgTransf.	Work ctr	Material
		X	2758208	0010	29.01.2019	PR1	LMPC_PRHA_34
		X	2768260	0010	20.12.2018	PR1	LMPC PRHA 12

Select Order Operation



- Execute the action code
- This takes you to the screen for creating a process order. You can still change the data.

**Create Process Order: Header - General Data**

Material Capacity WM material staging Operations Materials XSteps

Process Order: 000000000001 Type: PI01  
 Material: LMPC\_PRHA\_34 LMPC Halb 34 Prozess Plant: LM01  
 Status: CRTD MANC SETC

General Data Assignment Goods Recpt Control Dates/Qties MasterData Administr.

Quantities  
 Total Qty: 5 PC ExpectYieldVar: 0  
 Delivered: 0

Screen for creating a Process Order

- Save to create a new process order.
- After saving, you return to the HJPT planning table. A new process order is displayed.

			70001510	0010	29.01.2019	PR1	LMPC_PRHA_34
--	--	--	----------	------	------------	-----	--------------

New Process Order

### → Remember

During the conversion, the system saves automatically. The system saves the planning result so far and writes it to the database.

## 2.6.7.10 S\_CR03 and S\_CRC3 Display Work Center or Resource

Call CR03 or CRC3

### Use

You can use these action codes to call the transactions for displaying the work center or the resource of an order operation.

### Procedure

Select an order operation in the ALV Grid.

Alert	Disp...	F...	Number	Order	OpAc	Material	Work ctr	D
		X		3078502	0010	LMPC_FERT_12	MA3	V
		X		3082866	0010	LMPC_HALB_34	MA2	3
		X		3078627	0010	LMPC_FERT_12	MA3	V

Selection of an Order

Execute the action codes (S\_CR03).

You access transaction CR03 to display the work center.

Display Work Center

The procedure for the action code (S\_CRC3) for displaying the resource is identical.

## 2.6.7.11 S\_CS03 Display BOM

BOM Display

### Use

You can use the action code (S\_CS03) to call the transaction for displaying the BOM.

### Procedure

Select an operation in the LMPC ALV Grid.

Alert	Disp...	F...	Number	Order	OpAc	Material	Work ctr	Dep. req. order. rel	Requirement date
		X		3086561	0010	LMPC_PRHA_34	PR1	3086546 PA 1.000 ST	28.12.2019
		X		3086561	0020	LMPC_PRHA_34	PR2	3086546 PA 1.000 ST	28.12.2019

Selection

Execute the action code (S\_CS03).

Result:

**Display material BOM: General Item Overview**

Material: LMPC\_PRHA\_34  
 Plant: LM01 Werk LMPC  
 Alternative BOM: 1

Item	ICt	Component	Component description	Quantity	Un	A..
0010	L	LMPC_ROH_3		1	PC	<input type="checkbox"/>
0020	L	LMPC_ROH_4		1	PC	<input type="checkbox"/>

BOM Display

The BOM for the material of the selected order is displayed.

## 2.6.7.12 S\_IW31 Creating Maintenance Orders

Call Transaction IW31

### Use

You can use this action code to branch to the transaction IW31 to create maintenance orders. You can use maintenance orders to reserve capacity in work centers so that no orders can be dispatched at certain times.

### Procedure

Select an order operation in the ALV Grid.

Alert	Dis...	Fmd	Lock	Ord. pool	Disp. Seq.	Ord. Nr.	OpAc	Material	Work ctr	Latest start	Lat.st.tme
		X				3236572	0010	152	MA2	17.03.2021	06:00:00
		X				3236573	0010	152	MA2	17.03.2021	06:00:00

Select Order Operation

The plant is transferred to the transaction as an input parameter via the selection.

Execute the action code **Maint. ord** (S\_IW31).

This takes you to the entry screen for creating a maintenance order.

### Create Maintenance Order : Central Header

Order PM01 %00000000001 Maintenance

Sys.Status CRTD MANC NTUP

HeaderData Operations Components Costs Partner Objects Additional Data Location Pla

Person responsible

PlannerGrp / LM01

Mn.wk.ctr MA1 / LM01 LMPC wst 1

Person Resp...

Notifctn

Costs EUR

PMActType 103 Repair

SystCond.

Address

Dates

Bsc start 24.03.2021 Priority

Basic fin. Revision

Reference object

Func. Loc.

Equipment

Assembly

UII

First operation

Operation Maintenance CcKey Calculate duration

WkCtr/Plnt MA1 / LM01 Ctrl key PM01 Acty Type LM\_MA PRT

Work durtn 6 H Number 1 Oprtn dur. 6 H Comp.

Person. no

Creation of Maintenance Order

Fill in the required input fields.

→ Remember

Remember to maintain a workload for the maintenance order. Capacity requirements are only generated if a workload is maintained, which can be processed in the LMPC HJPT planning table.

When you have made all the entries, save your entries. Return to the planning table.

A message appears in the status line, which displays the order number of the newly created order.

✓ Order saved with number 818524

Display of the order number in the status line

After creating a maintenance order, you must load the maintenance order data into the planning table. To do this, you reload the data or save it.



Alert	Dispatc...	Fmd	Order	OpAc	RtgTransf.	Work ctr	Material
		X	2758766	0010	18.01.2019	MA1	LMPC_HALB_12
		X	2759044	0010	02.11.2018	MA1	LMPC_HALB_12

Select Order Operation

- Execute the action code (S\_MB51).
- Result:

Material Document List						
Material	Material Description			Plant Name 1		
SLoc	MvT	S	Mat. Doc.	Item	Pstng Date	Quantity in UnE EUn
LMPC_HALB_12						
L002	501		50000159	1	01.11.2018	25 PC

Transaction MB51

The system displays the material document list for the order material.

## 2.6.7.14 S\_MD04 Stock/Requirements List

Call transaction MD04

Use

You can use the action code (S\_MD04) to display the stock/requirements list for a material.

Procedure

- Select a row in the ALV Grid.

Alert	I	F	Work ctr	Order	OpAc	Cat	C...	Phase	Material
	X		MA1	60007668	0010	1	10	0	LMPC_HALB_34

Select Operation

- Execute the action code (S\_MD04).
- Result:



**Stock/Requirements List as of 14:49 hrs**

Show Overview Tree

Material: LMPC\_HALB\_34 | Werk: LMPC  
 MRP area: LM01 | Plant: LM01 | MRP type: PD | Material Type: HALB | Unit: PC

Individual List | Product Group

A. Date	MRP ...	MRP element data	Reschedul...	E.. Receipt/Reqmt	Available Qty	Pr...	St...
23.10.2017	Stock				0		
27.04.2017	OrdRes	LMPC_FERT_34			50-	50-	L001
14.09.2017	OrdRes	LMPC_FERT_34			2-	52-	L001
27.09.2017	PlOrd.	0001331035/Steck**	27.04.2017	10	20	32-	LM01 L001
28.09.2017	PlOrd.	0001331034/Steck**	27.04.2017	10	30	2-	LM01 L001

Display MD04

The system displays the stock/requirements list for the material of the selected ALV Grid row.

## 2.6.7.15 S\_MD4C Order Report

Call transaction MD4C

### Use


Display of the multilevel order report for a planned order, production order, or process order.

### Procedure

- Select an order operation in the ALV Grid.

Alert	F	Work ctr	Order	OpAc	Cat	C..	Phase	Material
X		MA1	60007668	0010	1	10	0	LMPC_HALB_34

Select Operation

- Execute the action code  (S\_MD4C).
- The initial screen is prefilled and only needs to be confirmed.

**Multilevel Order Report**

Profile

Sales Order | Project | WBS Element | Production/Process Order | Network | PL Order

Production/Process Order: 60007668

Profile Selection

Overall Profile: SAP000000001

Order Report Initial Screen

- Result:

Prod. order	Description	Require...	Requ...	Requ... El...	Req. / reqd. qty	Receipt ...	Recel...	K...	Error message
60007668	LMPC Halb 34	PrdOrd	60007668	1	3,000-PC	23.10.2017	PrdOrd 60007668	1	Exception Message for Lower...
	LMPC Rohstoff 3	OrdRes	105881	1	3,000-PC	04.10.2017	PurRes 10059472	10	87 Finish date in the past
	LMPC Rohstoff 4	OrdRes	105881	2	3,000-PC	04.10.2017	PurRes 10059490	10	10 Bring process forward (15.09...

Order Report

The report for the selected order is displayed.

## 2.6.7.16 S\_MIGO Goods Movements

Call Transaction MIGO

### Use

You use a specific configuration to call transaction MIGO.

### Note

The action code is delivered with an example configuration. This is to be modified by the consultant in the customer system to suit individual requirements. You can use this example configuration to post the goods issue for an order.

### Procedure

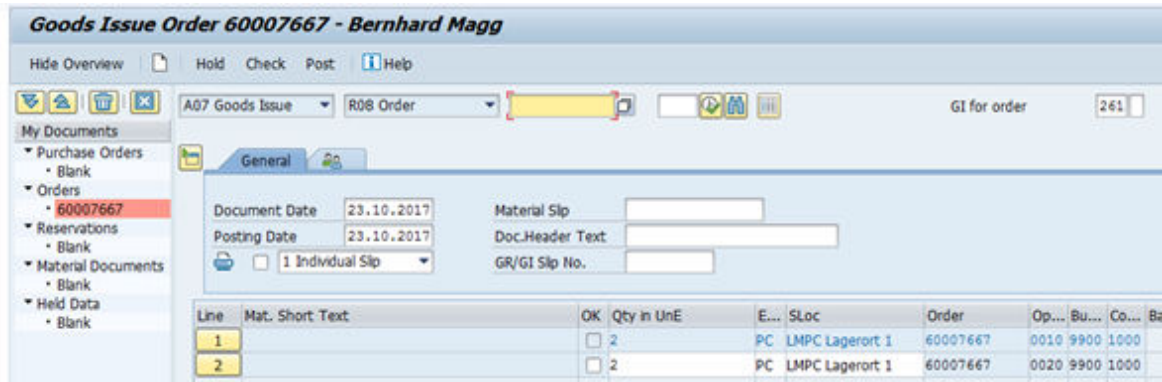
- Select an ALV Grid row.

Alert	F	Work ctr	Order	OpAc	Cat	C..	Phase	Material
		MA1	60007667	0010	1	10	0	LMPC_HALB_34

Select Operation

- Execute the action code  (S\_MIGO).

- Result:



Transaction MIGO

The prefilled transaction MIGO for the goods issue is displayed. The goods issue can be posted.

## Related Information

[S\\_MIGO Configuration: Goods Movements](#)

## 2.6.7.17 S\_MM03 Displaying Material Master Data

Call Transaction MM03

### Use


You can use the action code  (S\_MM03) to display the master data for the material.

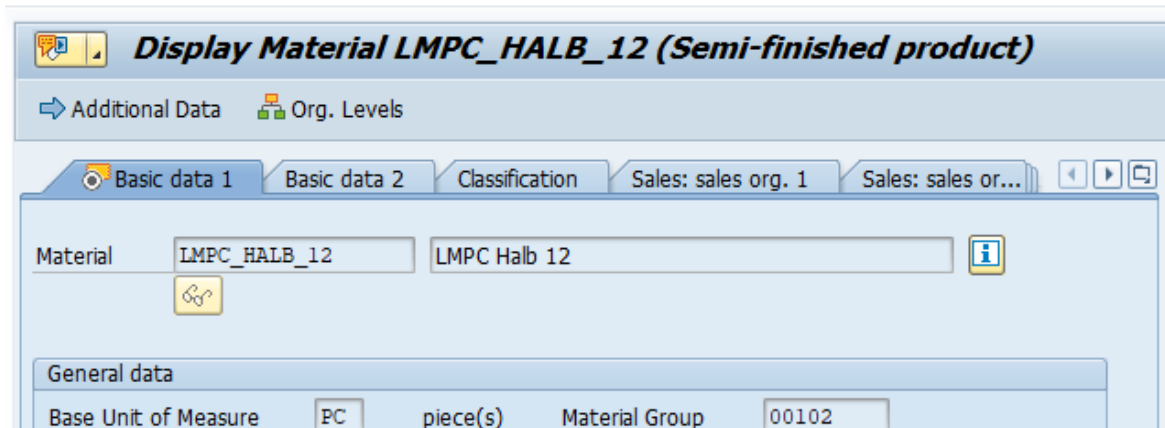
### Procedure

- Select an order operation in the ALV Grid.

Alert	Dispatc...	Fmd	Order	OpAc	RtgTransf.	Work ctr	Material
		X	2758766	0010	18.01.2019	MA1	LMPC_HALB_12
		X	2759044	0010	02.11.2018	MA1	LMPC_HALB_12

Select Order Operation

- Call the action code  (S\_MM03).
- The system displays the master data for the order material.



Material Master Data

→ Tip

The LMPC standard settings delivered define that the material data is also displayed if you double-click or click the hotspot on the material number in the ALV Grid.

Double-clicking or clicking the hotspot calls the action code S\_DBCLCK, which has been configured such that transaction MM03 is called for the material number.

[S\\_DBCLCK Double-Click and Hotspot Click on Fields in the ALV Grid \[page 298\]](#)

## 2.6.7.18 S\_MMBE Displaying Material Stock

Call transaction MMBE

**Use**

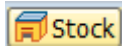
You can use the action code  (S\_MMBE) to display the stock for the order material.

**Procedure**

- Select an operation in the ALV Grid.

Alert	Dispatc...	Fmd	Order	OpAc	RtgTransf.	Work ctr	Material
	X	X	2759145	0010	13.12.2018	MA1	LMPC_HALB_34
	X	X	2758766	0010	18.01.2019	MA1	LMPC_HALB_12
	X	X	2759144	0010	13.12.2018	MA1	LMPC_HALB_34

Selection

- Execute the action code  (S\_MMBE).
- Result

**Stock Overview: Basic List**

Selection

Material: LMPC\_HALB\_34 MPC Hab 34  
 Material Type: HALB Semi-finished product  
 Unit of Measure: PC Base Unit of Measure: PC

Stock Overview

Client/Company Code/Plant/Storage Location/Batch/Special Stock | Unrestricted use | Qual. inspection | Reserved | Rcpt r

Full	29.000	7.000	151.000	
1000 IDES AG	29.000	7.000	151.000	
LM01 Werk: LMPC	29.000	7.000	151.000	
L001 LMPC Lagerort: 1			151.000	
L002 LMPC Lagerort: 2	29.000	7.000		

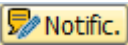
Stock Overview

The system displays the stock overview for the order material.

## 2.6.7.19 S\_QM01 Create Quality Notification for Material Error

Call transaction QM01

### Use

You can use the action code  (S\_QM01) to call transaction QM01 for creating a quality notification from the LMPC planning table with a batch input table. The settings in Customizing have been selected such that a quality notification with the notification type "F3: Material error" is created.

### Procedure

- Select an order operation in the ALV Grid.

Alert	Conflict	F	Work ctr	Order	Operation	Quantity	OpAc	Cat	C	Phase	SOP	Material	Earliest start
				MA3	60007823	7,001	0010	1	10	0		LMPC_FERT_12	05.01.2018
		X		MA3	2703322	2,520	0010	2		0		LMPC_FERT_12	05.01.2018

Select Order Operation

- Execute the action code  (S\_QM01).

The system creates a quality notification of notification type F3. The selection screen is skipped and you are taken to notification creation on the first subscreen.

### Quality Notification

The following parameters are also transferred from the LMPC planning table:

- Material number
- Plant
- Production order

### ! Restriction

It is only useful to create quality notifications for production orders. If you try to create a quality notification with reference to a planned order, the system displays an error message.

**Order 2703323 does not exist**

Message no. IW161

Error Message

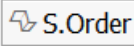
## Related Information

[S\\_QM01 Configuration: Create Quality Notification](#)

## 2.6.7.20 S\_VA03 Display Sales Order

Jump to transaction for displaying the sales order








### Usage

You can use the action code  (S\_VA03) to display the associated sales order for an order.

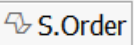
The prerequisite for this is that you have activated the data provider for the SD data and that, for the order, a sales order is displayed in the ALV Grid field for the sales order. [Data Provider /LMPC/CL\\_DP\\_SD\\_DATA Sales Order \[page 379\]](#)

### Procedure

Select an operation in the ALV Grid for which an order number is displayed in the Sales Order field.









	Alert	Lock Di...	Disp...	Fmd	Ord. Nr.	OpAc	Sales Order	SOp	Material
		X		X	3262796	0010	16900		LMPC FERT KE
		X		X	3295764	0010	16899		LMPC HALB 12
				X	3295827	0010			LMPC FERT 34

Selection

Execute the action code  (S\_VA03).

Result:

The overview screen for the sales order appears.

Display Standard Order 16900: Overview			
			
	Orders		
Standard Order	16900	Net value	0.00 EUR
Sold-To Party	1234	K.F.W. Berlin / Altonaer Strasse 20 / 10557 Berlin 	
Ship-To Party	1234	K.F.W. Berlin / Altonaer Strasse 20 / 10557 Berlin	
PO Number	Impc06	PO date	
<b>Sales</b>	Item overview	Item detail	Ordering party
	Procurement	Shipping	Reason for rejection

Display Sales Order

### → Tip

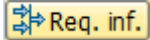
If the action code S\_DBCLCK is configured accordingly, you can also double-click or hotspot click on the order number in the ALV Grid to display the sales order [S\\_DBCLCK Double-Click and Hotspot Click on Fields in the ALV Grid \[page 298\]](#)

## 2.6.8 LMPC HJPT Support Functions

Overview of the LMPC HJPT support functions.

## 2.6.8.1 S\_BED2 Read Requirement Date MD09

Call requirement date determination MD09

The action code  (S\_BED2) is an auxiliary function for very rare requirements. If the data provider /LMPC/CL\_DP\_BED\_2 is used in a system, the requirement dates for the orders are determined using the logic of transaction MD09 and buffered in a database table. Data generation consumes a lot of performance and takes a certain amount of time. If the determination of the data is not activated via a regular background job, it is possible that when newly generated orders are first called, the requirement date data is not available in LMPC for new orders. You can execute the action code S\_BED2 for one or more orders, to generate the data for individual orders immediately, without having to wait for the result of the data provider.

## 2.6.8.2 S\_BMATXT Change Material Basic Data Text





### Usage

You can use the action code S\_BMATXT to change the basic data texts of materials. The basic data text is in the material master in the additional data.

### Procedure

Several basic data texts of materials can be changed with one function call.

Select one or more operations in the ALV Grid of the HJPT planning table.

	Alert	Lock	Disj	Fmd	Order Number	OpAc	SOp	Material	Wor...
	OO		X	X	<a href="#">3295759</a>	0010		<a href="#">LMPC HALB 12</a>	<a href="#">MA1</a>
	OO		X	X	<a href="#">3295437</a>	0010		<a href="#">LMPC HALB SL 1</a>	<a href="#">MA1</a>
	OA			X	<a href="#">3297245</a>	0010		<a href="#">LMPC HALB SR</a>	<a href="#">MA1</a>

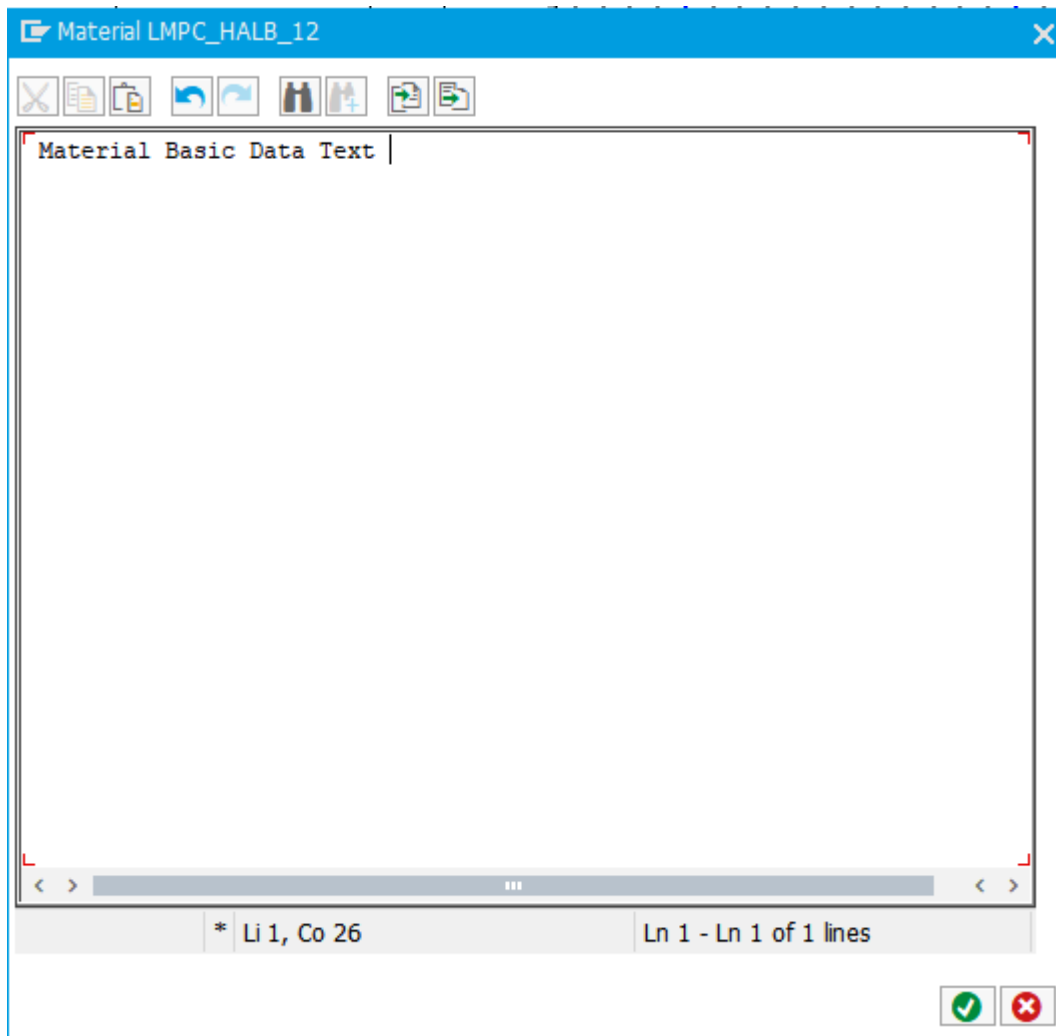
Selection of Operations

Execute the action code  (S\_BMATXT).

The function reads the materials of the orders from the selected operations.

For each material in the selection, the system displays a dialog box for entering the basic data text.





Dialog Box Basic Data Text

The title of the window tells you the material for which you are maintaining the basic data text.

A detailed text can be maintained.

If several materials are included in the selection, another window appears for the next material after you confirm the window.

The confirmation writes the basic data text to the material master.

#### → Remember

The change is made in simulation mode. The data in the relevant material master is only updated if you then save. If you exit the application without saving, the changes will be lost.

When delivered, the function is set up in such a way that the text set is maintained in the logon language of the user. You can use the parameter `LANGUAGE` in the settings for the action code to define a language for maintenance. If this parameter is maintained, maintenance only takes place for the defined language.

## Related Information

[Action Codes LMPC HJPT Support Functions](#)

### 2.6.8.3 S\_CONATP Log for ATP Check

Log for ATP Check

The action code S\_CONATP reads the log for the ATP check and displays it. This action code can only be used as a follow-on action code for the ATP check with the action code S\_ATP. It cannot be used as a standalone action code.

### 2.6.8.4 S\_CONPFR Log Mass Release

Log for Mass Release

The action code S\_CONPFR reads the log for the mass release and displays it. This action code can only be used as a follow-on action code for mass release with the action code S\_MFREI. It cannot be used as a standalone action code.

### 2.6.8.5 S\_CONPRO Log for Mass Conversion

Log for Mass Conversion

The action code S\_CONPRO reads the log for the mass conversion and displays it. This action code can only be used as a follow-on action code for mass conversion with the action codes S\_CONVPL, S\_CONVPP, and S\_CONVPI. It cannot be used as a standalone action code.

### 2.6.8.6 S\_CORTXT LMPC HJPT Order Text

LMPC Order Text

#### Use

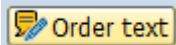
With this action code, a text of 72 characters can be saved for each order in the LMPC HJPT detailed scheduling planning board.

#### Procedure

- Select an order operation in the ALV Grid.

Alert	Dispatched	F...	CTC Order pool	Lock Nu...	Order Number	OpAc Cat	Material	Work ctr	Total Order Quantity	UoM	Tmtbl StD	Tmtbl...	Earliest start	E
	●○○				60008411	0020 001	LMPC_FERT_12	MA4	2	PC		00:00:...	16.07.2020	1
	○▲○	X			3221990	0020 001	LMPC_FERT_12	MA4	4	PC		00:00:...	18.07.2020	1

#### Select Operation

- Execute the action code  (S\_CORTXT).
- A popup window appears, in which you can enter the order text.

Enter Value X

Order Text

#### Dialog Box

- Confirm the dialog box.
- Result in the ALV Grid:

LMPC Order Text	Created By	Changed By	Created On	Changed On
Test text LMPC order text 1	D056579	D056579	21.07.2020 15:37:58	21.07.2020 16:58:33

#### Result of the Entry

The text is displayed for the associated field in the ALV Grid.

- There are 4 additional fields for the LMPC HJPT order text:
  - Created by
  - Changed by
  - Created on
  - Changed on

#### → Remember

When converting planned to production or process orders, the text of the planned order is automatically adopted for the newly generated production or process order.

The texts are saved with the key of the order number in the LMPC table /LMPC/CORDTEXT. The basic end date of the order is saved as a comparison field for the clean-out routine. During the run of the data provider for reading the data, the system checks the age of the data records. Data records that are older than 180 days are deleted. This prevents the database table from overflowing in the long term and removes superfluous entries.

#### → Tip

Also see the function for the tasks. If you are looking for an opportunity to define even more information for the order, this function may be better suited. [S\\_MCFMEA](#) [S\\_MCFCOM](#) [S\\_MCFRES](#), [Tasks](#), [Comments](#), [Resubmissions](#) [page 309]

## Related Information

[S\\_CORTXT Configuration: LMPC Order Text](#)

## 2.6.8.7 S\_COUNT Counting ALV Grid Data Records

Count Data Records in the HJPT Detailed Scheduling Board

### Use

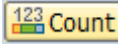
You can use the action code  (S\_COUNT) to count the selected data records in the ALV Grid.

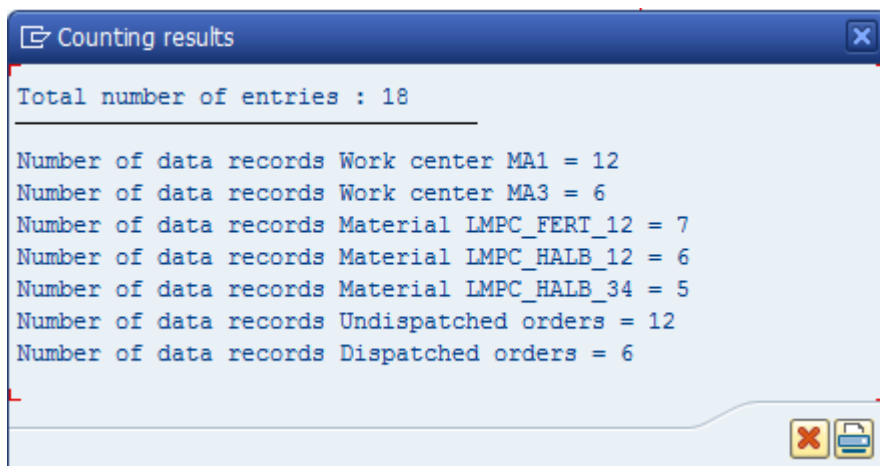
### Procedure

- Select data records in the ALV Grid.

Ep.	Alert	Conflict	I	F	Work ctr	Order	OpAc	Cat	C...	Phase	SOp	Material	Earliest start
			X		MA3	60007840	0010	1	10	0		LMPC_FERT_12	27.12.2017
			X		MA3	60007845	0010	1	10	0		LMPC_FERT_12	28.12.2017
			X		MA3	60007846	0010	1	10	0		LMPC_FERT_12	29.12.2017
			X		MA3	60007847	0010	1	10	0		LMPC_FERT_12	30.12.2017
			X		MA3	60007848	0010	1	10	0		LMPC_FERT_12	30.12.2017
			X		MA3	60007849	0010	1	10	0		LMPC_FERT_12	30.12.2017
			X	X	MA3	2703322	0010	2		0		LMPC_FERT_12	30.12.2017
			X	X	MA3	2703323	0010	2		0		LMPC_FERT_12	03.01.2018
			X	X	MA3	2703327	0010	2		0		LMPC_FERT_12	09.01.2018
			X		MA1	2702375	0010	2		0		LMPC_HALB_34	21.12.2017
			X		MA1	2703334	0010	2		0		LMPC_HALB_12	21.12.2017
					MA1	60007816	0010	1	10	0		LMPC_HALB_12	22.12.2017
			X		MA1	2703346	0010	2		0		LMPC_HALB_12	22.12.2017
			X		MA1	2703348	0010	2		0		LMPC_HALB_12	22.12.2017
			X		MA1	2702383	0010	2		0		LMPC_HALB_34	28.12.2017
			X		MA1	2702378	0010	2		0		LMPC_HALB_34	03.01.2018
			X		MA1	2702386	0010	2		0		LMPC_HALB_34	05.01.2018
			X		MA1	2661886	0010	2		0		LMPC_FERT_12	09.01.2018
					MA1	60007818	0010	1	10	0		LMPC_HALB_12	15.01.2018
			X		MA1	2703340	0010	2		0		LMPC_HALB_12	16.01.2018
			X		MA1	2702385	0010	2		0		LMPC_HALB_34	18.01.2018

Selecting Data Records for the Count

- Execute the action code  (S\_COUNT).
- A popup window appears with the results of the count:



Result

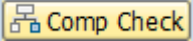
## → Remember

The count result is dependent on the settings in the Customizing of the action code. You use the parameters in Customizing to define the criteria to be used for counting. If no Customizing settings are defined, the system only displays the number of selected data records.

## 2.6.8.8 S\_CPCHCK Check of Requirement Dates for Components of an Order

Check requirement dates of order components

### Use

The action code  (S\_CPCHCK) for the component checks compares the requirement dates of an order's components with the current date. If any component has a requirement date that predates the current day, the conflict field CONFLICT\_AX is set in LMPC. If corresponding coloring is configured for this field, the respective row or a field in the ALV Grid are also highlighted in color.

The action code for the component check is especially useful if individual components of the order require a lead time (meaning that they are not immediately available). If an order is dispatched to a point in time that is very close to the current date, it is possible that the lead time for the components means that they are not available in time. The planner can use this action code to check this issue.

The action code checks dispatched order operations as well as not dispatched order operations.

The action code can be executed as a standalone action code via a button in the ALV Grid. However, it can also be used as follow-up action code of a dispatching function. This means that the requirement dates of the components are checked immediately after planning.

### Procedure

- In the bill of materials of the finished product, a negative lead-time offset (meaning a lead time) of -2 days is maintained for one of the components.

**Display material BOM: Item: All data**

Reference items | Subitems | Long Text

Material: ZMTH\_FG\_1  
 Plant: LM01 Werk LMPC  
 Alternative BOM: 1

Basic Data | Status/Lng Text | Administr. | Document Assgmt

**BOM item**

Item Number: 0010  
 Component: ZMTH\_BULK\_1  
 Item Category: I Stock item  
 Item ID: 00000001  
 Sort String:   
 Sub-item ID

**Quantity Data**

Quantity: 1 PC  Fixed quantity  
 Operation scrap in %: 0.00  Net ID  
 Component scrap (%): 0.00

**General Data**

Co-product  Recurs. allowed  
 AltItemGroup:   Recursive  
 CAD Indicator  
 ALE indicator  
 Discontin. data  
 Reference point:

**MRP Data**

Lead-time offset: 2-  
 Oper. LT offset:    
 Distribution key:   
 Phantom item  
 Explosion type:   
 Special procurement:

Negative Lead-Time Offset in the BOM

- An order for the relevant material is dispatched for the current date (in the example: December 18, 2017):

**Display Planned Order: Stock order**

Components Components

LA Stock order 2684333 E Standard in-house ...

Material ZMTH\_FG\_1 ZMTH Fertigtgut 1

MRP Area LM01 Werk LMPC

Hdr Assignmnt Mast. data Det. scheduling Production rates

Dates

	BasicDates	Production dates	
Finish	20.12.2017	19.12.2017	12:29:42
Start	19.12.2017	19.12.2017	11:09:42

Parameters

Scheduling type 2 Backwards

Reduction No reduction carri...

Scheduling margin 000

Scheduling executed, see log for information messages

Scheduling result planned order

S..	Op...	SOp	Work ctr	Start date	Time	FinDate	Time	Cat	Desc. capacity cat.	Capacit
0	0010		ZMTH_M_B	19.12.17	11:09	19.12.17	12:29	001	Machine	1.33
								002	Labor	1.33

Dispatched Order

- However, the semifinished product from the BOM should have been provided 4 days ago (2 days lead time + 2 days weekend) in order to be able to start processing the order today:

**Processing Components: Component Overview**

Material ZMTH\_FG\_1 ZMTH Fertigtgut 1

Product. plant LM01 Order start 19.12.2017

Order quantity 8 PC Order finish 20.12.2017

Component Overview

Material	Description	Requirement qty	U...	Q	Plant	Pr...	Supply Area	Reqmt Date	M	Item	I. R...	B...	M. I.
ZMTH_BULK_1		8	PC		LM01	L001		15.12.2017		0010	L 8	PC	PD

Requirement Date of BOM Material

- In order to avoid checking each component manually for this issue, instead the action code for component checking can be used after dispatching.

Select the orders to be checked and execute the action code **Comp Check** for the component check.

- Result:

Conflict	Alert	I	F	Work ctr	Order	OpAc	Cat	C	Phase	Material	Operation	Quantity	UoM	SOp	Earliest start	Earl.start	Earliest finish
		X	X	ZMTH_M	2701954	0010	2	0	ZMTH_LIMITIERTE_FV		5	PC			16.12.2017	08:32:00	16.12.2017
X		X	X	ZMTH_M	2684333	0010	2	0	ZMTH_FG_1		8	PC			19.12.2017	11:09:42	19.12.2017
X		X	X	ZMTH_M	2684333	0010	2	0	ZMTH_FG_1		8	PC			19.12.2017	11:09:42	19.12.2017
		X	X	ZMTH_M	2684318	0010	2	0	ZMTH_FERT_1		2	PC	0011		01.12.2017	06:00:00	01.12.2017


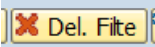
Highlighted Orders with Requirement Date Conflict for Components

All orders with a conflict for the components requirement date are identified via the conflict field. Based on the configured coloring, the corresponding ALV Grid rows are highlighted in red.

## 2.6.8.9 S\_FILTR, S\_FILTRE Set and Remove Filters

Set and remove filters in the ALV Grid of the LMPC planning table.

### Use

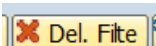

You can use the action codes  (S\_FILTR) and  (S\_FILTRE) to set and delete filters in the ALV Grid of the LMPC planning table.

Both action codes use the same action class /LMPC/CL\_ACTION\_FILTER. Depending on the Customizing settings, you can use this class to execute 3 different functions:


- Remove all filters
- Set filters
- Remove filters

### Procedure

#### S\_FILTRE Remove all filters

If the action code  (S\_FILTRE) is executed, all filters in the ALV Grid are removed, regardless of whether they have been set manually, or have been set using the action code  (S\_FILTR).

#### S\_FILTR Set filters

The user selects those data sets whose values are to apply to the filter and executes the action code  (S\_FILTR).

Alert	Conflict	F	Work ctr	Order	OpAc	Cat	C	Phase	SOp	Material	Earliest start	Earl.start	Earliest finish	Earl.finish
			MA1	60007815	0010	1	10	0		LMPC_HALB_12	05.01.2018	06:17:47	10.01.2018	11:40:00
			MA1	60007816	0010	1	10	0		LMPC_HALB_12	10.01.2018	07:51:07	13.01.2018	04:00:00
			MA1	60007818	0010	1	10	0		LMPC_HALB_12	13.01.2018	19:11:07	15.01.2018	07:40:00
		X	MA1	2661886	0010	2		0		LMPC_FERT_12	15.01.2018	05:51:40	15.01.2018	14:45:00
		X	MA1	2702375	0010	2		0		LMPC_HALB_34	15.01.2018	12:12:42	17.01.2018	12:00:00
		X	MA1	2702378	0010	2		0		LMPC_HALB_34	17.01.2018	04:20:19	18.01.2018	12:00:00
		X	MA1	2702383	0010	2		0		LMPC_HALB_34	19.01.2018	04:41:45	23.01.2018	13:30:00
		X	MA1	2702385	0010	2		0		LMPC_HALB_34	23.01.2018	14:17:27	31.01.2018	09:00:00

Selection of Data Sets for Setting Filters

For example, in Customizing you have defined that the fields Work Center and Material Number are set as filter fields. The logic reads the values for work center and material from the selected data sets, and uses these values to set the filter in the ALV Grid.



Result:

Alert	Conflict	F	Work ctr	Order	OpAc	Cat	C...	Phase	SOp	Material	Earliest start
		X	MA1	2661886	0010	2		0		LMPC_FERT_12	15.01.2018
		X	MA1	2702375	0010	2		0		LMPC_HALB_34	15.01.2018
		X	MA1	2702378	0010	2		0		LMPC_HALB_34	17.01.2018
		X	MA1	2702383	0010	2		0		LMPC_HALB_34	19.01.2018
		X	MA1	2702385	0010	2		0		LMPC_HALB_34	23.01.2018
		X	MA1	2702386	0010	2		0		LMPC_HALB_34	02.02.2018
		X	MA1	2702387	0010	2		0		LMPC_HALB_34	02.02.2018

Filtered Display in the ALV Grid

Only data sets are displayed whose work center and material have the previously selected values.

### S\_FILTR Remove filters

If the user wants to remove the set filters, they execute the action code (S\_FILTR) again without selecting any data sets.

Alert	Conflict	F	Work ctr	Order	OpAc	Cat	C...	Phase	SOp	Material	Earliest start
		X	MA1	2661886	0010	2		0		LMPC_FERT_12	15.01.2018
		X	MA1	2702375	0010	2		0		LMPC_HALB_34	15.01.2018
		X	MA1	2702378	0010	2		0		LMPC_HALB_34	17.01.2018
		X	MA1	2702383	0010	2		0		LMPC_HALB_34	19.01.2018
		X	MA1	2702385	0010	2		0		LMPC_HALB_34	23.01.2018
		X	MA1	2702386	0010	2		0		LMPC_HALB_34	02.02.2018
		X	MA1	2702387	0010	2		0		LMPC_HALB_34	02.02.2018

Filtered Data Sets Without Selection

Execute action code (S\_FILTR).

Result:

Alert	Conflict	F	Work ctr	Order	OpAc	Cat	C...	Phase	SOp	Material	Earliest start
			MA1	60007815	0010	1	10	0		LMPC_HALB_12	05.01.2018
			MA1	60007816	0010	1	10	0		LMPC_HALB_12	10.01.2018
			MA1	60007818	0010	1	10	0		LMPC_HALB_12	13.01.2018
		X	MA1	2661886	0010	2		0		LMPC_FERT_12	15.01.2018
		X	MA1	2702375	0010	2		0		LMPC_HALB_34	15.01.2018
		X	MA1	2702378	0010	2		0		LMPC_HALB_34	17.01.2018
		X	MA1	2702383	0010	2		0		LMPC_HALB_34	19.01.2018
		X	MA1	2702385	0010	2		0		LMPC_HALB_34	23.01.2018
		X	MA1	2702386	0010	2		0		LMPC_HALB_34	02.02.2018
		X	MA1	2702387	0010	2		0		LMPC_HALB_34	02.02.2018

Unfiltered Data Sets

The filters for the fields, which are set in Customizing, are removed.

### → Tip

- The system only removes the filters for the fields that have been set in Customizing. The filters on all the other fields remain unchanged. This means that filters set manually or set via the layout profile are not lost.
- The filters set temporarily can be retained when saving the data and reloading the data if retaining filter settings is set in the settings for the HJPT overall profile. [Configuration of HJPT Overall Profile](#)

### ! Restriction

This filter function only affects the display of the data sets in the ALV Grid. It does not affect the display of the bars in the graphical planning table.

## 2.6.8.10 S\_DBCLCK Double-Click and Hotspot Click on Fields in the ALV Grid

Double-Click on Action Codes

### Use

The action code S\_DBCLCK enables you to execute different action codes by double-clicking or clicking the hotspot on a field in the ALV Grid of the LMPC HJPT detailed scheduling planning board.

The following settings are defined in the standard LMPC delivery:

Field	Technical Field Name	Action Code
Order number	/LMPC/DELNR_CY, PLNUM_PA, AUFNR_FA	<a href="#">S_AK02 Change Order [page 82]</a>
Operation number	/LMPC/VORNR_CY, VORNR_KB, VORNR_AV	<a href="#">S_AV02 Changing Operations of the Production Order or Process Order [page 86]</a>
Material number	MATNR_MA and MATNR_MC	<a href="#">S_MM03 Displaying Material Master Data [page 283]</a>
Requirement date	BDTERM_MD	<a href="#">S_MD04 Stock/Requirements List [page 280]</a>
Rescheduling date	UMDAT_MD	<a href="#">S_MD04 Stock/Requirements List [page 280]</a>
Order text	/LMPC/AUTEXT_FA	<a href="#">S_AUTEXT Change the Long Text of Production Orders and Process Orders [page 85]</a>
LMPC order text	CORDTEXT_AX	<a href="#">S_CORTXT LMPC HJPT Order Text [page 290]</a>

Field	Technical Field Name	Action Code
Number of tasks	NUM_MEAS_ME	<a href="#">S_MCFMEA S_MCFCOM S_MCFRES, Tasks, Comments, Resubmissions [page 309]</a>
Task ID	MEASURE_ID_ME	<a href="#">S_MCFMEA S_MCFCOM S_MCFRES, Tasks, Comments, Resubmissions [page 309]</a>
Work center	ARBPL_CR	<a href="#">S_CRO3 and S_CRC3 Display Work Center or Resource [page 275]</a>
Sales order	KDAUF_SD	<a href="#">S_VA03 Display Sales Order [page 287]</a>

### → Tip

If the "HOTSPOT" parameter is set for the action code, the function is called by clicking on the hotspot instead of double-clicking. The advantage of a hotspot is that an underscore in the data indicates that a function is in that field.

The following screen section shows the underscores in the fields for the order number and material number.

Alert	Requirement date	Avail.date	Bufferdays	Dispa...	F...	Number	Order	OpAc	Cat	Material	Work ctr	Earliest start	Earl.start	
	03.02.2020	18.05.2020	72	X	X	3192538		0030	001	LMPC_HALB_1234	MA1	12.05.2020	14:08:23	
	01.04.2020	20.05.2020	32	X	X	3127588		0010	001	LMPC_HALB_12	MA1	12.05.2020	16:13:23	
	01.04.2020	20.05.2020	32	X	X	3127612		0010	001	LMPC_HALB_12	MA1	13.05.2020	07:18:23	
	25.02.2020	20.05.2020	58	X	X	3192541		0030	001	LMPC_HALB_1234	MA1	13.05.2020	12:28:23	
	30.03.2020	20.05.2020	34		X	3192542		0030	001	LMPC_HALB_1234	MA1	14.05.2020	11:45:00	
	06.04.2020	25.05.2020	31			60008347		0010	001	LMPC_HALB_12	MA1	16.05.2020	11:18:00	
	14.04.2020	25.05.2020	27		X	3127611		0010	001	LMPC_HALB_12	MA1	16.05.2020	12:30:00	

Grid with Hotspots on Order Number and Material Number

## 2.6.8.11 S\_DINFO Detailed Information for Graphical Bars

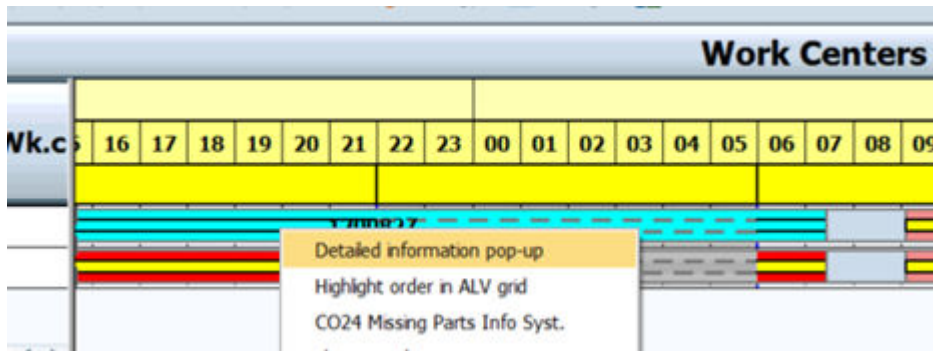
Detailed Information for Graphical Bars

### Use

You use this action code in the context menu of the capacity planning table and it displays information for an order in a popup window.

