TQC GLOSSMETER®

GL0010, GL0020, GL0030

User Guide
V1.01 092013

CE This product meets the Electromagnetic Compatibility Directive 89/336/EEC, amended by Directive 92/31/EEC and 93/68/EEC

This product is RoHs compliant (Directive 2002/95 EC).

Warranty

TQC will grant a warranty for a period of 12 months for TQC Glossmeter and 12 months for all related equipment from the date of delivery in respect of any evidence of faulty workmanship and materials. TQC will extend the warranty for TQC Glossmeter to a period of 24 months from the date of delivery if TQC Glossmeter is licensed via the TQC Ideal Finish Analysis software. Should a delivered consignment prove to be contrary to contract upon inspection, the customer shall grant TQC the opportunity hereunder of removing the fault, or else the customer may demand replacement. Should the supply or delivery of any improvement or replacement not prove possible, the customer may choose between having the purchase price reduced or in demanding the contract of sale to be rescinded (conversion). Damage resulting from natural wear and tear, mechanical or chemical damage, an act of God or non compliance with the operating instructions shall be excluded from the warranty as well as mechanical interference by the customer or by third parties with TQC Glossmeter and related equipment without TQC's written permission. No liability will be accepted for defects, damage or injury caused due to use not carried out in accordance with the manufacturer's user instructions.
To claim warranty, the rejected product has to be sent to TQC together with the original invoice, any exchange before the product has been returned to TQC is not possible. TQC reserve the right to repair, exchange or supply an equivalent substitute. TQC is not liable for handling or transport costs. Warranty on the purchase price is limited, all liability for consequential damages or changes in technology is expelled.

Scope of supply

The TQC Glossmeter comes with the following items:

- TQC Glossmeter (20°/60°/85° depending on your model)
- 2 AA type batteries
- A plastic case
- Screwdriver
- USB stick with TQC Ideal Finish Analysis software
- Micro fiber cleaning towel
- USB cable
- Calibration certificate

Table of Contents

1.   Introduction

The TQC Glossmeter enables you to measure the gloss level of different surfaces such as paint, coating, plastic and ceramics.

The gloss level is determined by projecting light onto the surface at a specific angle and measuring the light that it reflects. The angle at which the light is projected is important. The light shall be projected onto the surface at an angle matching the surface's average gloss level. A scan angle is therefore usualy specified for the various surfaces. The 60º angle is the reference angle and can be used for every surface, from matte to mirror finish. The 20º scan angle achieves the best results on high-gloss surfaces, whereas the 85º scan angle works best on matte surfaces.

Accurate measurements can only be achieved on flat and clean surfaces. Measurements on soiled, scratched or otherwise contaminated test objects are useless, except to determine the degree of imperfection. Because it is unlikely that the gloss output is the same across the entire test surface, you should measure the gloss in a number of places and determine the standard deviation.

Note:
The aluminum particles in effect and metallic lacquers can produce different results.

The TQC glossmeter comes in three versions:

Article Number	Model name	Measuring angles
GL0010	TQC SoloGloss	60°
GL0020	TQC DuoGloss	20°/60°
GL0030	TQC PolyGloss	20°/60°/85°

The TQC Glossmeter's memory is large enough to store a maximum of 2000 measurements of three angles each in 8 batches. One batch can contain up to a maximum of 500 measurements, which can be transferred to a PC by connecting it to the glossmeter with a USB cable. You can also read measurements from the TQC Glossmeter's screen. The settings (Setup) can be protected by a password.

Glossmeters are internationally standardized instruments to ensure that measurements produced by any of the devices can be compared with each other.

2.   Getting started with the TQC Glossmeter

The glossmeter is ready for use as soon as you unpack it. All you have to do is set a few parameters such as language, date/time and scan angle. For more information on these settings, see chapter 3. These settings can be protected by a password.

The operating buttons

The instrument has 4 buttons:

SCAN   The SCAN button is used to scan surfaces. This is also the button that powers the glossmeter on.

▲   The "up" arrow button enables you to navigate upward through the menu structure.

▼   The "down" arrow button enables you to navigate downward through the menu structure.

