

USER GUIDE VISUAL SCHEDULER

Exact Globe



Despite the continued efforts of Exact to ensure that the information in this document is as complete and up-to-date as possible, Exact cannot be held accountable for the correctness and/or completeness and/or specific applicability of the published and/or requested information in this document. The extraction and use of information from this document remains at all times completely within the user's own risk.

Exact Group B.V. shall not be liable for the examples included and for the procedures described in this book, neither is Exact liable for any ensuing damage of any nature whatsoever.

No part of this book may be reproduced and/or transmitted in any form by means of print photocopy, microfilm or any other means, without the prior written consent of Exact Group B.V.

© Copyright Exact Group B.V. All rights reserved. All trademarks mentioned herein belong to their respective owners. Exact Software ® is a registered trademark of Exact Group B.V.

CONTENTS

WELCOME TO EXACT GLOBE NEXT!	1
1. INTRODUCTION	2
1.1 Key Points For Scheduling	2
1.2 Preparing to Schedule	2
1.3 Finite Scheduling Versus Infinite Scheduling	3
2. SETTING UP EXACT VISUAL SCHEDULER	4
2.1 Creating and Deleting Shifts	4
2.2 Defining Capacity Per Operation	5
2.3 Parent and Child Operations	7
3. SCHEDULING RULES	8
3.1 Finite Scheduling Rules	8
3.2 Scheduling Rules to Remember	8
3.3 Getting Into Exact Visual Scheduler	9
4. EXACT VISUAL SCHEDULER PREFERENCES	10
5. SHOP OVERVIEW	13
6. OPERATION ZOOM IN	16
7. EDIT OPERATION CAPACITY	23
8. WHAT-IF SCHEDULING MODE	25
9. MOVING OPERATIONS	26
10. WHAT DO THE ICONS AND COLORS IN EXACT VISUAL SCHEDULER MEAN?	28
11. PRODUCTION ORDER ZOOM IN	30
12. EXACT VISUAL SCHEDULER DASHBOARD	32
APPENDIX A: PRODUCT UPDATE CHANGES	33

WELCOME TO EXACT GLOBE NEXT!

This manual provides the information you need to work effectively with Exact Globe Next. It is part of the series of user manuals for Exact Globe Next. The goal of this documentation is to help you to get quickly acquainted with the product and the possibilities it offers. It will help all users, especially those without much experience with our software, to get started with and benefit from the product straightaway.

Exact Globe Next is an integrated software solution; its modules of related business processes function together in an integrated manner. Besides the user manuals, there are several information sources, related to the software, available to you. You can access online help documents on Exact Globe Next functionalities while working with the software by just pressing the F1 key. The list of help document also contains release notes related to the product. They inform you of the improvements and functional additions in the various releases of the product.

You can also access the help documents, release notes, and other related documents online through the Exact Customer Portal on www.exact.com. The Customer Portal is a protected part of the Exact Software internet site, which has been specially developed to provide you with information and to help you get the maximum yield from your software. This portal informs you about our contacts, downloads, FAQs, and the latest product news. We invite you to use the portal as often as you wish!

Thank you for using Exact Globe Next and this user manual!

1. INTRODUCTION

1.1 KEY POINTS FOR SCHEDULING

There are specific preferences and master files that must be set up prior to using Exact Visual scheduler. The following is a list of those items.

Visual scheduler is a tool in Exact Globe Next (part of **SE4010 — E-Special order**) used to view the overall picture of the shop floor schedule, view and manipulate the load from each production order operation scheduled to run through each operation, and view and manipulate the schedule of a production order.

- All active or new production orders can be globally scheduled or a single production order can be scheduled using Visual scheduler.
- Production order operations can be moved into another timeframe or another operation and their scheduling variables can be changed.
- The capacity for operations can be overridden for a specified period of time and What-If scheduling can be performed.
- Key indicators about the shop's schedule can be reviewed to alert the scheduler to bottlenecks, late production orders, and production orders that have not started when they were scheduled to.

1.2 PREPARING TO SCHEDULE

Prior to scheduling production orders, the following steps must be completed to ensure an accurate schedule:

1. Enable working with operations by selecting the **Operations** check box under the **Operations** section in **Manufacturing settings**.
2. Define shifts at Manufacturing → Setup → Shifts.
3. Set up the operation capacity in the **Capacity/Scheduling** tab of the operation maintenance screen (Manufacturing → Setup → Operations).
4. Ensure production orders are set up for scheduling. Production orders must have accurate run estimates in order to properly schedule.

1.3 FINITE SCHEDULING VERSUS INFINITE SCHEDULING

Visual scheduler is an infinite scheduling tool by default. Infinite scheduling means that the production orders will be scheduled to the promised date without regard to the capacity of the operation. Finite scheduling is an option with Visual scheduler. Finite scheduling means that the production orders will be scheduled based on the capacity of the operation using the Scheduling Pecking Order (also called Production Finite Scheduling Sequence) that will be set in the Visual scheduler preferences. The Scheduling Pecking Order will be the sequence that production orders are scheduled when global scheduling a finite operation. Your pecking order choices are to schedule based on earliest due date, fewest remaining hours, or promise date. Using the Visual scheduler preferences, you can decide the order in which the production orders in your shop will be scheduled.

Tip:

Only operations that are considered as bottlenecks in your shop should be set to **Finite**. These are operations that have only one available resource. For example, if everything has to go through the Saw and you have only one machine or one operator, this operation should be set to **Finite**. Other operations with multiple resources (machines or people) can be managed using the **Infinite scheduling** option. For more information, see *Chapter 2.2 Defining capacity per operation*.

2. SETTING UP EXACT VISUAL SCHEDULER

2.1 CREATING AND DELETING SHIFTS

You can create and delete shifts for your operations.

The screenshot shows the '932 Shifts - Exact' window. At the top, there's a menu bar with 'File', 'Edit', and 'Help'. Below it is a toolbar with icons for adding, saving, undo, redo, copy, paste, zoom in, zoom out, and help. The main area is divided into two sections: 'Working day' and 'Break'. The 'Working day' section has a table with columns 'Working day', 'Shift day', 'Start time', and 'End time'. The 'Break' section has a table with columns 'Description', 'Start time', 'End time', and 'Scheduling break'. At the bottom, there are buttons for 'Save', 'New', and 'Close'. The status bar at the very bottom shows '932 MacBean NL', the user 'Caroline (yong294651)', the ID '00000001525', and the date 'Thursday, 6 October, 2016'.

Working day	Shift day	Start time	End time
<input type="checkbox"/>	Sunday		
<input checked="" type="checkbox"/>	Monday	08:00	16:00
<input checked="" type="checkbox"/>	Tuesday	08:00	16:00
<input checked="" type="checkbox"/>	Wednesday	08:00	16:00
<input checked="" type="checkbox"/>	Thursday	08:00	16:00
<input checked="" type="checkbox"/>	Friday	08:00	16:00
<input type="checkbox"/>	Saturday		

Description	Start time	End time	Scheduling break
Lunch	12:00	12:30	<input checked="" type="checkbox"/>

To create shifts:

1. Go to Manufacturing → Setup → Shifts, and then click **New**.
2. In the **Shifts** screen, define the code at **Shift code**. This is mandatory.
3. Click **Save**.
4. Under the **Working day** section, select the work day(s) for the shift.
5. Define the start time and end time respectively for each day.
6. If required, you can create breaks for the shift by clicking **New** under the **Break** section. Define the description of the break, the start time, and end time.
7. Click **Save**.

To delete shifts:

1. Go to Manufacturing → Setup → Shifts.
2. Select the required shift.
3. Click **Delete**. A message requesting for confirmation to delete the shift will be displayed.
4. Click **Yes** to confirm the deletion.

Note:

- A shift that is linked to an operation cannot be deleted. You will first need to remove the shift from the operation.
- Scheduled breaks will be deducted from total capacity time.

2.2 DEFINING CAPACITY PER OPERATION

When **SE4010 — E-Special order** is in the license, the **Capacity/Scheduling** tab is displayed in the operation maintenance at Manufacturing → Setup → Operations. Here, you can define the available capacity for each operation and create parent-child relationships for operations.

The screenshot shows the 'Capacity/Scheduling' tab in a software interface. The tab is highlighted with a red underline. Below the tab, there are three main sections: 'Scheduled resources' with a text input field containing the number '2', 'Restrictions' with two radio buttons labeled 'Labour' and 'Machine' (where 'Labour' is selected), and 'Finite schedule' with a checked checkbox.

