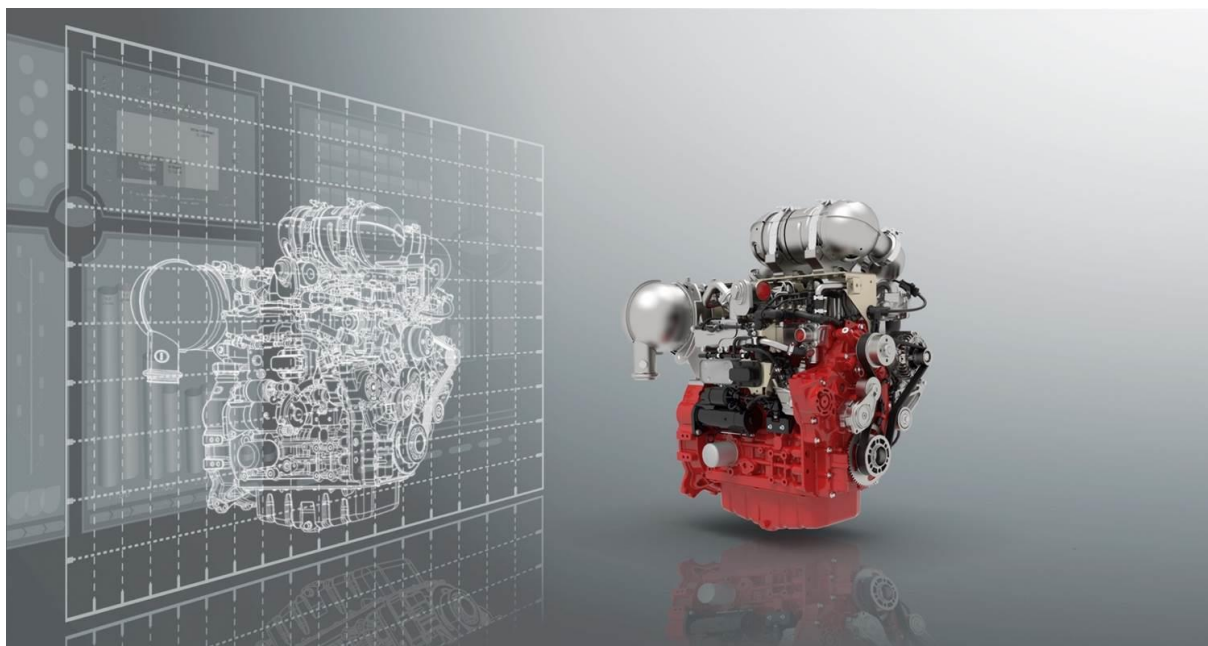


Handbook for capacity entry in AX4

For suppliers of DEUTZ AG



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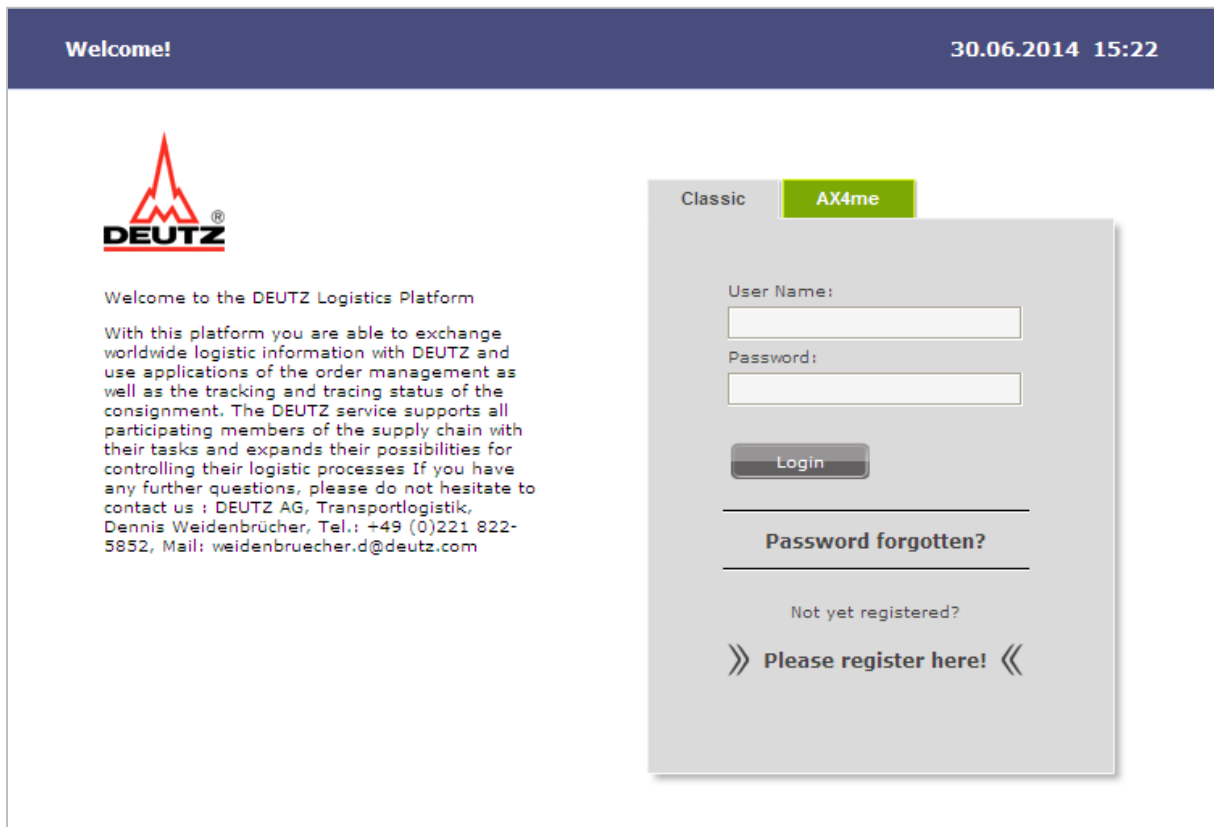
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1. Login on the AX4 platform

The login area for the AX4 platform can be found under the link <https://www.ax4.com/ax4/?ID=153117&lang=en>. DEUTZ AG will provide the user id and password to the supplier by e-mail. The password is only valid for the first login, after this it has to be changed.



