

Brabender®

... where quality is measured.

Instruction Manual

Software MetaBridge® MixMB for Mixer

ID no. 7900060



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Brabender GmbH & Co. KG
Kulturstraße 49-51
47055 Duisburg
Germany

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	<h2>1 General Information</h2>
	<h3>1.1 Use of the instruction manual</h3>
Read the manual thoroughly!	<p>Brabender instruments/software are developed/designed and built according to the state-of-the-art and comply with the demand for simple and safe handling. In order to become familiar with the applications and to use the Brabender instrument/software in an optimum way, it is imperative to read this instruction manual very carefully before putting the Brabender instrument into operation.</p> <p>The instructions, safety instructions and precautions given in the present instruction manual have to be observed strictly.</p> <p>This instruction manual manual is delivered with the Brabender instrument/software and is intended for operation in practice. It is to make the operating personnel familiar with the Brabender instrument/software and to inform them about details concerning transport, storage, mounting, start-up, operation, maintenance, trouble-shooting, and disposal.</p> <p>This instruction manual is, therefore, to be considered part of the Brabender instrument/software and must be kept and handed over with the instrument/software.</p> <p>The operating personnel as well as the personnel in charge of maintenance and repair must always have free access to this instruction manual.</p>
Strictly observe instructions and safety instructions!	
Keep and hand over with the instrument! Keep instruction manual accessible at any time!	
	<h3>1.2 Disclaimer of liability</h3>
	<p>Within the scope of legal regulations, Brabender GmbH & Co. KG refuses any liability - for whatever legal argument - for direct or indirect damage caused in connection with the delivery or use of the Brabender instrument/software. This is in particular true for - but not limited to - improper use and/or improper operation and handling of the Brabender instrument/software.</p> <p>In this context, Brabender explicitly excludes any warranty for wear parts, in particular for those with product contact.</p> <p>Under no circumstances, Brabender GmbH & Co. KG can be made liable for any damage or injuries caused by non-observance of the safety regulations included in the data sheets of the producer of substances to be tested or processed with the Brabender instrument. This is also valid if a recommendation was made concerning the application of certain substances and/or if the provision of test material is part of the scope of delivery and service.</p> <p>The Brabender instrument is subject to modifications of color and design as well as to technical modification without prior notice.</p>

1.3 Software

The Brabender software is developed with care and is tested internally - within the frame of general safety standards also for computer virus. This does, however, not involve any warranty whatsoever that the data carriers provided by Brabender and/or data transmitted electronically by Brabender are virus free.

It is within the exclusive responsibility of the user to test the Brabender software by means of state-of-the-art virus searching programs and to make sure that only Brabender software is applied which has been duly tested for computer virus by the user and has been found virus free.

Any claims arising from liability for defects concerning the functionality, faultlessness, and usability of Brabender software and/or concerning Brabender software being virus free are therefore excluded.

Our liability for any other damage arisen by the use of the Brabender software is limited to intent or gross negligence. Any further liability - for whatever legal argument, in particular for direct or indirect consequential damage - is excluded.

The software is subject to modification serving functional improvement and technical progress without prior notice.

Due to continuous progress and development of the software, the screenshots, if included in the present instruction manual, may slightly differ from the software version delivered.

2 Contact

Data to be stated in case of inquiries

If there are any inquiries to Brabender - e.g. relating to handling of the Brabender instrument/software, ordering of spare parts, accessories, additional equipment or to sending back Brabender instruments or parts of the instrument/spare parts for maintenance or repair - all data given on the name plate must be stated.

For questions concerning the Brabender software, besides the ID no. of the software the version no. must be stated as well.

Contact

For any questions, further information, or in case of problems with the Brabender instrument/software, please do not hesitate to contact the Brabender Service department.

Brabender GmbH & Co. KG
Kulturstraße 49 - 51
47055 Duisburg
Germany
☎ Phone +49-203-7788-131
✉ E-mail: service@brabender.com

North American Regions
C.W. Brabender Instruments, Inc.
50 East Wesley Street
South Hackensack, New Jersey 07606
USA
☎ Phone 201-343-8425
✉ E-mail: service@cwbrabender.com

3 Stylistic features

3.1 General stylistic features

The following stylistic features are used in the instruction manual:

1. marks operating instructions in their serial order
 - [indented] marks individual steps of a preceding general instruction
 - ⇒ [indented] marks the consequences of a preceding action
 - [in safety messages] marks operating instructions
- marks lists or (in instructions) alternatives
 - [indented] marks subordinated lists

3.2 Mandatory signs

The following mandatory signs are used in the instruction manual:



General mandatory sign, additional information



Read the instructions before, cross reference

3.3 Design of safety messages

The safety messages given in the instruction manual are marked by a hazard warning sign and a signal word.

The signal word and the associated signal color indicate the relative severity of the hazard:

DANGER

Describes an **imminently hazardous situation** which will result in **death or serious injury** if not avoided.

WARNING

Describes a **potentially hazardous situation** which is likely to result in **death or serious injury** if not avoided.

CAUTION

Describes a **potentially hazardous situation** which may result in **minor or moderate injury** if not avoided.

NOTICE

Describes a situation which may result in **property damage** if not avoided.

4 MetaBridge software

The Brabender MetaBridge has been factory installed on the internal PC of the Brabender instrument or of the MetaBridge controller. The software is web-based, that means several authorized users can log in at the same time and monitor the readings live on their PC, tablet or smartphone from anywhere around the world via network. The results can be evaluated, printed, and exported using the software.

4.1 Connection of the MetaBridge controller

1. Connect a USB-to-CAN adapter to one of the four USB ports on the left side of the MetaBridge controller and, on the other side, to the CAN-OUT port of the Brabender instrument.



Fig. 1: USB-to-CAN adapter



Fig. 2: MetaBridge controller, connections on the left side

- | | |
|---|--------------------|
| 1 | CAN cable |
| 2 | USB-to-CAN adapter |

- | | |
|---|-----------|
| 3 | USB (4 x) |
| 4 | HDMI |
| 5 | LAN |
| 6 | PC ON/OFF |

2. Plug the power cord into the power cord connection on the right side of the MetaBridge controller and connect it to the power supply.



Fig. 3: MetaBridge controller, power supply connection

- | | |
|---|-------------------------|
| 1 | Power supply connection |
|---|-------------------------|

MetaBridge software

3. Connect the MetaBridge controller as follows with the display unit.

For direct access to the MetaBridge software (no LAN access)

- Connect a monitor or touch monitor via an HDMI cable to the HDMI connection of the MetaBridge controller.
- In case of a touch monitor, connect the monitor via a USB cable to one of the four USB ports of the MetaBridge controller.
If a normal monitor is used, connect an additional mouse and keyboard via USB cables to a USB port of the MetaBridge controller.
- Switch the MetaBridge controller on by pressing the key "PC ON/OFF".

For external access to the MetaBridge software via LAN



If DHCP has been activated, an IP address is allocated automatically when the MetaBridge controller is connected to the network.

Steps to be carried out locally:

- Connect the MetaBridge controller via a LAN cable to a LAN wall socket.
- Press the key "PC ON/OFF" on the MetaBridge controller in order to switch the MetaBridge controller on.
- To show the IP address of the MetaBridge controller, connect a touch monitor (or a standard monitor and an additional USB mouse) directly to the MetaBridge controller via HDMI and USB.
- Tap the tile "Options" on the start screen of the MetaBridge and then the button "Network settings" in the action bar and note IP address of the MetaBridge controller.



Button "Network settings"

External access:

- Contact a local lab assistant in order to find out the IP address of the MetaBridge controller. Enter this IP address in the address line of your internet browser.

4.2 Starting/running down the internal PC

4.2.1 Starting the internal PC

1. In case of a direct connection via an HDMI cable, switch the MetaBridge controller on by pressing the key "PC ON/OFF".



For external access via LAN, the MetaBridge controller must have been switched on as well.

For external access, enter the IP address of the MetaBridge controller in the address line of your internet browser and confirm with "Enter".

⇒ After a few seconds, the log-in window shows up on the display unit (see fig. below) where you can log in or create a new user account.



Only in case of external access: A warning message concerning an unsafe connection may appear which can, however, be ignored.

The screenshot shows a standard log-in interface. At the top is the MetaBridge logo. Below it is a form with two input fields: 'User Name' and 'Password'. The 'User Name' field contains 'Miller'. To the right of the 'User Name' field is a link 'Forgot your password?'. Below the input fields are two checkboxes: 'Keep me logged in' and a checkbox for accepting terms and conditions. At the bottom are two buttons: a blue 'Create' button and a grey 'Exit' button.

Fig. 4: Log-in window
(standard log-in)

or

The screenshot shows the log-in window for creating a new user account. It includes all the fields from Fig. 4, plus additional ones: 'Repeat password', 'Secret question', and 'Secret answer'. The 'Create' button is highlighted in blue, while the 'Exit' button is grey.

Fig. 5: Log-in window (creating a new user account)

4.2.2 Running down the internal PC



Users who do not have administrator authorities can only run down the internal PC locally, that means if the display unit (PC, tablet, smartphone) is connected via a cable to the MetaBridge controller. In remote mode, only administrators can run down the internal PC.

NOTICE

Risk of loss of data by running down the PC improperly!

Switching off the MetaBridge controller with the main power switch, data may be damaged or get lost.

- Always run down the internal PC properly before switching off the MetaBridge controller.
- Do not switch off the MetaBridge controller as long as the internal PC is still running!

1. For running down the internal PC, tap the tile "User":

⇒ The following selection window pops up:

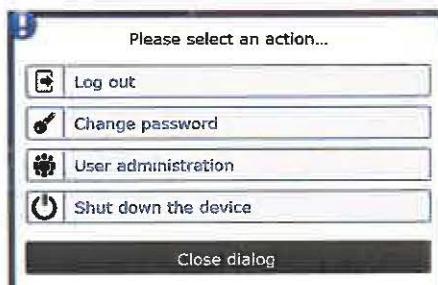


Fig. 6: Selection of user functions



Users below the administrator level can see the button "Shut down the device" only in local operation. In remote mode, i.e. on external terminals, only administrators can see this button.

2. Tap the Button "Shut down the device".

⇒ A message window "The device is shutting down" pops up.



Fig. 7: Message "The device is shutting down"

- ⇒ After a few seconds, the internal PC is shut down.
- ⇒ Now, the MetaBridge controller can be switched off.



Button "Shut down the device"

4.3 Start screen of the Brabender MetaBridge

Upon log-in, the start screen of the Brabender MetaBridge appears (see fig. below).



Generally, the start screen contains some device-specific tiles in the upper part (see chapter 4.4 "Device-specific tiles") and some general tiles in the lower part (see chapter 4.5 "General tiles").

The arrangement of the tiles may vary depending on the terminal (PC, tablet, smartphone) and monitor size.

The menus and functions of the individual tiles will be explained in detail in the following.



The following software description is based on touchscreen operation ("tap").
The software can, however, be handled just as well using a mouse.



Fig. 8: Start screen MixMB

1 Device-specific tiles

2 General tiles

MetaBridge software

4.4 Device-specific tiles

4.4.1 Tile "MetaBridge"

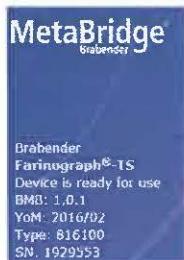


Fig. 9:
Tile "MetaBridge"

The "MetaBridge" tile shows the most important instrument data:

- User-defined device name (factory setting: Brabender, editable under "Options" - "Device")
- Model name (here as an example: Farinograph-TS)
- BMB: Brabender MetaBridge version no.
- YoM: Year of mounting of the Brabender device
- Type: ID no. of the Brabender device
- SN: Serial no. of the Brabender device

4.4.2 Tile "New"



Fig. 10:
Tile "New"

The tile "New" opens the parameter window for entering the parameters for a new test and for running and evaluating the new test.

4.4.2.1 Parameter window

Tapping the tile "New" opens the parameter window for entering the test parameters for a new test (see fig. below).

- !** When the parameter window opens, it shows the test parameters of the previous measurement so that data that remain unchanged (e.g. user, method) do not need to be entered anew.
- !** The fields "User" and "Sample" are mandatory fields.