Scheduled resources

Define the maximum number of resources that can work simultaneously on this operation. Otherwise, define the maximum number of machines that can be worked with in this work center. The value defined will be used as the default value in the **Scheduled resources** column under the **Shift** section.

Restrictions

Select **Labor** or **Machine** to determine if the total quantity of hours in the operation are labor or machine hours.

Finite schedule

This check box determines if the capacity is finite or infinite.

- **Finite capacity** — Select the check box to indicate that the capacity is finite. This means that the lead time is limited by the available capacity of the operation. This option can be used for bottleneck operations. When the load reaches 100% of capacity, all other operations that are scheduled before this time will be advanced to the first available capacity.
- **Infinite capacity** — Clear the check box to indicate that the capacity is infinite. With this, you can schedule the operation without taking into account the load and capacity of the operation.

Shift section

Shift				
	Select	Shift	Scheduled resources	Weekly capacity
1	<input checked="" type="checkbox"/>	DAY	2	75.00
2	<input type="checkbox"/>	EVENING		0.00
3	<input type="checkbox"/>	NIGHT		0.00

Select

Select the check box(es) for the shift(s) that you want to use for this operation.

Shift

The available shifts will be displayed in this column.

Scheduled resources

Define the maximum number of resources that can work simultaneously on this operation. Otherwise, define the maximum number of machines that can be worked with in this work center. When you select a shift for the operation, the value defined in the **Scheduled resources** column will be used for the particular shift.

Weekly capacity

The calculated capacity will be displayed here. This column cannot be edited. The capacity is calculated as follows:

Scheduled resources * sum of (working hours in the shift – scheduled breaks)

Child operations section

Child operations		
Parent <input type="text"/>		
	Operation	Description
1	MOLD	Mold

Under this section, you can create a parent-child relationship by adding child operations to an operation. Note that this is a one-level relationship.

2.3 PARENT AND CHILD OPERATIONS

Parent and child operations are helpful in cases where you have more than one of the same machines (in an operation) on the shop floor. When you create a production order that runs parts through one of those machines in the operation, you may not know which machine will actually end up running the production order. This is when the parent and child operations can help you to manage your shop more effectively.

Example:

You have three CNC Lathes on your shop floor.

In this case, you create three operations called CNC Lathe1, CNC Lathe2, and CNC Lathe3.

Then, you create an operation called CNC Lathe and add CNC Lathe1, CNC Lathe2, and CNC Lathe3 as its child operations.

When you create a production order that, in order to complete parts, must go through a CNC Lathe, you specify CNC Lathe on the production order.

While in Visual scheduler, after the production order has been scheduled on the parent operation, you can decide which child operation has the capacity to run the production order. It is as simple as clicking on the parent operation and dragging the production order to the correct child operation.

Note:

If the parent is marked as **Finite**, Visual scheduler will automatically schedule on one of the children, based on the available capacity. If you do not want the scheduling engine to assign production orders to child operations automatically, do not select the **Finite schedule** check box on the parent operation.

The child operations will always follow the parent operation's **Finite** setting. In other words, if the parent is marked as **Finite**, all the children will be as well. If the **Finite** setting is cleared for the parent, it will be for all children as well. In a child operation, the **Finite** setting will always be greyed out.

3. SCHEDULING RULES

3.1 FINITE SCHEDULING RULES

1. With the parent and child relationship, all children will be marked as **Finite** if the parent is marked as **Finite**.
2. Capacity of the parent = Capacity of all the children.
3. Load = The total load of all the children.
4. If the operation is selected as a finite operation, the scheduling engine will not look at capacity of the parent. The engine will look at the available capacity of the children.
5. When finite scheduling on more than one resource, Visual scheduler will find the first slot available with both resources but may finish the production order on one resource if only one is available.
6. Finite scheduling also gives you an option (via the **Move** function) to allow overloading of a finite operation.
7. If you choose to overload a finite operation, the **Global scheduling** screen will be displayed with all production orders scheduled on the operation. You can then choose the production orders to clear or to schedule.

3.2 SCHEDULING RULES TO REMEMBER

1. Visual scheduler will NOT tell you the order in which you run your production orders. There are too many variables to be considered for Visual scheduler to make assumptions. Your Shop Scheduler will ultimately be responsible for this decision.
2. When the Shop Scheduler tells Visual scheduler where to schedule a production order, Visual scheduler will NOT move or change that schedule.
3. The operation availability drives scheduling. If you do not have the operation scheduling variables and shifts defined, the operation will have NO availability.
4. The scheduling engine will NOT overload a finite operation.
5. Production orders are backward scheduled from the promised date minus any ship lead days.
6. Production orders without open deliveries are forward scheduled from the current date.
7. When operations that have been started are rescheduled, the end date may change, but the start date will not change.
8. The production orders are scheduled in the order that they are displayed in **Global scheduling**. This order can be manipulated before clicking the **Schedule** button.
9. When the Shop Scheduler changes or moves a production order scheduled, the scheduling engine will NOT modify those changes unless the Shop Scheduler tells Visual scheduler to do so.
10. When adjusting the start time of an operation due to material availability, the operation start can be pushed out, but will NOT be pulled in.

3.3 GETTING INTO EXACT VISUAL SCHEDULER

The following forms and dialogs will be discussed on the next pages:

Shop overview — This provides an overview of the load of each operation and capacity in day, week, or month intervals.

Unscheduled production orders — This function is the same as **Global scheduling** except that it is available from **Visual scheduler** in the **Shop overview** and **Operation zoom in** forms.

Operation zoom in — This provides the ability to view each production order scheduled in each operation and move production order operations into other timeframes.

Production order zoom in — This function is the same as **Production order scheduling**, except that it is available from **Visual scheduler** in the **Shop overview** and **Operation zoom in** forms.

Exact Visual scheduler preferences dialog — This option is available from the settings menu and provides the ability to define the pecking order that production orders are scheduled when **Global scheduling**, the duration of the Firm Zone®, and the display settings for the **Shop overview** and **Operation zoom in** forms.

Operation display order dialog — This option is available from the settings menu and provides the ability to select the operations to be viewed in the **Shop overview** and **Operation zoom in** forms, and also define the order that they are listed.

Edit operation capacity dialog — This provides the ability to override the capacity of an operation for a specified date range.

Move history dialog — This provides the ability to view the history of production order operations that have been moved in the **Operation zoom in** form.

4. EXACT VISUAL SCHEDULER PREFERENCES

You can define the settings for Visual scheduler, such as the background color for the timeframe of each operation, and the order and the information to be displayed on the Gantt bar.

To define preferences for Visual scheduler:

1. Go to Manufacturing → Planning → Visual scheduler.
2. In the **Selection: Production order** screen, define the criteria to display only the production orders that you want to view in the scheduler.
3. Click **Start**.
4. Click **Settings**. Alternatively, click **Op. zoom in** at the toolbar, and then click **Settings**.
5. Click **Operation order**, and then define the operations to be listed in Visual scheduler as well as the order that you would to view them.

Operation display order ✕

Available

Operation	Cost centre
▶ BEND	
CUT	
DRILL	
WELD	

>

<

>>

<<

Selected

Operation
▶ MOLD
STAMP
ASSEMBLE
PACK

***Note: Child operations are not displayed in this list, but will be displayed with the parent operation.**

OK
Cancel

6. Click **OK**.

7. Next, click **Settings** and click **Preferences**. You will see the following screen:

Visual scheduler preferences

General Shop overview Operation zoom in

Production finite scheduling sequence
Move below to change order

Order	Criteria
1	Earliest delivery
2	Fewest remaining hours
3	Earliest order date

Firm zone settings
Length: 3 Duration: Weeks

OK Cancel

8. If you have marked any operation as **Finite**, define your Scheduling Pecking Order under the **Production finite scheduling sequence** section in the **General** tab.
9. Define your settings under the **Firm zone settings** section.
10. Click the **Shop overview** tab. The following screen will be displayed:

Visual scheduler preferences

General Shop overview Operation zoom in

Display options

When load is below 90 % of capacity, change background to Green

When load reaches 90 % of capacity, change background to Yellow

When load reaches 100 % of capacity, change background to Red

Default horizon
Display for 30 days prior to today and 30 days after Firm zone

OK Cancel

11. Select the color scheme to be used when hitting specific thresholds, and then define the horizon.

12. Click the **Operation zoom in** tab. The following screen will be displayed:

The screenshot shows the 'Visual scheduler preferences' dialog box with the 'Operation zoom in' tab selected. The dialog has three tabs: 'General', 'Shop overview', and 'Operation zoom in'. The 'Display options' section contains three rows for load thresholds: 'When load is below' (90) with background 'Green', 'When load reaches' (90) with background 'Yellow', and 'When load reaches' (100) with background 'Red'. The 'Display: User settings' section includes 'Bar info.' with three dropdowns: 'Make item desc.', 'Debtor name', and 'Production order'. Below these are three checkboxes: 'Labels' (checked), '3-row view' (unchecked), and 'Load/Capacity (Hours)' (checked). The 'Tooltip' section has a 'Selection' button. At the bottom right are 'OK' and 'Cancel' buttons.

