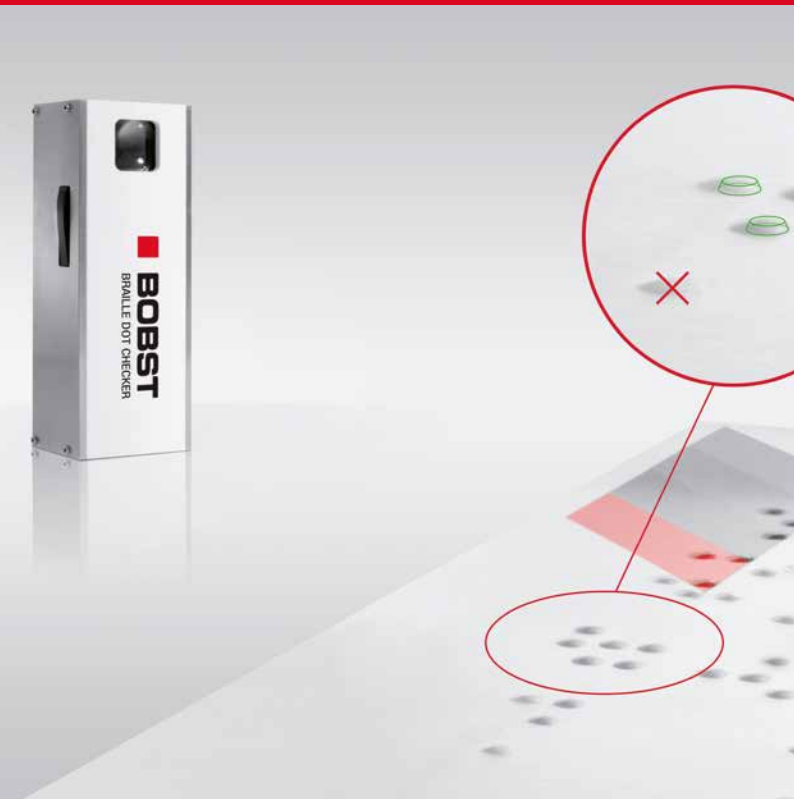
BRAILLE DOT CHECKER

User manual



BOBST

BRAILLE

INTRODUCTION

Congratulations ! You have just acquired the portable Braille Dot Checker BRAILLE 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.

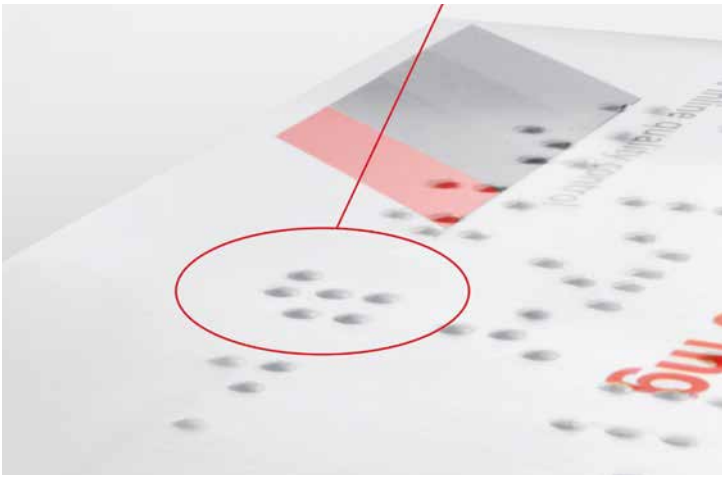
IMPORTANT:
This manual describes the current version of the BRAILLE hardware and software. Future enhancements or modifications are reserved.

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

- BRAILLE is not intrinsically safe. Therefore the device cannot be used in an environment with explosive vapors where there is a risk of spark ignition.
- BRAILLE may not be used in an area with strong electromagnetic fields.
- Use the BRAILLE in ambient temperatures between 10°C (50°F) and 40°C (104°F), and do not expose the BRAILLE to direct sun light.
- Neither the BRAILLE Sensor nor the BRAILLE 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 BRAILLE should only be used by trained personnel
- The BRAILLE should only be used on dry measurement objects.
- The BRAILLE 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 BRAILLE 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 BRAILLE 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 BRAILLE SOFTWARE

The USB Memory stick contains a setup utility **'setupBRAILLE.exe'**, which can be run to install the BRAILLE 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 BRAILLE.exe, click the BRAILLE Icon on your desktop or run the BRAILLE 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.