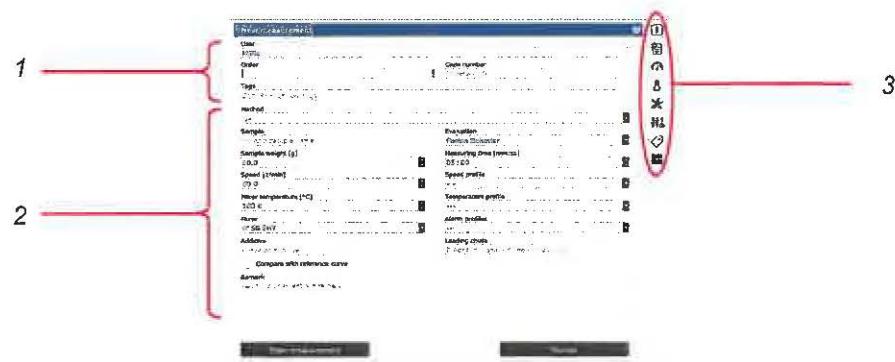


Fig. 11: Parameter window

- 1 Documentary parameters
2 Method-/product-specific parameters

- 3 Action bar

Buttons in the action bar



Description of button functions

shows a description of the button functions



Methods

opens the "Methods" window



Speed profiles

opens the "Speed profiles" window



Temperature profiles

opens the "Temperature profiles" window

MetaBridge software



Options

opens the "Options" window (see chapter 4.5.6 "Tile "Options"")



User parameters

allows to define user-specific parameters in the parameter window.

1. Tap the button "User parameters".

⇒ The following window opens:



Fig. 12: Entry mask for user-specific parameters

2. Fill in the mask and confirm with "OK".

⇒ The following window opens:



Fig. 13: Overview of user-specific parameters

3. Tap "Add" for defining further parameters or tap "Close" for taking over the parameter.

⇒ The parameter is taken over in the parameter window.



Tag editor

allows management of tags (key words) which can be searched for later.



Fig. 14: Entry mask for tags



Back to start screen

returns to the start screen

Entry fields of the parameter window

In case of touchscreen operation, a virtual keypad appears when tapping an entry field.

- New measurement (documentary parameters):

Field	Entry
User	User name (mandatory!) The previous entry will appear automatically until another name is entered.
Order	E.g. order no. or ordering company
Code number	Free entry of a code no. (sample or order specification)
Tags	Entry of tags (marks) which facilitate finding the measurement or sorting tests by certain criteria

- Method parameters:



These parameters are determined by the method selected and can only be edited if no method has been set (-/-).

Field	Entry
Method	Selection of a method For details concerning methods, please refer to chapter 4.4.6 "Title "Methods""
Sample	Free entry of a sample designation
Evaluation	Selection of the evaluation
Sample weight	Entry of the sample weight (mandatory!)
Measuring time	Entry of the measuring time The scaling of the time axis depends on the value entered here. Upon expiry of this time, the test is stopped automatically.

MetaBridge software

Field	Entry
	Speed Entry of setpoint speed (mandatory!)  This value is transmitted to the drive unit when the test starts.
	Speed profile Selection of a speed profile  Tapping the button "Speed profiles" in the action bar opens a window for defining a speed profile.
Button "Speed profiles"	
	Mixer temperature Entry of setpoint mixer temperature (mandatory!)  This value is transmitted to the temperature controller when the test starts.
Button "Temperature profiles"	
	Temperature profile Selection of a temperature profile  Tapping the button "Temperature profiles" in the action bar opens a window for defining a temperature profile.
	Mixer Selection of the mixer used (mandatory!)  If a Lab-Station is used as a drive unit, the mixer is recognized automatically and cannot be changed.
	Alarm profiles Selection of an alarm profile  Under the tile "Alarm", alarm profiles can be defined.
	Additive Free entry of an additive
	Loading chute Free entry of the loading chute used.
	Compare with reference curve Tapping the box opens a window for loading a reference curve.  Entering a key word (tag) in the field "Search..." in the right top allows searching for a certain reference curve.
	Remark Free entry of remarks concerning the test

4.4.2.2 Measuring window

Upon test start, the measuring window appears showing the online diagram and, if selected, the numerical values of the running test.



Button "Diagram settings"

- !** Tapping the button "Diagram settings" allows individual adjustment of the measuring window and the displays therein.

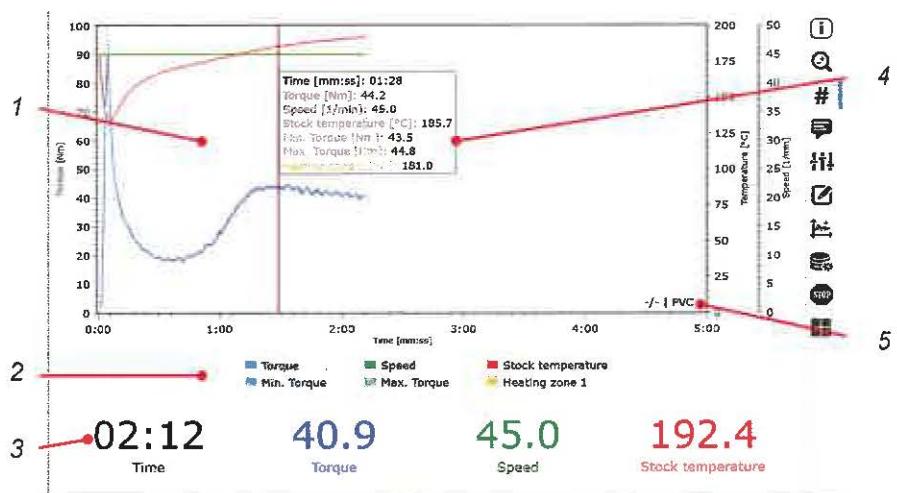


Fig. 15: Measuring window, here: with display of numerical details

- | | | | |
|---|-------------------|---|----------------------------|
| 1 | Measuring diagram | 4 | Numerical details |
| 2 | Legend | 5 | Display of method / Sample |
| 3 | Live-Ticker | | |

Buttons in the action bar



Description of button functions

shows a description of the button functions



Enable/disable zoom

allows zooming of sections of the curve.

1. Tap the button "Enable/disable zoom".
2. Draw the desired range to show it on an enlarged scale.
3. Tapping the button "Enable/disable zoom" again returns to the normal view.



Show/hide numerical view

When enabled, tapping any point on the curve shows a window with the numerical values of the curve in this point. Tapping this button anew disables this function.



Enter/edit comments

allows to insert and edit comments and series labels in the diagram.



A comment can be placed at any point within the diagram. It is not fixed on the curve. In contrast to that, a series label is always fixed with a line on the corresponding curve.

When shifting a series label, the line is moved as well, the line head being fixed on the curve and the other end of the line being shifted together with the text field.

1. Tap the point where you want the comment to appear.

⇒ When you tap directly onto the curve, first a window for selecting between series label and comment will appear. Upon selection of the option, a text field will appear (see figs. below).

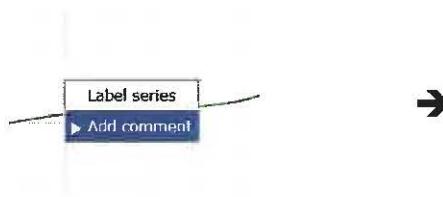


Fig. 16: Selection window



Fig. 17: Text field

2. If applicable (e.g. with a tablet or smartphone), tap the text field for showing the virtual keypad, then enter the text, format it (only with a PC, not on touch terminals), and tap "Save".
⇒ The comment appears in the diagram.



As long as the function "Edit comment" is enabled (or when it is enabled again later), the comment can be shifted (tap and shift), edited, or deleted (tap).



Show parameter window

shows the test parameters in a separate window.



Fields with the "Edit" button can still be edited.

Button "Edit"

**Change parameter**

Opens a selection window for changing individual parameters while the measurement is still running.



This button is only visible as long as the test is running.

**Add reference curve**

allows loading of a reference curve into the running test.

1. Tap the button "Add reference curve".
⇒ The list of saved reference curves opens.
2. Tap the desired reference curve in the list.
⇒ The selected reference curve is shown as a hatched area in the test diagram.
⇒ The button "Add reference curve" (with a "+" sign) turns into "Remove reference curve" (with a "-" sign).

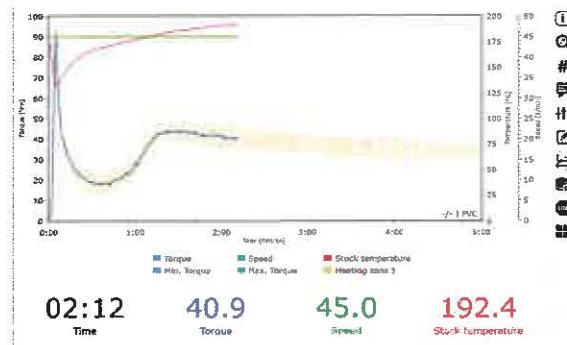


Fig. 18: Running test with a reference curve



Diagram settings

opens the window "Diagram settings" for making some basic settings concerning the test diagram.



Fig. 19: Window "Diagram settings"

Field	Entry
Show legend	Shows/hides the legend in the diagram
Select series by legend	Tapping and holding a series name in the legend shows only this series in color in the diagram while all other series are shown in grey (see fig. below: series "Min. (smoothed)").
Select series by axis	Tapping and holding an axis inscription shows only this series in color in the diagram while all other series are shown in grey.
Show sample name	Shows/hides the sample name in the right bottom corner of the diagram.
Show max torque	Shows/hides the maximum torque value in the right bottom corner of the diagram.

The buttons in the action bar enable further settings.



Axis settings

Enables settings concerning the axes of the diagram.



Series settings

Enables settings concerning representation of the individual series.



Measuring view

enables selection of a diagram view (see chapter 4.5.6.7 "Measuring view").



Back

returns to the previous page.



Stop measurement

stops the running test before the measuring time has elapsed.



Back to start screen

returns to the start screen

4.4.2.3 Evaluation

Upon expiry of the measuring time or after early test stop, the evaluation with the complete diagram including the evaluation lines and the tabular evaluation is shown (see fig. below).



Button "Diagram settings"

- Using the button "Diagram settings", the evaluation diagram and the corresponding displays can be adjusted to your individual needs.

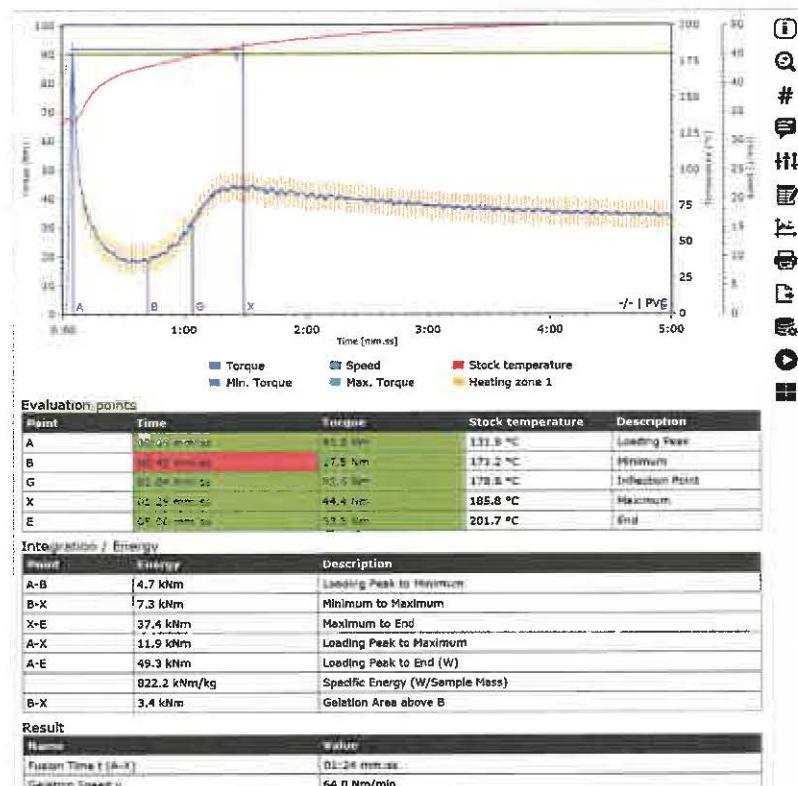


Fig. 20: Evaluation window (here: with reference curve)

Buttons in the action bar



Description of button functions

shows a description of the button functions



Enable/disable zoom

See details in the chapter 4.4.2.2 "Measuring window".



Show/hide numerical details

See details in chapter 4.4.2.2 "Measuring window".

**Enter/edit comments**

See details in chapter 4.4.2.2 "Measuring window".

**Show parameter window**

See details in chapter 4.4.2.2 "Measuring window".

**Change evaluation**

opens a window for selecting another evaluation method. Upon confirmation with "Apply", the test is evaluated anew according to the selected evaluation.

**Add reference curve**

opens a selection window for loading a reference curve into a loaded test or for creating a new reference curve from the loaded test.