Condition	Value	% of capacity, change background to	Color
When load is below	90	% of capacity, change background to	Green
When load reaches	90	% of capacity, change background to	Yellow
When load reaches	100	% of capacity, change background to	Red

Display: User settings

Bar info.

Field	Value
Make item desc.	Make item desc.
Debtor name	Debtor name
Production order	Production order

☒ **Labels** ☐ **3-row view** ☒ **Load/Capacity (Hours)**

Tooltip

Selection

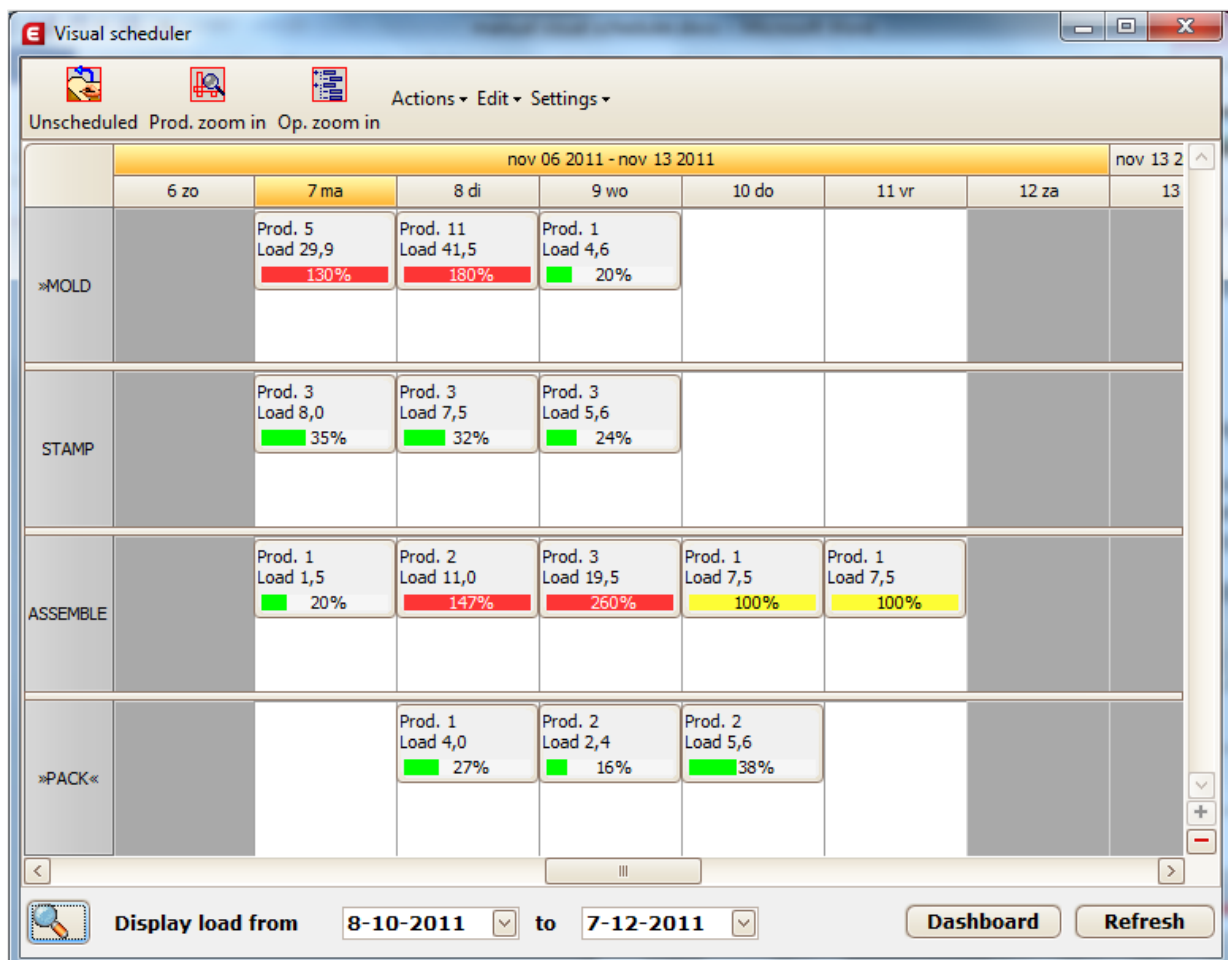
OK Cancel

13. Select the color scheme to be used when hitting specific thresholds and make selections as to the information to be displayed for each production order. Your choices are to display the production order number, part number, customer ID, and labels. You can choose to display all of the information for each production order.

5. SHOP OVERVIEW

Use the **Shop overview** form to view the big picture of shop load versus capacity. In this view, you can:

- review the number of production order operations scheduled to run through each operation.
- review the total load hours from the production order operations scheduled in each operation.
- review the percentage of the capacity of an operation that the load uses up for the defined timeframe.



Scheduled zones of an operation

STAMP	Prod. 3 Load 8,0 <div><div></div></div> 35%	Prod. 3 Load 7,5 <div><div></div></div> 32%
ASSEMBLE	Prod. 1 Load 1,5 <div><div></div></div> 20%	Prod. 2 Load 11,0 <div><div></div></div> 147%
»PACK«		Prod. 1 Load 4,0 <div><div></div></div> 27%

A scheduled zone displays the following:

- **Prod.** — The number of production orders scheduled to run through the operation during the selected timeframe (day, week, or month).
- **Load** — The total load hours in the operation during the selected timeframe (day, week, or month).
- **Load/Capacity Progress Meter** — The percentage of the capacity of an operation being used by the load created from all production order operations scheduled to run through the operation during the selected timeframe (day, week, or month).

Note:

Finite operations are flagged with >> << in the operation list.

STAMP	Prod. 3 Load 8,0 35%	Prod. 3 Load 7,5 32%	Prod. Load
ASSEMBLE	Prod. 1 Load 1,5 20%	Prod. 2 Load 11,0 147%	Prod. Load
»PACK«		Prod. 1 Load 4,0 27%	Prod. Load

Prod. 2
Cap 7,5
Load 11,0
Late 0

A scheduled zone tooltip will be displayed when you mouse over a work day. It will display the following:

- **Production orders** — The number of production order operations scheduled in the operation during the selected timeframe (day, week, or month).
- **Cap** — The capacity of the operation during the selected timeframe.
- **Load** — The total load of the operation during the selected timeframe.
- **Late** — The number of late production orders during the selected timeframe.

In general, there are two periods to deal with when scheduling. The first time period is a more finite time period where things are more firm and will not change as often. This will be your Firm zone. The second time period is the longer more fluid time period where requirements are expected to change.

A production order operation scheduled in the Firm zone is considered either pending or approved. A production order operation scheduled in the Firm zone is pending until it is either locked or approved.