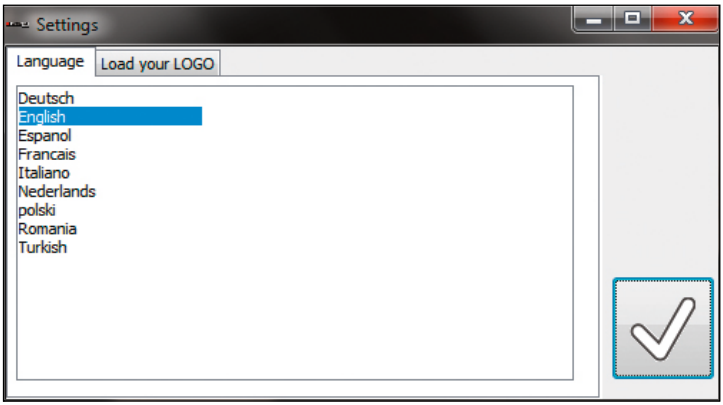
Clear statistics.

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.

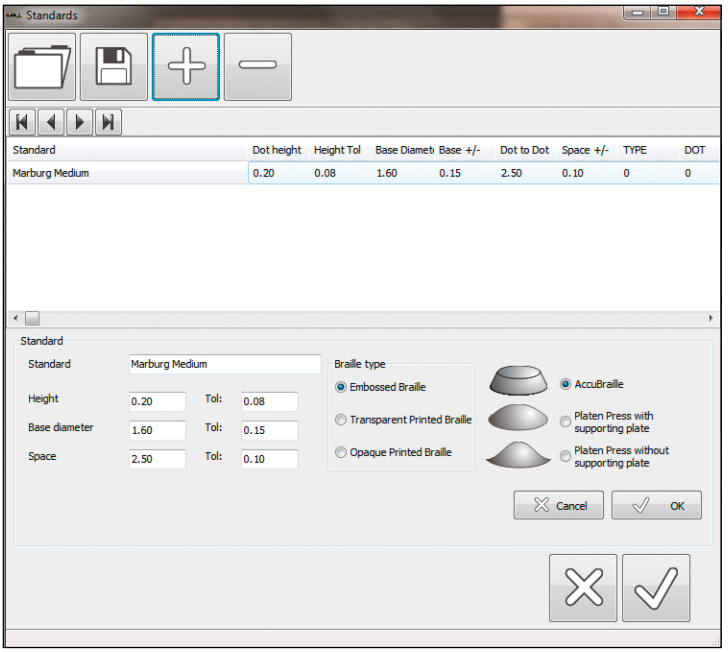


The logo and information is saved automatically and reloaded at the next program launch.

STANDARDS DATABASE

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

The BRAILLE 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.

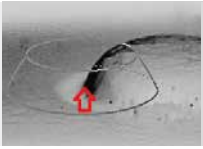
Click the save Icon to permanently save the changes to the hard disk.

Click the open Icon to open a database.

EXECUTE A MEASUREMENT

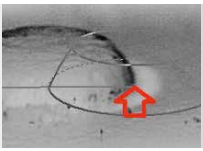
- Click Preview in case actually no life image is displayed inside the preview window [A]
- Position the aperture of the device such as the centered dot bottom matches the blue ellipse displayed in the preview window
- Press the button of the device and keep the device in position until the captured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

MANUAL MEASURE DOTS



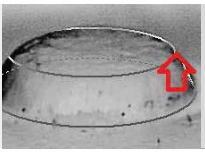
Move the mouse pointer to the left extend of the base of the Braille dot.

Press the left mouse button down and keep it depressed.

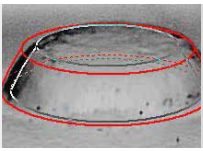


Move the mouse pointer to the right extend of the base.

Click the right mouse button while the left mouse button is still depressed.



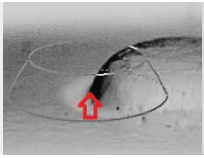
Move the mouse pointer to the left top of the dot. The shape of the Braille dot is displayed in real time.



