BREYE user manual

Introduction

Congratulations! You have just acquired the portable Braille Dot Checker BREYE manufactured by PERET GmbH. This device is the optimum tool to control the manufacturing process of Braille. It measures the characteristics of Braille dots in a fast and intuitive manner. It measures Height, Base diameter and Space and automatically creates quality control reports.

Important: *This manual describes the current version of the BREYE hardware and software. Future enhancements or modifications are reserved.*

Safety Instructions

Warning

For safety reasons it is absolutely necessary to read through the user's guide and all of the instructions it contains.

General safety rules

If the safety recommendations and instructions in this User Guide are not complied with, measurement errors or data loss or physical injury or property damage may result

- BREYE is not intrinsically safe. Therefore the device cannot be used in an environment with explosive vapors where there is a risk of spark ignition.
- BREYE may not be used in an area with strong electromagnetic fields.
- Use the BREYE in ambient temperatures between 10°C (50° F) and 40°C (104°F), and do not expose the BREYE to direct sun light.
- Neither the BREYE Sensor nor the BREYE transmission light box should ever be opened as there are no user-serviceable parts. Doing so voids the guarantee. Contact your authorized dealer if repairs are necessary.
- To avoid incorrect handling, the BREYE should only be used by trained personnel
- The BREYE should only be used on dry measurement objects.
- The BREYE should be protected against chemicals, corrosive vapors, strong mechanical vibrations and impacts.
- Use original PERET spare parts and accessories only.
- Use the original packaging exclusively when transporting.
- The BREYE casing can be cleaned with a dry cloth.

Installation

Start your Computer and wait until all boot processes have terminated and your computer is ready to operate. **Do not plug the USB cables in at this time.**

Plug the BREYE USB Memory Stick into a free USB Port and wait until Windows has recognized and registered the USB Stick as a Mass storage Device.

Install the BREYE software

The USB Memory stick contains a setup utility **'setupBREYE.exe'**, which can be run to install the BREYE Software on your PC.

Before termination the video driver installer will automatically be started. Click INSTALL.
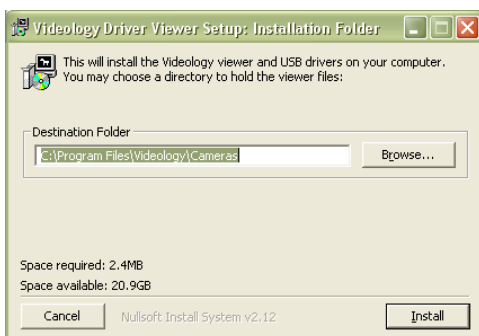
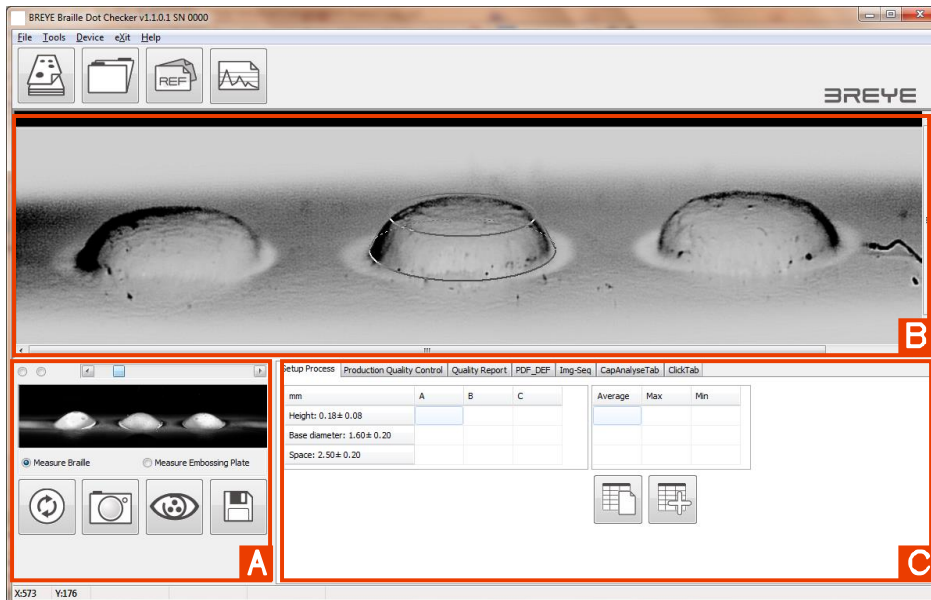

Wait until the installation of the driver is finished.