6. OPERATION ZOOM IN

Use the **Operation zoom in** form to view and manage the production orders scheduled in each operation to:

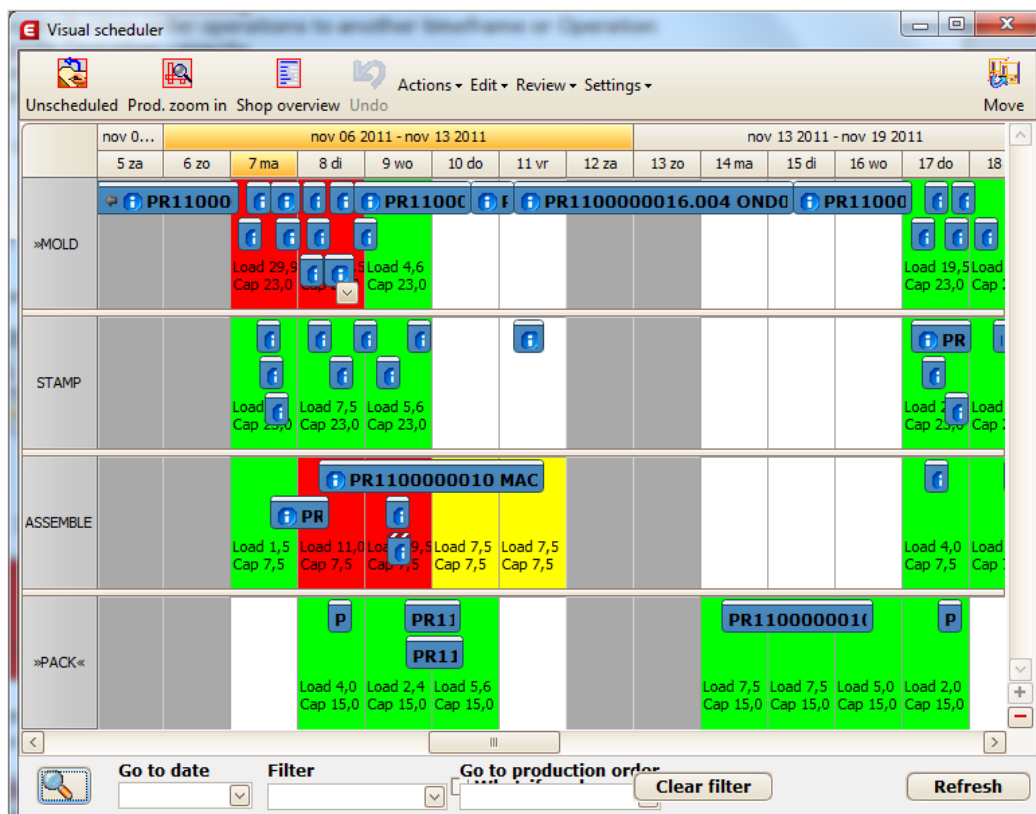
- define the Visual scheduler preferences and operation display order.
- global schedule production orders.
- perform What-If scheduling.
- move production order operations to another timeframe or operation.
- override operation capacity.
- review key production order operation details.
- change production order status.

Note:

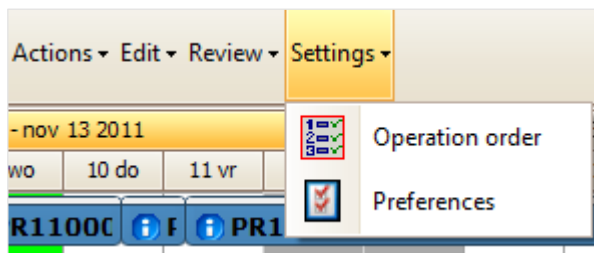
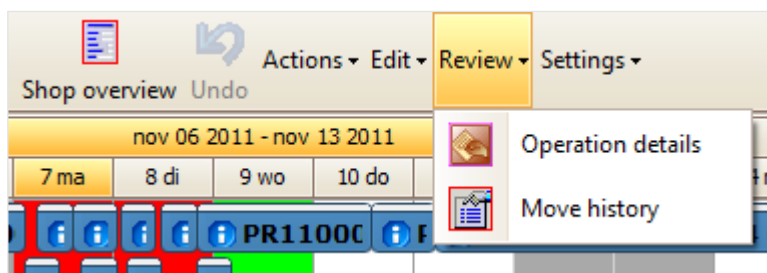
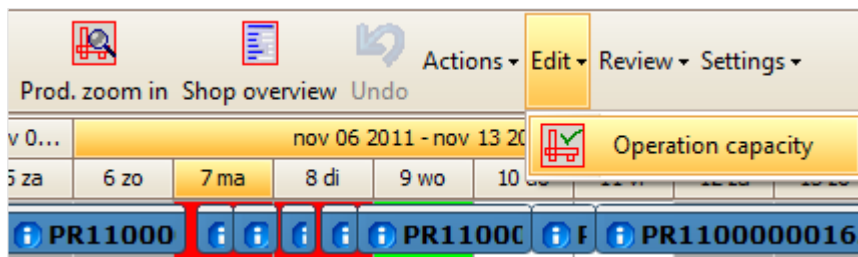
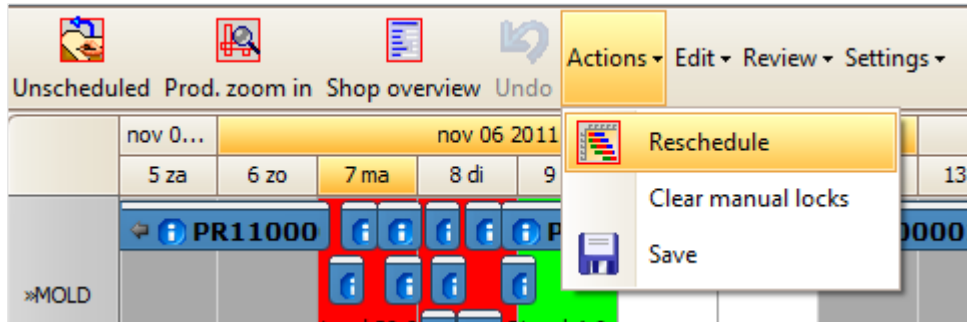
All changes are automatically saved unless the user is in the What-if mode.

To launch Operation zoom in:

1. Go to Manufacturing → Planning → Visual scheduler.
2. In the **Selection: Production order** screen, define the criteria to display only the production orders that you want to view in the scheduler.
3. Click **Start**.
4. Click **Op. zoom in** at the toolbar and the following screen will be displayed:

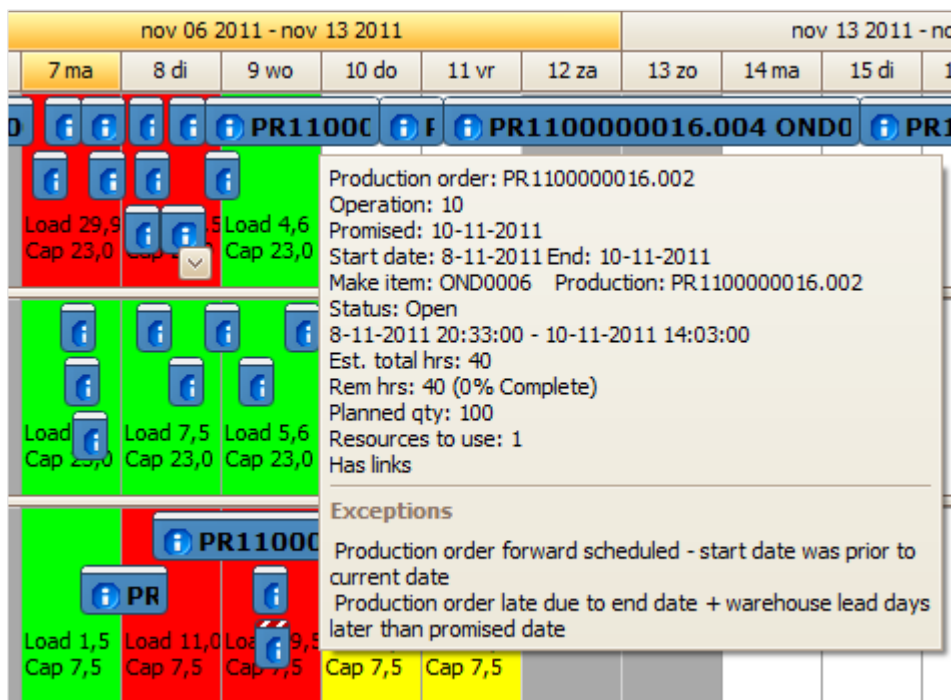


5. In the **Operation zoom in** function, the toolbar options at the top of the screen have changed. Each menu option is listed in the following:



What can I do in Operation zoom in?

1. Set up the **Operation zoom in** form to the desired view.
2. Review the scheduled zone of a production order operation.
3. View the tooltip information of a production order operation by hovering your mouse over the scheduled zone.
4. Review the details of a production order operation.
5. View its production order operations, links, exceptions, and manipulate its schedule by zooming into a production order.
6. Perform the What-If scheduling.
7. Unlock a production order operation that is locked by right-clicking the production order operation, and then selecting **Clear manual locks**.
8. Move a production order operation into another timeframe.
9. Move a production order operation into another operation.
10. Override the capacity of an operation.
11. Make the selected day a work day or non-work day.
12. Approve the production order operation in the Firm zone by right-clicking on a production order operation, and then selecting **Approve**.
13. Click **Refresh** to refresh the **Operation zoom in** form and to display the latest information in the system.
14. Reschedule the previously scheduled production orders accounting for the changes made while in **Operation zoom in** by clicking **Reschedule** from the **Actions** menu.



