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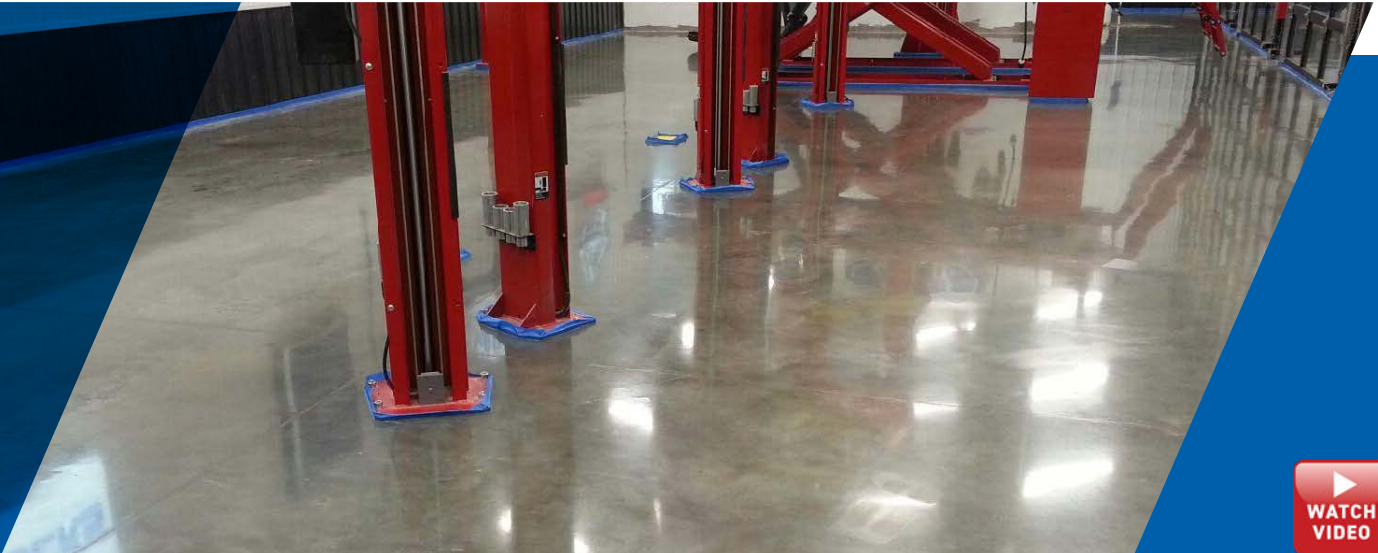


**RHOPOINT**   
Concrete Clarity Meter

### Concrete Clarity Meter

- DOI Meter
- Haze Meter
- 20/60° Glossmeter

# Quantifying surface quality



The Rhopoint IQ Concrete Clarity Meter measures Reflected Image Quality; it is the only hand held instrument that profiles *how* light is reflected from a surface. Glossmeters are usually used to measure the shininess of a surface but are not sensitive to other effects which reduce appearance quality.

## The Rhopoint IQ Concrete Clarity Meter can measure:

- 20/60° Gloss
- RSpec
- Reflectance haze
- Reflected Image Quality (RIQ)
- Distinctness of Image (DOI)

Unlike a standard glossmeter the IQ Concrete Clarity Meter has the unique capability of measuring and detecting quality problems caused by microscopic texture in the surface that cause haze and orange-peel effects which lead to poor Distinctness of Image (DOI).

These factors can seriously affect the visual impact and reflective quality of many coated, painted and polished surfaces. By measuring the quality of the reflected image it accurately profiles how light is reflected from a surface.



