

# USER MANUAL

## Dat-A-Control V3



Customer:  
Address:  
Zip code / town:  
Country:  
Telephone:

Order number:

Year of installation: 2015





## FOREWORD

This is the user manual for *Dat-A-Control*. This manual can be used as a guide to help you with *Dat-A-Control*. This manual is based on the assumption that you have followed a short course “Working with Dat-A-Control”, or that you have learned to use the system in another way.

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# 1. DAT-A-CONTROL

In this chapter we briefly explain what *Dat-A-Control* is, which function the programme has in the glasshouse and how the program is set up.

## 1.1. INTRODUCTION

In this manual is described how you can use *Dat-A-Control* to optimise the growing process. *Dat-A-Control* is the overall name for a software system which is developed to optimise growing on mobile bench systems. The two core features of the system are controlling the mechanical transport system and registration of plant information in the glasshouse. A mechanical transport system takes care of physically moving benches with plant in the glasshouse. This system is made with the following parts:

- infrastructure
- benches
- machines to move the benches
- software to control the separate machines (PLC programs)

The infrastructure is the basis of your logistic system and is built out of rail pipes, transport lines and detection mechanisms. The benches with plants are transported with different machines over the transport lines and rail pipes. Detection mechanisms control the location of a certain bench, and relay this information to the built-in intelligence of the different machines. Based on this information the machine decides whatever action is needed: starting, stopping, going on, going left, or going up. Also in some cases the mechanical transport system can be controlled by *hand*.

## 1.2. PROGRAM SETUP

*Dat-A-Logiqs* is the central component of *Dat-A-Control* and controls the mechanical transport system. On a PC the glasshouse and the mechanical transport system are visible in a graphic overview. With a click of the mouse the user can retrieve information regarding a certain machine, bench or the current bench transport jobs. Besides giving information, *Dat-A-Logiqs* is also used to give jobs to move benches to a different location. *Dat-A-Logiqs* makes sure that the transport system moves the benches at the right time to the right location. All transport movements made by machines are linked to *Dat-A-Logiqs*, which means that at any given time the location of all benches is known.

In *Dat-A-Plant* information is available about plants and batches in the glasshouse. Per batch information about variety, supplier, pot size and important dates is registered. With a click of the mouse the user can see which batch is on a bench, and which benches hold plants of the same batch. By placing the mouse pointer on a bench the required information about the plants in the bench is shown.

## 2. DAT-A-LOGIQS

*Dat-A-Logiqs* is the software to control the mechanical transport system which transports benches. The purpose of this system is to control the Logiqs bench system and knowing at which location the benches are, and where the benches have been in the past.

### 2.1. CONFIGURATION

*Dat-A-Logiqs* is configured per nursery, which means that the glasshouse overview including the Logiqs machines and all wanted settings (departments, transport lines, name setting, etc.) are configured in *Dat-A-Logiqs*.

*Dat-A-Logiqs* can be linked to *Dat-A-Plant*, but this isn't necessary. In cases when only *Dat-A-Logiqs* is used, information about the content of the benches is not available.

### 2.2. LOGIN

When you double click on the *Dat-A-Control* icon on your desk top the following screen is shown:



Figure 2.1 Login

Per nursery / customer multiple users can be defined with different roles. This makes it possible to define settings per user, to determine authorities concerning *Dat-A-Control*. In chapter 5 more information is given about defining users.

Each user has one password. After 10 failed login attempts the user will be blocked, and the service department of Logiqs will have to be consulted.

### 2.3. GRAPHIC OVERVIEW OF THE GLASSHOUSE CONTENT

After setting the name, password and the required language, the program will install the purchased modules. In this chapter we will assume that only *Dat-A-Logiqs* is installed.

#### 2.3.1. GRAPHIC OVERVIEW

The graphic overview is shown as figure 2.2. The graphic overview can be divided in a range of main features to clarify the main graphic view. These main features are shown in schedule 1.

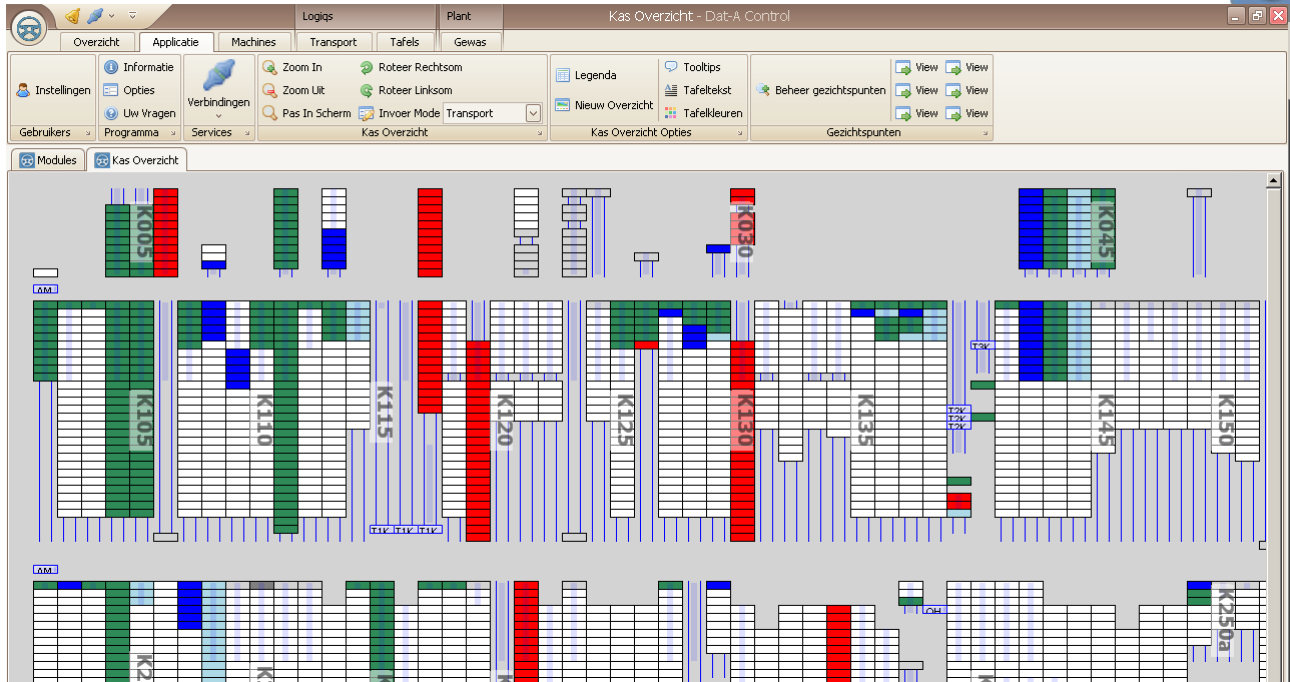


Figure 2.2 Graphic overview glasshouse content

Schedule 1: Main features graphic overview

Feature	Example	Description
Tabs		The different functions of Dat-A-Control are set in different tabs. This keeps the program simple and easy accessible.
Buttons		Buttons for often used features and overviews.
Rail pipes		The infrastructure over which the benches are transported.  The right 4 pipes are with a pull system, the left are without.
Bench		A mobile bench for growing pot plants.
Machine	 AM = transport car in the middle; AG = gable car AT = transport car; T = transport line section; T.W. = automatic cross transport / pusher; W = rail pipe in work system; OHK = overhead crane	A machine with certain functionality for moving plants or benches.  Names of machines can be different for your configuration.
Location label		Label helping to identify the position in the greenhouse.



### 2.3.2. CONNECTION CONTROL

The program in which the user works is called the “client”. The client connects to the server, on which the underlying programs, called services, run. It is possible that one of the connections isn't working properly. This is shown in figure 2.3.

When this occurs, click on the connection that isn't working, in this example the transport service.

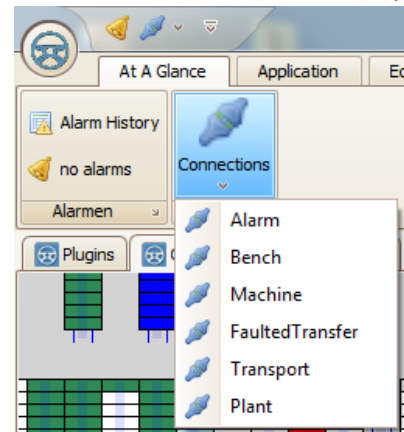


Figure 2.3 Connections

### 2.3.3. RESOLVE CONNECTION PROBLEMS

If the connection still fails, do the following (see figure 2.4):

- click on Start in the Windows task bar
- click on “Run”
- type in: services.msc and click OK
- scroll down to services of Logiqs

The service without connection will have stopped. In the upper left corner each service is explained. It also states “start the service”.

- Click on the service that doesn't work and click on start service

The service is started.

- go back to Dat-A-Control and check if the triangle is gone with the connection
- if not, wait a while and then click on it

If the triangle doesn't disappear, you should contact the service department of Logiqs.

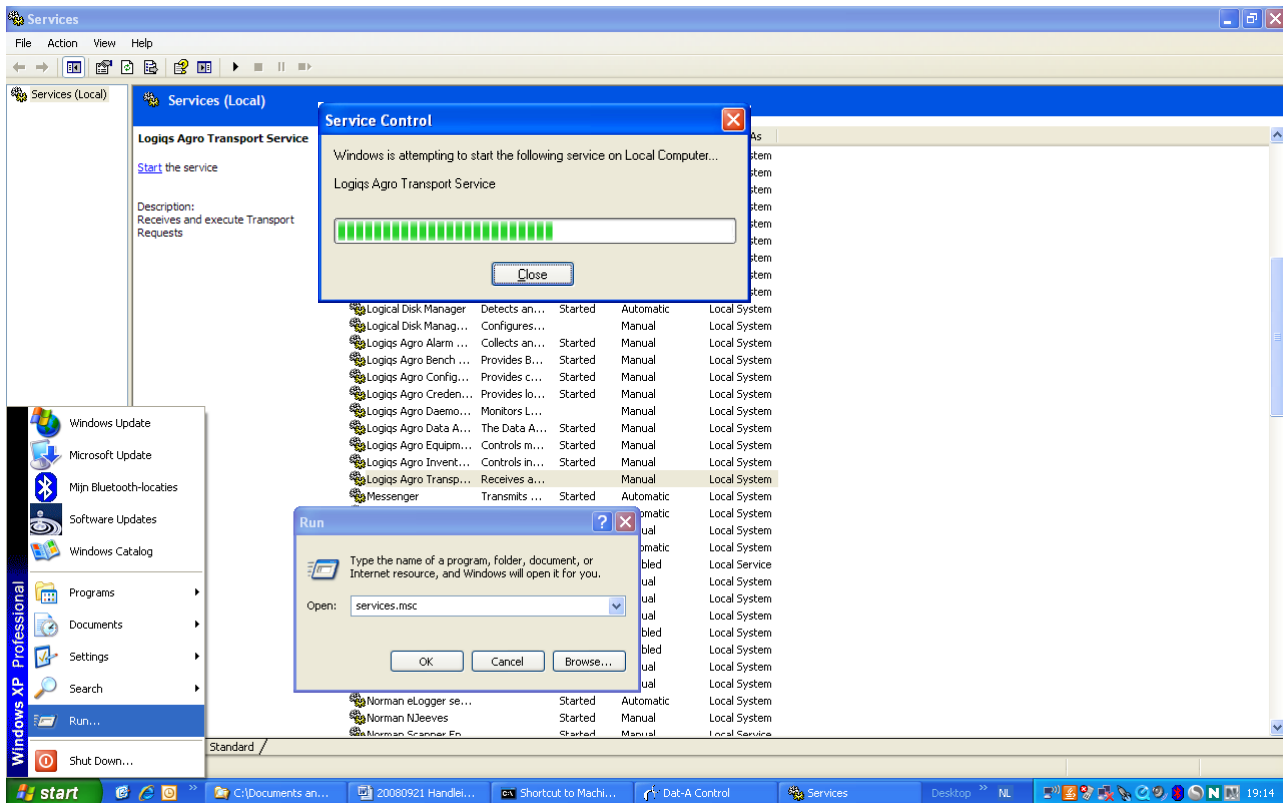


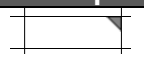
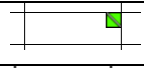





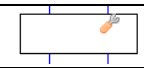
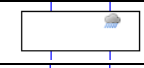

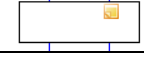
Figure 2.4 Starting services



### 2.3.4. STATUS REPORT OF BENCHES

Benches and machines can change in status. The status of benches is shown in schedule 2 and the status of machines in schedule 3.

#### Schedule 2: status features benches

Example	Description
	Benches with a grey check mark in the upper right corner are given a job, but the job isn't approved by the user (how to approve the job see paragraph 2.4).
	Benches with a green check mark in the upper right corner are given an approved job by the user. The job will be carried out.
	Benches with a circle with 2 little stripes inside have a job which is on hold. See paragraph 2.4.5 for more information.
	Benches with a lightning symbol mark the position of an automatic action. See paragraph 2.4.3 for more information.
	Benches which are to be collected by a machine are shown with a mirrored black check mark attached to the green check mark.
	Benches with a mirrored orange check mark are part of the "transport plan"; see paragraph 2.6 for more information.
	Benches with a grey square indicate that this rail pipe is the destination of a transport order. This means that this is not a status of the current bench but a reminder that there are benches in the system heading for this destination.
	Benches which need to be repaired are marked with a picture of a spanner in the right upper corner.
	Benches which have recently been irrigated are marked with a picture of a rainy cloud in the right upper corner.
	Benches which need to be cleaned are marked with a picture of a mud stain in the right upper corner.
	Benches with a remark are marked with a picture of a post-it memo in the right upper corner.

The status of a bench is always visible on the graphic overview. The first three statuses change because a user gives a job, see paragraph 2.4. The other four statuses can be changed by placing the pointer of the mouse over the bench, clicking right and clicking modify bench. The screen below appears where the user can change the status of the bench (Figure 2.5).

The last 4 status can be set by right-clicking the bench and then select "Bench" -> "Edit Bench". The screen in figure 2.5 will popup in which the user can make the required changes.