Tooltip — When you hover your mouse over a production order in its scheduled zone, the tooltip will be displayed with all of the pertinent scheduling information for that production order in the selected operation.

To view detailed information of an operation:

1. Double-click the production order in the scheduled zone. The **Operation details** screen will be displayed:

The screenshot shows the 'Operation details' window with the following data:

Prod./operation		
Prod.	Make item	Description
PR1100000016.002	OND0006	PRODUCTION: PR1100000016.002

Operation	View another OP	Debtor
MOLD	MOLD	

General | BOM

Hours			Production quantities	
	Setup	Run		
Planned	0	40	Planned	100
Realized	0	0	Realized	0
Projected	0	40		

Scheduling

Start date	End date	Resources to use
8-11-2011 20:33	10-11-2011 14:03	1

Status	Actual start
Open	

OK Close

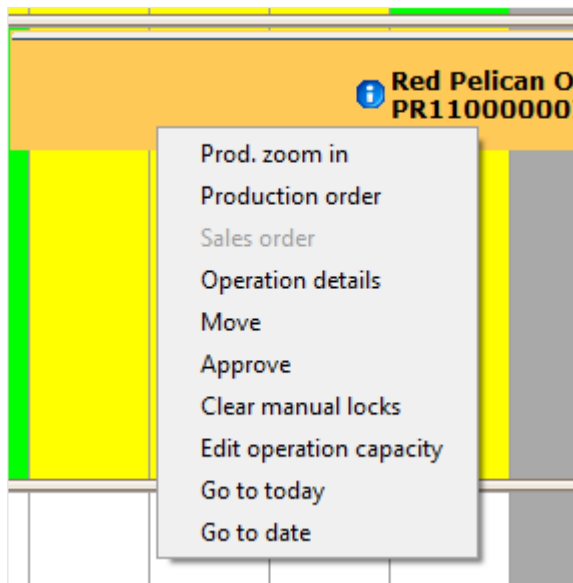
There are two tabs in this screen:

- **General** tab —This tab allows you to view general production order information, such as the make quantity and actual total time by operation.
- **BOM** tab — This tab allows you to view materials linked to this operation as well as due dates of the materials.

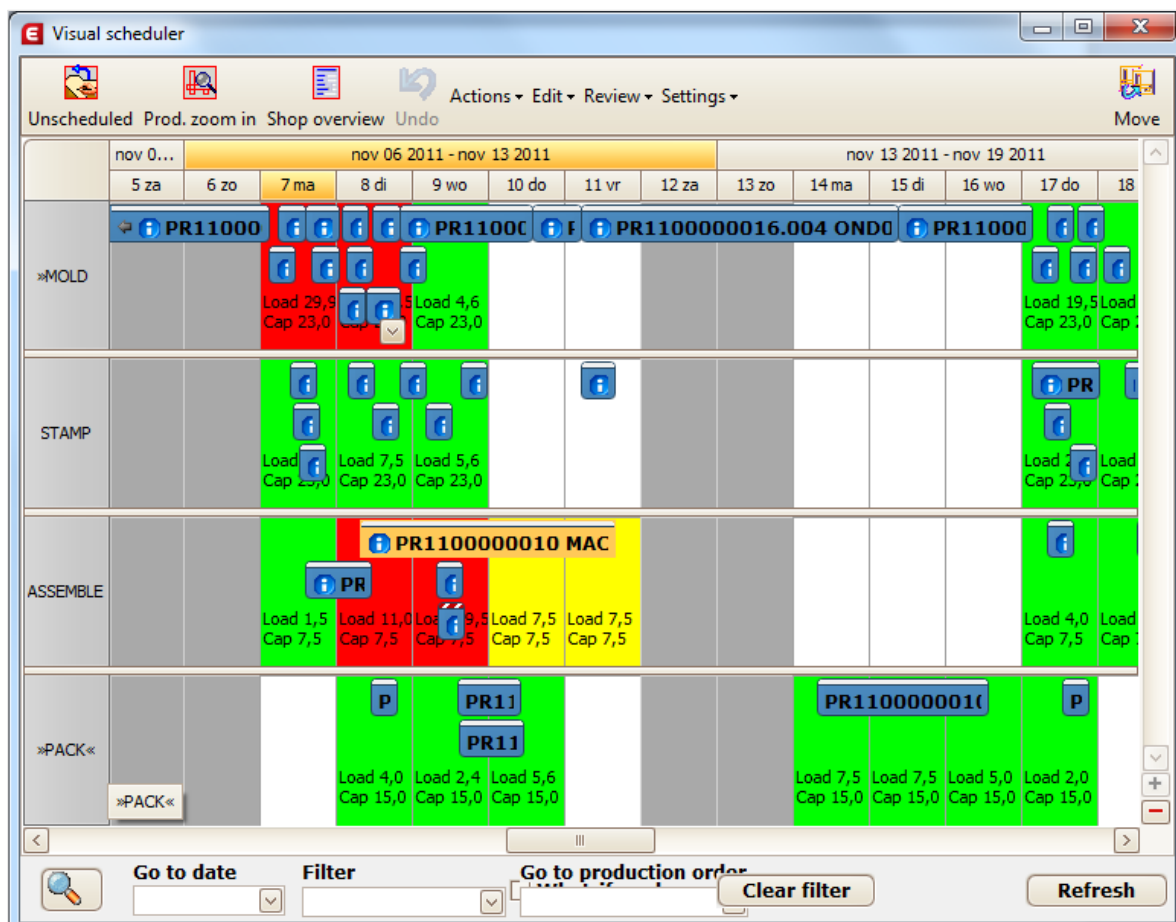
Note:

The actual start date field can be manually defined or it will be populated with the start date of the first time entry against this operation. Visual scheduler will now hold onto this date as well as the scheduled start and scheduled end dates so that you can compare these dates.

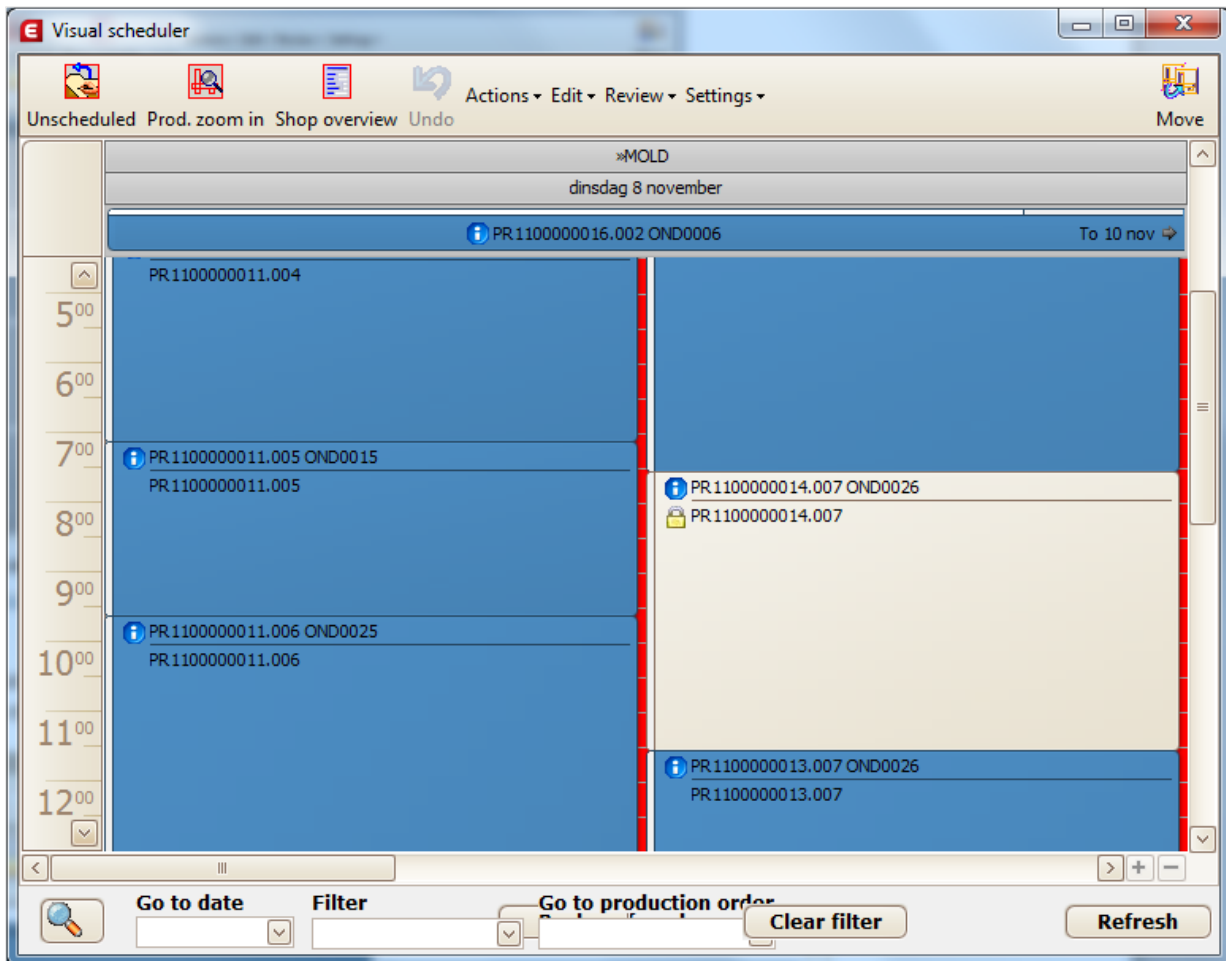
Use the right-click option on your mouse to access the options in the menu. Many of the options that you see in the right-click menu are also available from the drop-down menus at the top of the screen. The following is an example of the menu when you right-click on a production order:



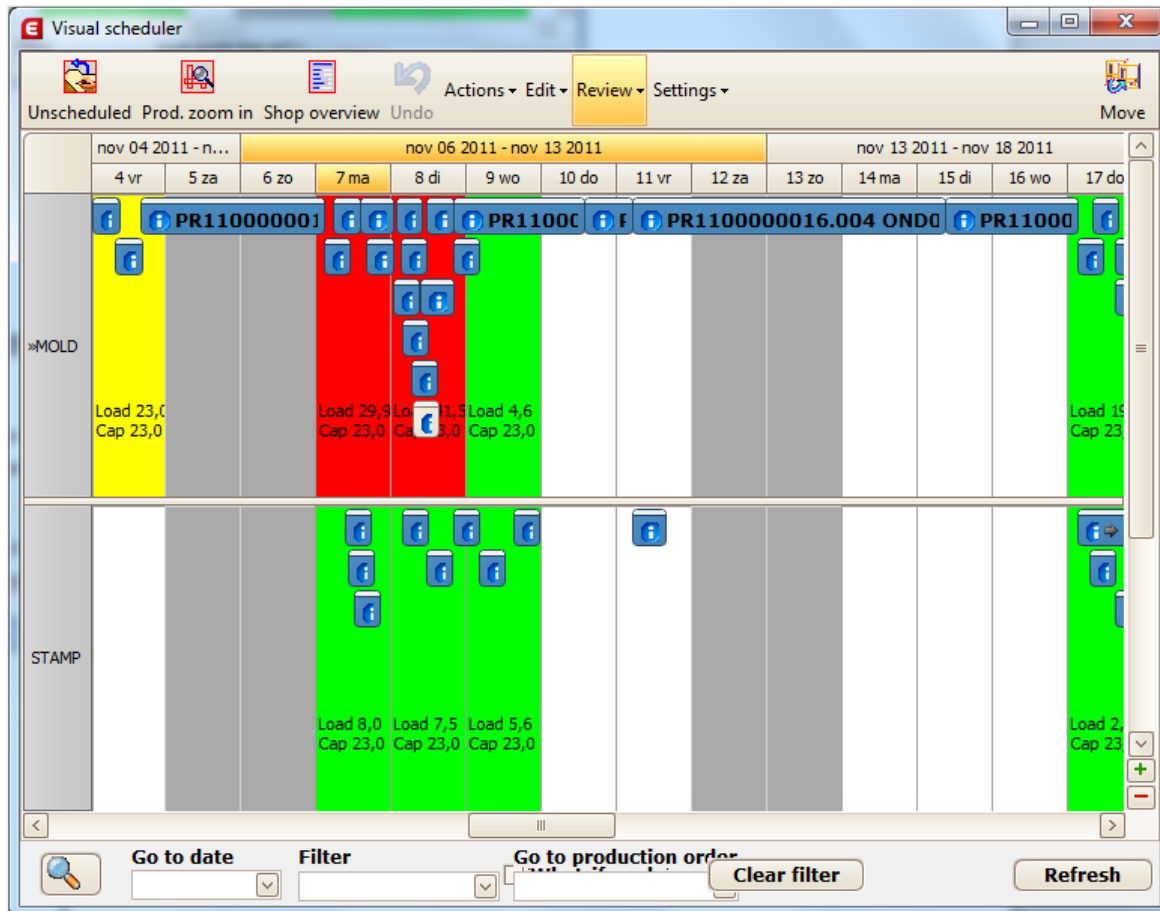
When you see a drop-down menu inside the scheduled zone of a production order, this means that there are more production orders in that scheduled zone. Click the drop-down menu to view the production orders.




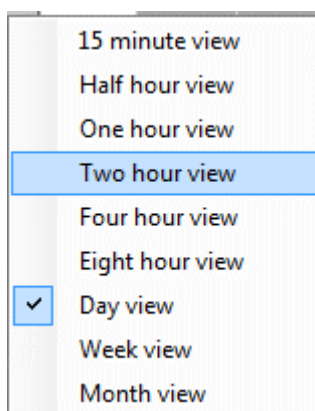
When you click the drop-down menu, it takes you into the **Day** view so that you can view all of the production orders that are scheduled in the same timeframe. See the following screen for an example:



Another option to view fewer operations in the scheduled zone is to click the minus sign located on the scroll bar at the right. For an example, after clicking the minus sign twice, the screen will update and show all the production orders in the **Mold** operation. The results will depend on the number of production orders in the selected timeframe.



You can also choose the view options across the top of the screen. For example, the screen above is displayed in **Four hour view**. Click  to change the view.



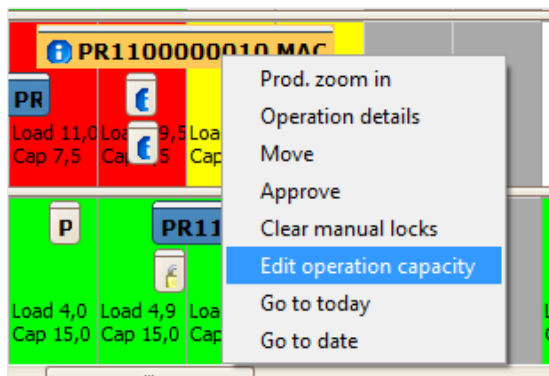
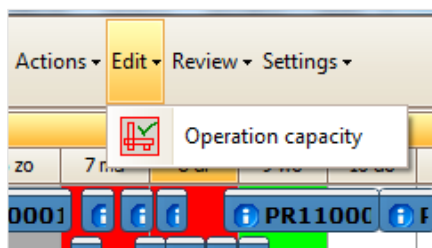
You can use the **Go to** options to jump to a specific date or production order.

7. EDIT OPERATION CAPACITY

The capacity for each operation can be defined in the operation maintenance (Manufacturing → Setup → Operations). It is possible to deviate from the default capacity, for example, if someone called in sick, or a machine broke down.

To edit capacity of operations:

1. Go to Manufacturing → Planning → Visual scheduler.
2. Click **Edit** at the toolbar, and then select **Operation capacity**. Alternatively, right-click on the operation, and then click **Edit operation capacity**.



3. After clicking **Edit operation capacity**, a pop-up screen will be displayed, as shown in the following:

 A screenshot of the 'Edit operation capacity' dialog box. The dialog has a title bar 'Edit operation capacity' with a close button. It contains several sections:

- Select operations:** A list of operations with checkboxes: OP001, MOLD (checked), STAMP, ASSEMBLE, and PACK.
- Date range:** Fields for 'Start date' and 'End date', both set to 10/11/2011.
- Options:** Radio buttons for 'Edit working days', 'Edit shift information' (selected), and 'Restore defaults'.
- Change shift information for selected days in date range:** A section with checkboxes for days of the week: Sunday, Monday, Tuesday, Wednesday, Thursday (checked), Friday, and Saturday.
- Shift Information Table:** A table with columns: Off, On, Shift, Start time *, End time *, Break start*, Break end*, Scheduled reso..., and Hc. It lists three shifts: DAY, EVENING, and NIGHT.
- Footer:** A message 'ck update to apply capacity changes to selected operations.' and two buttons: 'Update' and 'Close'.

To override capacity of operations:

1. In the **Edit operation capacity** screen, under the **Select operations** section, select the check box for each of the operation to which you want to apply the changes.