## Distinctness of Image (DOI)

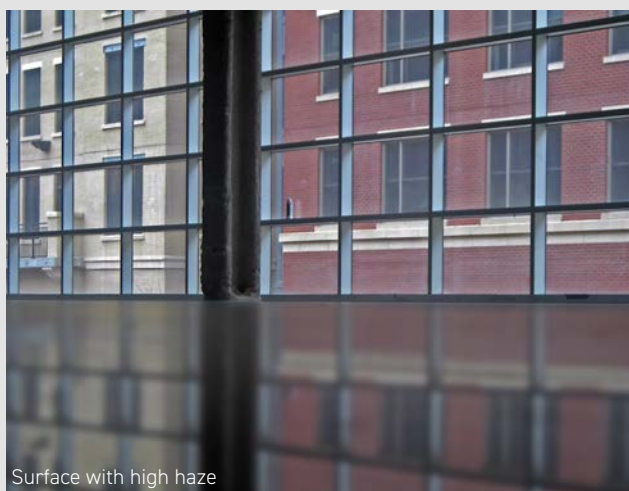
A measure of how clearly a reflected image will appear in a reflective surface and is used to quantify effects such as orange peel and surface waviness.

Orange peel dramatically reduces appearance quality without affecting gloss readings. The Rhopoint IQ Concrete Clarity Meter with DOI measurement can quantify the differences.



Surface with poor DOI

Haze is a common problem associated with coatings and polished materials. Surfaces with haze have a “milky” finish with a “shallow” reflected image. This important characteristic is directly measured with the Concrete Clarity Meter.



Surface with high haze

*Images courtesy of Curviello Concrete*



## Reflectance Haze

An optical effect caused by microscopic texture or residue on a surface.

**Visible Symptoms:** A milky finish is apparent on the surface with a loss of reflected contrast. Halos and patterns can be seen around reflections of high intensity light sources.

**Causes:** Resin transfer, lack of refinement, burnish and polishing marks, fine scratches, poor cleanliness/ surface residue.



### Distinctness of Image (DOI) Gloss

DOI is the sharpness of images of objects produced by reflection at a polished surface, sometimes called image clarity.

**Measurement by Image Clarity Meter:** The DOI, Image Clarity Value, obtained from this test method, range from 0 to 100 with a value of 100 representing perfect DOI (image clarity).

### Haze

Haze is the cloudiness or milky appearance of images of objects produced by reflection in a polished surface.

**Measurement by Glossmeter (ASTM D4039):** The Haze Index, obtained from this test method, is computed using the numeric difference between the value of specular gloss at 60° and the value of specular gloss at 20°.

## Concrete Polishing Council Polished Concrete Appearance Chart\*

Replaces CAA finished gloss chart

| Level | Name               | Distinctness of Image (DOI) Gloss  | Image Clarity Value, % | Level |
|-------|--------------------|--|------------------------|-------|
| 1     | Flat<br>(Ground)   | Images of objects being reflected have a flat appearance.  | 0-9                    | <10   |
| 2     | Satin<br>(Honed)   | Images of objects being reflected have a matte appearance.   | 10-39                  |       |
| 3     | Polished           | Images of objects being reflected do not have a sharp and crisp appearance but can be easily identified.                                     | 40-69                  |       |
| 4     | Highly<br>Polished | Images of objects being reflected have a sharp and crisp appearance as would be seen in a near-mirror like reflection. May require grouting. | 70-100                 |       |

\*Reproduced with the permission of "Concrete Polishing Council of the American Society of Concrete Contractors"

### Measurements for Compliance

The Image Clarity Meter and Glossmeter must be calibrated.

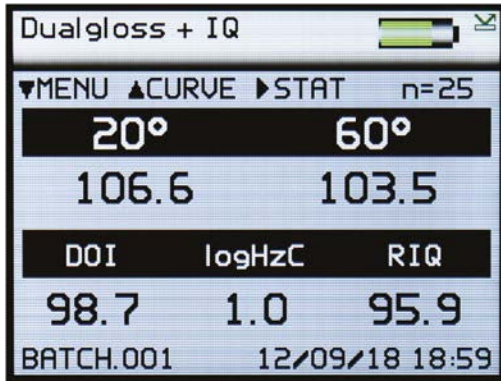
The minimum number of tests distributed across the polished surface should be three for areas up to

1000ft<sup>2</sup> and one additional test for each 1000ft<sup>2</sup> or fraction thereof. This applies to both the Image Clarity Value and Haze Index.

