





Quality control test instruments





EXPERTS IN MEASUREMENT

Helping manufacturers increase efficiency and product quality with accurate measurement instrumentation.

For over 35 years, Rhopoint has been assisting customers in a wide variety of industries globally to produce consistent materials, free from defects.



Accurate measurements



Reduce waste



Consistent quality



Increase production

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Introduction





RHOPOINT Istruments

About Rhopoint Instruments Ltd.

Rhopoint Instruments Ltd. is a UK based manufacturer of test equipment primarily focused on the measurement of appearance and surface quality.

Rhopoint Instruments, a subsidiary of Rhopoint Holdings, was founded in 1986 as a manufacturer of glossmeters. Since this time, the range has developed and grown to test not just gloss but many other parameters of total surface quality.

Revolutionary new measurement metrics of Reflected Image Quality (RIQ) and Rspec have been designed and developed by Rhopoint Instruments. These metrics have redefined the way that manufacturers in every industry sector are quantifying orange peel in surface finishes.



Gloss, Haze, **DOI & Opacity**



Keeping the finish of your coatings consistent

Transparency Measurement



Characterise the transparency of material

Liquid Coating Testing



Test instruments for testing paints and liquid coatings





About Rhopoint Americas Inc.

Rhopoint Americas Inc. was established in 2018 to provide a dedicated service to customers located in North, Central and South Americas. Head-quartered in Troy, Michigan, Rhopoint Americas is ideally situated to offer support to the automotive and coatings industry sectors.

Rhopoint Americas offers online ordering for all instruments in the range at manufacturer's direct pricing. Free next day shipping is offered within the USA for all hand-held instruments.







About Rhopoint Instruments GmbH

Rhopoint Instruments GmbH was established in 2022 to provide a dedicated service to customers located in Germany, Austria, Switzerland and the rest of mainland Europe.

Our staff have an expertise in all industry sectors from plastic films to automotive, Rhopoint Instruments GmbH is able to provide excellent technical assistance to our customer base.





Packaging Test Instruments



Keeping production efficient and consistent

Surface & Appearance Analysis



Characterisation of common surface irregularities





Rhopoint IQ

Gloss, Haze and Orange Peel







- · Multi-angle Glossmeter
- · Reflectance Hazemeter
- Distinctness of Image Meter (DOI)
- · Reflected Image Quality
- Rspec

Measures haze and orange peel effectively

Using patented technology, the Rhopoint IQ provides a unique solution for the measurement of haze and orange peel. Although visible to the naked eye, they are not detected by a standard glossmeter.

By measuring the quality of the reflected image it is the only hand held instrument that truly profiles how light is reflected from a surface.

Rapid and detailed analysis

In one quick and easy operation, the IQ not only measures gloss at three angles but also measures haze, DOI (distinctness of image) and Rspec (specular reflectance) providing a detailed analysis of the image forming quality of the surface.

Applications



Paints & Coatings



Yacht coatings



Metal polishers



Polished stone



Smart phone & screen covers



Wood coatings



Automotive re-finish



Printing ink



Automotive



Aerospace

Standards:

- DIN EN ISO 2813
- JIS Z 8741
- ASTM D523
- ISO 7668
- ASTM D2457
- ASTM E430
- DIN 67530



To ensure accurate and reliable results, Rhopoint Novo-Gloss Instruments are supplied with standards calibrated and certified according to ISO 17025 UKAS.

Rhopoint IQ Flex 20

Gloss, Haze and Orange Peel of small surfaces





- · Measurement of small and curved surfaces
- DOI / RIQ Meter, (quantify orange peel)
- · Hazemeter (reflectance haze)
- Custom adaptors for use on non-flat surfaces

Accurate measurement

The Rhopoint IQ FLEX 20 brings gloss, haze and distinctness of image measurement to a new format. It is specifically designed for small areas and curved surfaces that cannot be accurately measured with traditional glossmeters.