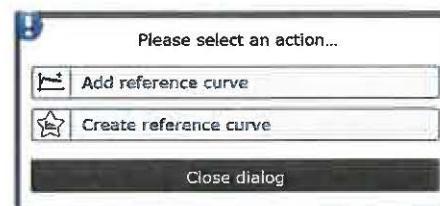


Fig. 21: Selection window reference curve

**Add referenzkurve**

If reference curves were already saved, a reference curve can be loaded and shown directly in the test diagram.

1. Tap the button "Add reference curve".
 - ⇒ The list of saved reference curves is opened:
2. Tap the desired reference curve in the list.
 - ⇒ The selected reference curve with the tolerance limits is shown as a hatched area in the evaluation diagram of the loaded test.
 - ⇒ The evaluation under the diagram shows the tolerance range of the reference curve and the deviations of the measuring curve from the reference curve.
 - ⇒ The button "Add reference curve" (with a "+" sign) turns into "Remove reference curve" (with a "-" sign).



Remove reference curve

Having added a reference curve into a test (see above), the button "Add reference curve" (with a "+" sign) turns into "Remove reference curve" (with a "-" sign). Tapping this button opens the following selection window:

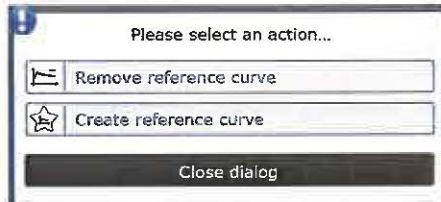


Fig. 22: Selection window "Remove reference curve"



Remove reference curve

Deletes the reference curve from the diagram.



Create reference curve

From each test loaded, a reference curve can be created, saved and loaded into any test using the function "Add reference curve".



For creating a new reference curve, a test must be open.

1. Tap the button "Create reference curve" in the action bar of the open test.
⇒ A window with the measuring values and editable tolerances appears.
2. Edit the tolerances as desired.
3. For saving the edited curve as a reference curve, tap the field "Apply".
⇒ The edited measuring curve is saved as a reference curve.
⇒ The original measuring curve of the loaded test is shown again.
4. For loading the reference curve, see "Add reference curve" above.



Reference curves can also be created from a correlation using the button "Export".



Print

opens a window for selecting a printer.



For printer setup see chapter 4.5.6 "Title "Options"".



Export

enables export of the test in different ways.

1. Tap the button "Export".

⇒ The following selection window appears:

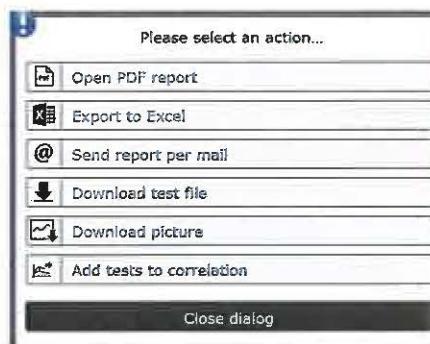


Fig. 23: Selection window "Export"

2. Tap the desired button in this window.



creates a PDF file from the test (this button only appears in case of external access)



exports the test to an Excel sheet



opens a window for sending the PDF file of the test as an e-mail



creates a ZIP file from the test



creates a PNG file from the diagram



creates a new correlation or extends an existing one (this button only appears if the Correlation module has been installed). Tapping this button opens another selection window:

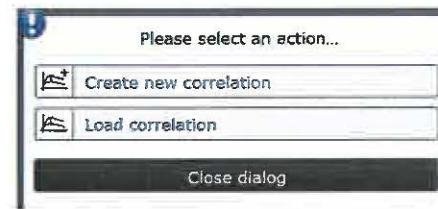


Fig. 24: Selection window "Add to correlation"



creates a new correlation



adds the test to an existing correlation

MetaBridge software



Diagram settings



See details in chapter 4.4.2.2 "Measuring window".



New measurement

opens the parameter window in order to start a new test



When loading a saved test, there is the button "Back" on this position instead.



Back to start screen

returns to the start screen



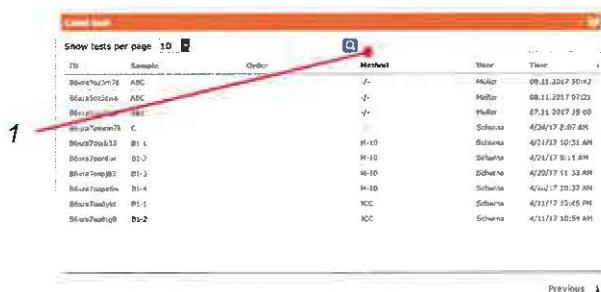
Fig. 25:
Tile "Load"

4.4.3 Tile "Load"

The tile "Load" contains a list of all tests saved.



In the field "Search..." in the right top, you can search for a certain test or for tags (key words) defined before.



ID	Sample	Order	Method	User	Date
06wvSp12078	ABC	-/-	H-10	Müller	09.11.2017 00:42
06wvSp12068	ABC	-/-	H-10	Müller	09.11.2017 07:23
06wvSp12067	ABC	-/-	H-10	Schärer	07.11.2017 19:00
06wvSp12066	C	-/-	H-10	Schärer	07.11.2017 10:31 AM
06wvSp12063	B1-1	-/-	H-10	Schärer	07.11.2017 01:49 AM
06wvSp12062	B1-2	-/-	H-10	Schärer	07.11.2017 01:53 AM
06wvSp12061	B1-3	-/-	H-10	Schärer	07.11.2017 01:53 AM
06wvSp12060	B1-4	-/-	H-10	Schärer	07.11.2017 01:53 AM
06wvSp12059	B1-1	-/-	HCC	Schärer	07.11.2017 02:45 PM
06wvSp12058	B1-2	-/-	HCC	Schärer	07.11.2017 02:45 PM

Fig. 26: Window "Load test"

1 Field "Search..."

Buttons in the action bar



Description of button functions

shows a description of the button functions



Show preview

shows a preview of the selected test.



! First tap the button "Show preview", then select the desired test. Otherwise, the test tapped will be opened immediately.

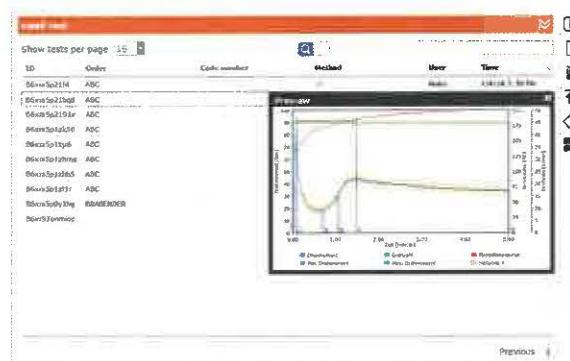


Fig. 27: Window "Load test" with preview of the test

MetaBridge software



Delete

deletes the selected test(s) from the list.



First tap the button "Delete", then select the test(s) to be deleted. Otherwise, the test tapped first will be loaded.



Import

opens the file selection dialog of the respective operating system.



Tag editor

allows management or entry of tags (key words) that can be used to filter the test list.



Back to start screen

returns to the start screen

4.4.3.1 Editing a loaded test

Tapping a test in the list of tests or importing a test shows the test diagram with the table of evaluation points according to the evaluation selected.



To get a better survey, the following fig. shows the window as a whole, although in the usual representation on a PC, tablet or smartphone, you must scroll down in order to see the lower part of the window.



Concerning the functions of the buttons in the action bar beside the test diagram, please refer to chapter 4.4.2.3 "Evaluation".

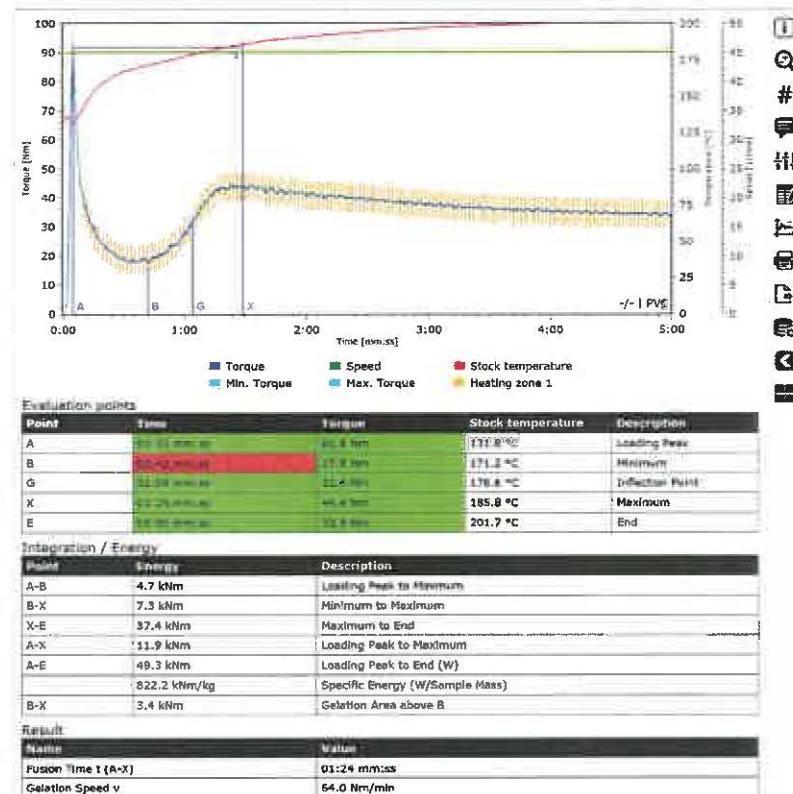


Fig. 28: Evaluation window (here: with reference curve)



Fig. 29:
Tile "Correlation"

4.4.4 Tile "Correlation"

If the program module "Correlation" was not included in the scope of delivery of the basic program, a separate license for this program module needs to be ordered and activated.



Activation of a license requires at least administrator authorities.



Button "Service"

4.4.4.1 License activation

If the license for the program module "Correlation" was not included in the scope of the order, it can be ordered separately from Brabender. You will get a license number which must be activated as follows.

1. To activate the license number for your device, select the tile "About us" and tap the button in the action bar.

⇒ The selection window "Service" is opened:



Fig. 30: Selection window "Service"



Button "Add license"

2. In the selection window "Service", tap the button "Add license".

⇒ A window for entering the serial number and the license number is opened:

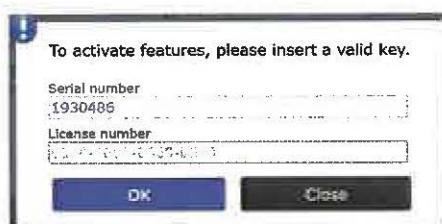


Fig. 31: Entry of the license number

3. In the field "Serial number", enter the serial number of the Brabender device to be connected with the MetaBridge software.



The serial number is indicated on the name plate of the device.

4. In the field "License number", enter the license number you got from Brabender.

5. Confirm your entries with "OK".
 ⇒ A message window "License number activated" appears.



Fig. 32: Message window "License number activated"

6. Close the message window.
 ⇒ The window for entering the serial number and the license number appears once more in order to activate further licenses, if any.

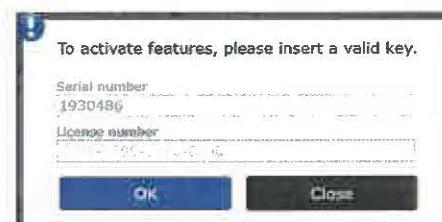


Fig. 33: Entry of license number

7. If no further licenses are to be activated, tap "Close" to close this window.
 ⇒ The window "About us" appears again.
8. Tap the button "Back to start screen" in order to return to the start screen.
 ⇒ The new program module can now be used.



Button "Back to start screen"

The tile "Correlation" includes two functions.

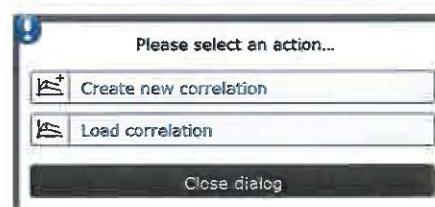


Fig. 34: Selection of correlation functions

- Create new correlation
- Load correlation

Upon selection of one of these functions, the corresponding window appears.

4.4.4.2 Create new correlation

Tapping the button "Create new correlation" opens the window "Correlation parameters".



Fig. 35: Window "Correlation parameters" for a new correlation

Buttons in the action bar



Description of button functions

shows a description of the button functions



Load correlation

opens a window for loading a saved correlation



Tag editor

allows management of tags (key words) which can be searched for later.



Fig. 36: Entry mask for tags



Back to start screen

returns to the start screen

Procedure for creating a new correlation

1. Fill in the entry mask "Correlation parameters" as required.
 2. Tap the field "Add tests" in the left bottom.
⇒ A list of saved tests that can be selected for the correlation opens.
 3. Select the desired tests.
- !** Selection is facilitated by tapping the button "Show preview" before starting the selection which opens a preview of the individual tests selected.
4. Tap the field "Start correlation" under the list of tests.
⇒ The correlation is created and shown.