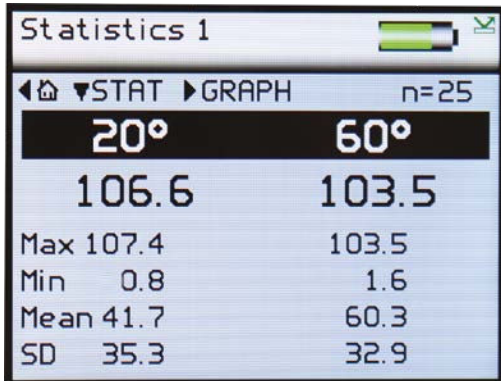
The mean (average) values of the test results should be used to evaluate compliance with the chart.

# Features

Simultaneous measurement of all parameters, results are date/time stamped.



Statistics per measured parameter.



Graphical reporting for quick trend analysis.



## Easy Batching

User definable batch names and batch sizes for quicker and more efficient reporting.



## Software-free Rapid Data Transfer

USB connection to a computer instantly recognises the device as a drive location which facilitates the quick transfer of files using Windows File Explorer or similar programs.



## Direct Data Input via Bluetooth

Instantly transmit measured readings directly to programs such as Microsoft Excel on your computer, tablet or smart phone to greatly simplify the reporting process.

|            | 1        | 2        | 3        | 4        | 5        | 6        |
|------------|----------|----------|----------|----------|----------|----------|
| DATE       | 02/07/19 | 02/07/19 | 02/07/19 | 02/07/19 | 02/07/19 | 02/07/19 |
| TIME       | 11:16:24 | 11:16:42 | 11:17:17 | 11:17:37 | 11:17:58 | 11:18:29 |
| 20         | 10.4     | 10.4     | 10.6     | 10.6     | 10.6     | 10.6     |
| 60         | 40.6     | 40.6     | 40.3     | 40.4     | 40.3     | 40.3     |
| LogHAZE    | 222.2    | 221.9    | 225.5    | 225.7    | 225.5    | 225.5    |
| DOI        | 10.4     | 10.4     | 9.7      | 9.7      | 9.7      | 9.8      |
| RIQ        | 6.6      | 6.5      | 7.1      | 7.0      | 7.2      | 7.2      |
| Cdiode     | 227      | 227      | 223      | 223      | 223      | 223      |
| Calibrated | 02/07/19 | 02/07/19 | 02/07/19 | 02/07/19 | 02/07/19 | 02/07/19 |
| Serviced   | 02/07/19 | 02/07/19 | 02/07/19 | 02/07/19 | 02/07/19 | 02/07/19 |
| S/N        | 1181180  | 1181180  | 1181180  | 1181180  | 1181180  | 1181180  |

## Operation

- Full colour easy to read screen
- Adjustable brightness
- 6 button touch sensitive interface

## Construction

- All aluminium construction - enclosure, voptics, standard holder
- Integrated calibration holder with in-position detector for error-free calibration

# Specifications

Assign values to effects that are visible to the eye

| 20° Gloss        |                        |                        |
|------------------|------------------------|------------------------|
| Range            | 0-100 GU               | 100-2000 GU            |
| Repeatability    | 0.2 GU                 | 0.2%                   |
| Reproducibility  | 0.5 GU                 | 0.5%                   |
| Resolution       | 0.1 GU                 |                        |
| Measurement Area | 6mm x 6.4mm            |                        |
| Standards        | ISO 2813<br>ASTM D2457 | ASTM D523<br>DIN 67530 |
|                  | ISO 7668<br>JIS Z 8741 |                        |

| 60° Gloss        |                        |                        |                        |
|------------------|------------------------|------------------------|------------------------|
| Range            | 0-10 GU                | 10-100 GU              | 100-1000 GU            |
| Repeatability    | 0.1 GU                 | 0.2 GU                 | 0.2%                   |
| Reproducibility  | 0.2 GU                 | 0.5 GU                 | 0.5%                   |
| Resolution       | 0.1 GU                 |                        |                        |
| Measurement Area | 6mm x 12mm             |                        |                        |
| Standards        | ISO 2813<br>ASTM D2457 | ASTM D523<br>DIN 67530 | ISO 7668<br>JIS Z 8741 |