OK   The OK button is used to confirm the selected menu option.

Starting the glossmeter
Press the SCAN button until the TQC logo displays. When the TQC logo disappears, the main menu described in section 2.2 displays.

Note: The message "Calibration needed!" displays when the TQC Glossmeter needs calibrating. For more information see section 3.2.

Note: The warning LOW BATTERY displays when the battery is low. The TQC Glossmeter powers off within 10 seconds.

Note: The instrument also powers off automatically if a button has not been pressed within 10 minutes. You can change this time. For more information, see section 3.7.

2.1   Where are which tasks performed?

This section describes the tasks you can perform with the TQC Glossmeter. The tasks are grouped by function in the below tables.

2.1.1   Using the TQC Glossmeter

Task	Menu	Action	Option
Power on TQC Glossmeter		Press SCAN	
View TQC Glossmeter product information	Setup	Select More	Device info
Scan		Press SCAN	
Power off TQC Glossmeter	Main menu		Power off

2.1.2   Settings

Task	Menu	Action	Option
Set scan limit per batch	Log	Select batch	Limits
Change settings	Main menu		Setup
Select scan angle	Setup		Geometry
Set scan limits	Setup		Scan Limits
Set time and date	Setup		Time Date
Set language	Setup	Select More	Language
Time after which TQC Glossmeter powers itself off	Setup		Power saving
Log in	Main menu		Log in
Activate, deactivate or change password	Setup		Password

2.1.3   Save/clear data

Task	Menu	Action	Option
Clear data in a batch	Log	Select batch	Clear batch
Clear memory	Clear memory		Clear all data
Clear batch names	Clear memory		Clear batch names
Save data to a batch	Log	Select batch	Log batch
View saved measurements	Log	Select batch	Statistics

2.1.4   Calibrate

Task	Menu	Action	Option
Calibrate	Setup		Calibrate
Adjust calibration values	Setup		Calibration Values

2.2   The main menu

When TQC Glossmeter is powered on, the TQC logo displays followed by the main menu displayed in Figure 2.1.
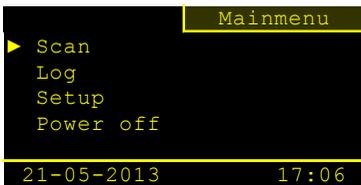

Figure 2 -1 Main menu with the "Scan" option selected

The following submenus are available:
- Scan
- Log
- Setup or Log in
- Power off

Use the arrow buttons ▲▼ to select the function you want to use. Press OK to activate the selected function or to access a submenu. Note: A ► in front of an option indicates that the option is selected.

2.2.1 Scan

Select the Scan (Measure) option to immediately start scanning. For more information, see chapter 4.

2.2.2 Log

Select Log to save measurements in different batches. For more information, see chapter 5.

2.2.3 Setup/Log in

Select Setup (Settings) to change some of the glossmeter's settings. For more information, see chapter 3. If a password has been entered, the main menu will display the Log in option instead of Setup.

2.2.4 Power off

Select Power off to switch off the glossmeter manually. For more information, see chapter 6.

3.   Setup/Log in

You can change the device's settings in the Setup menu. It is possible to protect the Setup menu with a password. For more information, see section 3.4.

Note:
If the Setup menu is password protected, the Log in option displays in the main menu. Select Log in to enter the password and display the Setup menu.

Setup
1.   Select Setup.
2.   Press OK to display the Setup menu.

```
            Setup                       Setup 2
► Geometry   Clear mem.   ► Language
  Calibratior Time Date      Device info
  Scan Limits Power saving
  Password   More…

                  | Back                    | Back
```
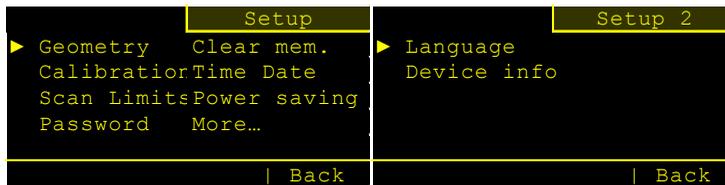
Figure 3 ‑1 The Setup menu

The Setup menu contains the following submenus:
- Geometry
- Calibration
- Scan Limits
- Password
- Clear memory
- Date/time
- Power saving
- Language
- Device info

These submenus are described in this sequence in this chapter.

