

RAMPF – the full-service provider for optical bonding

Display Week 2017: Vacuum application for optimum results / Top-class optically clear adhesives

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Wixom, MI, USA, May 8, 2017. With a fully automated, partly patented joining method and premium liquid optically clear adhesives, RAMPF Group, Inc. presents a comprehensive solution for using optical bonding technology in displays at Display Week 2017 from May 23 - 25 in Los Angeles, CA – Booth 718.

With every new generation of electronic devices, customers demand better performance and improved features. This also holds true for displays – improved visibility, greater durability, thinner designs, and extended product life are just a few of the most sought after qualities.

To meet these growing demands, RAMPF Group, Inc. has developed cutting-edge processing technologies and silicone adhesives which will be presented to visitors of Display Week 2017:

> Vacuum application for optimum results

RAMPF has developed a fully automated, partly patented joining method that ensures the reliable, bubble-free application of bonding materials with subsequent joining of components. This cuts the scrap rate to approaching zero.

The bonding material is applied in a vacuum and the components are joined in an airless environment in a vacuum. The thin-film degassing technology of the single components makes it possible to process highly degassed bonding material. Degassing of undercuts and the gap between the frame and display is also performed while the material is being applied. This minimizes the risk of air bubbles being trapped during the joining and curing processes.



The application of the bonding material is carried out by the RAMPF DC-VAC Vacuum Dispensing System. Designed for processing one- and two-component casting materials, it is fitted with vacuum material conditioning as standard and equipped with a dynamic mixing system. The encapsulating process can be easily adjusted and monitored thanks to the large viewing window.

A comprehensive range of monitoring equipment facilitates process control, while the vacuum chamber can be configured for manual filling or for integration into automated systems.

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> Turnkey solutions for optical bonding



RAMPF Group, Inc. also offers its customers turnkey solutions for all optical bonding processes. In addition to the display joining method in a vacuum, the fully automated production systems also feature all the operations to bond displays to frames.

> RAKU-SIL Liquid Optically Clear Adhesives

RAKU-SIL silicone adhesives from RAMPF boast outstanding optical and mechanical features:

- > 100% transparency / transmission
- > Total clarity, very low haze value
- > Stable color values throughout entire service life
- > Varying hardness levels from VLRH 20 to VLRH 95
- > Excellent adhesion

Liquid Optically Clear Adhesives from RAMPF deliver unbeatable value for money and have been optimized for industrial-scale processing on mixing and dispensing systems. They cure at room temperature and are available in various hardnesses and viscosities (from liquid to thixotropic).



Clear to see – the advantages of Optical Bonding.

RAMPF also offers high-class adhesives for attaching displays, frames, and supports etc. When used in combination, they are also ideal for the dam and fill process, in which a dam is filled with a highly viscous adhesive that keeps the free-flowing optical adhesive in place and, after joining, also helps adhesion.

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“With materials, machinery, and processing from a single source, we are ideally placed for supporting our customers in the growth market of displays with complex shapes, amongst others in automotive displays, mobile devices, GPS, industrial monitors, navigation devices, and wearables,” says Ron McNeal, Business Development Manager at RAMPF Group, Inc.

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www.rampf-group.com



RAMPF Group, Inc., based in Wixom, Michigan, is the North American subsidiary of the international RAMPF Group.

The product portfolio of RAMPF Group, Inc. is comprised of:

- > mixing and dispensing systems for the reliable processing of polymers
- > two-component polymer (or synthetic) systems based on polyurethane, epoxy, and silicone
- > modeling and mold engineering materials, in particular for the automotive, marine, and aviation industries

The international RAMPF Group stands for engineering and chemical solutions and caters to the economic and ecological needs of industry. The Group secures its presence on the international markets with more than 700 employees and six core competencies:

- > **RAMPF Machine Systems** based in Wangen (Göppingen), Germany, develops and produces multi-axis positioning and moving systems, trunk machines, and basic machines based on high-precision machine beds and machine bed components made from alternative materials.
- > **RAMPF Production Systems** based in Zimmern o. R., Germany, develops and produces mixing and dispensing systems for bonding, sealing, foaming, and casting a wide variety of materials. The company also offers a wide range of automation skills relating to all aspects of process engineering.
- > **RAMPF Composite Solutions** based in Burlington, Ontario, Canada, is a holistic composites supplier to companies in the aerospace and medical industries. The company offers a complete suite of services including composite part design and engineering, metal-to-composite conversion engineering, and composite manufacturing to very tight tolerances.
- > **RAMPF Eco Solutions** based in Pirmasens, Germany, develops chemical solutions for the manufacture of high-quality alternative polyols from PU and PET waste materials. This expertise is also put to use in the planning and construction of customer-specific facilities for manufacturing polyols.
- > **RAMPF Polymer Solutions** based in Grafenberg, Germany, develops and produces reactive resin systems based on polyurethane, epoxy, and silicone. Its product portfolio includes liquid and thixotropic sealing systems, electro and engineering casting resins, edge and filter casting resins, and adhesives.
- > **RAMPF Tooling Solutions** based in Grafenberg, Germany, develops and produces board and liquid materials for cutting-edge modeling and mold engineering. The range of skills includes made-to-measure services and products such as pastes, large-volume and full-size castings for Close Contour models, and prototyping systems.

RAMPF has subsidiaries in Germany, the U.S., Canada, Japan, and China.

All RAMPF companies are united under a holding company – **RAMPF Holding GmbH & Co. KG** – based in Grafenberg, Germany.

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