Now connect the USB cable to a free USB2.0 port. Windows will automatically detect the driver and assign it to the device.

Run the application

- Launch the BREYE.exe,
- Click the BREYE Icon on your desktop or,
- Run the BREYE from the Windows Start Menu

Main Window

A) Life image of camera
B) Captured image for analysis
C) Analysis types and results

Main Window Icons

 Measure a new box in production quality control

 Load Image

 Open Standards Database

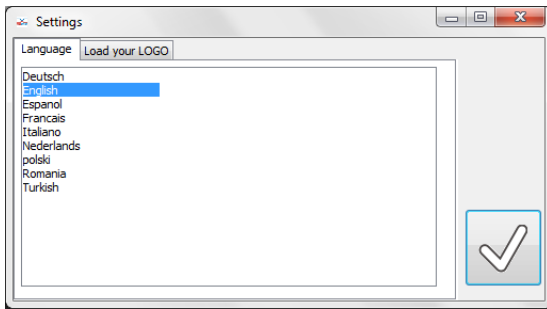 Open Statistics on quality reports

 Preview

 Capture

 Save image

 Clear statistics

 Add measurement to statistics and re-calculate average, maximum and minimum

Select your language

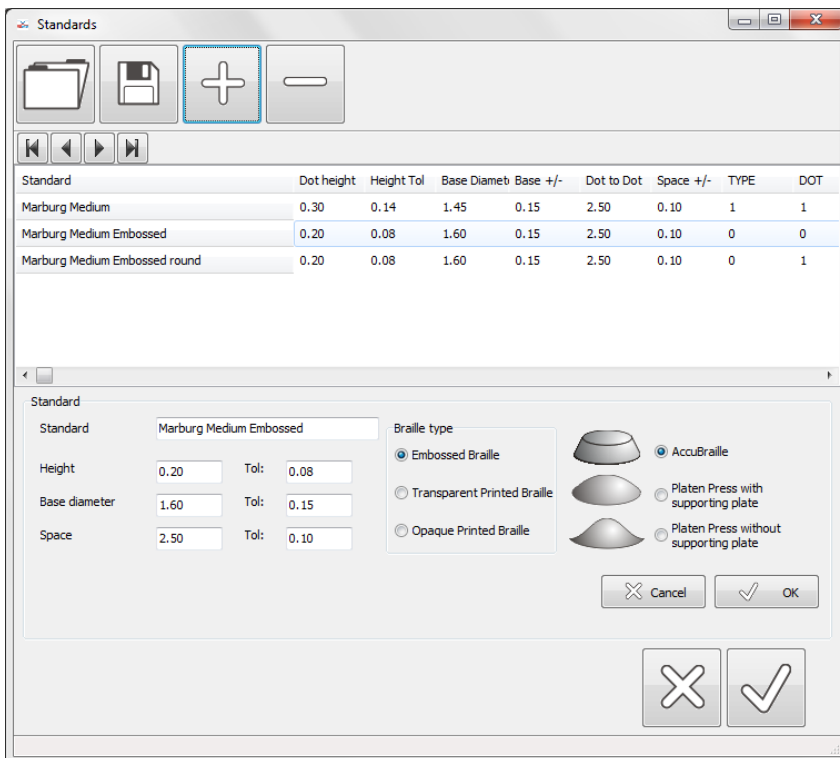Select File/Settings from the main menu to open the Settings window:

It is possible to print all reports with your company logo and details. Load the company logo in *.bmp format or *.jpg format into the settings window. Insert additional text information below. The logo and information is saved automatically and reloaded at the next program launch.
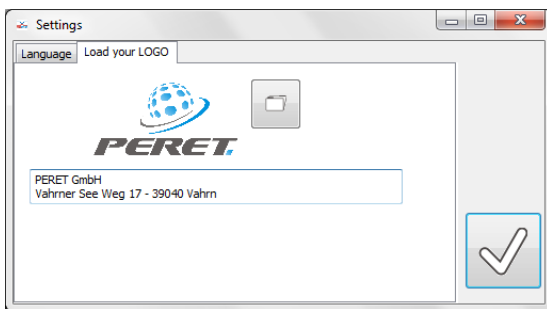
Standards Database

The BREYE software offers a database with standards. Click the database icon to open the database interface.