### Procedure

- Select a bar in the graphical section of the LMPC planning table (selection = blue color) + right-click.
- Select the function "Detailed information pop-up".



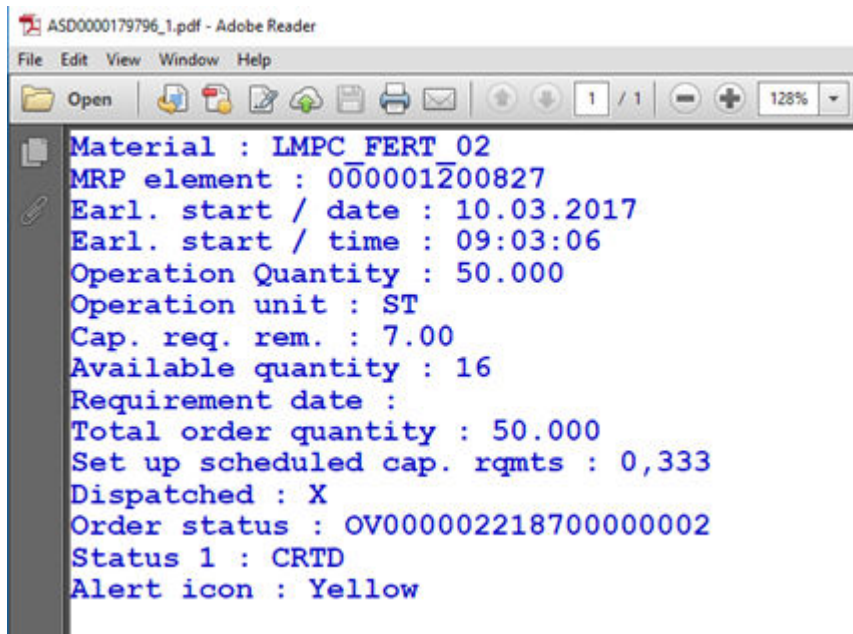
#### Executing the Function

- The system displays a popup window with details on the order.



#### Example of Popup Window with Detailed Information

- You can use the *Print* function to export the information.



Example: Export Detailed Information to PDF


→ Tip

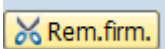
You use Customizing to make settings to define which information is displayed. [S\\_DINFO Configuration: Dialog Box for Detailed Information](#)

## 2.6.8.12 S\_FIX, S\_FIXE Firm and remove firming of orders

Firm and remove firming of orders

### Use

You can use the action code  (S\_FIX) to firm order operations of planned, production, and process orders.

You can use the action code  (S\_FIXE) to undo the firming.

Both single and multiple selection are possible.

→ Remember

The changes are made in simulation mode. The changes are not written to the database until you save.

There are two types of firming that can be made:

- The standard SAP firming of planned, production, and process orders.
- Setting the LMPC HJPT firming indicator.

Customizing can be used to determine which of the possible firming types are used when executing the action code. [S\\_FIX & S\\_FIXE Configuration: Set Firming and Remove Firming](#)

## Procedure

### Standard SAP Firming of Planned Orders

The firming indicator of planned orders can be displayed in the field AUFFX\_PA in the LMPC planning table.

Alert	Conflict	Firming indicator	Work ctr	Order
		X	MA3	2703322
			MA3	2703323
		X	MA3	2703327


Firming Planned Orders

The orders are not firming at the start.

Select order operations in the ALV Grid that are to be firming.

Alert	Conflict	Firming indicator	Work ctr	Order
			MA3	2703322
			MA3	2703323
			MA3	2703327

Selection of Orders

Execute the action code  (S\_FIX).

Result:

Alert	Conflict	Firming	Work ctr	Order
		X	MA3	2703322
		X	MA3	2703323
		X	MA3	2703327

Result

The firming indicator is set for the orders.

If you open the order header of a planned order, the firming indicator is also set there.

**Change Planned Order: Stock order**

Accept changes Components Components Bill of material Comp. ATP

Stock order: 2703322 Standard in-house pr...  
 Material: LMPC\_FERT\_12 LMPC\_Fert\_12  
 MRP Area: LM01 Werk: LMPC

Hdr Assignment Mast. data Det. scheduling Production rates

**Quantities**  
 Order quantity: 20 PC Scrap quantity:

**Dates**

	BasicDates	Production dates	Other dates
Ord.finish	10.01.2018	09.01.2018 10:30:00	Available for plng 10.01.2018
Start	04.01.2018	04.01.2018 06:00:00	GR processing time <input type="text"/>
Pind open.	04.01.2018		

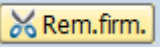
**Other data**

Producing plant	LM01
Stor. Location	L001
Production Version	LM01
BOM expl.number	<input type="text"/>

**Firming**

- Pind order
- Components
- Capacity scheduled
- Conversion indicator

Planned Order with Firming Indicator

You can use the action code  (S\_FIXE) to undo the firming.

If the parameter `CHK_BOMF` is set in the settings for the action code, the firming indicator cannot be removed if the firming indicator is set for the components in the planned order.

### ⚠ Caution

Special feature of planned orders: When you fix operations of a planned order, the entire planned order is firming. Individual operations of planned orders cannot be firming. The firming takes place at order header level.

Planned orders are firming automatically when they are dispatched.

If you remove the firming indicator for a planned order, the order is automatically deallocated.

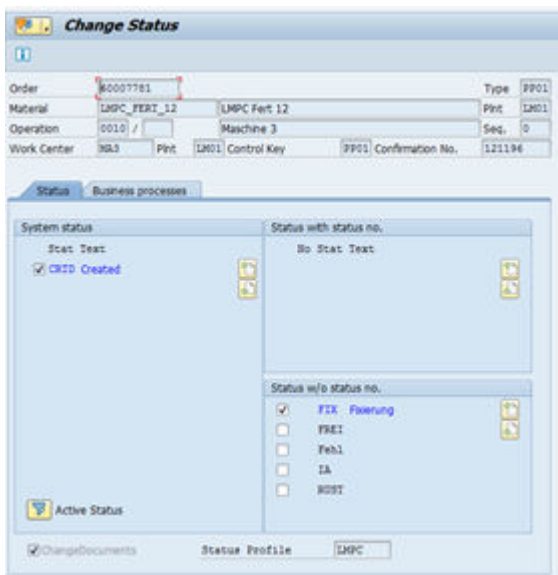
The operations of this order can always be dispatched and deallocated, regardless of whether a planned order is firming. The firming indicator does not influence the planning activities.

It only prevents change by means of an MRP run. The MRP run ignores firming planned orders. They will then no longer be changed.

### Standard SAP Firming of Operations of Production Orders

For the production order, the LMPC user status 'FIX' is set or removed in the operation of the production order. The firming takes place at operation level.

Example of a status in the operation of a production order:



Firming in the production order

#### → Tip

If you want to see the status "FIX" in the ALV Grid, you can set this via the status query, which can be defined in LMPC Customizing. Then the status is written to one of the status fields. The prerequisite for this is the configuration of a user status schema for the order operation and the existence of a status with **authorization key FIX**. This status is set or removed with this action.

#### ⚠ Caution

Firmed production order operations can be dispatched.

However, dispatched production order operations cannot be deallocated. The status "FIX" prevents deallocation of these order operations. They can no longer be rescheduled to other dates.

### Standard SAP Firming of Operations of Process Orders

Process order operations are firmed, in the same way as in production orders, via the user status within the order operation. Since it is not possible to use the process order settings to maintain a default status profile for operations, you can use the action code parameter `STSMMA` to supply a default status profile for process orders. This status profile will be applied to the operation by the action code if the operation does not already have a status profile. The status profile used for firming process orders must be valid for operations in the process industry. The behavior for planning activities is similar to the behavior for production orders.

### LMPC HJPT Firming Indicator

The LMPC HJPT firming indicator is only an indicator relating to an operation of an order. It is an indicator that can be set and removed. This can be done separately or in connection with the standard SAP fixing.

Without further settings, the indicator has no effect on operations of orders and is used only to indicate operations.

The changes to the indicator are made in the simulation.



If the indicator is changed, the following fields are updated:

Field Name	Description
HJPT_FIRM_AX	LMPC HJPT Firming Indicator
FCRUSER_AX	LMPC HJPT Firming Created By
FCHUSER_AX	LMPC HJPT Firming Last Changed By
FCRTMSTMP_AX	LMPC HJPT Firming Created On
FCHTMSTMP_AX	LMPC HJPT Firming Last Changed On

HJPT firming	LMPC Firming Created By	HJPT Firming Last Changed By	HJPT Firming Created On	HJPT Firming Last Changed On
X	D056579	D056579	15.09.2021 10:00:56	15.09.2021 10:00:56
X	D056579	D056579	15.09.2021 10:00:56	15.09.2021 10:00:56

Fields of the HJPT Firming Indicator

Options for using the LMPC HJPT firming indicator:

- You can use these fields to see when and by which user the LMPC HJPT firming was changed for the first time or most recently in an operation.
- In connection with the [Action Code Limits \[page 71\]](#), the execution of certain functions can be prevented. For example, you can specify that it is no longer possible to dispatch or deallocate operations that have the HJPT firming indicator.
- The bars of the operations in the graphic and the data records in the ALV Grid can be colored depending on the contents of the fields.  
[Coloring of Bars of the Bar Chart \[page 27\]](#)  
[Coloring the ALV Grid \[page 44\]](#)
- The function for dispatching using fixed operations uses the LMPC HJPT firming indicator. [S\\_EPF6 Dispatching Across Firmed Operations \[page 146\]](#)

→ Remember

For the data for the LMPC HJPT firming indicator to be display, the data provider /LMPC/CL\_DP\_OP\_ADD must be active. [Data Provider /LMPC/CL\\_DP\\_OP\\_ADD Additional Data for Operations \[page 373\]](#)

S\_FIX and S\_FIXE can also be used in background processing. [Program /LMPC/HJPT Background Processing \[page 19\]](#)

## 2.6.8.13 S\_L--, S\_L-, S\_L+, S\_L++, Moving Rows within the ALV Grid

Moving Rows in the ALV Grid

Use



You can use the functions to move ALV Grid rows.

This means that the ALV Grid lines can be sorted for planning functions, for example.

Instead of using drag and drop to move the rows, you can also use the ALV Grid buttons to move the rows.

Functions: 


- Move to the top
- Move one row up
- Move one row down
- Move to the bottom

**Procedure**

- Select one or more rows in the ALV Grid.

Alert	i	F	Work ctr	Order	OpAc	Cat	C...	Phase	Material	SOp
		X	MA1	60007668	0010	1	10	0	LMPC_HALB_34	
			MA1	60007712	0010	1	10	0	LMPC_HALB_12	
			MA1	60007667	0010	1	10	0	LMPC_HALB_34	
		X	MA1	1329491	0010	2		0	LMPC_HALB_12	
			MA1	60007666	0010	1	10	0	LMPC_HALB_34	
			MA1	60007453	0010	1	10	0	LMPC_HALB_12	

Select Operations

- Execute one of the action codes, for example,  (S\_L-).
- Result:

Alert	i	F	Work ctr	Order	OpAc	Cat	C...	Phase	Material	SOp
		X	MA1	60007668	0010	1	10	0	LMPC_HALB_34	
			MA1	60007667	0010	1	10	0	LMPC_HALB_34	
		X	MA1	1329491	0010	2		0	LMPC_HALB_12	
			MA1	60007666	0010	1	10	0	LMPC_HALB_34	
			MA1	60007712	0010	1	10	0	LMPC_HALB_12	

Result

The 3 operations have been moved up by one position.

**⚠ Caution**

If filters are used for the ALV Grid, the data records are moved in such a way that the items of the filtered data records remain unchanged. This means that only the visible data records are moved. Non-visible data records remain unchanged in their positions.

## 2.6.8.14 S\_LOCK Temporarily Lock Orders

Set Temporary Processing Locks

Usage

You can use this action code to temporarily lock planned orders, production orders, and process orders in the planning table.

The locks are always set for the entire order and not for the individual operation of the order.

If you have set locks, these orders can no longer be changed by other users in other transactions at the same time. For example, planned orders can no longer be changed in transaction MD12. It is also no longer possible to change production orders in transaction CO02. Also, another user can no longer double-click the order number in the ALV Grid of the HJPT planning table to navigate to change an order.

The same locks are set as when changing the orders in the HJPT planning table, for example, during dispatching, deallocation, and rescheduling.

These are self locks. This means that the user who sets the locks can continue to process these orders in the HJPT planning table. Only other users can no longer do this.

### → Remember

Locks are only valid temporarily. They cannot be saved. They are valid for as long as a user is working with the data. The set locks can be removed by exiting processing. Saving or reloading the data also removes the locks.

For the locks to be visible in the ALV Grid of the HJPT planning table, the data provider /LMPC/CL\_DP\_ENQUEUE must be activated. Also note the explanations for the self locks and external locks in the section on the data provider. [Data Provider /LMPC/CL\\_DP\\_ENQUEUE Order Locks \(Icon\) \[page 364\]](#)

Special feature for planned orders: Despite the lock, planned orders can still be dispatched, rescheduled, and deallocated. Production orders, on the other hand, can no longer be planned.

### i Note

Locks should not be confused with firming. For details on firming orders, see the section on firming. [S\\_FIX, S\\_FIXE Firm and remove firming of orders \[page 301\]](#)

## Procedure

The planning table has been opened. The orders do not have any locks yet because they have not yet been changed. Certain orders are to be locked so that they cannot be changed by other users while the current user is processing these orders.

Select the data records for orders that are to be locked.

Alert	Lock	Dis...	Fmnd	Order Number	OpAc	Subop.	Material	Work ...	Description
		X	X	3295762	0010		LMPC HALB 12	MA1	LMPC wst 1
		X	X	3295437	0010		LMPC HALB SL 1	MA1	LMPC wst 1
		X	X	3295759	0010		LMPC HALB 12	MA1	LMPC wst 1
		X	X	3297218	0010		161	MA1	LMPC wst 1
			X	3297245	0010		LMPC HALB SR	MA1	LMPC wst 1
			X	3295763	0010		LMPC HALB 12	MA1	LMPC wst 1
			X	3295596	0010		LMPC HALB SL 1	MA1	LMPC wst 1
			X	3297244	0010		LMPC HALB SR	MA1	LMPC wst 1

Selection of Data Records To Be Locked

Execute the action code for locking (S\_LOCK).

Result:

Alert	Lock	Dis...	Fmd	Order Number	OpAc	Subop.	Material	Work ...	Description
		X	X	<a href="#">3295762</a>	0010		<a href="#">LMPC HALB 12</a>	<a href="#">MA1</a>	LMPC wst 1
		X	X	<a href="#">3295437</a>	0010		<a href="#">LMPC HALB SL 1</a>	<a href="#">MA1</a>	LMPC wst 1
		X	X	<a href="#">3295759</a>	0010		<a href="#">LMPC HALB 12</a>	<a href="#">MA1</a>	LMPC wst 1
		X	X	<a href="#">3297218</a>	0010		<a href="#">161</a>	<a href="#">MA1</a>	LMPC wst 1
			X	<a href="#">3297245</a>	0010		<a href="#">LMPC HALB SR</a>	<a href="#">MA1</a>	LMPC wst 1
			X	<a href="#">3295763</a>	0010		<a href="#">LMPC HALB 12</a>	<a href="#">MA1</a>	LMPC wst 1
			X	<a href="#">3295596</a>	0010		<a href="#">LMPC HALB SL 1</a>	<a href="#">MA1</a>	LMPC wst 1
			X	<a href="#">3297244</a>	0010		<a href="#">LMPC HALB SR</a>	<a href="#">MA1</a>	LMPC wst 1

Self Lock Result

In the column with the lock symbol, self locks are displayed for the respective data record. Self locks are displayed with the symbol of an open padlock.

If another user also opens the same orders in the planning table, the system displays external locks for this user. External locks are displayed with the icon of a closed padlock.

Alert	Lock	Dis...	Fmd	Order Number	OpAc	Subop.	Material	Work ...	Description
		X	X	<a href="#">3295762</a>	0010		<a href="#">LMPC HALB 12</a>	<a href="#">MA1</a>	LMPC wst 1
		X	X	<a href="#">3295437</a>	0010		<a href="#">LMPC HALB SL 1</a>	<a href="#">MA1</a>	LMPC wst 1
		X	X	<a href="#">3295759</a>	0010		<a href="#">LMPC HALB 12</a>	<a href="#">MA1</a>	LMPC wst 1
		X	X	<a href="#">3297218</a>	0010		<a href="#">161</a>	<a href="#">MA1</a>	LMPC wst 1
			X	<a href="#">3297245</a>	0010		<a href="#">LMPC HALB SR</a>	<a href="#">MA1</a>	LMPC wst 1
			X	<a href="#">3295763</a>	0010		<a href="#">LMPC HALB 12</a>	<a href="#">MA1</a>	LMPC wst 1
			X	<a href="#">3295596</a>	0010		<a href="#">LMPC HALB SL 1</a>	<a href="#">MA1</a>	LMPC wst 1

View External Locks

You can find the field for displaying locks in the ALV Grid layout group of the HJPT help fields.

If a user has already set a lock on an order, no further lock can be set. The locks of another user cannot be removed or overridden.

The action code can be configured in such a way that all orders opened in the planning table are locked. For this, parameter `LOCK_ALL` is to be activated in the action code. It is then sufficient to execute the action code once and all orders are locked.

If locks are only to be set on orders that have a specific property, this can be realized using the function of the action code limits. If, for example, you want to allow locks for production orders only, you create a rule in the action code limits that excludes planned orders from processing. [Action Code Limits \[page 71\]](#)

The action code can be executed manually via a key. It can also be executed automatically on all orders when the planning table is started. This enables you to lock all orders that are currently open for planning by the user. For this, the action code with the trigger `PBO` is inserted into the context profile used. The parameter `LOCK_ALL` must also be set for the action code so that all date records are selected automatically. The restriction of action codes also works here. For details on the action code triggers, see the LMPC Configuration Guide. [Action Code Trigger](#)

#### → Tip

The lock status of orders can be displayed visually by creating rules for coloring the bars in the graphic or for coloring the ALV Grid.

- [Coloring of Bars of the Bar Chart \[page 27\]](#)

## 2.6.8.15 S\_MCFMEA S\_MCFCOM S\_MCFRES, Tasks, Comments, Resubmissions

MCF Tasks

### Use

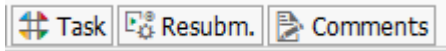
The MCF tasks function can be used in different consulting solutions and works across solutions.

The LMPC HJPT planning table has a data provider for displaying tasks data and three action codes for calling the tasks maintenance dialog.

The tasks data is assigned at the level of the planned, production, or process order. The key is therefore the order number in each case.

### Procedure

There are 3 action codes for the tasks. One for maintaining tasks, one for maintaining comments, and one for maintaining resubmissions. You can use these action codes to create, change, and delete the elements mentioned.



Action Codes for Tasks

Each of these action codes takes you to the maintenance dialog for tasks, resubmissions, and comments. Depending on which action code you use, another area for creating an element is active.

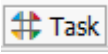
Only if you use the action code for the tasks are all existing objects for the key of the order number displayed immediately. You can then edit or delete them. For the other action codes, you can show the elements using the button for selecting existing elements.

### Creating a Task

Select a line in the LMPC ALV Grid.

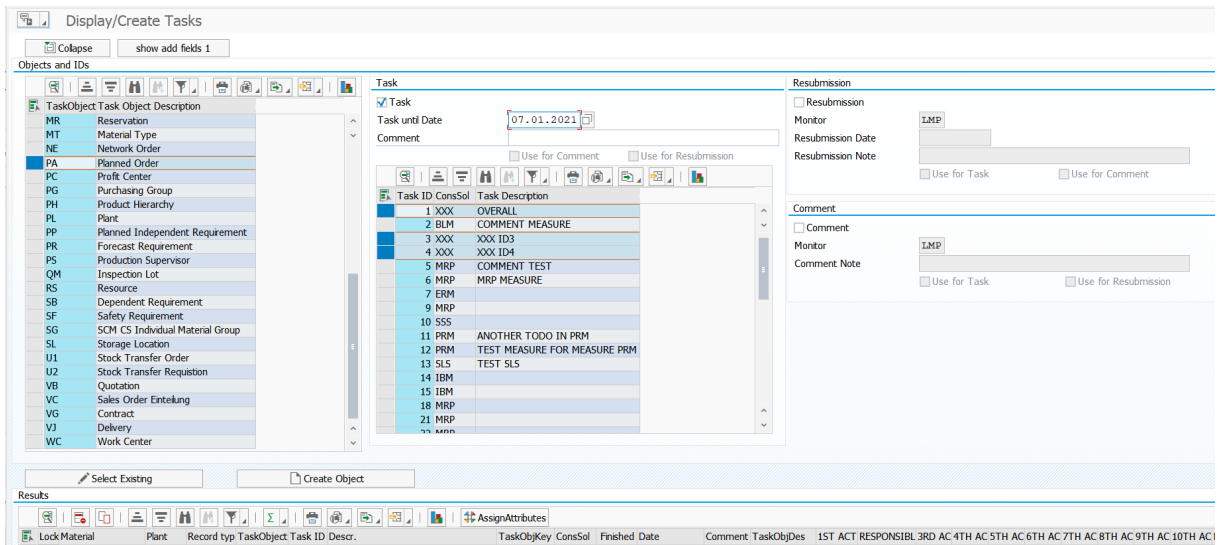
Alert	Disp...	F...	Lock	Order pool	Seq.	Ord. Nr.	OpAc	Material	Work ctr
		X				<u>3231048</u>	<u>0010</u>	LMPC FERT 34	MA3
		X				<u>3231068</u>	<u>0010</u>	LMPC FERT 34	MA3
		X				<u>3231055</u>	<u>0010</u>	LMPC FERT 34	MA3
		X				<u>3231066</u>	<u>0010</u>	LMPC FERT 34	MA3

Line Selection

Call the action code  (S\_MCFMEA) for tasks.

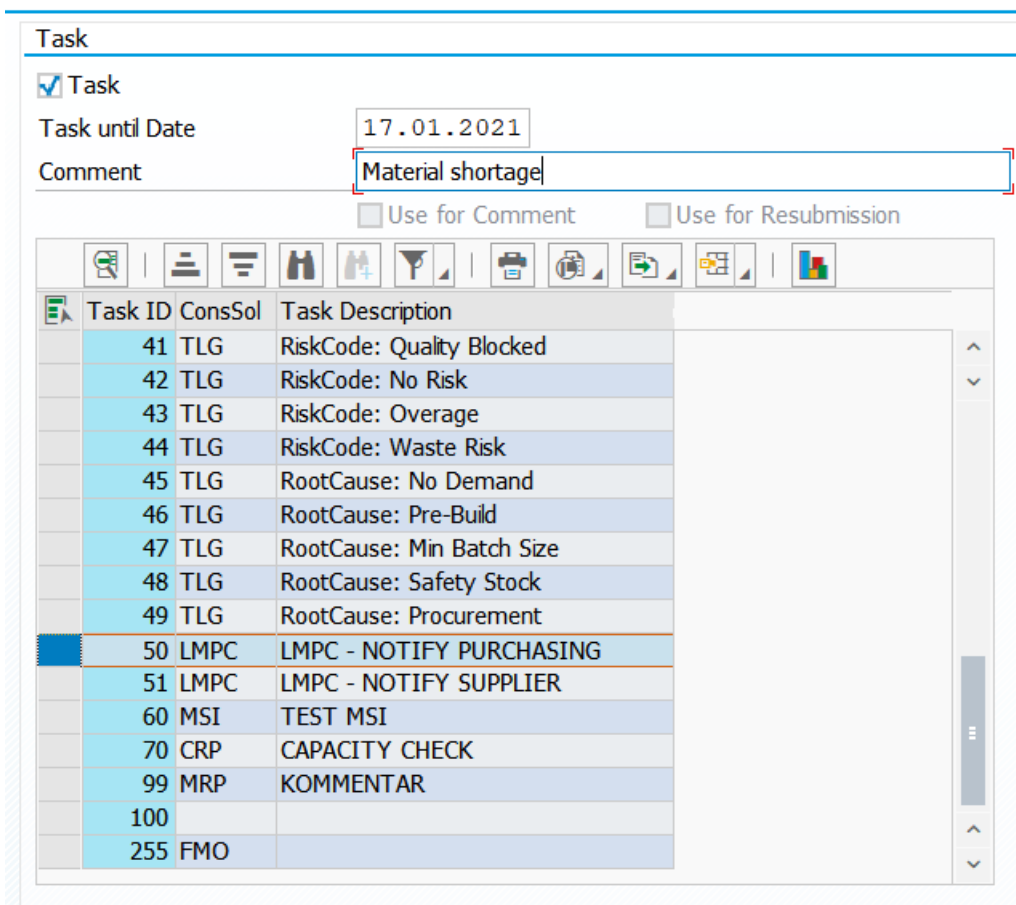
The screen for maintaining tasks appears. The correct task object is already preselected. In this case, PA for planned order. For production or process orders, the reference object is FE.

The flag is also set for "Tasks". Possible tasks are preselected.



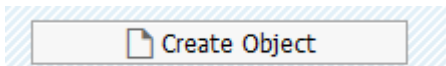
### Maintenance Screen for Tasks

Select a tasks ID, for example, LMPC – Notify Purchasing. Set an end date and enter a comment.



### Maintain Task

Choose the button for creating a new task.



Result:

Status	Lock	Material	Plant	Record typ	TaskObject	Task ID	Descr.	TaskObjKey	ConsSol	Finished	Date	Comment	TaskObjDes
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	LMPC_FERT_34	LM01	M	PA	50	LMPC - NOTIFY PURCHASING	0003231048	LMPC	<input type="checkbox"/>	07.01.2021	Material shortage	Planned Order

Result of Task Creation

In the lower part of the screen, you can see the task created.

There is no need to save the task since it is saved upon creation. You use the *Back* button to exit task maintenance.

Result:

Ord. Nr.	OpAc	Material	Work ctr	oTas	Num. Tasks	Task ID	Task Description	Date until finish
3231048	0010	LMPC_FERT_34	MA3		2	50	LMPC - NOTIFY PURCHASING	07.01.2021
3231068	0010	LMPC_FERT_34	MA3		0	0		

Result in ALV Grid of HJPT Planning Table

In the ALV Grid fields of the HJPT planning table, the system displays the information on the task created.

#### → Remember

- Depending on the settings, the fields "Number of Tasks" and "Task ID" allow you to navigate directly to the tasks by double-clicking or by a hotspot click.
- If more than one task is maintained for each order, the first task is displayed in the fields in the ALV Grid.

The other two action codes work in a similar way. Only when you call the maintenance screen is a checkmark set for either comment or resubmission so that you are able to use these functions.

#### → Tip

If you do not require such a comprehensive functionality and, for example, only want to maintain a brief text per order, it is recommended that you use the function for the LMPC order texts rather than the tasks. [S\\_CORTXT LMPC HJPT Order Text \[page 290\]](#)

For the data fields to be filled in the HJPT planning table, the data provider for the tasks must be activated.

[Data Provider /LMPC/CL\\_DP\\_MEASURES Configuration: Tasks, Resubmissions, Comments](#)

Detailed documentation for the tasks can be found in the online documentation, "Comprehensive Functions".

There, you can also find information about the configuration of tasks.

## Related Information

[Data Provider /LMPC/CL\\_DP\\_MEASURES Tasks, Resubmissions, Comments \[page 371\]](#)

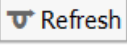
[Documentation on the consulting solution comprehensive functions](#)

## 2.6.8.16 S\_REFR, S\_RELOAD Planning Table Update

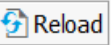
### Refreshing of Data

You can update the SAP LMPC HJPT detailed scheduling planning board at any time while you are working with it.

Two functions are available for this: Refreshing the data (S\_REFR) and reloading the data (S\_RELOAD).

**Refresh**  Refresh (S\_REFR)

You can use the “Refresh” function to update the ALV Grid of the HJPT planning table. When you refresh, the data providers are run once and the ALV Grid is updated. You thereby load, for example, changed data from the graphic into the ALV Grid. When you update the ALV Grid, the data records are also sorted according to the defined sort sequence. This action code is usually used as a subsequent action code for other functions to load the changed data into the ALV Grid.

**Reload**  Reload (S\_RELOAD)

This function reloads the data. Unsaved planning data will be lost. You can use this function to return to the saved initial situation.

Checks are performed before the data is reloaded.

The first check monitors whether changes have been made to the data that have not yet been saved.

During the second check, the system checks whether external locks exist for the open orders.

The third check is performed only if intermediate saving has been deactivated in the overall profile.

If intermediate saving has been deactivated, you exit the planning table when you save. In the LMPC planning table, intermediate saving means that you can continue working after saving. The data is written to the database. A local memory does not exist. After saving, the planning table remains open.

If intermediate saving has been deactivated, the planning table asks whether the data is to be reloaded. See also the notes on intermediate saving in the LMPC Configuration Guide. [Configuration of HJPT Overall Profile](#)

If one of the checks encounters an error, the user receives a message and can decide whether they want to cancel the reload of the data or whether loading is to be executed anyway. The checks can be deactivated using the parameter `CHCK_OPT` in the settings for the action code.

#### → Tip

- Both update functions can also be executed automatically after a specific interval (autorefresh). For instructions for this, see the description of the overall profile in the LMPC Configuration Guide. [Timer Function](#)
- Filter settings set temporarily for the ALV Grid and a temporary layout selection can be retained when the data is reloaded. Settings need to be made in the HJPT overall profile for this. [Configuration of HJPT Overall Profile](#)



## 2.6.8.17 S\_RESSIZ Reset All HJPT Dialog Boxes

Reset all Dialog Boxes of Planning Table

The LMPC HJPT planning table can display the data distributed across several windows. A distinction is made between the main window and the dialog box.

The graphic is located in the main window of the HJPT planning table.

Dialog boxes are all additional windows outside the main window.


The ALV Grid with the data on the orders, the window for charts, or the window for completed production and process orders can be displayed in separate dialog boxes.

The settings of the HJPT overall profile determine which elements are displayed in the main window and which elements are displayed in dialog boxes. [HJPT Window Configuration](#)

When you save the data in the HJPT planning table, the current positions and sizes of the dialog boxes are saved depending on the user name and profile name of the LMPC overall profile. The position is always saved in relation to the upper left corner of the main screen currently being used by the user. The main screen refers to the user's physical screen on which the main window of the application is located. When you save, the planning table also remembers whether a window has been closed. In future, this window will then no longer be opened when you access the planning table.

When you reload or access the planning table again, the system displays the dialog boxes in the size and position last saved by the user.

This ensures that the next time you open the HJPT planning table, the user can find the usual window settings.

If windows were closed, the action code  (S\_RESSIZ) can be used. It resets all dialog boxes of the LMPC HJPT planning table to their size configured in Customizing and displays them. All windows are positioned at the top left of the screen in which the main window of the LMPC HJPT planning table is located.

If users work with two screens and the windows of the HJPT planning table are positioned on different screens, the recommendation is to place the action code as a function on the menu bar of the ALV Grid and include it as a function in the menu bar of the graphic. This means that the function can be executed on any screen and the windows can be reset from any screen.

This is particularly recommended if users work at different work centers with different screens. This is because a window may be displayed outside the visible area if it was previously saved with a different number of screens or a different screen resolution. The action code helps users to show the windows again.

### → Tip

You can use the parameter settings to define which dialog boxes are to be reset. The standard system is configured such that all dialog boxes are reset.

The action code S\_RES\_CV is a special variant for the window for charts. S\_RES\_CV resets only the window for charts. [S\\_RES\\_CV Reset HJPT Window for Charts \[page 314\]](#)

## 2.6.8.18 S\_RES\_CV Reset HJPT Window for Charts

Opening the LMPC HJPT Capacity Chart


### Use

This action code is used if the window for charts is used in dialog mode.

While working with the HJPT planning table, you can change the size of the window for the charts. When you save, the planning table remembers the size and position of the window. The size and position are saved for each user and HJPT overall profile for the user's screen currently used.

If you close the window and then save, the planning table remembers that the window has been closed and no longer displays it the next time you start the planning table.

If you minimize the window, the window becomes a small bar at the bottom left of the screen. When you then save, the planning table remembers the position and the height and width of the window. In future, it will then always be displayed in the far left at the bottom of the screen when you open the planning table.

The action code  (S\_RES\_CV) resets the window for the charts to the size defined for the window in the settings and positions it at the top left of the screen in the first level above the main window that may also be there. This allows you to reopen the window if it was saved as closed or minimized. [HJPT Window Configuration](#)

You can also use this action code to reopen the window for charts if you have closed it while working with the planning table.

### → Tip

Reloading the data with the action code S\_RELOAD also allows you to retrieve the window if the window was open the last time you saved.

[S\\_REFR, S\\_RELOAD Planning Table Update \[page 312\]](#)

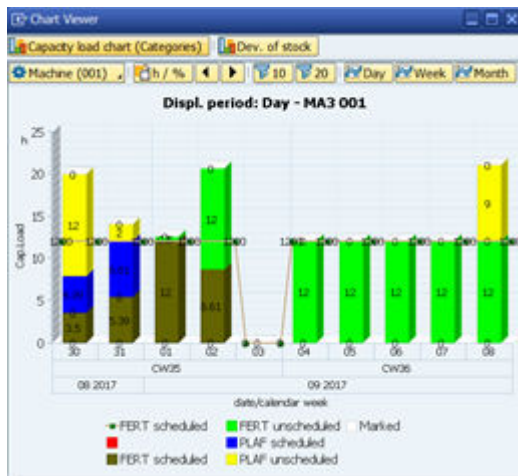
### ! Restriction

If you minimize the window, you cannot use the action code to reset it to the configured size. During the reset, the minimized size is retained and the system only branches to the top left. This is a special feature of the window element used. It remembers that it was minimized in the current application and must be reopened manually by the user using the restore function. The restore function is the first icon on the right side of the upper edge of the window. Alternatively, you can click the top edge of the window to access a context menu to restore the window.

### Procedure

Execute the action code  (S\_RES\_CV).

Result:



Capacity Chart

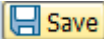
The window for charts opens at the top left of the screen. The size is determined by the setting for the window size in the HJPT overall profile. [HJPT Window Configuration](#)

#### → Tip

There is another action code, S\_RESSIZ, which resets the window for charts and all dialog boxes in the HJPT planning table. [S\\_RESSIZ Reset All HJPT Dialog Boxes \[page 313\]](#)

## 2.6.8.19 S\_SAVE Save Planning

Saving in the LMPC Planning Table

The action code  (S\_SAVE) is a follow-on action code attached to other action codes, so that an automatic save is executed after the respective LMPC function.

It can also be used as a standalone action code, for example, to trigger saving via the ALV Grid buttons for separate screens.

It can be used as an ALV Grid button or as a right-click function of the capacity planning table.

If action codes are chained, S\_SAVE must always be at the end.

Application options:

- Dispatch and save immediately.
- Deallocate and save immediately.
- Save the data if the ALV Grid is displayed in a separate window.

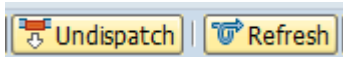
#### ! Restriction

The action code works only as a follow-on action code for other action codes or in single use. It does not work as an action code in an action code chain between 2 action codes. Neither is it possible to add another action code as a follow-on action code after the action code S\_SAVE. So, the action code is either alone or the last function in a chain.

## 2.6.8.20 S\_SEP Separator

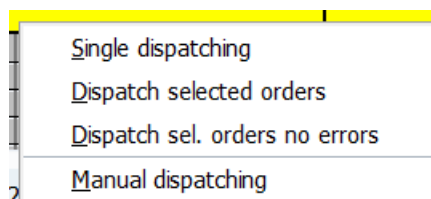
Separator for LMPC HJPT Action Codes

The action code S\_SEP is used to group the pushbuttons in the ALV Grid bar. It generates a vertical separator between the ALV Grid pushbuttons.



Example Separator Between Two Pushbuttons

It can also be used to create a horizontal separator in the context profiles or in the dropdown action code pushbuttons on the ALV Grid menu bar.



Example of a Separator in a Context Profile

### i Note

The name of the action code is predefined. The insertion of separators using the context profile will only work if the name of the action code is S\_SEP. Other names are not possible.

### → Tip

If there are more pushbuttons than fit in a row, the ALV Grid inserts a break automatically and displays the pushbuttons in a further row. The break is at the separators. If you use a lot of pushbuttons, it is recommended that you insert a few more separators. This enables more even distribution of the pushbuttons when the screen width changes.

## 2.6.8.21 S\_SETSEL Select Operations Automatically

### Use

This action code is used to select operations in the ALV Grid.

There are two possible use cases:

- Automatic selection of operations according to certain rules.
- Automatic selection within a concatenation of action codes to make the selection for a subsequent action code.

The rules according to which the selection of operations is made are configured using the action code limitation function.

Processing logic: As a first step, the action code selects all operations. In a second step, action codes are used to filter out the data records that are not to be selected.

Therefore, the action code limitation can only be set for this action code in such a way that it filters out operations. It does not make sense to set a termination of processing for the action code S\_SETSEL.

For details on action code limitation, see the description in the separate section on action code limitation.

[Action Code Limits \[page 71\]](#)

If no rules are set for this action code in the action code limitation, the action code selects all operations in the ALV Grid.

### ⚠ Caution

The operations are selected independently of filters that are set in the ALV Grid. The function always processes all data records that are loaded. If you have set ALV Grid filters, operations that are not visible to you may be selected because they are hidden by the ALV Grid filters.

However, the selection is dependent on the LMPC work center filter. With the LMPC work center filter, only the data records for the selected work center are loaded in the ALV Grid, and these are the only data records that can be selected. [Work Center Filter \[page 46\]](#)

### Procedure

Initially, no operations are selected:

Alert	Lock	Dis...	Disj	HJPT fir...	Fmd	Ord. Nr.	Material	Plant	Work ctr	Description
○▲○					X	3297248	LMPC HALB SR	LM01	MA2	LMPC wst 2
○○■					X	3307470	LMPC FERT 12	LM01	MA3	LMPC wst 3
○○■					X	3308146	152	LM01	MA2	LMPC wst 2
○○■					X	3308052	153	LM01	MA1	LMPC wst 1
○○■					X	3308146	152	LM01	MA2	LMPC wst 2
○○■					X	3308052	153	LM01	MA1	LMPC wst 1
○○■					X	3308743	153	LM01	MA1	LMPC wst 1
○○■					X	3308325	LMPC H UVG 1	LM01	MA1	LMPC wst 1
○○■					X	3308325	LMPC H UVG 1	LM01	MA5	LMPC wst 5

Initial Situation

Execute the action code  Selection (S\_SETSEL).

Depending on the rules that are set in the action code limitations, operations are selected in the ALV Grid.

Alert	Lock	Dis...	Disj	HJPT fir...	Fmd	Ord. Nr.	Material	Plant	Work ctr	Description
○▲○					X	3297248	LMPC HALB SR	LM01	MA2	LMPC wst 2
○○■					X	3307470	LMPC FERT 12	LM01	MA3	LMPC wst 3
○○■					X	3308146	152	LM01	MA2	LMPC wst 2
■○○					X	3308052	153	LM01	MA1	LMPC wst 1
○○■					X	3308146	152	LM01	MA2	LMPC wst 2
■○○					X	3308052	153	LM01	MA1	LMPC wst 1
■○○					X	3308743	153	LM01	MA1	LMPC wst 1
■○○					X	3308325	LMPC H UVG 1	LM01	MA1	LMPC wst 1
○○■					X	3308325	LMPC H UVG 1	LM01	MA5	LMPC wst 5

Result

This example shows the selection of operations without a subsequent action code. You can use a concatenation of action codes to have the selected operations dispatched immediately, for example. The concatenation of S\_SETSEL with other action codes is described in a separate section of the LMPC documentation. [Concatenation with S\\_SETSEL \[page 323\]](#)

## 2.6.8.22 S\_SORT Sorting the ALV Grid

Sorting

### Use

This function updates the sorting of the graphic and the sorting of the ALV Grid.

If you are working with the three-part graphic and have deactivated the automatic sorting of the graphic in the HJPT overall profile, the processed operations are always placed at the end of the list during dispatch or deallocation. This is done regardless of when the operation is scheduled.

The action code S\_SORT can be used to trigger a sorting of the elements of the graphic.

Another use case is sorting the ALV Grid. If you have used drag and drop to put the operations in the ALV Grid in a new order and want to reset the sorting to the sorting set in the layout, you can also call the action code S\_SORT.

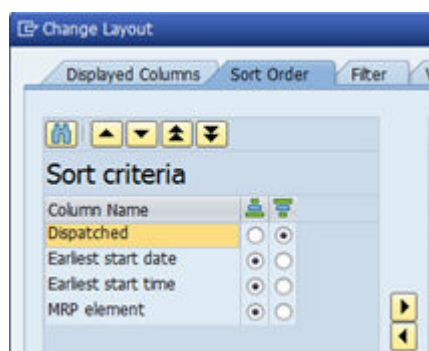
The sorting of the graphic and the sorting of the ALV Grid are also executed by refreshing the data. Therefore, you can also execute the action code S\_REFR instead of the action code S\_SORT. However, the action code S\_REFR also causes a run of the entire data provider. Therefore, S\_SORT is an alternative for sorting, which requires less runtime.

### Procedure

Execute the action code  (S\_SORT). It is not necessary to select the data records.

Result: The elements in the graphic were sorted again and the data records in the ALV Grid were sorted in the sequence defined in the layout settings.

Example of LMPC HJPT sort settings in the layout:



Sorting

### ! Restriction

The ALV Grid is sorted as it is set in the ALV Grid at this point in time. Note that this does not mean that sorting is reset to the sort settings saved for the layout. If you change the sort settings in the layout settings

while working in the HJPT planning table, these are the valid settings, regardless of which sort settings are saved for the layout. This action code does not return the sort order to a sort setting that was saved in the layout, but only to the sort order currently set in the layout.

## 2.6.8.23 S\_SVDBF Save Data to Database Tables

### Save Data

You can use this action code to save values from the SAP LMPC HJPT detailed scheduling planning board in database tables directly. Currently, this is possible for the tables AFKO, PLAF, and /LMPC/CORDTEXT. Further tables can be reached by an extension option via a BAdI.

For tables AFKO and PLAF, values are stored only in the database buffer. If you exit the LMPC HJPT planning table without saving or reloading, your changes will be lost.

The action code was developed to fill customer fields (Z fields) in standard tables.

### Caution

Theoretically, you can also change the content of all other fields of a database table. It should be noted that standard fields should be changed with caution. When standard SAP fields are changed, the customer is responsible for the consistency of the data. The HJPT planning table has not installed any checks for data consistency. It should also be noted that check routines for correct value entries may be behind individual standard fields, which prevents saving. This is not an error, it is a defensive mechanism in the standard system that cannot be bypassed.

## Related Information

[S\\_SVDBF Configuration: Storing Data in Database Fields](#)

## 2.6.8.24 S\_XBR Create Book of Reports

Evaluate LMPC HJPT Data in Excel

### Application

With this action code, the data from the ALV Grid of the LMPC HJPT planning table can be loaded into an Excel book of reports. The data can then be evaluated using this book of reports.

In the standard delivery, the user chooses the directory on the local computer, to which the report folder is saved. However, the action code can also be configured in such a way that the book of reports is saved on a network drive or is sent by e-mail in the background. This makes it possible to create and send a report automatically by means of a background job.

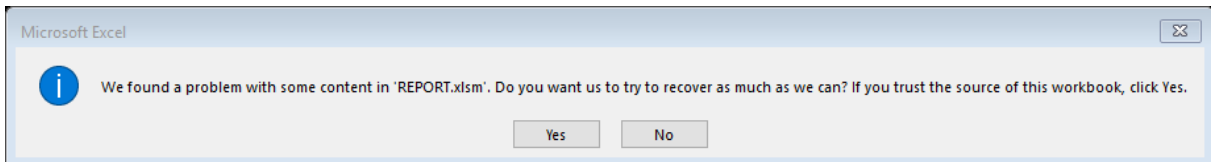
### Procedure

Call the action code  (S\_XBR) using the button in the ALV Grid of the LMPC planning table.

The system displays a dialog box that you can use to specify the storage location for the Excel file created.