The screenshot shows the DEUTZ AX4me login interface. At the top, a dark blue header contains 'Welcome!' on the left and the date and time '30.06.2014 15:22' on the right. Below the header, the DEUTZ logo is displayed on the left. To the right of the logo is a login form with two tabs: 'Classic' and 'AX4me', with 'AX4me' being the active tab. The form contains fields for 'User Name:' and 'Password:', a 'Login' button, a 'Password forgotten?' link, and a 'Not yet registered?' link. At the bottom of the form, there is a link that says '» Please register here! «'.

Figure 1: Login on the AX4 platform

Note: Please note that the entry of capacity data on the AX4 platform does not replace any obligation to inform or any subject matter of contract. This information serves for strategic planning within DEUTZ AG. The delivery schedules are still binding for the supplier.

After a successful login the following view should appear in the browser. If there are any part numbers which have not been assigned to any machine yet, these will be listed as well with a corresponding advice.

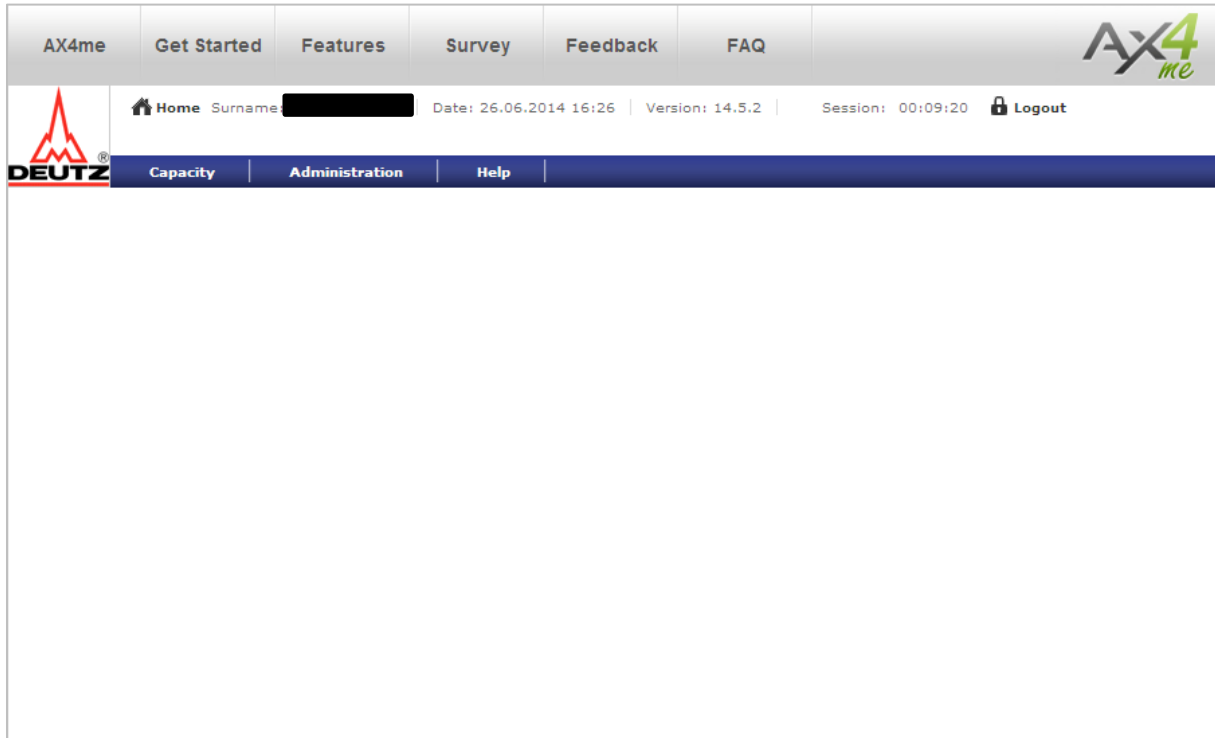


Figure 2: View in the browser after successful login

2. Selecting capacity entry

After logging in the following selection has to be made: *Capacity => Create tooling capacity*