Standard	Dot height	Height Tol	Base Diameter	Base +/-	Dot to Dot	Space +/-	TYPE	DOT
Marburg Medium	0.30	0.14	1.45	0.15	2.50	0.10	1	1
Marburg Medium Embossed	0.20	0.08	1.60	0.15	2.50	0.10	0	0
Marburg Medium Embossed round	0.20	0.08	1.60	0.15	2.50	0.10	0	1

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The BREYE default database offers a series of pre-defined standards. You can create your own database by adding or removing records from the database and saving the actual database with a different file name.

 Click the ADD Icon to add a new record. Compile the fields on the left bottom, select the Braille type and click OK.

 Select the record from the list that you would like to remove from the database. Click the delete icon to remove the record from the list.

Select the record from the list you would like to modify. Modify the data and click OK.
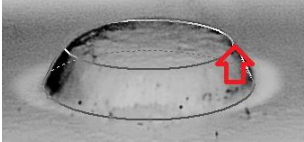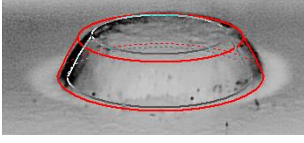
 Click the save Icon to permanently save the changes to the hard disk
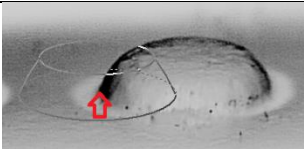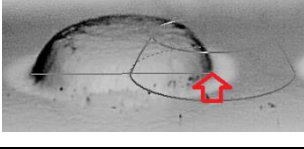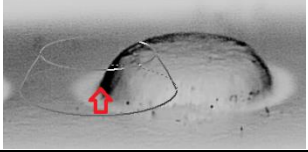
 Click the open Icon to open a database

Execute a measurement
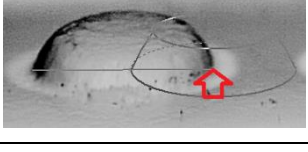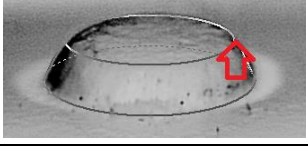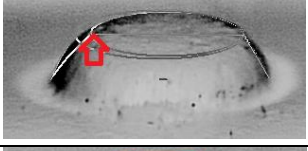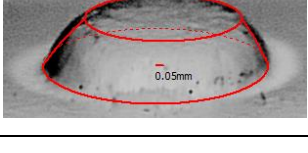
- Click Preview in case actually no life image is displayed inside the preview window [A]
- Position the aperture of the device such as the centered dot bottom matches the blue ellipse displayed in the preview window
- Press the button of the device and keep the device in position until the captured image appears in the Analysis Window [B]

Manual measure dots

		Move the mouse pointer to the left extend of the base of the Braille dot
		Press the left mouse button down and keep it depressed
		Move the mouse pointer to the right extend of the base .
		Click the right mouse button while the left mouse button is still depressed

		Move the mouse pointer to the top of the dot. The shape of the Braille dot is displayed in real time
		Release the left mouse button when the drawn shape matches the real dot shape.
		The measured values are copied to the result table.

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Manual measure asymmetric dots

|		
		Move the mouse pointer to the left extend of the base of the Braille dot
		Press the left mouse button down and keep it depressed
		Move the mouse pointer to the right extend of the base .
		Click the right mouse button while the left mouse button is still depressed
		Move the mouse pointer to the right top of the dot. The shape of the Braille dot is displayed in real time
		Click the right mouse button while the left mouse button is still depressed
		Move the mouse pointer to the left top of the dot. The shape of the Braille dot is displayed in real time.
		Release the left mouse button when the drawn shape matches the real dot shape. The correction required is displayed in 0.01mm units
		The measured values are copied to the result table.