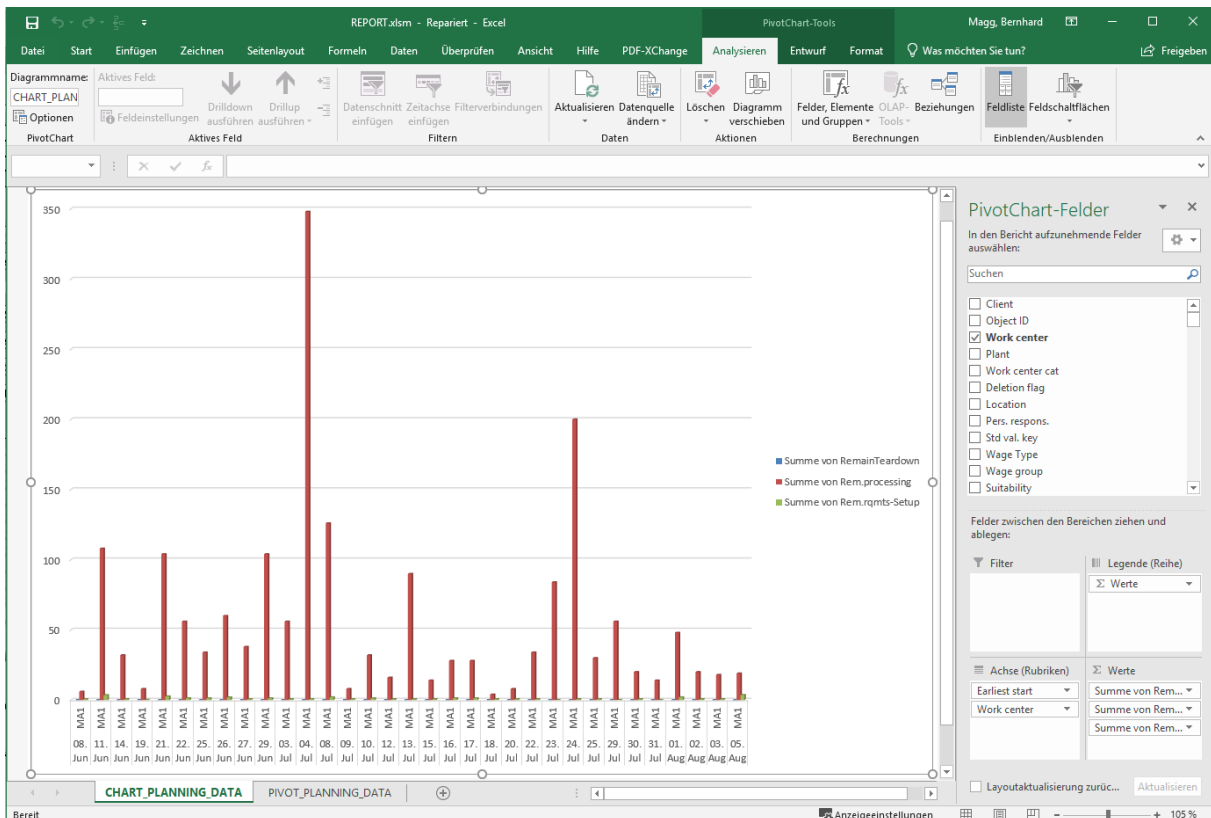
Once you have saved the Excel document, you can access it.

Since the ALV Grid of the LMPC HJPT planning table has more than 612 columns, Excel must still “process” the file internally. Therefore, the following message must be confirmed:



Excel Message

This happens automatically when the message is confirmed. You may have to activate macros if necessary.



Book of Reports View

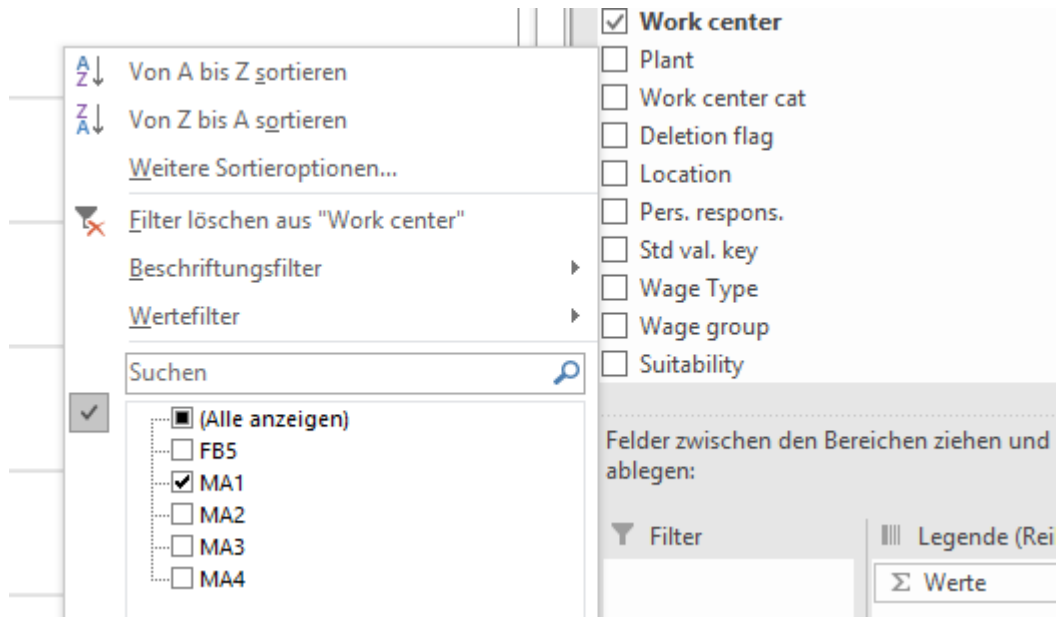
This is the standard book of reports that is delivered with the SAP LMPC HJPT detailed scheduling planning board. Additional report folders can be created in Customizing. Depending on your requirements, you can define a different row and column selection in Customizing.

In the standard system, the book of reports displays the capacity requirements per work center per day. This is an Excel PivotChart

You can use the fields on the right margin to change the values according to which the data is aggregated and displayed.



For example, a filter can be set to only one work center to display the data for only one work center:



Selection of a Filter

## Related Information

[S\\_XBR Configuration: Create Report Folder](#)

## 2.6.9 Concatenating Action Codes

Using Customizing for the LMPC HJPT planning table, it is possible to form chains of action codes. A concatenation of action codes means that several action codes are executed automatically one after the other. To do this, the user only has to trigger the first action.

Most of the action codes in the standard delivery are already concatenated. As a rule, an action code contains the subsequent action code S\_REFR for updating the data.

The concatenation of action codes cannot be chosen freely. It must be checked individually for each concatenation whether it is possible.

The action codes are executed one after the other in the configured sequence. Usually, each action code is executed independently of the preceding action code. Each action code receives the selected operations from the ALV Grid. It is like manually executing the action codes individually, one after the other, with the same selection of operations.

Individual action codes differ from this processing. They transfer a selection of operations as a return. For these action codes, the transferred selection becomes the new selection for the subsequent action code.

The following action codes return a selection:

- [S\\_CASORT Sort Upwards \[page 250\]](#)
- [S\\_CORTXT LMPC HJPT Order Text \[page 290\]](#)

- [S\\_D&D\\_MO](#)
- [S\\_L-, S\\_L-, S\\_L+, S\\_L++, Moving Rows within the ALV Grid \[page 305\]](#)
- [S\\_MALV Selecting Operations in ALV Grid \[page 253\]](#)
- [S\\_PBLKFG Pool formation with BOM information \[page 222\]](#)
- [S\\_PCONV Partial Conversion of Planned Orders with Subsequent Dispatching \[page 120\]](#)
- [S\\_SARBFV Change of Work Center for Operations by Changing the Production Version \[page 128\]](#)
- [S\\_SETSEL Select Operations Automatically \[page 316\]](#)
- [S\\_SVDBF Save Data to Database Tables \[page 319\]](#)

Although these action codes return a selection, this does not mean that these action codes are suitable for concatenation. If required, this must be checked separately for each use case. These action codes are listed here for information purposes only.

The following describes the concatenations that are released by LMPC development and are therefore also covered by support.

- [Concatenation with S\\_BOMEXP \[page 322\]](#)
- [Concatenation with S\\_SETSEL \[page 323\]](#)
- [Concatenation with S\\_REFR \[page 329\]](#)
- [Concatenation with S\\_RELOAD \[page 329\]](#)
- [Concatenation with S\\_SAVE \[page 330\]](#)

### i Note

If you want to use concatenations that have not been released, you can request a review from LMPC consulting or LMPC development. Concatenations that are not described in the documentation are not covered by support.

## Related Information

[Configuration of HJPT Action Codes](#)

### 2.6.9.1 Concatenation with S\_BOMEXP

If operations in the planning period are rescheduled to a new start time, the BOMs may have changed on the new start date.

However, when you reschedule operations, the BOM of orders is not exploded.

For this reason, an option has been created for a new BOM explosion for planned orders. This BOM explosion is carried out with the action code S\_BOMEXP.

To ensure that the BOM explosion is performed automatically when dispatching planned orders, the action code S\_BOMEXP can be combined with planning functions.

The combination of S\_BOMEXP with the function for manual planning has been examined and released by LMPC development.

Further combinations with other planning functions have not been examined and are therefore not supported.

In general, you can assume that only a combination with planning functions is useful, which does not read any operations. This is because the BOM explosion is executed only for the operations in the selection.

For details combining S\_BOMEXP with S\_MANP, see the documentation for S\_BOMEXP. [S\\_BOMEXP Bill of Material Explosion and Component Quantity Update for Planned Orders \[page 88\]](#)

## 2.6.9.2 Concatenation with S\_CHSDV

You can use the action code S\_CHSDV to change the standard values of operations.

You can also set the action code in such a way that all operations are reset to the values from the routing in the background.

In this setting, the action code S\_CHSDV can be combined with the action S\_APSEL for deallocating operations. It is irrelevant whether S\_APSEL or S\_CHSDV is executed first.

This combination has the effect that when operations are deallocated, they are reset to the original standard values.

[S\\_CHSDV Change to Standard Values \[page 92\]](#)

[S\\_APSEL Deallocate Selected Operations \[page 135\]](#)

S\_CHSDV can also be combined with S\_SETSEL. [Concatenation with S\\_SETSEL \[page 323\]](#)

### i Note

Combinations of S\_CHSDV with other action codes were not examined and are not supported. If you are interested in a combination with other action codes, you can request a feasibility analysis.

## 2.6.9.3 Concatenation with S\_SETSEL

The action code S\_SETSEL can be used to select operations automatically. [S\\_SETSEL Select Operations Automatically \[page 316\]](#)

This selection can be passed on to the subsequent action code in the case of concatenation.

However, this is only possible for action codes that do not make their own selection. Some action codes have their own selection routines.

The action codes that are listed in the allowlist can be combined with the action code S\_SETSEL. The action codes that are listed in the blocklist can either not be combined or can only be combined with restrictions. These are action codes that have their own selection or that read operations. All action codes that are not listed have not been checked.

### i Note

If you want to perform a check for a combination, you can request this from LMPC consulting or LMPC development.

## Allowlist

- [S\\_AK02 Change Order \[page 82\]](#)
- [S\\_APSCG Deallocate Selected Operations and Close Gaps \[page 134\]](#)
- [S\\_APSEL Deallocate Selected Operations \[page 135\]](#)
- [S\\_ATP ATP Check in Mass Processing \[page 258\]](#)
- [S\\_ATPPIO ATP Check and Order Conversion \[page 260\]](#)
- [S\\_AVRR Change Setup Time Manually \[page 74\]](#)
- [S\\_AVRU Adjust Setup Time Automatically \[page 77\]](#)
- [S\\_BMATXT Change Material Basic Data Text \[page 288\]](#)
- [S\\_BOMEXP Bill of Material Explosion and Component Quantity Update for Planned Orders \[page 88\]](#)
- [S\\_CASORT Sort Upwards \[page 250\]](#)
- [S\\_CHSDV Change to Standard Values \[page 92\]](#)
- [S\\_CO24 Missing Parts Info System \[page 272\]](#)
- [S\\_CONVPI Mass Conversion of Planned Orders to Process Orders \[page 262\]](#)
- [S\\_CONVPP and S\\_CONVPL Mass Conversion of Planned Orders to Production Orders \[page 262\]](#)
- [S\\_COOIS Information System for Production Orders \[page 263\]](#)
- [S\\_COOISP Information System for Process Orders \[page 264\]](#)
- [S\\_CORTXT LMPC HJPT Order Text \[page 290\]](#)
- [S\\_COUNT Counting ALV Grid Data Records \[page 292\]](#)
- [S\\_CPCHCK Check of Requirement Dates for Components of an Order \[page 293\]](#)
- [S\\_CPV2 Change Production Version and Dispatch \[page 96\]](#)
- [S\\_CRCLOR Create LMPC Clean-Out Orders \[page 98\]](#)
- [S\\_DELPLA Deleting Planned Orders \[page 114\]](#)
- [S\\_EPMSQ Dispatching According to Material Master Field \[page 150\]](#)
- [S\\_EPRSIN Insert Setup Optimum Operation \[page 193\]](#)
- [S\\_EPRST Dispatching Using Setup Matrix \[page 191\]](#)
- [S\\_EPSEL Dispatch Selected Operations \[page 159\]](#)
- [S\\_EPSELF Dispatch Selected Orders Without Errors \[page 160\]](#)
- [S\\_EPSELT Dispatching for Date \[page 164\]](#)
- [S\\_EPSEQ Dispatch According to the Sequence Entered \[page 165\]](#)
- [S\\_EPSIM Simultaneous Dispatching \[page 167\]](#)
- [S\\_EPSRT Sorted Dispatching \[page 168\]](#)
- [S\\_E\\_TBSQ Assign Number by Table \[page 170\]](#)
- [S\\_EPTBSQ Dispatch by Table \[page 172\]](#)
- [S\\_FILTR, S\\_FILTRE Set and Remove Filters \[page 296\]](#)
- [S\\_FIX, S\\_FIXE Firm and remove firming of orders \[page 301\]](#)
- [S\\_SARBPL and S\\_HARBPL Change the Work Center for Operations of Production and Process Orders \[page 125\]](#)
- [S\\_L--, S\\_L-, S\\_L+, S\\_L++, Moving Rows within the ALV Grid \[page 305\]](#)
- [S\\_LOCK Temporarily Lock Orders \[page 306\]](#)
- [S\\_MAGR, S\\_MAGRD Selecting Orders in the Graphic, Removing the Selection \[page 252\]](#)
- [S\\_MANP Manual Dispatching \[page 183\]](#)
- [S\\_MFREI Mass Release of Orders \[page 265\]](#)
- [S\\_MVEORD Move Order Operations in the Pool \[page 187\]](#)
- [Execution of Leveling Within the HJPT Planning Table Using Action Code S\\_NIVEL \[page 410\]](#)

- [Simulative Leveling Within LMPC Planning Table with Action Code S\\_NIVSIM \[page 411\]](#)
- [S\\_OPL Optimized Dispatching \[page 195\]](#)
- [S\\_ORDCLM Completing Production Orders Technically in Mass Processing \[page 118\]](#)
- [S\\_OSC Optimum Adjustment of Setup Times \[page 81\]](#)
- [S\\_PHCH Change of Duration of a Phase in Process Order \[page 122\]](#)
- [S\\_PLOSS Enter Production Scrap in Order \[page 124\]](#)
- [S\\_SARBFV Change of Work Center for Operations by Changing the Production Version \[page 128\]](#)
- [S\\_SELCAP Selecting Detailed Capacity List in the Chart \[page 254\]](#)
- [S\\_SHFTPP Shift Production Plan \[page 248\]](#)
- [S\\_SVDBF Save Data to Database Tables \[page 319\]](#)
- [S\\_XBR Create Book of Reports \[page 319\]](#)

### Blocklist

Action Code / Function	Remark
<a href="#">S_AK05 Displaying an Order [page 84]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_APALL Deallocate All Operations [page 133]</a>	Concatenation not possible. Action code has its own selection.
<a href="#">S_APSELP Deallocate with Pool ID [page 221]</a>	Concatenation is only possible with restrictions. Action code independently reads all operations that have the same pool ID that is already contained in one of the operations of the selection.
<a href="#">S_ATPA Individual Availability Check [page 259]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_AUTEXT Change the Long Text of Production Orders and Process Orders [page 85]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_AVO2 Changing Operations of the Production Order or Process Order [page 86]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_AVO6 Dispatching Operations Individually [page 137]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_AVO7 Deallocating Operations Individually [page 138]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_AV77 Change Network [page 88]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_C203 Display Master Recipe [page 267]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_C223_D Display Production Version [page 268]</a>	Concatenation not possible. Single selection only, no multiple selection.

<b>Action Code / Function</b>	<b>Remark</b>
<a href="#">S_CM01 Overview of Capacity Planning [page 269]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_CO11N Entering Time Tickets [page 270]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_CO15 Enter Production Order Confirmation [page 271]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_CO40 Conversion of Planned Order to Production Order [page 273]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_COR5 Releasing Individual Process Orders [page 274]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_COR7 Creating Process Orders [page 274]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_CR03 and S_CRC3 Display Work Center or Resource [page 275]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_CS03 Display BOM [page 276]</a>	Concatenation not possible. Contradicts the dispatching process.
<a href="#">S_D&amp;D Dispatching Operations with Drag and Drop in the ALV Grid [page 139]</a>	Concatenation not possible. Contradicts the dispatching process.
<a href="#">S_DINFO Detailed Information for Graphical Bars [page 299]</a>	Concatenation not possible. Contradicts the dispatching process.
<a href="#">S_DMOORD Create Planned Orders for Tests [page 115]</a>	Concatenation not possible. No selection.
<a href="#">S_EPALL Dispatch All Operations [page 142]</a>	Concatenation not possible. Action code has its own selection independently of user selection.
<a href="#">S_EPALV Dispatching by Entering Dates in the ALV Grid [page 143]</a>	Concatenation not possible. No selection.
<a href="#">S_EPBKFG Two-Step Dispatching with Pool ID [page 226]</a>	Concatenation is only possible with restrictions. Action code reads operations independently.
<a href="#">S_EPFX Dispatching Across Firmed Operations [page 146]</a>	Concatenation is only possible with restrictions. Action code reads operations independently.
<a href="#">S_EPML, S_EPMLBW, S_EPMLFW Multilevel Planning [page 241]</a>	Concatenation is only possible with restrictions. Action code reads operations independently.
<a href="#">S_EPNP Dispatching Operations of Networks [page 153]</a>	Concatenation not possible. Single selection only, no multiple selection.

<b>Action Code / Function</b>	<b>Remark</b>
<a href="#">S_EPPRL Parallel Planning with Parallel Sequences [page 211]</a>	Concatenation is only possible with restrictions. Action code reads operations independently.
<a href="#">S_EPPRLP Parallel Dispatching with Pool ID [page 204]</a>	Concatenation is only possible with restrictions. Action code reads operations independently.
<a href="#">S_EPRQD Dispatch on Requirement Date [page 157]</a>	Concatenation is only possible with restrictions. Action code reads operations independently.
<a href="#">S_EPSELL Dispatching with Check on Gaps and Pool Orders [page 161]</a>	Concatenation is only possible with restrictions. Action code reads operations independently.
<a href="#">S_EPSELP Single-Level Dispatching with Pool ID [page 219]</a>	Concatenation is only possible with restrictions. Action code reads operations independently.
<a href="#">S_EPSELX Dispatching Insert in Gaps with and Without Pool Orders [page 162]</a>	Concatenation is only possible with restrictions. Action code reads operations independently.
<a href="#">S_FPL Dispatch by LMPC Timetable [page 174]</a>	Concatenation is only possible with restrictions. Action code reads operations independently.
<a href="#">S_IW31 Creating Maintenance Orders [page 277]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_MALL, S_RMALL Select All Operations in ALV Grid and Remove Selection [page 251]</a>	Concatenation not possible. Action code makes selection itself.
<a href="#">S_MANPL Manual Dispatching List with Gap Check [page 185]</a>	Concatenation is only possible with restrictions. Action code reads operations independently.
<a href="#">S_MANPLX Manual Dispatching with Insert [page 187]</a>	Concatenation is only possible with restrictions. Action code reads operations independently.
<a href="#">S_MB11 Displaying Pegged Requirements [page 117]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_MB51 Material Document List [page 279]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_MCFMEA S_MCFCOM S_MCFRES, Tasks, Comments, Resubmissions [page 309]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_MD04 Stock/Requirements List [page 280]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_MD4C Order Report [page 281]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_MIGO Goods Movements [page 282]</a>	Concatenation not possible. Single selection only, no multiple selection.

Action Code / Function	Remark
<a href="#">S_MM03 Displaying Material Master Data [page 283]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_MMBE Displaying Material Stock [page 284]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_ORDCL Closing Individual Production Orders or Process Orders Technically [page 117]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_ORDREP LMPC Order Report [page 119]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_ORFIRM, S_ORFREL Firm Order Relations and Undo Firming [page 235]</a>	Concatenation is only possible with restrictions. Action code reads operations independently.
S_ORSON	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_PBLKFG Pool formation with BOM information [page 222]</a>	Concatenation is only possible with restrictions. Action code reads operations independently.
<a href="#">S_PBPRL Form Order Pool for Parallel Dispatching with Pool ID [page 202]</a>	Concatenation does not make sense from an application perspective.
<a href="#">S_PCONV Partial Conversion of Planned Orders with Subsequent Dispatching [page 120]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_PLVERS HJPT Read/Save Plan Version [page 213]</a>	Concatenation not possible. No selection.
<a href="#">S_POOLA Automatically Create Order Pool [page 218]</a>	Concatenation is only possible with restrictions. Action code reads operations independently.
<a href="#">S_POOLID Create Order Pool Manually [page 217]</a>	Concatenation is only possible with restrictions. Action code reads operations independently.
<a href="#">S_QM01 Create Quality Notification for Material Error [page 285]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_REFR, S_RELOAD Planning Table Update [page 312]</a>	Concatenation not possible. No selection.
<a href="#">S_RESCD Reschedule All [page 190]</a>	Concatenation is only possible with restrictions. Action code reads operations independently.
<a href="#">S_RESSIZ Reset All HJPT Dialog Boxes [page 313]</a>	Concatenation not possible. No selection.
<a href="#">S_RES_CV Reset HJPT Window for Charts [page 314]</a>	Concatenation not possible. No selection.
<a href="#">S_SAVE Save Planning [page 315]</a>	Concatenation not possible. No selection.
<a href="#">S_SETSTR Change Strategy Profile Settings [page 246]</a>	Concatenation not possible. No selection.



Action Code / Function	Remark
<a href="#">S_SORT Sorting the ALV Grid [page 318]</a>	Concatenation not possible. No selection.
<a href="#">S_SPLIT Distribute Capacity Requirements to Individual Capacities Manually [page 130]</a>	Concatenation not possible. Single selection only, no multiple selection.
<a href="#">S_UMTMSG Display Rescheduling Proposals [page 256]</a>	Concatenation not possible. No selection.
<a href="#">S_VA03 Display Sales Order [page 287]</a>	Concatenation not possible. Single selection only, no multiple selection.

## 2.6.9.4 Concatenation with S\_REFR

Most action codes have the action code S\_REFR as the subsequent action code, to update the data in the ALV Grid after an action.

The action code S\_REFR must always be used as the last action code in a chain.

### Related Information

[S\\_REFR, S\\_RELOAD Planning Table Update \[page 312\]](#)

## 2.6.9.5 Concatenation with S\_RELOAD

Some action codes have a concatenation with the reload of the data (S\_RELOAD). If planned orders are converted to production orders or process orders, the data must then be reloaded to load the newly generated orders into the planning table.

The action code S\_RELOAD must always be used as the last action code in a chain.

#### → Remember

When you reload the data, the unsaved planning statuses are lost. If you want to avoid this, use the action code S\_SAVE as an alternative.

### Related Information

[S\\_REFR, S\\_RELOAD Planning Table Update \[page 312\]](#)

## 2.6.9.6 Concatenation with S\_SAVE

If you want the result to be saved immediately after an action is executed, you can use the action code S\_SAVE as a subsequent action code.

The action code S\_SAVE must always be used as the last action code in a chain of action codes. This is because the planning table is restructured when you save.

### Related Information

[S\\_SAVE Save Planning \[page 315\]](#)

## 2.7 LMPC HJPT Data Provider

LMPC Classes for Loading Data

The ALV Grid of the LMPC HJPT planning table is based on the structure /LMPC/HJPT\_F01. The ALV Grid is filled with data via certain classes, known as data providers.

### ! Restriction

The HJPT planning table has more than 1100 fields. However, not all fields are filled. This is due to the fact that the underlying structure is formed from standard structures using includes. This means that there are fields that are not filled. Therefore, empty columns in the ALV Grid are not an error, but a result of the architecture.

The following chapters on the data providers describe which fields are filled by data providers. Only the fields that are filled by LMPC data providers are described.

Standard fields of the graphical planning table, which are read and made available by the HJPT planning table, are not described. These fields are standard SAP fields.

The LMPC Configuration Guide contains a list of all data providers and fields that you fill. [Data Provider Catalog](#)

### → Remember

Provisioning data costs runtime. The less data read, the faster it is to call the HJPT planning table. Saving the data or refreshing the data is also faster the fewer data providers are active, since the data providers are run for each of these actions. The data providers are written in such a way that they require as little runtime as possible. It is not possible to improve the runtime of data providers.

Careful consideration should be given to which data is required for the individual use case. Data providers that are not required should be deactivated.

See the section on runtime behavior. [Notes on Runtime Behavior \[page 14\]](#)

If you have questions about the content and use of the fields or the configuration of data providers, please contact your LMPC consultant.

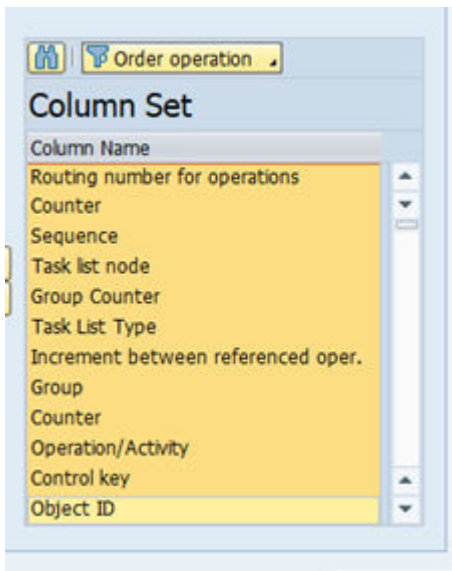
## 2.7.1 Data Provider /LMPC/CL\_DP\_AFVG Order Operation Data Planned Order

Operation data for planned orders

The data provider /LMPC/CL\_DP\_AFVG reads the order operation fields of planned orders.

For production and process orders, the fields are filled using the data provider CL\_DP\_STD. [Data Provider / LMPC/CL\\_DP\\_STD Basic Data of the Capacity Planning Table \[page 383\]](#)

The fields are located in the layout settings, in the group "Order operation".



Layout Settings

The data provider fills the fields:

Field	Description
PLNTY_AV	Task List Type
PLNNR_AV	Key of Task List Group
PLNKN_AV	Number of Task List Node
ZAEHL_AV	Internal Counter
LOEKZ_AV	Deletion Flag
UVORN_AV	Suboperation
VORNR_AV	Operation Number
STEUS_AV	Control Key
ARBID_AV	Operating Resources Object ID

Field	Description
WERKS_AV	Plant
KTSCH_AV	Standard Text Key
LTXA1_AV	Operation Short Text
LTXA2_AV	Operation Description: 2nd Line of Text

## 2.7.2 Data Provider /LMPC/CL\_DP\_ALERT Alert Processing

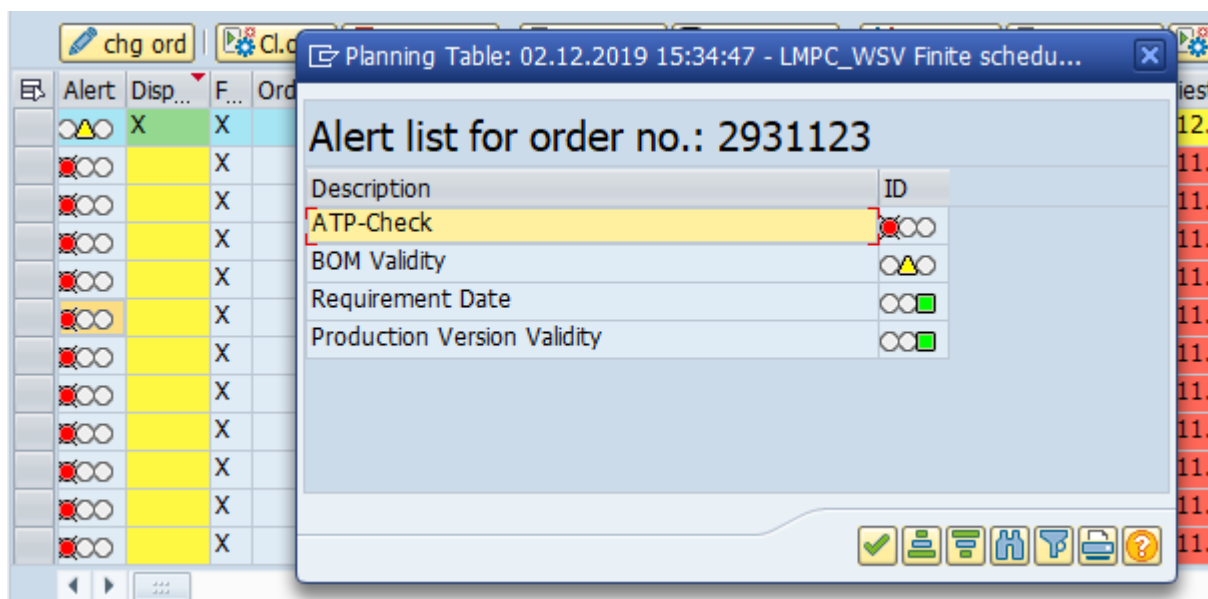
### LMPC Alerts

You can display alerts in the SAP LMPC HJPT detailed scheduling planning board.

Alerts provide the option of a quick overview of the status of orders.

An alert is generated for each row in the ALV Grid view. All generated alerts are cumulated as a traffic light icon in the field /LMPC/ALERT\_ICON\_CY (status) of the structure /LMPC/HJPT\_F01 (structure of the ALV Grid view).

Double-clicking on the field lists all alerts for a row.



Example of an Alert

The standard delivery of the HJPT planning table contains 4 alerts:

- Requirement date
- ATP check
- BOM validity
- Production version validity

### Requirement date:

The system checks whether the basic end date of the order adheres to the requirement date.

- Green: Basic end date  $\leq$  requirement date
- Yellow: There is no requirement date
- Red: Basic end date  $\geq$  requirement date

If the data provider /LMPC/CL\_DP\_USER\_104 is active, the date available for MRP is considered instead of the basic dates. This date is calculated from the order basic end date plus the goods receipt processing time.

### ATP check

The alert of the ATP check displays whether it was possible to confirm the material availability.

For production and process orders:

- Green: Material availability confirmed
- Yellow: No status (no check)
- Red: Missing parts

For planned orders:

- Green: The order was confirmed in full.
- Yellow: The order was partially confirmed or the order has not yet been checked.
- Red: The order was not confirmed.

### BOM validity

The system checks whether the basic dates of the orders lie within the limits of the BOM validity.

- Green: The basic start date is either later than or the same as the "valid from" value of the BOM. The basic end date is either earlier than or the same as the "valid to" value of the BOM.
- Yellow: No validity data is available.
- Red: The basic start date is earlier than the "valid from" value of the BOM. The basic end date is later than the "valid to" value of the BOM.

#### i Note

For the alert for the bill of material to work, the data provider CL\_DP\_BOM must be set to read BOM data. This is not the case in the standard delivery. [Data Provider /LMPC/CL\\_DP\\_BOM Component Data or BOM Data \[page 343\]](#)

### Production version validity

- Green: The basic start date is either later than or the same as the "valid from" value of the production version. The basic end date is either earlier than or the same as the "valid to" value of the production version.
- Yellow: No validity data is available.
- Red: The basic start date is earlier than the "valid from" value of the production version. The basic end date is later than the "valid to" value of the production version.

## 2.7.3 Data Provider /LMPC/CL\_DP\_AUTEXT Order Texts

LMPC order text and SAP standard order texts

This data provider fills fields for order texts. These are the order header text of the production order or process order and the fields for the LMPC order text.

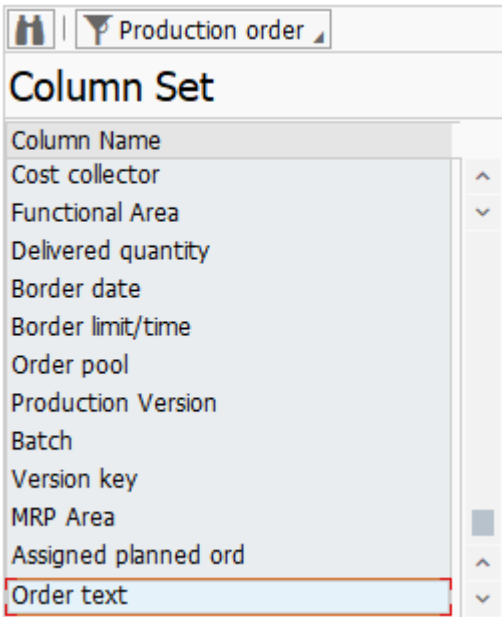
Fields

Technical Field Name	Description
AUTEXT_FA	Order Header Text
CORDTEXT_AX	LMPC Order Text
CRUSER_AX	User who created the text.
CHUSER_AX	User who last changed the text.
CRTMSTMP_AX	Time stamp for when this text was created.
CHTMSTMP_AX	Time stamp for when this text was last changed.

The order header text comes from the long text of production and process orders. From this text, the first 72 characters are read and displayed. Text can be entered by branching to the change mode of orders. ([S\\_AK02 Change Order \[page 82\]](#)) Saving is performed in simulation mode. This means that if you do not save in planning in the HJPT planning table, the texts are lost when you exit the planning table.

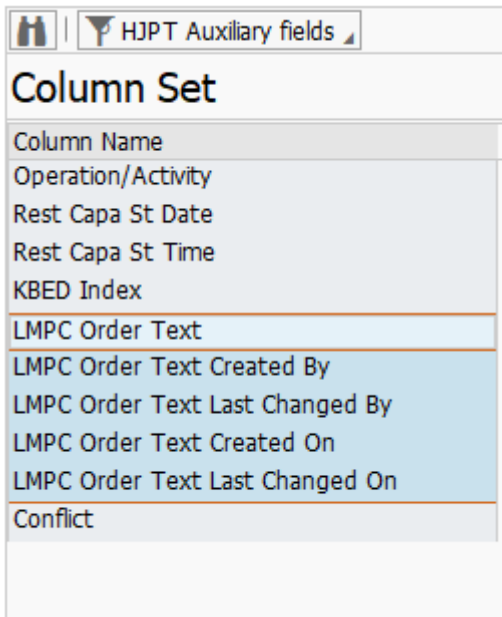
The LMPC order text is a text field also of 72 characters, which can be filled via the action code S\_CORTXT ([S\\_CORTXT LMPC HJPT Order Text \[page 290\]](#)). This text is stored in an LMPC table for the order number and kept for six months. Texts that are older than six months will be deleted automatically. The storage of this order text depends only on the order number. Therefore, the texts can be stored for each order type. Data is saved to the database immediately and not in simulation mode. When converting planned orders to production or process orders, the LMPC order text of the planned order is automatically adopted for the newly generated production or process order.

The field for the order header text is in the layout settings in the production order group.



Production Order Layout Group

The fields for the LMPC order text are in the help fields layout group.



Help Fields Layout Group

Order text	LMPC Order Text	Created By	Changed By	Created On	Changed On
	Test LMPC HJPT Order Text	D056579	D056579	24.07.2020 18:08:29	24.07.2020 18:39:03
Test Order Header Long Text					

Fields in the HJPT ALV Grid

## 2.7.4 Data Provider /LMPC/CL\_DP\_BED LMPC Requirement Date and Order Relations

Data provider for requirement date

The data provider for the LMPC requirement date determines the pegged requirements, the requirement date, and the available quantities at the time of the order receipt for the orders that are displayed in the HJPT planning table. The LMPC order relations are also calculated by this data provider. [List of Order Relations \[page 60\]](#)

### → Remember

In the HJPT planning table, a row in the ALV Grid represents an operation of an order. Since the data provider determines the data for each order, the data for the individual operations of an order is always the same.

The requirements/stick list of transaction MD04 is read in the planning period via a standard SAP module. The control parameter settings can be used to extend the read period as required. [Transaction /LMPC/STEU LMPC Control Parameters](#)

Of this data, only the data of the plant segment and the segments of make-to-order production is processed for standard sales orders. Other segments, such as a pre-planning segment, are not processed. Cross-plant planning is not supported either.

There is no plan to process data for other planning segments.

The receipts in the form of planned, production, or process orders are calculated against requirements such as planned independent requirements, sales orders, order reservations, dependent requirements, and so on. The respective order operation that is displayed in the HJPT planning table is assigned the requirement date of the requirement that the order of the operation covers according to the heuristic.

For anonymous make-to-stock production in the plant segment, the logic works according to the first-in-first-out (FIFO) logic. In make-to-order production, the sales order specifies the requirement date against which the planned or production orders and process orders that cover the requirements are calculated.

The calculation takes into account the simulative status of the data in the planning table. This means that the receipt dates of the operations are read from the currently simulated planning data.

This has the advantage that the current, unsaved planning situation is taken into account. If, for example, a planned order is brought forward and dispatched before other planned orders, the logic in the data provider will assign it to an earlier requirement and the requirement date will be adjusted according to the requirements.

If the logic for firming order relations is used, the firming relations between the orders are also included in the logic for determining the LMPC requirement date and override the FIFO logic. The firming order relations only make sense for anonymous make-to-stock production, since in make-to-order production the orders are already assigned to the sales orders and are processed accordingly.

The following MRP elements are recognized and processed:

Stocks:

- Plant stock
- Safety stock



Receipt elements:

- Planned orders
- Production orders
- Process orders
- Purchase requisition
- Purchase order schedule line

Requirement elements:

- Planned independent requirements
- Dependent requirement
- Dependent reservation
- Sales order

### **i** Note

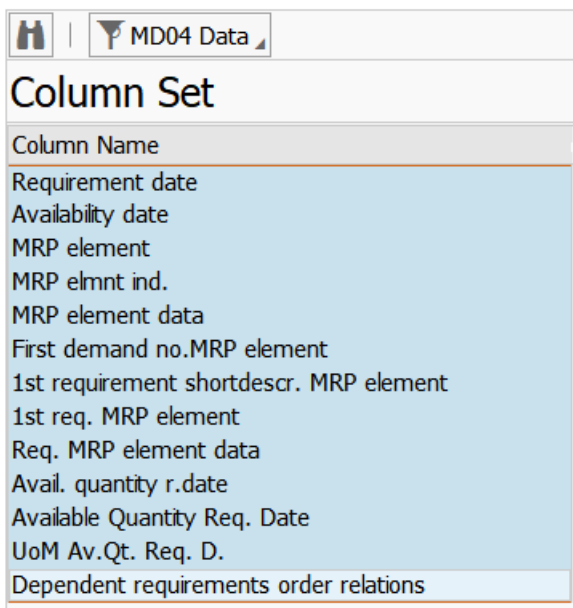
It is possible that elements that are not listed here are also processed. However, this cannot be guaranteed. If you want to enhance the logic, you can request an enhancement from SAP.

The following fields are filled:

<b>Field Name</b>	<b>Description</b>
<b>Order Data</b>	
BDTERM_MD	LMPC requirement date of the order (date).
STODA_MD	MRP availability of the order (date).
DELBO_MD	Short description of the MRP element of the order.
DELKZ_MD	MRP element of the order.
EXTRA_MD	Data for the MRP element of the order.
<b>Pegged requirement data:</b>	
DMD_DELNR_MD	Number of the MRP element of the first pegged requirement for this receipt.
DMD_DELBO_MD	Short description of the MRP element of the first pegged requirement for this receipt.
DMD_DELKZ_MD	MRP element of the first pegged requirement for this receipt.
DMD_EXTRA_MD	Data for MRP element pegged requirement
OREL_DMD_MD	Pegged requirement order relations. Dropdown field with all pegged requirements for an order.  Each row contains the following information: <ul style="list-style-type: none"> <li>• Number of MRP element of the pegged requirement</li> <li>• Short description of MRP element of the pegged requirement</li> <li>• Material number of the pegged requirement</li> </ul>

Field Name	Description
	<ul style="list-style-type: none"> <li>• Linked quantity</li> <li>• Firming indicator</li> </ul> <p>In this field, you enter the pegged requirements with their original MRP elements.</p> <p>Example: The pegged requirement dependent requirement comes from a planned order. Therefore, planned order is entered instead of dependent requirement.</p>
<b>Material Data</b>	
VRFMGBT_MD	Available quantity on the requirement date (after issue of the requirement).
VRFMG_MD	Available quantity on the receipt date (after receipt of the requirement coverage element).
VRFMGEH_MD	Unit of measure for available quantity for requirement date.

The fields can be found in the layout group of the MD04 data.



#### MD04 Data

Ord. Nr.	Requirement date	Availability date	MRP ele.	MRP element data	1d MRP e	Rq MRP	Req M.	Req. MRP element data	Aval. qu. r.d	Aval. QRD	Uo.	Dependent requirements order relations
3228984	08.01.2021	12.01.2021	PIOrd.	PA 0003228984/Stck**	3230583	DepReq	SB	LMPC_TDUMY1	51-	25-	PC	3230583 PIOrd. LMPC_TDUMY1 9.000 PC
3233285	18.11.2020	12.01.2021	PIOrd.	PA 0003233285/Stck**	17098/10	Order	VC	0000017098/000010/0001	114-	4-	PC	3230583 PIOrd. LMPC_TDUMY1 9.000 PC
3231071	28.11.2020	13.01.2021	PIOrd.	PA 0003231071/Stck**	60008467	OrdRes	AR	LMPC_FERT_34	99-	50-	PC	60008482 PrdOrd LMPC_FERT_12 7.000 PC
3233464	10.02.2021	11.02.2021	PIOrd.	PA 0003233464/Ord.**	16978/10	Order	VC	0000016978/000010/0001	0	2-	PC	16978/10 Order LMPC_FERT_KE 2.000 PC
3228983	18.01.2021	14.01.2021	PIOrd.	PA 0003228983/Stck**	60008485	OrdRes	AR	LMPC_FERT_12	57	179	PC	60008485 PrdOrd LMPC_FERT_12 1.000 PC
3233464	10.02.2021	11.02.2021	PIOrd.	PA 0003233464/Ord.**	16978/10	Order	VC	0000016978/000010/0001	0	2-	PC	16978/10 Order LMPC_FERT_KE 2.000 PC

#### Fields in the ALV Grid

### → Tip

In the fields of the first pegged requirement, the number of the corresponding sales order is displayed if an assignment to the order could be created. The data provider /LMPC/CL\_DP\_SD\_DATA uses this data to provide additional data for the sales order.

[Data Provider /LMPC/CL\\_DP\\_SD\\_DATA Sales Order \[page 379\]](#)

### ! Restriction

This logic maps simple standard cases. It is written in such a way that only anonymous make-to-stock production and make-to-order production are calculated for sales orders. For an order, only the MD04 data for the plant and MRP area of the order is read and processed. Transaction MD04 allows you to display a whole host of MRP elements. The simple logic of the data provider CL\_DP\_BED can only recognize and process individual MRP elements. Therefore, if requirement dates are not determined in your system or are not determined correctly, this is not an error, it is probably due to the fact that certain MRP elements are not processed for their planning situation.

Also check the data provider /LMPC/CL\_DP\_BED\_2. This data provider can process more MRP elements.

[Data Provider /LMPC/CL\\_DP\\_BED\\_2 Requirement Date According to MD09 Logic \[page 340\]](#)

### i Note

#### Comparison Between Requirement Date and Rescheduling Date

This data provider calculates the LMPC requirement date for the orders.

The data provider /LMPC/CL\_DP\_USER\_001 is used to read the rescheduling date from the MD04 data.  
[Data Provider /LMPC/CL\\_DP\\_USER\\_001 Ranges of Coverage and Exception Messages \[page 386\]](#)

The **rescheduling date** is specified by transaction MD04. If an order arrives too late and the available quantity becomes negative, MD04 displays a date on which an order would have to arrive for the requirements to be covered on time. It informs the user that an order must be brought forward. If an order arrives too early, material is produced in stock unnecessarily. Therefore, in MD04, the rescheduling date indicates that this order is to be produced later to avoid storage costs. The rescheduling date is read from the database; simulated data is not taken into account.