| Haze             |                         |
|------------------|-------------------------|
| Range            | 0 - 500 Log HU          |
| Repeatability    | 1 Log HU                |
| Reproducibility  | 10 Log HU               |
| Resolution       | 0.1                     |
| Measurement Area | 6mm x 6.4mm             |
| Standards        | ASTM E430    ASTM D4039 |

|                  | RSpec       | DOI         | RIQ         |
|------------------|-------------|-------------|-------------|
| Range            | 0 - 2000 GU | 0 - 100 GU  | 0 - 100 GU  |
| Repeatability    | 0.2% HU     | 0.2 HU      | 0.2 HU      |
| Reproducibility  | 0.5% HU     | 0.5 HU      | 0.5 HU      |
| Resolution       | 0.1         | 0.1         | 0.1         |
| Measurement Area | 6mm x 6.4mm | 6mm x 6.4mm | 6mm x 6.4mm |
| Standards        | Rhpoint     | ASTM E430   | Rhpoint     |

## Suitable for use by:

- Contractors
- Architects
- Building Owners



Single button push to initiate measurement of all parameters

# Specifications

## Instrument Information

|                       |                            |
|-----------------------|----------------------------|
| Battery Type          | Rechargeable lithium ion   |
| Operation             | 17+ hours                  |
| Readings per charge   | 20,000+                    |
| Memory                | 8MB, 2,000 readings        |
| Operating Temperature | 15°C - 40°C (60°F - 104°F) |
| Operating Humidity    | Up to 85% (non condensing) |
| Commodity Code        | 9027 5000                  |

## Dimensions & Weights

|                   |                                   |
|-------------------|-----------------------------------|
| Dimensions        | 140mm (H) x 50mm (W) x 65mm (D)   |
| Weight            | 390g                              |
| Packed weight     | 1.75 kg                           |
| Packed dimensions | 360mm (H) x 290mm (W) x 140mm (D) |

## Included Accessories

|                             |   |
|-----------------------------|---|
| Certificates                | <ul style="list-style-type: none"> <li>Instrument calibration certificate</li> <li>Tile calibration certificate</li> </ul>  |
| Cables                      | <ul style="list-style-type: none"> <li>USB data &amp; mains cable</li> <li>Wrist strap</li> </ul>   |
| USB Containing:             | <ul style="list-style-type: none"> <li>Instruction manual</li> <li>Bluetooth data app</li> <li>Example Excel spreadsheets</li> <li>Novo-Gloss Multi Gauge software</li> <li>Instructional videos</li> </ul> |
| Calibration tile            | High gloss calibration tile with cleaning cloth   |
| Sample positioning template |   |
| Quick start guide           |   |

## Order Code

|                                    |               |
|------------------------------------|---------------|
| Rhopoint IQ Concrete Clarity Meter | A6000-013 CCM |
|------------------------------------|---------------|

**Free extended 2 year warranty:** Requires registration at [www.rhopointinstruments.com](http://www.rhopointinstruments.com) within 28 days of purchase. Without registration, 1 year standard warranty applies.

**Free light source warranty:** Guaranteed for the life of the instrument.

**Calibration and service:** Fast and economical service via our global network of accredited calibration and service centres. Please visit [www.rhopointinstruments.com](http://www.rhopointinstruments.com) for detailed information.

**Languages:**



## Ethically Sustainable

The Rhopoint IQ is made from an all aluminium construction which means it can be recycled at the end of its long life.





**TRY BEFORE YOU BUY**

## We offer two options for you to try out the Concrete Clarity Meter before buying.

- 1 Online demonstration:** Online presentation of the Concrete Clarity Meter with your samples measured LIVE on Zoom, Microsoft Teams or Skype. Includes a consultation with an application specialist
- 2 Factory sample testing:** Send in samples of your material for testing and receive a comprehensive test report

[Arrange a demo](#)

Ready to receive a quote?

[Click here](#)

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