Fine tune the measurement with the keys of your num pad

The actual dot is outlined in red while the previously measured dots are outlined in blue color.
Click inside a dot to make it becoming the actual one.
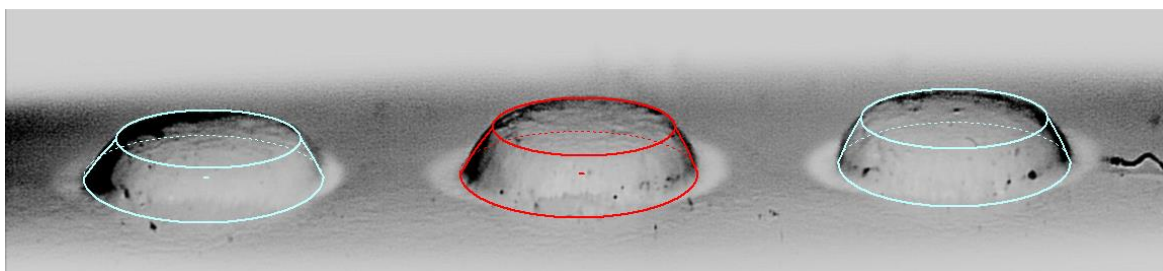
In order to adjust size and position of the actual dot press the proper key on your num pad or click the numerical icon on your screen with the left mouse button.
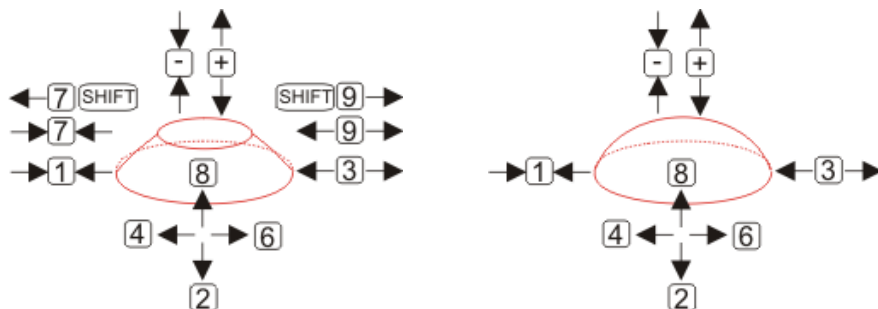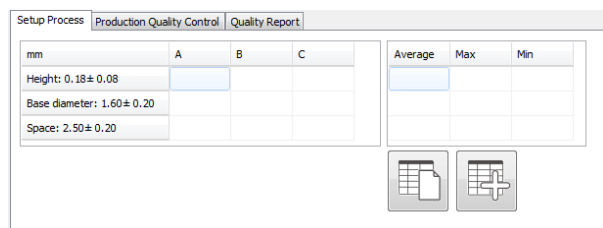

Remove a measurement

- Move the mouse button on top of the dot
- Click the left mouse button to remove a measurement

Setup Process

Setup your embosser by measuring sets of 3 individual dots all over the sheet as described above. Use the software to calculate the statistics.
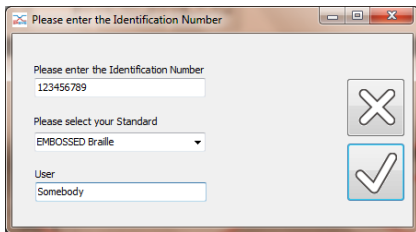

 Clear statistics

 Add measurement to statistics and re-calculate average, maximum and minimum

Daily production quality control

 Start the measurement of a new box in production quality control by clicking the new job icon.

Enter the Job Identification number, select the standard you want to work with, and enter the name of the operator.

 Click the OK Icon to continue

 Click the CANCEL Icon to abort

Execute a measurement as described above. The measurement data will be copied to the first line of the quality report table

The colored square in above sample displays the summary of the actual measured dots of the box.

- A green square is displayed if every dot shows its minimum height, a base diameter in tolerance and the space between dots is in tolerance
- A red square is displayed, if at least one dot height of the actual measurement is out of tolerance. The height is the most critical parameter for the readability of the Braille script,
- An orange square is displayed, if the base diameter of at least one dot is out of tolerance.
- A yellow square is displayed, if at least one space between two dots is out of tolerance.

Select the next row by clicking onto the row.
Measure the next 3 dots of a different location of the same box
Finally select the last row by clicking onto the row.
Measure 3 dots at the 3rd location of the same box.

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Click the OK Icon to auto create and save a Quality Report in PDF format. The report is automatically displayed and can be printed.

Click the CANCEL Icon to abort

Statistics

Open Statistics on quality reports

Select the time frame by selecting the FROM date and the TO date properly.