The **LMPC requirement date** is a slightly different concept. The LMPC requirement date shows when the quantity of an order is required by the pegged requirement. This means when the quantity must be received at the latest. The advantage of the LMPC requirement date is that the requirement date also works with data in the simulation that has not yet been saved. For each planning operation in the HJPT planning table, the requirement date of the orders involved is recalculated and updated using the simulated planning dates.

### → Tip

The function dispatching on requirement date can be used to dispatch orders in such a way that they are produced as close to the requirement date as possible. [S\\_EPRQD Dispatch on Requirement Date \[page 157\]](#)

## Related Information

[Connecting Lines for Bars in Bar Chart \[page 28\]](#)

[List of Order Relations \[page 60\]](#)

[Multilevel Planning via Order Relations \[page 232\]](#)

## 2.7.5 Data Provider /LMPC/CL\_DP\_BED\_2 Requirement Date According to MD09 Logic

Pegged requirements data based on transaction MD09

The data provider uses the logic of transaction MD09 to determine data for the requirement date.

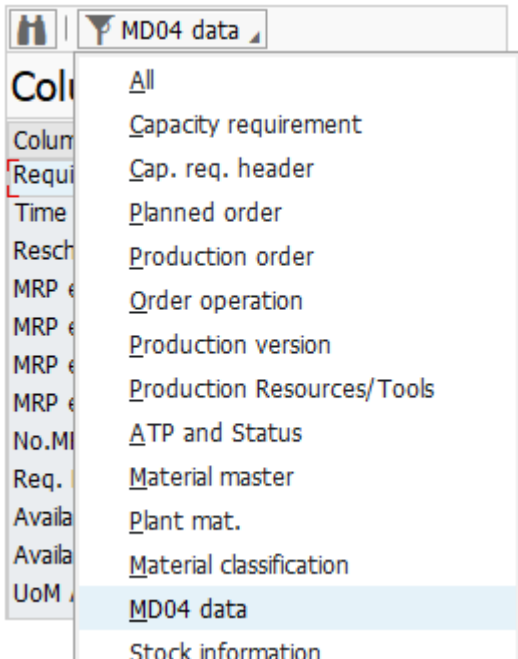
### Caution

This data provider reads data for the orders from transaction MD09. In contrast to the data provider /LMPC/CL\_DP\_BED, data changes in the simulation are not taken into account. The data provider /LMPC/CL\_DP\_BED\_2 reads from the database only. The fields that are filled with the data provider /LMPC/CL\_DP\_BED\_2 (logic MD09) cannot be compared with the fields of the data provider /LMPC/CL\_DP\_BED (first-in-first-out heuristic). These are independent logics that cannot be compared. Also note the information in the configuration guide [Data Provider /LMPC/CL\\_DP\\_BED\\_2 Configuration: Requirement Date MD09](#) and the description of the data provider /LMPC/CL\_DP\_BED. [Data Provider /LMPC/CL\\_DP\\_BED LMPC Requirement Date and Order Relations \[page 336\]](#)

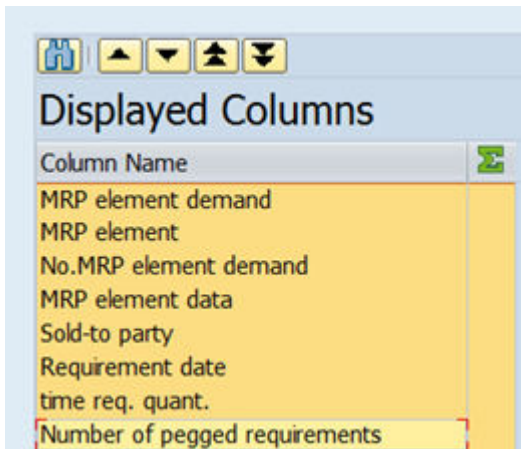
The data provider fills the following fields:

Field Name	Description
BDTERM_MD	Requirement date
BDZEIT_MD	Time req. quant.
DMD_DELKZ_MD	MRP element pegged requirements
DMD_DELBO_MD	Short description of MRP element
DMD_DELNR_MD	No. MRP element demand
DMD_EXTRA_MD	Data for MRP element pegged requirement
DMD_KUNNR_MD	Sold-to party
NUM_PRQM_MD	Number of pegged requirements

The fields can be found in the “User fields” group:



Groups Selection Layout



Fields in the Layout Settings

MRP ele...	MRP ele...	N MRP elm.	Data	Sold-to pt	Req. date	Time	Num of pegged rqmts
PP	Ind.Req..		VSF		21.08.2017	00:00:00	1
VC	Order	0000016898	0000016898/...	1234	23.08.2017	00:00:00	1
VC	Order	0000016898	0000016898/...	1234	23.08.2017	00:00:00	1

Fields in the ALV Grid of the HJPT Planning Table

To find the requirement element, the list of the order route is read from transaction MD09 from bottom to top until a requirement element is found that does not have the same number as the searching planning or production order. If there is more than one pegged requirement for an order, the first pegged requirement is always selected and the route to the MRP element is determined for this requirement. You can use the parameter `SEL_MODE` (see parameter description) to change the logic so that it selects the last pegged requirement and determines the order route for this.

Special feature Release order for a stock transfer order: If more than one element is found in the order route, the system selects the earliest element.

Special feature Order reservation: If an order reservation is found as the result, the logic will continue to search upwards until a production order is found.

Special feature Dependent requirement: If a dependent requirement is found as the result, the logic continues to look up the list until a planned order is found.

Special feature Production order: Data on the released production order is not determined again. Released production orders are skipped (in German and English -> query on the status description). The data for this production order is only read from the database table. You can use the parameter DRREL\_ON to deactivate this behavior (see parameter settings).

Example MD09:

Here, the pegged requirement from the planned order is the order reservation. Therefore, the system continues to search for the production order.

**Pegged Requirements**

Plan.order 0002770241/Stck\*\*

Material: LMPC\_HALB\_34  
 MRP Area: LM01  
 Plant: LM01  
 Receipt Date: 13.12.2019  
 Order Quantity: 5 PC  
 Quantity Without Source: 0 PC

---

**Pegged Requirements**

Planned dates	Material	Description	Material Memo	MRP Area	El	Data	Recpt/reqd	Quantity	Unit
11.02.2019	LMPC_FERT_34	LMPC Fert 34		LM01	PP	VSF	16	4.333	PC
13.12.2019	LMPC_FERT_34	LMPC Fert 34		LM01	PP	VSF	17	2.667	PC

---

**Route from Source Requirements to MRP Element**

Material	Description	Material Memo	MRP Area	Date	MRP elemnt	MRP element data	Recpt/reqd	Unit
LMPC_FERT_34	LMPC Fert 34		LM01	11.02.2019	Ind.Reqmts	VSF	16-	PC
	LMPC Fert 34		LM01	26.08.2019	Prod.order	000060008193/PP...	15	PC
LMPC_HALB_34	LMPC Halb 34		LM01	24.08.2019	Order.res.	LMPC_FERT_34	30-	PC
	LMPC Halb 34		LM01	13.12.2019	Plan.order	0002770241/Stck**	5	PC

Example Transaction MD09

### i Note

For planned and production orders: The planned dates in the order route are the basic end dates for the respective order. However, since we need the scheduled start date, this date is read from the RESB table for planned and production orders.

## Related Information

[Data Provider /LMPC/CL\\_DP\\_BED\\_2 Configuration: Requirement Date MD09](#)

## 2.7.6 Data Provider /LMPC/CL\_DP\_BOM Component Data or BOM Data

Display data for components of orders

The data provider /LMPC/CL\_DP\_BOM reads the components of the orders.

The data provider has two versions of read logic:

- Reading the data from the components of the orders.
- Reading the data from the BOMs of the header materials.

The standard setting is to read the data using the components of the orders. Reading the data using the BOMs is an alternative logic and can be activated via a parameter in Customizing. [Data Provider /LMPC/CL\\_DP\\_BOM Configuration: Component Data or BOM Data](#)

The following data is read:

5 BOM components with the associated material short texts, required quantities, required quantity units, and batch numbers.

The data for the standard description and material group of the respective BOM material is also read from the material master. The plant-specific material status is read from the plant material data.

BOM component 1	BOM mdscr1	Reqm qty 1	BOM component 2	BOM mdscr2
LMPC_HALB_12		62		
LMPC_ROH_3		328	LMPC_ROH_4	
LMPC_HALB_12		4		
LMPC_HALB_12		50		
LMPC_HALB_12		4		
LMPC_HALB_12		14		
LMPC_ROH_3		10	LMPC_ROH_4	
LMPC_FERT_12		2	LMPC_FERT_34	
LMPC_FERT_12		4	LMPC_FERT_34	

Example: BOM Components in the HJPT Planning Table

You use a parameter in data provider Customizing to decide which items are displayed. [Data Provider /LMPC/CL\\_DP\\_BOM Configuration: Component Data or BOM Data](#)

If no BOM items are selected in Customizing, the data provider shows the first 5 items determined.

**Differences depending on choice of read logic:**

- **Change information for BOM**

<b>Read components</b>	<b>Read BOM</b>
<p>Change information is not read for the BOM.</p> <p>The BOMs are not read, so no changes to the BOM can be determined.</p>	<p>When reading via the BOM, the data provider reads the elements of the BOM for the explosion date of the routing. The changes to the BOM are then taken into account over time.</p> <p>Additional fields: The validity of the BOM, the change number, the change text, and the date of the next planned change for the bill of material.</p>

- **Change of component quantities**

<b>Read components</b>	<b>Read BOM</b>
<p>Change the component quantities when changing the quantity of the order, since the quantities are read directly from the order.</p>	<p>The component quantities are not changed when changing the quantity of the planned order.</p> <p>The quantities are read from the database (table RESB). Therefore, it is not possible to change the component quantities in the simulation.</p> <p>For production and process orders only, this logic can also be updated in the simulation.</p> <p>The data for planned orders is updated as soon as the data is saved.</p>

- **Display of batches**

<b>Read components</b>	<b>Read BOM</b>
<p>Batch information is read directly from the order.</p>	<p>Batch information is read from the database table RESB.</p> <p>If there was an operation split in batch determination and more than one batch has been assigned to a BOM item, the first batch number is displayed and a "+" is appended to the number. The "+" indicates that there is more than one batch number.</p>

- **Display of assemblies**

<b>Read components</b>	<b>Read BOM</b>
<p>When the components are read, the components are read directly from the order.</p> <p>The components with exploded dummy assemblies are displayed in the order. You can also use this logic to display the items in dummy assemblies.</p>	<p>The BOM explosion only takes place for the header material of the order.</p> <p>Dummy assemblies are not exploded. Therefore, materials in dummy assemblies cannot be displayed.</p>



- **Sequence of components**

<b>Read components</b>	<b>Read BOM</b>
For data without dummy assemblies: Components are displayed in the sequence of the item numbers.	Only elements of the BOM on the first level in the sequence of item numbers.
Data with dummy assemblies:  The components of the orders are read using standard SAP function modules. These do not return the sequence in the usual display. The sequence is not formatted in the way it is displayed in the dialog display of the components for the order.  The sequence of the display for materials with dummy assemblies is determined from the order levels.  First, the components are read directly below the material. The components that are contained in dummy assemblies are then read.  The material of the dummy item itself is also displayed.  However, since a material of a dummy assembly belongs to a lower order level, it is displayed together with the materials contained in the dummy assemblies. It is not displayed in the row of materials in the level directly below the header material, it is only displayed when the next level of materials of the dummy assemblies is displayed.  If a dummy assembly has alternative items, all alternative items are displayed.  You can use the SORT parameter in the data provider to change the sorting so that the elements are displayed in the order of their item numbers and material numbers.	No explosion of dummy assemblies.

### **i Note**

The choice of read logic depends on the requirements in the customer system. No general statement can be made as to which logic is to be used. Reading via the components delivers the data directly from the order and is the standard logic. However, it does not provide any change data for the BOM.

Reading the data with this data provider requires a relatively long runtime. It is not possible to determine which logic requires less runtime. This depends on the data in the system. A test is recommended to determine which logic is used.

Reading via the BOM can be advantageous in terms of runtime if you access a large number of orders with minimal different materials. In this case, only a few BOM explosions have to be carried out instead of reading the data from each order individually.

The disadvantage of reading from the BOMs is the missing update of component quantities when changing the quantity of the header material in the planned order.

## ! Restriction

If the alert is to be used for the validity of the BOM, reading via the BOM must be activated. [Data Provider / LMPC/CL\\_DP\\_ALERT Alert Processing \[page 332\]](#)

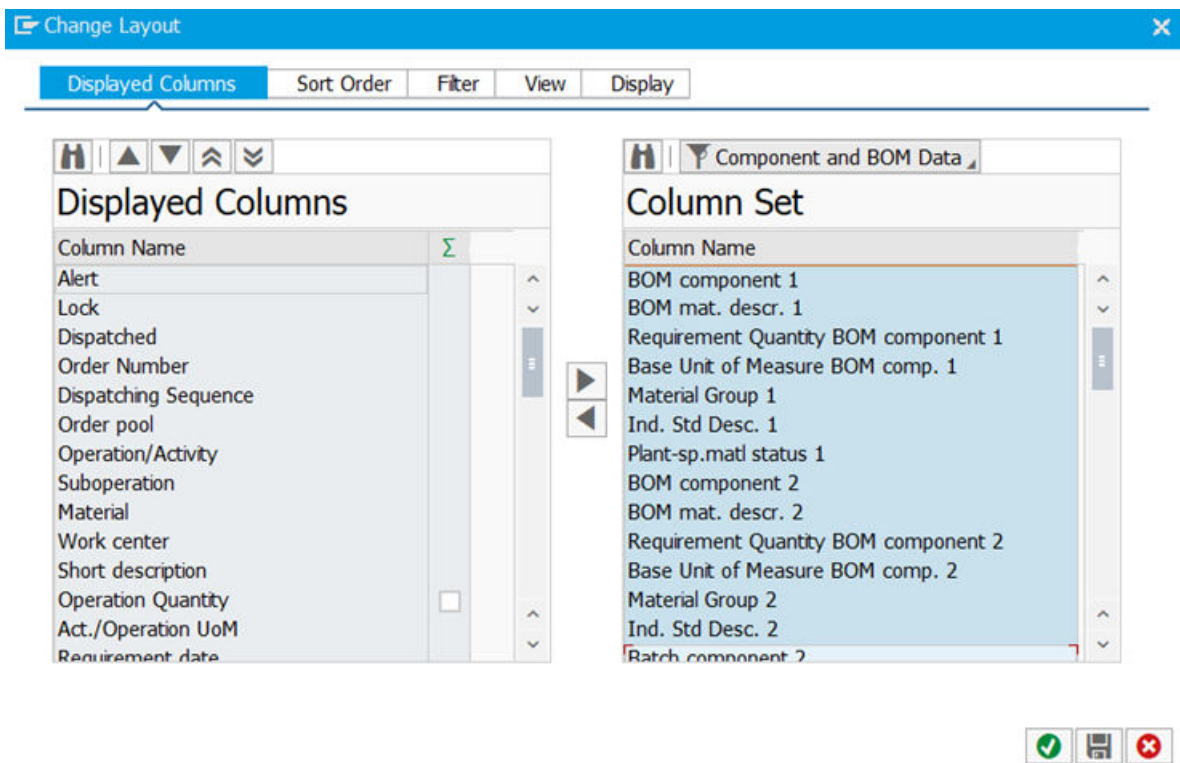
The following fields are filled:

Field Name	Description
STK01_SP	LMPC BOM component 1
MAKT1_SP	LMPC material short text 1
BDMNG1_SP	Required quantity BOM component 1
MEINS1_SP	Base unit of measure BOM component 1
MATKL1_SP	Material group 1
MORMT1_SP	Standard description 1
CHNRKP1_SP	Batch number component 1
MMSTA1_SP	Plant-specific material status 1
to	
STK05_SP	LMPC BOM component 5
MAKT5_SP	LMPC material short text 5
BDMNG5_SP	Required quantity BOM component 5
MEINS5_SP	Base unit of measure BOM component 5
MATKL5_SP	Material group 5
NORMT5_SP	Standard description 5
CHNRKP5_SP	Batch number component 5
MMSTA5_SP	Plant-specific material status 5

The following additional fields are only filled if reading via the BOM is activated:

SDATV_SP	BOM valid from
SDATB_SP	BOM valid to
AENNR	Change number of next BOM change
AETXT	Short text: Next change number
DATUV	Date of next BOM change

You can use the layout settings of the ALV Grid to show the fields. The fields are located in the group of the component and BOM data.



#### ALV Grid Layout Field Selection

#### → Tip

If you want to name the fields differently, you can use the transaction /LMPC/FLD to assign different names.

The data provider CL\_DP\_BOM is the basis for other elements of the HJPT planning table. The data is required for the following elements:

- [Data Provider /LMPC/CL\\_DP\\_BOM\\_BATCH\\_INFO Batches for BOM Components \[page 348\]](#)
- [Data Provider /LMPC/CL\\_DP\\_STOCK Stock Information \[page 384\]](#)
- [Data Provider /LMPC/CL\\_DP\\_USER\\_102 Classification of Material Master \[page 391\]](#)
- [Two-Step Planning with Pool ID \[page 222\]](#)

#### ! Restriction

The logic of the data provider was developed based on customer requirements. This logic is not generically valid for all cases that can be configured in an SAP system.

## 2.7.7 Data Provider /LMPC/CL\_DP\_BOM\_BATCH\_INFO Batches for BOM Components

Data for batches of BOM items

The data provider /LMPC/CL\_DP\_BOM\_BATCH\_INFO reads the shelf life expiration date and the period indicator of batches that are assigned to the BOM components of the production order or process order.

The following fields are filled:

Field Name	Description
VFDAT1_SP	Shelf life expiration date (SLED) or expiration date BOM item 1
IPRKZ1_SP	Period indicator for SLED / expiration date BOM item 1
VFDAT2_SP	Shelf life expiration date (SLED) or expiration date BOM item 2
IPRKZ2_SP	Period indicator for SLED / expiration date BOM item 2
VFDAT3_SP	Shelf life expiration date (SLED) or expiration date BOM item 3
IPRKZ3_SP	Period indicator for SLED / expiration date BOM item 3
VFDAT4_SP	Shelf life expiration date (SLED) or expiration date BOM item 4
IPRKZ4_SP	Period indicator for SLED / expiration date BOM item 4
VFDAT5_SP	Shelf life expiration date (SLED) or expiration date BOM item 5
IPRKZ5_SP	Period indicator for SLED / expiration date BOM item 5

### Example

At least one of the BOM materials of an order is identified as “subject to batch management requirement” in the material master. Corresponding batches exist for the materials (transaction MSC1N, MSC2N, MSC3N)

### Display Batch

Material: ZMTH\_CHARGE\_HALB\_3  
 Batch: ZMTH\_CHAR3  
 Plant: LM01      Werk: LMPC

Basic data 1    Basic data 2    Classification    Material data    Changes

Expiration Date		Batch Status	
Date of Manufacture	01.01.2015	Batch Status	<input checked="" type="radio"/> Unrestricted
Shelf Life Exp. Date	08.2019		<input type="radio"/> Batch restr.
Available From	03.03.2016	Last Status Chge	
Period Indicator	W		

Example Batch

A production order is created for the finished product. The batch is assigned for the materials subject to batch management in the component list of the production order:

### Production Order Change: Component Overview

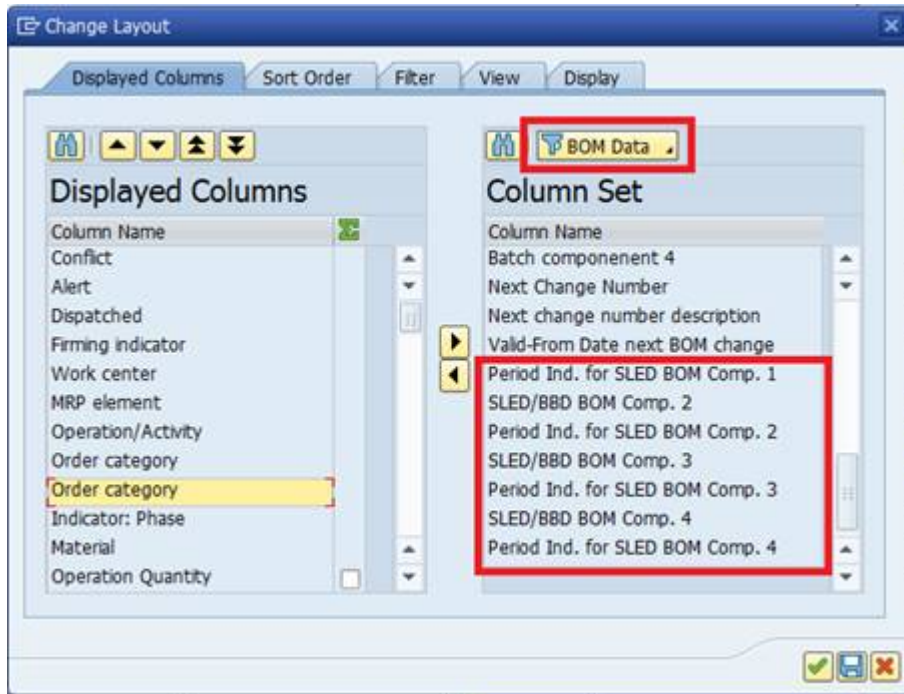
Order: 60007863      Type: PP01  
 Material: ZMTH\_CHARGE\_FERT\_2    ZMTH Charge Fertigerzeugnis 2    Plant: LM01

Filter: NO\_FIL No Filter      Sorting: ST\_STA Standard Sort

Item	Component	Description	Reqmt Qty	U...	I...	Op...	Se...	Plant	St...	Batch
0010	ZMTH_CHARGE_HALB_2	ZMTH Charge Halb 2	10	PC	L	0010	0	LM01	L001	ZMTH_CHAR2
0020	ZMTH_CHARGE_HALB_3	ZMTH Charge Halb 3	10	PC	L	0010	0	LM01	L001	ZMTH_CHAR3

Production Order

The data provider /LMPC/CL\_DP\_BOM\_BATCH\_INFO LMPC provides the information on the shelf life expiration date/expiration date of the bill of materials in the ALV Grid, where this information can be shown (category: BOM data):



Columns in the Layout Settings

The information is now visible in the ALV Grid of the HJPT planning table:

SLED/BBB 1	Per. Ind.1	SLED/BBB 2	Per. Ind.2	SLED/BBB 3	Per. Ind.3	SLED/BBB 4	Per. Ind.4	Alert	I	F	Work ctr	Or
31.01.2018	D	08.2019	W		D		D	⚠	X		ZMTH_M...	60
31.01.2018	D	08.2019	W		D		D	⚠	X		ZMTH_M...	60
	D		D		D		D	⚠			ZMTH_P...	70

Fields in the ALV Grid

## 2.7.8 Data Provider /LMPC/CL\_DP\_CALC Calculations

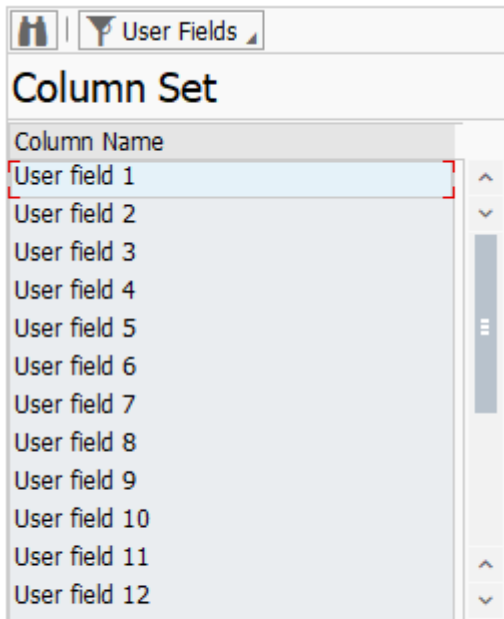
Perform calculations

You can use this data provider to perform simple calculations with the data of the ALV Grid of the LMPC HJPT planning table.

Only the four basic arithmetic operations are possible:

- Addition
- Subtraction
- Multiplication
- Division

You can use two fields of the ALV Grid of the HJPT planning table as operands in an equation. The result of the calculation is output via a user field.



User Fields

For details on configuration, see the LMPC Configuration Guide. There is also an application example.

## Related Information

[Data Provider /LMPC/CL\\_DP\\_CALC Configuration](#)

## 2.7.9 Data Provider /LMPC/CL\_DP\_COLOR ALV Grid Classic Color Customizing

Coloring the ALV Grid with simple rules

The HJPT detailed scheduling planning board contains two data providers for coloring the fields and lines of the ALV Grid.

- Data Provider /LMPC/CL\_DP\_COLOR ALV Grid Classic Color Customizing
- [Data Provider /LMPC/CL\\_DP\\_COLOR\\_FORMULA ALV Grid Color Customizing with Formulas \[page 353\]](#)

For instructions on how to color fields and lines, see the LMPC Configuration Guide.

ID	Alert	#	Order	OpAc	SOo	Category	Material	Order pool	No.	ID	Cat.	Work cd.	Short description	Cat.	Plant	Operation	Quantity	Unit	Res.	Start time	Disposition	gap	Free cap.	Earliest start	Earl.start	Earliest finish
X	X	2733085	0010	2			LMPC_HALB_34			30004789	001	MA1	LMPC wst 1	LM01	LM01		4	PC	LM1	00:00:00			22.10.2018	17:24:48	22.10.2018	
X	X	2733085	0010	2			LMPC_HALB_34			30004789	002	MA1	LMPC wst 1	LM01	LM01		4	PC	LM1	00:00:00			22.10.2018	17:24:48	22.10.2018	
X	X	60067925	0010	1			LMPC_HALB_34			30004789	001	MA1	LMPC wst 1	LM01	LM01		13	PC	LM1	00:00:00			22.10.2018	22:49:48	23.10.2018	
X	X	60067925	0010	1			LMPC_HALB_34			30004789	002	MA1	LMPC wst 1	LM01	LM01		13	PC	LM1	00:00:00			22.10.2018	22:49:48	23.10.2018	
X	X	2733648	0010	2			LMPC_HALB_32			30004789	001	MA1	LMPC wst 1	LM01	LM01		8	PC	LM1	00:00:00			22.10.2018	04:00:00	22.10.2018	
X	X	2733648	0010	2			LMPC_HALB_32			30004789	002	MA1	LMPC wst 1	LM01	LM01		8	PC	LM1	00:00:00			22.10.2018	04:00:00	22.10.2018	
X	X	2733651	0010	2			LMPC_HALB_32			30004789	001	MA1	LMPC wst 1	LM01	LM01		4	PC	LM1	00:00:00			22.10.2018	04:00:00	22.10.2018	
X	X	2733651	0010	2			LMPC_HALB_32			30004789	002	MA1	LMPC wst 1	LM01	LM01		4	PC	LM1	00:00:00			22.10.2018	04:00:00	22.10.2018	
X	X	0793669	0010	3			LMPC_HALB_17			30004789	001	MA1	LMPC wst 1	LM01	LM01		1	SR	LM1	00:00:00			22.10.2018	04:00:00	22.10.2018	

Example of a Colored ALV Grid

This section describes which color settings are delivered with the LMPC Customizing. The coloring is activated in the delivery for the sample profiles.

### Note

The settings are only examples and serve as a template on the basis of which the customer system settings can be made.

Color settings in transaction /LMPC/CUSTCOL:

Field / Line Colored	Color	Condition
Whole line	Green	Dispatched operation of a planned order.
Whole line	Dark blue	Dispatched operation of a production order or process order.
Whole line	Red	If the work center of the operation is not a leaf node.
Order number of production order or process order (AUFNR_FA)	Yellow	If the order is a production order/process order.
Order number (/LMPC/DELNR_CY)	Orange	If the order is a production order / process order
Status field 1 (FA_STATUS1_SU)	Red	If the field is filled with one of the following values: FMAT, FMAT NMVP, MSPT, MSPT MANC.
Status field 1 (FA_STATUS1_SU)	Yellow	If the field is filled with one of the following values: NMVP, MANC.
Status field 1 (FA_STATUS1_SU)	Green	If the field is filled with one of the following values: MABS, MACM.
Field dispatched (/LMPC/FLAG_EIGP_CY)	Green	If the order operation is dispatched and does not belong to a planned order
Field dispatched (/LMPC/FLAG_EIGP_CY)	Dark blue	If the order operation is dispatched and does not belong to a production order or process order
Field dispatched (/LMPC/FLAG_EIGP_CY)	Yellow	If the order operation has not been dispatched
Whole line	Orange	If the order of the operation is a service and maintenance order (order category = 30).



Buffer days field (RQDBFF_MD)	Green	If there are still enough buffer days until the requirement date (number of days < 0).
Buffer days field (RQDBFF_MD)	Yellow	If the MRP availability is the same as the requirement date (number of days = 0).
Buffer days field (RQDBFF_MD)	Red	If the MRP availability is after the requirement date (number of days > 0).

## Related Information

[Settings for Color Application in LMPC HJPT ALV Grid](#)

### 2.7.10 Data Provider /LMPC/CL\_DP\_COLOR\_FORMULA ALV Grid Color Customizing with Formulas

Color the ALV Grid of the HJPT planning table using formulas

The data provider /LMPC/CL\_DP\_COLOR only allows you to create simple rules for coloring the ALV Grid.

You can use the data provider /CL\_DP\_COLOR\_FORMULA to define more complex rules. It is possible to perform calculations. For example, a certain number of days can be subtracted from a date.

For instructions on how to color fields and rows, see the LMPC Configuration Guide. [Settings for Color Application in LMPC HJPT ALV Grid](#)

This section describes which color settings are delivered with the LMPC Customizing. The coloring is activated in the delivery for the sample profiles.

#### **i** Note

The settings are only examples and serve as a template on the basis of which the customer system settings can be made.

#### **→** Remember

Coloring with formulas requires considerably more runtime than traditional coloring. Therefore, as few formulas as possible should be defined.

Color settings in transaction /LMPC/CUSTCOL\_FML:

Field / Line Colored	Color	Condition
----------------------	-------	-----------

Latest start / date field (SSTAD_KB)	Red	If the date of the latest start is 2 or more days in the past
Latest start / date field (SSTAD_KB)	Orange	If the date of the latest start is earlier than the current date.
Latest start / date field (SSTAD_KB)	Yellow	If the date of the latest start is less than 3 days in the future.
Latest start / date field (SSTAD_KB)	Green	If the date of the latest start is less than 5 days in the future.
Latest start / date field (SSTAD_KB)	Dark blue	Condition always fulfilled.
Latest end / date field (SENDD_KB)	Orange	If the latest end date is today and the time of the latest end is less than 1 hour in the past.
Latest end / date field (SENDD_KB)	Red	If the latest end date is earlier than the current date
Remaining capacity requirement field (KBREST_SU)	Green	Always fulfilled.
Order Pool field (/LMPC/ POOL_GUID_CY)	Orange	If a pool ID exists.
Free capacity in dispatching gap field (LGTHGAP_TM)	Dark blue	If the free capacity is less than or equal to 2 hours
Free capacity in dispatching gap field (LGTHGAP_TM)	Green	If the free capacity is less than or equal to 4 hours.
Free capacity in dispatching gap field (LGTHGAP_TM)	Yellow	If the free capacity is less than or equal to 8 hours.
Free capacity in dispatching gap field (LGTHGAP_TM)	Orange	If the free capacity is less than or equal to 16 hours.
Free capacity in dispatching gap field (LGTHGAP_TM)	Red	If the free capacity is greater than 16 hours
Status field 2 (FA_STATUS2_SU)	Yellow	If status field 2 contains the value "EROF"
Requirement date field (BDTERM_MD)	Light blue	If the requirement date is empty.
Requirement date field (BDTERM_MD)	Red	If the requirement date is before the latest end date of the operation.
Requirement date field (BDTERM_MD)	Red	If the requirement date is before the current date.

Requirement date field (BDTERM_MD)	Yellow	If the requirement date is the same as the latest end date of the order.
Requirement date field (BDTERM_MD)	Green	If the requirement date is after the latest end date of the order.
Operation number field (VORNR_KB)	Red	If the latest start date is before or on yesterday and the status in the status field 3 is not "TRÜC" and the order category is "10".
Order number field (/LMPC/DELNR_CY)	Red	If the latest start date is in the past, the status is not released, and the order category is a production order.
Field: Date to Completion of Task (FINISHED_UNTIL_ME)	Green	If the completion date is in the future.
Field: Date to Completion of Task (FINISHED_UNTIL_ME)	Yellow	If the completion date is today.
Field: Date to Completion of Task (FINISHED_UNTIL_ME)	Red	If the completion date is in the past.
Resubmission date field (RESUBMISSION_DATE_ME)	Green	If the resubmission date is in the future.
Resubmission date field (RESUBMISSION_DATE_ME)	Yellow	If the resubmission date is today.
Resubmission date field (RESUBMISSION_DATE_ME)	Red	If the resubmission date is in the past.
Field: MRP Availability (STODA_MD)	Orange	If the date of the MRP availability is later than the requirement date.

## 2.7.11 Data Provider /LMPC/CL\_DP\_COMB\_USRFLD - Merge Data

Group data in fields

You can use this data provider to write data from fields of the ALV Grid of the LMPC HJPT planning table to other fields of the ALV Grid.

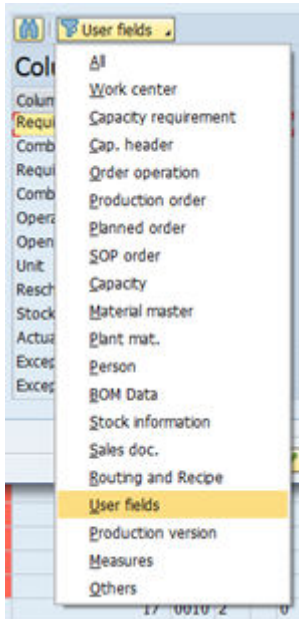
In the ALV Grid, data for one order type is displayed in different fields than the same data for a different order type. For example, the production version for planned orders is in the field VERID\_PA, for production and process orders, it is in the field VERID\_FA. You can use the data provider to transfer the data of different fields to one field.

All fields of the HJPT planning table are available as start and target fields for the data provider. Fields in the LMPC HJPT ALV Grid have different data types. The data provider is written in such a way that all data types

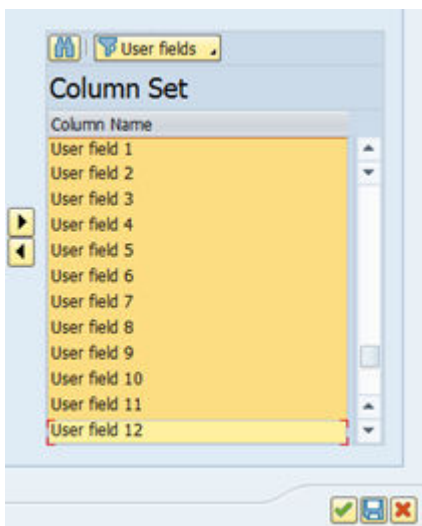
are converted to the data type `Character` before they are written to the destination field. Therefore, it is recommended that you use the user fields 1-20 as destination fields.

The user fields have a length of 40 characters. If the data from multiple fields is written to one field, then, depending on the settings, this data is either combined, meaning concatenated, or overwritten. If overwrite is selected, the last value written to the field overrides all other values. A value is written to a field only if the source field is not empty. This prevents the information from being overwritten with an empty value.

The user fields 1-20 can be found in the "User fields" group.



ALV Grid Layout Groups - Selection of User Fields



Fields in the 'User Fields' Group

### → Remember

You can use transaction `/LMPC/FLD` to change the name of the fields in the field catalog, to give the fields different column headings.

## Related Information

[Data Provider /LMPC/CL\\_DP\\_COMB\\_USRFLD Configuration: Merge data](#)

### 2.7.12 Data Provider /LMPC/CL\_DP\_COUNT Count, Calendar Weeks, and Weekdays

#### Calendar Data and Counting of Orders

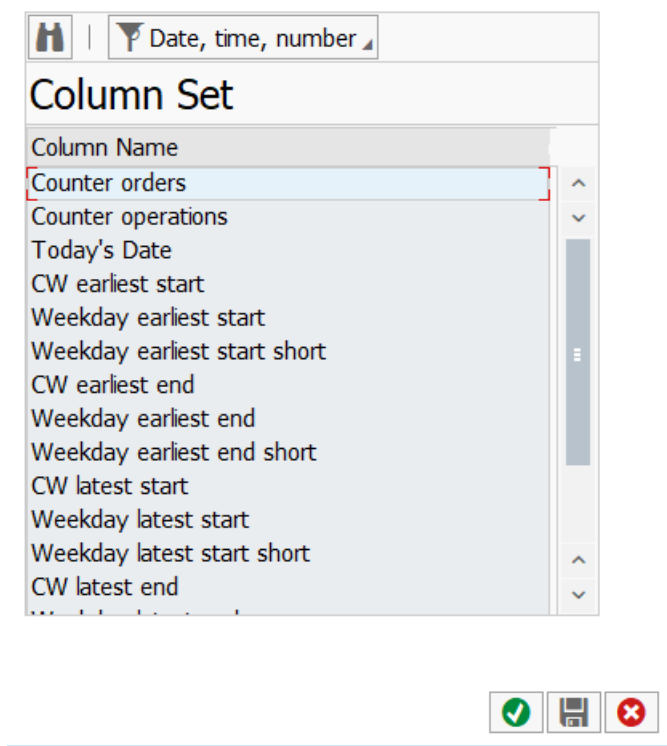
This data provider fills counting fields for order numbers and operations in the ALV Grid. It also performs operations calculations for the calendar week of start and end times, and also generates the weekdays for these times.

The following fields are filled:

#### Data Provider Fields

Technical Field Name	Description
COUNT_ORD_TM	Counter for number of orders
COUNT_OP	Counter for number of operations
SYDATLO	Current date
KW_FSTAD	Calendar week earliest start
DAY_FSTAD	Weekday earliest start
DAY_FSTAD_SH	Weekday earliest start short
KW_FENDD	Calendar week earliest end
DAY_FENDD	Weekday earliest end
DAY_FENDD_SH	Weekday earliest end short
KW_SSTAD	Calendar week latest start
DAY_SSTAD	Weekday latest start
DAY_SSTAD_SH	Weekday latest start short
KW_SENDD	Calendar week latest end
DAY_SENDD	Weekday latest end
DAY_SENDD_SH	Weekday latest end short
KW_DATE1	Calendar week date 1
DAY_DATE1	Weekday date 1
DAY_DATE1_SH	Weekday date 1 short
KW_DATE2	Calendar week date 2
DAY_DATE2	Weekday date 2
DAY_DATE2_SH	Weekday date 2 short

The fields are in the layout group for date, time, and number.



Fields in Layout Group

Example fields in the ALV Grid:

Earliest start	Earl.start	Earl. finish / date	Earl.finish time	Today's Date	CW earl.start	Weekday earliest start	W. CW earliest end	Weekday earliest end	Wd. CW lat.st.	Weekday lat. start	W. CW latest end	Weekday latest end	Wd. L
12.08.2020	09:00:00	12.08.2020	18:00:00	02.09.2020	CW33	Wednesday	WE CW33	Wednesday	WE CW33	Wednesday	WE CW33	Wednesday	WE
18.08.2020	16:36:00	25.08.2020	18:00:00	02.09.2020	CW34	Tuesday	TU CW35	Tuesday	TU CW34	Tuesday	TU CW35	Tuesday	TU
19.08.2020	12:30:00	27.08.2020	14:54:00	02.09.2020	CW34	Wednesday	WE CW35	Thursday	TH CW34	Wednesday	WE CW35	Thursday	TH
29.08.2020	14:00:00	29.08.2020	18:00:00	02.09.2020	CW35	Saturday	SA CW35	Saturday	SA CW35	Saturday	SA CW35	Saturday	SA
29.08.2020	16:00:00	29.08.2020	18:00:00	02.09.2020	CW35	Saturday	SA CW35	Saturday	SA CW35	Saturday	SA CW35	Saturday	SA
01.09.2020	14:00:00	01.09.2020	18:00:00	02.09.2020	CW36	Tuesday	TU CW36	Tuesday	TU CW36	Tuesday	TU CW36	Tuesday	TU
02.09.2020	13:20:00	02.09.2020	18:00:00	02.09.2020	CW36	Wednesday	WE CW36	Wednesday	WE CW36	Wednesday	WE CW36	Wednesday	WE
02.09.2020	17:00:00	02.09.2020	18:00:00	02.09.2020	CW36	Wednesday	WE CW36	Wednesday	WE CW36	Wednesday	WE CW36	Wednesday	WE
03.09.2020	14:00:00	03.09.2020	18:00:00	02.09.2020	CW36	Thursday	TH CW36	Thursday	TH CW36	Thursday	TH CW36	Thursday	TH
03.09.2020	15:00:00	03.09.2020	18:00:00	02.09.2020	CW36	Thursday	TH CW36	Thursday	TH CW36	Thursday	TH CW36	Thursday	TH
03.09.2020	16:00:00	03.09.2020	18:00:00	02.09.2020	CW36	Thursday	TH CW36	Thursday	TH CW36	Thursday	TH CW36	Thursday	TH

Fields in the ALV Grid

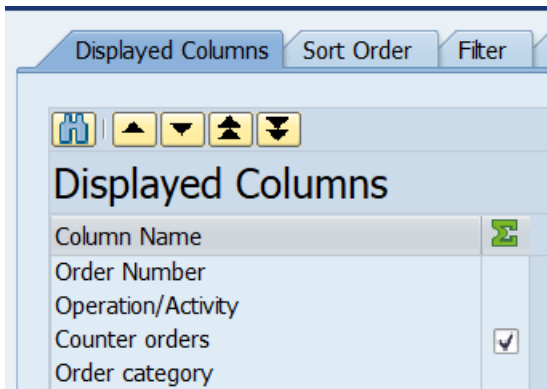
The calculation of the calendar week and the texts of the weekdays is based on the data of the capacity requirements. The earliest and latest start dates, as well as the earliest and latest end dates are used.

There are also six additional fields for which you can use the configuration to define the data with which they are filled. You can use the parameters for the data provider to transfer two field names of any date fields. From this, the data provider calculates the following fields: Calendar Week, Weekday, and Weekday Short Description. For the description of the configuration, see the LMPC Configuration Guide.

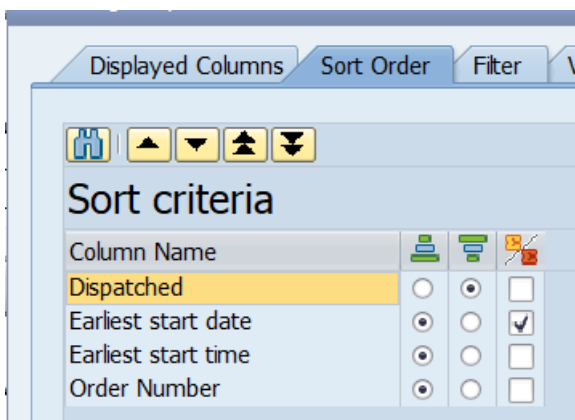
The fields for counting the orders are used to read the number of operations or orders when using totals rows in the ALV Grid.

## Example

The system totals using the counter for the orders and sets the subtotals for the earliest start date.



Summation Using the Order Counter



Subtotal Using Earliest Start Date

The following screen then appears:

Alert	D	F...	Order	OpAc	Σ Counter orders	Category	Ph	Material
	X		2925427	0020	1	2		LMPC_HALB_12
	X		2925427	0020	0	2		LMPC_HALB_12
<b>Earliest start date 02.09.2019</b>					<b>1</b>			
			60007815	0020	1	1		LMPC_HALB_12
			60007815	0020	0	1		LMPC_HALB_12
	X		2925851	0020	1	2		LMPC_HALB_12
	X		2925851	0020	0	2		LMPC_HALB_12
	X		2929765	0020	1	2		LMPC_HALB_12
	X		2929765	0020	0	2		LMPC_HALB_12
	X		2916131	0020	1	2		LMPC_HALB_12
	X		2916131	0020	0	2		LMPC_HALB_12
<b>Earliest start date 04.09.2019</b>					<b>4</b>			
	X		2929767	0020	1	2		LMPC_HALB_12
	X		2929767	0020	0	2		LMPC_HALB_12
<b>Earliest start date 09.09.2019</b>					<b>1</b>			
	X		2928642	0020	1	2		LMPC_HALB_12

Subtotals in the ALV Grid Using the Order Number on the Start Date

→ Tip

You can also use the counters to calculate subtotals for orders for each material number, for example, so that you can see the number of orders for each material number at a glance.