Log in
1.   Select Log in in the main menu and press OK. The Log in screen displays. The first position of the four-digit password is selected.
2.   Use the arrow buttons to change the digit and press OK. The second position is now selected.
3.   Repeat the above procedure for the second, third and fourth positions.

The correct password displays the message "Password accepted." The Log in option in the main menu is replaced with Setup. You can now change the device's settings.

3.1   Geometry

Use this menu option to select the scan angle for the measurements. Based on the version of the TQC Glossmeter you are using, you can choose one, two or three scan angles.

1.   Select Setup in the main menu.
2.   Select Geometry and press OK. The available scan angles display.
3.   Use the arrow buttons to select the scan angle you want to activate and press OK. The box to the right of the scan angle is checked. Press OK again to deactivate the scan angle.
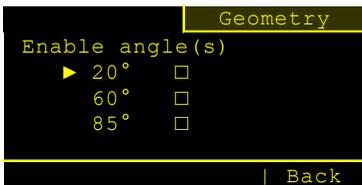
Figure 3 ‑2 Setting scan angles

Note: A scan angle is specified for various surfaces. The 60º angle is the reference angle and can be used for every surface, from matte to mirror finish. The 20º scan angle achieves the best results on high-gloss surfaces (GU > 70 when measuring at a 70º angle). The 85º scan angle achieves the best results on matte surfaces (GU < 10 when measuring at a 60º angle).

3.2   Calibration

Calibration consists of determining the glossmeter's metrological characteristics. This is done by comparing the gloss values of black glass in the calibration holder.

You should check the condition of the calibration holder and the optical lenses before calibrating the device.

The calibration holder and the optical lenses must be clean and in pristine condition. Grease and dust can be removed with clean, dry air or the supplied cleaning cloth. The device cannot measure surfaces accurately if the lenses are permanently damaged. The TQC Glossmeter cannot be calibrated if the calibration holder is damaged.

Procedure
1.   Place the TQC Glossmeter in the calibration holder.
2.   Select Setup in the main menu.
3.   Select Calibration and press OK.

The Calibration menu contains the following options:
- Calibrate
- Calbr. Values

Calibrate

To calibrate:
1. Use the arrow buttons to select the Calibrate option.
2. Press OK. The message "Calibration successful" displays.
3. The only option is BACK.
4. Press OK to display the Calibration menu.

Calbr. Values

To prevent measurement deviations caused by a calibration error, the TQC Glossmeter must always be calibrated with the same holder. The calibration values can be adjusted if a different calibration holder is used:
1. Use the arrow buttons to select Cabr. Values.
2. Press OK to display a list of calibration values for each scan angle.
3. Use the arrow buttons to select the scan angle for which you want to adjust the standard calibration values.
4. Press OK. The scan angle and the previous standard value are displayed. The digit after the comma is selected.
5. Press the arrow buttons to adjust the digit in groups of 10.

Note: The calibration values are in the calibration holder next to the glass plate.

3.3 Scan Limits

You can set scan limits for measurements that need to fall within a certain range. Scan limits can be activated and deactivated. The scan limits are deactivated by default and the values are set to 1 (minimum) and 100 (maximum).

1. Select Setup in the main menu.
2. Select Scan Limits and press OK. The scan angles, the scan limits and their status display.
3. Use the arrow buttons to select the scan angle for which you want to set ranges and press OK. The high and the low limits display. The low limit is selected. The status of the scan limits for the selected scan angle are also displayed ("on" or "off"). The right-top of the screen displays the scan angle for which you are setting limits.
4. Use the arrow buttons to adjust the limit and press OK. The high limit is now selected.
5. Use the arrow buttons to adjust the limit and press OK. The status ("on" or "off") of the limits for this scan angle are now selected.