Easily customisable

The Rhopoint IQ FLEX 20 can be customised with magnetically attached adaptor plates. These can be easily interchanged for different applications and provide reduced measurement areas as low as 2mm.

To increase the repeatability of curved surface measurement, alternative adaptor plates can be designed for specific samples.



Automotive exterior



Automotive interior



Cosmetics





Smart phones, tablets & laptops



Yacht manufacturers



Polished metals



Curved surfaces



To ensure accurate and reliable results, Rhopoint Novo-Gloss Instruments are supplied with standards calibrated and certified according to ISO 17025 UKAS.



Novo-Curve

60° benchtop glossmeter

RHOPOINT



- Benchtop glossmeter
- · Measures at 60°, suitable for all gloss levels
- Measures curved surfaces
- Measures small surfaces

Easily measure curved and small areas

The Novo-Curve $^{\text{TM}}$ is a unique bench top instrument designed for the gloss measurement of curved surfaces and small areas that are difficult to measure with standard glossmeters.

The large sample platform allows hands free measurement by simply placing the item over the measuring aperture. Four adjustable jigging posts are also available to provide consistency in sample positioning.

Statistical data is stored internally in the instrument memory and can be either viewed on screen or by downloading to PC using the Novo-Gloss Multi Gauge software supplied.



Plastic parts



Banknotes



Automotive



Dental research



Furniture



Food products



Ceramics



Medical



Electroplating



Confectionery



Coins



Paints & Coatings



To ensure accurate and reliable results, Rhopoint Novo-Gloss Instruments are supplied with standards calibrated and certified according to ISO 17025 UKAS.

Novo-Gloss

Glossmeters for a variety of surface finishes

RHOPOINT



- 60°, 45°, 20/60/85° and 20/60/85° with haze variants
- Intuitive interface requires minimal training to operate and interpret results
- · Simple data transfer

Test across a variety of gloss levels

Single, dual and trigloss glossmeters are high specification hand held instruments for measuring gloss.

Gloss is an aspect of the visual perception of objects that is as important as colour when considering the psychological impact of products on a consumer. Maintaining consistent gloss levels on every product or across different batches of a product is vital for manufacturers seeking maximum appeal of their finished goods.

The advanced features of the instrument include user definable batches for more efficient measurement of multiple samples, direct data input via bluetooth into Microsoft Excel and pass/fail for easy identification of non-conformances.

Standards

ISO 2813 | ASTM D523 | ISO 7668 | ASTM D2457 DIN EN ISO 2813 | JIS Z 8741



Automotive



Aerospace



Yacht coatings



Smart phone & screen covers



Furniture



Metal polishers



Polished stone



Wood coatings



Printing ink



Paints and coatings



Detailing



Textile



To ensure accurate and reliable results, Rhopoint Novo-Gloss Instruments are supplied with standards calibrated and certified according to ISO 17025 UKAS.

Novo-Gloss Flex 60

Measures low gloss curved and small surfaces





- · Ultra lightweight remote measuring head
- · Suitable for ultra low gloss finishes
- For curved and hard to reach surfaces.

Increased control of surface finish

Designed specifically to measure the gloss of surfaces that cannot be measured using traditional glossmeters, the Novo-Gloss Flex 60 Glossmeter combines the functionality and reporting of an advanced glossmeter with an ultra lightweight remote measuring head.

The Novo-Gloss Flex 60 has been designed specifically to measure low gloss surfaces. It features an additional measuring scale with a resolution 10 times greater than standard glossmeters. This increased resolution gives a far superior level of control of surface finish.

The Novo-Gloss Flex 60 complies to ISO 2813 and ASTM D523. Measurements are made with the instrument are compatible with traditional glossmeters complying to these standards.

Applications



Curved plastic parts



Automotive interior trim



Plastics industry



Furniture



To ensure accurate and reliable results, Rhopoint Novo-Gloss Instruments are supplied with standards calibrated and certified according to ISO 17025 UKAS.