Select the Job Identification number. You can select a specific job identification number to calculate a statistics over all measurements of this job. You can also use wild cards like '*' to select similar job numbers.

Click the Statistics Icon to calculate the statistics. All selected jobs will be listed. The overall Average, maximum and minimum are calculated and displayed in a table. The measurement results of the selected quality reports will be displayed graphically.

Select and display a report

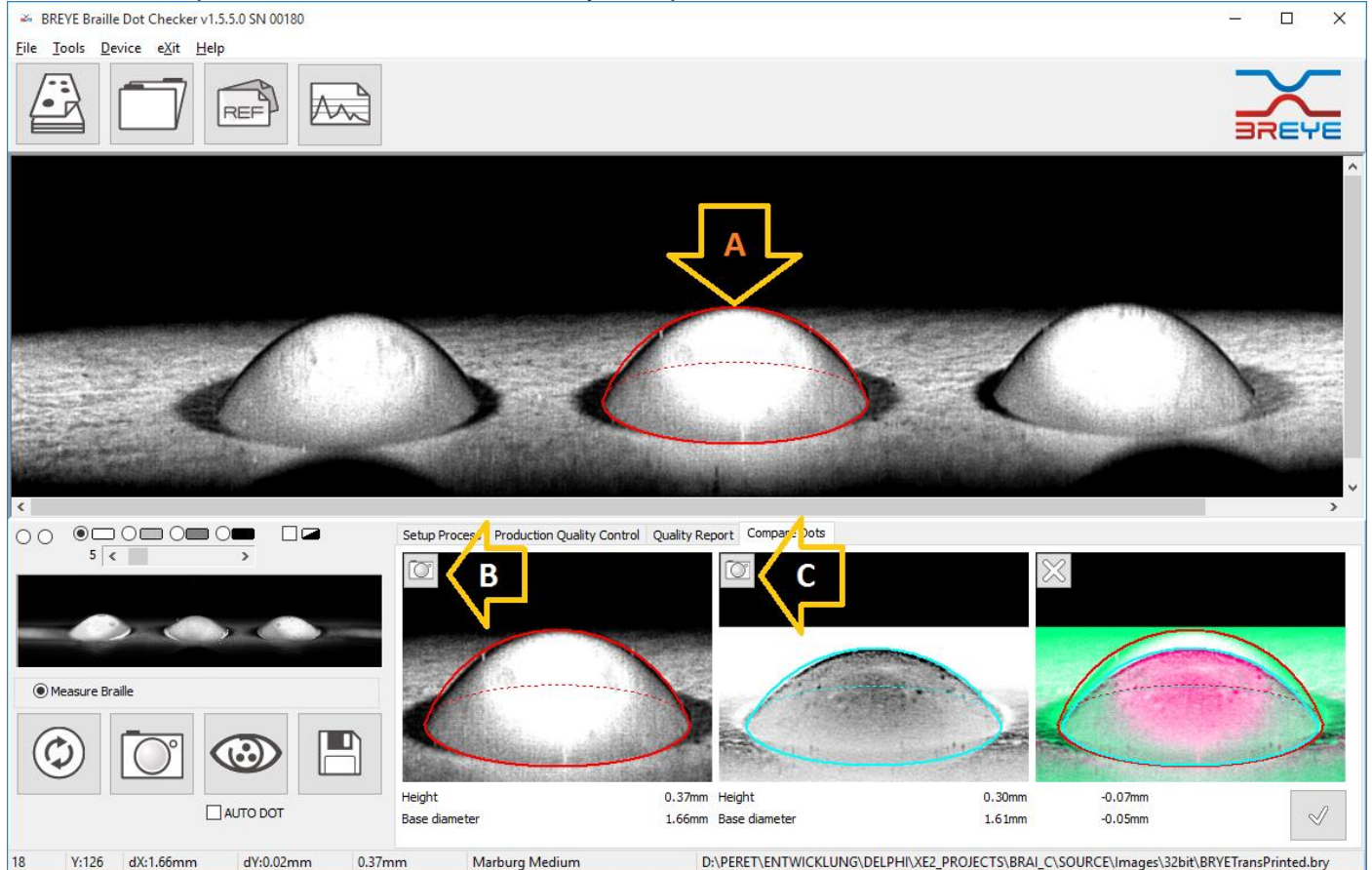Move the mouse pointer on one of the squares of one of the curves.
Click the left mouse button.
The associated report will be displayed automatically and can be printed.