Note that only 1 of the 4 status symbols will be shown, even when a combination are active. The priority in which the symbols are shown is:

- 1: Broken
- 2: Dirty
- 3: Wet
- 4: Comment

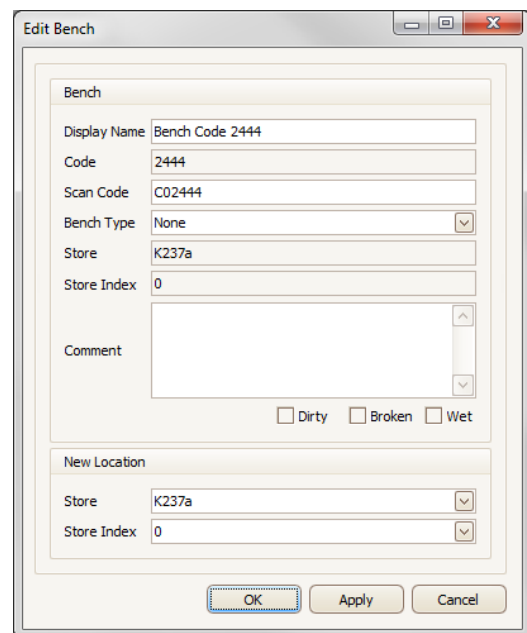





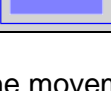


Figure 2.5 Modify status bench

### 2.3.5. STATUS REPORT OF MACHINES

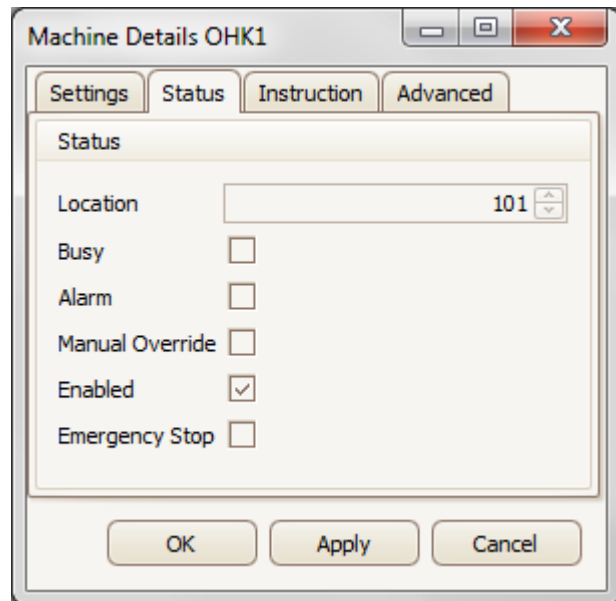
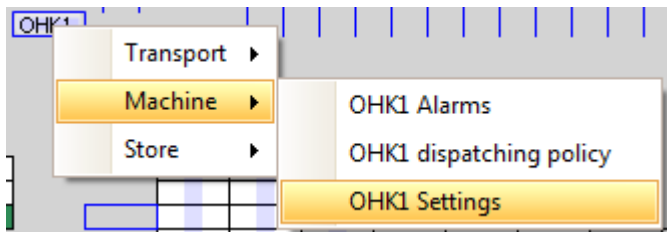
Machines can change status. The different states are described in the next table.

**Schedule 3: status features machines**

Example	Description
	Machine is in operation, but not working
	Machine is working
	Machine is turned off or there is no connection with the machine. This is usually an indication that there is an alarm elsewhere that is related to this machine.
	Machine has an alarm
	Machine is in emergency stop
	Machine is on manual control

The movement of a movable machine is visible on the screen.

The status of a machine is visible by clicking on the machine in the tab equipment or, by a right-mouse-click on the machine in the screen, and then selecting "Machine" followed by "Settings", and then selecting the "Status" tab.



**Figure 2.6 Machine status**

## 2.4. BENCH MOVEMENTS

A bench is moved because plants are due to be potted, spaced, sold or for another reason. By making a movement job in *Dat-A-Logiqs* the mechanical transport system will be controlled and benches and plants will automatically be moved to the required location. There are three possibilities to instruct in *Dat-A-Logiqs* to move benches to a required location:

- Drag
- Transport tab
- Automatic job

We will explain the possibilities first, and then we will explain how jobs can be set and approved.

In paragraph 2.1 we have explained that per nursery transport lines can be set. These transport lines are the route a bench can follow from beginning to end. It is possible that a beginning and end are connected through multiple routes (transport lines).



Figure 2.7 Transport lines

### 2.4.1. DRAG AWAY

After selecting one or more benches, these can be dragged to a different location on the overview. By pressing the left mouse button above the first selected bench and keeping the button pressed till the last selected bench, one or more benches can be selected. Release the left mouse button, place the pointer above the selected benches, press the left button again and drag the benches to the required location. When the location is reached, release the button. After this the job has to be approved.

### 2.4.2. TRANSPORT TAB

Another possibility to choose a job is in the tab transport. In this tab the possible transport lines are shown (see figure 2.7). When a transport line is selected, the screen below appears. Here the beginning location has to be selected (for some transport lines this is not adjustable), the end location has to be selected, and the number of benches to be transported.

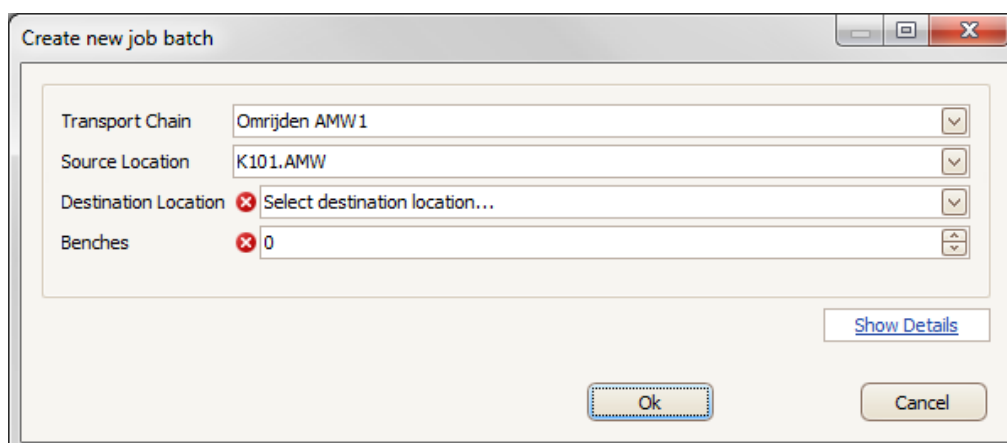
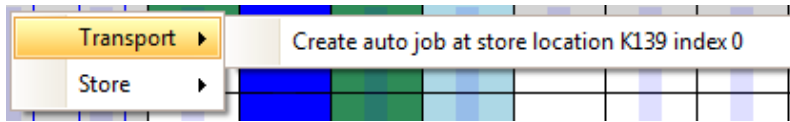


Figure 2.8 Jobs from the tab transport



### 2.4.3. AUTOMATIC MOVEMENT

The third possibility is to order the movements automatically. Automatically means not that selected benches receive a job, but a location (on this location there could be a bench, this is the first bench to receive the order). See figure below.



The number of benches to be moved has to be set. If nothing is filled in, the number of benches is set to "indefinite". Every bench which from that moment on comes on the location gets the set destination and follows the transport line.

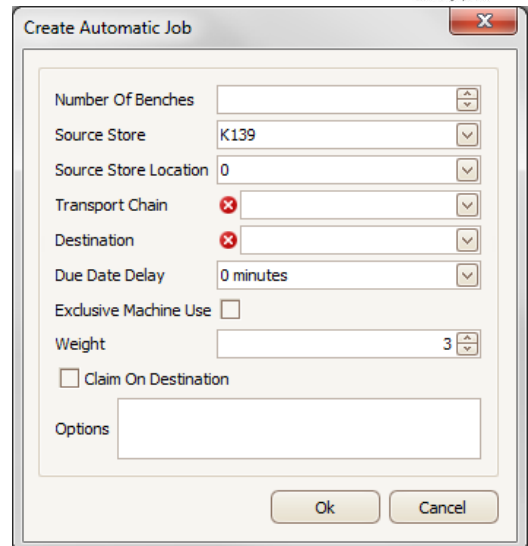


Figure 2.9 Setting automatic job

### 2.4.4. SETTING JOBS

When a dragged job can only be accomplished by one transport chain, a small command bar as shown figure 2.10.



Figure 2.10 Job icons

By clicking the OK-button (the green icon on the left) you approve the job, after which it will start as soon as possible. There are two alternatives for this icon:

The means that there is not enough room for the selected benches at the final location.

The means that a route cannot be decided automatically, so you will need to correct this manually by selecting the "Edit job" option (the middle icon).

The red button (the right icon) will cancel the job.

The "Edit job" button will show the detail screen as shown in figure 2.11. This will also show if the job can be done by multiple transport chains.

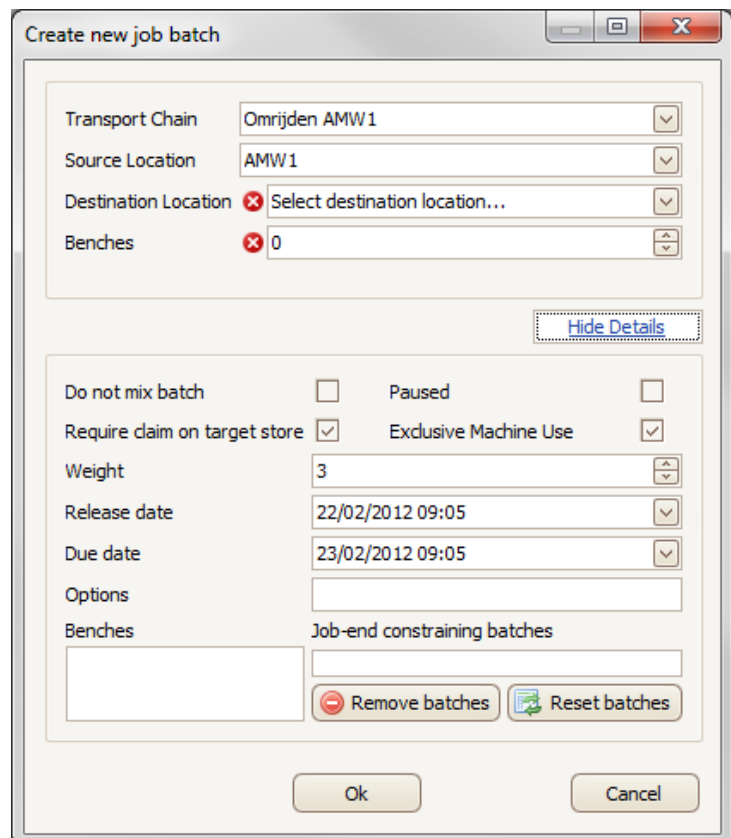


Figure 2.11 Job detail screen

Weight, release date and end date don't have to be changed. This is done when the user wants the machines that will carry out the job to work intelligently with the job. This requires that the correct machine strategy is set (see paragraph 2.6).

“Do not mix batch” means the group of benches has to reach the end location as a complete batch. This option is selected when more batches have the same end location and the batches run (partly) simultaneously. NOTE: when benches on their transport line are placed in a buffer location where jobs can be mixed (before benches go to their end location) the option “Do not mix batch” can’t be chosen. This because the system in the worst case will get “jammed” when a bench at the end of the buffer location is handled by a machine, which is not allowed in a “Do not mix batch” option. If it is possible it is better to carry out these jobs at a different time (not at the same time as another job), in the following job of arrival at the end location.

When “reset batches” is selected, the batches are shown that will arrive at its destination before this job.

After OK is selected, the job will be carried out with the desired settings (the benches are shown with green check mark). Cancel will cancel the job.

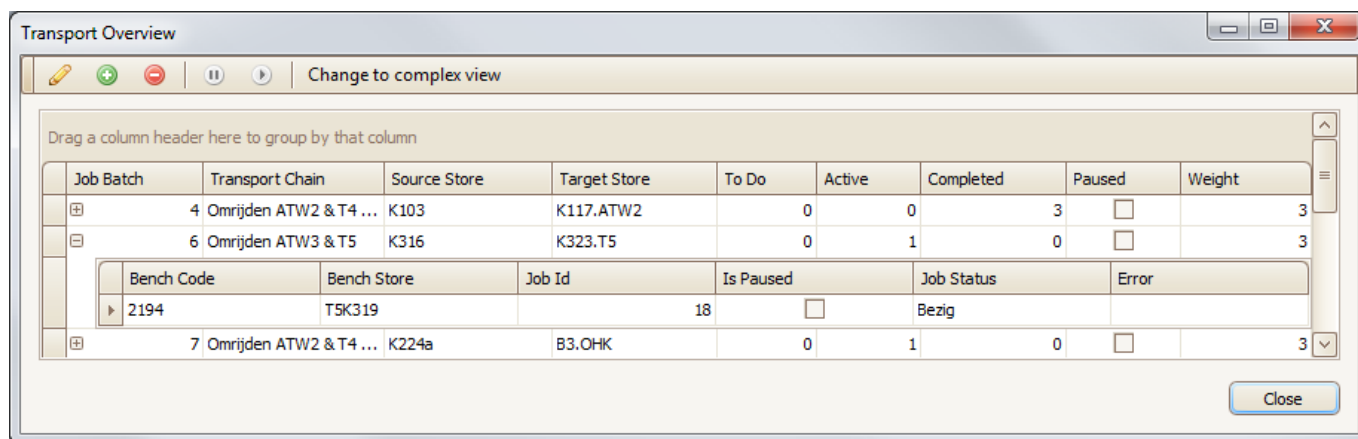







Figure 2.12 Tab batches

A job can be selected by clicking on the job; an arrow is shown in front of the ID number. In schedule 4 the different possibilities from this screen are shown.

**Schedule 4: Icons in tab batches**

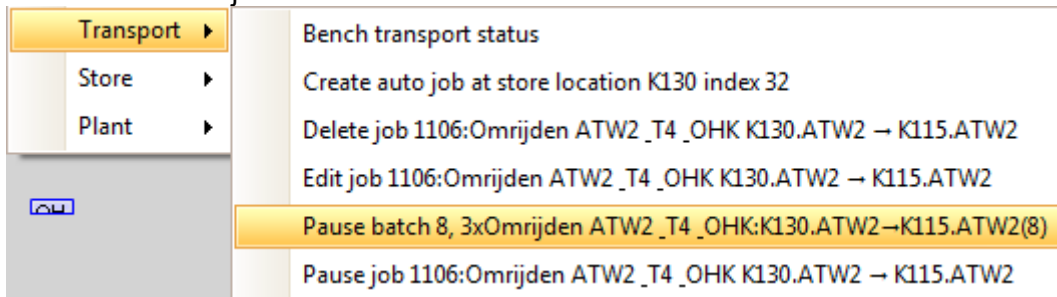
Example	Description
	Changing the selected job.
	Making a batch.
	Removing the selected batch.
	Put selected batch on hold.
	Resume selected batch.

The tab batches is emptied when the client (i.e. the Dat-A-Control program which is used) is shut down and restarted.