Release the left mouse button when the drawn shape matches the real dot shape.

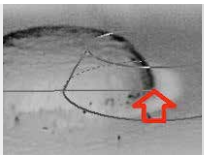
The measured values are copied to the result table.

MANUAL MEASURE ASYMMETRIC DOTS



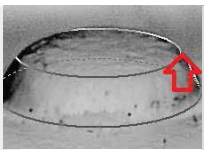
Move the mouse pointer to the left extend of the base of the Braille dot.

Press the left mouse button down and keep it depressed.



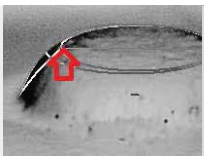
Move the mouse pointer to the right extend of the base.

Click the right mouse button while the left mouse button is still depressed.

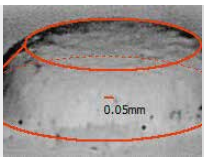


Move the mouse pointer to the right top of the dot. The shape of the Braille dot is displayed in real time.

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.

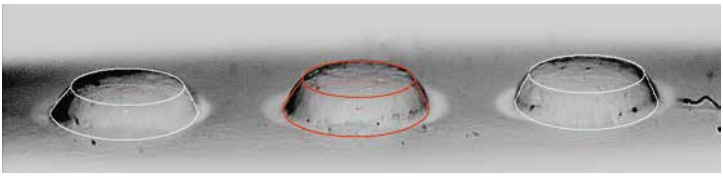


Release the left mouse button when the drawn shape matches the real dot shape. The correction required is displayed in 0.01mm units.

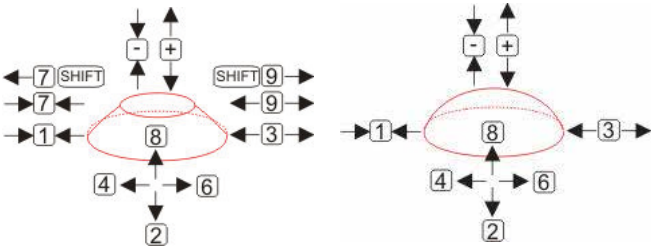
The measured values are copied to the result table.

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.

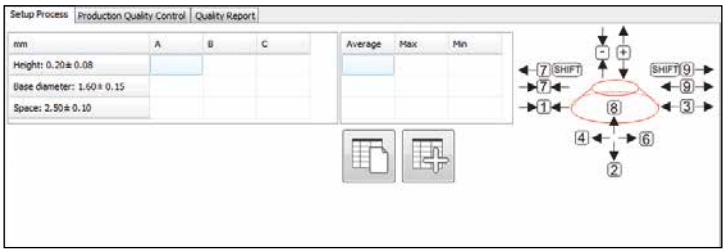


REMOVE A MEASUREMENT

- 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.



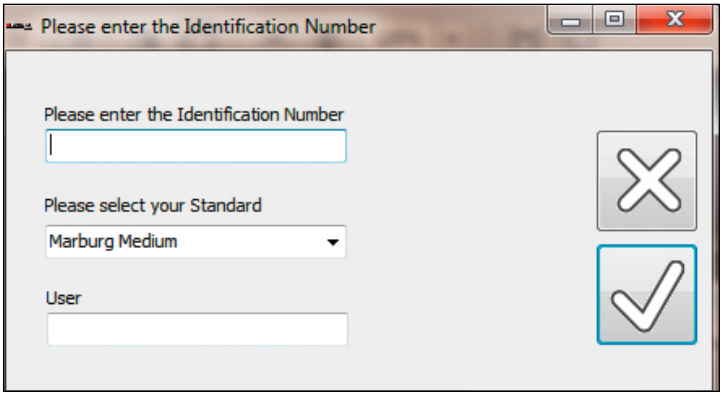
Clear statistics.

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.

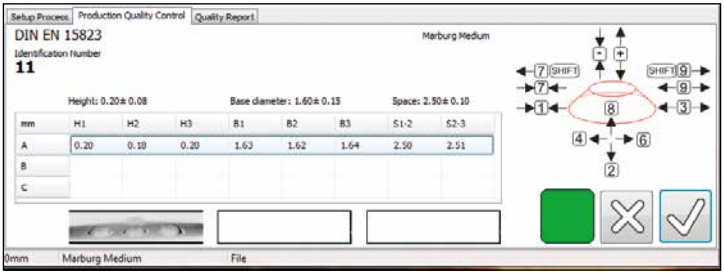
Enter the Job Identification number, select the standard you want to work with, and enter the name of the operator.