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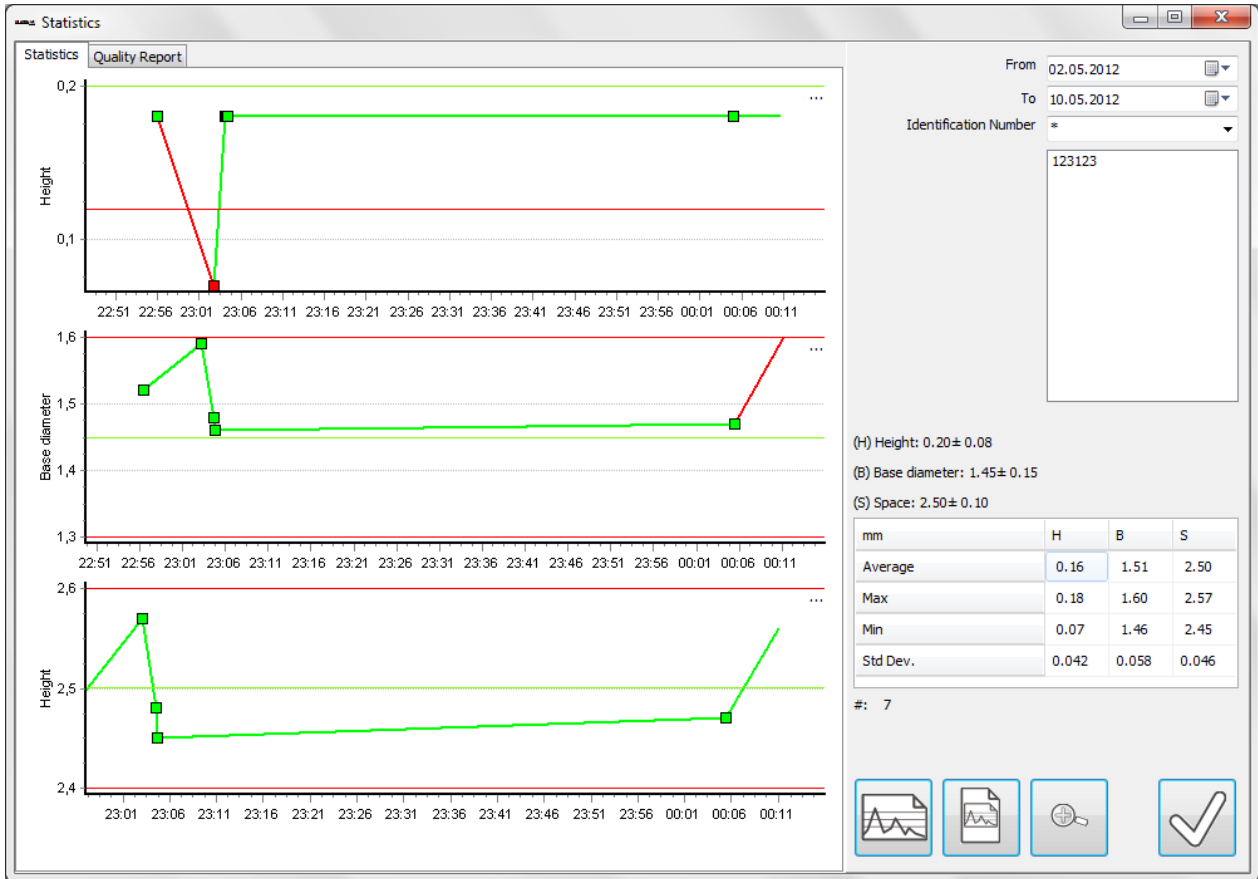
Compare Dots

Use the 'Compare Dots' function to visually compare Braille dots.

- Select the Compare Dots Page to get access to the function
- Capture an Image of the first dot
- Measure the dot in <u>the center</u> of the image (A)

- Click the [camera icon] Camera Icon of the first reference space to copy the current measurement result (B)
- Capture an Image of the second dot
- Measure the dot in <u>the center</u> of the image (A)

- Click the [camera icon] Camera Icon of the second reference space to copy the current measurement result (C)
- The dots will be overlayed and displayed and the differences will be calculated and displayed.

- Click the delete Icon to delete the current overlay image [X icon].