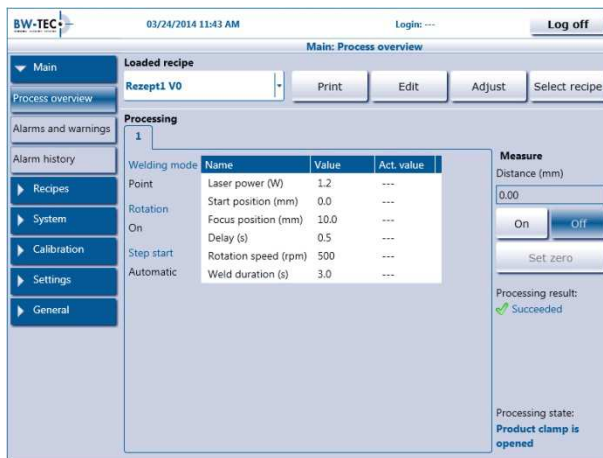


BW-TEC HMI Description

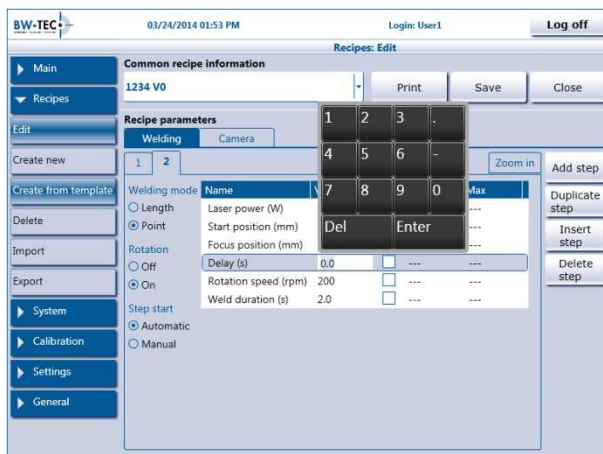
The BW-TEC HMI has been programmed for Windows and optimized for Touchscreen-applications. The HMI can easily be translated into any language, without any programming expenses.



The **user interface** is designed for intuitive and simple interaction.

Even recipes with many parameters are clearly displayed and easily administered.

With its numerous open interfaces, the HMI can be integrated in company-wide ERP- and MES- systems.



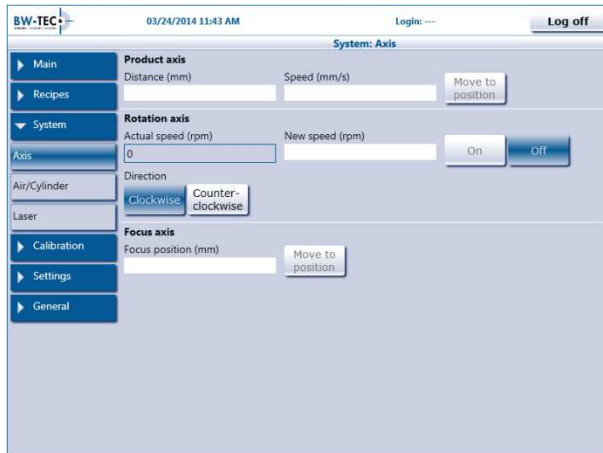
Recipe-management:

Recipes can be generated offline or directly at the machine.

Multiple Recipe storages with different storage locations are possible.

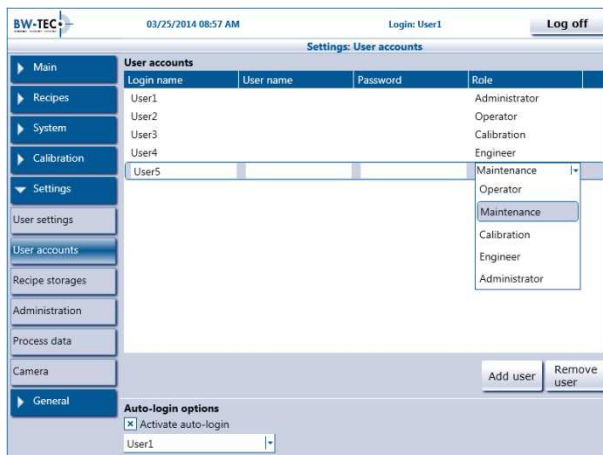
Import / Export of recipes as XML-File or with a recipe database.