6. Use the arrow buttons to select "on" to activate the scan limits or "off" to deactivate the scan limits for this scan angle and press OK. The Scan Limits menu displays.
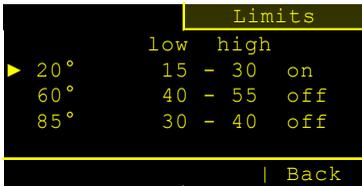
```
                    Limits
              low   high
  ►  20°       15 - 30   on
     60°       40 - 55   off
     85°       30 - 40   off

                    |  Back
```

Figure 3 -3 Scanning ranges

If the scan limits for a specific scan angle are activated and the measurement value is between the limits, a ⚡ displays after the measurement value. A ▼ displays if the measurement value is lower than the Low Limit. A ▲ displays if the measurement value is higher than the High Limit.

Scan limits are set for scanning without data logging but can also be set for batches. For more information see section 5.2.

3.4   Password

Use this menu option to protect the Setup menu with a password. If the Setup menu is protected by a password, Log in displays in the main menu instead of Setup. The password always consists of four digits.

Activate/deactivate the password
1. Select Setup in the menu.
2. Select Password and press OK.
3. Use the arrow buttons to select Password on or Password off and press OK.

Change password
1. Select Setup in the menu.
2.   Select Password and press OK.
3.   Select Change password and press OK. The previously defined four-digit password displays. The first position of the four-digit password is selected.
4. Use the arrow buttons to change the digit and click OK. The second digit is now selected.
5. Repeat the above procedure for the second, third and fourth positions. You will be asked if you want to save the password after the last digit has been entered.
6. Select YES to save the password and press OK. The Password menu displays again.

Note: After the password has been activated, you must log in to change the settings.

13

3.5 Clear memory

Use the Clear Memory menu option to clear saved data. You have the option of clearing data in a specific batch, of clearing the names of batches or of clearing all of the data stored in memory.

```
                  Clear memory
    ►  Clear log data
       Clear batchnames
       Clear all data

                              | Back
```
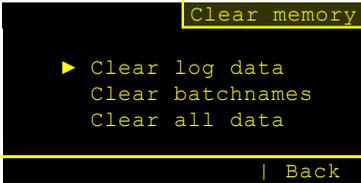
Figure 3 -4 Clear memory

Clear data in one batch
1. Select Setup in the menu.
2. Select Clear mem. and press OK.
3. Select Clear batch data and press OK.
4. Use the arrow buttons to select the batch in which you want to clear the data and press OK. The question "Clear all data for the selected batch?" displays. The YES option is selected.
5. Press OK to clear the data. To return to the batch menu, select BACK and press OK.

Clear batch names
Use this option to clear the name you determined and populate the field with the standard batch name.
1. Select Setup in the menu.
2. Select Clear mem. and press OK.
3. Select Clear batch names and press OK.
4. Use the arrow buttons to select the batch for which you want to clear the name and press OK. The question "Clear batch name?" displays. The YES option is selected.
5. Press OK to clear the name. The question "Clear batch name?" displays for the next batch. This time, BACK is selected.
6. Press OK to go back to the batch menu.

Clear all data
1. Select Setup in the menu.
2. Select Clear mem. and press OK.
3. Select Clear all data and press OK. The question "Clear all data?" displays and the YES option is selected.
4. Press OK to clear all data. To go back to the Clear Memory menu, select BACK and press OK.

Note: Deleted data cannot be retrieved; data is permanently deleted.

3.6   Time/ Date

This is where you enter the date and time and select the date format. The date and time are displayed in the main menu.

Set Time
1.   Select Setup in the main menu and press OK.
2.   Use the arrow buttons to select Time/Date and press OK. The following options display:
- Set Time
- Set Date
- Date Format
3.   Select the option you want to change and press OK.
Use the arrow buttons to change the hours and minutes under the Set Time options. Pressing OK activates the next field. When you have finished setting the time and press OK, the DG0020 automatically displays the Set Date screen. After you have set the date, the Time/Date menu displays again. The BACK option is selected.

Set Date
To set the date format, select Date Format and press OK.
The following date formats are available:

dd-mm-yyyy	Day-Month-Year
mm-dd-yyyy	Month-Day-Year
yyyy-mm-dd	Year-Month-Day
yyyy/mm/dd	Year/Month/Day

Use the arrow buttons to select the date format and press OK. The Time/Date menu displays again.