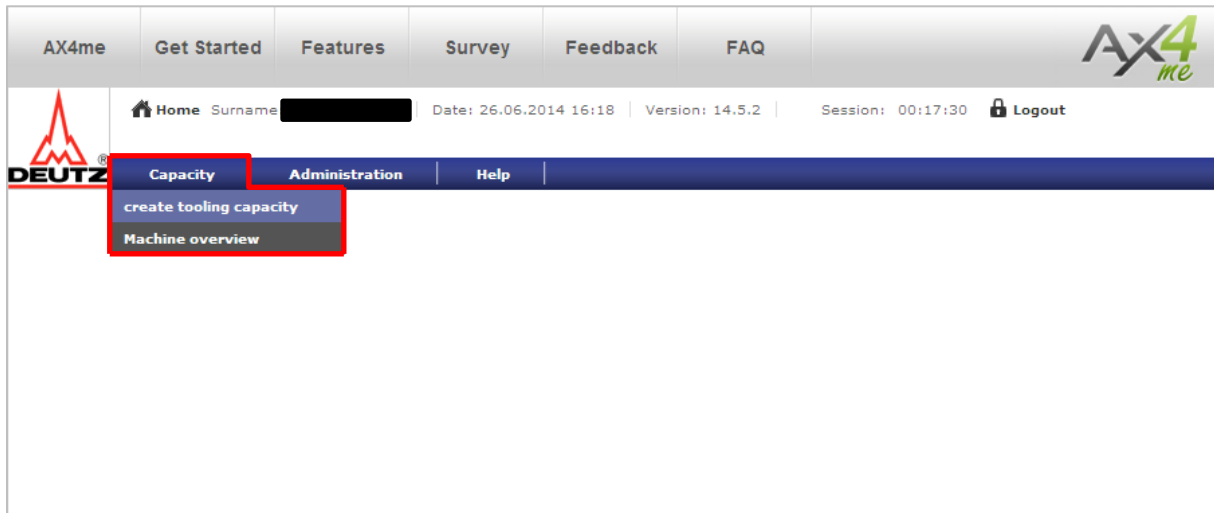
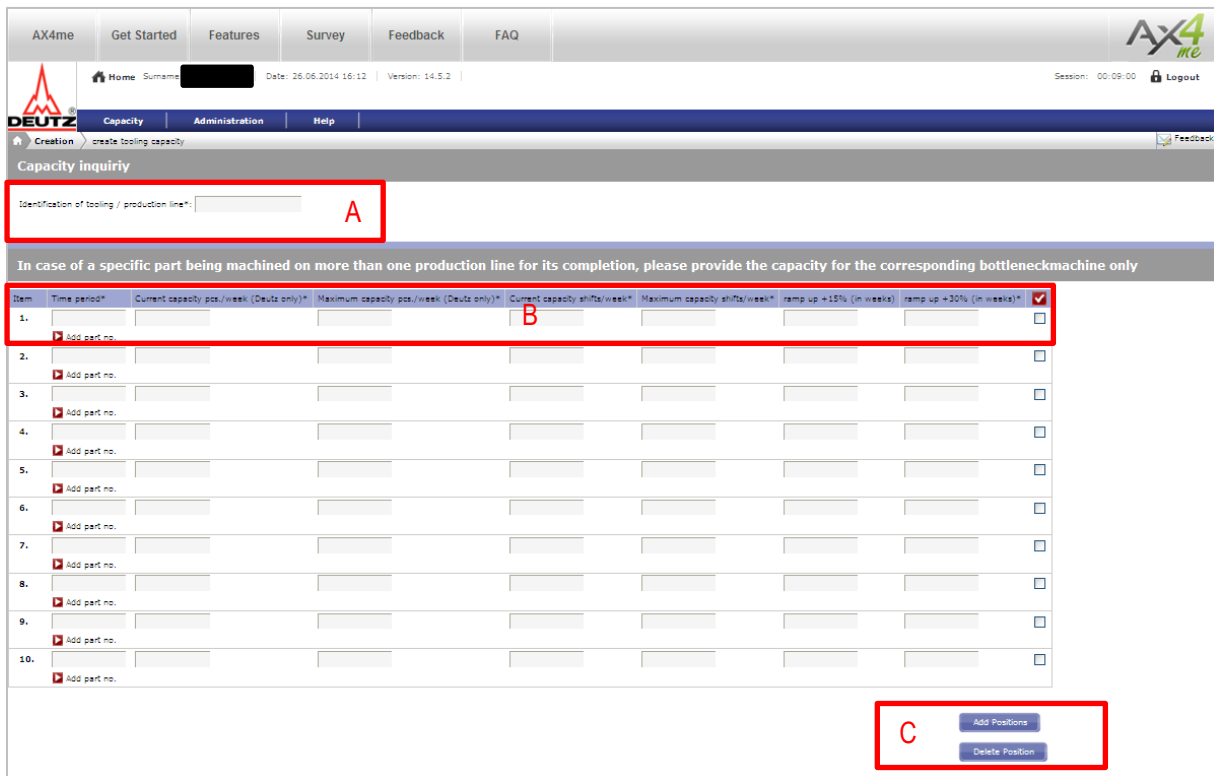


Figure 3: Selection for creating tooling capacity

3. Entry of capacity data

After the appropriate selection the following view should appear in the browser. In this view a tooling/production line, the part numbers which are manufactured on it and the corresponding capacities can be entered.



Identification of tooling / production line*:

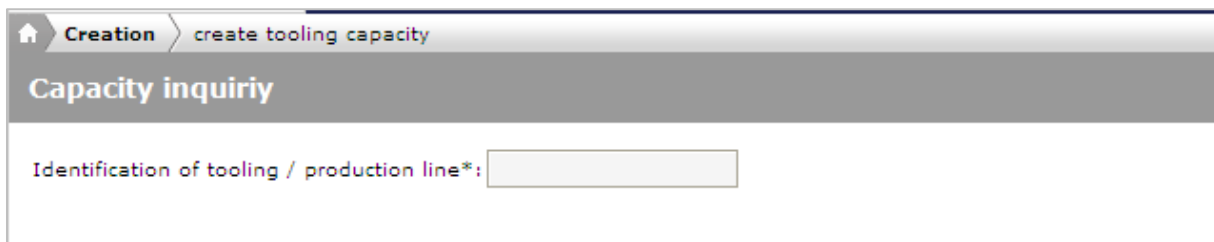
In case of a specific part being machined on more than one production line for its completion, please provide the capacity for the corresponding bottleneckmachine only

Item	Time period*	Current capacity pcs./week (Deutz only)*	Maximum capacity pcs./week (Deutz only)*	Current capacity shifts/week*	Maximum capacity shifts/week*	ramp up +15% (in weeks)	ramp up +30% (in weeks)*	<input checked="" type="checkbox"/>
1.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>
2.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
3.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
4.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
5.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
6.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
7.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
8.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
9.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
10.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>

Figure 4: Overview of the capacity entry

A. *Identification of tooling/production line*: In this field a denomination for the tooling/production line has to be entered. The chosen denomination can only be used once for a tooling/production line. If the same name is picked for another tooling/production line the system will not allow to save the entries.