Click the OK Icon to continue.

Click the CANCEL Icon to abort.

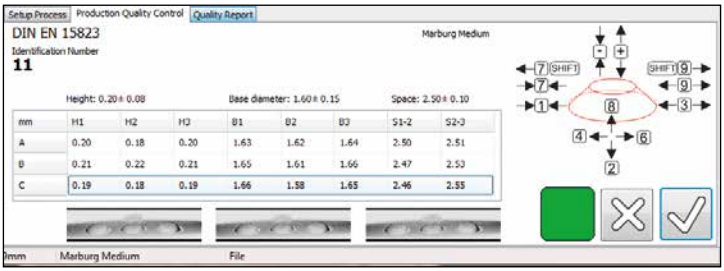
Execute a measurement as described above. The measurement data will be copied to the first line of the quality report table.



The colored square in above sample displayes 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.



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.

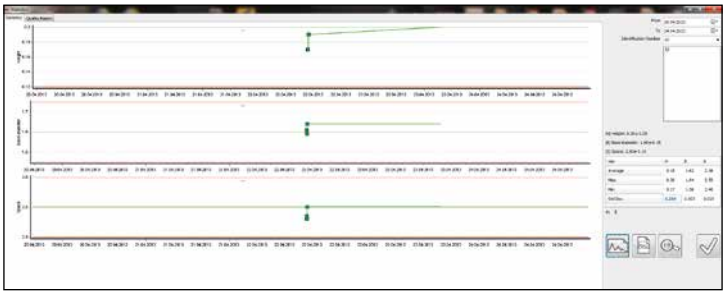
Click the Statistics Icon to calculate the statistics.

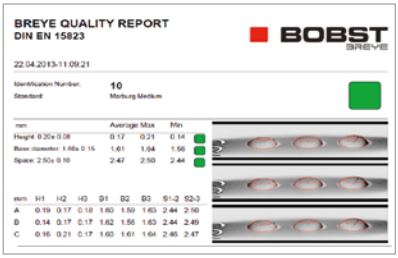
All selected jobs will be listed. The overall Average, maximum and minimum are calculated and displayed in a table. The measurement results of the selected quality reports will be displayed graphically.

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.