3.7   Power saving (battery)

The Power saving option enables you to determine how long it takes before the TQC Glossmeter powers itself off after a button was last pressed. The default time is 10 minutes.
1.   Select Setup in the menu.
2.   Select Power saving and press OK. The time you set displays in minutes.
3.   Use the arrow buttons to change the number of minutes and press OK. The Setup menu displays again.

3.8   Language

The menu option enables you to choose the language you want to display the device's menus in. You can choose from English, German, Dutch, French, Italian and Spanish.

1. Select Setup in the menu.
2. Select More... and press OK.
3. Select Language and press OK.
4. Use the arrow buttons to select your language and press OK. The main menu displays again.

3.9   Device info

Here, you will find the serial number of your device as well as the version of the firmware (internal software). This screen also displays the device's memory status.
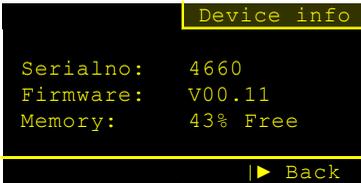
Figure 3 ‑5 Device info

4.   Scanning

The TQC Glossmeter starts the scan interface as soon as the device is powered on.

Press the scan button shortly to make a single measurement or longer to make several measurements. The TQC Glossmeter will emit a signal for every measurement. The device stops scanning as soon as the scan button is released.

Note: Data scanned in this way is not stored in a batch. For more information on storing scanned data in batches, see chapter 5.

To access the scan function after you have used other menu options, select the Scan option in the main menu.

Scan angles
Based on the model of the TQC Glossmeter you are using, you can activate one, two or three different scan angles in the start menu. A scan angle is specified for various surfaces. The 60º angle is the reference angle and can be used for every surface, from matte to mirror finish. The 20º scan angle achieves the best results on high-gloss surfaces, whereas the 85º scan angle works best on matte surfaces.

For information on activating and deactivating scan angles, see section 0.

If necessary, scanning ranges can be set. For more information, see section 3.3.
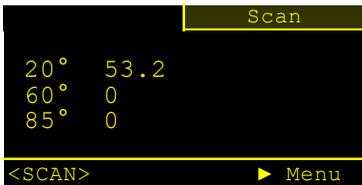
Figure 4 -1 Scanning without logging

5.   Logging

Select Log to store data in a batch or to define scan limits for a batch. The Log option enables you to view a batch's statistics and clear data in a specific batch or change the name of one or more batches.

1.   Select Log in the main menu and press OK. The available batches display.
2.   Use the arrow buttons to select the batch in which you want to save the data and press OK. The batch menu for the selected batch displays.

The following options are available:
*   Log Batch
*   Limits
*   Statistics
*   Clear
*   Rename

The options are described in this sequence in the following sections.

5.1   Log batch

Use this option to save scan data in a batch of your choice. Empty batches are indicated by a □.Batches that already contain data are indicated by a ■.
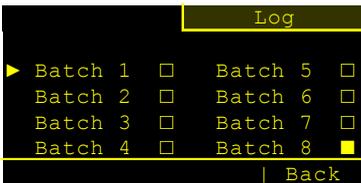
Figure 5‑1 Log

1.   Select Log in the main menu and press OK. The available batches display.
2.   Use the arrow buttons to select the batch in which you want to save the data and press OK. The batch menu for the selected batch displays.
3.   Select Log batch and press OK. The data logging screen displays.
4.   Press the red scan button shortly to make a single measurement. Press the scan button longer to make several measurements.

Each log record is assigned a log number that is displayed in the top-right of the screen during the measurement and contains measurements for the activated scan angles. The screen also displays whether the measurements are inside or outside of the set scan limits.