The name can be changed at any time by clicking on the button *Edit*.



Identification of tooling / production line*:

Figure 5: Entry of an identification for the tooling/production line

B. In this area the actual capacity information has to be entered.

Item	Time period*	Current capacity pcs./week (Deutz only)*	Maximum capacity pcs./week (Deutz only)*	Current capacity shifts/week*	Maximum capacity shifts/week*	ramp up +15% (in weeks)	ramp up +30% (in weeks)*	<input checked="" type="checkbox"/>
1.	<input type="text"/> <input type="button" value="Add part no."/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
2.	<input type="text"/> <input type="button" value="Add part no."/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
3.	<input type="text"/> <input type="button" value="Add part no."/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>

Figure 6: Entry of capacity data

- *Time period:* Entry of the date from which the stated capacity will be valid. With the Add positions button up to 999 additional time periods can be created. The clearing up process has to be managed by the supplier.
- *Current capacity pcs./week (DEUTZ only):* Entry of the output in pieces per week, which are actually being produced in the corresponding time period. If the tooling/production line is being used for other customers as well, the relevant output to be stated is the one for DEUTZ AG only. A separator for thousands should not be used.
- *Maximum capacity pcs./week (DEUTZ only):* The maximum output in pieces per week that can be produced in the corresponding time period.
- *Current capacity shifts/week:* Entry of the number of shifts per week being worked on the tooling/production line in order to reach the current output.
- *Maximum capacity shifts/week:* The number of shifts per week being worked in order to reach the maximum output.
- *Ramp up +15% (in weeks):* The number of weeks necessary to increase the maximum output by 15%.
- *Ramp up +30% (in weeks):* The number of weeks necessary to increase the maximum output by 30%.
- *Add part no.:* Clicking this button will allow to assign part numbers to the tooling/production line. Part numbers have to be assigned to its tooling/production line only in the first time period that is being entered. Only DEUTZ part numbers can be entered.

Note: The part numbers assigned in the first time period are valid for all subsequent time periods. Therefore the first time period should not be deleted, otherwise all the part numbers have to be entered again.

C. Add positions/Delete position: These buttons can be used for creating additional positions or deleting existing positions. This enables the entry of additional time periods, where other capacities might be applicable.

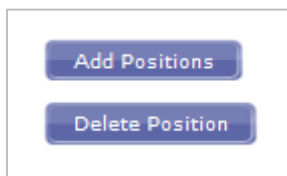


Figure 7: Adding and deleting positions

4. Assigning part numbers to a tooling/production line

The *Add part no.* button will allow for assigning part numbers to the corresponding machine.