## 2.7.13 Data Provider /LMPC/CL\_DP\_CTC CTC Data

Identification of CTC Planned Orders

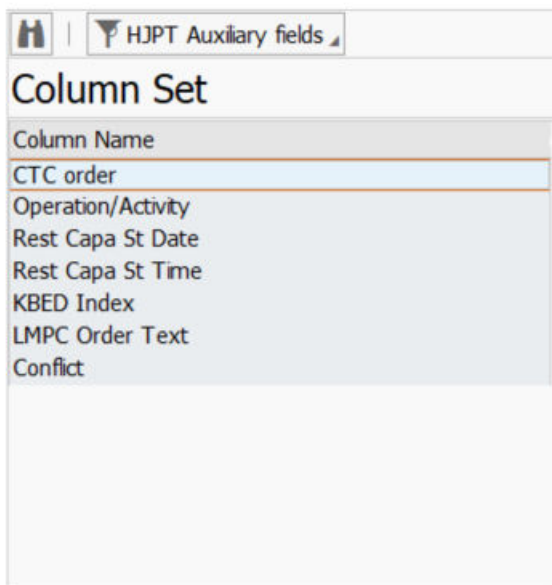
This data provider reads the identification of orders that were created with the consulting solution CTC.

This data provider is useful only in connection with the consulting solution CTC. [Capable to Confirm \(CTC\)](#)

It fills a field of structure /LMPC/HJPT\_F01:

- CTC\_AX Indicator: Order originates from CS CTC

The field is in the layout settings in the group of HJPT help fields:



CTC Field in the Layout Groups

It can be displayed to identify which planned order was created using the consulting solution CTC.

Alert	Dispatched	F...	CTC	Order pool	Lock	Num...	Order Number	OpAc	Cat	Material
●○○	X	X		888			3127483	0010	001	LMPC FERT 12
○▲○	X	X		888			3127525	0020	001	LMPC FERT 34
○▲○	X	X					3127565	0010	001	LMPC FERT 34
○▲○	X	X					3127566	0010	001	LMPC FERT 34
●○○	X	X	X				3224591	0010	001	LMPC HALB 34
●○○	X	X	X				3224591	0020	001	LMPC HALB 34
●○○	X	X	X				3224591	0030	001	LMPC HALB 34

CTC Field in ALV Grid



## 2.7.14 Data Provider /LMPC/CL\_DP\_CYPP0005 User Exit: CYPP0005

Fields from User Exit

This data provider reads fields that are filled in the user exit of the capacity planning table EXIT\_SAPLCYPP02\_001 in structure CI\_CYUSER, if this user exit is defined.

## 2.7.15 Data Provider /LMPC/CL\_DP\_DB\_FLDS Read Database Fields

Fill user fields

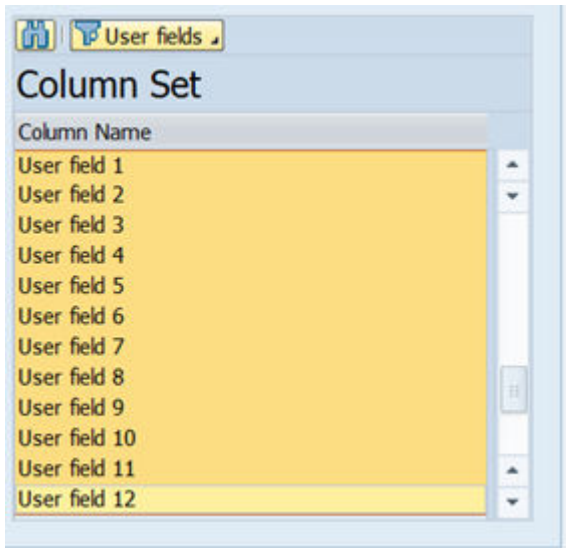
The data provider /LMPC/CL\_DP\_DB\_FLDS is used to read any fields from database tables and to display them in the LMPC HJPT ALV Grid. This data provider enhances the HJPT standard with the option of reading fields that are not supported in the HJPT planning table. For example Z fields of database tables.

There are 20 fields available to be filled:

Field Name	Description
/LMPC/USR1_CY	User field 1
/LMPC/USR2_CY	User field 2
/LMPC/USR3_CY	User field 3
/LMPC/USR4_CY	User field 4
/LMPC/USR5_CY	User field 5
/LMPC/USR6_CY	User field 6
/LMPC/USR7_CY	User field 7
/LMPC/USR8_CY	User field 8
/LMPC/USR9_CY	User field 9
/LMPC/USR10_CY	User field 10
/LMPC/USR11_CY	User field 11
/LMPC/USR12_CY	User field 12
/LMPC/USR13_CY	User field 13
/LMPC/USR14_CY	User field 14
/LMPC/USR15_CY	User field 15
/LMPC/USR16_CY	User field 16
/LMPC/USR17_CY	User field 17
/LMPC/USR18_CY	User field 18
/LMPC/USR19_CY	User field 19

Field Name	Description
/LMPC/USR20_CY	User field 20

The fields can be found in the “User fields” group.



Layout Settings for ALV Grid User Fields

The column headers of the fields are User field 1 – 20. You can use transaction /LMPC/FLD to personalize these column headers.

→ Tip

The data provider can be used in conjunction with the action class /LMPC/CL\_ACTION\_SET\_DBFLDS and an action code based on this class, for example, action code S\_SVDBF.

This action code allows you to store values in database fields.

The combination of action code and data provider enables you to read and save in fields of any database tables.

[S\\_SVDBF Save Data to Database Tables \[page 319\]](#)

## Related Information

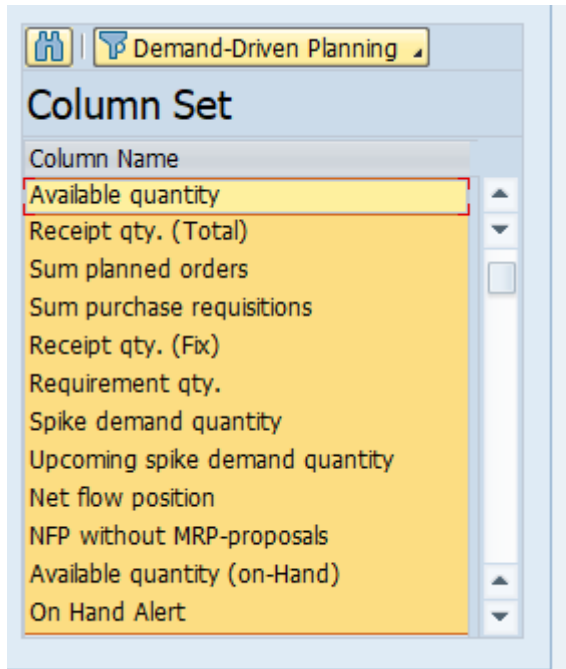
[Data Provider /LMPC/CL\\_DP\\_DB\\_FLDS Configuration: Read any data](#)

## 2.7.16 Data Provider /LMPC/CL\_DP\_DDP Demand-Driven Planning

Data Provider for DDP Fields

The data provider provides the fields for the demand-driven planning scenario.

The DDP fields can be found in the layout settings of the LMPC ALV Grid in the Demand-Driven Planning group.



Fields for Demand-Driven Planning

You can use the layout settings to show the fields.

Buffer status (av. qty)	B: Buffer status NFP	B: Buffer status NFP w/o p.	B: Buffer status (On-Hand)	B: Buffer status (Execution)	E. Pro [%]	Plan. Priority [%]	TOG [%]	av. qty	TOY [%]	av. qty	TOR [%]	av. qty	TORS [%]aQ	TOG [%]
1 - Red Safety	1 - Red Safety	1 - Red Safety	1 - Red Safety	2 - Red	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0
1 - Red Safety	1 - Red Safety	1 - Red Safety	1 - Red Safety	2 - Red	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0

Example DDP Fields in ALV Grid of HJPT Planning Table

### → Remember

All values of DDP are calculated at the header material level of the order. Therefore, values for operations for the same material are identical.

The displayed DDP data can be used for planning.

For example, the ALV Grid can be sorted according to key figures. Scheduling can be carried out using the sort sequence in the ALV Grid.

You can also use the action code S\_EPSRT to execute scheduling by DDP key figures according to a sort sequence previously defined in Customizing.

For more information about using DDP key figures for planning in the HJPT planning table, contact your LMPC consultant.

The data provider is used to color the fields. If a different coloring is required, you can override the coloring of the fields using the LMPC standard settings for ALV Grid coloring.

**i Note**  
 For the fields to be available in the HJPT planning table, a field enhancement must be carried out and the data provider must be activated. For details on this, see the LMPC Configuration Guide.

For more information on DDP, see the DDP documentation. This is not part of the LMPC documentation.

**Related Information**

[Data Provider /LMPC/CL\\_DP\\_DDP Demand-Driven Planning \[page 363\]](#)

**2.7.17 Data Provider /LMPC/CL\_DP\_ENQUEUE Order Locks (Icon)**

Display locks

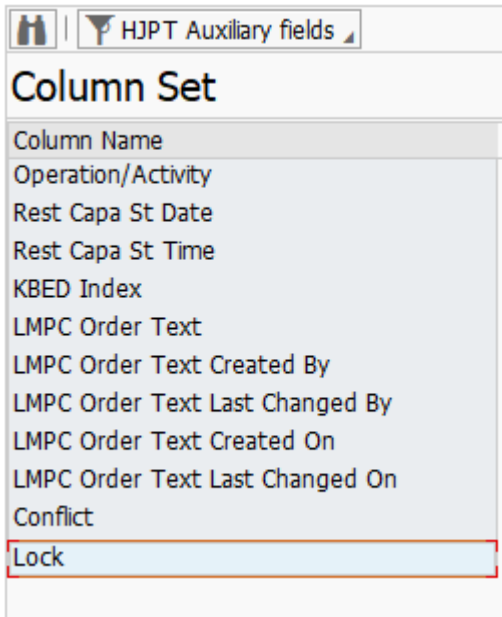
This data provider reads the locks on order operations and displays them in the HJPT planning table.

Lock	Dispatch...	Firming	Order
	X	X	2733653
	X	X	2733653
	X		60007870
	X		60007870
		X	2719701
		X	2719701
		X	2733654

Example Locks on Operations



Field: ENQUE\_ICON\_AX


The field is in the group of help fields.




Layout Settings Field Selection User Fields

You can distinguish between two types of locks:

- Self lock 
- External lock 

The **self lock**  (icon: open padlock) indicates that the lock has been set by this program. For example, an order was changed via the HJPT detailed scheduling planning board. This self lock is only set for planning activities (dispatch, deallocation) for production and process orders. No self locks are generated during scheduling for planned orders. When changes are made to orders via action code S\_AK02 (for example, double-click or click the hotspot on the order number), self locks are set for planned, production, and process orders. All orders with a self lock can be dispatched and changed within the HJPT planning table. All orders with a self lock cannot be changed by other transactions while these orders are open within the HJPT planning table.

The **external lock**  (icon: closed padlock) indicates that the order is locked by another transaction. For example, a production order is open in transaction CO02, or the order has been opened and changed in another LMPC HJPT instance. Production and process orders with a foreign lock cannot be changed in the HJPT planning table, neither can they be dispatched. Planned orders with a foreign lock cannot be changed in the HJPT planning table. However, it is possible to plan planned orders with foreign locks.

### i Note

The behavior described here refers to the settings in the standard test profiles for the capacity planning table. It is possible to convert the locking behavior of the capacity planning table. For example, you can convert it so that all orders that are opened are locked automatically. Another alternative is that you can set that all orders are blocked in the order pool. For details on this, see the LMPC Configuration Guide. [Data Provider /LMPC/CL\\_DP\\_ENQUEUE Configuration: Read Locks](#)

→ Tip

Action code S\_LOCK allows the user to set manual locks for the orders. [S\\_LOCK Temporarily Lock Orders \[page 306\]](#)

## 2.7.18 Data Provider /LMPC/CL\_DP\_GAP Calculate Dispatching Gaps

### Calculation of Planning Gaps

The data provider /LMPC/CL\_DP\_GAP calculates the start and the free capacity of a gap in the production plan. All operations that are dispatched are taken into account. The duration is calculated as free capacity in hours, minutes, and seconds.

The calculation is carried out for each work center for all open work centers.

### ! Restriction

The calculation is only performed for the capacity relevant for scheduling.

The calculation is correct if the operations on the resource are dispatched one after the other without overlapping. Parallel operations and overlaps are not taken into account.

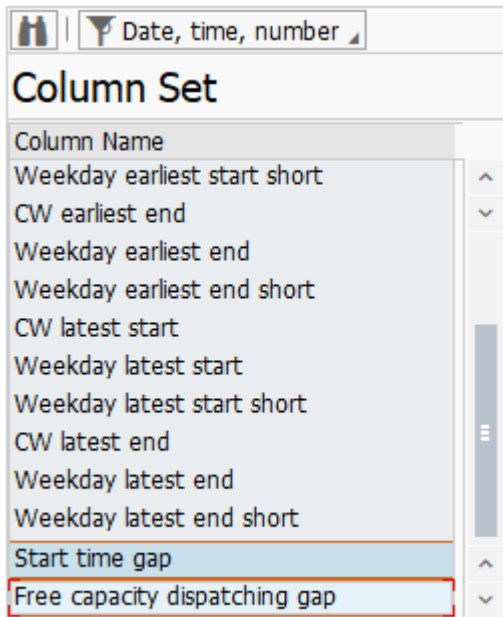
This data provider is used in connection with the action codes S\_MANPL and S\_EPSELL. You can configure the dispatching functions of these action codes so that they check for gaps in the production plan.

The data provider fills 2 fields:

Fields

Technical Field Name	Description
STRTGAP_TM	Start gap
LGTHGAP_TM	Free capacity gap

Both fields are in groups Date, Time, and Number.



Layout Settings

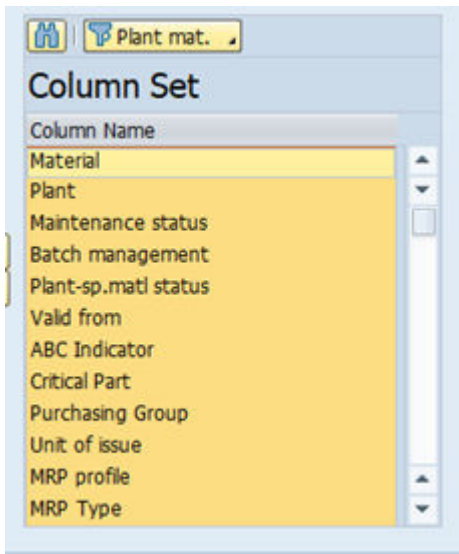
Start time disposition gap	Free cap.	
	00:00:00	(
	00:00:00	(
	00:00:00	(
	00:00:00	(
10.12.2018 15:06:45	00:07:00	1
10.12.2018 15:06:45	00:07:00	1
	00:00:00	1
	00:00:00	1
17.12.2018 11:06:45	95:13:00	2
17.12.2018 11:06:45	95:13:00	2
	00:00:00	(
	00:00:00	(

Fields in the ALV Grid

## 2.7.19 Data Provider /LMPC/CL\_DP\_MARC Plant Material Data

Data from table MARC

The data provider /LMPC/CL\_DP\_MARC reads the plant material data for the material of the respective order. The fields can be found in the layout settings group 'plant material'.

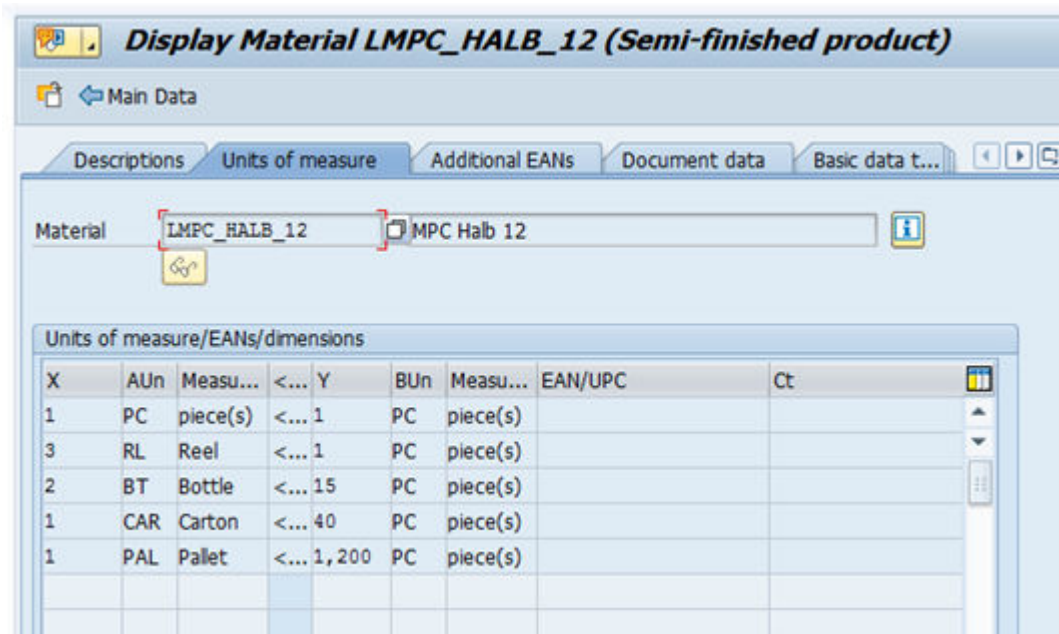


Layout Settings

## 2.7.20 Data Provider /LMPC/CL\_DP\_MAT\_ADD Alternative Units of Measure

Material additional data units of measure

In the material master, units of measure in addition to the base unit of measure can be stored under the additional data (view Basic Data 1 – Additional Data button).



Maintenance of Additional Units of Measure

The first entry is a base entry. The data provider reads and processes up to six conversion factors from this master data.



You can use data provider parameters to specify which alternative units of measure are displayed. If no alternative units of measure were specified in the data provider, the conversions for the first six data records found are displayed.

A conversion factor is calculated for each alternative unit of measure. The order quantity of the planned order, production order, or process order is multiplied by this conversion factor and an alternative quantity is calculated. The alternative quantity and the corresponding unit of measure are written to the respective fields.

In addition to the alternative units of measure, you can display an alternative short text for the material. In the additional data for the material, you can store the short texts for the material in different languages. For each material, it is possible to display the short text of a selected language that is not the logon language.

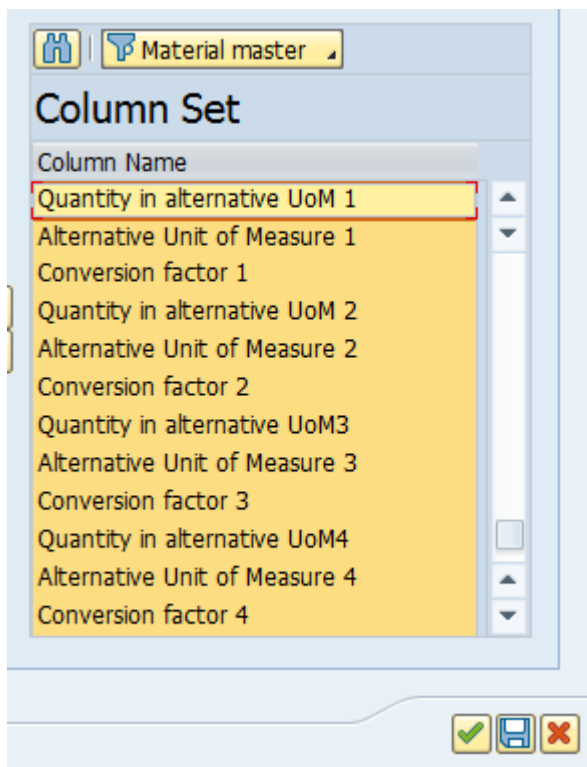
The view of the LMPC HJPT planning table contains 18 columns, which display the data for the alternative units of measure. For each alternative unit of measure, there is one field for the conversion factor, one field for the alternative unit of measure, and one field for the order quantity in an alternative unit of measure. An additional field exists for the alternative short text.

The following fields are filled:

Field Name	Description
QAME1_MA	Quantity in alternative unit of measure 1
AMEINH1_MA	Alternative unit of measure 1
UMREN1_MA	Conversion factor 1
QAME2_MA	Quantity in alternative unit of measure 2
AMEINH2_MA	Alternative unit of measure 2
UMREN2_MA	Conversion factor 2
QAME3_MA	Quantity in alternative unit of measure 3
AMEINH3_MA	Alternative unit of measure 3
UMREN3_MA	Conversion factor 3
QAME4_MA	Quantity in alternative unit of measure 4
AMEINH4_MA	Alternative unit of measure 4
UMREN4_MA	Conversion factor 4
QAME5_MA	Quantity in alternative unit of measure 5
AMEINH5_MA	Alternative unit of measure 5
UMREN5_MA	Conversion factor 5

QAME6_MA	Quantity in alternative unit of measure 6
AMEINH6_MA	Alternative unit of measure 6
UMREN6_MA	Conversion factor 6
MAKTX_ADD_MA	Alternative material short text

The fields are contained in the layout, in the “Material master” group.



Fields in the Layout Settings

Display of Fields in the ALV Grid of the HJPT Planning Table:

Qty.alt.1	AU	Conversion factor 1	Qty.alt.2	AU	Conversion factor 2	Qty.alt.3	AU	Conversion factor 3	Qty.alt.4	AU	Conversion factor 4
7.200	BT	0.133	1.350	CAR	0.025	0.045	PAL	0.001	162	RL	3.000
4.533	BT	0.133	0.850	CAR	0.025	0.028	PAL	0.001	102	RL	3.000
1.333	BT	0.133	0.250	CAR	0.025	0.008	PAL	0.001	30	RL	3.000

Example Data for Alternative Units of Measure

## Related Information

[Data Provider /LMPC/CL\\_DP\\_MAT\\_ADD Configuration: Additional Material Data](#)

## 2.7.21 Data Provider /LMPC/CL\_DP\_MEASURES Tasks, Resubmissions, Comments

Data for tasks, resubmissions, and comments

The data provider reads the data for tasks, resubmissions, and comments.

The data for the tasks is displayed in 9 fields in the ALV Grid of the LMPC HJPT planning table:

- OPEN\_MEASURES\_ME Indicator Open Tasks (icon)
- RESUBMISSION\_DATE\_ME Resubmission Date
- RESUBMISSION\_FLG\_ME Resubmission Flag
- RESUBMISSION\_NOTE\_ME Comment on resubmission
- COMMENT\_NOTE\_ME Comment
- NUM\_MEAS\_ME Number of Tasks
- MEASURE\_ID\_ME Task ID
- DESCRIPTION\_ME Task Description
- FINISHED\_UNTIL\_ME Date Until Finish

The fields are in the ALV Grid layout group "Tasks".

Column Name
Open Tasks
Resubmission Date
Resubmission Flag
Comment
Comment
Number of Tasks
Task ID
Task Description
Date until finish

Layout Group: Tasks

The data for the tasks is read from the data provider /LMPC/CL\_DP\_MEASURES.

oTas	Resubmission Date	Resub.Flg.	Comment	Comment	Num. Tasks	Task ID	Task Description	Date until finish
+	13.01.2021	X	Wiedervorlage	Kommentar	5	51	LMPC - NOTIFY SUPPLIER	04.01.2021
+	13.01.2021	X	Wiedervorlage	Kommentar	5	51	LMPC - NOTIFY SUPPLIER	04.01.2021
+	13.01.2021	X	Wiedervorlage	Kommentar	5	51	LMPC - NOTIFY SUPPLIER	04.01.2021
					0	0		

Data in the ALV Grid

This functionality has three action codes with which the data is maintained. [S\\_MCFMEA](#) [S\\_MCFCOM](#) [S\\_MCFRES](#), [Tasks](#), [Comments](#), [Resubmissions](#) [page 309]

## 2.7.22 Data Provider /LMPC/CL\_DP\_MEH MEH Data

Data fields for enhanced material master view (UoM)

This data provider reads the additional material master fields of the consulting solution "enhanced material master view (UoM)".

The UoM enhancements are delivered with the core transport of the SCM Consulting Solutions. If you have an LMPC license, you can use this function.

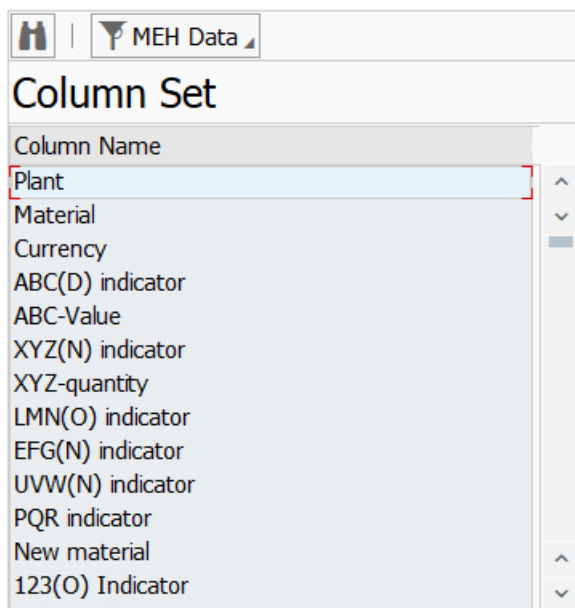
For documentation on enhanced material master view (UoM), see the comprehensive functions under the following link: [Enhanced Material Master View](#)

This is not part of the LMPC documentation.

### i Note

For the fields to be available in the HJPT planning table, a field enhancement must be carried out and the data provider must be activated. For details on this, see the LMPC Configuration Guide. [Data Provider / LMPC/CL\\_DP\\_MEH Configuration: UoM Data](#)

As soon as the necessary enhancements have been made, the fields are located in the layout group of the UoM data.



UoM Data

## 2.7.23 Data Provider /LMPC/CL\_DP\_MRP MRP Monitor Data

Data Fields for MRP monitor (MRP)

This data provider reads the analysis results of the SCM consulting solution MRP monitor (MRP).

The MRP monitor is a standalone consulting solution and is not delivered with the LMPC HJPT planning table.

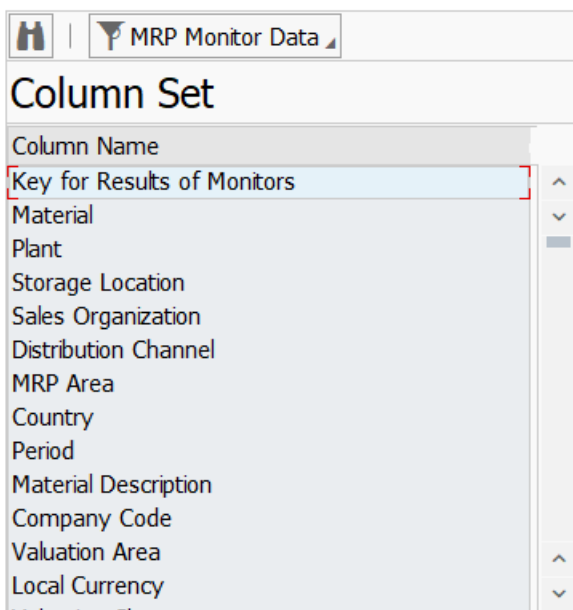
For the documentation on the consulting solution MRP monitor (MRP), see the following link: [MRP Monitor](#)

This is not part of the LMPC documentation.

### Note

For the fields to be available in the HJPT planning table, a field enhancement must be carried out and the data provider must be activated. For details on this, see the LMPC Configuration Guide. [Data Provider / LMPC/CL\\_DP\\_MRP Configuration: MRP Data](#)

As soon as the necessary enhancements have been made, the fields are located in the layout group of the MRP monitor data.



MRP Monitor Data

### Caution

Remember that the MRP monitor consulting solution is a solution that carries out extensive evaluations. The MRP monitor therefore has a large amount of data and also a large number of fields. If you want to load the data of this solution into the fields of the HJPT planning table, this can have a negative impact on the runtime of the HJPT planning table because a large amount of data is to be read. It is recommended that you use this data provider only for small data records or only for profiles that are intended for evaluating data. In a more extensive planning scenario, this data provider is not recommended.

## 2.7.24 Data Provider /LMPC/CL\_DP\_OP\_ADD Additional Data for Operations

This data provider is used to read additional HJPT data for order operations. This is data that results from LMPC firming and when changing the standard values of operations.

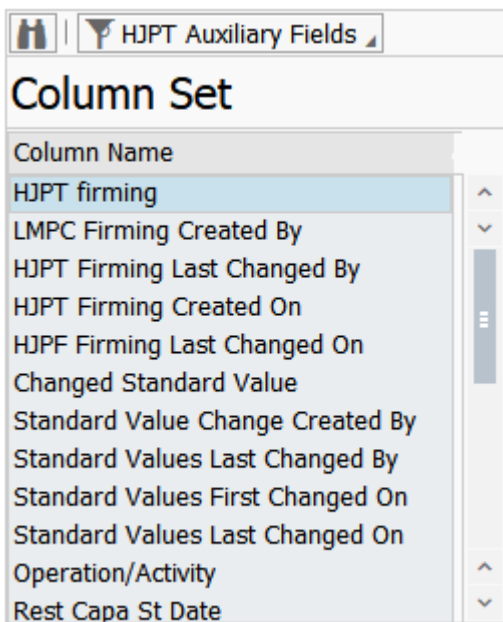
The data provider is required if one of the following action codes is used:

- [S\\_CHSDV Change to Standard Values \[page 92\]](#)
- [S\\_FIX, S\\_FIXE Firm and remove firming of orders \[page 301\]](#)

The data provider /LMPC/CL\_DP\_OP\_ADD fills the following fields:

Field Name	Description
HJPT_FIRM_AX	LMPC HJPT Firming Indicator
FCRUSER_AX	LMPC HJPT Firming Created By
FCHUSER_AX	LMPC HJPT Firming Last Changed By
FCRTMSTMP_AX	LMPC HJPT Firming Created On
FCRTMSTMP_AX	LMPC HJPT Firming Last Changed On
SDVCH_AX	Indicator: Change Standard Value
SDVC_CRUSER_AX	Standard Value Change Created By
SDVC_CHUSER_AX	Standard Values Last Changed By
SDVC_CRTMSTMP_AX	Standard Values First Changed On
SDVC_CHTMSTMP_AX	Standard Values Last Changed On

The fields are located in the layout settings of the ALV Grid in the group of HJPT help fields.



HJPT Help Fields

HJPT firm.	F. Created By	F.Changed By	F.Created On	F.Changed On	STV change	S. Created By	S. Changed By	SDV.f.Chndg On	S.Changed On
X	D056579	D056579	15.09.2021 12:18:13	15.09.2021 12:18:13	X	D056579	D056579	15.09.2021 12:18:27	15.09.2021 12:18:27
X	D056579	D056579	15.09.2021 10:00:56	15.09.2021 10:00:56					

Fields in the ALV Grid

## 2.7.25 Data Provider /LMPC/CL\_DP\_PRODVER Data for Production Version

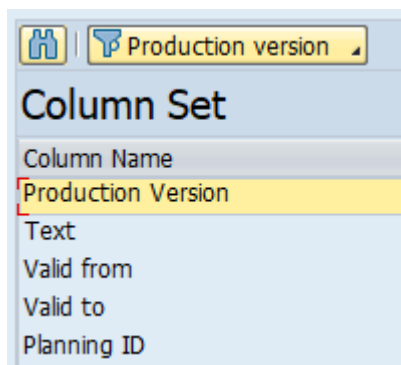
Display of data for the production version

The data for the production version of planned orders, production orders, and process orders is determined.

The data provider /LMPC/CL\_DP\_PRODVER fills the following fields:

Field Label	Description
VERID_PV	Production Version
VERS_TEXT_PV	Short Text for Production Version
ADATU_PV	Validity Start Date of Production Version
BDATU_PV	Validity End Date of Production Version
MDV02_PV	Planning Identification

The fields are located in the layout settings of the ALV Grid in the group "Production version".



Columns in the Layout Settings

Version	Text	Valid from	Valid to	Planning ID
LM01	LMPC Halb 12	01.01.2017	31.12.2022	
LM01	LMPC Halb 12	01.01.2017	31.12.2022	
LM01	LMPC Halb 34	01.01.2017	31.12.2020	
LM01	LMPC Halb 34	01.01.2017	31.12.2020	
LM01	LMPC Halb 12	01.01.2017	31.12.2022	

Columns in ALV Grid of HJPT Planning Table

## 2.7.26 Data Provider /LMPC/CL\_DP\_PS\_AFAB Relationships

Data for Relationships in Networks

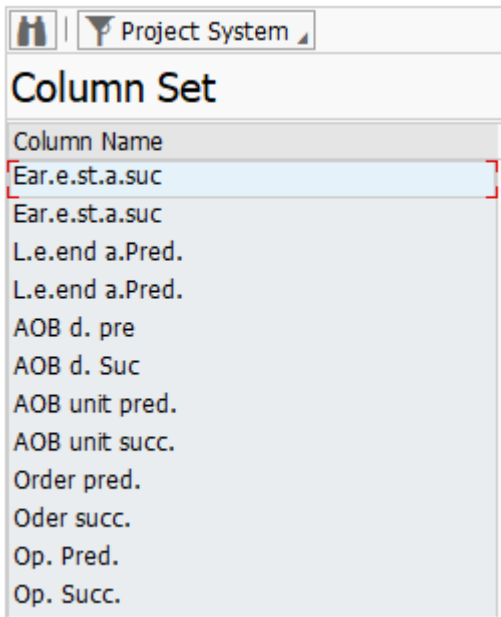
The data provider /LMPC/CL\_DP\_PS\_AFAB reads data for relationships of Project System (PS) orders. It is not required for the PP and PP-PI environment.

You can use this data to check whether the relationships are adhered to when the operations are dispatched.

The following fields are filled:

Field Name	Description
VGAUFNR_PS	Order number of latest predecessor
VGVORNR_PS	Operation number of latest predecessor
NFAUFNR_PS	Order number of earliest successor
NFVORNR_PS	Operation number of earliest successor
FFSTAD_PS	Earliest earliest start of all successors
FFSTAU_PS	Earliest earliest start of all successors (time)
SFENDD_PS	Latest earliest end of all predecessors
SFENDU_PS	Latest earliest end of all predecessors (time)
DVG_PS	Relationship duration predecessor
DVGE_PS	Relationship duration unit predecessor
DNF_PS	Relationship duration successor
DNFE_PS	Relationship duration unit successor

The fields can be found in the "Project System" group.



Layout Settings Column Set



Order Number	Oper./Act.	Work center	Earliest start	Earl.start	Earliest finish	Erl.finish	Order pred.	Op. Pred.	Oder succ.	Op. Succ.	Ear.e.st.a.suc	Ear.e.st.a.suc	L.e.e.Pred	L.e.e.Pred
904719	0010	MA2	30.12.2020	06:00:00	30.12.2020	14:00:00			904721	0010	30.12.2020	14:00:00		00:00:00
904721	0010	MA3	30.12.2020	14:00:00	31.12.2020	10:00:00	904719	0010	904721	0030	31.12.2020	10:00:00	30.12.2020	14:00:00
904721	0020	MA3	31.12.2020	10:00:00	31.12.2020	16:00:00	904721	0010	904721	0040	31.12.2020	16:00:00	31.12.2020	10:00:00
904721	0030	MA4	31.12.2020	10:00:00	31.12.2020	14:00:00	904721	0010	904721	0040	31.12.2020	16:00:00	31.12.2020	10:00:00
904721	0040	MA3	31.12.2020	16:00:00	02.01.2021	12:00:00	904721	0020	904722	0010	05.01.2021	06:00:00	31.12.2020	16:00:00
904720	0010	MA3	02.01.2021	12:00:00	04.01.2021	08:00:00	904719	0010	904720	0020	04.01.2021	08:00:00	30.12.2020	14:00:00
904720	0020	MA3	04.01.2021	08:00:00	04.01.2021	14:00:00	904720	0010	904720	0030	04.01.2021	14:00:00	04.01.2021	08:00:00
904720	0030	MA3	04.01.2021	14:00:00	04.01.2021	18:00:00	904720	0020	904722	0010	05.01.2021	06:00:00	04.01.2021	14:00:00
904722	0010	MA1	05.01.2021	06:00:00	05.01.2021	16:00:00	904720	0030	904722	0020	05.01.2021	16:00:00	04.01.2021	18:00:00
904722	0020	MA1	05.01.2021	16:00:00	07.01.2021	11:30:00	904722	0010	904719	0020	07.01.2021	11:30:00	05.01.2021	16:00:00
904719	0020	MA2	07.01.2021	11:30:00	07.01.2021	17:30:00	904722	0020				00:00:00	07.01.2021	11:30:00

Example Data

## 2.7.27 Data Provider /LMPC/CL\_DP\_RTRC Routing and Recipe

Read standard values

The data provider reads an operation's standard values, their respective units, the base quantity, the base unit of measure, and the number of employees.

For production orders in discrete production (PP), the data is read directly from the operation of the order. For planned orders in discrete production (PP), the data is read from the routing of the order. Changes in routing are displayed immediately in planned orders, whereas the production order shows the routing status from the point in time at which the production order was generated.

For process orders in process industry (PI), the data is read directly from the order operation. For planned orders in process industry (PI), the data is read from the product recipe. Changes to the recipe are reflected the same way as in the PP scenario. If an operation has multiple phases, the standard values for all phases of the operation are totaled. However, you can configure the data provider such that it reads only the values for a single phase instead of the total for all phases.

The data provider fills the following fields of the structure /LMPC/RTRC:

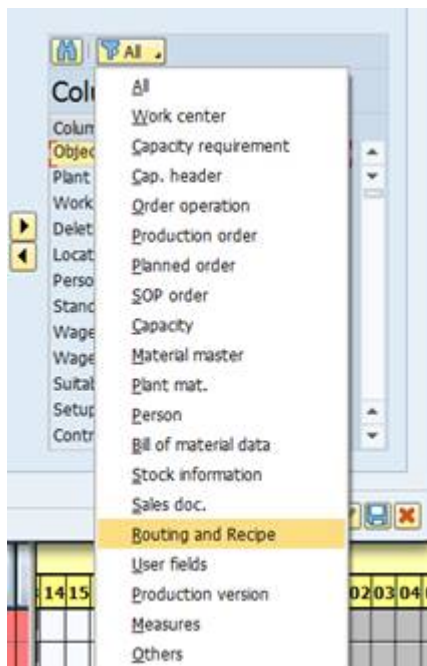
Field Name	Description
VGW01_RR	Standard value 1
VGE01_RR	Unit of standard value 1
VGW02_RR	Standard value 2
VGE02_RR	Unit of standard value 2
VGW03_RR	Standard value 3
VGE03_RR	Unit of standard value 3
VGW04_RR	Standard value 4
VGE04_RR	Unit of standard value 4
VGW05_RR	Standard value 5
VGE05_RR	Unit of standard value 5
VGW06_RR	Standard value 6
VGE06_RR	Unit of standard value 6
BMSCH_RR	Base quantity

Field Name	Description
MEINH_RR	Unit of measure for operation
ANZMA_RR	Number of employees
ZWNOR_RR	Normal queue time
ZEIWN_RR	Unit of the normal queue time
ZWMIN_RR	Minimum queue time
WEIWM_RR	Unit of the minimum queue time
RSTRA_RR	Reduction strategy per operation
RSTUF_RR	Reduction level with which the operation was reduced

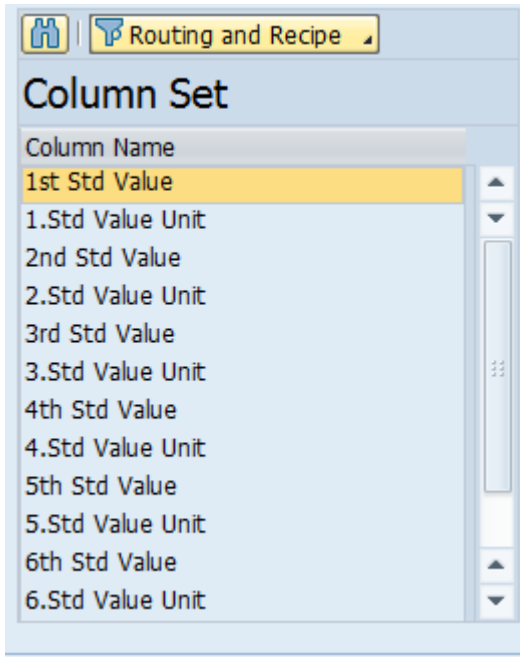
### ! Restriction

The fields ZWNOR\_RR, ZEIWN\_RR, ZWMIN\_RR, WEIWM\_RR, and RSTRA\_RR are only filled for orders in PP. For PP-PI planned or process orders, these fields remain empty. The field RSTUF\_RR is only filled for PP production orders, not for PP planned orders.

The fields can be displayed using the layout settings. In order to find the fields more easily, a layout group "Routing and Recipe" was created.



Group "Routing and Recipe"



Fields of the Group "Routing and Recipe"

Material	Order Number	OpAc	1st StdVal	1...	2nd StdVal	2....	3rd StdVal	3....	4th StdVal	4....	5th StdVal	5....	6th StdVal	6....	Base Quantity	UoM	NoE...
LMPC_FERT_34	60008467	0010	30	MIN	60	MIN	60	MIN	30	MIN					10	PC	2.00
LMPC_FERT_12	60008482	0010	30	MIN	60	MIN	60	MIN	30	MIN					1	PC	0.00
LMPC_HALB_34	3233285	0010	20	MIN	8	MIN	8	MIN	0	MIN					1	PC	0.00
LMPC_HALB_34	3233286	0010	20	MIN	8	MIN	8	MIN	0	MIN					1	PC	0.00
LMPC_HALB_34	3233285	0020	0	MIN	9	MIN	9	MIN	0	MIN					1	PC	0.00
LMPC_FERT_12	60008482	0020	0	MIN	60	MIN	60	MIN							1	PC	0.00
LMPC_HALB_12	3228984	0010	120	MIN	8	MIN	8	MIN							1	PC	0.00

Fields in the ALV Grid

## Related Information

[Data Provider /LMPC/CL\\_DP\\_RTRC Configuration: Routing and Recipe](#)

## 2.7.28 Data Provider /LMPC/CL\_DP\_SD\_DATA Sales Order

Sales Order Data

The data provider CL\_DP\_SD\_DATA provides data for the sales orders that are related to the planned and production orders.

The basis for reading the data is the sales order number and item.

For make-to-order production, the order number and item of the respective sales order are taken directly from the planned or production order. Since this information is stored there.

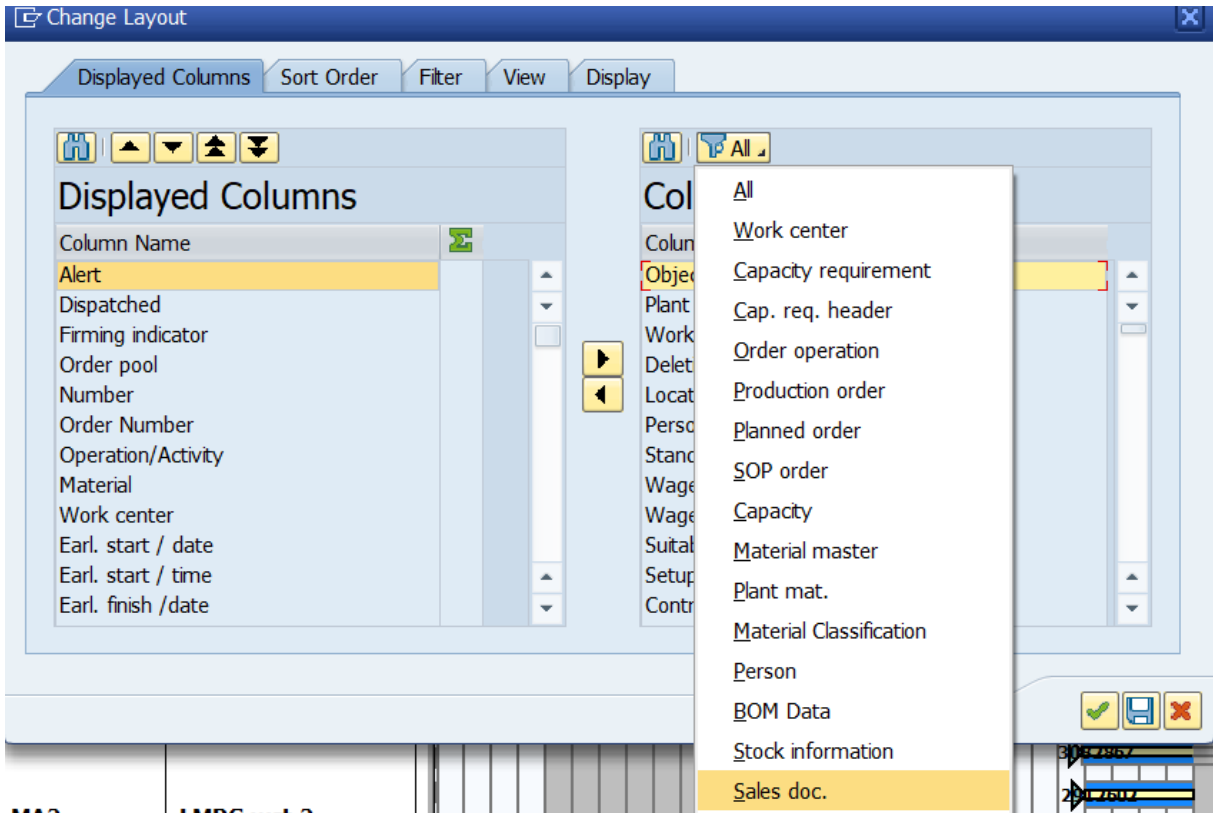
For anonymous make-to-stock production, the result of the data provider for pegged requirements (CL\_DP\_BED and CL\_DP\_BED\_2) is evaluated. The data providers for the pegged requirements determine the assignment of a planned or production order to a sales order, either using a first-in-first-out relationship ([Data Provider /LMPC/CL\\_DP\\_BED LMPC Requirement Date and Order Relations \[page 336\]](#)) or using the data from

transaction MD09 ([Data Provider /LMPC/CL\\_DP\\_BED\\_2 Requirement Date According to MD09 Logic \[page 340\]](#)). You provide the assignment to the sales order in the fields for the first pegged requirement (fields DMD\_DELKZ\_MD and DMD\_EXTRA\_MD). The data provider CL\_DP\_SD\_DATA then determines the order number and item of the sales order from these fields. For details on the fields of the data providers for the pegged requirements, see the corresponding section of the documentation.