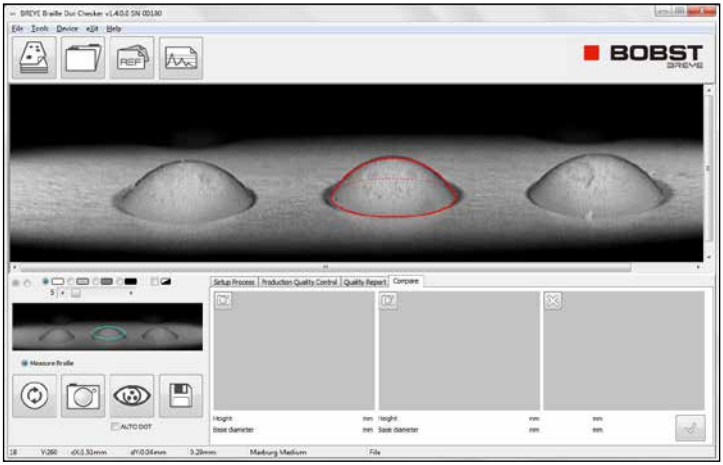


RELEASE NOTES

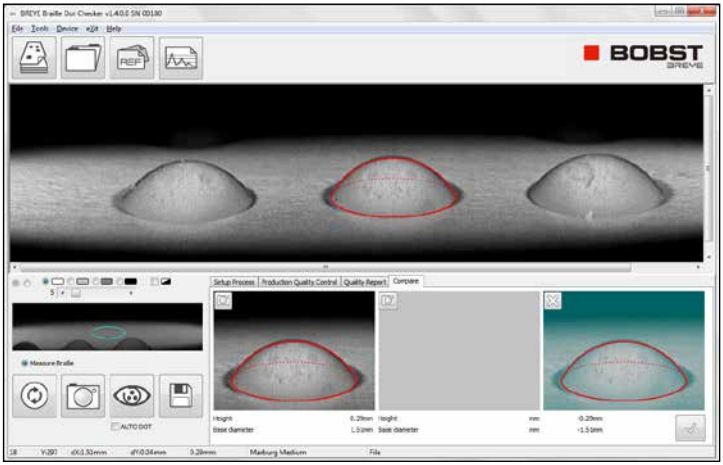
BRAILLE DOT CHECKER V1.4.0

BRAILLE DOT COMPARISON
The new Braille Dot function for comparison of single dots can be used to detect and document variations in dot shapes, for example on printed dots in print direction compared to cross print direction.

Capture an image and outline the dot in the center of the image.

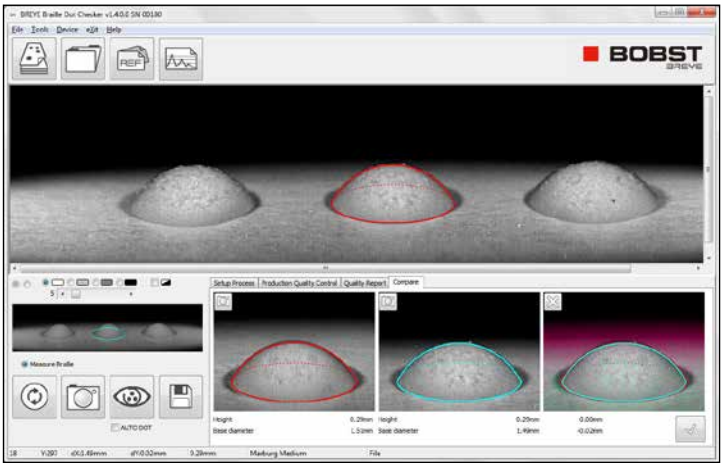


Click the capture Icon of the first image.



Capture the next image and outline again the dot in the center.

Click the capture Icon of the second image.



The third image automatically will show the differences.

Click the report icon to create a PDF report.

BRAILLE DOT CHECKER V1.3.1.0

AUTO DOT FUNCTION

Check the AUTO DOT selector or click the AUTO DOT icon after a reading to fine tune the measurement result. The dot still needs to be outlined manually, but the software automatically searches the real edge close to the operators outlining. This makes the measurements less user dependent.

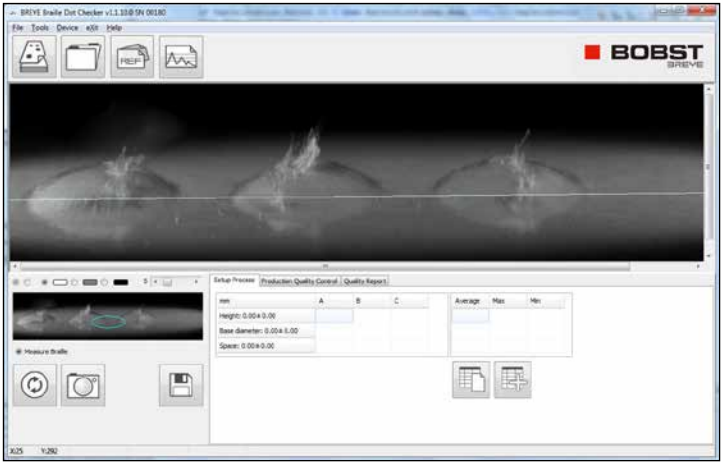
BRAILLE DOT CHECKER V1.1.12

Version v1.1.12 improvements are focused on faster, more repeatable and more precise positioning of the device to obtain higher quality images. Further the measurement possibilities have been improved by additional fine tuning functions to outline the Braille dot with high precision.

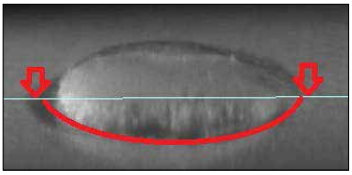
EASY POSITIONING IMPROVEMENTS

The live image can be displayed in the main window by clicking the preview icon.

A blue line displays the optimal position for the alignment of the braille dots that should be measured. This feature helps the operator to easily bring the image in focus.