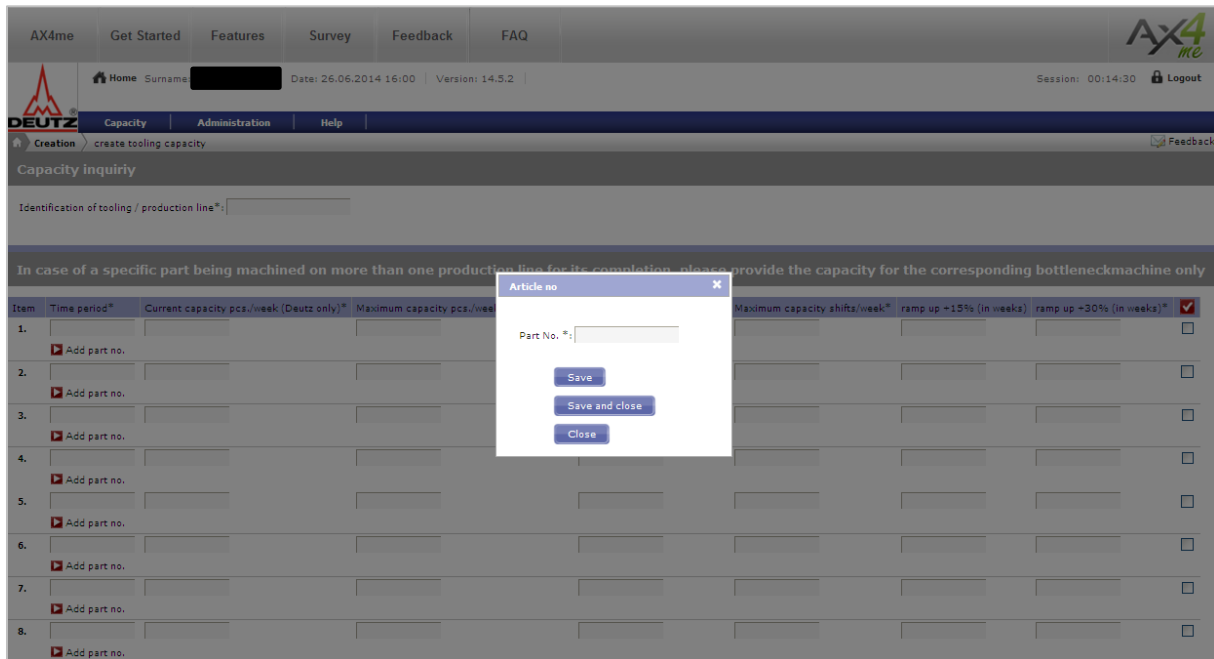


Figure 8: Assigning part numbers to a tooling/production line

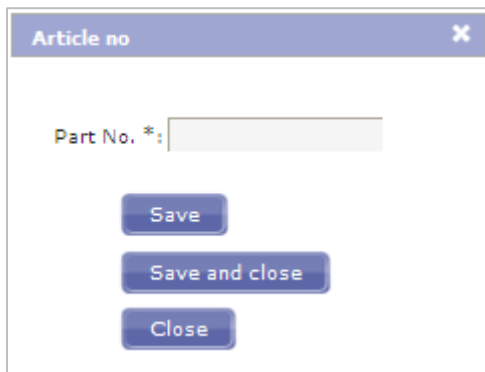


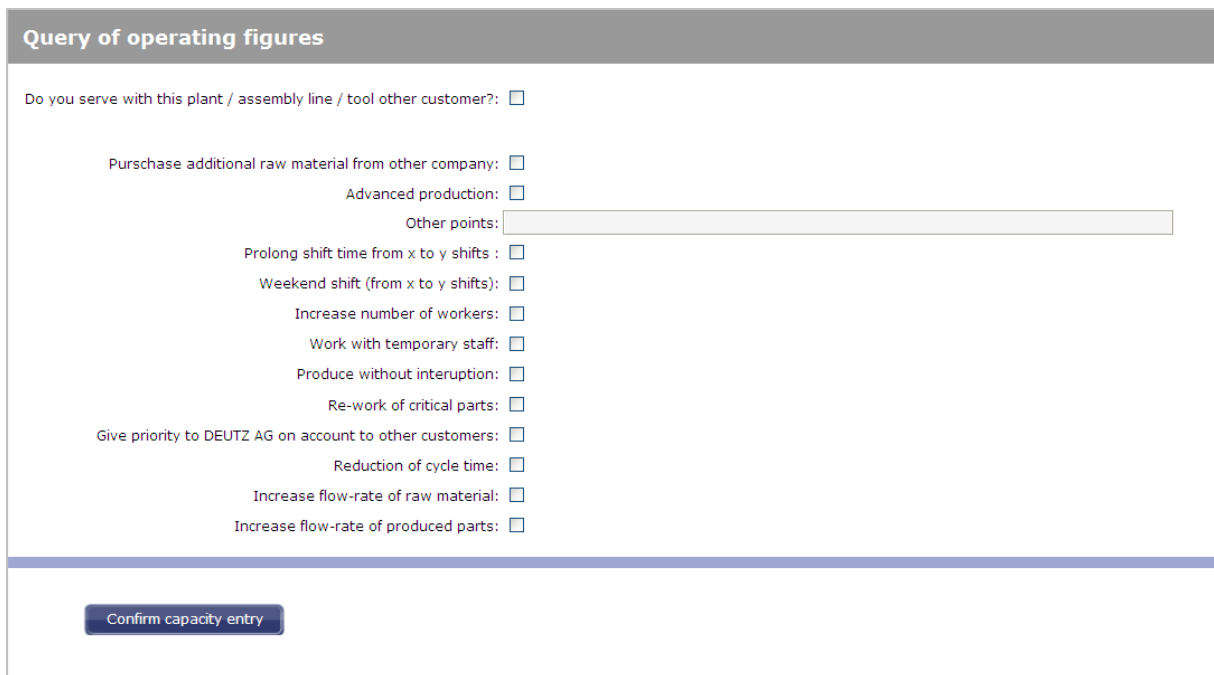
Figure 9: Detailed view of assigning part numbers

A guideline on how to upload multiple part numbers from an external source can be found in 6. Upload of multiple part numbers on page 11.

5. Entry of operating figures and completing the capacity entry

In the lower part there is a query of operating figures. If the content is applicable to the corresponding tooling/production line, the supplier can document it by clicking the related checkbox.

The field other points provides space for additional information and comments. If for instance, the values for a ramp up (+15% and +30%) are not realizable, but a ramp up of +20% would be, then this information might be entered at this point.



Query of operating figures

Do you serve with this plant / assembly line / tool other customer?:

Purchase additional raw material from other company:

Advanced production:

Other points:

Prolong shift time from x to y shifts :

Weekend shift (from x to y shifts):

Increase number of workers:

Work with temporary staff:

Produce without interruption:

Re-work of critical parts:

Give priority to DEUTZ AG on account to other customers:

Reduction of cycle time:

Increase flow-rate of raw material:

Increase flow-rate of produced parts:

Confirm capacity entry

Figure 10: Entry of operating figures

The capacity entry has to be completed by clicking the button *confirm capacity entry*. All the entered data will be saved by clicking *release capacity*. The *Edit* button allows for changing the data again.



Edit **Release capacity**

Figure 11: Completing the capacity entry

6. Upload of multiple part numbers

It is possible to upload multiple part numbers from an external file like a list of Microsoft Excel or from an ERP system. Therefore in a first step the tooling/production line and its capacity data have to be entered as described in 3. Entry of capacity data and 5. Entry of operating figures and completing the capacity entry. Then the following selection has to be made: *Capacity => Machine overview*