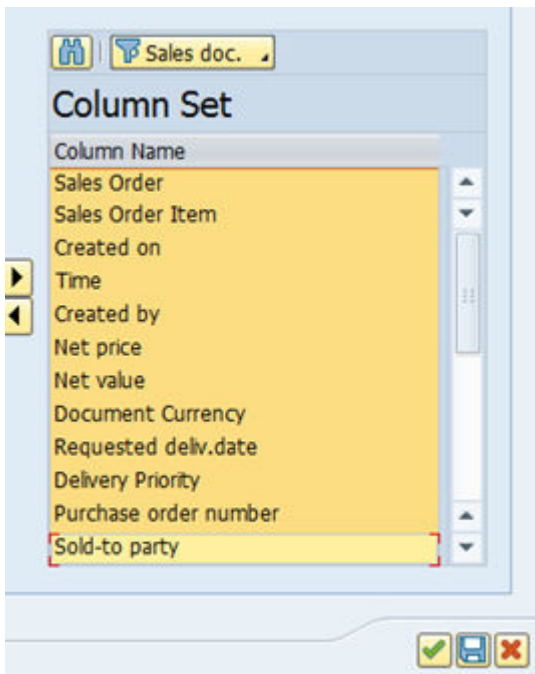
The data provider /LMPC/CL\_DP\_SD\_DATA fills the following fields:

<b>Field Label</b>	<b>Description</b>
KDAUF_SD	Sales order
KDPOS_SD	Sales order item
ERDAT_SD	Creation date of the order item
ERZET_SD	Creation time of order item
ERNAM_SD	User who created the order item
NETPR_SD	Net price
NETWR_SD	Net value of order item in document currency
WAERK_SD	Sales document currency
VDATU_SD	Requested delivery date
LPRIO_SD	Supply priority
BSTKD_SD	Purchase order number of customer
KUNNR_SD	Customer number
KNAME1_SD	Customer name
KVGR1_SD – KVGR5_SD	Customer group1 to 5
KVGRBEZ1_SD – KVGRBEZ5_SD	Customer group description 1 to 5

The fields are located in the layout settings of the ALV Grid in the group "Sales document".



Sales Document Category in the Layout Settings



Columns in the Layout Settings

Item Order	Qty	Unit	Time	Created by	Net price	Net value	Cur.	Resubst. to	Purchase order number	Sub-to party Name	10	Description	10	Description 2	10	Description 3	10	Description 4	10	Description 5
10000	10	25.07.25	13.00	0000000	0.00	0.00	EUR	07.08.20	10000	1000	0.00	0.00								

Columns in the ALV Grid

## Related Information

[Data Provider /LMPC/CL\\_DP\\_BED LMPC Requirement Date and Order Relations \[page 336\]](#)

[Data Provider /LMPC/CL\\_DP\\_BED\\_2 Requirement Date According to MD09 Logic \[page 340\]](#)

## 2.7.29 Data Provider /LMPC/CL\_DP\_STATUS Status Fields

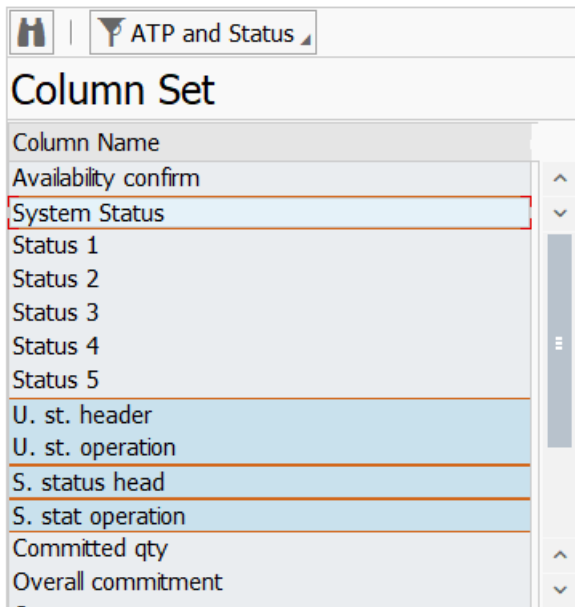
Data on system status and user status

This data provider reads system and user status information from the order header information and the order operations.

The following fields are filled:

Field Name	Description
/LMPC/FLAG_EIGP_CY	Flag "Dispatched"
SSKOX_SU	System status header (formatted)
SSVOX_SU	System status operation (formatted)
ASKOX_SU	User status header (formatted)
ASVOX_SU	User status operation (formatted)
VSTTXT_AV	System status

The fields are located in the layout settings of the ALV Grid in the groups ATP and Status.



Layout Settings

Dispac	S. status head	S. stat operation	U. st. header	U. st. operation	System Status
X	CRTD MSPT PR	CRTD DSPT	MAT CAP	FIX Fehl	CRTD DSPT
X	CRTD MSPT PR	CRTD DSPT	MAT CAP	FIX Fehl	CRTD DSPT

Columns in the ALV Grid

## 2.7.30 Data Provider /LMPC/CL\_DP\_STD Basic Data of the Capacity Planning Table

Basic data for the ALV Grid

The data provider /LMPC/CL\_DP\_STD reads the basic data for the ALV Grid of the SAP LMPC HJPT detailed scheduling planning board. The data comes from the selection of the graphical planning table for capacity leveling in the standard SAP system of the component PP-CRP-LVL.

The fields of the following layout groups are filled by this data provider:

- Work Center
- Capacity Requirements
- Capacity Requirements Header
- Order Operation
- Production Order
- Planned Order
- Material Master
- Capacity
- Person

The fields of the capacity requirements are particularly important for planning. They contain the information on the start times and the operation quantities and are therefore the central data for the operations. On the basis of this data, the situation of the operations is determined in the graphic and scheduling is performed.

The fields of these groups that are relevant for capacity planning are shown in the example layout for the ALV Grid that is provided with the LMPC delivery.

### **i Note**

Since these fields are standard SAP data for capacity planning, this data is not documented in detail here. If you have any questions about the use of the individual fields, please contact your LMPC consultant or an SAP PP consultant.

### **! Restriction**

Not all of the fields in these groups will be filled. Only those fields for which the capacity planning table provides values. Empty fields are therefore not an error, but are only due to the software architecture of the standard SAP system.

## **2.7.31 Data Provider /LMPC/CL\_DP\_STOCK Stock Information**

### Material Stock

The data provider reads the unrestricted-use stock, the stock in quality inspection, and the total plant stock at the time at which the LMPC HJPT planning table is called, in the form in which it is displayed in transaction MD04. The information can be read for the order material and for the materials in the BOM that are displayed in the HJPT planning table.

If a batch has been assigned to the respective order or the respective component contains a batch assignment, the fields 'unrestricted-use stock', 'restricted-use stock', and 'stock in quality inspection' are read from the database table for batch stocks (MCHB) instead of from transaction MD04 and thus only for the assigned batch. The plant stock inventory remains unaffected.

The determination of batch stocks can be deactivated in Customizing. As can the reading of stocks for the individual fields (see description of the parameters in the LMPC Configuration Guide).

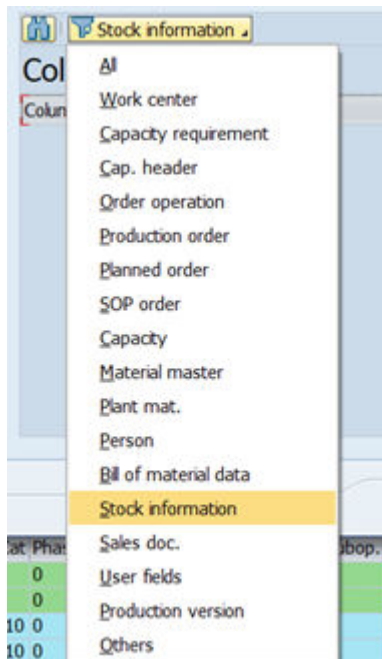
The data provider fills the following fields of the structure /LMPC/STOCK:

<b>Field Name</b>	<b>Description</b>
LABSTAM_ST	Valuated, unrestricted-use stock for order material)
INSMEAM_ST	Stock in quality inspection order material
EINMEAM_ST	Restricted-use stock order material
GSBSTBM_ST	Total plant stock order material
LABSTBM1_ST	Valuated unrestricted-use stock for BOM component 1
INSMEBM1_ST	Stock in quality inspection BOM component 1
EINMEBM1_ST	Restricted-use stock component 1
GSBSTBM1_ST	Total plant stock component 1
LABSTBM2_ST	Valuated unrestricted-use stock for BOM component 2

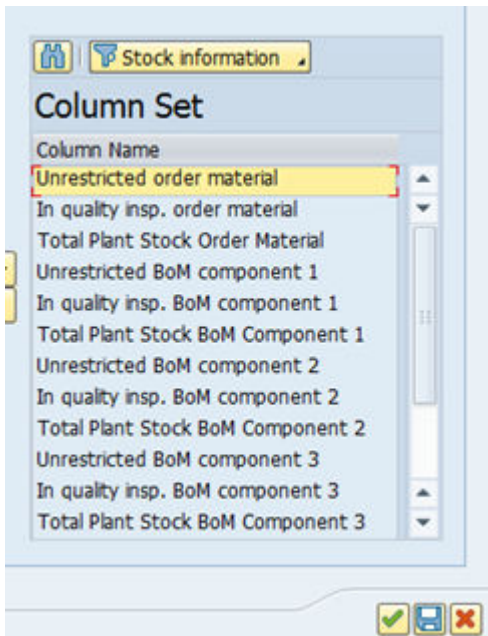


Field Name	Description
INSMEBM2_ST	Stock in quality inspection BOM component 2
EINMEBM2_ST	Restricted-use stock component 2
GSBSTBM2_ST	Total plant stock component 2
LABSTBM3_ST	Valuated unrestricted-use stock for BOM component 3
INSMEBM3_ST	Stock in quality inspection BOM component 3
EINMEBM3_ST	Restricted-use stock component 3
GSBSTBM3_ST	Total plant stock component 3
LABSTBM4_ST	Valuated unrestricted-use stock for BOM component 4
INSMEBM4_ST	Stock in quality inspection BOM component 4
EINMEBM4_ST	Restricted-use stock component 4
GSBSTBM4_ST	Total plant stock component 4
LABSTBM5_ST	Valuated unrestricted-use stock for BOM component 5
INSMEBM5_ST	Stock in quality inspection BOM component 5
EINMEBM5_ST	Restricted-use stock component 5
GSBSTBM5_ST	Total plant stock component 5

The fields can be displayed using the layout settings. In order to find the fields more easily, a group "Stock information" was created.



Group Stock Information



Fields for Stock Information

☒	In qual. insp. OM	Unrestricted BC1	In qual. insp. BC1	Unrestricted BC2	In qual. insp. BC2	Unrestricted BC3	In qual. insp. BC3	Unrestricted BC4	In qual. insp. BC4
	2.000	12.000	7.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	2.000	12.000	7.000	0.000	0.000	0.000	0.000	0.000	0.000

Stock Information in the HJPT ALV Grid

→ Tip

The units of measure for the individual items can be displayed using the BOM data or the order material data.

## Related Information

[Data Provider /LMPC/CL\\_DP\\_STOCK Configuration: Material Stock](#)

## 2.7.32 Data Provider /LMPC/CL\_DP\_USER\_001 Ranges of Coverage and Exception Messages

Data for rescheduling date, range of coverage, exception messages

The data provider provides the rescheduling date, the ranges of coverage, and exception messages from transaction MD04.

The data has different reference points. Some data refers to the material in the MRP area as a whole, other data is dependent on the respective order or operation.

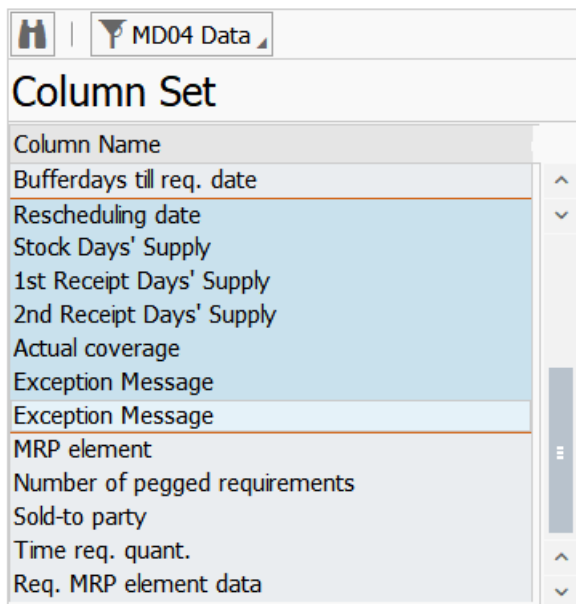
The data provider fills the following fields in the ALV Grid of the LMPC HJPT planning table:

Technical Field Name	Description
AUSKT_MD	Number of exception message (dependent on order)
AUSLT_MD	Text of exception message (dependent on order)
BERW1_MD	Stock days' supply (dependent on the material in the MRP area)
BERW2_MD	1st receipt days' supply (dependent on the material in the MRP area)
BERW4_MD	2nd receipt days' supply (dependent on the material in the MRP area)
IREIW_MD	Actual range of coverage (dependent on operation)
UMDAT_MD	Rescheduling date (dependent on order)

### Note

Special feature of actual range of coverage: The actual range of coverage is read from the period totals of the MDO4 data. The period totals for the days are evaluated. The actual range of coverage changes from period to period. Only one actual range of coverage is displayed for each operation. The following rule is used to read the actual range of coverage: The latest start date is read from the respective operation. The system reads the actual range of coverage of the first period that is earlier than the latest start date. Therefore, the system reads the actual range of coverage that is as close to the start date of the operation as possible.

The fields are located in the layout settings of the HJPT planning table, in the group of the MDO4 data.



Layout Settings

Resch.date	Stock DS	1st R...	2nd ...	Actl cov.	Exception	Exception Message
<u>28.11.2020</u>	45.1-	45.1-	45.1-	25.0-	10	Bring process forward
<u>18.01.2021</u>	45.1-	45.1-	45.1-	25.0-	15	Postpone process
<u>10.02.2021</u>	999.9-	39.0-	39.0-	2.0	15	Postpone process
<u>04.01.2021</u>	1.9-	1.9-	1.9-	6.0-	10	Bring process forward
<u>10.11.2020</u>	54.0-	54.0-	54.0-	57.0-	10	Bring process forward
<u>05.01.2021</u>	1.9-	1.9-	1.9-	1.0-	10	Bring process forward
	33.2-	26.7-	26.7-	999.9-		
<u>28.11.2020</u>	45.1-	45.1-	45.1-	25.0-	10	Bring process forward
<u>28.11.2020</u>	45.1-	45.1-	45.1-	25.0-	10	Bring process forward

Fields in the ALV Grid

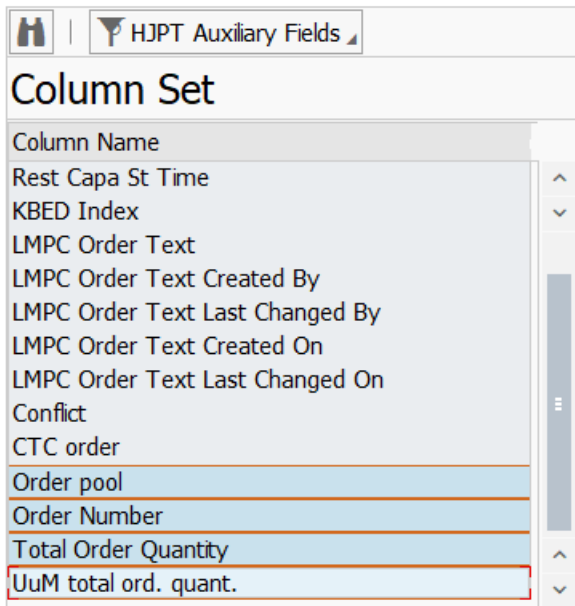
## 2.7.33 Data Provider /LMPC/CL\_DP\_USER\_002 Technical Data

Various Technical Fields of the LMPC Planning Table

The data provider /LMPC/CL\_DP\_USER\_002 fills the following fields in the ALV Grid of the LMPC HJPT detailed scheduling planning board:

Technical Field Name	Description
/LMPC/DELNR_CY	Order Number
/LMPC/VORNR_CY	Operation Number
/LMPC/POOL_GUID_CY	Order Pool
GAMNG_AX	Total Order Quantity
GAMEIN_AX	UoM total ord. quant.
/LMPC/HIER_LEAF_CY	Technical field Work Center is leaf node in hierarchy
GRUPPE_CY	Technical field for identifying the data record
KOMBI_CY	Technical field for identifying the data record
/LMPC/INDEX_CY	Technical field for identifying the data record

Of these fields, the technical fields are not visible. The visible fields are in the layout settings in the group of HJPT help fields:



Layout Settings

Order Number	OpAc	Order pool	Order Quantity	UoM
<u>3127518</u>	0010		90	PC
<u>3192522</u>	0010		77	PC
<u>3127519</u>	0010		9	PC
<u>3127519</u>	0020		9	PC
<u>3192522</u>	0020		77	PC

Fields in the ALV Grid

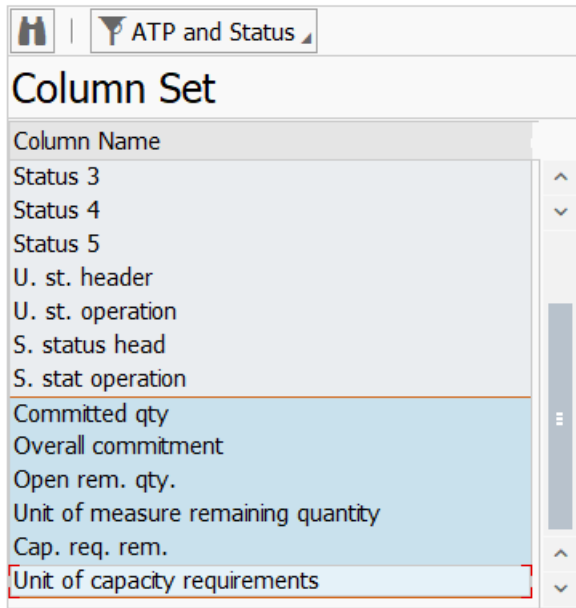
## 2.7.34 Data Provider /LMPC/CL\_DP\_USER\_003 Quantities

ATP Fields

The data provider /LMPC/CL\_DP\_USER\_003 fills the following fields in the ALV Grid of the HJPT planning table:

Technical Field Name	Description
KBREST_SU	Remaining capacity requirement
KEINH_SU	Unit of measure for the output of capacity offer and capacity requirement
OMENG_SU	Remaining quantity (target confirmation quantity)
OMEIN_SU	Unit of measure remaining quantity
VFMNG_SU	Confirmed quantity for order after ATP check components
GSBTR_SU	Total commitment date

The fields are located in the layout settings of the HJPT planning table, in the groups ATP and Status.



Layout Settings

Cap. req. rem.	Unit	Open Yield	Uni...	Committed qty	Ov.commit.
4.33	H	4	PC	0	05.12.2018
4.33	H	4	PC	0	05.12.2018

Fields in the ALV Grid

## 2.7.35 Data Provider /LMPC/CL\_DP\_USER\_101 Remaining Capacity Requirement

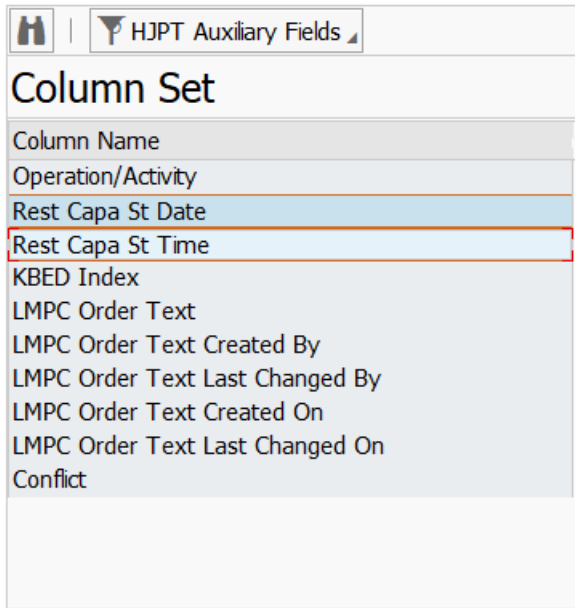
Data on Remaining Capacity Requirement

The data provider /LMPC/CL\_DP\_USER\_101 fills the following fields in the ALV Grid of the HJPT planning table:

Technical Field Name	Description
/LMPC/KBRESTD_CY	Start date for remaining capacity requirement bar
/LMPC/KBRESTZ_CY	Start time for remaining capacity requirement bar

These fields are required if you use KANBAN for planning.

The fields are located in the layout settings of the HJPT planning table, in the group of HJPT help fields.



Layout Settings

Rest Capa St D	Rest Capa St T	C
22.11.2018	11:47:27	2
22.11.2018	11:47:27	2
27.11.2018	14:30:00	7

Fields in the ALV Grid

These fields are the basis for displaying the bars of the remaining capacity in the HJPT planning table graphic.

### ! Restriction

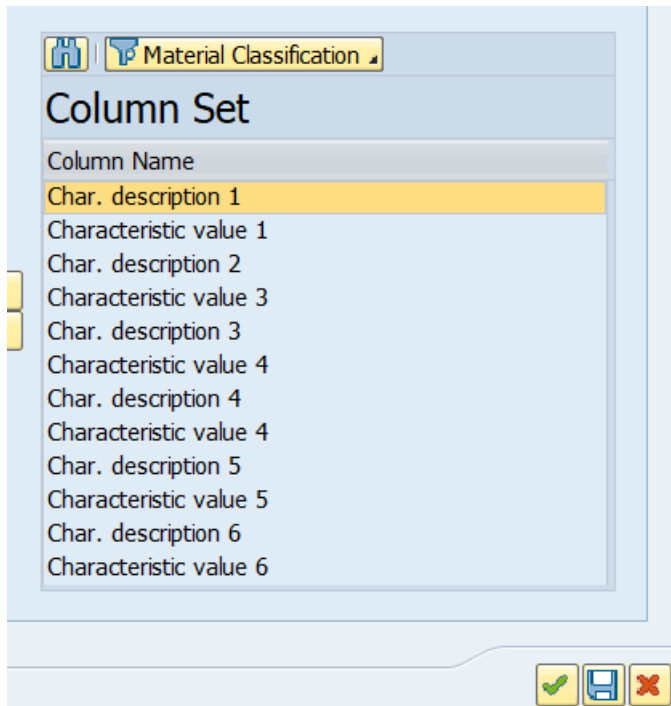
Remaining capacity bars are only displayed for PP planned orders, PP production orders, and PI process orders. For PI planned orders, the data is not calculated.

## 2.7.36 Data Provider /LMPC/CL\_DP\_USER\_102 Classification of Material Master

Read characteristic values from material classifications

The data provider /LMPC/CL\_DP\_USER\_102 reads up to 10 characteristic names and characteristic values from the material classification for material class 001. Data can be read for the header material of an order, as well as for the materials of the BOMs.

The fields are in the layout group Material Classification.



Fields in the Material Classification Layout Group

Customizing settings can be used to rename the fields. For details on this, see the LMPC Configuration Guide. [Setting HJPT Material Classification](#)

## Example

Material classification



**Classification**

Object

Material: LMPC\_HALB\_12      LMPC Halb 12  
 Class Type: 001      Material class

Assignments

Class	Description	Sta...	S..	Icon	Itm
TCL800		<input type="checkbox"/>	1	✓	10
260	Emulsifiers	<input type="checkbox"/>	1	✓	20
LMPC_CL1		<input type="checkbox"/>	1	✓	80

Entry 1 / 3

Values for Class TCL800 - Object LMPC\_HALB\_12

General

Characteristic Description	Value
Model (PLM130)	TOPSPEED-500
Category (PLM130)	SUPERSPORT
Engine performance (PLM130)	123 KW
Density	4.5000E+01
Boiling point	2.3000E+01
AIR20	234.00 EUR
Sum of Maintenance Costs	444.00 EUR
RAM Memory Size	8
Colour	Black

Inconsistent

Example of Material Class 001

The data is displayed in 12 fields in the ALV Grid of the HJPT planning table: In Customizing, 6 of these characteristics have been selected to display them in the ALV Grid of the HJPT planning table.

For explanations on how to create Customizing, see the LMPC Configuration Guide.

Material	Description 1	Char. value 1	Description 2	Char. value 3	Description 3	Char. value 4	Description 4	Char. value 4	Description 5	Char. value 5	Description 6	Char. value 6
LMPC_HALB_12	Engine perform.	1.230000000000	Sum of Mainten	444.00 EUR	Concentration	0.000000000000	Colour	Black	AIR20	234.00 EUR	Category (PLM1_	SUPERSPORT
LMPC_HALB_12	Engine perform.	1.230000000000	Sum of Mainten	444.00 EUR	Concentration	0.000000000000	Colour	Black	AIR20	234.00 EUR	Category (PLM1_	SUPERSPORT
LMPC_HALB_34												

Example of Characteristic Value Display in ALV Grid

### ! Restriction

- The development has been made for material class 001. Characteristics and characteristic values can be read for this material class only.
- The system can only read the classifications for the BOM materials that are displayed in the fields for the BOM data in the HJPT planning table.

- The logic was developed for single-value characteristics. Multiple-value characteristics are not supported.

## Related Information

[Setting HJPT Material Classification](#)

### 2.7.37 Data Provider /LMPC/CL\_DP\_USER\_103 Production Resource/Tool

Data for production resources/tools

The data provider /LMPC/CL\_DP\_USER\_103 reads data for production resources/tools.

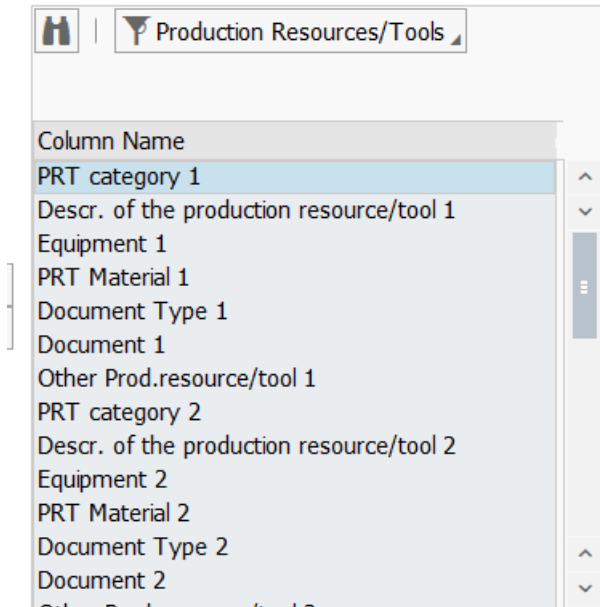
The first five production resources/tools found for an operation are always displayed.

For each production resource/tool there are the following fields:

- Type of production resource/tool
- Description of production resource/tool
- Equipment number
- Material number
- Document type
- Document number
- Number of other production resource/tool

The data is read from the routing for the respective material of the order. The data is determined for planned orders and production or process orders. They are read from the routing that is stored in the data for the capacity requirements in the respective order.

The fields are in the layout group called Production Resources/Tools.



Layout Settings

Order Number	OpAc	Ca Production tool 1	Ca Production tool 2	Ca Production tool 3	Cat	Material
3230221	0010	E LMPC Equipment 01	E LMPC Equipment 02	E LMPC Equipment 03	001	LMPC_FERT_34
3230225	0010	E LMPC Equipment 01	E LMPC Equipment 02	E LMPC Equipment 03	001	LMPC_FERT_34
3230226	0010	E LMPC Equipment 01	E LMPC Equipment 02	E LMPC Equipment 03	001	LMPC_FERT_34
3230227	0010	E LMPC Equipment 01	E LMPC Equipment 02	E LMPC Equipment 03	001	LMPC_FERT_34
3230228	0010	E LMPC Equipment 01	E LMPC Equipment 02	E LMPC Equipment 03	001	LMPC_FERT_34

Example Data for Production Resources/Tools

Settings in Customizing can be used to restrict the display of production resources/tools. For more information, see the relevant section in the LMPC Configuration Guide.

## Related Information

[Settings for HJPT Production Resources/Tools](#)

### 2.7.38 Data Provider /LMPC/CL\_DP\_USER\_104 Buffer Days for Requirement Date

Number of days for requirement date

The data provider fills a field in the ALV Grid of the LMPC HJPT planning table.

Technical Field Name	Description
RQDBFF_MD	Time buffer. Time in days between planning availability and requirement date.

The date of availability for MRP is calculated from the basic end date of an order to which the processing time for goods receipt in days (WEBAZ) is added. The data for the MRP availability is calculated in the data provider /LMPC/CL\_DP\_BED.

The time buffer is the number of days (in working days from the factory calendar) between the date of availability for MRP from the warehouse and the requirement date. A negative number indicates that there is still time between the availability date and the requirement date. Zero means that the order is available on the requirement date. A positive number indicates that the availability date is the specified number of days after the requirement date.

### → Remember

If there is no requirement date for an order, the number of buffer days is set to -999. The requirement date is calculated using the data provider /LMPC/CL\_DP\_BED. This data provider must be active. [Data Provider /LMPC/CL\\_DP\\_BED LMPC Requirement Date and Order Relations \[page 336\]](#)

Examples: If the day of the MRP availability is the same as the requirement date, the time buffer is zero. If the day of the MRP availability is one day before the requirement date, the time buffer is -1. If the day of the MRP availability is one day after the requirement date, the time buffer is +1.

Due to different customer requirements, there are two logics for calculating the buffer days.

- Logic 1 calculates the number of buffer days over the working days according to the factory calendar for the plant. This is the standard logic in the LMPC delivery.
- Logic 2 calculates the number of buffer days using the available capacity of the scheduling-relevant capacity at the work center of the respective operation.

Logic 1 and logic 2 return identical results if a capacity offer is available at the respective work center for each workday of the factory calendar.

### i Note

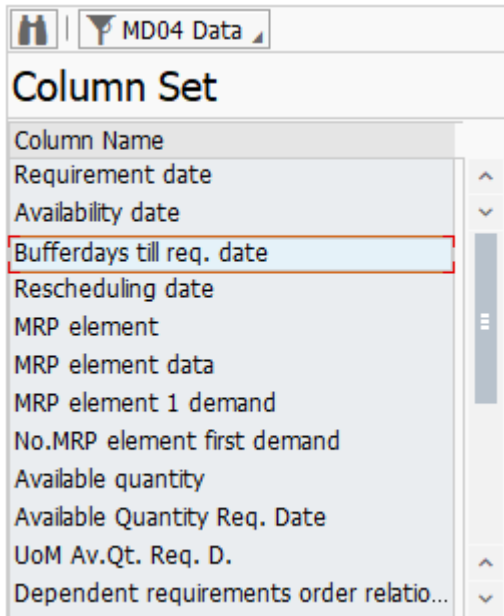
Logic 2 is a special logic, with certain uncertainties.

The module for determining the capacity offer for the work center does not return any data for the past. There is no capacity offer in the past because the time has already passed. Therefore, the calculation can only be performed for days as of the current date.

In logic 2, each working day on which capacity is available is counted. Shifts are not allocated to the working days. For example, if a night shift starts on a Sunday before midnight and the Sunday has no other capacity, this day is still counted because there is a capacity offer on this day.

The buffer days are calculated between the MRP availability and the requirement date. These two values are the same for all operations of an order. However, since the number of buffer days is calculated depending on the capacity offer at the respective work center, the number of buffer days in an order can be different for each operation. This occurs if operations of an order are produced in different capacities that have a different capacity offer. This uncertainty must be taken into account by the user. Logic 2 can be activated using a parameter in the data provider. [Data Provider /LMPC/CL\\_DP\\_USER\\_104 Configuration: Buffer Days for Requirement Date](#)

The field is in the layout settings of the LMPC planning table, in the group of MD04 data.



Layout Settings

→ Tip

Together with the field for the alerts, you can use this data in the HJPT planning table to get a quick overview of whether orders are produced on time or late. You can see whether orders have to be brought forward or whether there is still enough time and an order can be produced later.

Alert	Requirement date	Avail.date	Bufferdays	Disp...	F...
○○○	02.06.2020	16.03.2020	51-	X	X
●○○	05.03.2020	20.03.2020	11	X	X
●○○	05.03.2020	20.03.2020	11	X	X
●○○	26.02.2020	20.03.2020	17	X	
○○○	02.06.2020	16.03.2020	51-		X

Overview of Alert, Requirement Date, and Buffer Days

## Related Information

[Data Provider /LMPC/CL\\_DP\\_BED LMPC Requirement Date and Order Relations \[page 336\]](#)

## 2.7.39 Data Provider /LMPC/CL\_DP\_USER\_STAT Variable Status Fields

Freely definable status fields

In contrast to the data provider /LMPC/CL\_DP\_STATUS, the data provider /LMPC/ CL\_DP\_USER\_STAT enables the variable filling of 5 status fields.

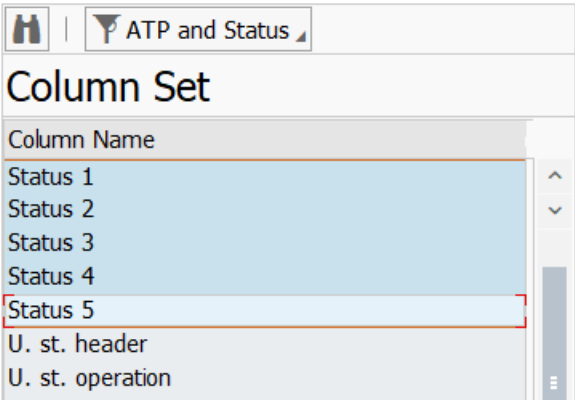
You can fill the fields with order and user statuses for production/process orders. You can use Customizing in transaction /LMPC/CUSTADD to define which status information is displayed in which fields. The LMPC delivery provides examples for Customizing.

The 5 fields are set as examples as follows:

Field Name	Source	Field Label	System Status	User Status
FA_STATUS1_SU	Order Header	Material Status	MMAT missing Material availability, MACM material com- mitted, NMVP material availability not checked.	
FA_STATUS2_SU	Order Header	Order Status	CRTD created, REL re- leased, PREL partially released.	
FA_STATUS3_SU	Operation	Partial confirmation	PCNF partially con- firmed.	
FA_STATUS4_SU	Order Header	User Status Order Header		LMPC FIX firmed, REL released MISS missing parts, IA in process, RUST set up.
FA_STATUS5_SU	Order Header	Capacity Check	MSCP missing ca- pacity, CPCK capacity checked, MSCP miss- ing capacity, CANC ca- pacity avail.not checked	

The fields can be found in the ATP and Status groups: They are assigned sequential numbers. The column labels are not determined using transaction /LMPC/FLD as usual, but rather using transaction /LMPC/CUSTADD.

To make the status fields visible in the HJPT planning table, the following columns are selected:



Layout Settings

Example: Fields in the ALV Grid

Material Status	Order Status	PRC	User Status Order Header	Capacity Check
MSPT	CRTD			
MSPT	CRTD			

Fields in the ALV Grid

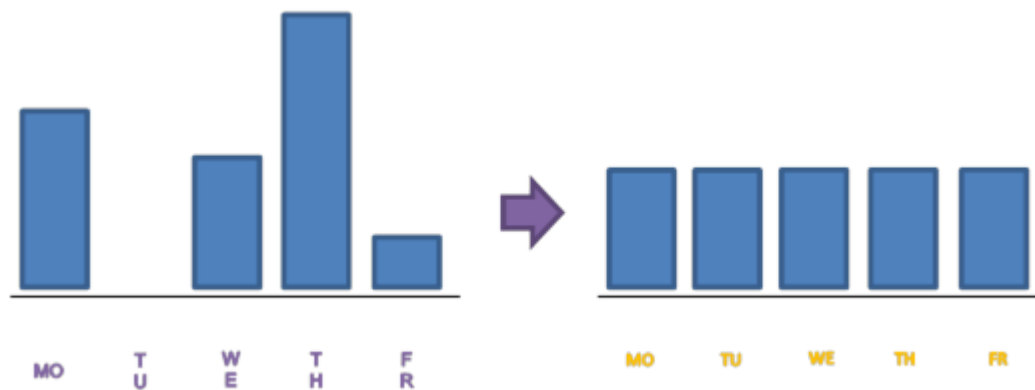
### Related Information

[Transactions /LMPC/CUSTADD, /LMPC/CUSTADDS Status Fields, Material Classification, Production Resource/Tool](#)

## 3 LMPC Leveling Function

LMPC smoothing of production

The main purpose of the leveling function is the **smoothing of production quantities per material within a leveling period** (this process is referred to as leveling).



Smoothing of Production Quantities

The relevant production quantities are distributed evenly over the leveling period. Depending on the selection of data and functions, the leveling function also provides supporting functionalities for leveling, which are not directly part of the actual leveling:

- MRP run per production line
- Deletion of firm planned orders

The leveling function smooths the production quantities that result from the requirements over the chosen period. The actual logic for performing leveling is contained in an interchangeable class, meaning that the logic can be changed or replaced. The function is described below, using the function module delivered as an example.

### ! Restriction

- The leveling function can only create planned orders.
- A valid production version must exist for each of the materials.

The leveling function can be called as a standalone transaction or executed as a background job. It is also available as an action code in the LMPC planning table (S\_NIVEL).

The following steps are performed when the transaction is executed, whereby processing is in line with the data selection. All steps are optional and you can select and deselect them on the selection screen. Steps 3 and 4 should always be executed together. One step has no effect without the other step.

1. **Deletion of Firm Planned Orders for the Plant Material.** Irrespective of the leveling period on the selection screen. Only the firm planned orders are deleted.
2. **Single-Item Planning, Single-Level for Plant Material (MRP Run).** Not restricted to the leveling period
3. **Execution of Leveling:** Generation of new schedule line.



4. **Creation of New Planned Orders** according to the schedule line from step 3. Planned orders are created as firm.
5. **Single-Item Planning, Multi-Level for Plant Material (MRP Run)**. Not restricted to the leveling period.

→ Remember

LMPC leveling provides a certain basic functionality for smoothing production.

Customers can make enhancements to the logic by creating their own leveling classes. [Enhancement Options for HJPT Leveling](#)

No further development is taking place for LMPC leveling. The functionality of LMPC leveling has been moved to the separate consulting solution “lean rough cut capacity planning”.

[Lean Rough Cut Capacity Planning](#)

The consulting solution LRP offers significantly greater functional scope than LMPC leveling. Further developments will continue to be made for LRP.

## Related Information

[Transaction /LMPC/NIVEL\\_CFG LMPC Set Leveling](#)

## 3.1 Transaction /LMPC/NIVELLIERUNG LMPC Leveling of Planned Orders

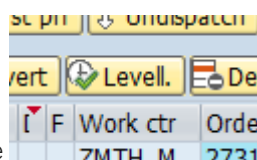
LMPC leveling

### ⚠ Caution

Note that you may need to configure the Leveling function before using it for the first time.

Leveling can be called in two ways:

- Via transaction /LMPC/NIVELLIERUNG





- Via the action code `7MTH M 2731` (S\_NIVEL) directly from the LMPC HJPT planning table

Calling using the transaction is explained in the following steps:


1. Call transaction /LMPC/NIVELLIERUNG.
2. You maintain your data on the following selection screen. The entries in the MRP specifications area correspond to the familiar fields from MRP planning (transaction MD01 or MD02).

**LEAN - Levelling of planned orders**




Plant  

**Material selection by manual selection**

Material  to  

**Material selection by production version**


Production Line  to  

**Material selection by MRP controller/production supervisor**

MRP controller


Prodn Supervisor

**Material selection by task list type**

Work center  to  


Task List Type  to


**Material selection by sales document**

Sales Document  to  

**Material selection by timetable usage**

Determine timetable automat.

Work Center  to  

Timetable  to  

Leveling Selection Screen

Planauftragsselektion und -erstellung		
Zeitraum	17.04.2020	bis 15.05.2020
Prod./Ecktermine	Eckstart	
Terminierungsrichtung	Automatisch	
Dispbereich		
Einzelschritte		
<input checked="" type="checkbox"/> 1. Fix. Planaufträge löschen <input checked="" type="checkbox"/> 2. MRP-Lauf einstufig <input checked="" type="checkbox"/> 3. Nivellierung <input checked="" type="checkbox"/> 4. Planaufträge erstellen <input checked="" type="checkbox"/> 5. MRP-Lauf <input type="radio"/> mehrstufig <input type="radio"/> einstufig		
MRP-Vorgaben		
Bestellanf. erstellen	1	
Lieferplaneinteilungen	2	
Dispoliste erstellen	3	
Planungsmodus	4	
Terminierung	2	
<input type="checkbox"/> Unveränderte Komp. planen		
Optimierung für Jobeinplanung		
<input checked="" type="checkbox"/> Ohne Bestätigungs-Screen <input checked="" type="checkbox"/> Protokoll anzeigen		
Konfiguration		
<input type="button" value="Aufrufen"/>		

Leveling Selection Screen

The selection screen includes the following fields:

Field Name	Value	Description
<b>General</b>		
Plant		Executing plant
<b>Material selection by manual selection</b>		

Material	Material number, single value, or from/to range
<b>Material selection by production version</b>	
Production Line	Selection by production line, entered in the production version of the corresponding material numbers
<b>Material selection by MRP controller / production supervisor</b>	
MRP Controller	Selection by MRP controller
Production Supervisor	Selection by production supervisor
<b>Material selection by routing type</b>	
Work Center	Work center for which planning is to be performed, single value, or from/to range
Routing type	Selection by routing type
<b>Material selection by sales document</b>	
Sales Document	Sales order number, single value, or from/to range
<b>Material selection by timetable usage</b>	
Determine Timetable Automatically	Checkbox: Timetable and materials are determined automatically by means of the work center entered (next field). If this option is used, it is not mandatory to enter a timetable.
Work Center	Work center for which the timetable is to be determined. Required field if you have activated automatic timetable selection.
Timetable	Timetable to be used. Ignored if used together with "Determine Timetable Automatically".
<b>Selection and generation of planned orders</b>	
Period	Enter the period for data selection and leveling (leveling horizon)

Prod./Basic Dates

Planned orders are selected in the period by means of one of the following criteria:

- Basic start date
- Basic finish date
- Scheduled start (production) if available; otherwise basic start date
- Scheduled finish (production) if available; otherwise basic finish date

Note: This setting is ignored by the sample leveling function *Level Light*. *Level Light* reads using the basic start dates only.

---

Scheduling Direction		Scheduling indicator for generation of planned orders (automatic / forwards / backwards)
MRP Area		Limits leveling to a specific MRP area (if supported by the leveling function used).
<b>Single steps</b>		
Single Steps		Indicators for the single steps that are to be executed during leveling  1. Delete firm planned orders  2. Single-level MRP run  3. Leveling (indicator set)  4. Create planned orders (indicator set)  5. MRP multilevel
<b>MRP settings</b>		
Create MRP List	1	Create MRP list (in the same way as in standard requirements planning)
Create Purchase Requisition	2	Create purchase requisition (in the same way as in standard requirements planning)
Scheduling Agreement Schedule Lines	3	Create scheduling agreement schedule lines (in the same way as in standard requirements planning)
Planning Mode	1	Planning mode (in the same way as in standard requirements planning)

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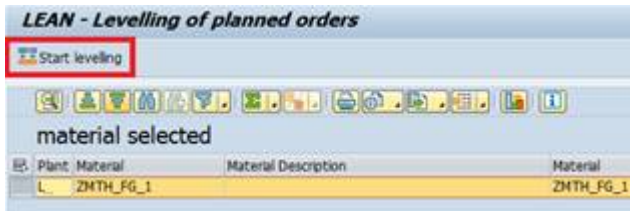
**Optimization for job scheduling**

Without Confirmation Screen	Set this indicator if the transaction is to be scheduled in the background job.
Display Log	If activated, the log is displayed after the leveling process is complete.