Novo-Shade Duo+

Measure shade, opacity and cleanliness

RHOPOINT



- · Measure opacity (hiding power)
- · Suitable for measuring coatings or plastic films
- · Measures shade on grayscale

The Novo-Shade Duo+ combines 3 measuring instruments

The Novo-Shade Duo+ is a versatile solution for reflectometry measurement. Its standard configured geometry of 45°:0° allows objective measurements of the shade or opacity of a surface.

Shade: In shade mode, applications include the measurement of colour fading in textiles and plastics, shade of paints, inks and coatings, chalking of paint, efficiency of detergents and bleaching agents and the whiteness of recycled paper.

Opacity: Whilst in opacity mode, applications include the measurement of the hiding power of paints, inks and coatings, transparency of plastic films and opacity of paper. Its in-built automatic calibration ensures accurate measurements are guaranteed every time the instrument is used.

Cleanliness: Measures the cleanliness and oxidisation of metal surfaces.

Applications

Shade



Shade of paints, inks & coatings



Chalking of paint



Efficiency of detergents & bleaching agents



Whiteness of recycled paper

Opacity



Transparency of plastic film



Opacity of paper



Hiding power of paints, inks & coatings

Cleanliness



Cleanliness and Oxidisation on Metal Surfaces





TRANSPARENCY MEASUREMENT

Characterise the transparency of material

Rhopoint ID	14
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Rhopoint ID

Imaging transmission appearance meter

RHOPOINT



- Measures haze, transmission, sharpness contact and at a distance
- Suitable for sheeted material up to 30mm thickness and small-size rigid plastics that cannot be measured with a standard ASTM D1003 hazemeter

Rhopoint ID uses a high resolution camera to capture images of a target viewed through the test material. Imaging techniques are used to directly quantify the appearance quality of the sample.





Medium-High Sharpness (S = 76.34%)







Films



Display films



PET bottles



Windscreens



Mobile phones



Rigid plastics



Recycled materials



Liquids, Gels & Pastes



Tubes & Pipes



Blister packaging



Rhopoint ID-Inline

Advanced & Complete Analysis of **Transparent Appearance**



NEW In-line measurement version



- · Camera-based system
- Quantify product transparency with parameters that are highly correlated to human perception
- · Short or long focal distance versions available to suit customer production line

Flexible software allows single or multiple ID sensors to be combined with compatible measurement devices and tabulated in the Rhopoint ID laboratory software.

Suitable for:

Large sheets of material

The IDTX sensor can be built into a large bespoke measurement station allowing large sheets of plastic or glass to be measured easily

3D objects

3D objects such as visors or transparent trays that are too large to be easily measured on the bench-top ID can be measured using a bespoke inspection station





Films

Windscreens







Cast or extruded films

Large sheets of material





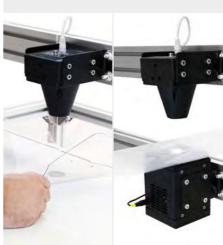


Glass sheets

3D objects



Tubes & pipes



Rhopoint Novo-Haze TX

Measures total transmission and haze





- Measures haze and total transmission to ASTM D1003 (CIE C)
- · Traditional sphere hazemeter
- · Simple and easy to use

Minimal test time, maximum accuracy

The instrument features an intuitive user friendly interface which minimises the test time and makes it an ideal choice for both QC and R&D.

Uncompromising design, high quality materials make the Novo-Haze TX the ideal choice for any laboratory or QA environment.

At 50% of the price of the market leader for ASTM D1003 (CIE C) measuring instrument, the Rhopoint Novo-Haze TX represents huge savings without compromising measurement accuracy.