Immediately view and delete measurement data
The options UP, DOWN, DEL and BACK are displayed at the bottom of the Log batch menu. Use the UP, DOWN and OK buttons to view other logs.
To delete the selected log, use the arrow buttons to select DEL and press OK. You will be asked to confirm the deletion. The YES option is selected. Pressing OK displays the next log that you can delete. The BACK option is selected

5.2   Limits

Use this option to set scan limits for each method for a selected batch. For more information on scan limits, see section 3.3.
1.   Select Log in the main menu and press OK. The available batches display.
2.   Use the arrow buttons to select the batch for which you want to set scan limits and press OK. The batch menu for the selected batch displays.
3.   Use the arrow buttons to navigate to the Limits option and press OK. The scan angles, the set limits and their status display.
4.   Use the arrow buttons to select the scan angle for which you want to set ranges and press OK. The low and the high limits and their status display for the selected scan angle. The low limit is selected.
5.   Use the arrow buttons to adjust the limit and press OK. The high limit is now selected.
6.   Use the arrow buttons to adjust the limit and press OK. The status ("on" or "off") of the limits for this scan angle are now selected.
7.   Use the arrow buttons to select "on" to activate the scan limits or "off" to deactivate the scan limits for this scan angle and press OK. The Scan Limits menu displays.

Note: You can activate or deactivate the scan limits for a batch. If the scan limits for a specific scan angle are activated and the measurement value is between the limits, a ⚡ displays after the measurement value. A ▼ displays if the measurement value is lower than the Low Limit. A ▲ displays if the measurement value is higher than the High Limit.

5.3   Statistics

Select Statistics to evaluate the measurements in the selected batch. The Statistics menu displays the minimum values, the maximum values, the averages and the standard deviation for each scan angle.

1.   Select a batch from the Log menu and press OK.
2.   Use the arrow buttons to navigate to Statistics and press OK. After the message PLEASE WAIT disappears, the scan angle and the minimum and maximum measurements display.

3. Use the arrow buttons to navigate to diameter/s and press OK. The averages and the standard deviation display for this batch.

5.4   Clear

Use this option to clear all measurement data in a specific batch.
1. Select a batch from the Log menu and press OK.
2. Use the arrow buttons to select Clear and press OK. The question "Clear all data?" and the name of the selected batch display.
3. Select YES and press OK. The Log menu displays on the screen.

Note: Deleted data cannot be retrieved; data is permanently deleted.

5.5   Rename

Use this option to change the name of a batch. A batch name has ten positions that can consist of letters and digits.
1. Select a batch from the Log menu and press OK.
2. Use the arrow buttons to select Rename and press OK. The first letter of the batch name is selected.
3. Use the arrow buttons to change the value and press OK. The second position is now selected.
4. Repeat the above procedure for the remaining positions. After the last position has been changed, the batch menu displays again.

6. Power off

The Power off option switches the device off.
1. Select Power off in the main menu and press OK.
2. Use the arrow buttons to select YES and press OK. The TQC Glossmeter powers itself off.

Selecting NO in the Power off menu and pressing OK displays the main menu.

7.   Safety and maintenance

7.1   General maintenance

Always store the glossmeter in its case when it is not in use.
Make sure the device is placed correctly in the case with the display facing the front.

Never use pressurized air to clean the meter.

Maintaining the screen
Handle the device with care and make sure that you do not accidentally scratch or break the LCD screen. Do not bang the TQC Glossmeter or expose it to extreme temperatures. Temperatures above 50°C will damage the display. This is a real danger when, for example, the glossmeter is left in the car.

Cleaning the TQC Glossmeter
We recommend cleaning the instrument with a soft, dry cloth such as that used to clean glasses. Do not use solvents!
Clean the plastic housing only with isopropyl alcohol and a dry cloth.

Cables and connections
The TQC Glossmeter can be connected to the PC by a USB cable. Never force a connector that is difficult to insert in the connection. Make sure the connector and the connection fit together and that they are aligned and undamaged. The buttons on the TQC Glossmeter are disabled when the device is connected to a PC. The message USB ATTACHED Buttons disabled displays on the screen.

Heat, humidity and dust
Keep the TQC Glossmeter away from extreme heat. Do not leave the device near a heater or in the car on the dashboard. Heat can damage the screen, the plastic housing and the internal components.
Do not leave the device in dusty, humid or wet places. Dust and humidity can damage the device and cause defects/failures.