**Configuration**

Call <i>Configuration</i> button	Branch to the configuration transaction for leveling.
----------------------------------	---

3. Enter either a material, a sales document number, or a work center/timetable.
4. As a minimum, select the checkbox for step 3 (Leveling) and 4 (Create Planned Orders).
5. Choose *Execute*.
6. A list of the materials selected is displayed on the following screen. Choose the "Start levelling" button to perform leveling.



Start Leveling

7. During subsequent leveling, the order quantities are leveled within the selected period of the basic start dates, this is done according to the leveling logic configured under "Configuration". With the leveled quantity, planned orders are then generated as requirement coverage elements for each working day. At the same time, these planned orders are fixed, to prevent them being changed by a standard MRP run.
8. After leveling is complete, the system displays the log that contains any errors.
9. You can now evaluate the requirement quantities and planning quantities in the stock/requirements list.

A.	Date	MRP ...	MRP element data	Reschedul...	E.. Receipt/Reqmt	Available Qty	Pr...	St...
	15.03.2018	PIOrd.	0002732770/Stock*		22	176	ZMF2	L001
	16.03.2018	PIOrd.	0002732771/Stock*		22	154	ZMF2	L001
	19.03.2018	PIOrd.	0002732772/Stock*		22	132	ZMF2	L001
	20.03.2018	PIOrd.	0002732773/Stock*		22	110	ZMF2	L001
	21.03.2018	PIOrd.	0002732774/Stock*		22	88	ZMF2	L001
	22.03.2018	PIOrd.	0002732775/Stock*		22	66	ZMF2	L001
	23.03.2018	PIOrd.	0002732776/Stock*		22	44	ZMF2	L001
	26.03.2018	PIOrd.	0002732777/Stock*		22	22	ZMF2	L001
	27.03.2018	PIOrd.	0002732778/Stock*		22	0	ZMF2	L001

MD04 Evaluation

During leveling, the requirement quantities for the period were added together and averaged per day of the basic start date period, and requirement coverage elements were generated accordingly, such that at the end of the leveling period, the requirement quantities matched the requirement coverage element quantities.

### **i** Note

- If you execute step 3 (leveling), you must also execute step 4 (creation of planned orders), since the leveling result is otherwise lost and only planned orders are deleted.
- If you do not execute step 3 (leveling), do not activate step 4. Step 3 and 4 are always used together.
- If you execute both step 1 (delete firm planned orders) and step 3 (leveling), also execute step 2 (single-level MRP run) so that after the firm planned orders have been deleted, new planned orders are created for leveling.

### **⚠** Caution

In the default class (*Level Light*), averaging is performed using the dates and quantities of the default requirement proposals (that is, the planned orders produced in the first single-level MRP run). If the newly generated orders cannot be produced within a day due to the requirement quantities, or additional buffer times such as planned delivery times or goods receipt times are maintained, the requirement dates no longer correspond to the basic start dates. If, due to backward scheduling, the basic start dates are now before the period selected for leveling, the leveling function does not capture these quantities.

## 3.2 Deletion of Firm Planned Orders

Delete firm planned orders

### Use

If you execute the leveling function again to optimize your results after requirement quantities have been adjusted and you want to choose a different selection period, you may need to delete the firm planned orders created during the previous leveling. This function is primarily required for repeated tests.

### → Remember

All planned orders are deleted based on your selection. There is no selection period. Unscheduled, firm, and dispatched planned orders are all deleted.

### Execution

1. Call transaction /LMPC/NIVELLIERUNG.
2. You maintain your data on the following selection screen. The entries in the MRP specifications area correspond to the familiar fields from MRP planning (transaction MD01 or MD02).
3. Set the "Delete firm pl. orders" indicator (step 1) and, if applicable, the "MRP multi-level" indicator (step 5).
4. Choose "Execute".
5. A list of the materials selected is displayed on the following screen. Now choose the "Start Leveling" button to delete the firm planned orders and execute a new MRP run.
6. The evaluation of the stock/requirements list now shows the result of a standard planning run, and the firm planned orders created during leveling have been deleted.

**Stock/Requirements List as of 17:33 hrs**

Show Overview Tree

Material: LMPC\_FERT\_03 LMPC Fert 03  
 MRP Area: 1000 Production Plant: BP01  
 Plant: 1000 MRP Type: PD Material Type: FERT Unit: PC

Individual List Product Group Cross-Plant View

A. Date	MRP ...	MRP element data	Reschedul...	E.. Receipt/Reqmt	Available Qty	Pr...
27.03.2017	Stock			96		0
27.03.2017	SafeSt	Safety Stock			100-	100-
29.03.2017	IndReq	VSF			10-	110-
05.04.2017	PldOrd	0002743161/STCK	27.03.2017	30	30	80-0001
05.04.2017	PldOrd	0002743162/STCK	27.03.2017	30	30	50-0001
05.04.2017	PldOrd	0002743163/STCK	27.03.2017	30	30	20-0001
05.04.2017	PldOrd	0002743164/STCK	27.03.2017	30	30	10 0001
05.04.2017	PldOrd	0002743165/STCK			30	40 0001
05.04.2017	IndReq	VSF			23-	17
20.04.2017	PldOrd	0002743166/STCK			30	47 0001
20.04.2017	IndReq	VSF			44-	3
04.05.2017	PldOrd	0002743167/STCK			30	33 0001

#### MD04 Evaluation

- You can now adjust your requirement quantities and perform leveling again.

### 3.3 MRP Run per Production Line

MRP run using leveling function

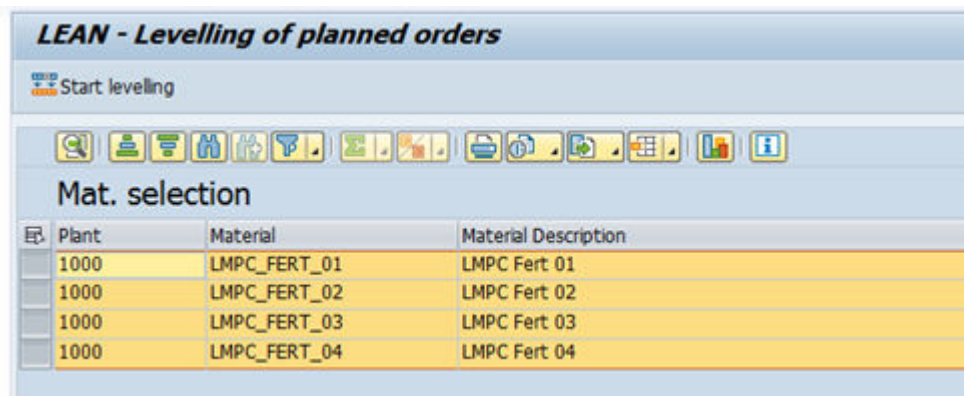
#### Use

Since it is possible to activate and deactivate the leveling steps on an individual basis, you can use a suitable data selection by means of the leveling transactions to execute the MRP run on the production line only (without additional leveling functions). All materials that are assigned to this line are selected.

#### Execution

- Call transaction /LMPC/NIVELLIERUNG.
- On the following selection screen, do not enter any material numbers; just enter your production line in the "Work center" field instead.
- In the "Single steps" area, activate step 5 only (MRP multi-level).
- Choose "Execute".
- The following detail screen displays the list of materials based on your selection.





Material Selection for Levelling

6. Choose the "Start levelling" button.
7. You can now evaluate the result of MRP planning for these materials in the stock/requirements list.

### 3.4 Levelling Class /LMPC/CL\_NIVEL\_FUNCTION\_LIGHT

#### Description of Levelling Logic

The LMPC standard delivery includes the levelling class /LMPC/CL\_NIVEL\_FUNCTION\_LIGHT. This contains a simple levelling logic, which is described below.

Levelling is always executed for each material according to the following logic:

- The selection period is used to determine the number of days over which levelling is executed.
- During levelling using the factory calendar, the number of days of the factory calendar in the selection period that are production days is determined.
- During levelling using the LMPC timetable, the number of days in the selection period on which planning is intended for this material is read from the LMPC timetable.
- The planned orders for the material in the selection period are read.
- The total of the production quantity is created for all planned orders in the selection period.
- The average production quantity per day is calculated by dividing the total production quantity by the number of production days.
- For this average value per day, an entry for creating a planned order is written. First, the quantity is rounded up according to the following rules:
  - If a fixed lot size (FIELD MARC-BSTFE) is defined in the material master, the average quantity is rounded up to the nearest multiple of the fixed lot size. If no fixed lot size is maintained, the average quantity is rounded up to the nearest multiple of the purchase order quantity rounding value (field MARC-BSTRF). If this value is also not maintained, the average quantity is rounded up to the nearest whole number.
  - In the next step, the system checks whether the quantity is greater than the minimum lot size (field MARC-BSTMI) and, if necessary, rounds up to this minimum lot size.
  - The system then checks whether the quantity is greater than the maximum lot size (MARC-BSTMA).
  - If the quantity is smaller than the maximum lot size, there is no further check and an entry is written for the creation of a planned order for the respective day.

- If the quantity is greater than the maximum lot size, the quantity is limited to the maximum lot size and the remaining quantity that exceeds the maximum lot size is determined. An entry is written for the creation of a planned order with the maximum lot size.
- The remaining quantity is processed further with exactly the same logic. For the remaining quantity, further entries are generated to create a planned order for the same day until the remaining quantity has been processed.

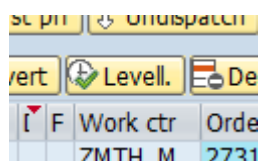
#### ⚠ Caution

The lot size settings in the material master can cause the quantities for the newly created planned orders to differ significantly from the average per day. For example, the minimum lot size can lead to the creation of production quantities that are too large. These discrepancies cannot be cleared by the logic. The user is responsible for the settings of the master data and may have to counteract this effect by changing the master data.

## 3.5 Execution of Leveling Within the HJPT Planning Table Using Action Code S\_NIVEL

Action Code S\_NIVEL

If the action code S\_NIVEL is active in the context profile used in the HJPT planning table (refer to the LMPC Configuration Guide), you can call leveling directly from within the HJPT Detailed Scheduling Planning Board.



Button for Leveling

When you call the action code, the system does not display the leveling selection screen. The system levels the orders immediately.

The input fields of the leveling program are prefilled by the parameters of the action code. In the default configuration, material and plant are determined from the selection in the planning table. The period for leveling is specified using user parameters. For the settings for the action code, see the LMPC Configuration Guide. [Action Code S\\_NIVEL: Configuration](#)

The leveling selection screen is only displayed if the required settings are not transferred using the action code parameters when the action code is called and are therefore missing.

#### → Remember

After you call leveling, you must reload the LMPC data to load the new orders into the planning table.

Leveling does not work in simulation mode, that is, all changes made by leveling are effective immediately, even if you do not save.

#### → Tip

The action code for direct execution of leveling in the planning table is a special application. The planning data is deleted and compiled again by leveling, which requires the data to be loaded again. It is

recommended that you perform leveling using the separate transaction for leveling, or use simulative leveling.

[Transaction /LMPC/NIVELLIERUNG LMPC Leveling of Planned Orders \[page 401\]](#)

[Simulative Leveling Within LMPC Planning Table with Action Code S\\_NIVSIM \[page 411\]](#)

## 3.6 Simulative Leveling Within LMPC Planning Table with Action Code S\_NIVSIM

Simulative leveling

### Use

With "simulative leveling" it is also possible to perform a leveling run directly in the SAP LMPC HJPT detailed scheduling planning board.

You delete existing planned orders and create new planned orders in simulation mode directly in the open planning table. The result of leveling is immediately visible and can be discarded again.

In contrast to the leveling transaction, the changes are not written to the database until saving is executed in the HJPT planning table. If the changes are to be discarded, you can use the function **reload or exit the HJPT planning table** to restore the status of the last save.

### ⚠ Caution

Before saving or reloading, you cannot continue planning in the HJPT planning table.

### ! Restriction

In simulative leveling, only parts of the leveling transaction are supported.

You can only execute step 3 (Leveling) and step 4 (Create Planned Orders). A simulative MRP run is not possible.

There are also fewer enhancement options available. Due to the changed data selection and processing, only the enhancement options BAdI for the Material Authority Check and BAdI for changing the header data of the planned order before generation, are available.

### Procedure

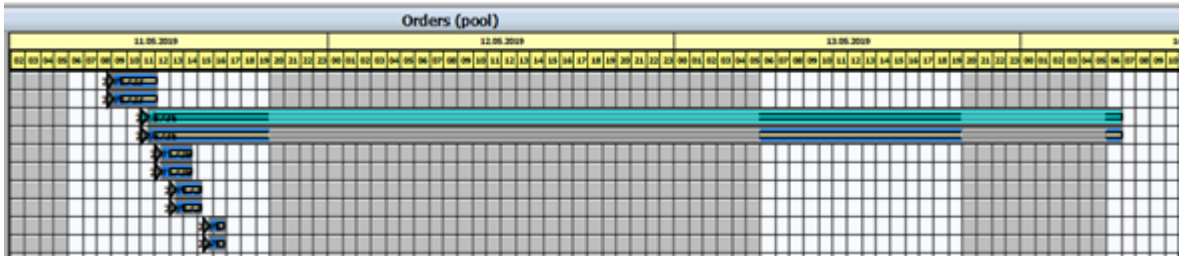
#### → Remember

It is recommended that you save unsaved planning statuses in the LMPC HJPT planning table before executing the leveling, since in the event that the result of the simulative leveling is rejected, only the last saved planning level is restored.

Select at least one planned order in the ALV Grid.

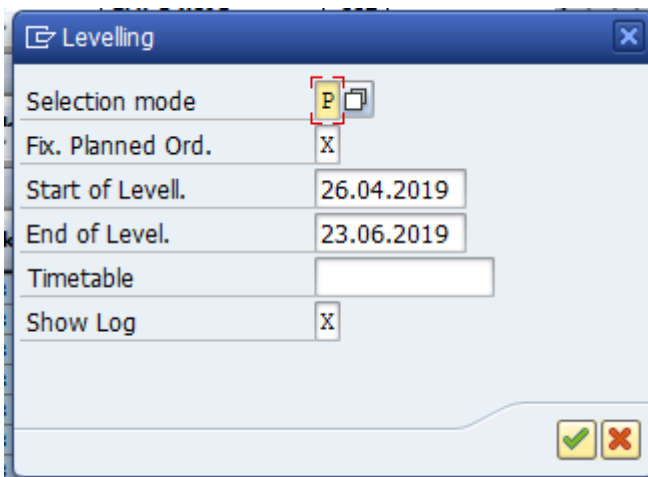
In this example, leveling is used on large requirement coverage elements generated by the MRP run. The selected planned orders have been highlighted in the graphic using the action code S\_MAGR.

Selected operations in the graphic:



Execute the action code  (S\_NIVSIM)

The system opens a popup window in which you can make settings for the leveling run.



Settings Dialog Box

Overview of the available settings:

Setting	Function	Default
---------	----------	---------

<b>Selection Mode</b>	<p>Selection of the planned orders for leveling:</p> <p><b>M:</b> All planned orders from the planning table, whose material is the same material as that of the selected order operations.</p> <p><b>C:</b> All planned orders whose work center matches the selected order operations.</p> <p><b>P:</b> All planned orders that have been selected.</p> <p>The leveling run is always performed separately for each plant material. For example, if you select mode 'P' and selected operations from two different materials, two separate leveling runs are performed.</p>	M (material)
<b>Leveling Firm Planned Orders</b>	<p>Consider or ignore firm planned orders during leveling?</p> <p>X: Consider</p> <p>BLANK: Ignore</p>	BLANK (ignore)
<b>Leveling Start Date</b>	Start date of leveling	Current day or the start of the planning period if this lies in the future. New planned orders cannot be created in the past.
<b>Leveling End Date</b>	End date of leveling	<p>End of the planning period minus a buffer of 2 days or the current day, if the end of the planning period is before the current day.</p> <p>Simulative leveling can only be performed in the planning period specified by the time profile.</p>
<b>Timetable</b>	Name of timetable if leveling is to be performed according to a timetable.	
<b>Displaying the Log</b>	<p>Should the system display the log after leveling?</p> <p>X: Display</p> <p>BLANK: Do not display</p>	BLANK (do not display)

Confirm your selection in the popup window. Depending on the Customizing settings, the popup window may be skipped.

If you have activated the leveling log display, the leveling log will be displayed once leveling has been completed.

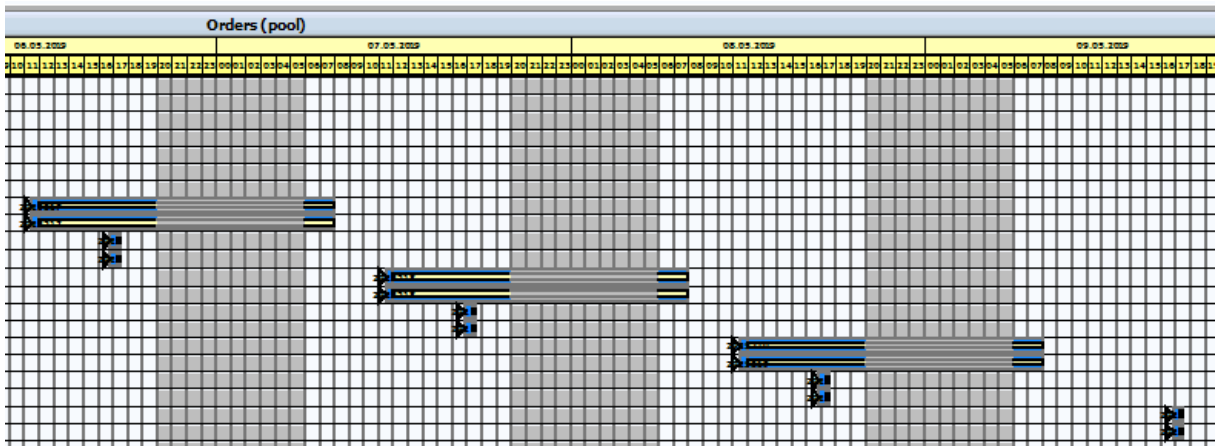
**Log Display**

Technical Information | [Navigation icons] | Choose | Save | STOP 0 | 0 | 0 | 162 | [Info icon]

Typ	Message text	Date/Time
[Green icon]	Start Levelling.	26.04.2019 14:23:19
[Green icon]	Material LMPC_FERT_12	26.04.2019 14:23:19
[Green icon]	Initial inventory: 52.000-	26.04.2019 14:23:19
[Green icon]	Safety stock: 0.000	26.04.2019 14:23:19
[Green icon]	Cumulative quantity of planned orders in sel. horizon: 356.000	26.04.2019 14:23:19
[Green icon]	Mode: C - Levelling using factory calendar	26.04.2019 14:23:19
[Green icon]	Average quantity per day: 9.622	26.04.2019 14:23:19
[Green icon]	Mat LMPC_FERT_12, Day 20190426, Workday 00000000, RdQuant 10.000, lev...	26.04.2019 14:23:19

Leveling Log

Result:



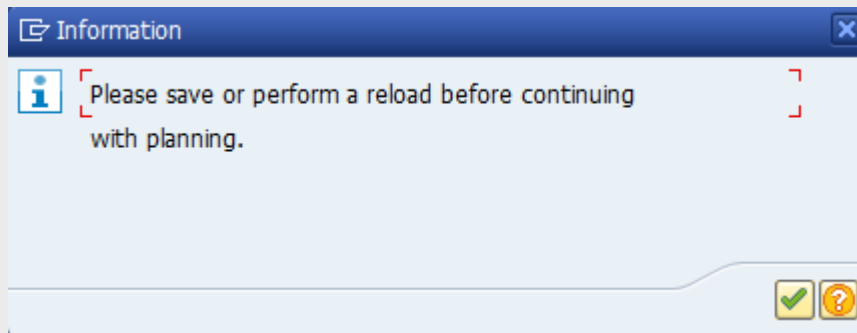
Result of Leveling

The production quantities were distributed over the selected period.

If you want to keep the results, save in the HJPT planning table. You can use the **Reload** function to discard the simulation and restore the last saved planning state

**! Restriction**

Further planning in the HJPT planning table can only be continued either after saving or a reload. If you try to execute action codes anyway, the system prompts you to save or reload.



Note

## Related Information

[Action Code S\\_SIMNIV: Configuration for Simulative Leveling](#)

# 4 LMPC Order Mass Processing

## LMPC Mass Processing of Orders

LMPC order mass processing (/LMPC/MP) is a transaction for processing planned, production, and process orders.

In contrast to the LMPC planning table transaction /LMPC/HJPT, the orders are only processed at header level in LMPC order mass processing. It is not possible to edit data at the level of orders or capacity requirements.

The orders are only processed in the form of a list. There is no graphical representation. There are no planning functions.

The aim of the development was to create a transaction with which certain functions can be executed easily and quickly on a large number of orders.

The orders in the transaction are displayed in table form as a list of the selected orders.

Proce	Order pool	Order Number	Order type	Material	Material Description	Prod. Version	Total order quantity	Scrap quantity	BUn
X		60007605	PROD	LMPC_HALB_12		LM01	17.000	0.000	PC
X		60007648	PROD	LMPC_FERT_34		LM01	2.000	0.000	PC
X		60007715	PROD	MW_LMPC_FERT_12		MW01	10.000	0.000	PC
X		60007815	PROD	LMPC_HALB_12		LM01	9.000	0.000	PC
X		60007816	PROD	LMPC_HALB_12		LM01	34.000	0.000	PC
X		60007837	PROD	LMPC_FERT_12		LM02	2.000	0.000	PC
X		60007894	PROD	MW_LMPC_FERT_12		MW01	10.000	0.000	PC
X		60007895	PROD	MW_LMPC_FERT_12		MW01	15.000	0.000	PC
X		60007896	PROD	MW_LMPC_FERT_12		MW01	20.000	0.000	PC
X		60007897	PROD	MW_LMPC_FERT_34		MW01	15.000	0.000	PC
X		60007898	PROD	MW_LMPC_FERT_34		MW01	15.000	0.000	PC

Work Screen: Order Mass Processing

The orders can be processed using functions known as action codes.

All changes to the orders are updated immediately when an action code is executed. In contrast to the HJPT planning table, it is therefore not possible to simulate the changes first and then save them collectively.

LMPC order mass processing is characterized by extensive customizing and enhancement options. The columns displayed and the action codes available can be displayed in Customizing.

Enhancement interfaces can be used to enhance the program with customer-specific selection fields, data selections, and action codes.

## Related Information

[Transaction /LMPC/MP\\_CUST LMPC MP Settings](#)



## 4.1 Transaction /LMPC/MP LMPC Order Mass Processing

Call LMPC Mass Processing of Orders

You access the LMPC order mass processing via **transaction /LMPC/MP**.

The transaction starts with a selection screen. The conditions according to which the orders are selected for processing are entered there.

**LMPC Order Mass Processing: Entry**

Overall Prof  
/LMPC/MP-Overall Profile **DEFAULT**

General Selection Criteria

MRP controller		to		
Start Date		to		
Material		to		
Plant	LM01	to		
Work center		to		
Resource Network		to		
Sequence number		to		

Planned Order / Prod. Order / Process Order

Planned Orders  
 Production Orders  
 Process Orders

Planned Order		to		
Production Order		to		
Process Order		to		

Selection Criteria Production/Process Order

Order Type		to		
System Status		and		<input type="checkbox"/> Excl.
User Status		and		<input type="checkbox"/> Excl.

Selection Screen

Selection according to the following criteria is supported:

- MRP Controller
- Start
- Material
- Plant
- Work Center
- Resource network
- Sequence number
- Type of order

- Order number

The following criteria are available for production and process orders:

- Order type
- System status (max. 2), restricting selection
- User status (max. 2), restricting selection

You must always specify at least one selection criterion from one of the groups "General Selection Criteria" or "Planned Order/Production Order/Process Order" to read orders for the mass processing of orders.

Special feature of selection by work center: During selection by work center, planned orders are only selected if they have undergone lead-time scheduling and have capacity requirements. For all other selection parameters, capacity requirements are not necessary.

In the group of "Selection Criteria for Production/Process Order", only the order type is a selection criterion. The System Status and User Status fields are only restrictive criteria. These two selection criteria cannot be used as the only selection criteria. This means that you have to enter either an order type or a selection criterion from the other two groups for a status.

The types of an order for each checkbox are also not independent selection criteria. A general selection criterion or an order number must also be specified for a category. For example, if the category of planned orders is to be selected (checkbox is set) and no additional selection criterion was specified in the general selection criteria, no orders are read for this order category.

The restrictions to the order number in the section "Planned Order / Production Order / Process Order" are only valid for the selected category of the order. For example, if you want to select planned orders and production orders (checkboxes are set) and you have set a restricting order number for production orders only, then all planned orders are read according to the general selection criteria and, for the production orders, only the orders for which the number has been specified are displayed.

Special feature Start Date selection field: For planned orders and production orders, the selection is made for the basic start date. For process orders, you can use the parameter settings for the data provider /LMPC/ CL\_MP\_DP\_STD to switch the selection to the scheduled start date.

The following fields on the selection screen can be preset using user parameters:

- /LMPC/MP overall profile
- MRP Controller
- Material
- Planning Plant
- Work Center
- Resource network
- Order type

The description of the user parameters are contained in the LMPC Configuration Guide.

## 4.2 Work Screen

LMPC MP Work Screen

After executing the selection, you branch to the screen for processing the orders. The work screen of LMPC order mass processing shows a tabular list of all selected orders in an ALV Grid.

Proce.	Order pool	Order Number	Order type	Material	Material Description	Prod. Version	Total order quantity	Scrap quantity	BU
X		60007605	PROD	LMPC_HALB_12		LM01	17.000	0.000	PC
X		60007648	PROD	LMPC_FERT_34		LM01	2.000	0.000	PC
X		60007715	PROD	MW_LMPC_FERT_12		MW01	10.000	0.000	PC
X		60007815	PROD	LMPC_HALB_12		LM01	9.000	0.000	PC
X		60007816	PROD	LMPC_HALB_12		LM01	34.000	0.000	PC
X		60007837	PROD	LMPC_FERT_12		LM02	2.000	0.000	PC
X		60007894	PROD	MW_LMPC_FERT_12		MW01	10.000	0.000	PC
X		60007895	PROD	MW_LMPC_FERT_12		MW01	15.000	0.000	PC
X		60007906	PROD	MW_LMPC_FERT_12		MW01	20.000	0.000	PC

Order Processing Screen

The bar with the executable functions is located above the ALV Grid. ALV Grid standard functions, such as sort, filter, total, print, and so on are available. You then find buttons for the action codes of order mass processing. The relevant Customizing settings determine which of the action codes are available.

In LMPC MP, action codes can be executed in different ways:

- The buttons in the header of the ALV Grid enable you to execute the corresponding action on the selected orders after selecting orders.
- You can double-click on individual ALV Grid fields to call action codes.
- You can use a function key (F-key = hot key) to execute action codes.
- Action codes can be executed using a field that is ready for input in the table display.

### ! Restriction

Not all action codes can be executed with all types of call. This depends on the action code. The description of the individual action codes in the following chapters provides more detailed information about this.

The update of all changes made by the functions takes place immediately in the database. It is neither necessary nor possible to save changes manually. Therefore, the save button in the header bar is also disabled.

## 4.3 Table Columns

Available Columns in /LMPC/MP

The layout configuration of the ALV Grid enables the user to show or hide the available columns.

The following fields are available:

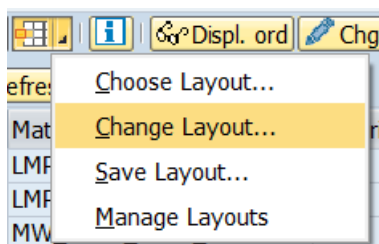
Field	Technical Name
<b>Order Header</b>	
LMPC Order Number	DELNR_OH
Plant	WERKS_OH
Production Version	VERID_OH
Total Order Quantity	GAMNG_OH
Production Scrap Quantity	AVMNG_OH
Base Unit of Measure	GMEIN_OH
Order Date Basic Start Date or Scheduled Start	START_DATE_OH
Order Category	TYPKZ_OH
Sales Order Number	KDAUF_OH
Item Number in Sales Order	KDPOS_OH
MRP Controller for Order	KDPOS_OH
LMPC Combined Order Type	COMB_ORDER_TYPE_OH
Resource Network Name	NNAME_OH
Task List Type	PLNTY_OH
Task List Group	PLNNR_OH
Group Counter	PLNAL_OH
<b>General Material Master</b>	
Material Number	MATNR_MA
Material Group	MATKL_MA
Material Description	MAKTX_MA
<b>Material Master (Plant-Dependent)</b>	
Maximum Storage Period	MAXLZ_MC
<b>LMPC Fields</b>	
Order Pool	POOL_GUID_LM
LMPC Order Text	CORDTEXT_LM
Order Processing Status Yes/No	ORDER_STATE_BOOL_LM
<b>Production- and Process-Order-Specific Fields in / LMPC/MP</b>	
Order Category	AUTYP_FA
User Status Header (Formatted)	ASKOX_FA
System Status Header (Formatted)	SSKOX_FA
<b>Plan/Recipe Header Fields</b>	

Field	Technical Name
Status of Plan/Recipe	STATU_PK
<b>Technical Fields</b>	
Internal Index	MP_INDEX_IT

Special feature Start Date: The basic start date is displayed for planned orders and production orders. For process orders, depending on the parameter settings, the scheduled start date can also be displayed.

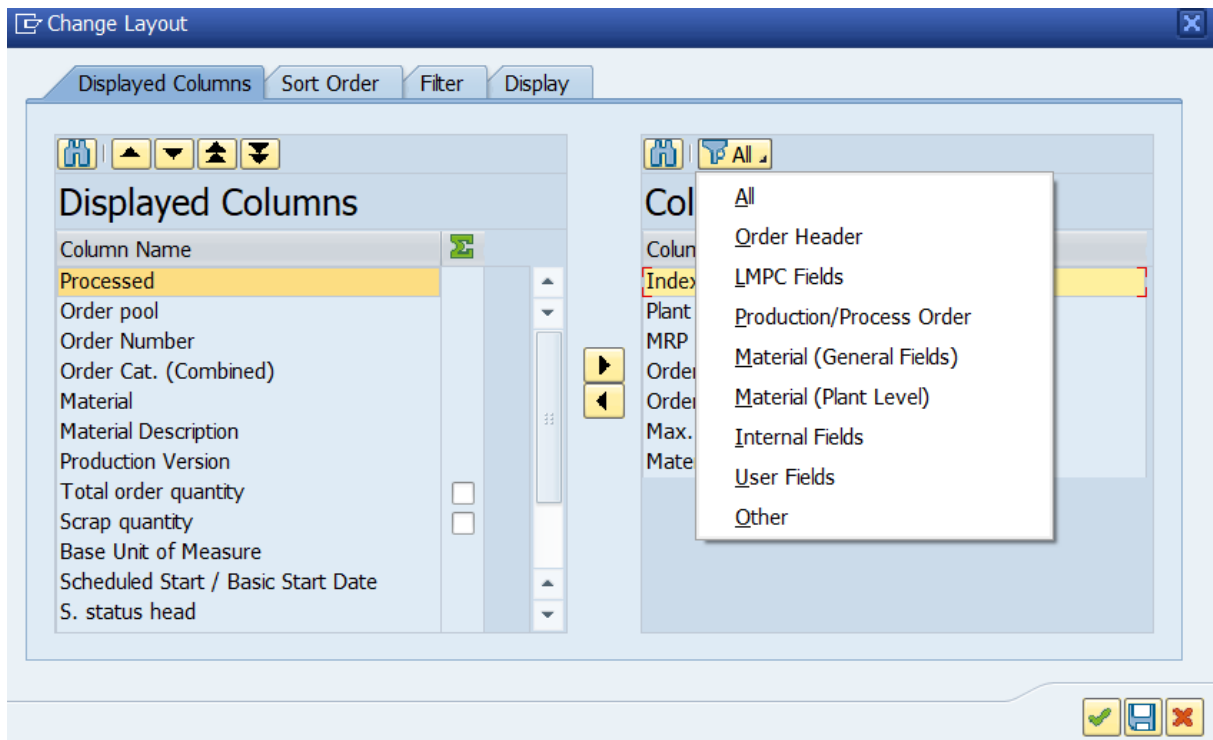
The standard delivery returns a DEFAULT layout, which is a basic setting for the fields. The display can be adapted to the needs of each user.

To change the display, use the button for the layout in the header row of the ALV Grid.



Change Layout

You can use the menu option "Change Layout" to configure the displayed columns.



Column Selection

Columns available for selection are displayed filtered by category. The two buttons with the left arrow and the right arrow button can be used to show or hide the columns.

You can save and load layouts. The layout that is displayed when you start the order mass processing depends on the Customizing of the overall profile. If a layout is entered in the overall profile, this always overrides all user-specific or preset layouts. If no layout has been entered, the system uses the layout that was saved as the default setting.

### i Note

In contrast to the HJPT planning table, only very few fields are available in /LMPC/MP. For the application runtime to be as minimal as possible, only the most important data for the orders is read. If you need more data, please contact LMPC development. Additional data can be added as part of an enhancement project.

## 4.4 /LMPC/MP Action Codes

### LMPC MP Action Codes

The following describes the action codes of the order mass processing /LMPC/MP that are contained in the LMPC standard delivery. The name of the action codes in the standard system all start with the letter “M”.

### Related Information

[MP Action Codes](#)

#### 4.4.1 M\_ATP ATP Check

Mass ATP Check

#### Use

You can use the function M\_ATP to execute a mass ATP check for the selected orders.

#### Procedure

Select an order.

Pr...	Order pool	Order Number	Order type	Material	Material Description	Version	Total order quantity	Scrap quantity	Unit	Start Date	S. status head
X		60007816	PROD	LMPC_HALB_12		LM01	34.000	0.000	PC	10.01.2018	CRTD MSPT PRC CSER SETC
		60007948	PROD	LMPC_HALB_12		LM01	2.000	0.000	PC	30.06.2018	CRTD PRC MACM SEFC

Selection

Execute the action code  (M\_ATP).

Result:

For production orders, you can see the status for the result of the ATP check.

S. status head
CRTD MSPT PRC CSER SETC

Result of ATP Check

For planned orders, the status can be read via a jump to the relevant order.

## Related Information

[Parameters for Action Codes of Mass Processing with PPIO\\_ENTRY](#)

## 4.4.2 M\_CHANGE\_ORDER, M\_DISPLAY\_ORDER Display Order & Change Order

Display and Change Orders

### Use

You can use the "Change Order" function (M\_CHANGE\_ORDER) to switch to the order change transaction of the selected order, depending on the order type:

- MD12 for planned orders
- CO02 for production orders
- COR2 for process orders

After the user leaves the change transaction, the changed data is saved immediately. The changes to the processed order are read and the display is updated in the ALV Grid.

The "Display Order" (M\_DISPLAY\_ORDER) function works in the same way as "Change Order", however, the relevant display transaction (MD12, CO02, COR2) is called instead of the change transaction. After you leave the transaction, the system does not update the data in this case.

### ! Restriction

Only one order can be processed per function call. In the event of multiple selection, only the first selected order is opened.

### → Tip

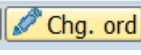
In the standard system, Customizing is set such that when you double-click on the order number, the system calls the change transaction.

### Procedure

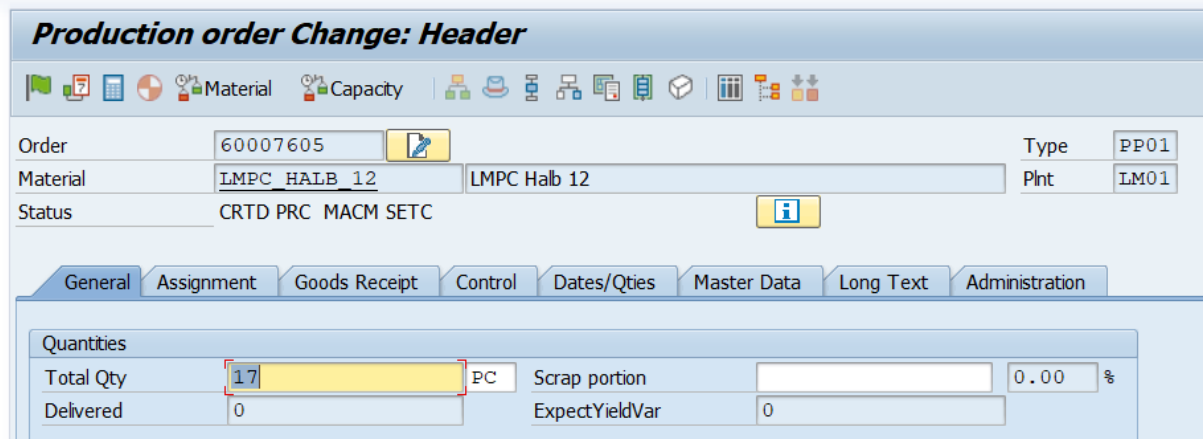
Select an order.

Proc...	Order pool	Order Number	Order type	Material	M
X		60007605	PROD	LMPC_HALB_12	
X		60007648	PROD	LMPC FERT 34	

Selection of an Order

Click on the button  (M\_CHANGE\_ORDER).

Result:



**Production order Change: Header**

Order: 60007605 Type: PP01  
Material: LMPC\_HALB\_12 LMPC Halb 12 Plnt: LM01  
Status: CRTD PRC MACM SETC

General Assignment Goods Receipt Control Dates/Qties Master Data Long Text Administration

Quantities  
Total Qty: 17 PC Scrap portion: 0.00 %  
Delivered: 0 ExpectYieldVar: 0

Change Screen

Result: The screen for changing the order is displayed.

## Related Information

[Parameters for Action Code M\\_DISPLAY\\_ORDER](#)

### 4.4.3 M\_CONV Order Conversion

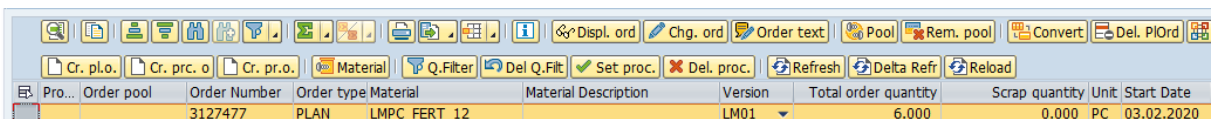
Mass Conversion of Orders

#### Use

Using LMPC order mass processing, you can convert planned orders to production or process orders.

#### Procedure

Select an order.



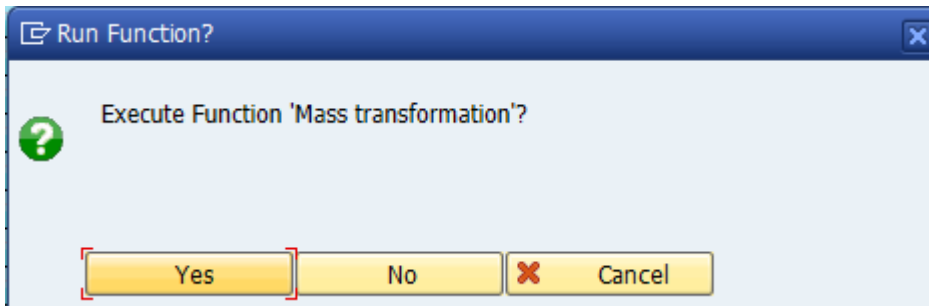
Pro...	Order pool	Order Number	Order type	Material	Material Description	Version	Total order quantity	Scrap quantity	Unit	Start Date
		3127477	PLAN	LMPC_FERT_12		LM01	6.000	0.000	PC	03.02.2020

Selection



Execute the action code  (M\_CONV).

The system asks you whether you really want to execute the action.



Actual Execution Query

Result:

The planned order disappears, a new production order is displayed.

Pro...	Order pool	Order Number	Order type	Material	Material Description	Version	Total order quantity	Scrap quantity	Unit	Start Date	S. status head
		60008293	PROD	LMPC_FERT_12	Material Description	LM01	6.000	0.000	PC	24.02.2020	CRTD MSPT PRC SETC

Result of Planned Order Conversion

### ! Restriction

It is not intended to output the log of the conversion for the action code M\_MFREI. Do not set the output of the log in the program variants for the program PPIO\_ENTRY because this will result in errors.

## Related Information

[Parameters for Action Codes of Mass Processing with PPIO\\_ENTRY](#)

### 4.4.4 M\_MD11, M\_CO01, M\_COR1 Create Planned Order, Create Production Order, Create Process Order

Create Orders

#### Use

You can use LMPC order mass processing to branch directly to the transactions for creating new orders. A planned order (MD11), a production order (CO01), or a process order (COR1) can be created.

After you exit the transaction, order mass processing checks whether new orders exist that match the selection criteria. If new orders are found, they are added to the table for order mass processing. This means

that a newly created order is immediately available in mass processing without the need to reenter the program.

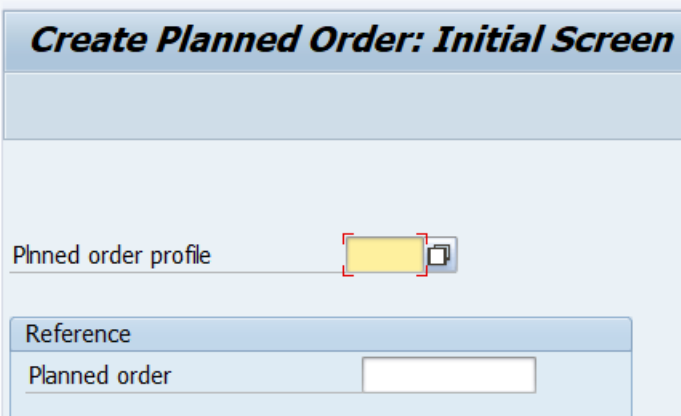
### ! Restriction

The newly created order must meet the selection criteria.

### Procedure

Choose the pushbutton  (M\_MD11) to jump to transaction MD11 for creating a planned order.

Result:



Initial Screen for Planned Order Creation

Enter the data for the planned order.

Save the new planned order.


You return to order mass processing automatically.

The system issues a message with the order number in the footer:



Message

The relevant order is contained in the ALV Grid list:

	2925851	PLAN	LMPC_HALB_12	LM01	
--	---------	------	--------------	------	---

Newly Created Order

A production order or process order is created in the same way.

## Related Information

[Parameters for Calling Transactions with Class /LMPC/CL\\_MP\\_ACTION\\_CALL\\_TCODE](#)

## 4.4.5 M\_CORTXT Change LMPC Order Text

LMPC Order Text

### Use

This function can be used to change the LMPC order text. The change can be made in two ways.

- Direct input in input-enabled field
- Input in a dialog box

LMPC order texts that are older than 6 months are automatically deleted when the function is used to prevent an overflow of the database table.

### → Remember

The LMPC order text does not correspond to the order text in the header of the production order. This is a separate text that can be maintained for each order within LMPC and is available in the LMPC planning table and in LMPC mass processing. This text can also be set for planned orders.

### Direct Input Procedure

Enter an LMPC order text directly in the corresponding field in the ALV Grid.

Order Number	Order type	Material	LMPC Order Text
60007605	PROD	LMPC_HALB_12	LMPC Order Text Example
60007648	PROD	LMPC_FERT_34	
60007715	PROD	MW_LMPC_FERT_12	

Input LMPC Order Text

Confirm your entry by choosing *Enter*.

A confirmation message appears.

New order text has been saved.

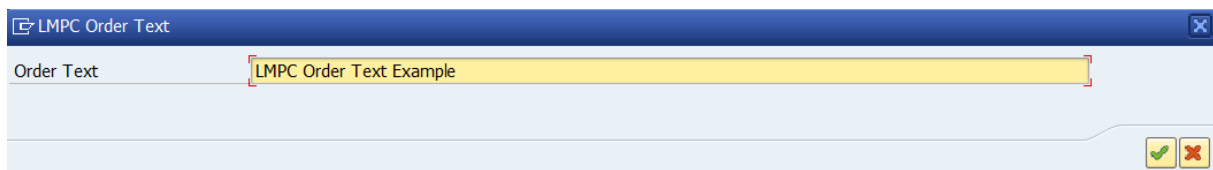
Confirmation Message

### Procedure for Input via Dialog Box

Select a row in the ALV Grid.