Examples

Viewed through material with low haze Viewed through material with higher haze











LIQUID COATING TESTING

Test instruments for testing paints and liquid coatings

Minimum Film Forming 18
Temperature Instrument
Flow Cups 19

Minimum Film Forming Temperature Instrument

Determines the MFFT of latex, emulsions and adhesives

RHOPOINT



- · Paints and coatings
- Adhesives
- Touch screen display
- · Industry standard instrument

Tests minimum film forming temperatures

The Rhopoint MFFT is used to determine the minimum film forming temperature and white point in paint and coatings such as water based coatings, polymer dispersions, synthetic latexes and emulsion.

The MFFT also tests adhesive temperature optimisation in such areas as coalescence of water-borne adhesives and minimum temperature for epoxy resin cure.

Easy to use design

The new MFFT benefits from an easy to use touch screen interface, digital MFFT temperature calculation and output to handy results labels. These additions to the trusted Rhopoint MFFT make the instrument easy to operate with improved certainty results.

Applications





Resins

Adhesives



Paints & Coatings



Optional chiller / water recirculation unit to regulate the incoming water supply temperature and reduce costs



Flow Cups

Measure viscosity and flow time



- Aluminium body
- Stainless steel orifice
- · Variety of flow times
- Afnor | BS | ISO | DIN | Frikmar standards
- · Measure viscocity and record flow time precisely

This precision engineered range of standardised flow cups allow the measurement of the kinematic viscosity of paints, varnishes and other newtonian liquids by recording the flow time of the product through the cup.

Precision engineered

Manufactured from high grade aluminium alloy and fitted with stainless steel orifices (specification dependant) the flow cups are easy to clean and durable.

A high quality internal surface finish for optimum accuracy and performance is obtained using the latest computerised machining process.





Paint



Varnish





Printing ink

Adhesives







Crease & Board Stiffness Tester

Predict Packaging Performance





- Board stiffness
- Crease recovery
- · Crease to board stiffness ratio

Improves packaging efficiency

Board stiffness test and crease resistance testing are important parameters that help determine maximum conversion and packaging speeds, they can also be related to the final dimensional stability of the finished product.

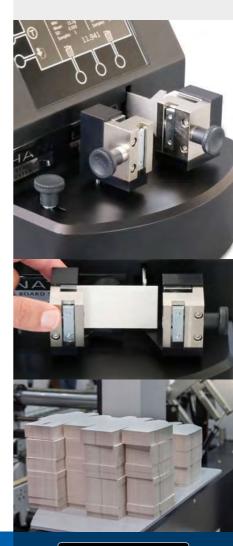
The Hanatek Crease & Board Stiffness Tester (CBT1) gives board manufacturers, printers and packing companies the ability to predict the 'runability' of a sample board or finished carton.







Unprinted carton board



Carton Force Analyser

Increase the running speed of carton packaging





- Measures all the forces required to erect and fill cartons
- · Crease resistance (spring-back), board stiffness, carton opening force, crease opening force
- · Variable sample sizes and small crease testing including HL

Eliminate rejections, reduce waste and increase the running speed

The Hanatek Carton Force Analyser (CFA) measures the forces that limit the running speed of folding box board packaging.

By measuring the stiffness of the substrate and crease bending resistance, the user can optimise cartons for faster running and packaging speeds.

The instrument allows individual creases to be analysed identifying problem areas in packaging design or manufacture.



Printed carton board



Unprinted carton board



Bending Moment



Board Stiffness



Ratio of Crease to **Board Stiffness**



Crease Recovery Stiffness



Crease Folding Force



Crease Opening Force



Carton Opening Force



Relative Crease Strength



Geometrical Stiffness



Crease/Board Analyse



Factor

Carton Crease Proofer

Production quality crease samples





- Determine optimum crease settings
- · Check substrate suitability
- · Check ink & coating flexibility

Indicates how a finished carton will run on an automated glueing, filling or packaging line

The Hanatek Carton Crease Proofer (CCP) allows the user to produce production quality crease samples without committing valuable machine time. The instrument can assist in checking ink and coating flexibility.

The CCP comes complete with commercially produced rules and dies which are identical to those used on a full sized cut and crease machine.