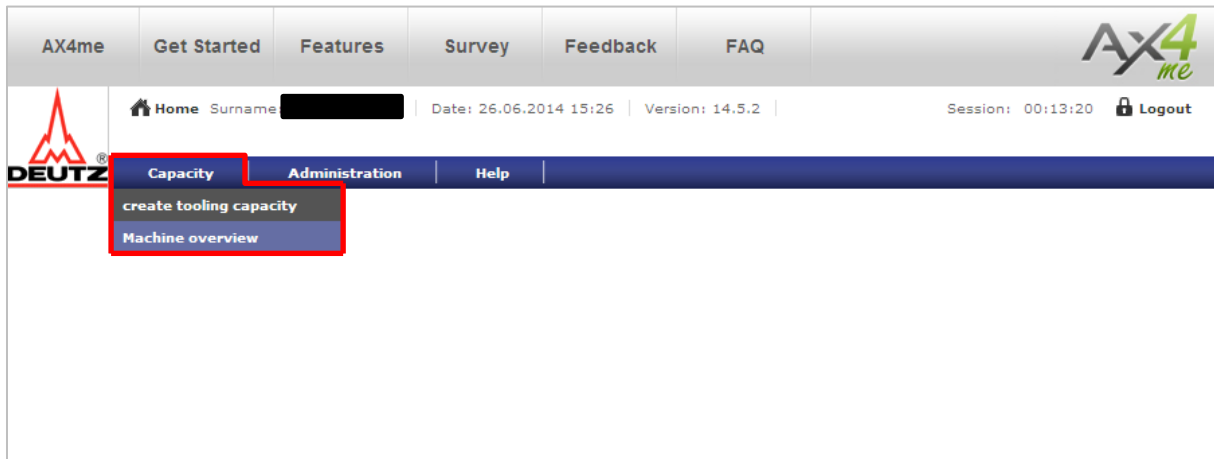
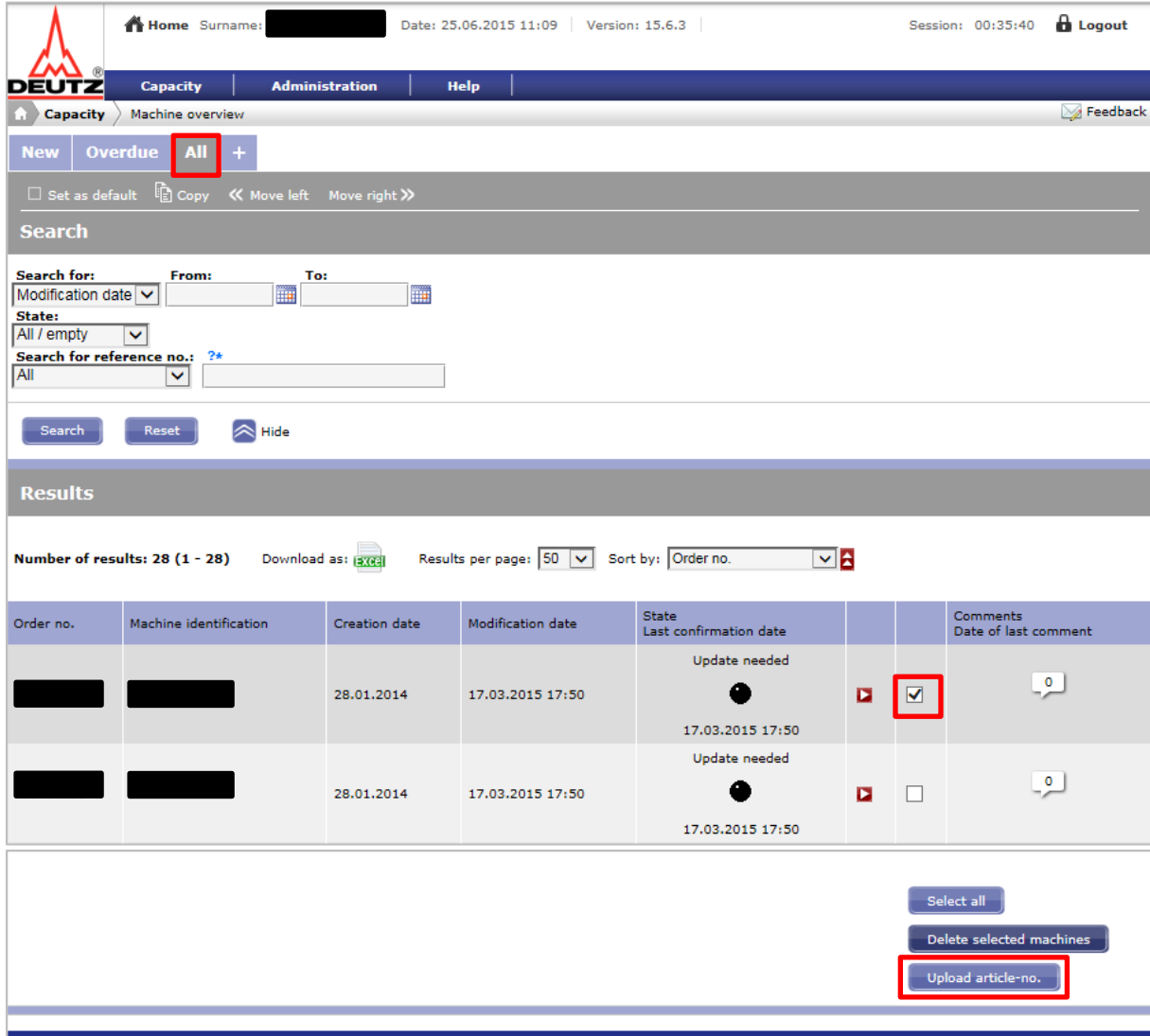


Figure 12: Selecting Machine overview

A list of all toolings/production lines is provided by clicking on the tab “All”. Marking the checkbox and clicking the button *Upload article-no.*, will open a new window that allows for uploading multiple part numbers.

