

Press Release

RHOPOINT TAMS™

NEXT GENERATION PAINT QUALITY INSTRUMENT: SETTING NEW STANDARDS IN APPEARANCE MEASUREMENT

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Rhopoint Instruments Ltd., together with specialists from Volkswagen AG and AUDI AG, has developed the next generation instrument to check automotive paint appearance in perfect correlation with the visual perception, the Rhopoint TAMS™ (**T**otal **A**ppearance **M**easurement **S**ystem). Individual new values for contrast, sharpness, waviness and dominant structure size fully describe the visual perception. Consequently, the new values for Quality and Harmony allow a fast and reliable pass-fail decision in the final production inspection stage.

Surface appearance is of paramount importance to automotive manufacturers as the first visual impression of a vehicle can directly affect a customer's ultimate purchasing decision. The painted surface finish should have the most appealing **Visual Appearance Perception** to the customer, and this can only be achieved if the overall car surface finish exhibits both high **Quality** and **Harmony** values. Existing measurement instruments produce complex results that rely on the user interpreting values in the form of real life visual appearance. Difficulties with interpretation often lead to inefficient communication regarding surface appearance between the manufacturer, coating supplier and tier suppliers of OEM parts. Difficulties correlating measured values to visual impression can result in a finish appearance which does not match the manufacturer's expectations although the measured parameters are within tolerances.





To improve painting processes, the Volkswagen AG initiated a major innovation project to investigate and improve the fundamental process of car finish measurement. The project required development of a completely new instrument technology based on collaboration with a specialist company in the field of appearance measurement, Rhopoint Instruments Ltd. (UK). A significant part of this project involved extensive **Human Perception Studies** performed at AUDI AG, and collaboration in defining and computing fundamental parameters that fully describe the human perception of automotive surface appearance.

This innovative project has led to the development of the **Total Appearance Measurement System (TAMS™)**. The TAMS™ technology is designed to mimic the human eye and brain mechanism using a dual-focus vision system combined with a high-technology imaging and computing system. The TAMS™ captures images with different focuses and computes characteristics that are closely correlated with human perception. Consistent results fully describe visual appearance. Intuitive measurement parameters have been chosen to enhance communication between all internal and external parts of the automotive supply chain regarding appearance finish. The TAMS™ emulates the **Eye and Brain Mechanism** and replicates the natural **Vision – Perception – Emotion** process.

TAMS™ uses four new parameters to fully define visual perception: **Contrast, Sharpness, Waviness and Dominant Structure Size**. A significant advantage of the TAMS™ is that these parameters are combined into two new values: **Quality** and **Harmony**. These values predict the emotional response that occurs subconsciously in the mind of the customer; does each individual part look good? Do adjacent parts look sufficiently homogeneous?

Based on optical metrology, the TAMS™ is a significant step forward for the measurement of automotive coatings by quantifying visual perception and aiding understanding and results-sharing. TAMS™ technology makes it possible to obtain a totally clear view of diverse surfaces (starting with the steel substrate, followed by E-coat, basecoat and topcoat), improve surface finish, establish new **Quality Criteria** and remove subjectivity in visual assessment.

As a long-time distribution partner of Rhopoint Instruments Ltd, Konica Minolta's Sensing Europe B.V. will take the responsibility of commercialising and distributing TAMS™ through its sales and support network.

TAMS™ represents the perfect complement to Konica Minolta's extensive line of colour and light measurement solutions for the automotive industry and supply chain.

About Rhopoint Instruments:

Rhopoint Instruments Ltd, a division of Rhopoint Holdings Ltd, is a leading UK designer and manufacturer of quality test instruments for surface appearance measurement used in R&D, Quality Assurance and Production environments. It serves numerous industries including paint and coating manufacturers, suppliers and end users in automotive, marine and yacht manufacture, metal and stone polishing, smart phone, computer manufacture, powder and coil coating, printing and graphic arts, furniture and plastics. Being an internationally recognized brand, we work closely with our distribution partners in over 50 countries to supply and provide support for our products to our worldwide customer base. As part of Rhopoint Instruments ongoing commitment to continuous improvement and quality it is accredited to the ISO9001:2008 Quality Management System. The principles of this accreditation are integrated into all aspects of the company and product life cycle – from initial product design, to manufacture to service and calibration.

For further information about the company, visit www.rhopointinstruments.com

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About Konica Minolta Sensing Europe B.V.:

Konica Minolta Sensing Europe B.V., part of Konica Minolta Inc. Japan, is a leading provider of measurement solutions for applications in the fields of Colour & Appearance and Light Measurement. Konica Minolta Sensing Europe serves the industry in more than 30 countries in the EMEA region with branches and qualified distributors. Derived from our state-of-the-art optical and image processing technologies, measuring solutions from Konica Minolta Sensing help improve quality control and support R&D in a wide variety of industries. Our colour management solutions are essential for controlling and monitoring quality in many areas of manufacturing, such as automotive, coatings, plastic, construction materials, food, chemicals and pharmaceuticals. In the area of Light & Display measurement technology, Konica Minolta and the group companies Instrument Systems and Radiant Vision Systems enjoy an “industry standard” position. Konica Minolta Sensing Business Unit will continue to innovate, utilizing the latest high-accuracy sensing technology, providing solutions that meet the ever-changing needs in diverse fields.

For further information about the company, visit www.konicaminolta.eu/measuring-instruments

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