Control substrate quality

Important substrate properties can be easily compared before printing and converting.

Check for coating cracking

Produce production quality creases and predict carton runability using a Hanatek crease and board stiffness tester.







Unprinted carton board



Universal Friction Tester

Precise Coefficient of Friction (COF) Tester





- · Static and dynamic coefficient of friction
- This fully-featured instrument includes attachments for peel, tear and seal strength.
- LAB version offers analysis software + peel, tear and seal integrity tests

This instrument is designed for simple QA testing of static and dynamic COF and features pre-loaded ISO/ASTM/friction test methods with the option to create a custom test.

Optional Analysis Software

Software features graphical reporting of results and allows unlimited custom test routines to be created in minutes.

Tolerances for both static and dynamic COF can be set for each test routine allowing for easy identification of non-conformances.



Printed packaging



Foil packaging



Plastic film



Printed paper



Leather



Textiles



Cartons



Labels



Paper



Printed films



Friction test



Peel testing



Tear testing



Seal strength



Rub & Abrasion Tester

Durability of inks, coatings, printed cartons and films, and labels





- · Assess coating & substrate suitability
- Test the rub resistance of printed material to BS3110
- · Optional test: solvent resistance/wet rub test
- · Optional test: scratch / abrasion testing

Designed to increase the efficiency and repeatability of rub proof testing, this comparative test works by abrading a printed sample against a reference material under known conditions.

The results can be used to identify alternative substrates, better ink and coating formulations for the suitability of finished cartons, films, printed books, magazines and promotional materials.

The Hanatek Rub & Abrasion Tester (RT4) can be programmed for the required number of cycles, enabling it to be run concurrently with other laboratory tests.

Optional test attachments offer the ability to conduct tests under harsher conditions and can be used to check the solvent resistance or the cure of UV inks.





Barcode labels

Printed cartons





Security printing

Holograms





Printed films

Newspaper





Magazines

Printing inks



Printed packaging



Universal Sample Cutter

Cuts variety of materials





- Configurable for multiple test types e.g. friction, grammage, rub
- · Suitable for film, paper, foils etc.
- Same accuracy independent of operator
- · Repeatable, time saving

The Hanatek Universal Sample Cutter (USC) has been designed for the simple cutting of samples for the packaging laboratory.

Time

Save valuable time by preparing multiple samples simultaneously.

Cost Effective

The USC uses interchangeable dies to suit different test types. Simply purchase a new die for the test type required.

Safety

Increase operator safety - no knives required.

Applications



Unprinted carton board



Printed packaging



Non-woven



Labels



Paper



Foils



Tissue paper



Plastic film



Tobacco packaging



Flexible packaging

Standard Dies

We have standard dies available to cut samples for most test types including:

- Friction
- WVTR
- Tensile
- · Rub resistance
- Grammage
- Carton crease
- 02 permeability
- Carton stiffness
- CO2 permeability
- & more

Film Shrink Tester

Measures the effect of temperature on plastic.





- · Determines quality of cast and blown films
- Measures unrestrained film shrinkage
- · Simple laboratory test

Film shrinkage is important to industry as blown films are often heat treated to form protective packaging for perishable food or manufactured products.

The Hanatek Film Shrink Tester (FST) is used to measure the effect of temperature on plastic films.

Fast efficient testing

Fast and accurate hotplate control allows a film shrink test to be performed in minutes.

Easy determination of percentage film shrink

The easy to read, back lit scale allows percentage shrink to be easily determined.





Stretch film

Blown film



Shrink wrap





Precision Thickness Gauge

Precisely measures the thickness of a variety of substrates





- Repeatability of better than 0.4 µm
- · Factory configured to a choice of international standard
- User programmable number of readings, dwell time and down speed

Accurate and repeatable thickness measurements can improve product quality whilst controlling the costs associated with raw material usage.