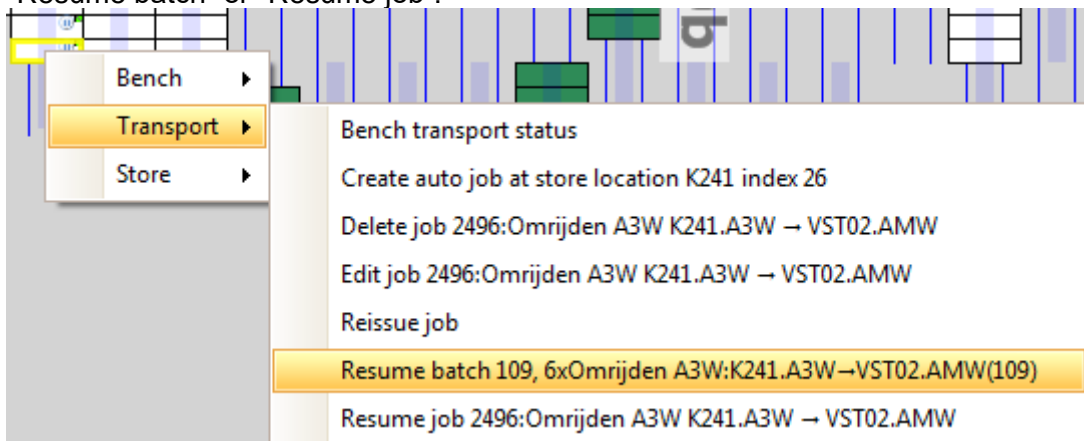
### 2.4.5. PAUSE AND RESUME BATCHES

Note: The functionality in this subparagraph has been introduced at the start of 2012 and as a result might not be available in your version of the software.

Active jobs and batches can be put on hold (pause) and resumed (unpaused). To do this one clicks with the right mouse button on a bench and in the popup menu you select “Transport” and then either “Pause batch” or “Pause job”.



To resume the job or batch you go to the same context menu, but now select “Transport” and then either “Resume batch” or “Resume job”.



Of course you can also do the above via the Transport Overview. See schedule 4 in the previous sub paragraph for the appropriate buttons.



### 2.4.6. TRANSPORT PLAN

Note: This functionality is under development. As a result, only a selected group of customers will have this visible for acceptance testing.

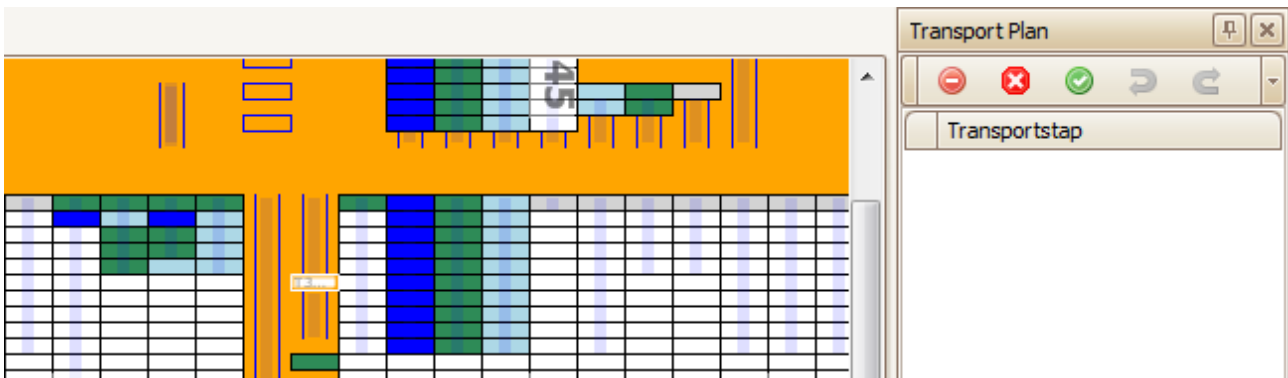
With the use of a transport plan one can schedule a chain of jobs to achieve the more complex movements. During the creation of a transport plan the display of the greenhouse will show as if orders have already been executed, so one can give the same benches multiple jobs. After all steps of the transport plan have been scheduled, all orders are given to the system and handled.

To activate the transport plan, click on the "Transport Plan" icon (as shown next to the title of this paragraph) found on the Transport tab next to the "Auto Job" icon.

Note: If the icon is not available in your client and you wish to make use of the functionality of the Transport Plan, please contact Logiqs.

Once you have clicked the icon a new view of the greenhouse will open with an orange background colour and a list on the right side of the screen. You are now in plan mode

You can now give your orders the same way as you are used to in the normal greenhouse view. Every order will be added to the step list on the right side of the screen.



The step list has a few buttons:

- cancels and deletes all existing transport steps
- cancels the whole transport plan and closes the orange screen
- makes the transport plan final and sends it to the server to be done
- undo's steps of the transport plan before it is made final
- redo's steps of the transport plan that have been undone by the previous option



To show which benches are part of a transport plan they are marked with a mirrored orange triangle.

## 2.5. CHANGING AND REMOVING BENCH MOVEMENTS

### 2.5.1. CHANGING

Individual bench jobs can be changed. You can do this by selecting the bench, click the right hand button of the mouse, choose the option transport and then click on “edit job”.

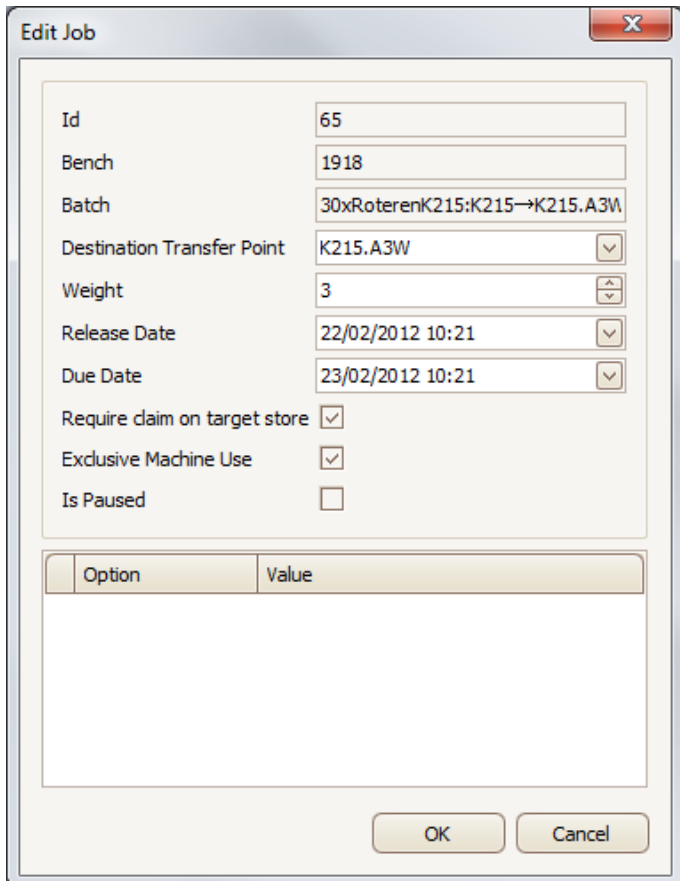
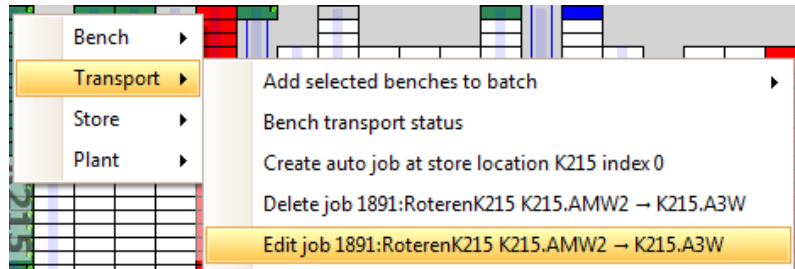


Figure 2.13 Changing transport jobs

When for instance you want the batch to have a later starting time, you select the first bench in the group and change the release time. This means that the complete group will start later. It is not possible to change the setting of the first bench when the machine is already working to collect the bench.

### 2.5.2. REMOVING

Jobs can be removed per bench or the whole batch in one.

To remove a batch the user must select the benches with a job (by keeping the left mouse button pressed), click the right hand mouse button, select the option transport and select “delete selected jobs”. (see figure 2.14) The batch can be removed in the screen batches (see figure 2.12) even while the jobs are being carried out.

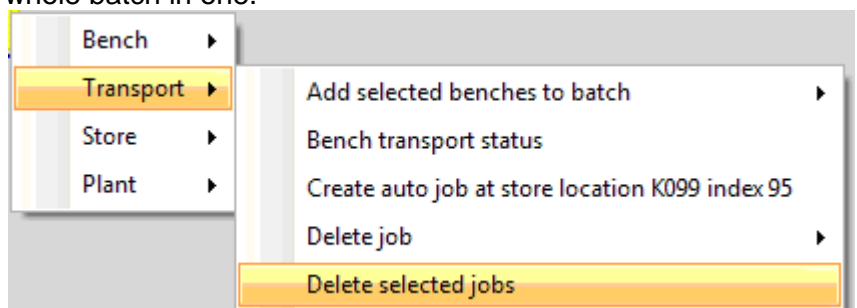
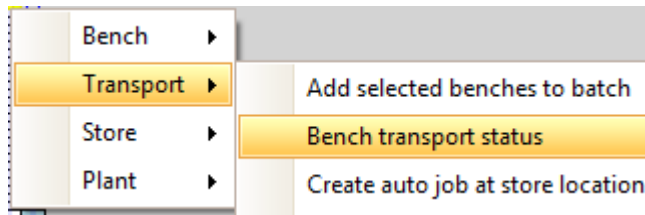


Figure 2.14 Removing transport job (batches)

To remove the transport job for a single bench you select the bench, click the right hand mouse button, choose the option transport, and click “delete job”.

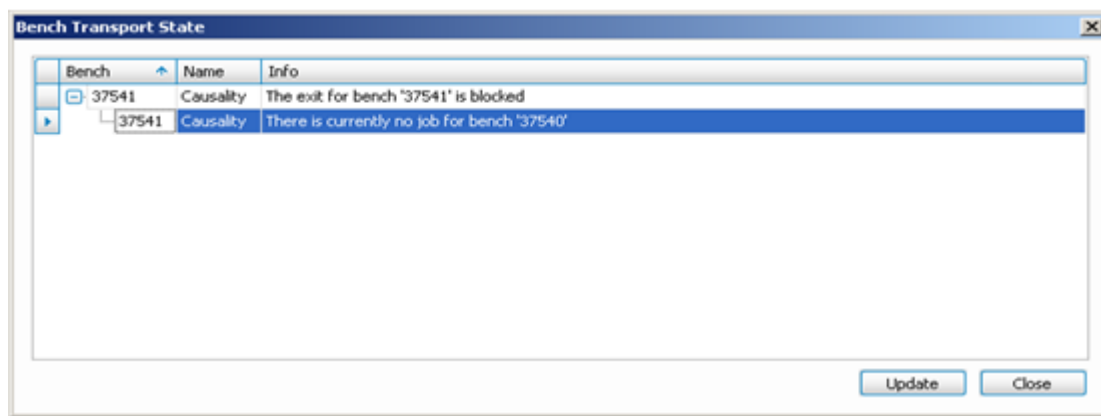


## 2.6. TRANSPORT STATUS



When a user needs information about the status of a job, this information is available. Click with the right hand mouse button on the bench about which information is required, choose transport and click on “bench transport status”. If a job for one (or more) bench(s) is interrupted, you can check what the status of the job is. See figure 2.15.

It is possible that a job is halted, while there are no problems in the system. A job which isn't finished can stop other jobs. By checking the transport status the cause of the “delay” can be removed. In the example of figure 2.15 removing benches from row K32 can be a solution, or deleting the batch and selecting a new end location.



## 2.7. MACHINE STRATEGY

When we explained setting transport jobs (§2.4.4) we have mentioned machine strategies. Machine strategies can be set to carry out jobs as efficiently as possible, or as quickly as possible.

### 2.7.1. DECIDING BEST STRATEGY

Every strategy consists of a number of parts. Those parts are:

- Earliest release date      Machine selects the bench within its reach with the earliest release time and date. Example: When multiple jobs are made 1-by-1 without adjusting the release date, those jobs will be executed in order of creation.
- Random                      Machine selects a random bench within its reach. This results in a more spread execution of jobs.
- Weight                      Machine selects a bench with the highest priority. With this a later added job can get priority.
- Nearest position          Machine selects the closest bench with a job. This is a very useful strategy when the order of which jobs are executed does not matter but the capacity of the machine does.
- Earliest due date          Machine selects the bench within its reach with the earliest end time and date. You select the order of parts most fitting for your operation.

### 2.7.2. SETTING STRATEGY

The machine strategy can be changed by selecting the machine with the mouse, clicking the right hand mouse button, choosing the machine and selecting the option machine dispatching policy.