Fig. 37: Correlation

Buttons in the action bar



Description of button functions

shows a description of the button functions



Enable/disable zoom

- See details in the chapter 4.4.2.2 "Measuring window".



Show/hide numerical details

- See details in chapter 4.4.2.2 "Measuring window".



Enter/edit comments

- See details in chapter 4.4.2.2 "Measuring window".



Edit correlation

opens again the list of saved tests for adding further tests to the correlation or for deleting tests from the correlation.



Change correlation mode

switches between normal display of the curve (each test in another color) and series view (all series, e.g. all mean values, in the same color).



Change evaluation

opens a window for selecting another evaluation method. Upon confirmation with "Apply", the test is evaluated anew according to the selected evaluation.



Print

opens a window for selecting a printer.

- For printer setup see chapter 4.5.6 "Tile "Options"".



Export

enables export of the correlation as an e-mail or download.

- First** tap the button "Export", then select the test(s) to be exported. Otherwise, the test tapped first will be exported.

- See details in chapter 4.4.2.3 "Evaluation".

Furthermore, the button "Export" enables creation of a reference curve from the correlation. The program calculates the reference curve from the bandwidth given by the correlation in each point of the curve.

1. Tap the button "Create reference curve" in the selection window.
 ⇨ A window for defining the bandwidth (tolerance range) of the reference curve is opened:

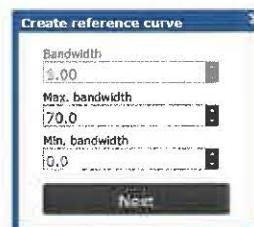


Fig. 38: Window "Create reference curve"

Bandwidth

Factor by which the original bandwidth of the correlation is enlarged

Max. bandwidth

maximum bandwidth of the reference curve

Min. bandwidth

minimum bandwidth of the reference curve



Equal values for max. and min. bandwidth create a tolerance range with a constant band width.

2. To create the reference curve, tap the field "Next".

- ⇨ A window with the individual values of the reference curve including lower and upper limits is shown.



Diagram settings



See details in chapter 4.4.2.2 "Measuring window".

The buttons in the action bar enable further settings.



Axis settings



See details in chapter 4.4.2.2 "Measuring window".



Correlation settings

enables settings concerning representation of the individual curves or series.



Back to previous page

returns to the previous page.



Back to previous page

returns to the previous page.



Back to start screen

returns to the start screen

4.4.4.3 Load correlation

1. Tap the button "Load correlation".
⇒ The list of saved correlations appears:



Fig. 39: Window "Load correlation"

2. To load a correlation, select the desired correlation in the list.
⇒ The correlation is loaded and can now be treated just like a newly created one.



For editing a correlation, see chapter 4.4.4.2 "Create new correlation".



Description of button functions

shows a description of the button functions



Show preview

shows a preview of the correlation selected.



First tap the button "Show preview", then select the desired correlation(s). Otherwise, the correlation tapped first will be opened.



Delete

deletes the selected correlation(s) from the list.



First tap the button "Delete", then select the desired correlation(s). Otherwise, the correlation tapped first will be opened.



Import

opens a window for importing correlations.



Back to start screen

returns to the start screen

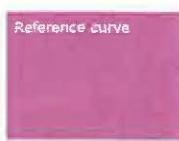


Fig. 40:
Tile "Reference curve"

4.4.5 Tile "Reference curve"

The tile "Reference curve" enables loading of a reference curve and adding it into a diagram (see fig. below). The buttons in the action bar allow to delete reference curves from the list or to import further reference curves.

i For creating a reference curve from a test, please refer to chapter 4.4.3 "Tile "Load""", description of the buttons "Add reference curve" and "Remove reference curve".

! In the field "Search..." in the right top, you can search for a certain test.

The screenshot shows a table titled "Load reference curve" with columns: ID, Sample, Order, Method, User, and Date. The table lists several entries:

ID	Sample	Order	Method	User	Date
Blends243m01	ABC	1		Pöller	06.3.2017 10:47
Blends243m02	ABC	2		Küller	06.3.2017 07:21
Blends243m03	ABC	3		Pöller	07.3.2017 15:50
Blends243m04	C	4		Schmitz	07.3.2017 07:47 AM
Blends700m01	B1-3	5	M-10	Schmitz	07.3.2017 10:31 AM
Blends700m02	B1-2	6	M-10	Schmitz	07.3.2017 10:31 AM
Blends700m03	B1-3	7	M-10	Schmitz	07.3.2017 12:03 AM
Blends700m04	B1-4	8	M-10	Schmitz	07.3.2017 10:32 AM
Blends700m05	B1-2	9	M-10	Schmitz	07.3.2017 12:45 PM
Blends700m06	B1-2	10		Edelmann	07.3.2017 10:54 AM

Fig. 41: Window "Load reference curve"

Buttons in the action bar



Description of button functions

shows a description of the button functions



Delete

deletes the selected reference curve(s) from the list.



! First tap the button "Delete", then select the desired reference curve(s). Otherwise, the reference curve tapped first will be opened.



Import

opens a window for importing reference curve(s).



Back to start screen

returns to the start screen



Fig. 42:
Tile "Methods"

4.4.6 Tile "Methods"

A method combines all data that clearly define the test conditions. In order to avoid the necessity of entering every individual value anew when frequently changing the test conditions, these values can be saved as a method.

Certain methods may have been factory installed as default methods which cannot be deleted.

Tapping the tile "Methods" opens the method window of the method currently active (see fig. below as an example).



The buttons "Rename method" and "Delete method" on the right beside the entry field of the method name turn active only after definition of at least one user-specific method.



Fig. 43: Window "Methods"



Description of button functions

shows a description of the button functions



Method

opens the method window



Speed profiles

opens the "Speed profiles" window



Temperature profiles

opens the "Temperature profiles" window



Back to start screen

returns to the start screen



Button "Create new method"

4.4.6.1 Create a new method

1. To create a method, tap the button "Create new method" behind the entry field "Method".
 - ⇒ A window for entering a name for the new method is opened.
2. Enter a name and confirm with "Apply".
 - ⇒ The method window now shows the name of the new method, and the entry fields are open.
3. Edit all entry fields as desired.
4. Confirm your entries with "Apply".
 - ⇒ The method is saved and can now be selected in the parameter window when starting a new test.



Button "Rename Method"

4.4.6.2 Rename a method

- !** The method to be renamed must be active in the method window.
1. To rename the method currently active, tap the button "Rename method" behind the entry field "Method".
 - ⇒ A window for entering a new name for the current method is opened.
 2. Enter a new name and confirm with "Apply".
 - ⇒ The method window is shown again, now showing the new name in the field "Method".



Button "Delete method"

4.4.6.3 Delete a method

- !** The method to be deleted must be active in the method window.
1. To delete the method currently active, tap the button "Delete method" behind the entry field "Method".
 - ⇒ The software asks whether you really want to delete this method.
 2. To delete the current method, tap "Yes".
 - ⇒ The method window is shown again, now showing "-/" in the field "Method".

4.4.6.4 Create, rename, delete speed profiles



Button "Speed profiles"



Button "Temperature profiles"



The profile types available differ depending on the program.

1. For showing/editing profiles (speed, temperature), tap the corresponding button in the action bar of the method window.

⇒ The window of the corresponding profile appears.



Depending on whether a corresponding profile is has been activated or not, the profile will be shown or a corresponding message will appear.

No.	Action	Speed (r/min)	Time [seconds]	End
1	Hold	20.0	61 : 00	1:00
2	Ramp	63.0	00 : 50	1:30
3	Hold	53.0	05 : 20	6:00
4	Ramp	20.0	00 : 20	7:00

Fig. 44: Window "Speed profiles" (example)

2. Tapping the arrow behind the field with the profile name opens a list of profiles available.



Button "Create new profile"

Create a new profile

1. For creating a new profile, tap the button "Create new profile" behind the entry field of the profile name.
⇒ A window for entering the name of the new profile opens.
2. Enter a name and confirm with "Apply".
⇒ The profile window now shows the name of the new profile and the message "The profile is empty".



Fig. 45: Window of an empty profile (example)

The buttons on the right beside the profile have the following functions:



adds a line at the end of the profile



inserts a line above the line marked



deletes the marked line upon confirmation of the safety question

3. Edit the profile according to your needs. In the column "Action", define whether the value entered is to be held ("Hold") or reached as target value within the time entered ("Ramp").
4. Tap "Apply" in order to save the new profile.
⇒ The new profile can now be used.



Button "Rename profile"

Rename profile



The profile to be renamed must be active in the corresponding profile window.

1. For renaming the profile currently active, tap the button "Rename profile" behind the entry field of the profile name.
⇒ A window for entering a new name for the current profile is opened.
2. Enter a new name and confirm with "Apply".
⇒ The profile window is shown again, now showing the new profile name.



Button "Delete profile"

Delete a profile



The profile to be deleted must be active in the corresponding profile window.

1. For deleting the profile currently active, tap the button "Delete profile" behind the entry field of the profile name.
⇒ The software asks whether you really want to delete this profile.
2. Tap "Yes" in order to delete the current profile.
⇒ The profile window is shown again, now showing "-/" in the field of the profile name.



Fig. 46:
Tile "Alarm"

4.4.7 Tile "Alarm"

The tile "Alarm" enables setting of alarms for certain parameters. When the measuring values fall below or exceed the range defined here, the corresponding alarm is given.

Tapping the tile "Alarm" opens the alarm profile currently active (see fig. below as an example).

- !** The buttons "Rename alarm profile" and "Delete alarm profile" on the right beside the entry field of the profile name turn active only after definition of at least one user-specific alarm profile.
- i** To create, rename and delete alarm profiles, please follow the corresponding instructions in chapter 4.4.6.4 "Create, rename, delete speed profiles".



Fig. 47: Window "Alarm profiles" (example)

4.5 General tiles

4.5.1 Buttons in the action bar of the general tiles

The buttons in the action bar of most of the general tiles are identical in order to provide for quick access from any general tile to each other.



Description of button functions

shows a description of the button functions



About us

shows contact of the Brabender Customer Service and some important device data.



Our products

shows the Brabender product range of the Chemical sector.



Manual

link to the instruction manual of your Brabender device



Show FAQ

opens a list of frequently asked questions and the corresponding answers.



Feedback

direct contact with Brabender



Brabender in the web

link to the Brabender homepage (only visible on external terminals)



Brabender on YouTube

link to Brabender application and information clips on YouTube (only visible on external terminals)

**Service**

opens a selection window with options for a software update or for a remote service meeting:

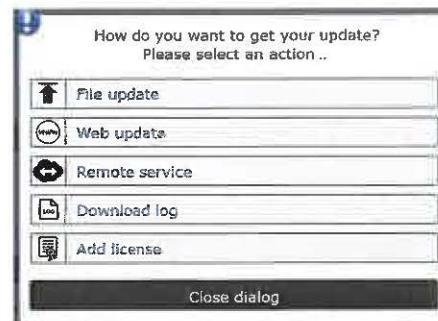


Fig. 48: Service selection window

Tap the corresponding button and follow the instructions.



file update



web update



remote service request



download log



add license

**Back to start screen**

returns to the start screen

MetaBridge software

4.5.2 Tile "Hardware"



Fig. 49:
Tile "Hardware"

The tile "Hardware" shows the current state of the individual hardware modules (e.g. drive unit on/off, heating on/off).



In this window, you can start/stop the individual hardware modules manually.

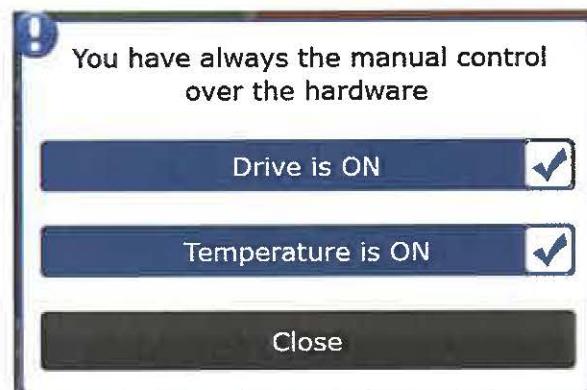


Fig. 50: Hardware window

4.5.3 Tile "Time/date"



Fig. 51:
Tile "Time/date"

The tile "Time/date" shows the local time and date of the respective terminal.



This tile just displays the local time and date, you cannot make any settings here.



For time and date setting, please refer to chapter 4.5.6.1 "General settings".