If a recipe is changed, the HMI will automatically generate a new version.



In the **system-mode** all machine components can be controlled manually.

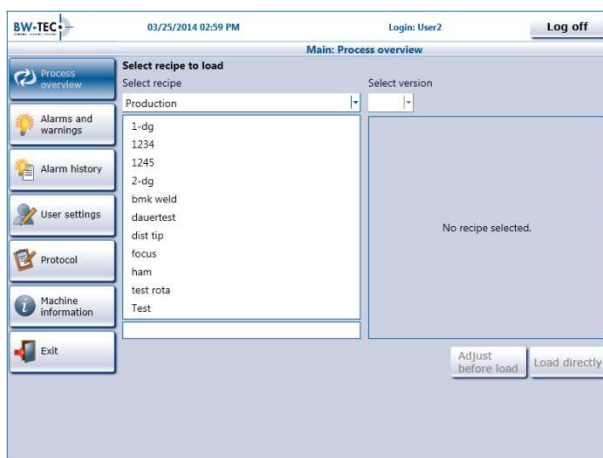
In the **calibration-mode** the machine can be calibrated easily. This mode will only appear for authorized users.



User administration with access control:

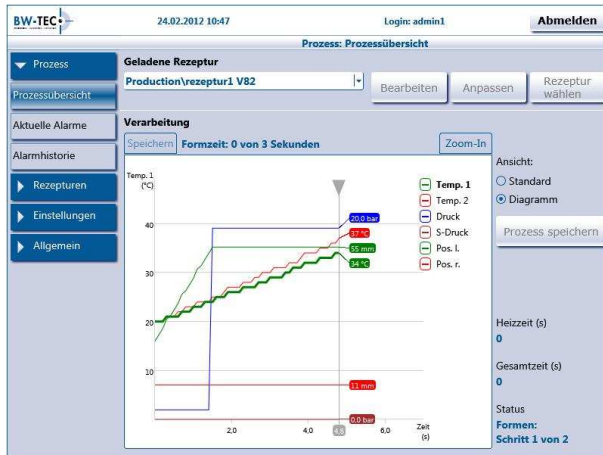
User can be restricted in their role.

For example only a user with the role „engineer“ can generate recipes. The recipe-management will automatically disappear for all other roles.



Operator-view:

An operator can only adjust recipes, if the engineer has defined an adjustable range. The operators user interface is adapted and contains only the elements, which are important for the production.



The **Process visualization** can be displayed in tabular form or as a graph.

Time	Action	Details
03/24/2014 11:43:52 AM	Alarm confirmed	Emergency stop pressed
03/24/2014 11:44:34 AM	Alarm raised	Emergency stop pressed
03/24/2014 11:44:38 AM	Alarm confirmed	Emergency stop pressed
03/24/2014 11:45:25 AM	Warning finished	User abort
03/24/2014 11:45:25 AM	Process started	Rezept1 V0
03/24/2014 11:45:30 AM	Process finished	Rezept1 V0, succeeded
03/24/2014 11:50:45 AM	Process started	Rezept1 V0
03/24/2014 11:50:50 AM	Process finished	Rezept1 V0, succeeded
03/24/2014 11:51:02 AM	Warning raised	User abort
03/24/2014 11:51:12 AM	Warning finished	User abort
03/24/2014 11:51:12 AM	Process started	Rezept1 V0
03/24/2014 11:51:13 AM	Warning raised	User abort
03/24/2014 11:51:13 AM	Process finished	Rezept1 V0, aborted
03/24/2014 11:51:21 AM	Warning finished	User abort
03/24/2014 11:51:21 AM	Process started	Rezept1 V0
03/24/2014 11:51:26 AM	Process finished	Rezept1 V0, succeeded
03/24/2014 11:51:30 AM	Process started	Rezept1 V0
03/24/2014 11:51:35 AM	Process finished	Rezept1 V0, succeeded

Protocol:

The protocol will show important events, such as process-start, process-end, logins, logoffs, alarms and warnings.

Process-documentation:

At the end of a process, all the data, such as parameters, results and user, will be saved in an excel- or XML-file or sent to a printer.