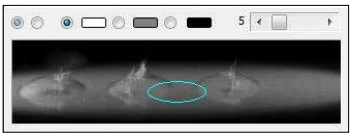


Align your dots such as the blue line goes across the center of the base of the dots.



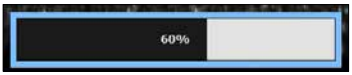
EASY BRIGHTNESS ADJUSTMENTS

Next to the brightness ruler now there are pre-defined settings for bright (white), colored (gray) and dark (black, dark blue, dark green) samples, that can be selected by a simple click on the proper symbol. The brightness ruler is still available for fine tuning of the brightness.



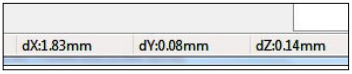
In case of dark samples there will not be available the blue positioning line because the simple preview images does not show enough details.

The settings are changing the speed of image capture. In order to advice the operator about the status there has been introduced a progress bar information. Do not move the BRAILLE DOT CHECKER until 100% of the capture procedure has been completed.

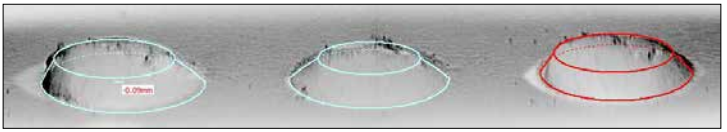


EASY DOT SELECTION AND ADJUSTMENT

The actual base dimensions and the actual height is displayed in real world dimensions in the status bar at the bottom of the window.



The most recently measured dot is the actual dot and outlined in red color. The inactive dots are outlined in blue color. An inactive dot can be made the active dot by simply clicking on the dot.



The active dot dimensions can be adjusted using the num pad of the key board in version 1.1.12:

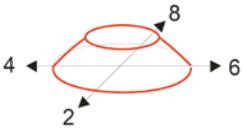
- '+' increase the height of the active dot

- '9' increase the size of the plateau
- '7' decrease the size of the plateau

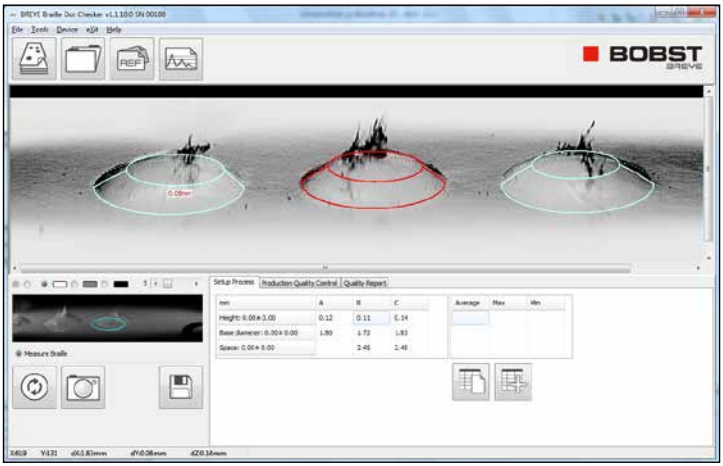
- '3' increase the size of the base
- '1' decrease the size of the base

Use the num pad to adjust the position of the outlined dot until it perfectly matches the captured dot

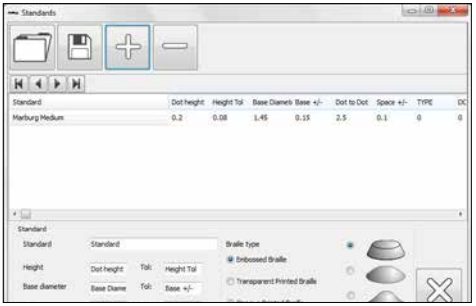
- '4' move the active dot to the left
- '6' move the active dot to the right
- '8' move the active dot up
- '2' move the active dot down



The height and the space are adjusted automatically in the Setup Process table as well as in the Production control table.



DOT SHAPE TYPE MAKES DOT OUTLINING EASY
The reference library has been enhanced by a specification for the dot Shape. Every single reference can have one out of 3 different dot shapes:



Accubraille dot shape

Die cutter with counter plate or printed braille

Die cutter without counter plate

Printed in Switzerland
No BSA096100102 052 02

For more information
www.bobst.com

www.bobst.com