Note:

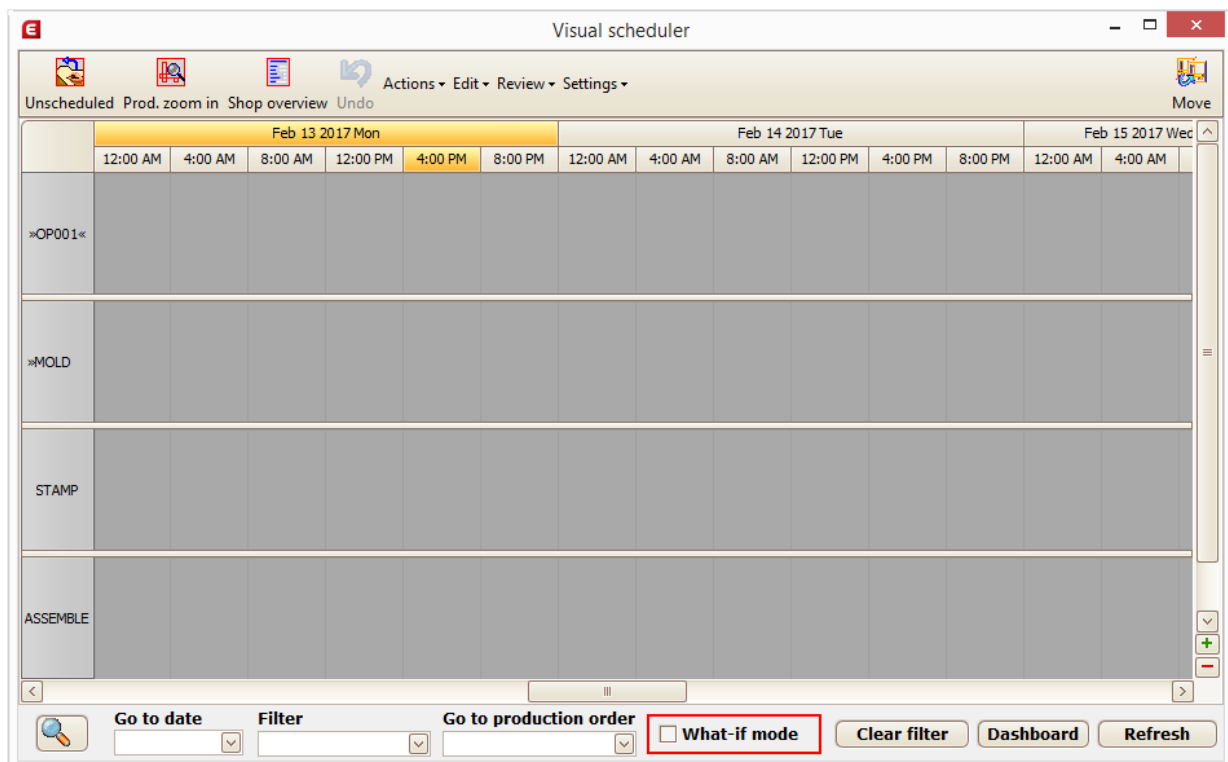
If you have selected a scheduled operation in the **Shop overview** or **Op. zoom in** form, the operation will be selected by default.

2. At the **Start date** and **End date** fields, type or select the dates to define the start and end dates of the change.
3. Modify the work days and shift details of the selected operation.
4. Click **Update** to apply the capacity changes to the selected operations.
5. Click **Close** to exit.

Field	Description
Start date	Define the start date of the change.
End date	Define the end date of the change.
Edit working days	Edit the days defined at the Start date and End date fields as work or non-work days.
Edit shift information	Modify the shift information for the selected days.
Restore defaults	Restore the shift information of each operation to its default.
Set as non-working day for selected operations	Select this option if you want each day in the specified date range to be a non-work day. Note: This is available only if you have selected Edit working days .

8. WHAT-IF SCHEDULING MODE

All the changes are automatically saved in Visual scheduler. To make changes without having them saved instantly, select the **What-if mode** check box. While in the What-if mode, you have the option to save the changes that were made as and when necessary. When in the What-if mode, you can disable the mode by clearing the check box. You will then be asked if you would like to save the changes that have been made while in the What-if mode.



Tip:

When not in the What-if mode, you can click the **Undo** button at the top of the screen to reverse any changes that have been made.

9. MOVING OPERATIONS

To move a production order from one timeframe to another or from one operation to another, you can use any of the following three options:

- Select the production order and drag it to the new timeframe.
- Select the production order and click the **Move** button.
- Select the production order and right-click to access the **Move** option from the menu.

Regardless of which option you select, the **Move step** screen will be displayed and you can choose your options.

You have options to change the operation, start date, and time as well as choose the previous or subsequent operations that you want to move.

Note:

Moving an operation locks it in place. **Global scheduling** cannot change the start and end times of a locked operation. A lock icon will be displayed on the operations that were moved.

Selecting different move options have different ramifications to the production order schedule when you reschedule the production order through **Global scheduling**.

Caution:

Locked operations will not be rescheduled by the **Global scheduling** function.

If you select **Move this step only**, then the operation that was moved as well as the previous and next operations will be locked. The previous and next operations are locked because you are confirming that the current start or end times of both operations are correct and perhaps the only window of time to get this production order done. The previous and next operations are not moved, just locked.

If you select **Include previous steps**, then the operation that was moved as well as the next operation will be locked. This is because you are telling Visual scheduler that the scheduled start or end times of the subsequent operations should not be changed.

If you select **Include subsequent steps**, then the operation that was moved as well as the previous operation will be locked. This is because you are telling Visual scheduler that the scheduled start or end times of the previous operations should not be changed.

If you select **Move entire routing** only, the operation that you are moving will be locked. The next time that this production order is rescheduled, the previous routing lines will be backward scheduled from the locked operation(s) and the subsequent routing lines will be forward scheduled from the locked operation(s).

Note:

When using the **Move entire routing** option, all related suborders will be moved as well.

Move history report

The **Move history** report displays the timeframe and work center to which the production orders have been moved.

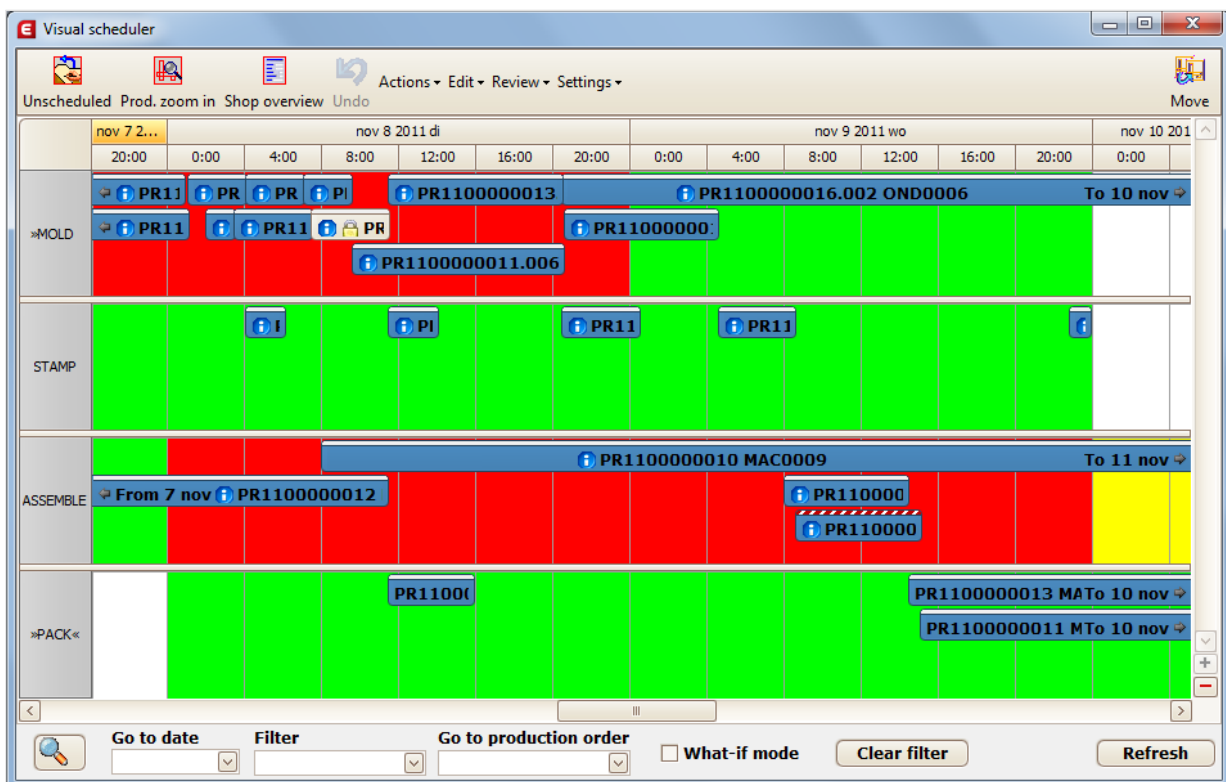
Production order	Step	Old start	New start
PR1100000008.003		5-9-2011	6-9-2011
PR1100000009.006		7-9-2011	8-9-2011

To view the move history report:

1. Go to Manufacturing → Planning → Visual scheduler.
2. In the **Selection: Production order** screen, define the criteria to display only the production orders that you want to view in the scheduler.
3. Click **Start**.
4. Click **Op. zoom in** at the toolbar.
5. Click **Review** at the toolbar, and then click **Move history**.