4.5.4 Tile "MultiDevice"

The tile "MultiDevice" enables parallel operation and control of up to four instruments with the MetaBridge software. Tapping the tile "MultiDevice" changes some of the function tiles of the MetaBridge start screen as shown below as an example in order to install and manage further instruments.

Fig. 52:

Tile "MultiDevice"

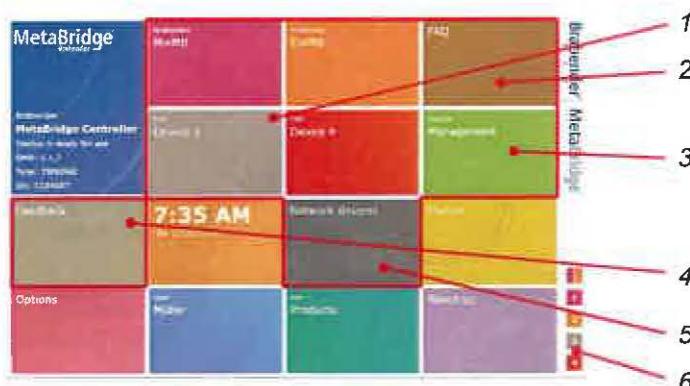


Fig. 53: Start screen "MultiDevice" (example)

- | | | | |
|---|-------------------------------|---|-------------------------------------|
| 1 | <i>Instrument tiles</i> | 4 | <i>Tile Feedback</i> |
| 2 | <i>Tile FAQ</i> | 5 | <i>Tile Network devices</i> |
| 3 | <i>Tile Device Management</i> | 6 | <i>Direct access to the devices</i> |

The four buttons "1" - "4" in the right bottom beside the start screen enable direct access to the different devices. The top button opens an overview window of all devices connected (see fig. below).



Fig. 54: Overview window of all devices connected (example))

4.5.4.1 Installation of a new device



If the MetaBridge controller is included in the scope of delivery, the license for the corresponding device usually has been activated. In this case, you just need to define the inverter and the COM ports (see instructions below).

If the software was ordered without MetaBridge controller, you got a license number for the corresponding Brabender device which needs to be activated first. Upon activation of the license, the device must be installed in the MetaBridge software.



Button "Service"

1. To activate the license number for your device, select the tile "About us" and tap the button "Service" in the action bar.
⇒ The selection window "Service" is opened:



Fig. 55: Selection window "Service"



Button "Add license"

2. In the selection window "Service", tap the button "Add license".
⇒ A window for entering the serial number and the license number is opened:

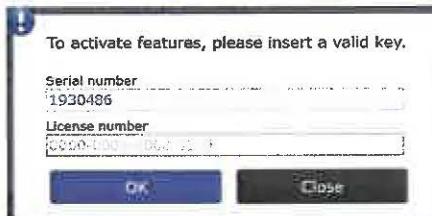


Fig. 56: Entry of the licence number

3. In the field "Serial number", enter the serial number of the Brabender device to be connected with the MetaBridge software.
! The serial number is indicated on the name plate of the device.
4. In the field "License number", enter the license number you got from Brabender.

5. Confirm your entries with "OK".
 ⇒ A message window "License number activated" appears.



Fig. 57: Message window "License number activated"

6. Close the message window.
 ⇒ The window for entering the serial number and the license number appears once more in order to activate further licenses, if any.
7. If no further licenses are to be activated, tap "Close" to close this window.
 ⇒ The window "About us" appears again.
8. Tap the tile "MultiDevice" on the start screen.
 ⇒ The "MultiDevice" start screen appears.
9. To connect the device with the MetaBridge software, tap the tile "Edit Device 2" (or any other free tile "Edit Device x").
 ⇒ A window for entering the serial number and the device type opens.



Fig. 58: Entry of basic data for a new device

10. Enter the serial number and type of the Brabender device (mandatory fields).
11. In the line "Device name", you may enter a device name which will appear on the tile "MetaBridge" on the start screen of this device. The default name is "Brabender".

MetaBridge software

12. To continue, tap the field "Continue".
 - ⇒ The device initializes, then the startscreen of the new device appears with the window "Hardware configuration" on top.

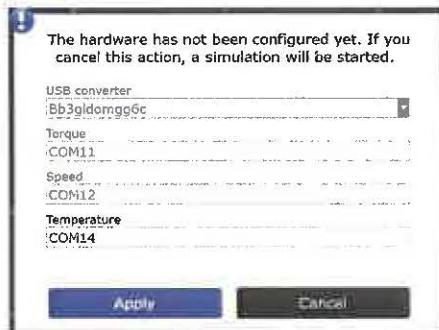


Fig. 59: Message "Hardware has not been configured yet" (Example)

! The number and designation of the COM ports varies depending on the device.

For device configuration, the device must be connected with the MetaBridge controller and must have been switched on.

13. In the line "USB converter", select the USB converter connected.
 - ⇒ Allocation of the COM ports follows automatically.
 14. To finish, tap the field "Apply".
 - ⇒ The MetaBridge start screen of the new device appears and the device can now be operated with the MetaBridge software.
- !** To change over to another device, tap the tile "MultiDevice", then tap the tile of the corresponding device.

4.5.4.2 Tile "FAQ"

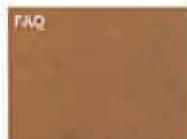


Fig. 60:
Tile "FAQ"

The tile "FAQ" lists both general and device-specific FAQs and the corresponding answers.

! This page can also be opened with the button "FAQ" in the action bar of the general tiles.



Fig. 61:
Tile "Device
Management"

4.5.4.3 Tile "Device Management"

The tile "Device Management" enables management of the devices installed in the MetaBridge software. Tapping this tile opens the following window (example).



Fig. 62: Window "Device management" (example)

The fields in this window have the following functions:

Field	Function
	<p>The fields with device names allow switching over between the different devices installed</p> <p>! The tile "MetaBridge" on the left top of the respective start screen indicates the device currently active.</p>
	<p>The fields "add devicw 1/2/3/4" allow installation of devices with an existing, free license in the MetaBridge software.</p> <p>! License activation and installation of the device in the MetaBridge software are done via the button "Service".</p>
	<p>This button deletes the corresponding device from the MetaBridge software, e.g. if all instrument fields are occupied but you want to install another device.</p> <p>! The license for the deleted device will not be deleted. Tapping the field "add Device ...", the device can be re-connected to the MetaBridge software whenever needed.</p>

4.5.4.4 Tile "Feedback"



Fig. 63:
Tile "Feedback"

The tile "Feedback" opens a mask for directly contacting and sending a message to Brabender.



Fig. 64: Feedback mask

1. If known, select the Brabender department you want to contact.
2. Completely fill in all other entry fields.
3. Upon entry of your message, tap the field "Send" in order to send your message to Brabender.
 - ⇒ The responsible employee will contact you as soon as possible.

4.5.4.5 Tile "Network devices"

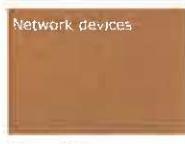


Fig. 65:
Tile "Network devices"

The tile "Network devices" lists all devices connected in a separate window (see fig. below). Tapping one of the devices opens the corresponding start screen.

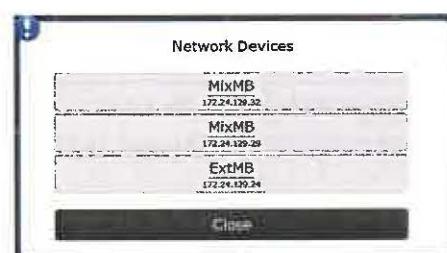


Fig. 66: Window "Network devices"

4.5.5 Tile "Manual"



Fig. 67:
Tile "Manual"

The tile "Manual" opens the instruction manual (PDF) of your Brabender device.



Fig. 68: PDF instruction manual (example)

4.5.6 Tile "Options"



Fig. 69:
Tile "Options"



Fig. 70: Tile "Options", window "General settings"

Buttons in the action bar



Description of button functions

shows a description of the button functions



General settings

opens the window "General settings".



Network settings

opens the window "Network settings".



Diagram settings

opens the window "Diagram settings".



Axis settings

opens the window "Axis settings".



Series settings

opens the window "Series settings".



Correlation settings

opens the window "Correlation settings".



This button only appears if the corresponding correlation module has been activated.



Measuring view

opens the window "Measuring view".



Lims

opens the window "Lims settings" serving as an access to the measuring data for a Lims program.



Service settings

opens the window "Service settings".



This button is only visible for administrators.



Back to start screen

returns to the start screen



4.5.6.1 General settings

Tapping the tile "Options" (or tapping the button "General settings" in any other window) opens the window "General settings" (see previous fig.).

Entry fields of the window "General settings"

- Device

Field	Entry
Device name (mandatory field)	The entry has been set in factory and will appear above the model name on the tile "MetaBridge". The device name can be edited by the administrator. This field is a mandatory field .
Device description	Here, you can enter any description of your device.
Loading peak search interval	Set the time range in which a maximum is recognized as loading peak.
Torque threshold	Set the torque value which must be reached for automatic test start.
Temperature range (\pm) before start of test	Before test start, the software verifies whether the setpoint temperature has been reached. Enter the tolerance range for starting the test.
Stop drive after calibration	When enabled, the drive motor stops automatically after torque calibration and the test needs to be started manually with the "Start" button.
Stop motor at test end	When enabled, the drive motor stops automatically at the end of the test.
Alarm at the end of the test	When enabled, an alarm/a message is given at the end of the test.
Print at the end of the test	When enabled, the test is printed automatically when completed.
Sound	When enabled, an acoustic signal is given e.g. when another user logs in or in case of an error (wrong entry, missing entry in a mandatory field).
Simulation mode	Enables simulation of tests without a device connected. ! For running real tests, this function must have been disabled.
Send parameters to temperature controller	When activated, the parameter set of the connected measuring mixer is transmitted automatically to the temperature controller before heating starts. ! If this option is disabled, wrong parameters can cause faulty measurements.
Print customer logo	Enable this function for including a customer logo on your printouts. ⇒ A window for loading the logo opens.

MetaBridge software

- General settings

Field	Entry
Language	Selection of the language
Date and time	<p>Here, you can set the local date and time. These data may differ from the data shown on the tile "Time/date" if the measuring device and the terminal are located in different time zones.</p> <ol style="list-style-type: none"> Tap the line "Date and time". <p>⇒ The following windows appear one after another.</p>



Fig. 71: Setting of date

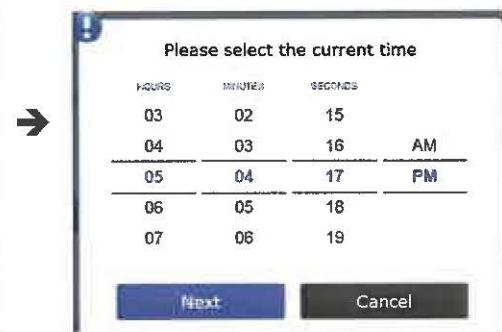


Fig. 72: Setting of time

- Set the correct values, then close the window with "Next".
- ⇒ Date and time are taken over.

Export file name	Here you can define the composition of the file name of your export files. By means of the arrows, you can move the variables in this window. Tapping the entry field opens the following window:
------------------	--

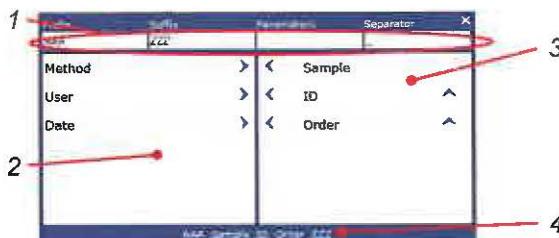


Fig. 73: Export file name

- | | | | |
|---|---------------------------------------|---|--|
| 1 | Manual entry fields | 3 | Variables currently used |
| 2 | Available variable presently not used | 4 | Representation of the current composition of the file name |

- Units

Here, you can set the units and calibration values, if applicable, required for your device.

4.5.6.2 Network setting, printer setup



Tapping the button "Network settings" opens the window "Network settings" (see fig. below).



Fig. 74: Tile "Options", window "Network settings"



Settings in this window can only be made by an administrator.

- **Network settings**

In case of an existing cable network and DHCP

1. Connect the Brabender device via a LAN cable with the LAN wall socket.



There are no further settings required, the fields under "Network settings" will be filled in automatically. This is the default setting.



The device can be accessed via the IP address, e.g.

<http://192.168.0.100>

or, with a DNS server, via

[http://\[device name \(entry on the tile "Options"\)\]](http://[device name (entry on the tile)

factory setting: <http://Brabender>

Assignment of a fixed IP address

1. Connect the Brabender device via a LAN cable with the LAN wall socket.
2. Disable the option "DHCP enabled".
3. Fill in all entry fields as desired.