7.2   Calibration

The TQC Glossmeter automatically emits a signal when it needs calibrating. For more information on calibration, see section 3.2.

The calibration value must be adjusted when the calibration holder is changed. The calibration values are next to the glass plate in the calibration holder. Because the value can differ for each calibration holder, it is important that a glossmeter is always calibrated on the same calibration holder. The calibration values can be adjusted when the calibration holder is replaced.

7.3   Batteries

The batteries are slowly losing power when the battery symbol in the measurement/scan window starts blinking.

When the batteries are almost empty and need replacing, the message *"Battery low"* displays followed by *"Replace battery."*

Replace the batteries within 20 minutes in order to keep the time and date settings.

We recommend using only high-quality batteries.
Battery type: AA 1.5 V alkaline (not rechargeable). Insert the + side of the battery first and then press down the – side.

Check the time and date after replacing the batteries.

8.   Specifications TQC Glossmeter

Applied products:

GL0010	TQC SoloGloss 60˚
GL0020	TQC DuoGloss 20˚/60˚
GL0030	TQC PolyGloss 20˚/60˚/85˚

Measurement:

Base dimensions:	45 x 130mm / 1.7 x 5.1 inch
Orifice size:	10 x 50mm / 0.4 x 2.0 inch
Spot size:	±5 x 5 mm / @ 20˚ / 0.2 x 0.2 inch
	±20 x 9 mm / @ 60˚ / 0.8 x 0.35 inch
	±40 x 9mm / @ 85˚ / 1.5 x 0.35 inch
Measurement speed:	70 measurements per minute at 3 angles
Simultaneous measurement:	3 geometries
Power saver option:	User selectable
Units:	Gloss Units (GU)
Resolutions:	0.1 GU (0-100GU)
	1 GU (>100GU)

Measuring angle characteristics:

	20˚	60˚	85˚
Range	0- 2000 GU	0- 2000 GU	0-2000 GU
Repeatability r *	0,4 GU	0,2 GU	0,2 GU
Reproduceability R *	1,69 GU	1,58 GU	1,88 GU
Bias	1,2 GU	0,6 GU	1,6 GU

* According to ISO 2813 (range 0-100 GU)

Operational:

Calibration standard:	Integrated tile in dust cover
Display:	High Contrast OLED display
Batches:	Max. 8
Readings per batch:	500, non-dependent on number of angles.
Readings max.	2000
Scan function:	Yes
Statistics:	Min. / Max. / Avg. / Std.dev
Security:	Password protection
Software:	TQC Ideal Finish Analysis

Standards:

ISO 2813; ASTM D523; ASTM D2457; ASTM C584; AS 1580 (6022); BS 3900 D5; DIN 67530; JIS Z 8741; ISO 7668

*Exception 45˚ angle

9.   Menu Structure

The Start menu

The date and time are displayed in the main menu.

Scan
Log
Setup
Power off

The Scan menu

Scan
>   <SCAN>
>   Menu

The Log menu

Log
>   Batch 1
>   Batch 2
>   Batch 3
>   Etc. up to Batch 8
>>   Batch 1
>>   Log batch
>>   Up
>>   Down
>>   Delete
>>   Back
>>   Limits
>>   Select to change
>>   Back
>>   Statistics
>>   O/s or Min/Max
>>   Back
>>   Clear
>>   Yes
>>   Back
>>   Rename

The Setup menu

Geometry
       Enable angle(s)
       Back
Calibration
       Calibrate
       Calibration Values
Scan Limits
       Limits low high
       Back
Password
       Password on
       Password off
       Change Password
       Back
Clear memory
       Clear log data
              Batch 1
              Batch 2
              Batch 3
              Etc. up to Batch 8
                     Yes
                     Back
       Clear batch names
              Batch 1
              Batch 2
              Batch 3
              Etc. up to Batch 8
                     Yes
                     Back
       Clear all data
       Yes
       Back
Time Date
       Set Time
       Set Date
       Date Format
              Back
Power saving

More...
       Language
              English

Deutsch
Français
Italiano
Back
Device info
Back

Power off

Yes
No