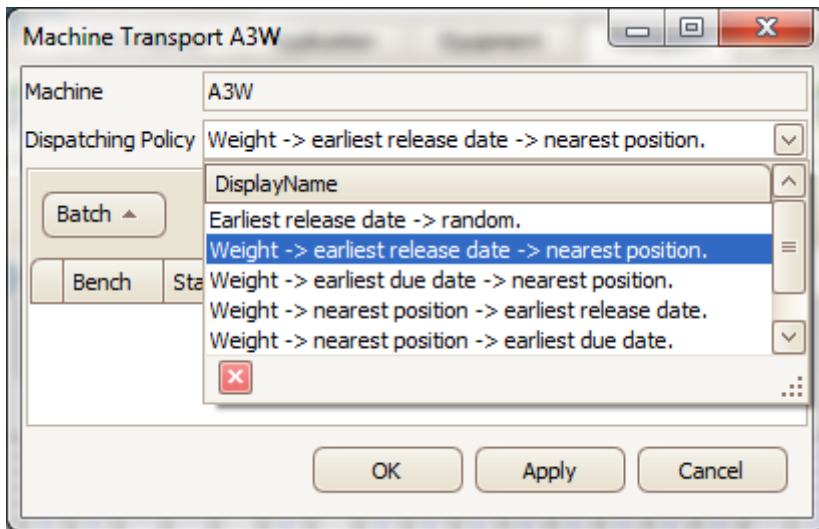
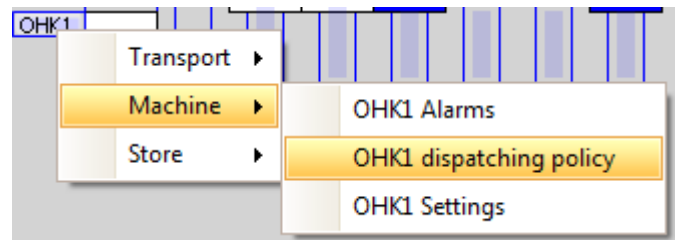


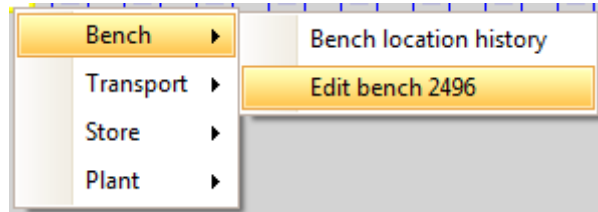
Figure 2.16 Setting dispatch policy

## 2.8. MANUAL BENCH MOVEMENT

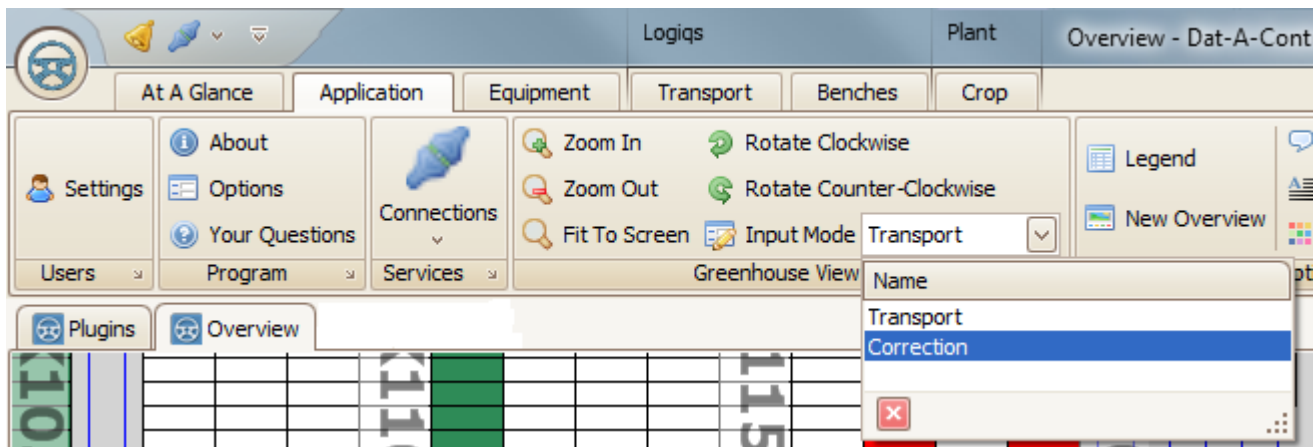
If you want to move a bench manually to bring the situation in your screen up-to-date, you can do so by either editing or correcting a bench.

### 2.8.1. VIA EDITING

If you only have to correct a single table, then editing it via “Edit bench” in the context menu is the easiest solution. You will find a “New Location” function at the bottom of the page. After you entered the new location, you click OK and the table will jump to the new location if that location is free.



### 2.8.2. VIA CORRECTION MODE



An alternative to editing benches is using the correction screen. The so called “pink screen”. To get to the correction screen, go to the Input Mode dropdown box on the Application screen and select “Correction”.

**Table 5: Input modus**

Input modus	Action
Create a new order(white screen)	<i>Dat-A-Logiqs</i> sets a job for one or more machines to physically transport a bench to the required location.
Correct bench location (pink screen)	This option is used to adjust the location of one or more benches. This option is only used when the actual location of a bench is not the location as registered in <i>Dat-A-Logiqs</i> . This is not a transport job to physically move a bench.

Select the benches that have to be moved in the pink screen by keeping the left hand mouse button pressed. Release the button, click above the benches and drag the benches to the new location and release the left hand mouse button. Click OK when you are sure that the new location is the correct one, and the benches are adjusted.

**Note: to be able to make new transport jobs, you have to select “Create new order”!**

### 3. DAT-A-PLANT

In *Dat-A-Plant* information about the plants in the glasshouse is registered. Dat-A-Plant is linked to Dat-A-Logiqs.

#### 3.1. GRAPHIC OVERVIEW OF THE GLASSHOUSE CONTENT

Dat-A-Control offers the user a graphic overview of the glasshouse content: blocks, transport lines and pipe rails, benches and machines. The benches are divided in groups, each with their own colour.

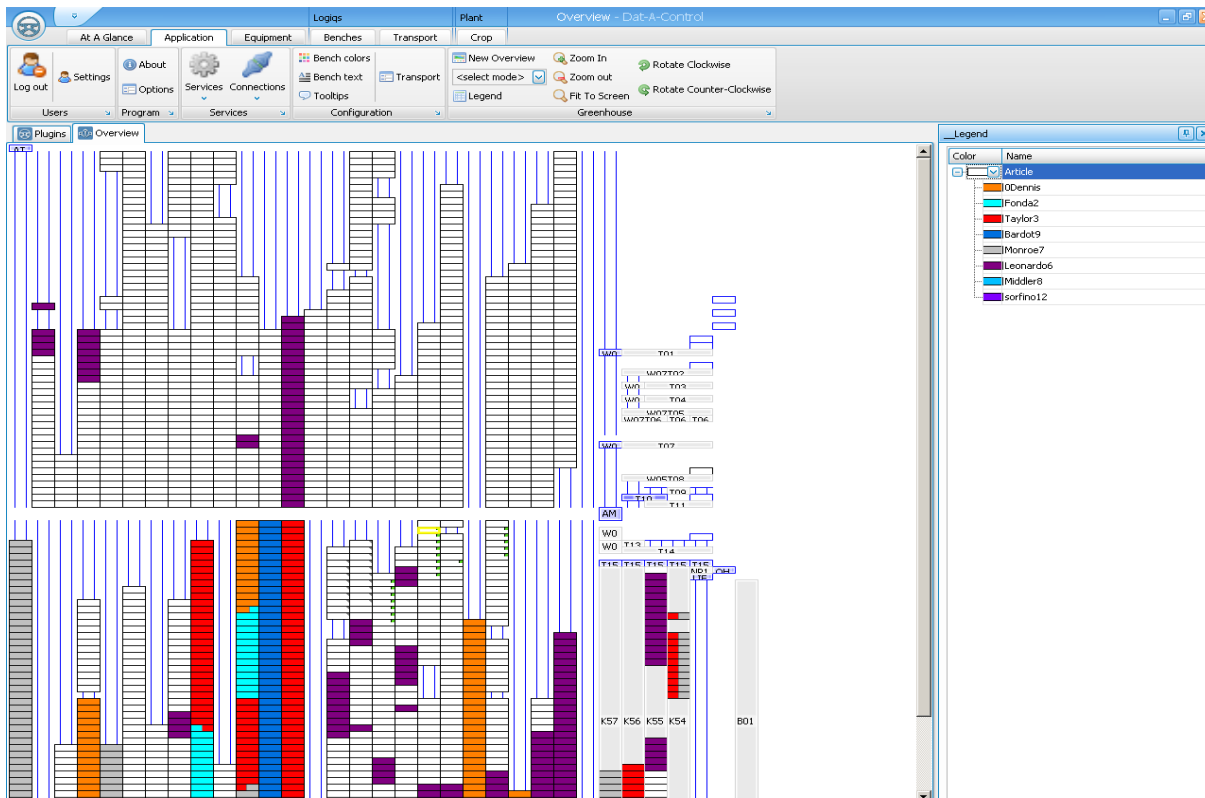


Figure 3.1 Graphic overview including Dat-A-Plant

In one view the glasshouse content is visible in groups of benches, depending on the chosen category. The screens of figure 3.2 can be found under the tab “application” and choose the option “bench colours”. The choice can be made from variety, pot size, phase, date of last phase change and batch. Per category there is a separate legend which can be chosen at the bottom of the screen.

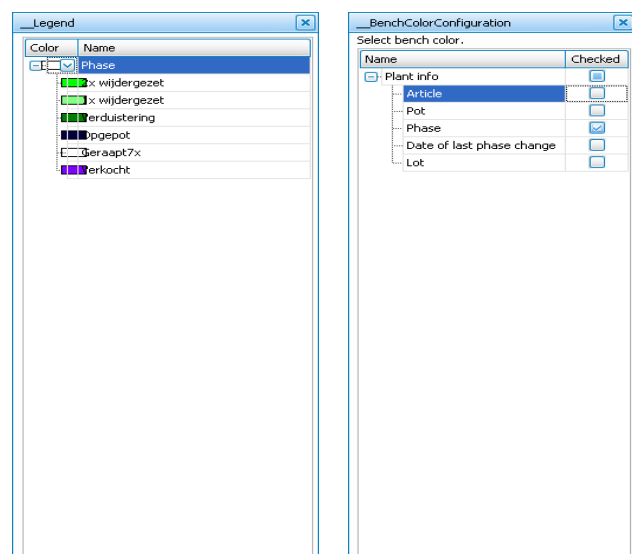


Figure 3.2 Bench colour categories and legend

### 3.2. TRANSPORT MOVEMENTS

Dat-A-Plant is linked to Dat-A-Logiqs, which means that movements will be arranged as described in chapter 2. When moving benches, information about the location of a plant is registered in the system.

### 3.3. BASIC INFORMATION

There are two ways to link information to a plant:

- while entering information about a lot of plants in the system / setting transport jobs (Dat-A-Potting / Dat-A-Spacing).
- adding plant information by hand to the plants in a bench.

Dat-A-Potting and Dat-A-Spacing are applications which are used as help with plant registration and take care of “automatic” adding of information when potting or spacing. The manual for these applications, when purchased, will follow later. When only Dat-A-Plant is installed, all plant movements will have to be entered by hand.

Per lot is recorded which article is concerned, who the supplier of the plants is, and which pot size is used. How to register this information is described in chapter 4, Settings.

The following information in this chapter is based on the assumption that only Dat-A-Plant is installed.

#### 3.3.1. SETTING SUPPLIERS

Go to the tab “Crop” and click on suppliers. To enter a new supplier you select NEW. A new line is shown where all relevant information can be filled in.

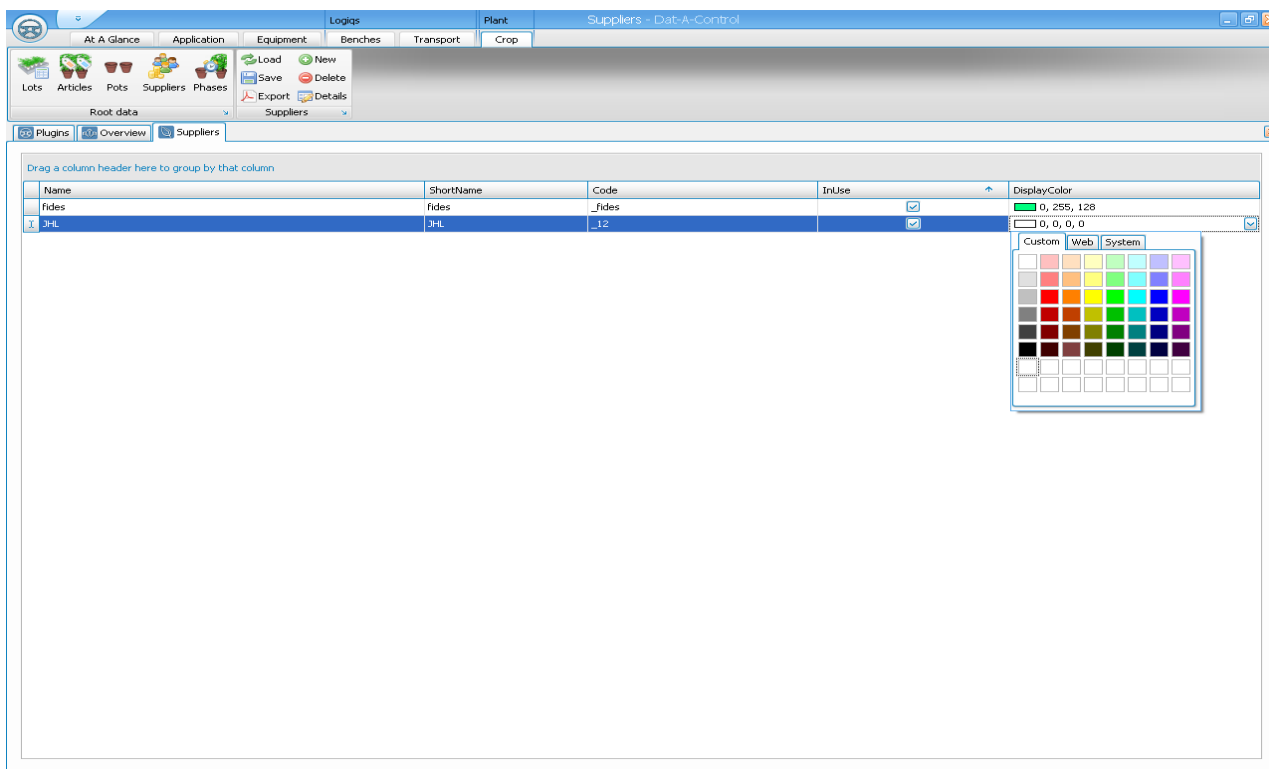


Figure 3.3 List of suppliers

You have to select “in use” and a colour for the new supplier has to be chosen. NOTE: to save the new supplier you have to leave the just filled in line, and click “save”.

Removing a supplier is done by selecting the correct line, and click “remove”.

### 3.3.2. SETTING ARTICLES

Go to the tab “Crop” and click on articles. To enter a new article you select NEW. A new line is shown where all relevant information can be filled in. You have to select “in use” and a colour for the new article has to be chosen. NOTE: to save the new article you have to leave the just filled in line, and click “save”. After an article is saved, it can be used in the system.

Removing an article is done by selecting the correct line, and click “remove”.