Entries in these fields imply sound IT and network knowledge!

- ⇒ The device can be accessed via the IP address, e.g.
`http://192.168.0.100`
or, with a DNS server, via
`http://[device name (entry on the tile "Options")]`
factory setting: `http://Brabender`

Working without network

1. Disable the option "Cable network enabled".

● **Wi-Fi settings**

1. To establish a Wi-Fi connection, activate the box "Activate Wi-Fi".
⇒ The software shows a list of all Wi-Fi networks available.
2. To activate a hotspot, activate the box "Activate hotspot".
⇒ A window for entering a name and a password for the hotspot is opened.

- Printer setup

Setup of a network printer

! Both the Brabender device and the printer must have been connected to the network.

! The quality of the printout may vary depending on the internet browser used.

1. Tap the tile "Load" and load a saved test.
2. Tap the button "Print" in the action bar of the test diagram.
⇒ The print preview appears (see fig. below).

! If no printer has been set up yet, the default printer set in this window shows "Save as PDF" (see fig. below, detail on the left).

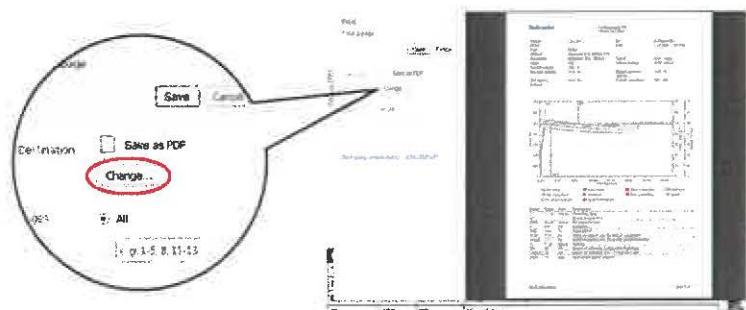


Fig. 75: Print preview

3. Tap the button "Change..." on the left below the line "Save as PDF".
⇒ The window "Select a destination" appears:

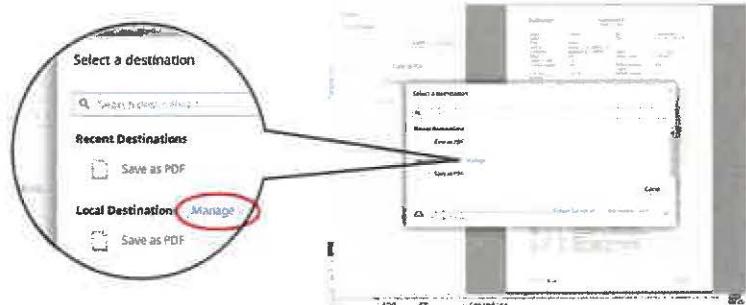


Fig. 76: Window "Select a destination"

4. In the window "Select a destination" in the line "Local destinations", tap "Manage".
 ⇒ The window "Print Settings - localhost" appears:

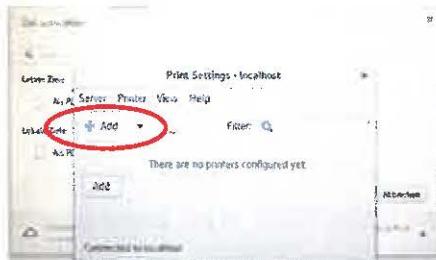


Fig. 77: Window "Print Settings - localhost"

5. In the window "Print Settings - localhost", tap "Add".
 ⇒ The window "New Printer" appears:

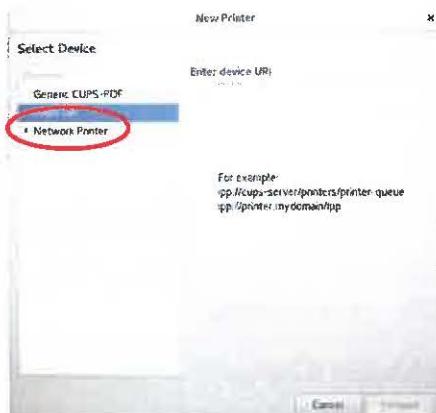


Fig. 78: Opening the list of network printers

6. In the window "New Printer", tap "Network Printer".
 ⇒ A list of network printers appears:



Fig. 79: List of network printers

7. Tap the desired printer in this list, then tap "Forward".
 ⇒ If the printer is found **automatically**, the following window with the printer address appears:

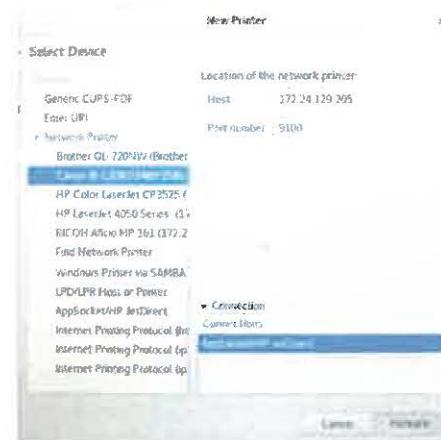


Fig. 80: Window with printer address

- In this window, tap "Forward" in order to open the window "Installable Options" (see fig. below).
- ⇒ If the printer is **not found automatically**, the following window with a list of printer drivers appears:



Fig. 81: List of printer drivers

MetaBridge software

- In this window, tap "Generic (recommended)", then tap "Forward" in order to open a list for selecting a printer driver.

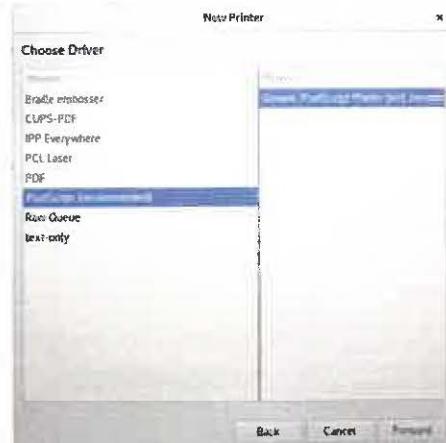


Fig. 82: Selection of printer driver

- Tap the desired driver ("PostScript"), then tap "Forward" in order to open the window "Installable Options".



Fig. 83: Window "Installable Options"

8. In the window "Installable Options", tap "Forward".
 ⇒ A window with the printer name and a description of the printer appears:



Fig. 84: Window with printer name and description

9. In this window, tap "Apply".
 ⇒ The program asks whether you want to print a test page:

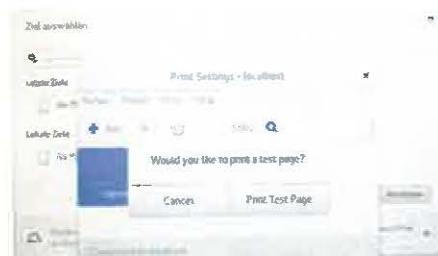


Fig. 85: Frage: Testseite drucken

10. For printing a test page, tap "Print Test Page".
 ⇒ The test page is printed on the selected printer.



On a generic printer, the printout frequently appears in black and white only.
 For getting color printouts on the selected printer, proceed as follows:

1. Search for the homepage of the printer producer.
2. Search for Linux drivers for the selected printer.
3. Download the Linux printer driver on a memory stick.
4. Plug the memory stick into your Brabender device and copy the driver.
5. For printer setup, please ask your network administrator.



IMPORTANT

Upon completion of the printer setup, tap the button "Back to start screen" in order to return to the start screen.

Now, when you tap the button "Print" in the action bar of a loaded test, the printer will be shown as destination printer and can be used.

Setup of an independent printer



Setup of an independent printer connected via USB is done the same way as described above. The printer must have been connected via USB to the Brabender device and both printer and device must have been switched on.

The printer name will then be shown in the list of printers.



4.5.6.3 Diagram settings

Tapping the button "Diagram settings" opens the window "Diagram settings".



For details, please see explanations concerning the button "Diagram settings" in chapter 4.4.2.2 "Measuring window".



4.5.6.4 Axis settings

Tapping the button "Axis settings" opens the window "Axis settings".



For details, please see explanations concerning the button "Axis settings" in chapter 4.4.2.2 "Measuring window".



4.5.6.5 Series settings

Tapping the button "Series settings" opens the window "Series settings".



For details, please see explanations concerning the button "Series settings" in chapter 4.4.2.2 "Measuring window".



4.5.6.6 Correlation settings

Tapping the button "Correlation settings" opens the window "Correlation settings" (see fig. below). Here, the settings for up to 10 tests can be made.



The window "Correlation settings" always lists 10 tests, independent of the number of tests in the correlation currently loaded. This is because up to 10 tests can be loaded and represented in a correlation.



For details, please see explanations concerning the button "Correlation settings" in chapter 4.4.4.2 "Create new correlation".

4.5.6.7 Measuring view



Tapping the button "Measuring view" allows to select various diagram views.



This function is relevant only when a new test has been started.

The program always first shows the measuring view set before. For selecting another view during a running test, tap the button "Diagram settings" in the action bar of the test diagram, then tap the button "Measuring view".

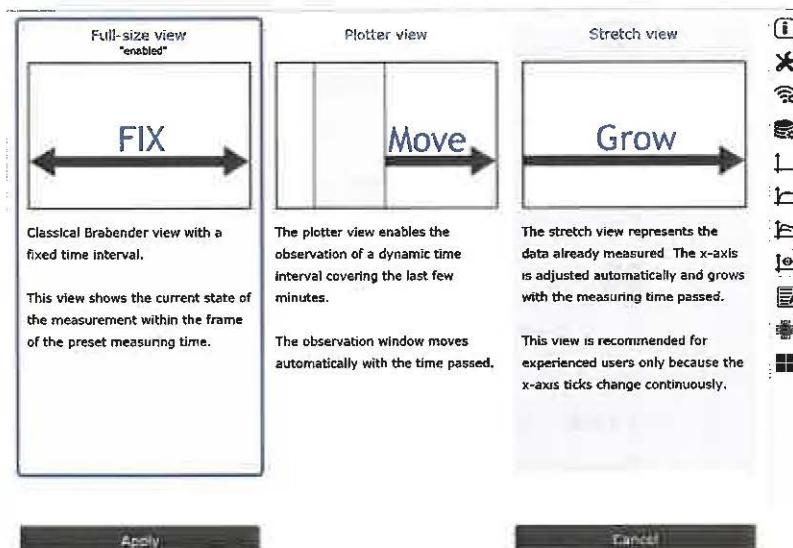


Fig. 86: Tile "Options", window "Measuring view"

4.5.6.8 Service settings



! The button "Service settings" is only visible for administrators.

Tapping the button "Service settings" opens the window "Service settings".



Fig. 87: Tile "Options", window "Service settings"

4.5.6.9 Hardware settings



! The button "Hardware settings" is only visible for administrators.

Tapping the button "Hardware settings" opens the window "Hardware settings".



Fig. 88: Tile "Options", window "Hardware settings"

4.5.7 Tile "User"



Fig. 89:
Tile "User"

The tile "User" opens a selection window with several user functions.

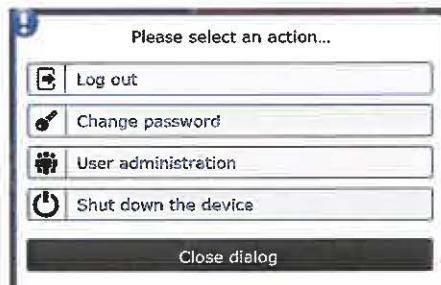


Fig. 90: Selection of user functions



Log out

logs out the current user and opens the log-in window.



Fig. 91: Log-in window



If the option "Keep me logged in" has been enabled, the current user is not logged out when the device is switched off. When the device is switched on again, the MetaBridge start screen appears immediately. The user will remain logged in until he logs out using the button "Log out".



Change password

opens a window where the user currently logged in can change his password.

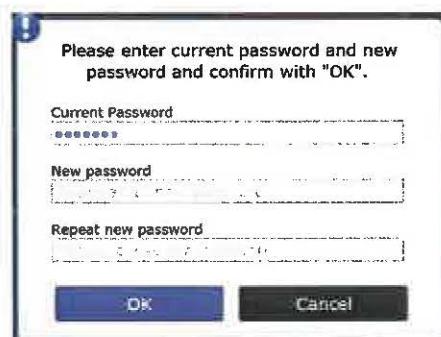


Fig. 92: Changing the password



After having changed his password, the current user is logged out automatically and must log in anew, if desired.



User administration



The user administration is visible for administrators only.

Tapping this button opens a list of all users with their respective user type (administrator/operator) and their last log-in (see fig. below).