10. WHAT DO THE ICONS AND COLORS IN EXACT VISUAL SCHEDULER MEAN?

In Visual scheduler, you will see many different colors on production order indicators as well as icons. The following is a list of those icons and the colors that are displayed on the screen.



PR1100000012 MAC0007

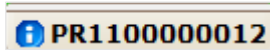
A production order that has a blue indicator means that the production order is in the Firm zone and the production order has not been approved.

PR1100000012 MAC0007

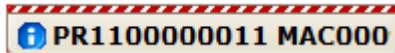
A production order that has a grey indicator and in the Firm zone means that the production order has been approved.

Tip:

Production orders outside of the Firm zone will be displayed in grey as well.

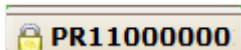


A production order with the “i” icon means that this production order operation has links or that there is an exception for this operation on the production order. Mouse over the icon to display a tooltip that will provide further explanation.



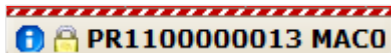
A production order with a red and grey stripe at the top (also called a candy cane stripe) means one of these three things:

- the production order is scheduled past its promised date,
- the production order has components linked to it and the components are not complete, or
- the production order has material links that are marked as “affects scheduling” and those materials have an actual quantity of 0.



A production order with a lock icon on it means that the operation is locked and will not be rescheduled by the **Global scheduling** function. You can right-click and clear manual locks if necessary.

You may see multiple icons on one production order indicator. For more information, see the following example:

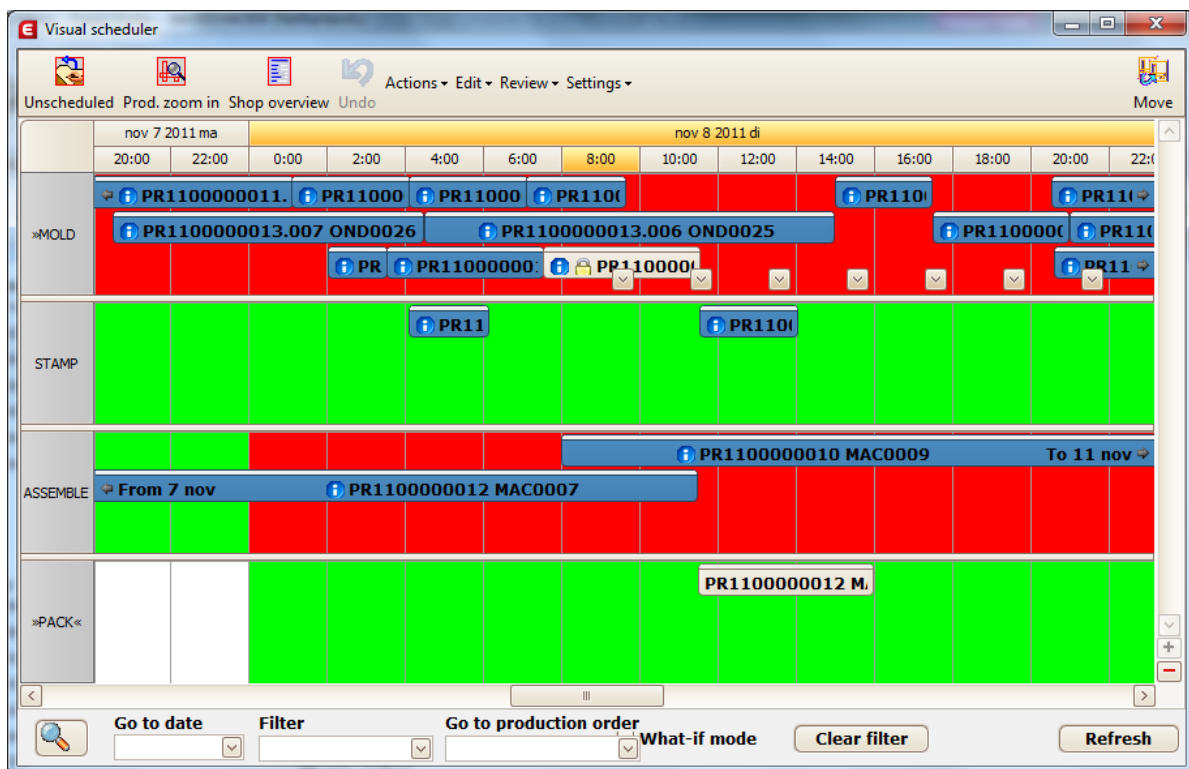


Remember to hover your mouse over the production order indicator to view detailed information of the production order.

11. PRODUCTION ORDER ZOOM IN

To view one individual production order, you can use the **Production order zoom in** function. You can use this function to manipulate auto links, create manual links, view an Outside Service schedule, preview the production order completion status, or reschedule an individual production order.

Before you click **Prod. zoom in**, click on a production order in the **Op. zoom in** screen. The production order selected will turn orange. If you do not select a production order before clicking **Prod. zoom in**, you will have to manually enter the production order number when the **Prod. zoom in** screen is displayed.



Once you click **Prod. zoom in**, the feature allows you to do the following:

- Review the information of the production order in the header section.
- Preview the schedule of the production order by clicking the **Production preview** hyperlink. Any portion of the production order that has been completed will also be displayed.
- Clear the current schedule of the production order, if necessary, by clicking **Clear**. You might do this if you want to manipulate the links that currently exist on the production order.
- Review key details about each production order operation by clicking the **Details** hyperlink.
- Manually link material requirements and/or component production orders to production order operations in the **Links** tab, if necessary (not available yet).
- Review the scheduling information of any of the production order operations or change their scheduling variables in the **List** tab. You can edit any field with an * in the **List** tab.
- Review the schedule of the production order in a Gantt view or move production order operations in the **Gantt** tab. You can also move production order operations in the **List** tab using the **Move** button at the top right corner of the screen.
- Check the **Scheduling options** dialog.
- Review the components of the production order if the production order is an assembly production order.
- Review any scheduling exceptions in the **Exceptions** tab.

Visual scheduler

Search Save Shop overview Op. zoom in Move

Production order SO qty Planned qty Status Start date End date
 PR1100000014.007 0 10 Open 8-11-2011 10-11-2011

Make item Assembly view Promised To be realized
 OND0026 PR1100000014.0... 10-11-2011 10

Gantt List Components Exceptions Links

	nov 7 2011 ma		nov 8 2011 di											
	20:00	22:00	0:00	2:00	4:00	6:00	8:00	10:00	12:00	14:00	16:00	18:00	20:00	22:00
MOLD							Rem hrs:4							
STAMP								Rem hr						

Assembly overview Production preview Details Clear Schedule

Note:

- Use the + or — button to show more or less operations.
- All changes made in the **Production order zoom in** screen must be saved.

12. EXACT VISUAL SCHEDULER DASHBOARD

Firm Zone section

Unapproved Ops refers to the number of production order operations that have been scheduled in the Firm zone without being approved by the scheduler.

APPENDIX A: PRODUCT UPDATE CHANGES

Product Update	Chapter
406	4, 6
404	All chapters

Exact builds business software for SMEs and their accountants. Our innovative technology is aimed at specific business needs, providing an overview of today and insights into the opportunities of tomorrow.

Exact inspires businesses to grow. Our 1,600 employees love, share and support our customers' ambition. Like them, we aim high. Like them, we aspire to lead the way. That's how we know it's a bumpy road to success. And that's why we build software to help smooth it out, enabling our customers from all over the world to grow.

Exact. Cloud business software.

www.exact.com