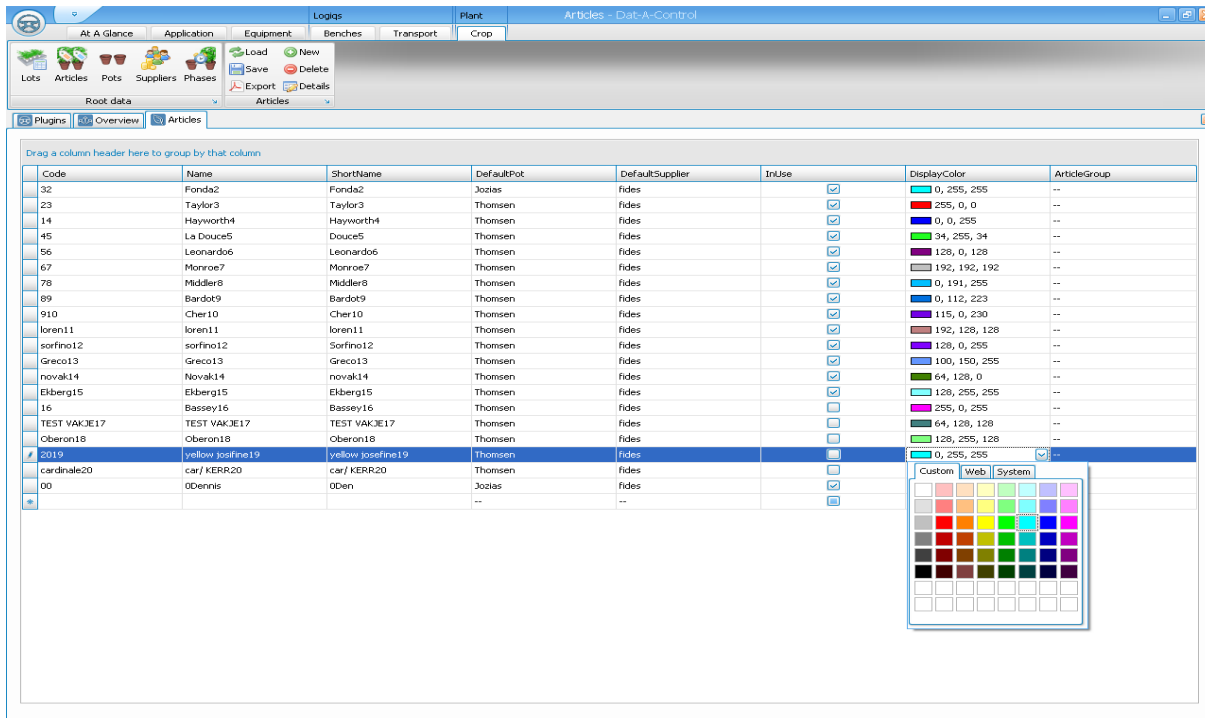
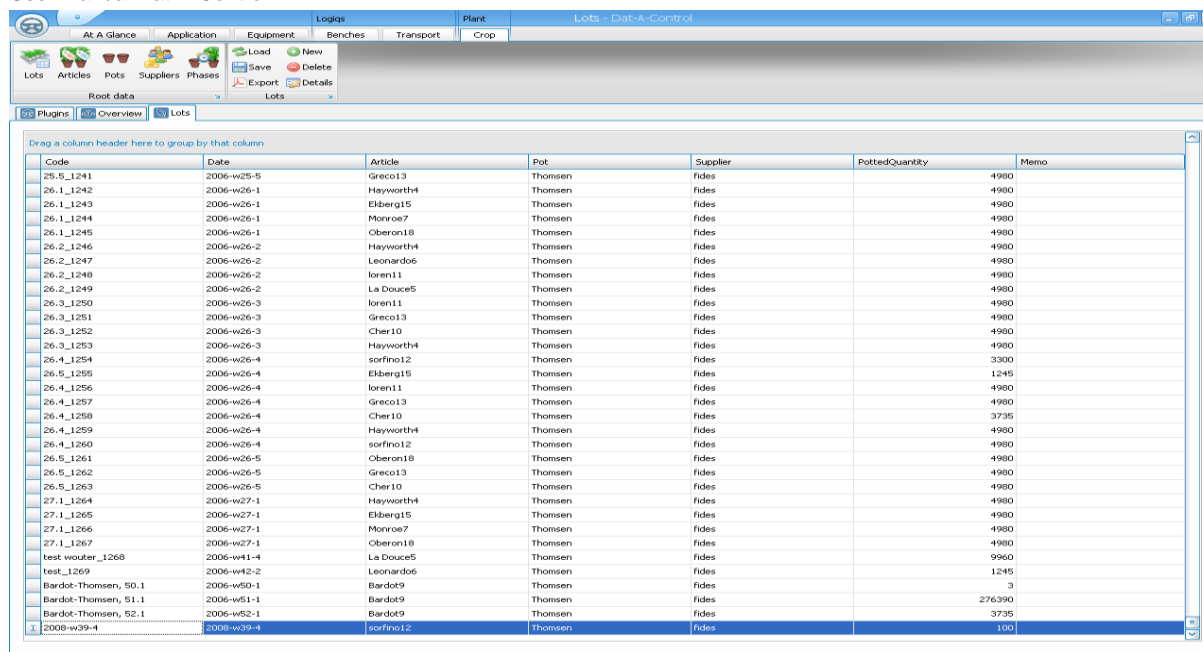


Figure 3.4 List of articles

### 3.3.3. SETTING LOTS

For every lot information about the plants is logged. In the tab “Crop” you select lots. Making new lots is done by clicking NEW in the tab “Crop”. A new line is shown where all relevant information can be filled in. NOTE: to save the new lots you have to leave the just filled in line, and click “save”. If something changes with a lot, there is a memo column to add remarks. You can also add remarks by clicking “details”.

Removing a lot is done by selecting the correct line, and click “remove”.



Code	Date	Article	Pot	Supplier	PottedQuantity	Memo
25_5_1241	2006-w25-5	Greco13	Thomsen	Fides	4980	
26_1_1242	2006-w26-1	Hayworth4	Thomsen	Fides	4980	
26_1_1243	2006-w26-1	Elberg15	Thomsen	Fides	4980	
26_1_1244	2006-w26-1	Monroe7	Thomsen	Fides	4980	
26_1_1245	2006-w26-1	Oberon18	Thomsen	Fides	4980	
26_2_1246	2006-w26-2	Hayworth4	Thomsen	Fides	4980	
26_2_1247	2006-w26-2	Leonard06	Thomsen	Fides	4980	
26_2_1248	2006-w26-2	koren11	Thomsen	Fides	4980	
26_2_1249	2006-w26-2	La Douce5	Thomsen	Fides	4980	
26_3_1250	2006-w26-3	koren11	Thomsen	Fides	4980	
26_3_1251	2006-w26-3	Greco13	Thomsen	Fides	4980	
26_3_1252	2006-w26-3	Cher10	Thomsen	Fides	4980	
26_3_1253	2006-w26-3	Hayworth4	Thomsen	Fides	4980	
26_4_1254	2006-w26-4	soffino12	Thomsen	Fides	3300	
26_5_1255	2006-w26-4	Elberg15	Thomsen	Fides	1245	
26_4_1256	2006-w26-4	koren11	Thomsen	Fides	4980	
26_4_1257	2006-w26-4	Greco13	Thomsen	Fides	4980	
26_4_1258	2006-w26-4	Cher10	Thomsen	Fides	3735	
26_4_1259	2006-w26-4	Hayworth4	Thomsen	Fides	4980	
26_4_1260	2006-w26-4	soffino12	Thomsen	Fides	4980	
26_5_1261	2006-w26-5	Oberon18	Thomsen	Fides	4980	
26_5_1262	2006-w26-5	Greco13	Thomsen	Fides	4980	
26_5_1263	2006-w26-5	Cher10	Thomsen	Fides	4980	
27_1_1264	2006-w27-1	Hayworth4	Thomsen	Fides	4980	
27_1_1265	2006-w27-1	Elberg15	Thomsen	Fides	4980	
27_1_1266	2006-w27-1	Monroe7	Thomsen	Fides	4980	
27_1_1267	2006-w27-1	Oberon18	Thomsen	Fides	4980	
test wouter_1268	2006-w41-4	La Douce5	Thomsen	Fides	9960	
test_1269	2006-w42-2	Leonard06	Thomsen	Fides	1245	
Bardot-Thomsen, 50.1	2006-w50-1	Bardot9	Thomsen	Fides	3	
Bardot-Thomsen, 51.1	2006-w51-1	Bardot9	Thomsen	Fides	276390	
Bardot-Thomsen, 52.1	2006-w52-1	Bardot9	Thomsen	Fides	3735	
2008-w39-4	2008-w39-4	soffino12	Thomsen	Fides	100	

Figure3.5 List of lots

### 3.3.4. PLANTS AND BENCH(ES)

All actions below are done by selecting the required benches in the graphic overview and clicking on the right hand mouse button.

#### 3.3.4.1. Adding lots

Select the required bench(es), click on the right hand mouse button and fill in the information, as shown in figure 3.6. The number of plants filled in is the number of plants per bench when multiple benches are selected (not the total number of plants for all selected benches).

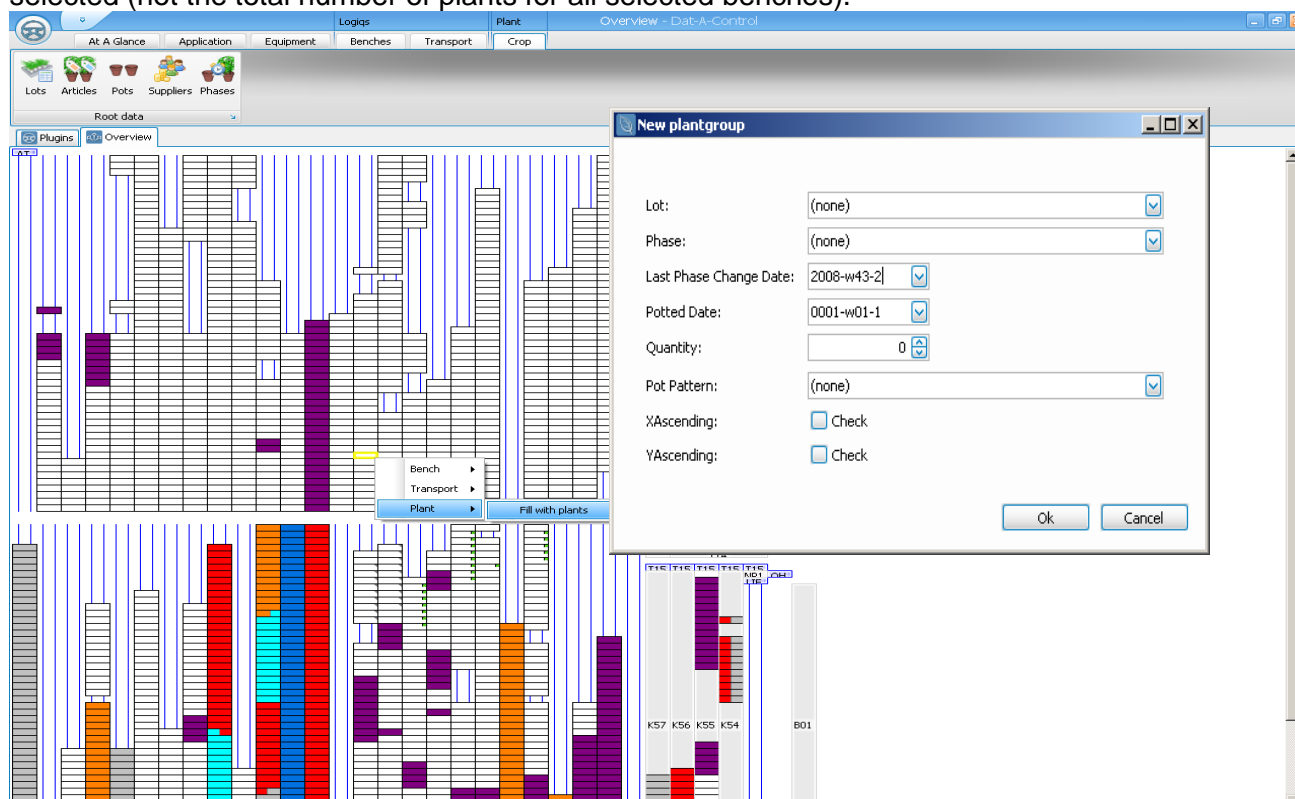


Figure 3.6 Adding plant groups to benches

### 3.3.4.2. Removing plant information

Plant information can be removed automatically when a bench comes to a location where all plants are ALWAYS taken out of the bench. On locations where not all plants are taken out of the bench you can always remove plants by hand in the system.

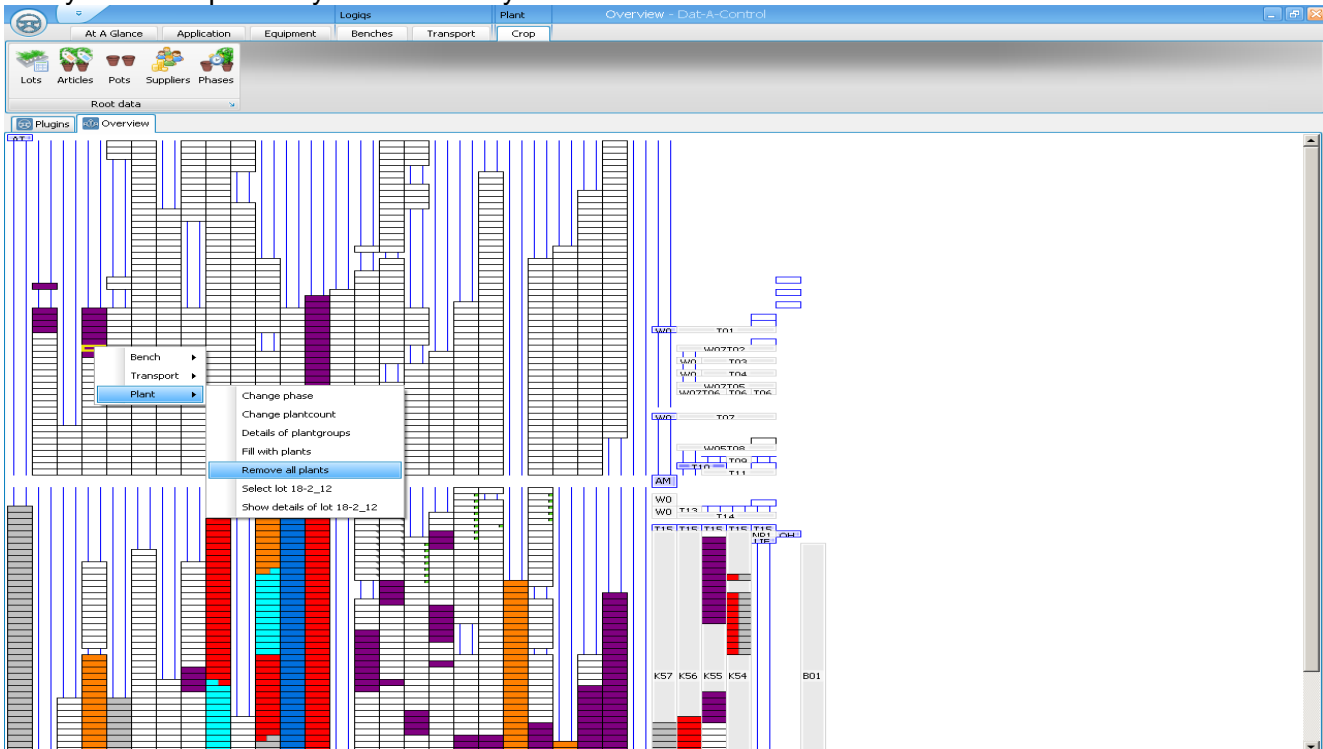


Figure 3.7 Removing plants from benches

### 3.3.4.3. Change phase

On certain machines/actions an automatic phase change can be linked (potting, spacing). It is also possible to change the phase by hand, see figure 3.8.