Physical test parameters of the Hanatek thickness gauge can be factory configured according to international standards or customer requirements. The high accuracy of the instrument is achieved by controlling these key factors:

- · Momentum and profile of measurement probe
- · Measurement pressure
- Measurement dwell time

The instrument is linearised throughout its measurement range using multi point calibration

Flatness of measurement head/anvil <0.2µm, Typical parallelism <1µm







Paper



Plastic film



Adhesive tape



Flexible packaging



Laminated packaging



Foil packaging



Labels



Textiles



Non-Woven



Geomembrane



Tissue paper



Rhopoint TAMS®

(Total Appearance Measurement System)

OTAMS



- · NEW metrics for paint appearance measurements
- Suitable for raw materials, e-coats, primers, top coat and clear coat
- Characterization of common surface irregularities including defects, waviness and roughness

Instrumental analysis of surface appearance, roughness and waviness in the automotive painting process

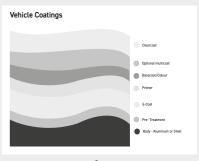
The Rhopoint TAMS® is a product jointly developed by Rhopoint Instruments and Volkswagen AG. A beautiful smooth finish is a key aim when painting a vehicle.

The quality of this finish is determined by the surface roughness & waviness of the raw material to be painted and the effectiveness of each subsequent coating process as well as any polishing or sanding operations.

The Rhopoint TAMS® can measure and map surfaces at all stages of paint processes from raw material to final topcoat.

This innovative device has many of the advantages of the high-resolution analytical tools combined with the portability and accessibility of a hand held device.

Applications



The Rhopoint TAMS® can be used at each stage of the coating process.

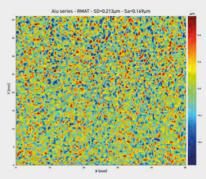


High Contrast



Low Sharpness

High Sharpness



Optimap 3 PSD

Complete surface analysis

OPTIMAP3 BD



- · Map and measure surface finish
- · Large area measurement
- · Suitable for substrates from composite material to top coat

Powerful quality control

On-screen functionality includes cross-sectional viewing allowing detection and characterisation of common surface irregularities including defects and waviness. In quality control, inferior surface evaluation methods are still commonplace.

Accurate and fast data

Many methods are subjective, time consuming and lack definition. Modern consumers demand high quality products with surface finishes that are homogeneous and free from defects. The Optimap 3 provides a unique solution to these measurement challenges providing quantifiable data for improved production control.





Automotive

Displays





Aerospace

Furniture





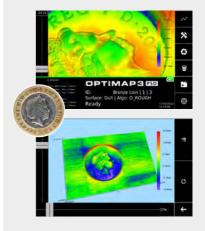


Plastics & composites

Paints & coatings



Yacht coatings



RoboTAMS

Automated Total Appearance Measurement System





- The new standard for paint appearance measurement
- · Non-contact measurements
- TAMS measurement sensor integrates fully into an inline inspection process

Measuring automotive paint finishes

The Rhopoint TAMS provides measurement data that closely correlates to human perception, is easier to understand and communicate.

The RoboTAMS measurement sensor integrates fully into an inline inspection process and is designed for top coat evaluation as part of the production line or offline measurement cell. The sensor is able to capture high resolution maps of surfaces and has the possibility to measure e-coat and raw materials.

This innovative new technology models the human perception of surface appearance quality, providing new parameters that revolutionise the understanding and communication of visual appearance information.









Try before you buy

Discover the perfect instrument for your requirements with our try before you buy service.

Feel confident in your purchase and that it delivers the results that you need.



Online Demonstration



Factory Sample Testing



Face to Face Demonstration*



Product Loan / Demo

Find out more & arrange a demo:



www.rhopointinstruments.com/help-services/try-before-you-buy

ISO 9001:2015 ACCREDITED COMPANY

All test instruments are manufactured by Rhopoint Instruments in our factory in St Leonards on Sea, UK in an ISO 9001 environment.











Blister packaging









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