Execute the action code  Order text (M\_CORTXT).

A dialog box opens.



Dialog Box

Enter the order text and confirm.

The order text is displayed in the column in the ALV Grid.

Proce...	Order pool	Order Number	Order type	Material	LMPC Order Text
X		60007605	PROD	LMPC_HALB_12	LMPC Order Text Example
X		60007815	PROD	LMPC_HALB_12	

Result

## 4.4.6 M\_CPV Change Production Version

Change Production Version

### Use

You can select and change the production version for each order using a dropdown menu in the relevant row in the ALV Grid. Only production versions that have the following characteristics are available:

- Valid for the material produced
- Valid for their validity period
- Valid for the lot size of the order
- Not locked in general

The switch takes place after selecting the new production version, either by choosing Enter or by switching to another cell in the ALV Grid.

### ! Restriction

This action code can only be executed using the dropdown menu (Trigger field ready for input). A different trigger is not an option.

### Procedure

For an order for which there are several valid production versions, select a production version directly from the dropdown menu of the "Version" column.

Order Number	Order type	Material	Prod. Version
60007837	PROD	LMPC_FERT_12	LM03
60008099	PROD	LMPC_FERT_12	LM01
60008153	PROD	LMPC_FERT_12	LM02
2448813	PLAN	LMPC_FERT_12	LM03
2448814	PLAN	LMPC_FERT_12	LM01

Production Version Selection

Choose *Enter*.

The production version is changed immediately.

## 4.4.7 M\_DEL\_PLAF Delete Planned Order

Delete Planned Orders In Bulk

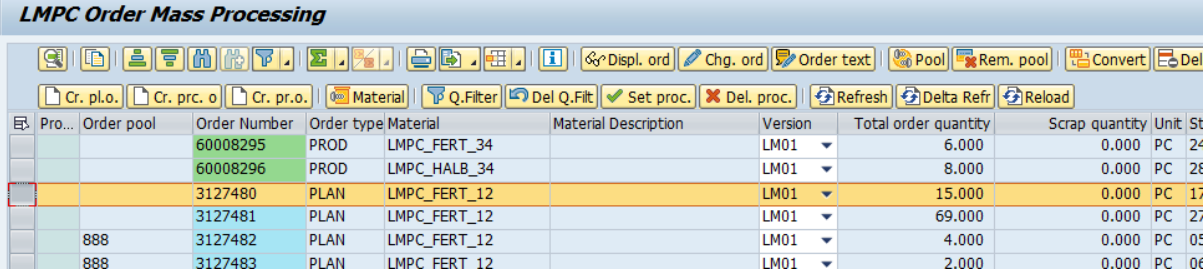
### Use

You can use this function to delete planned orders.

## Procedure

Select a planned order.

### Selection

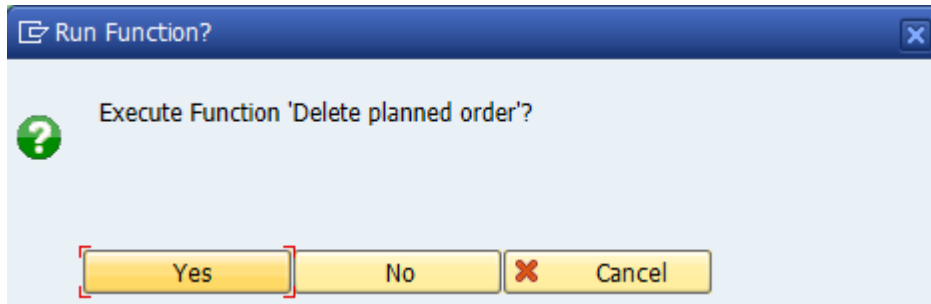


The screenshot shows the 'LMPC Order Mass Processing' window. The table below lists the orders displayed in the interface.

Pro...	Order pool	Order Number	Order type	Material	Material Description	Version	Total order quantity	Scrap quantity	Unit	St
		60008295	PROD	LMPC_FERT_34		LM01	6.000	0.000	PC	24
		60008296	PROD	LMPC_HALB_34		LM01	8.000	0.000	PC	28
		3127480	PLAN	LMPC_FERT_12		LM01	15.000	0.000	PC	17
		3127481	PLAN	LMPC_FERT_12		LM01	69.000	0.000	PC	27
888		3127482	PLAN	LMPC_FERT_12		LM01	4.000	0.000	PC	05
888		3127483	PLAN	LMPC_FERT_12		LM01	2.000	0.000	PC	06

Execute the action code  (M\_DEL\_PLAF).

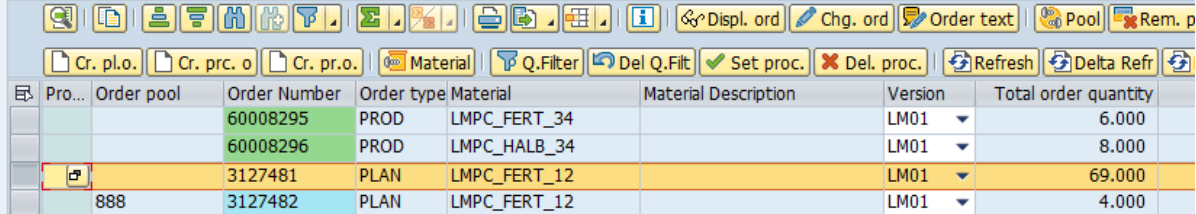
The system asks you whether you really want to execute the function.



### Query Actual Execution

Result:

The planned order has disappeared.



The screenshot shows the 'LMPC Order Mass Processing' window after the deletion of the planned order. The table below lists the remaining orders.

Pro...	Order pool	Order Number	Order type	Material	Material Description	Version	Total order quantity
		60008295	PROD	LMPC_FERT_34		LM01	6.000
		60008296	PROD	LMPC_HALB_34		LM01	8.000
		3127481	PLAN	LMPC_FERT_12		LM01	69.000
888		3127482	PLAN	LMPC_FERT_12		LM01	4.000

### Result

## Related Information

[Parameters for Action Codes of Mass Processing with PPIO\\_ENTRY](#)

## 4.4.8 M\_MREL Release Orders

Mass Release of Orders

### Use

You can use this function to release production orders and process orders.

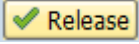
### Procedure

Select a production order.

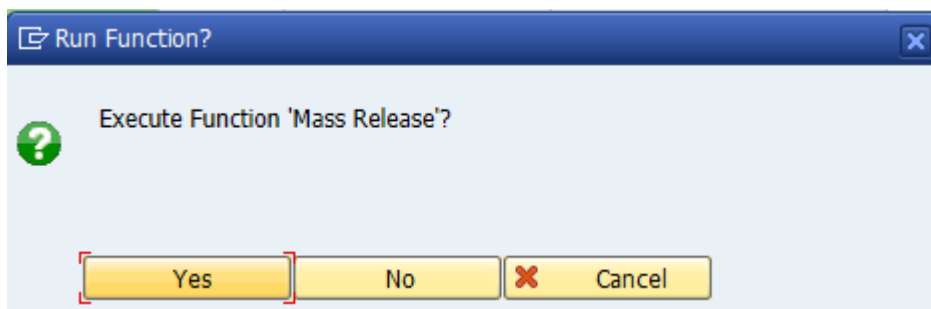
**LMPC Order Mass Processing**

Pro...	Order pool	Order Number	Order type	Material	Material Description	Version	Total order quantity	Scrap quantity	Unit	Start Date	S. status head
		60007648	PROD	LMPC_FERT_34		LM01	2.000	0.000	PC	14.09.2017	TECO MSPT PRC SETC
		60007816	PROD	LMPC_HALB_12		LM01	34.000	0.000	PC	10.01.2018	CRTD MSPT PRC CSER SETC
		60007943	PROD	LMPC_FERT_KE		LM01	2.000	0.000	PC	16.06.2018	CRTD PRC MACM SETC

Selection

Execute the action code  (M\_MFREL).

The system asks you whether you really want to execute the function.



Query Actual Execution

Result:

The status field for the system status of the order header changes. The status of the order is set to released.

S. status head
TECO MSPT PRC SETC
REL MSPT PRC MANC SETC
CRTD PRC MACM SETC

Result

## Related Information

[Parameters for Action Codes of Mass Processing with PPIO\\_ENTRY](#)

## 4.4.9 M\_MM03 Display Material

Go To Material Master

### Use

You can use this function to switch to the material master display for the material of the selected order.

### Procedure

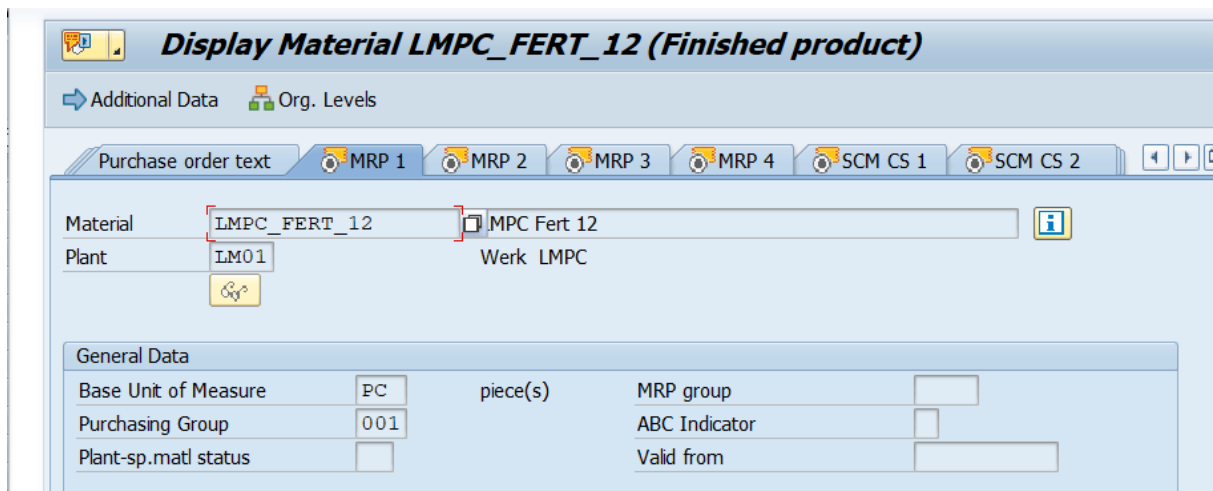
Select an order.

Proc...	Order pool	Order Number	Order type	Material
		60007837	PROD	LMPC_FERT_12
		60008099	PROD	LMPC_FERT_12
		60008153	PROD	LMPC_FERT_12

Selection of an Order

Execute the action code  (M\_MM03).

The transaction MM03 opens to display the produced material of the order.



**Display Material LMPC\_FERT\_12 (Finished product)**

Additional Data Org. Levels

Purchase order text MRP 1 MRP 2 MRP 3 MRP 4 SCM CS 1 SCM CS 2

Material LMPC\_FERT\_12 MPC Fert 12

Plant LM01 Werk LMPC

General Data

Base Unit of Measure	PC	piece(s)	MRP group	
Purchasing Group	001		ABC Indicator	
Plant-sp.matl status			Valid from	

MM03 Screen

In the standard system, the action code is set in such a way that the display of the material is opened in a new session.

## Related Information

[Parameters for Calling Transactions with Class /LMPC/CL\\_MP\\_ACTION\\_CALL\\_TCODE](#)

## 4.4.10 M\_ORDCL Technically Complete Orders

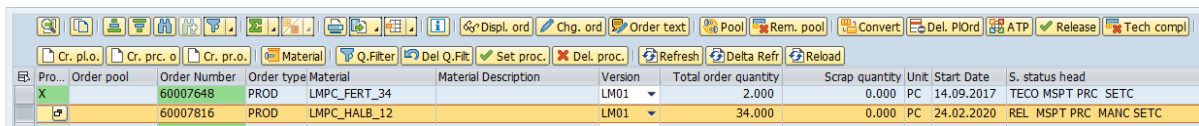
Mass Processing Technically Complete Orders

### Use

You can use this function to technically complete production or process orders.

### Procedure

Select a production order.

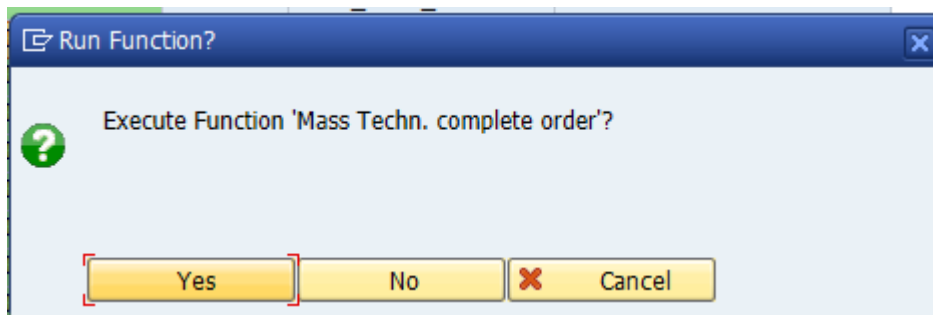


Pro...	Order pool	Order Number	Order type	Material	Material Description	Version	Total order quantity	Scrap quantity	Unit	Start Date	S. status head
X		60007648	PROD	LMPC_FERT_34		LM01	2.000	0.000	PC	14.09.2017	TECO MSPT PRC SETC
		60007816	PROD	LMPC_HALB_12		LM01	34.000	0.000	PC	24.02.2020	REL MSPT PRC MANC SETC

Selection

Execute the action code  (M\_ORDCL).

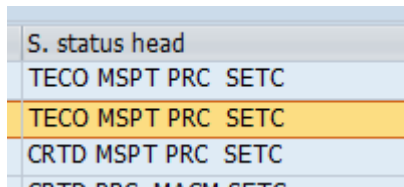
The system asks you whether you really want to execute the function.



Query Actual Execution

Result:

The status in the system status field of the order header changes. The order now has the status “technically completed”.



S. status head
TECO MSPT PRC SETC
TECO MSPT PRC SETC
CRTD MSPT PRC SETC
CRTD PRC MANC SETC

Result

## Related Information

[Parameters for Action Codes of Mass Processing with PPIO\\_ENTRY](#)



## 4.4.11 M\_POOL Pool Formation

Create LMPC Order Pools

### Use

The pool formation combines orders into groups. A group is identified by means of the pool ID. The pool function is a function of the LMPC HJPT planning table and is also made available in LMPC order mass processing. Pool IDs created in order mass processing are also available in the LMPC HJPT planning table and vice versa.

The "Order Pool" column shows the current pool allocation of an order.

### Procedure

Select the orders that you want to combine as an order pool.

Proce...	Order pool	Order Number	Order type	Material	Material Description	Prod. Version
		60007837	PROD	LMPC_FERT_12		LM01
		60008099	PROD	LMPC_FERT_12		LM02
		60008153	PROD	LMPC_FERT_12		LM02

Selection of Orders

Execute the action code  (M\_POOL).

Depending on the configuration, you may need to assign the pool number (pool ID) manually. However, it is also possible that a number from a number range or a unique newly generated GUID is assigned automatically.

Manual assignment of the number:

Dialog Box

The orders have been merged into one pool and have a pool ID:

Proce...	Order pool	Order Number	Order type	Material
	33333	60007837	PROD	LMPC_FERT_12
	33333	60008099	PROD	LMPC_FERT_12
	33333	60008153	PROD	LMPC_FERT_12

Result

Pool IDs can only be assigned to production orders and process orders if they are not locked. If there is a lock for at least one of the selected orders, the function terminates with an error message.

If you want to add one or more orders to an existing pool, you must select at least one existing pool order as well as the new orders to be added in the table. If you then execute the "Pool" function, the orders without a pool ID are added to the existing pool. However, this is only possible if the addition is switched on in the configuration for the action code.

The behavior of the pool function can be adjusted further using parameter settings. The parameters are described in the configuration guide for the action code.

#### ! Restriction

The trigger for fields that are ready for input is not supported for this action code.

## Related Information

[Parameter Action Code M\\_POOL, M\\_POOL\\_REMOVE](#)

### 4.4.12 M\_POOL\_REMOVE Remove Order Pool

Remove Pool Assignment

This function removes the pool assignment for all selected orders.

#### → Remember

A separate action code was created in /LMPC/MP for the removal of the pool ID. In the LMPC HJPT planning table, however, the removal can be performed with the same action code as the one for setting the pool ID.

#### ! Restriction

The trigger for fields that are ready for input is not supported for this action code.

## Related Information

[Parameter Action Code M\\_POOL, M\\_POOL\\_REMOVE](#)

### 4.4.13 M\_QUICKFILTER, M\_QUICKFILTER\_REM, Quick Filter

Filters

#### Use

The quick filter function action code M\_QUICKFILTER is used to filter the ALV Grid for a single value of a field.

The action code can be called using a button in the header of the ALV Grid or by double-clicking on a field defined in Customizing.

When the action code is executed, the current sorting and the current filter of the ALV Grid are saved. The previous filter is removed and a new filter is set up with the value of the quick filter. Sorting is not affected by this.

The quick filter is removed using the action code M\_QUICKFILTER\_REM. This is connected to the *Back* button in the menu bar in the standard delivery. However, the action code can also be executed using an action code button in the header of the ALV Grid. This restores the saved filter and the saved sorting.

In the standard system, a quick filter is set up for the material number.

### ! Restriction

You can filter only one field value at a time. A combination of field values is not possible. A quick filter cannot be set again while a quick filter is active. Combined quick filters are therefore not possible. You can double-click to create quick filters for multiple fields, but only one quick filter can be active at a time.

The trigger for fields that are ready for input is not supported for this action code.

### Procedure

#### Double-click procedure:

Order Number	Order type	Material	Material Description	Prod. Version	Total order quantity
60007918	PROD	LMPC_HALB_34		LM01	4.000
60008060	PROD	LMPC_HALB_12		LM01	5.000
60008085	PROD	ZMTH_CHARGE_FG_1		ZMC1	199.000
60008100	PROD	LMPC_FERT_34		LM01	2.000
60008124	PROD	ZMTH_FG_1		ZFM2	18.000
60008125	PROD	ZMTH_BULK_1		ZMB1	19.000
60008147	PROD	LMPC_EK_01		001	10.000
60008148	PROD	LMPC_EK_01		001	20.000
60008152	PROD	MW_LMPC_FERT_12		MW01	1.000
70001007	PROC	LMPC_PRHA_12		LM02	29.000
70001054	PROC	LMPC_PRHA_12		LM02	7.000
70001504	PROC	ZMTH_PRFE_E1		ZMI1	3.000
70001524	PROC	ZMTH_PRFE_E2		ZM01	10.000
70001542	PROC	ZMTH_PRFE_E2		ZM01	19.000
70001543	PROC	LMPC_PRHA_34		LM02	9.000

Initial Situation

Initially, a large number of orders is displayed. A quick filter is set up for the "Material" field.

Double-click the material number in a field to filter.

Result:

Order Number	Order type	Material	Material Description	Prod. Version
60007918	PROD	LMPC_HALB_34		LM01
2912594	PLAN	LMPC_HALB_34		LM01
2916135	PLAN	LMPC_HALB_34		LM01
2916136	PLAN	LMPC_HALB_34		LM01

Quick Filter Result

Only orders for this material are displayed.

To remove the quick filter, choose the *Back* button in the SAP GUI menu bar.

The quick filter is deleted and the previous sorting and previous filters are restored.

**Procedure for Action Code Button in ALV Grid:**

Order Number	Order type	Material	Material Description	Prod. Version	Total order quantity
60007918	PROD	LMPC_HALB_34		LM01	4.000
60008060	PROD	LMPC_HALB_12		LM01	5.000
60008085	PROD	ZMTH_CHARGE_FG_1		ZMC1	199.000
60008100	PROD	LMPC_FERT_34		LM01	2.000
60008124	PROD	ZMTH_FG_1		ZFM2	18.000
60008125	PROD	ZMTH_BULK_1		ZMB1	19.000
60008147	PROD	LMPC_EK_01		001	10.000
60008148	PROD	LMPC_EK_01		001	20.000
60008152	PROD	MW_LMPC_FERT_12		MW01	1.000
70001007	PROC	LMPC_PRHA_12		LM02	29.000
70001054	PROC	LMPC_PRHA_12		LM02	7.000
70001504	PROC	ZMTH_PRFE_E1		ZMI1	3.000
70001524	PROC	ZMTH_PRFE_E2		ZM01	10.000
70001542	PROC	ZMTH_PRFE_E2		ZM01	19.000
70001543	PROC	LMPC_PRHA_34		LM02	9.000

Initial Situation

Initially, a large number of orders is displayed. A quick filter is set up for the "Material" field.

Select a row in the ALV Grid.

Order Number	Order type	Material	Mat
60007918	PROD	LMPC_HALB_34	
60008060	PROD	LMPC_HALB_12	
60008085	PROD	ZMTH_CHARGE_FG_1	

Selection

Execute the action code  (M\_QUICKFILTER).

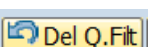
In Customizing, you have set that the system is to filter according to the material column.

The material number is read from the selected line and a filter is set for this value.

Order Number	Order type	Material	Material Description	Prod. Version
60007918	PROD	LMPC_HALB_34		LM01
2912594	PLAN	LMPC_HALB_34		LM01
2916135	PLAN	LMPC_HALB_34		LM01
2916136	PLAN	LMPC_HALB_34		LM01

Result

Only orders for this material are displayed.

To remove this filter, choose the ALV Grid button  (M\_QUICKFILTER\_REM). The quick filter is deleted and the previous sorting and previous filters are restored.

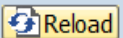
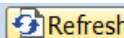
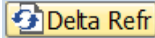
## Related Information

[Parameters for Action Code M\\_QUICKFILTER, M\\_QUICKFILTER\\_REM](#)

### 4.4.14 M\_RELOAD, M\_REFRESH, M\_REFRESH\_DELTA, Update of Display

Action Codes for Refresh

#### Use

You can use the action codes  Reload (M\_RELOAD),  Refresh (M\_REFRESH), and  Delta Refr (M\_REFRESH\_DELTA) to update the data displayed for the orders.

#### Reload

In the case of a reload, all data of the order table is rejected. The orders are then selected again and their data loaded. A reload is therefore a new entry with identical selection criteria.

#### Refresh

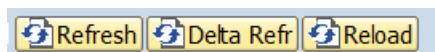
In a refresh, the system reads the data for all open orders again. Since no new selection takes place in contrast to the reload, the refresh does not find any new orders. The refresh takes less runtime than the reload.

#### Delta Refresh

During the delta refresh, only the data for the selected orders is reloaded.

#### Procedure

Open orders in LMPC order mass processing were changed externally, not in the program itself. If you now want to reload the current data for these orders, choose the Refresh button. If you also want to search for new orders in the meantime, use "Reload" instead. If you only want to read data for specific orders, use "Delta Refresh".



Action Codes for Updating Data

In addition to refresh and reload, there are two other functions that are only used internally by other action codes. A direct call by the user is not planned. The action codes are documented here for the sake of completeness.

- M\_REFRESH\_CHANGED - Update orders marked as "changed" internally
- M\_REFRESH\_NEW – like M\_REFRESH\_CHANGED, only that by reevaluating the selection criteria, newly created orders are also found and added.

#### ! Restriction

The trigger for fields that are ready for input is not supported for these action codes.

## Related Information

[Parameters for Refresh Action Codes](#)

### 4.4.15 M\_SET\_STATE, M\_RESET\_STATE Select Order as "Processed"

Set Selection

#### Use

You can use the action code  **Set proc.** (M\_SET\_STATE) to set orders to "processed" manually. The selection is purely for information purposes and has no actual effect on the order.

It is saved using an LMPC table, from which old entries are automatically removed after a configurable period.

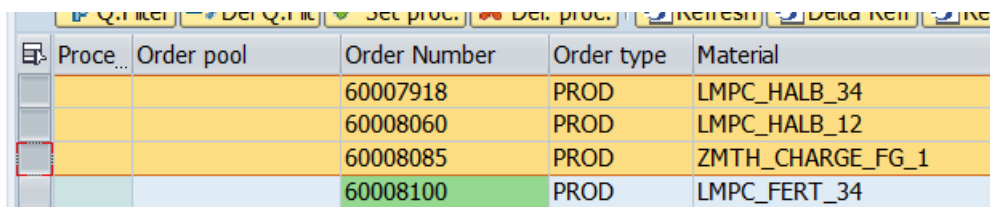
In the ALV Grid of order mass processing, the column with the flag for processing can be displayed. For example, a filter, a sorting, or a coloring can be set for this field.

In the standard system, the field is colored with the status green if an order is marked as "processed" and in light blue if it is not flagged.

You can use the action code  **Del. proc.** (M\_RESET\_STATE) to remove the selection of the order.

#### Procedure

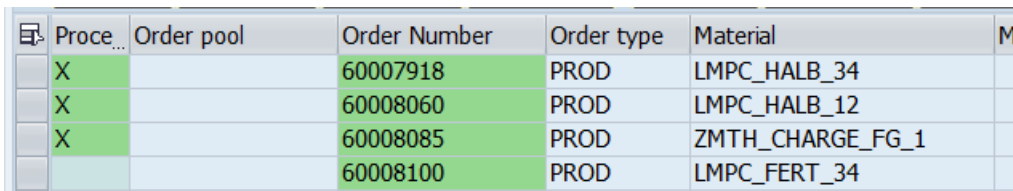
Select at least one order.



Proce...	Order pool	Order Number	Order type	Material
		60007918	PROD	LMPC_HALB_34
		60008060	PROD	LMPC_HALB_12
		60008085	PROD	ZMTH_CHARGE_FG_1
		60008100	PROD	LMPC_FERT_34

Selection

Execute the action code  **Set proc.** (M\_SET\_STATE) to set the processing indicator.



Proce...	Order pool	Order Number	Order type	Material
X		60007918	PROD	LMPC_HALB_34
X		60008060	PROD	LMPC_HALB_12
X		60008085	PROD	ZMTH_CHARGE_FG_1
X		60008100	PROD	LMPC_FERT_34

Result

The orders have been selected as processed.

To remove the selection, execute the action code  **Del. proc.** (M\_RESET\_STATE).

## ! Restriction

The trigger for fields that are ready for input is not supported for this action code.

## Related Information

[Parameters for Action Codes M\\_SET\\_STATE, M\\_RESET\\_STATE](#)

# 5 LMPC Order Report

For a production order, the LMPC order report shows an overview of the upstream planned and production orders for all low-level codes of the materials used. It has a similar structure to the material tree of the standard SAP transaction MD4C.

In the LMPC standard delivery, the LMPC order report shows the same data as transaction MD4C. However, the difference lies in the fact that an extension is possible via data providers and field enhancements of the underlying ALV structure.

The LMPC order report can be called in two ways:

- Via an action code from the HJPT planning table. [S\\_ORDREP LMPC Order Report \[page 119\]](#)
- As a standalone transaction. [Transaction /LMPC/ORDER\\_REP LMPC Order Report \[page 440\]](#)

## Related Information

[S\\_ORDREP Configuration: Action Code for LMPC Order Report Configuration of the LMPC Order Report](#)

## 5.1 Transaction /LMPC/ORDER\_REP LMPC Order Report

Call LMPC Order Report

You can use transaction /LMPC/ORDER\_REP to call the LMPC order report.

The description for the application is located in action code S\_ORDREP. [S\\_ORDREP LMPC Order Report \[page 119\]](#)



# 6 Other Planning Scenarios for the HJPT Planning Table

Overview of planning scenarios in the HJPT planning table

Up to this point, the documentation for the HJPT planning table only deals with the planning scenario for discrete manufacturing in PP and the planning of orders in the process industry PP-PI.

This unit introduces further planning scenarios that are also possible with the HJPT planning table.

- [LMPC and EPEI - Every Part Every Interval \[page 441\]](#)
- [LMPC and Takt-Based Planning \[page 442\]](#)
- [LMPC and Repetitive Manufacturing \(PP-REM\) \[page 441\]](#)
- [LMPC and Project System \(PS\) \[page 443\]](#)
- [LMPC and Collective Orders \[page 444\]](#)

## 6.1 LMPC and EPEI - Every Part Every Interval

Using EPEI together with the HJPT planning table

The HJPT planning table supports a scenario in which a time-phased production plan is created. The aim is to produce orders for the same product in the same lot size at regular intervals. This reduces quantity on hand and smooths production.

The consulting solution EPEI is required for this scenario.

This consulting solution determines the optimum lot size for the materials to be planned and enters it in the material master.

The MRP run uses this lot size to create planned orders that can be dispatched in the next step using the planning functions of the HJPT planning table.

The following HJPT planning functions are available for dispatching in the EPEI scenario:

- [S\\_EPTBSQ Dispatch by Table \[page 172\]](#)
- [S\\_FPL Dispatch by LMPC Timetable \[page 174\]](#)

For information on EPEI analysis, see the documentation on the consulting solution EPEI. [EPEI - Every Part Every Interval](#)

## 6.2 LMPC and Repetitive Manufacturing (PP-REM)

Use of the HJPT planning table in repetitive manufacturing

The HJPT planning table can be used extensively for the planning scenario of repetitive manufacturing.

Since the HJPT planning table processes capacity requirements of operations as a data basis, the planned orders in repetitive manufacturing (PP-REM) must have undergone lead-time scheduling to be processed.

The LMPC HJPT action codes were developed for the scheduling level of detailed scheduling.

Therefore, only planned orders with detailed scheduling in repetitive manufacturing are supported. Planned orders with rate-based scheduling are not supported.

With a few exceptions, all LMPC HJPT action codes can be used for planned orders in repetitive manufacturing.

The following list of action codes cannot be used in repetitive manufacturing. These are functions for the process industry and functions for production orders.

- [S\\_ORDCL Closing Individual Production Orders or Process Orders Technically \[page 117\]](#)
- [S\\_ORDCLM Completing Production Orders Technically in Mass Processing \[page 118\]](#)
- [S\\_ORDREP LMPC Order Report \[page 119\]](#)
- [S\\_PCONV Partial Conversion of Planned Orders with Subsequent Dispatching \[page 120\]](#)
- [S\\_PHCH Change of Duration of a Phase in Process Order \[page 122\]](#)
- [S\\_SARBPL and S\\_HARBPL Change the Work Center for Operations of Production and Process Orders \[page 125\]](#)
- [S\\_SPLIT Distribute Capacity Requirements to Individual Capacities Manually \[page 130\]](#)
- [S\\_ATPA Individual Availability Check \[page 259\]](#)
- [S\\_ATPIO ATP Check and Order Conversion \[page 260\]](#)
- [S\\_CONVPI Mass Conversion of Planned Orders to Process Orders \[page 262\]](#)
- [S\\_CONVPP and S\\_CONVPL Mass Conversion of Planned Orders to Production Orders \[page 262\]](#)
- [S\\_COOIS Information System for Production Orders \[page 263\]](#)
- [S\\_COOISP Information System for Process Orders \[page 264\]](#)
- [S\\_MFREI Mass Release of Orders \[page 265\]](#)
- [S\\_V\\_FREI Release of Operation in Production Order \[page 266\]](#)
- [S\\_C203 Display Master Recipe \[page 267\]](#)
- [S\\_CO11N Entering Time Tickets \[page 270\]](#)
- [S\\_CO15 Enter Production Order Confirmation \[page 271\]](#)
- [S\\_CO24 Missing Parts Info System \[page 272\]](#)
- [S\\_CO40 Conversion of Planned Order to Production Order \[page 273\]](#)
- [S\\_COR5 Releasing Individual Process Orders \[page 274\]](#)
- [S\\_COR7 Creating Process Orders \[page 274\]](#)
- [S\\_CONATP Log for ATP Check \[page 290\]](#)
- [S\\_CONPFR Log Mass Release \[page 290\]](#)
- [S\\_CONPRO Log for Mass Conversion \[page 290\]](#)

## 6.3 LMPC and Takt-Based Planning

Using repetitive manufacturing with line balancing

Takt-based planning or takt-based flow manufacturing is a special area of repetitive manufacturing with its own master data.

For planned orders with the order type run schedule quantities, rate-based scheduling is used instead of detailed scheduling.

Therefore, the planned orders of takt-based planning cannot be processed in the HJPT planning table.

If you want to use takt-based planning with the HJPT planning table, you need the additional consulting solution takt-based scheduling (TBS). This consulting solution is used to create discrete, detailed scheduled orders from the planned orders of takt-based planning. These orders can be processed using the HJPT planning table.

## 6.4 LMPC and Project System (PS)

Using the LMPC HJPT planning table with networks from the project system

The HJPT planning table can be used to plan networks in the project system.

The capacity load chart displays the capacity commitment of networks, provided that the relevant Customizing settings have been made.

You can use the data provider /LMPC/CL\_DP\_PS\_AFAB to read additional data for the project system. [Data Provider /LMPC/CL\\_DP\\_PS\\_AFAB Relationships \[page 375\]](#)

### → Tip

If the scheduling formulas at the work center are set correctly, it is also possible to create networks (PS) and planned or production orders (PP) in the same work center.

If you have any questions about the settings for scheduling, please contact your LMPC consultant.

The standard action code for changing networks is S\_AV77. [S\\_AV77 Change Network \[page 88\]](#)

The standard action code for dispatching network operations is S\_EPNN. [S\\_EPNN Dispatching Operations of Networks \[page 153\]](#)

Furthermore, the following action codes can be used for planning networks:

- [S\\_AK02 Change Order \[page 82\]](#)
- [S\\_AK05 Displaying an Order \[page 84\]](#)
- [S\\_AV02 Changing Operations of the Production Order or Process Order \[page 86\]](#)
- [S\\_SARBPL and S\\_HARBPL Change the Work Center for Operations of Production and Process Orders \[page 125\]](#)
- [S\\_APALL Deallocate All Operations \[page 133\]](#)
- [S\\_APSEL Deallocate Selected Operations \[page 135\]](#)
- [S\\_AV06 Dispatching Operations Individually \[page 137\]](#)
- [S\\_AV07 Deallocating Operations Individually \[page 138\]](#)
- [S\\_D&D Dispatching Operations with Drag and Drop in the ALV Grid \[page 139\]](#)
- [S\\_EPALL Dispatch All Operations \[page 142\]](#)
- [S\\_EPSEL Dispatch Selected Operations \[page 159\]](#)
- [S\\_EPSELF Dispatch Selected Orders Without Errors \[page 160\]](#)

- [S\\_EPSELT Dispatching for Date \[page 164\]](#)
- [S\\_EPSEQ Dispatch According to the Sequence Entered \[page 165\]](#)
- [S\\_EPSIM Simultaneous Dispatching \[page 167\]](#)
- [S\\_EPSRT Sorted Dispatching \[page 168\]](#)
- [S\\_MANP Manual Dispatching \[page 183\]](#)
- [S\\_MVEORD Move Order Operations in the Pool \[page 187\]](#)
- [S\\_RESCD Reschedule All \[page 190\]](#)
- [S\\_POOLID Create Order Pool Manually \[page 217\]](#)
- [S\\_POOLA Automatically Create Order Pool \[page 218\]](#)
- [S\\_EPSELP Single-Level Dispatching with Pool ID \[page 219\]](#)
- [S\\_APSELP Deallocate with Pool ID \[page 221\]](#)
- [S\\_SETSTR Change Strategy Profile Settings \[page 246\]](#)
- [S\\_SHFTPP Shift Production Plan \[page 248\]](#)
- [S\\_MALL, S\\_RMALL Select All Operations in ALV Grid and Remove Selection \[page 251\]](#)
- [S\\_MAGR, S\\_MAGRD Selecting Orders in the Graphic, Removing the Selection \[page 252\]](#)
- [S\\_MALV Selecting Operations in ALV Grid \[page 253\]](#)
- [S\\_SELCAP Selecting Detailed Capacity List in the Chart \[page 254\]](#)
- [S\\_FILTR, S\\_FILTRE Set and Remove Filters \[page 296\]](#)
- [S\\_DBCLCK Double-Click and Hotspot Click on Fields in the ALV Grid \[page 298\]](#)
- [S\\_DINFO Detailed Information for Graphical Bars \[page 299\]](#)
- [S\\_L-, S\\_L-, S\\_L+, S\\_L++, Moving Rows within the ALV Grid \[page 305\]](#)

### ! Restriction

- The list of order relations does not display any data for networks themselves, but requirements relevant to MRP from order reservations of networks are listed with quantity and date. Negative BOM requirements, that is, receipts from networks, are not displayed in the order relations.
- Since networks are not based on materials, unlike in discrete manufacturing with planned and production orders, no development of the stocking situation can be displayed for networks.
- No requirement dates are determined for operations in networks.

## 6.5 LMPC and Collective Orders

Use of direct production in the HJPT planning table

Using the special procurement key 52 "Direct procurement/in-house production", it is possible to create a collective order using the BOM. The orders are linked to each other across the low-level codes.

This leads to special behavior of the orders during scheduling and dispatching.

Orders in collective orders are always scheduled together. In a collective order, there is a leading order that determines the dates and quantities in the entire network. As soon as the operation date of the leading order of a collective order is changed, the dates of the linked orders change automatically.

If the quantity of the leading order is changed in a collective order, the quantities of the following orders also change.

Collective orders consist either only of planned orders or only of production or process orders. If you trigger the conversion for a planned order in the collective order, all planned orders of the entire network are converted into production or process orders.

### Caution

It is recommended to process only production or process orders of collective orders in the HJPT planning table. This is because the processing of planned orders of a collective order with the HJPT planning table is only possible to a very limited extent.

Planned orders can be displayed and also be converted to production or process orders in the HJPT planning table.

However, it is not possible to dispatch or change planned orders of a collective order.

The standard SAP system does not allow this for the capacity planning table. See SAP Note [131468](#) 

### Special Features of Dispatching

- If only one operation of a collective order is dispatched and the other operations of the same network are not, the operation times of all operations still change. Scheduling is always carried out for all operations in a collective order, regardless of whether only one operation or all operations are dispatched.
- If an operation of a collective order is not open in the HJPT planning table and is not dispatched, it is still scheduled if the related operations that are open in the HJPT planning table change.
- If an operation of a collective order is not open in the HJPT planning table and is dispatched, this dispatched operation can block the dispatching of the other operations open in the planning table.
- The scheduling does not take into account the availability of the capacities. It is executed for all orders in the collective order. The availability of the capacity is only checked when dispatching. This can lead to the following behavior: If a later operation of a collective order is dispatched as early as possible and the preceding operations of the same network are not processed in the planning function, the early operations may be scheduled in the past.

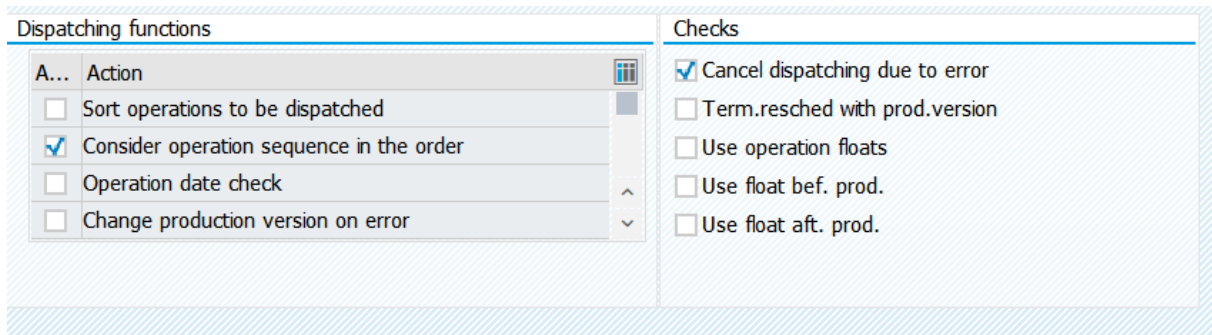
### → Remember

Dispatching is only guaranteed to work if all operations of a collective order are open in the HJPT planning table and all operations of an order network are processed in the planning function. Therefore, all operations of a collective order should always be open in the planning table.

### Settings in the Strategy Profile

So that the planning function considers the sequence of the operations in the collective order and only allows dispatching in the correct sequence, two checkboxes must be set in the strategy profile for dispatching:

- Consider operation sequence in the order
- Cancel dispatching due to error



Example: Settings in the Strategy Profile

### → Remember

For dispatching and rescheduling production or process orders of a collective order, only certain functions of the LMPC HJPT planning table can be used. Dispatching is only possible if the orders are dispatched in the correct sequence that is specified by the network.

Only the following planning functions can be used to process orders in collective orders. All other planning functions of the HJPT planning table are not suitable for collective orders.

#### Dispatching of individual operations:

- [S\\_AV06 Dispatching Operations Individually \[page 137\]](#)
- [S\\_MANP Manual Dispatching \[page 183\]](#)

#### Dispatching several or all operations of a collective order at the same time as the scheduled start date or as early as possible:

- [S\\_EPSIM Simultaneous Dispatching \[page 167\]](#)
- [S\\_EPSRT Sorted Dispatching \[page 168\]](#) (sorting by order number and operation number)

#### Dispatching of several unplanned operations with a manually specified start date:

- [S\\_EPSEQ Dispatch According to the Sequence Entered \[page 165\]](#)
- First [S\\_MANP Manual Dispatching \[page 183\]](#) for the first operation of a network, then [S\\_EPSIM Simultaneous Dispatching \[page 167\]](#) or [S\\_EPSRT Sorted Dispatching \[page 168\]](#) (sorting by order number and operation number) for all other operations.

#### Rescheduling operations in a collective order that have already been dispatched to another date:

- [S\\_SHFTPP Shift Production Plan \[page 248\]](#)
- [S\\_RESCD Reschedule All \[page 190\]](#)

When rescheduling, all operations in a collective order must be selected.

### ! Restriction

- Collective orders are displayed in a separate section in transaction MDO4. This section is not processed by the HJPT planning table when determining the requirement dates. Therefore, no data can be displayed for the requirement date. This also means that the list of order relations for collective orders cannot be used.
- The LMPC mass processing of orders /LMPC/MP is not suitable for processing orders of a collective order.
- LMPC leveling cannot be used for materials of collective orders.

For all questions regarding the use of all LMPC functions with collective orders that are not listed here, contact your LMPC consultant.

#### → Tip

The advantage of direct production with collective orders is that there is a direct link between the orders across the low-level codes. This ensures consistent production across all low-level codes. However, the use of direct production is subject to a number of restrictions. For example, it is not possible to replace a production order with another order for the same material in the collective order.

The use of collective orders in connection with the LMPC HJPT planning table is possible, but is not recommended due to the restrictions.

You can use the LMPC order relations instead. You can also use this LMPC planning scenario to ensure consistent, multilevel planning across all low-level codes.

[Multilevel Planning via Order Relations \[page 232\]](#)

If you only need a two-level connection, it is recommended that you use two-level planning with a pool ID.

[Two-Step Planning with Pool ID \[page 222\]](#)

As an alternative to collective orders, it is also recommended that you use the multilevel order report in transaction MD4C.

[S\\_MD4C Order Report \[page 281\]](#)

# 7 LMPC Support

If you want to report errors for the LMPC consulting solution, you can do so via the SAP ticket system.

1. First check that you have installed the current build of your LMPC version in the system. New builds for the respective LMPC release are published at regular intervals. The last build contains all previous error corrections. Perhaps an error that you want to report has already been corrected. It is then sufficient to **download and import the latest build of LMPC from the delivery platform**. For instructions on how to check your LMPC version, see the following chapter: [LMPC Version \[page 11\]](#). First compare the version in your system with the version that is available for download in the delivery platform.
2. Create an OSS incident under the component **XX-PROJ-CON-LMPC**. For the **priority of tickets**, refer to **SAP Note 67739**.
3. Make sure that the **system connection** is open and that **credentials** for logging on to the system are provided in the **secure area** of the incident. Check that it is possible to log on to the **client** of your choice. Also check that the provided user name has **authorization for the LMPC transactions and debugging** in the system.
4. Describe the issue: What is the system behavior and what would you have expected?
5. Provide a **step-by-step description** with an example of how to reproduce the error. An example includes:
  - **System name**
  - **Client**
  - **LMPC HJPT overall profile**
  - **Plant**
  - **Work center**
  - **Sample order number**

Describe the example in a document and attach it to the ticket.

Create a **ticket for each topic**. Please do not mix topics in the tickets. See SAP Note [50048](#).

## → Remember

- LMPC support only checks for errors in the source code of the solution. LMPC support does not provide support for the correct configuration of the solution. Therefore, LMPC Support does not check any Customizing in your system.  
If you have questions about the settings of functions in the system or require support with testing new functions, contact LMPC Consulting.
- If you experience problems with the CORE installation, open a ticket under the component XX-PROJ-CON-MCF.





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