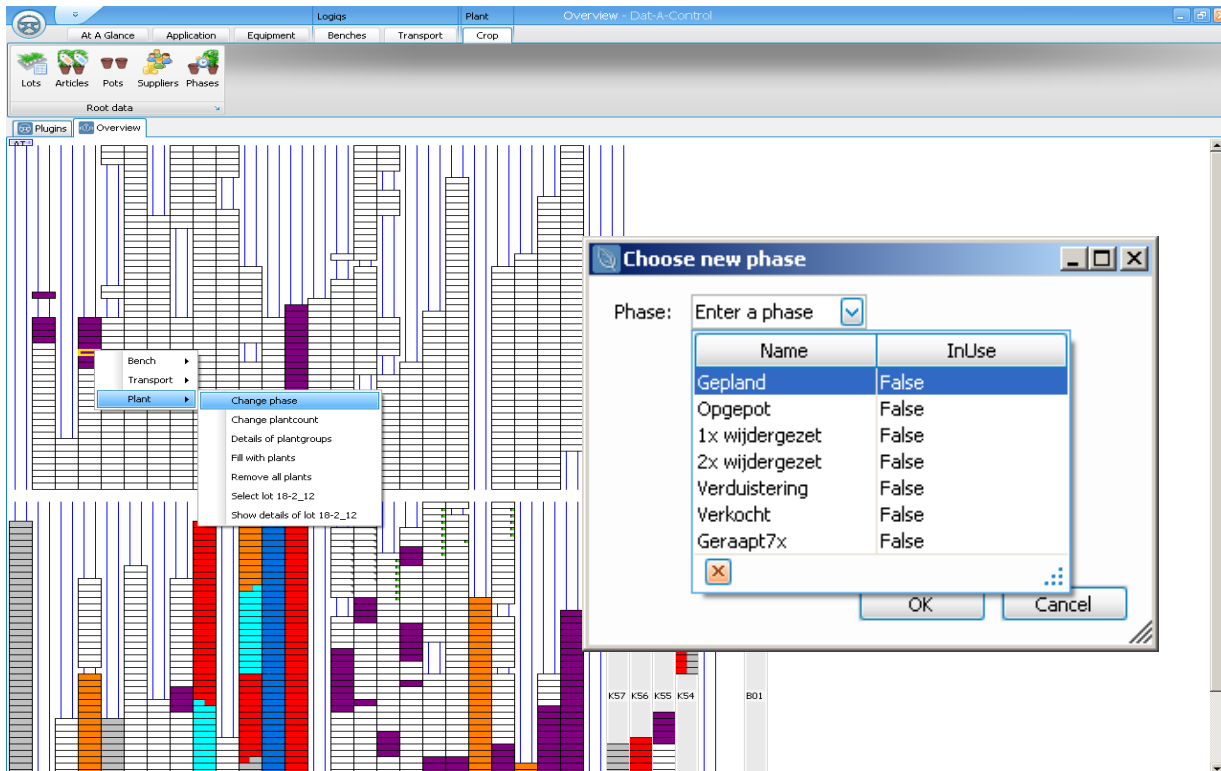


Figure 3.8 Adjusting phase

### 3.3.4.4. Change plant counts

Adjusting plant counts is done per individual bench.

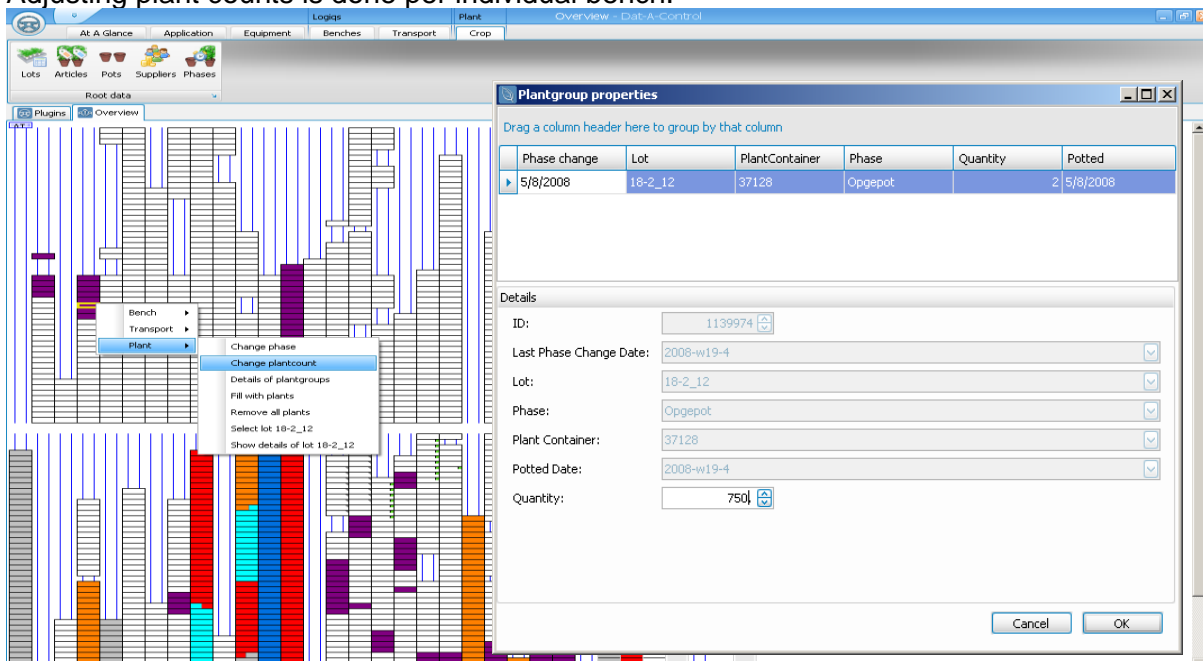


Figure 3.7 Changing plant counts

### 3.3.5. POT SETTINGS, POT PATTERN AND POT MODEL

Go to the tab “Crop” and click on *Pots*, *Pot Pattern* or *Pot Model* depending on the parameters that you want to add or edit.

To enter a new pot, pattern or model type you select NEW. A new line is shown where all relevant information can be filled in.

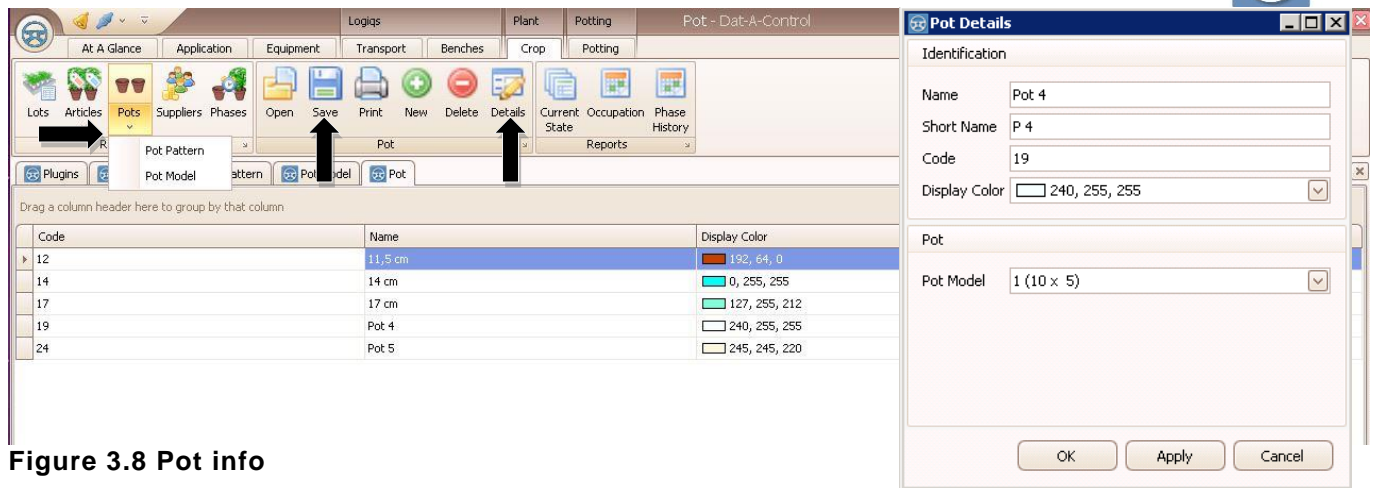


Figure 3.8 Pot info

NOTE: to save the new pot type, pattern or model, you have to leave the just filled in line, and click "save".

NOTE: If you want to edit a existing pot, you will need to select the desired pot and then click on the *Details* button, make the desired modifications then click *OK*, and then click *Save*. To see the refreshed data afterwards just click on another item, and the info will be refreshed.

For editing the Pot Pattern or Pot Model, the user needs just to select the pattern or model button, edit the desired line and click on *Save* afterwards.

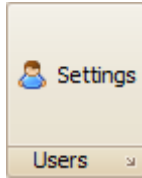
Removing a pot type, pattern or model is done by selecting the correct line, and clicking "remove".

## 4. SETTINGS

Settings are the basic information and settings of your system.

### 4.1. USER SETTINGS

On the tab “application” the button settings can be found.



In the user's settings you can change passwords. It is also possible to instruct the system, when a problem occurs, that a text message is send to the mobile phone of the person responsible. (only possible when Dat-A-SMS is purchased)

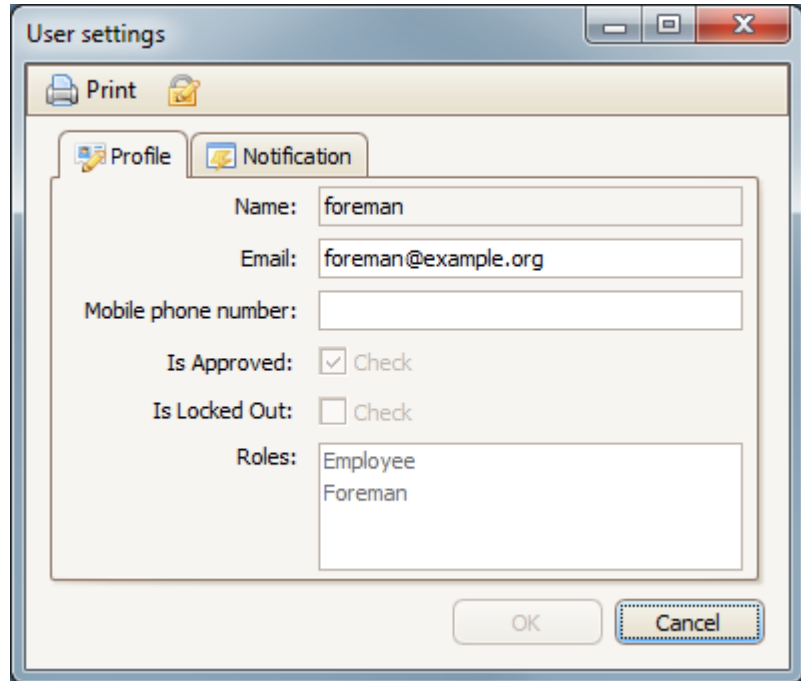


Figure 4.1 User's settings

## 4.2. INTERFACE SETTINGS

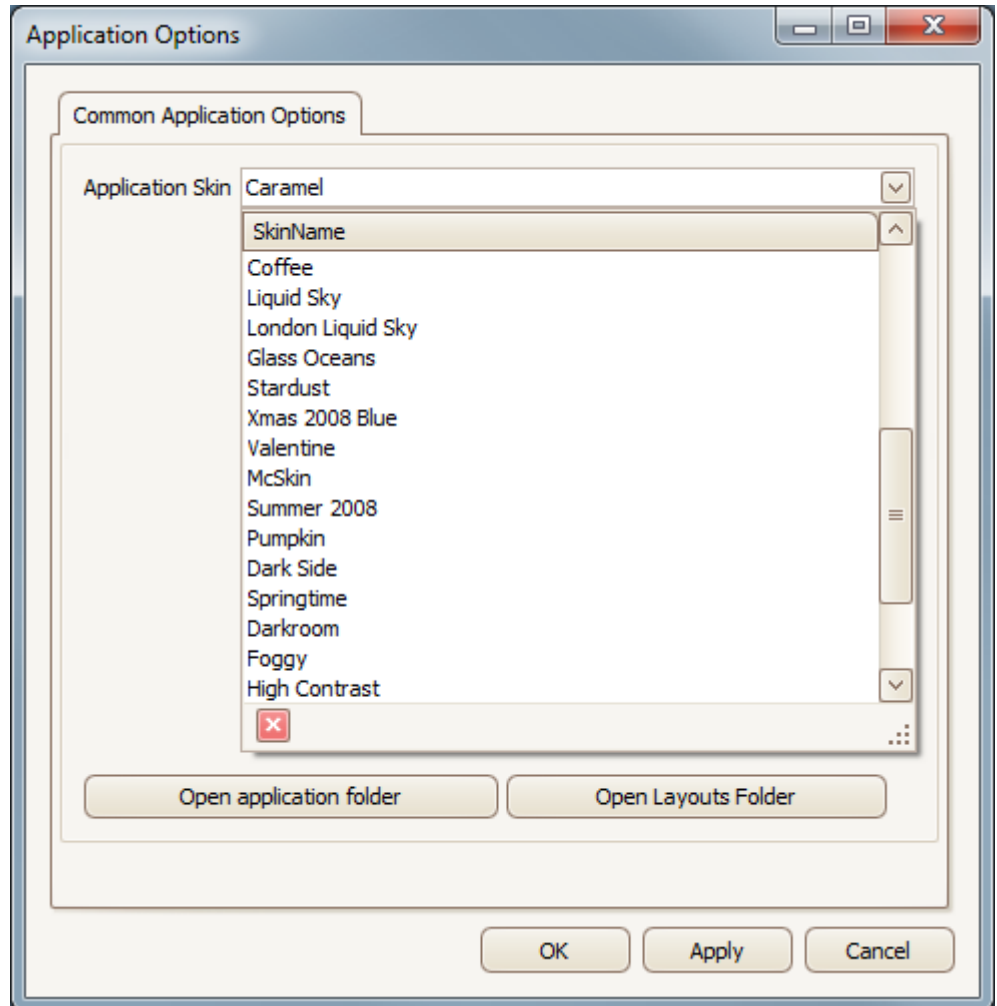
Without needing the help of Logiqs, you are able to change a few visual aspects of your client. In these aspects we make a difference between general (colour and layout) and specific (tables and forms) properties.