User administration			
ID	User	Type of user	Last login
7045200001	Colleen	Operator	07/07/19 0:59 AM
7045200002	Edwards	Operator	20/07/19 9:26 AM
7045200003	Keller	Admin	27/07/19 2:28 PM

Fig. 93: List of users

Buttons in the action bar



User settings

opens the window "User settings" where the different user settings and authorities are explained and some general user settings can be made.

The screenshot shows the "User settings" window with several sections:

- Default language:** English. A note states: "The default language applies in the log-in area and for new users."
- Forgot your password?** A checkbox is checked, with a note: "If the 'Forgot your password?' function has been activated, the user can define a new password. He has to answer the secret question. If this function has been deactivated, the administrator must set a new password."
- Open user registration:** A checkbox is checked, with notes: "If the open user registration has been activated, every user is able to log in on his own. Only supplementary data are requested which will not be passed on to third parties. When the registration, the user automatically gets the 'Default rights on registration' and can log in directly. If this function has been deactivated, each individual user must be registered by the administrator."
- Default rights on registration:** Shows "Operator". Notes: "With the registration, the user automatically gets the authorities defined above. These rights can be extended or restricted later by the administrator." Sub-options include: "Locked user: The user has no authorities, he is just added in the system. His authorities can be upgraded later by the administrator.", "Observer: The user is able to view lists.", "Operator: The user can also start measurements.", and "Advanced user: The user is able to view, add and delete tasks methods.".

Fig. 94: Window "User settings"



User administration

opens the window "User administration"

User administration			
#	Name	Type of user	Last login
1	Administrator	Operator	2023-04-01
2	Operator	Operator	2023-04-01
3	Administrator	Operator	2023-03-31

Fig. 95: Window "User administration"

Tapping a user in this list opens a window with the log-in data of this user (see fig. below).



The administrator can change all these data.

The window titled "Edit user" contains the following fields:

- User: Goldman
- Password: (empty)
- Repeat password: (empty)
- Screen name: whoami
- Secret answer: I am goldman
- Type of user: Operator
- Remark:

At the bottom are two buttons: "Delete" and "Cancel".

Fig. 96: Window "Edit user"



Delete user

opens the window "Delete user" with the list of users. Tapping a user in this list opens a safety question and, upon confirmation of this question, deletes the user.

Delete user			
#	Name	Type of user	Last login
1	Administrator	Operator	2023-04-01
2	Operator	Operator	2023-04-01

Fig. 97: Window "Delete user"



Add user

opens a window for adding a new user.

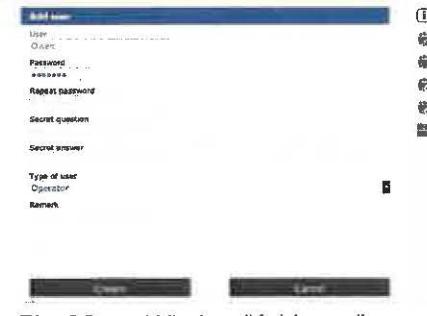


Fig. 98: Window "Add user"

1. Fill in all entry fields.
2. In the field "Type of user", set the desired user type for the new user:



If the open user registration has been activated in the user settings, each new user is registered automatically with the "default rights on registration" of the preset user type. These authorities can, however, be extended or limited individually by the administrator.

Locked user	the user has no authorities, he is just added in the system
Observer	can view tests
Operator	can view and edit (run) tests
Advanced user	can view, edit and delete tests and methods
Admin	can view, edit and delete tests and methods and can manage users

3. Finally, tap "Create".

⇒ The window "User administration" is opened with the new user being included in the list.



Shut down the device

With this button, the internal PC can be run down and the touchscreen can be switched off (only in local operation, in remote operation for administrators only, see chapter 4.2.2 "Running down the internal PC").

4.5.8 Tile "Our Products"



Fig. 99:
Tile "Our Products"

The tile "Our Products" shows a survey of the Brabender Food or Chemical instruments (depending on the section your Brabender device belongs to).



Fig. 100: Window "Our Products"

Tapping a device opens a PDF file with a detailed description of the respective device and its applications:



Fig. 101: PDF file of a Brabender device (example)



Fig. 102:
Tile "About us"

4.5.9 Tile "About us"

The tile "About us" lists the contact data of the Brabender Customer Service as well as some basic data of your Brabender device which may be needed when contacting the Brabender Customer Service.

The button "Brabender in the web" opens the Brabender Homepage (only from external terminals).

Tapping the button "Brabender on YouTube" opens a list of clips about Brabender and the application of many Brabender instruments (only from external terminals).



Fig. 103: Window "About us"

5 Configuration of the MetaBridge software

5.1 Presettings in the MetaBridge software at initial start-up

When the internal PC is started for the first time, some basic presettings need to be made once before the measuring program as such can be started.

1. If not yet done, switch the Brabender device on.
2. Press the key "PC ON/OFF" on the Brabender device or on the MetaBridge controller in order to start the internal PC and the touchscreen, if any.
 - ⇒ The key "PC ON/OFF" lights up in white.
 - ⇒ The internal PC boots. On the touchscreen or on the external terminal, the following windows appear one after the other:



Key "PC ON/OFF"



Fig. 104: Welcome screen



Fig. 105: Title screen



Configuration of the MetaBridge software



Fig. 106: Language selection

3. Tap the desired language.



The language can be changed at any time in the program.

⇒ The following window appears.

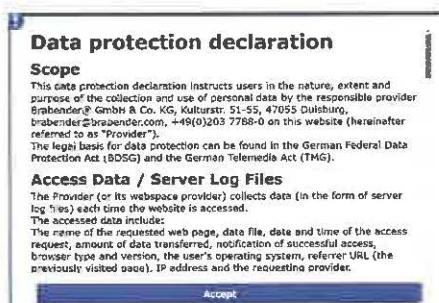


Fig. 107: Privacy statement

4. Read the privacy statement completely, then tap "Accept".

⇒ The following window appears:



Fig. 108: Setting the date

5. Set the current date, then tap "Next".
 ⇒ The following window appears:

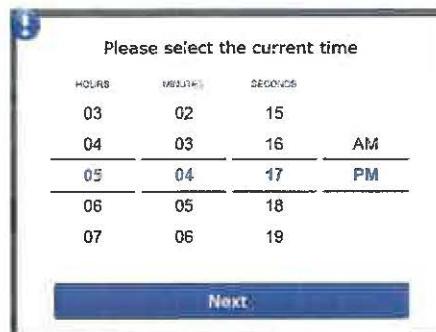


Fig. 109: Setting the time

6. Set the current time, then tap "Next".
 ⇒ The following window appears:



Fig. 110: Creating an administrator account

7. Fill in this window completely, then tap "Finish".
 ! The secret question and answer are needed in case you forgot your password for logging in again in your account and setting a new password.
 ⇒ The presettings for initial startup are now completed. The start screen of the Brabender MetaBridge appears.
8. If a software was purchased without a MetaBridge controller, you still need to activate the license number and to install the corresponding device in the software.
 ⇒ Upon license activation, installation of the device and log-in, the start screen of the respective device appears.
9. If applicable, make further presettings (language, units, etc.) on the tile "Options".

6 Running a test

6.1 Safety notes, general notes

⚠ WARNING

Danger of severe burns due to hot surfaces, risk of property damage!

The surfaces of parts of the machine system can reach extremely high temperatures during operation and remain very hot even a long time after shutdown!

Danger of severe burns, danger of damage to the contact surfaces due to hot machine parts!

- Always wear suitable protective gloves when working on the machine system!
- Always ensure there is a sufficient distance for unprotected parts of your body and cables, pipelines and hose lines. Keep them away from hot surfaces!
- Do not use the machine as a storage surface!
- Deposit hot machine parts on a suitable, heat-resistant base only!
- Set up clear warning signs beside the hot machine parts in order to avoid unintentional touching by third persons!
- Guide/dispose hot product only in appropriate, heat-resistant containers!

⚠ WARNING

Danger of injury, risk of property damage!

The software offers the possibility of programming speed profiles. In this context, the machine system, controlled by the software, may start automatically from standstill position.

Danger of injury, danger of damage to or destruction of the machine system!

- Never put your hands into the open measuring mixer or insert any tools when the drive unit is live!
- Always pull the power plug of the drive unit before undertaking any manipulations on the open measuring mixer!

⚠ WARNING

Risk of injury, risk of property damage!

When the feed opening is open, the rotating mixer blades are accessible!

Danger of most serious injuries, entanglement hazard by the rotating mixer blades when the drive motor is running!

- Never put your hands into the open measuring mixer when the drive unit is on!
- Never work on the measuring mixer with open long hair or with loose garments (tie, scarf, shawl or the like) or jewelry!

⚠ CAUTION

Danger of injury, risk of property damage!

Operation of the machine system in "Local" mode may cause operating troubles due to wrong operating parameters.

Danger of injury, risk of damage to the machine system!

- In normal operation, always control the Brabender drive unit through the software, that means in "Remote" mode!
- Measurements must not be run in "Local" mode!
- Use "Local" mode only for short terms and only for cleaning purposes!



As many settings in the software depend on the material to be processed and on the entire system configuration, only some general instructions concerning the test procedure are given in the following. If you have any questions, please do not hesitate to ask the experts of the Brabender laboratory.

6.2 System preparation prior to each test



Concerning preparation of the instrument system and of the sample, please refer to the corresponding chapter in the instruction manual of the instrument.

6.3 Test procedure



Concerning the test procedure, please also refer to the corresponding chapter in the instruction manual of the instrument.

1. Tap the tile "New" in the MetaBridge software.
⇒ The parameter window for entering the test parameters appears (see fig. below).
2. Fill in the parameter window completely.
 - For entering the test parameters, please refer to chapter 4.4.2.1 "Parameter window".
 - In order to prevent switching-off of the drive unit due to excessive torque, start with a **low speed** ($20 - 30 \text{ min}^{-1}$).
In order to make sure that the measuring curve is recorded completely, first set a **large measuring range**.

The screenshot shows the 'New measurement' dialog box. It includes fields for User (Möller), Order, Tags, Method, Sample (name: Enter a sample name...), Sample weight [g] (60.0), Speed [1/min] (60.0), Mixer temperature [°C] (180.0), Mixer (W 50 EHT), Additive (Enter an additive...), Evaluation (Fusion Behavior), Measuring time [min:ss] (05 : 00), Speed profile, Temperature profile, Alarm profiles, and Loading chute (Enter the loading chute you will use...). There is also a 'Remark' section with placeholder text. At the bottom are 'Start measurement' and 'Cancel' buttons.

Fig. 111: Parameter window

Running a test

3. Make sure that the drive unit and the docking station (if applicable) have been switched on.



Otherwise, the system cannot be calibrated.

4. To start the measurement, tap the field "Start measurement".

⇒ The device initializes.

⇒ The measuring mixer is heated up.

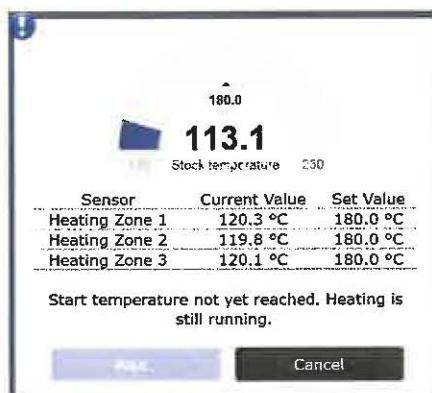


Fig. 112: Heating up

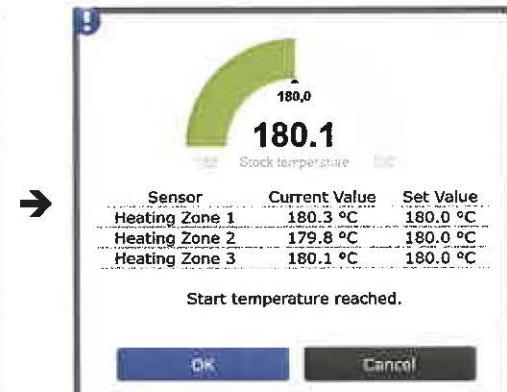


Fig. 113: Start temperature reached

5. Wait until all current values have reached the setpoint values and all temperatures are constant, then tap "OK".

⇒ The speed now rises to the setpoint value automatically and the system is calibrated.



Fig. 114: Calibration

⇒ Upon calibration, you are requested to fill the mixer or to press "Start".



Upon tapping "Start", recording of the measuring values starts immediately, otherwise, recording of the measuring values starts automatically when the torque threshold shown in this window is exceeded (in the fig. below: 1 Nm).