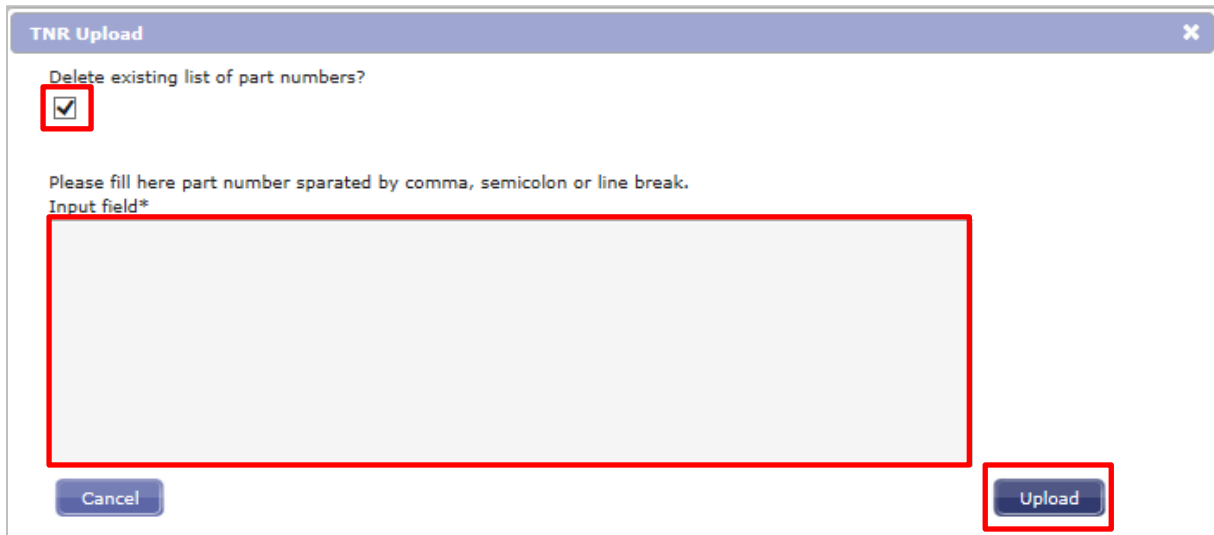


The screenshot shows the DEUTZ AX4 Capacity entry interface. At the top, there is a navigation bar with 'Home', 'Surname', 'Date: 25.06.2015 11:09', 'Version: 15.6.3', 'Session: 00:35:40', and 'Logout'. Below this is a menu with 'Capacity', 'Administration', and 'Help'. The main content area is titled 'Machine overview' and has tabs for 'New', 'Overdue', and 'All' (which is selected and highlighted with a red box). There are also buttons for 'Set as default', 'Copy', 'Move left', and 'Move right'. A search section includes fields for 'Search for:', 'From:', 'To:', 'Modification date', 'State:', and 'Search for reference no.:'. Below the search section are buttons for 'Search', 'Reset', and 'Hide'. The 'Results' section shows 'Number of results: 28 (1 - 28)', 'Download as: Excel', 'Results per page: 50', and 'Sort by: Order no.'. A table with the following columns is displayed: 'Order no.', 'Machine identification', 'Creation date', 'Modification date', 'State', 'Last confirmation date', and 'Comments'. The first row of the table has a checked checkbox in the 'State' column, which is highlighted with a red box. The second row has an unchecked checkbox. At the bottom right of the table, there are buttons for 'Select all', 'Delete selected machines', and 'Upload article-no.' (which is highlighted with a red box).

Order no.	Machine identification	Creation date	Modification date	State	Last confirmation date	Comments
[Redacted]	[Redacted]	28.01.2014	17.03.2015 17:50	Update needed ●	17.03.2015 17:50	0
[Redacted]	[Redacted]	28.01.2014	17.03.2015 17:50	Update needed ●	17.03.2015 17:50	0

Figure 13: Machine overview and selection for uploading multiple part numbers

In the following window multiple part numbers can be entered by copying them from an external source like a Microsoft Excel file or an ERP system. If the part numbers that have been added to that tooling/production line before should be deleted, the checkbox in the upper part of the window can be marked. This will assign only the part numbers currently copied into the window by clicking the button *Upload*.



The screenshot shows a dialog box titled "TNR Upload" with a close button (X) in the top right corner. Inside the dialog, there is a checkbox labeled "Delete existing list of part numbers?" which is checked. Below this, there is a text instruction: "Please fill here part number sparated by comma, semicolon or line break." followed by a label "Input field*" and a large, empty rectangular text area. At the bottom left of the dialog is a "Cancel" button, and at the bottom right is an "Upload" button. Red rectangular boxes are drawn around the checked checkbox, the large input field, and the "Upload" button.

Figure 14: Detailed view for uploading multiple part numbers

7. Updates of capacity data

The supplier will be requested periodically to check and update the capacity data if necessary. A reminder for checking the capacity data will be sent automatically by e-mail every 4 month from the last modification date. Any changes of the capacity data has to be communicated immediately.

For changing capacity data the following selection has to be made: *Capacity => Machine overview*