### 4.2.1. GENERAL

To change the general layout of your client, go to the “Application” tab press the “Options” button.



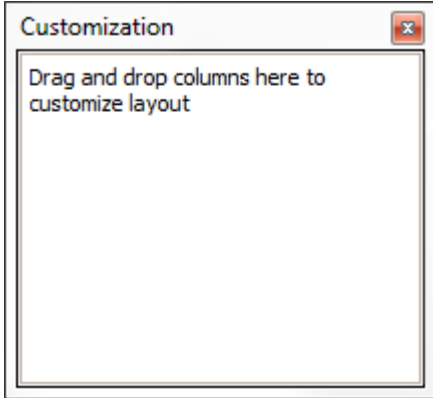
A screen with a dropdown box will show up with which you can select a theme of your liking.



### 4.2.2. TABLES

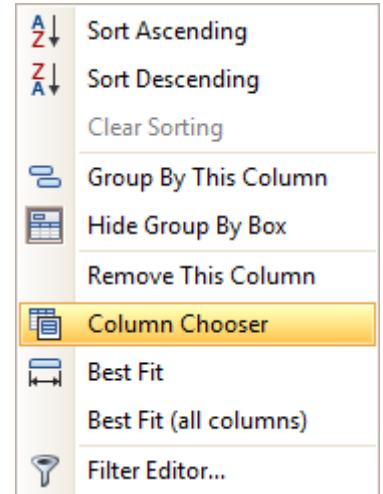
All tables can be changed by the user.

To change a table, right-click on any column in the to be changed table. The menu showing on the right will now popup.



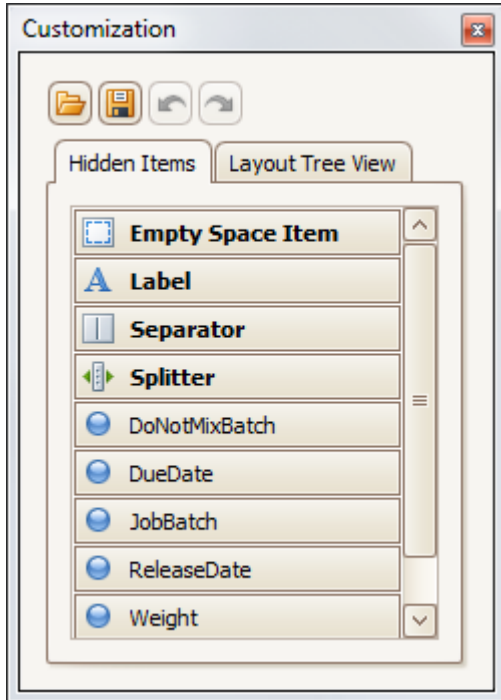
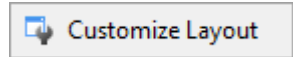
Select the “Column Chooser” and the “Customization” box will show up. If this box is empty the table already has all available columns. If not, you can now drag an available column to table.

By dragging columns between the table and the customization box you make the table look fitting to your wishes.



### 4.2.3. FORMS

To change the lay-out of a form, right click within the inner grey lines of a form under or above a label. A small menu will popup. In this menu, select “Customize Layout”.



A form will show with all kinds of possible layout adjustments. To add items to your form, drag them out of the Customization forum and onto the form at the place you like to have them.

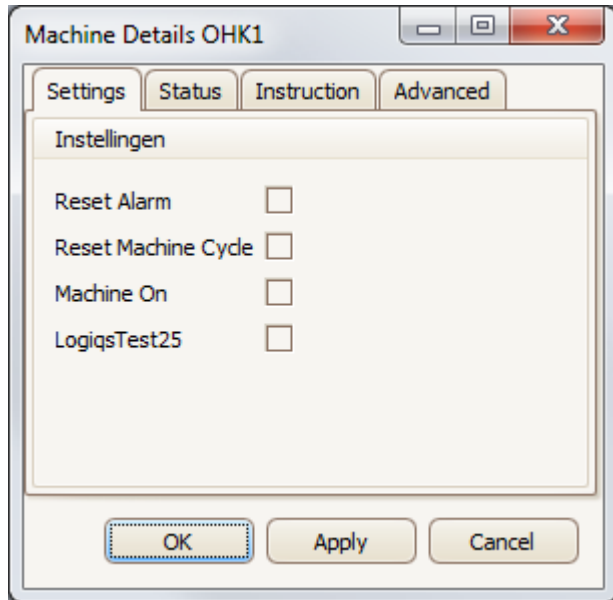
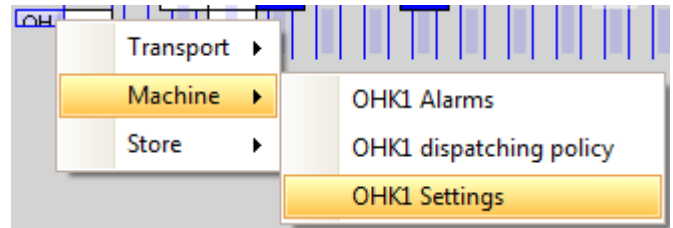
We advise you to reserve some time to adjust forms, since this is a difficult and sometimes stressful topic.

If the adjustments you made are not what you hoped of it, you cannot find a way to undo some changes, you are simply missing some basic functionality or you just want to get the default layout back, then this is what you do: Close the Customization forum, again right click within the inner grey lines of a form under or above a label but this time select “Reset layout”.

**Warning:** Dat-A-Control is frequently being altered to add new functionality. As a result of this, forms can change to add or remove functionality. It is impossible to maintain the personalized layout so in these situations the layout will be changed to the new default layout with the altered functionality.

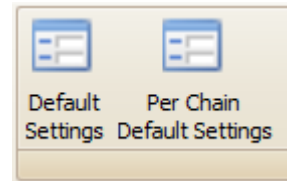
### 4.3. MACHINE SETTINGS

To adjust the machine settings, right-click the machine to open the context menu and select Machine followed by Settings. An alternative way to reach the same screen is by clicking the machine in the “Machines” tab.



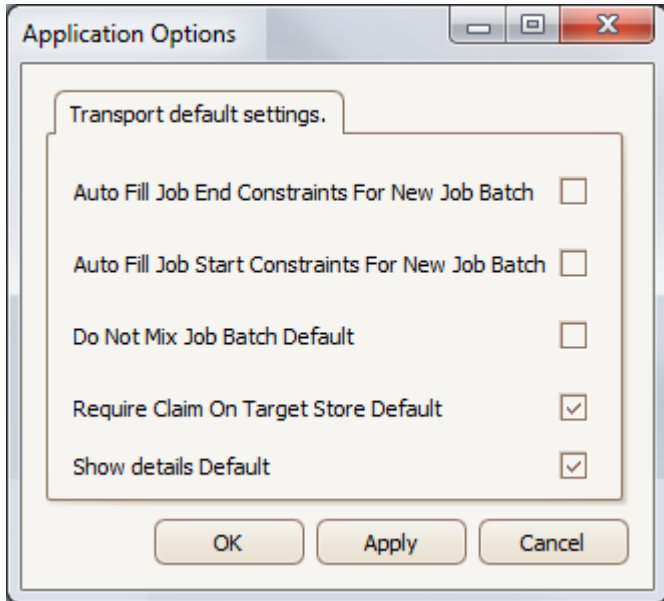
The standard settings of every machine are related to fixing alarms: Reset Alarm, Reset Machine Cycle, and Machine On.

Next to those standard settings this screen can also contain customer specific settings. The example on the left shows the “LogiqsTest25” setting as used in our testing environment.



### 4.4. DEFAULT TRANSPORT CHAIN SETTINGS

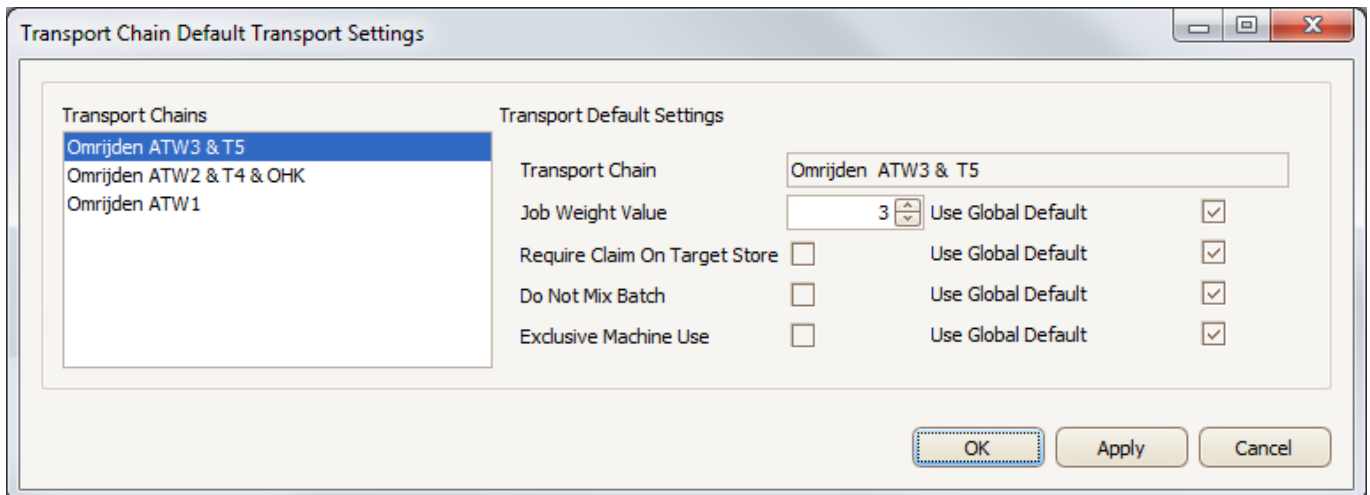
Note: The functionality in this paragraph has been introduced at the start of 2012 and as a result might not be available in your version of the software.



With the button “Default Settings” on the Transport Tab you can change the default settings of transport chains. When you press that button you will see the option screen as shown on the left.

The settings are application wide. In other words: Changes made in your client will influence every new batch started on all clients in your system.

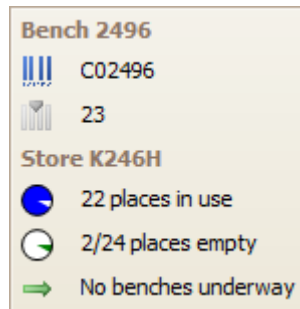
It is possible to set transport chain specific settings per individual chain. You can do so by pressing the “Per Chain Default Settings” button next to the “Default Settings” button. This will result in the option screen as shown below.





## 4.5. TOOLTIPS

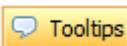
If you keep your mouse steady above a bench, more information will show up.



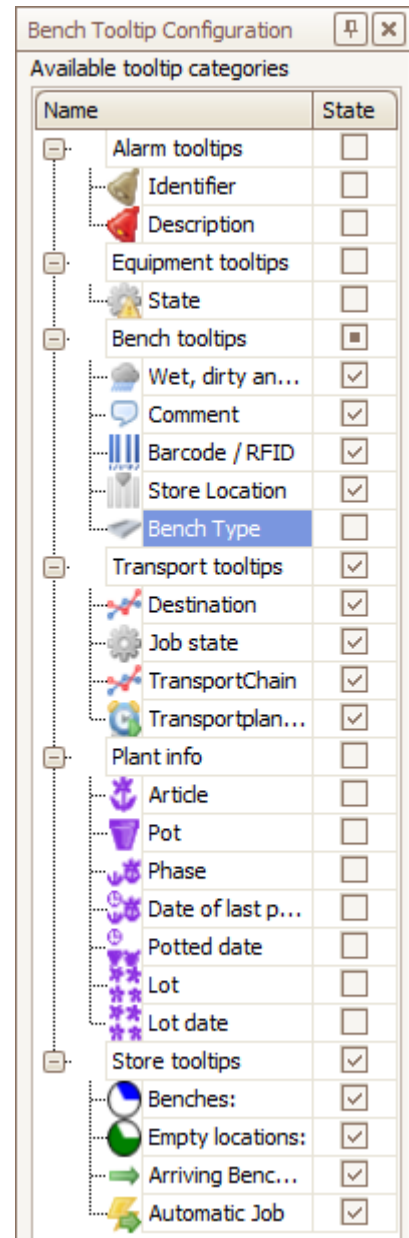
**Bench 2496**  
 C02496  
 23  
**Store K246H**  
 22 places in use  
 2/24 places empty  
 No benches underway

Example:

This information is called “Tooltips” and can be adjusted to fit the users need.

By clicking the  button on the “Application” tab a list will show up as shown on the right side of this page. This list contains all possible tooltip options.

We advise you to use at least one of the alarm tooltips.

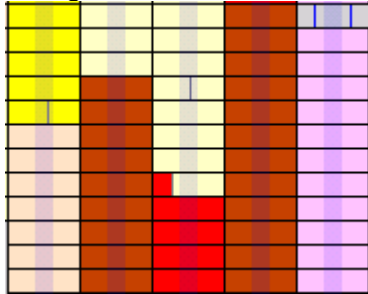


Name	State
Alarm tooltips	<input type="checkbox"/>
Identifier	<input type="checkbox"/>
Description	<input type="checkbox"/>
Equipment tooltips	<input type="checkbox"/>
State	<input type="checkbox"/>
Bench tooltips	<input checked="" type="checkbox"/>
Wet, dirty an...	<input checked="" type="checkbox"/>
Comment	<input checked="" type="checkbox"/>
Barcode / RFID	<input checked="" type="checkbox"/>
Store Location	<input checked="" type="checkbox"/>
Bench Type	<input type="checkbox"/>
Transport tooltips	<input checked="" type="checkbox"/>
Destination	<input checked="" type="checkbox"/>
Job state	<input checked="" type="checkbox"/>
TransportChain	<input checked="" type="checkbox"/>
Transportplan...	<input checked="" type="checkbox"/>
Plant info	<input type="checkbox"/>
Article	<input type="checkbox"/>
Pot	<input type="checkbox"/>
Phase	<input type="checkbox"/>
Date of last p...	<input type="checkbox"/>
Potted date	<input type="checkbox"/>
Lot	<input type="checkbox"/>
Lot date	<input type="checkbox"/>
Store tooltips	<input checked="" type="checkbox"/>
Benches:	<input checked="" type="checkbox"/>
Empty locations:	<input checked="" type="checkbox"/>
Arriving Benc...	<input checked="" type="checkbox"/>
Automatic Job	<input checked="" type="checkbox"/>

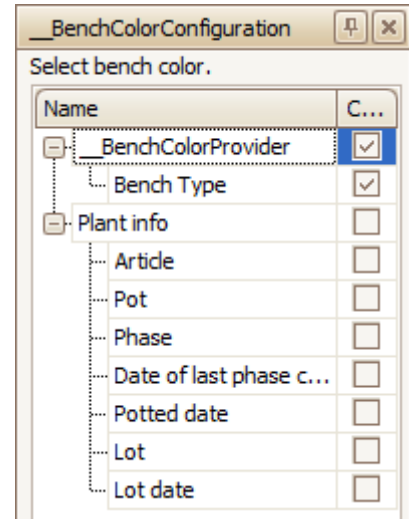
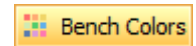
## 4.6. BENCHES

### 4.6.1. BENCH COLORS

To get some information about benches by simply looking at the screen, it is possible to give the bench one or more colours.