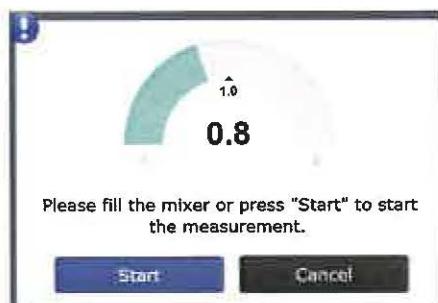


Fig. 115: Request to fill the mixer

⚠ WARNING

Risk of injury, risk of property damage when filling the sample material into the mixer without or with an unsuited or wrongly mounted loading device!

When loading the sample material into the mixer through a wrongly mounted or unsuited loading device or without any loading device at all, the rotating mixer blades may be partly or fully open. When loading the sample material with the pressure ram, the feed opening of the measuring mixer needs to be opened and closed several times so that the rotating mixer blades are open.

Danger of most serious injuries, entanglement hazard!

- Always use an original Brabender loading device for loading the sample material into the measuring mixer!
- Never load any sample material directly into the measuring mixer with your hands without a properly mounted original Brabender loading device!
- Always ensure there is a sufficient distance for your hands. Keep them away from the feed opening!
- Never work on the measuring mixer with open long hair or with loose garments (tie, scarf, shawl or the like) or jewelry!

6. Mount the loading device or the chute of the loading device or open the pressure lever of the pressure ram.



See separate instruction manual of the measuring mixer.

7. Fill the sample material into the measuring mixer.



See separate instruction manual of the measuring mixer.



⇒ As soon as the starting torque is exceeded (or when the field "Start" is tapped), the measuring window with the on-line diagram appears.



Concerning the buttons in the action bar of the measuring window, please refer to chapter 4.4.2.2 "Measuring window".

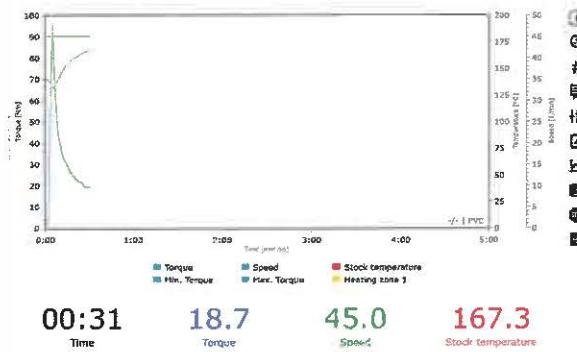


Fig. 116: Measuring window

6.4 Test end

6.4.1 Test end upon expiry of the test time

Upon expiry of the test time preset, data transmission from the device to the MetaBridge is stopped automatically and the evaluation is shown.



The test is saved automatically in the list of tests and. Separate saving of the test is not required.



Concerning the buttons in the action bar and the possibilities for editing the evaluation, please refer to chapter 4.4.2.3 "Evaluation".

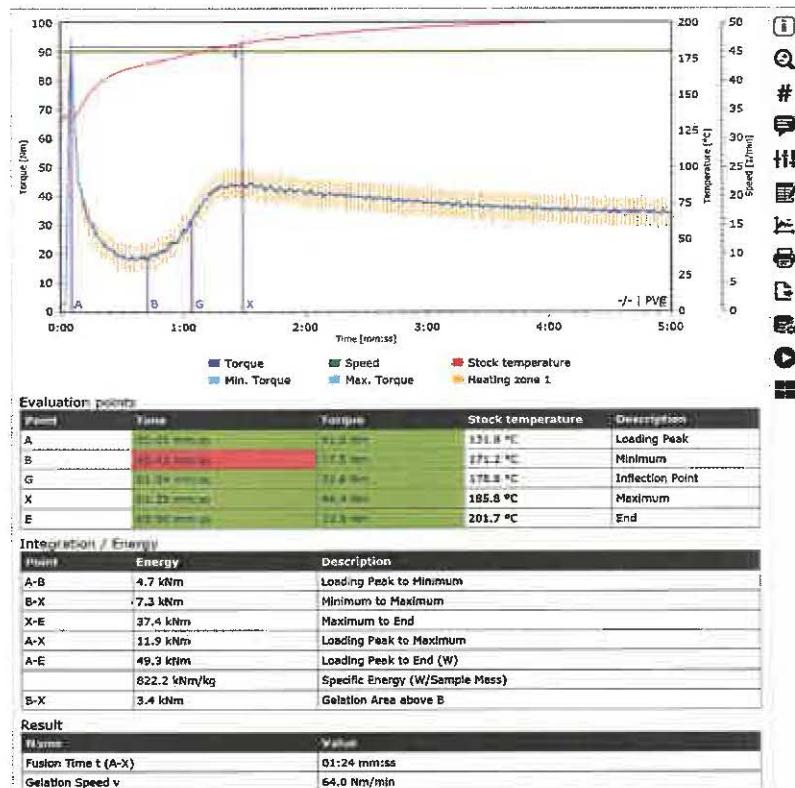


Fig. 117: Evaluation window (here: with reference curve)



6.4.2 Early test end (test abortion)

The test can be stopped manually any time before expiry of the preset test time.

1. Tap the button "STOP" in the action bar beside the measuring window.
⇒ A window appears asking you whether you really want to stop the test:

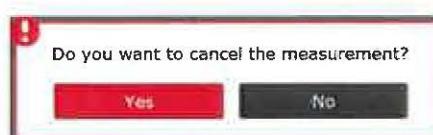


Fig. 118: Safety question

2. If you want to stop the test, tap "Yes".
⇒ Data transmission is stopped.
⇒ The evaluation with the evaluation points calculated up to the point of abortion of the test is shown.

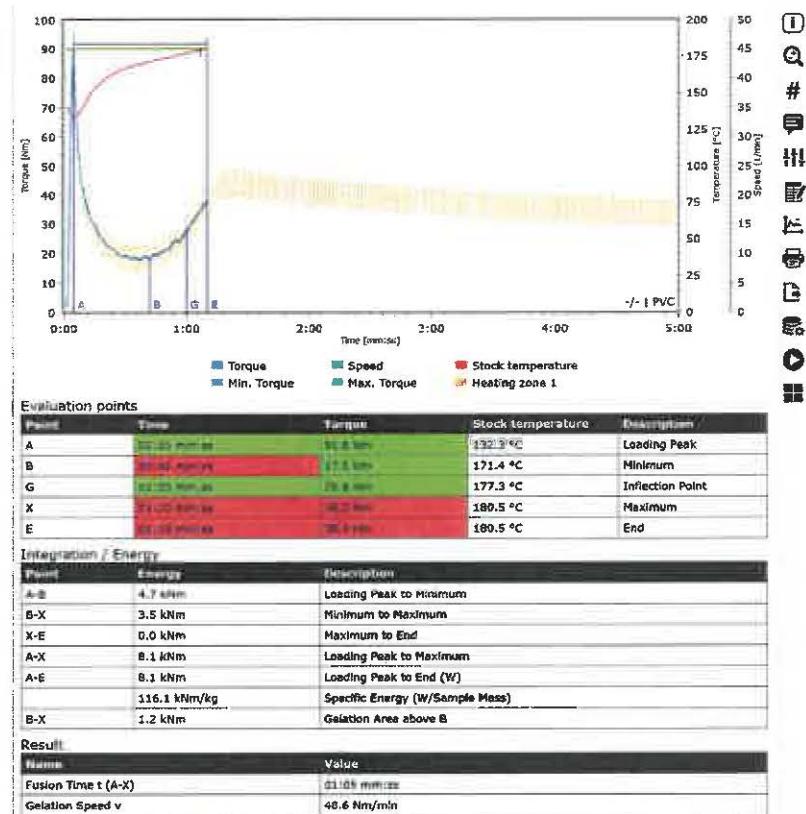


Fig. 119: Evaluation window of a cancelled test

7 Annex

7.1 List of buttons in the MetaBridge software

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-  [Methods](#)
-  [Speed profiles](#)
-  [Temperature profiles](#)
-  [Options](#)
-  [User parameters](#)
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-  [Change correlation mode](#)
-  [Network settings](#)
-  [Service settings](#)
-  [Hardware settings](#)
-  [User administration](#)
-  [User settings](#)

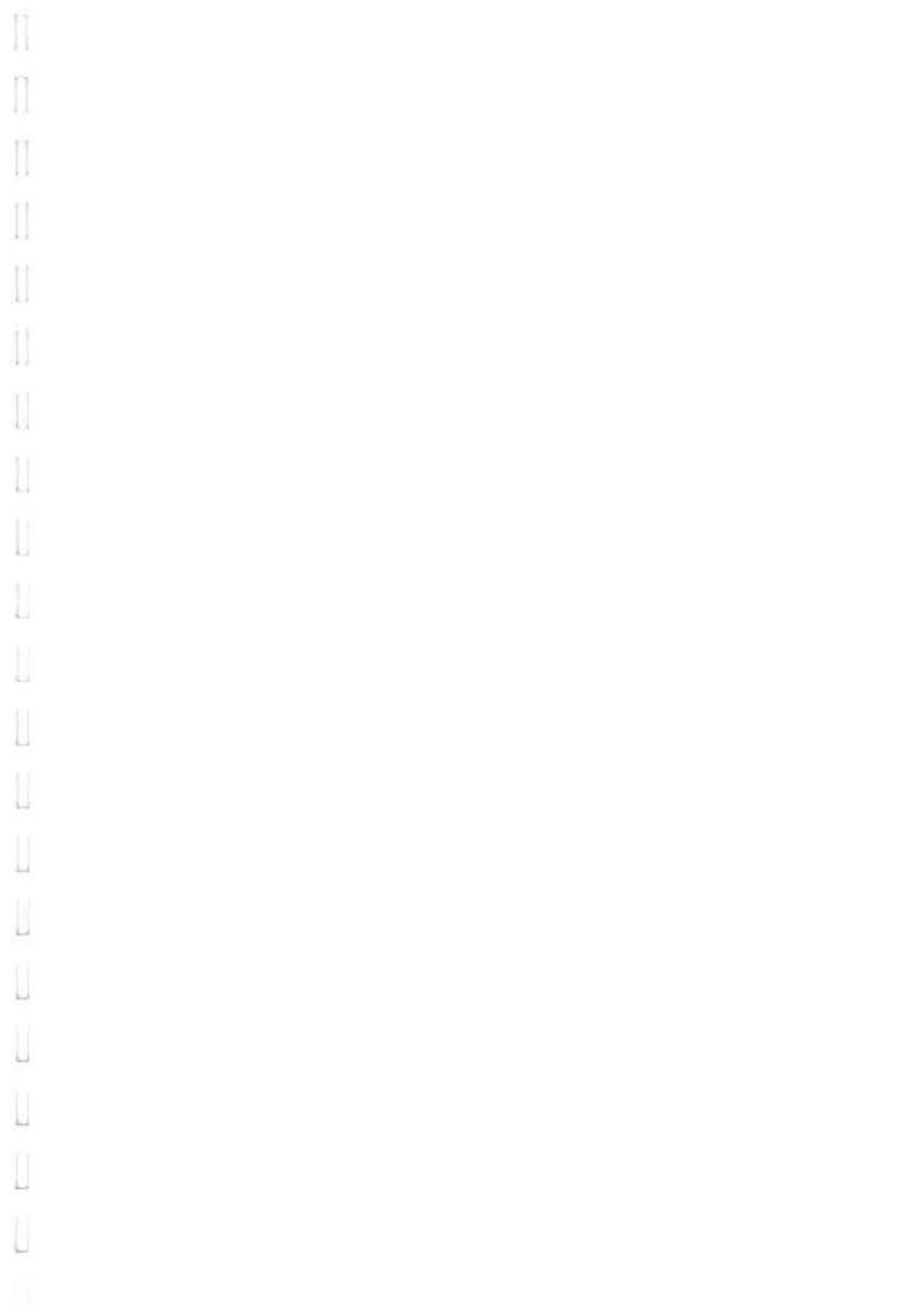
-  [Add user](#)
-  [Delete user](#)
-  [About us](#)
-  [Our products](#)
-  [Manual](#)
-  [FAQ](#) [Show FAQ](#)
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... where quality is measured.

Brabender® GmbH & Co. KG

Kulturstr. 49-51
47055 Duisburg
Germany

Phone +49-203-7788-0

E-mail: brabender@brabender.com

www.brabender.com

C.W. Brabender® Instruments, Inc.

50 East Wesley Street
South Hackensack, New Jersey 07606
USA

Phone +201-343-8425

Fax +201-343-0608

E-mail: service@cwbrabender.com
www.cwbrabender.com

ООО «Брабендер»

ул. Ягодинская, д. 25
420032 Казань
Россия

Тел. +7 843 233 46 66

E-Mail: ooo.brabender@brabender.ru

www.brabender.com