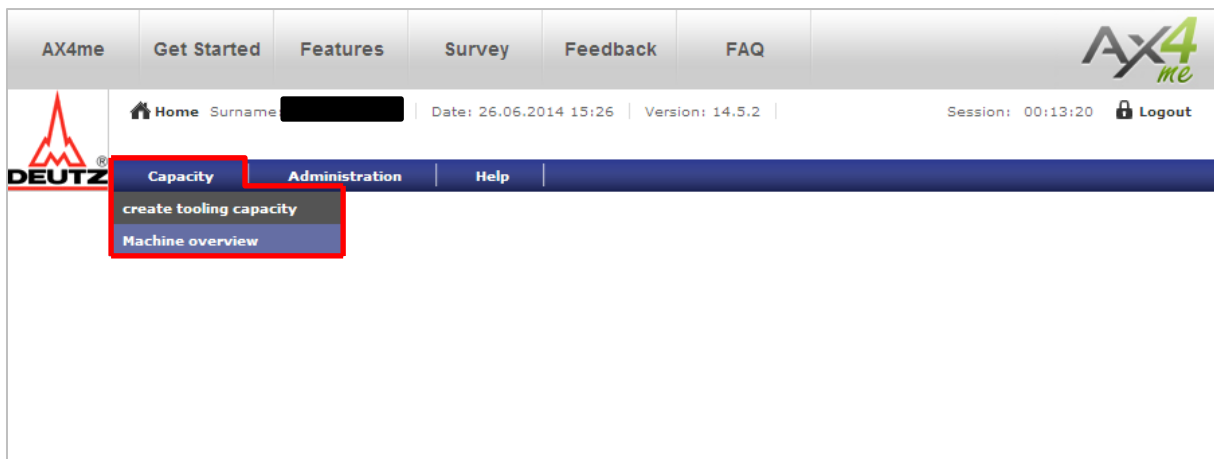
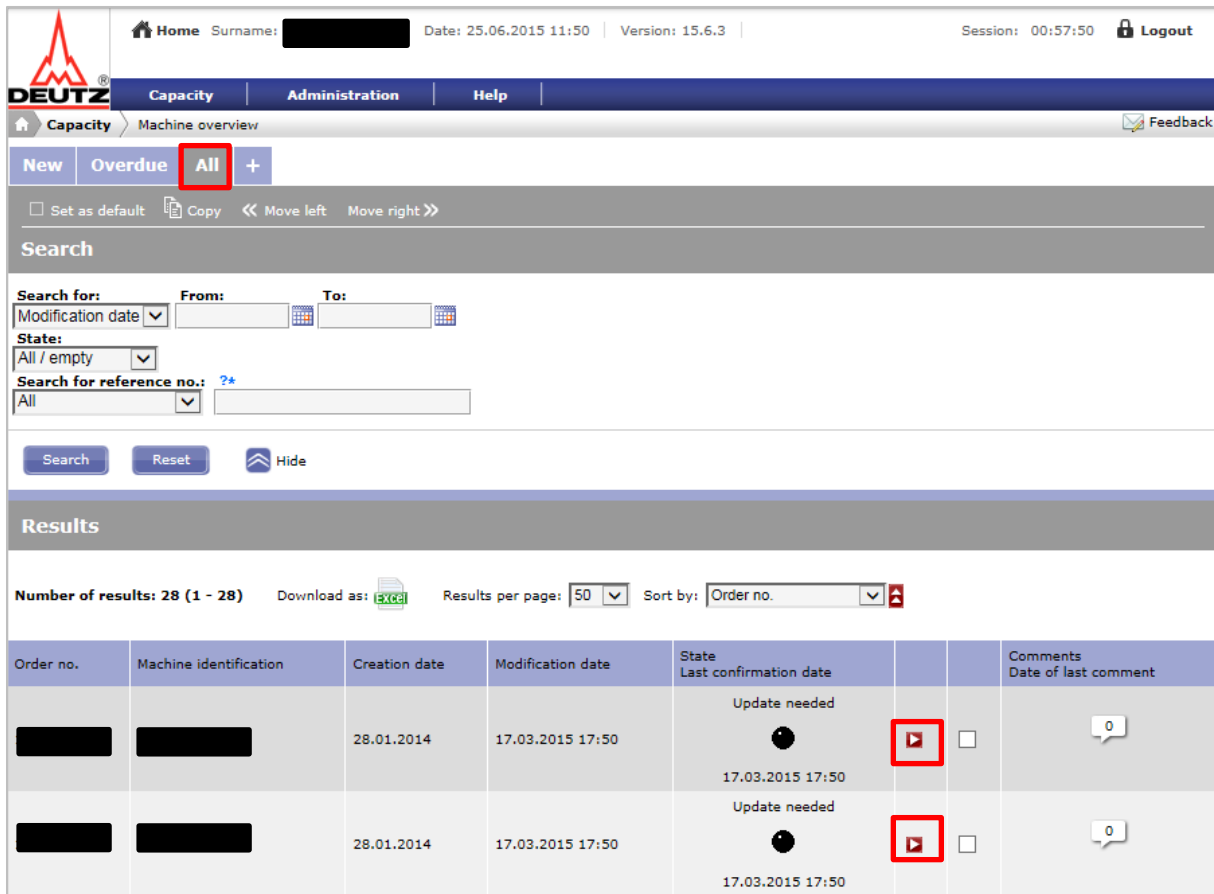


Figure 15: Selecting Machine overview


A list of all toolings/production lines is provided by clicking on the tab „All“:



The screenshot shows the DEUTZ AX4 Capacity entry interface. The 'All' tab is selected in the 'Machine overview' section. The search bar is empty. The results table shows two entries with the state 'Update needed' and a 'Play' button icon highlighted in red.

Order no.	Machine identification	Creation date	Modification date	State	Last confirmation date	Comments	Date of last comment
[Redacted]	[Redacted]	28.01.2014	17.03.2015 17:50	Update needed	17.03.2015 17:50	[Play icon]	0
[Redacted]	[Redacted]	28.01.2014	17.03.2015 17:50	Update needed	17.03.2015 17:50	[Play icon]	0

Figure 16: Overview of all entered toolings/production lines

A click on the symbol  will open the view of the capacity data entry (see figure 4) and will allow changing the data for the selected tooling/production line.

Note: Even if there is no need to change the existent capacity data, it has to be confirmed by clicking the buttons *Confirm capacity entry* and *Release capacity* (see figure 10 and 11). The *Release capacity* button will appear right after clicking the *Confirm capacity entry* button at the bottom of the page. Then the data will be transferred to the SAP system of DEUTZ AG as the current valid capacity and the state of the corresponding tooling/production line will change from “Update needed” to “Update not needed”.



8. Contact

For any questions please contact:

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