Users without Dat-A-Plant can only select Bench Type. Those with Dat-A-Plant can also select Article, Pot, Phase, Date of last change, Potted date, Lot, and Lot date.



### 4.6.2. BENCH TEXT

Besides a colour, benches can also be marked with a text. This makes it possible to visually recognise benches and their content in two ways.

The texts can be selected by clicking the table text in the tab "application". On the right in the graphic overview a column appears where the required bench text can be selected.

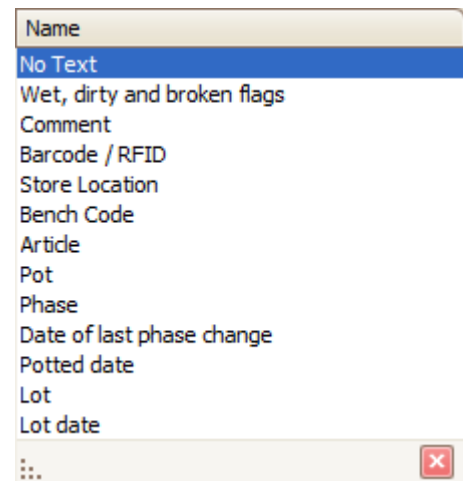
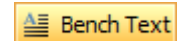


Figure 4.2 Text in benches

## 5. HELP WITH PROBLEMS

The logistic system is a complex system of machines, mechanical parts and control software. It is impossible to operate this system without problems. After all, a machine can break down, the electric power may fail, an electronic sensor can be covered under potting soil or leaves, and so on. For these reasons the system has an extensive functionality to signal and solve problems, which help you to see which problems have occurred, what the cause of the problem is, and what should be done to solve the problem. The user can also add own solutions for problems.

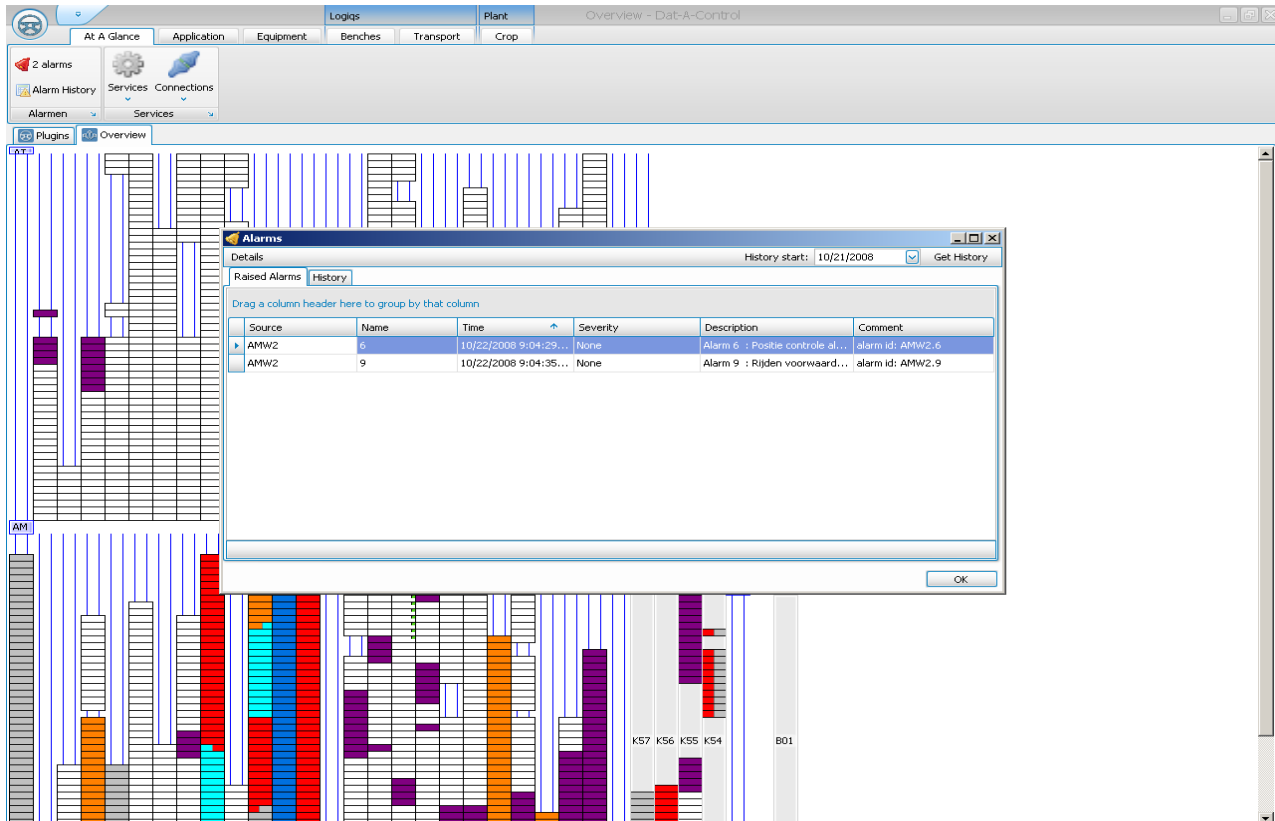


Figure 5.1 Overview of alarms

### 5.1. NOTICING A PROBLEM

Dat-A-Control contains a database with possible problems which can occur. As soon as a machine reports to the system that a problem occurs, or that the position of a bench in the system is impossible or unwanted, a problem warning is shown in the main screen.

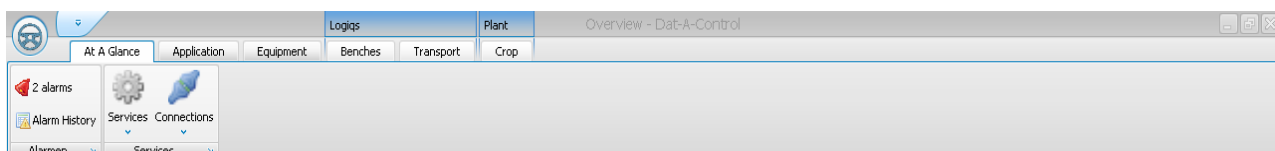
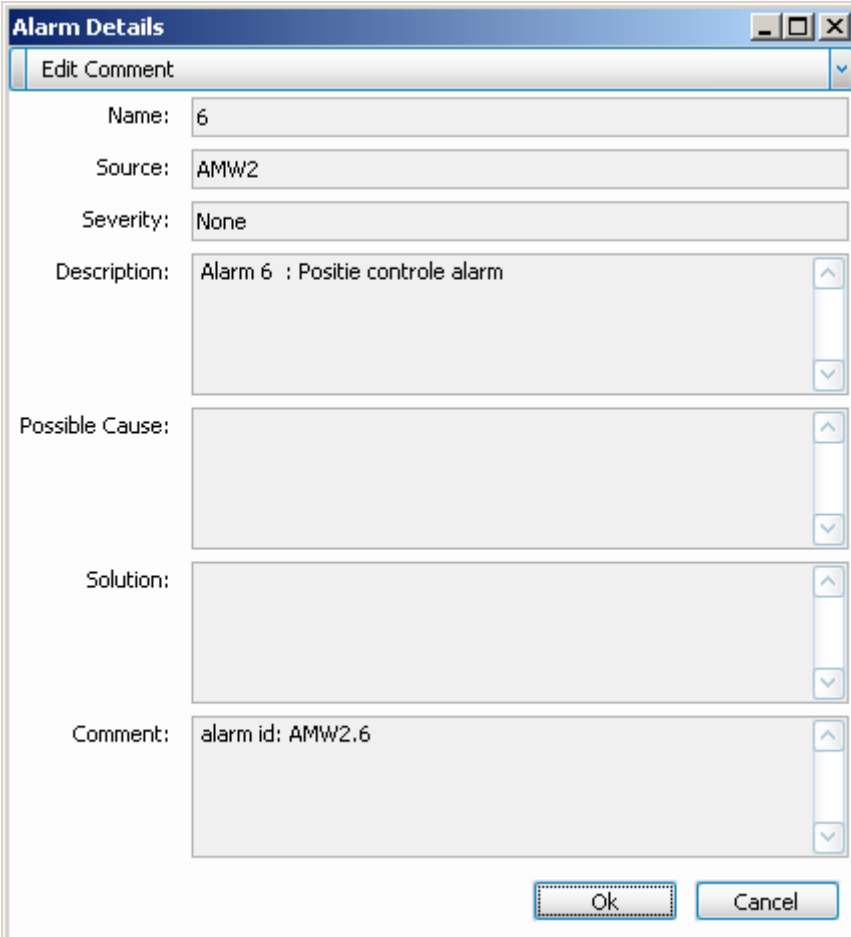


Figure 5.2 Problem warning

## 5.2. ANALYSING A PROBLEM

When you click on the warning button the “alarms” screen appears. In this screen the current problems per machine are shown (see figure 5.1). After double clicking on a problem the screen in figure 5.3 appears. The user can adjust the fields after his own ideas to make the warnings as clear as possible for himself. (NOTE: this function is not working properly yet)



Name:	6
Source:	AMW2
Severity:	None
Description:	Alarm 6 : Positie controle alarm
Possible Cause:	
Solution:	
Comment:	alarm id: AMW2.6

Figure 5.3 Adjust alarm details

The columns cause and solution contain information about the actions to undertake to solve a problem.

### 5.3. REGISTRATION AFTER A TRANSFER ERROR

Transfer errors are a different type of problem, and cause a separate notification. A transfer error occurs when a machine wants to transport a bench, which isn't possible in Dat-A-Control. A machine can't transport benches after a transfer errors occurs. When the system stops you should also check transfer errors as well as problems. After a transfer error it is necessary to rectify the current situation in Dat-A-Control.

### 5.4. CONSEQUENCES FAULTED TRANSFER

Plants are linked to a bench for registration purposes. Registration on benches is done by counting. If something goes wrong, plants will be linked to the wrong bench, which means that the registration system doesn't work. When there is no plant registration, it is still necessary that the benches are at their correct location in Dat-A-Control for instance when working with a Pocket PC and notification of full pipe rows. In this paragraph we explain which steps to follow after a transfer error occurs.

### 5.5. SOLVING FAULTED TRANSFER

To solve transfer errors, it is important to follow the next steps:

1. Check with "Transfers" in the tab Transport (figure 5.4) if there are transfers errors.
2. Check if the current position of the benches in Dat-A-Control matches the reality in the glasshouse.
3. If Dat-A-Control doesn't match with reality, adjust the information in Dat-A-Control. (this is explained below; figure 5.5 and 5.6)
4. Check again with "Transfers" in the tab Transport and click on reset when the reality matches with Dat-A-Control.

A transfer error occurs when the PLC notifies Dat-A-Control, while this isn't possible because a problem occurs or a notification for a full pipe row is done, or similar problems.

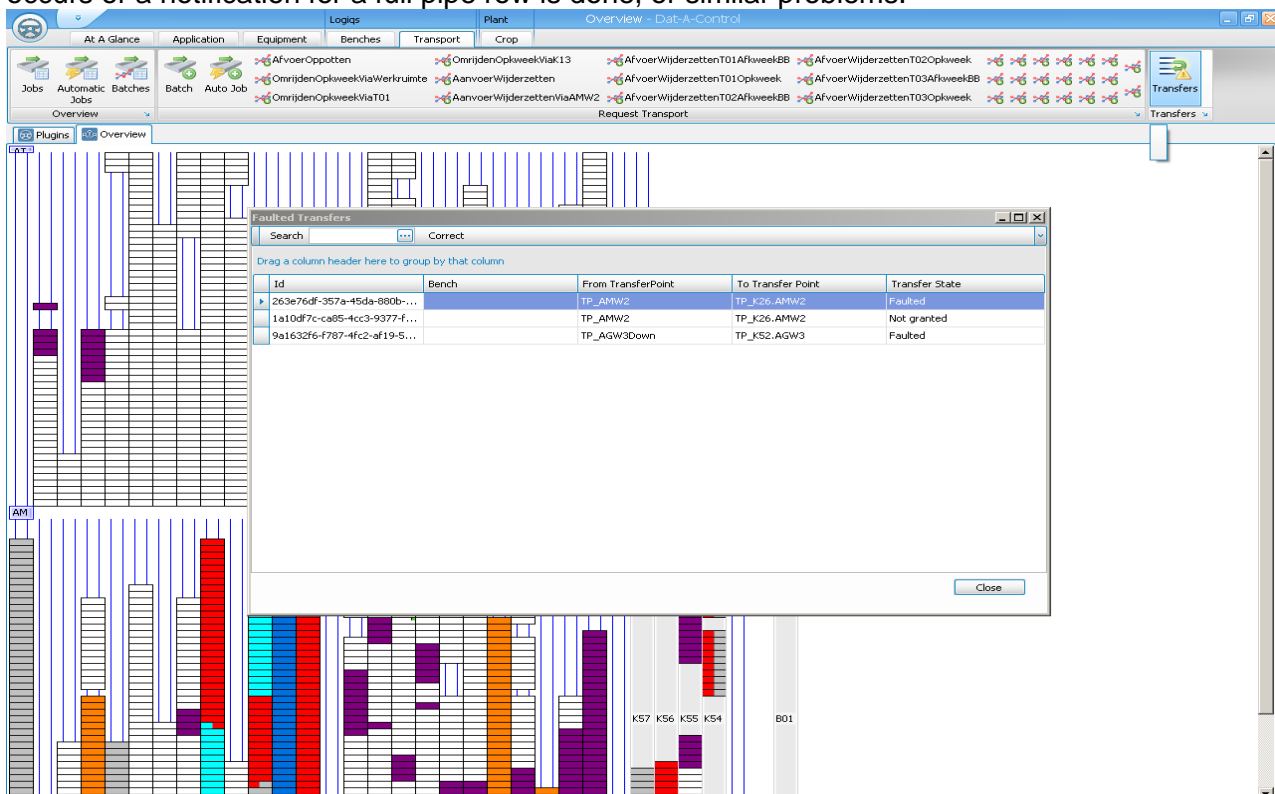


Figure 5.4 Faulted transfer overview