

RAMPF presents holistic solution for optical bonding of displays

SID Display Week 2018: Fully automated joining process / First-class optically clear silicone adhesives

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Wixom, MI, USA, May 14, 2018. With a fully automated, partially patented joining method and premium liquid optically clear adhesives, RAMPF Group, Inc. is presenting a holistic solution for using optical bonding technology in displays at SID Display Week 2018, May 22 - 24, LA, CA – Booth 732.



Clear to see – the advantages of Optical Bonding.

In automotive cockpits, mobile devices, GPS, industrial monitors, navigation devices, and wearables, state-of-the-art displays must exhibit razor-sharp definition, clarity, high durability, and extended product life.

To meet these growing demands, RAMPF Group, Inc. has developed cutting-edge processing technologies and silicone adhesives that will be presented to visitors of SID Display Week 2018:

> Vacuum application for bubble-free results

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

The bonding material is applied in a vacuum and the components are joined in an airless environment. The thin-film degassing technology of the single components makes it possible to process bubble-free bonding material.

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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.



Developed for vacuum casting demanding materials – RAMPF DC-VAC Vacuum Dispensing System.

The bonding material is dispensed by the RAMPF DC-VAC Vacuum Dispensing System. Designed for processing one- and two-component casting materials, the cell is equipped with material conditioning under vacuum and the dynamic mixing system MS-C.

The vacuum chamber has large windows to check and adjust the encapsulation process. Various monitoring options guarantee full process control. The vacuum chamber can be designed for manual or automatic part loading.

The DC-VAC is combined with C-DS gluing units, assembly units, robot systems, conveyor systems, and process control systems to a fully automated, customized production system. In addition to the display joining method in a vacuum, RAMPF's fully automated production system also features 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 the entire service life
- > Varying hardness levels VLRH 20 to VLRH 95

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> Excellent adhesion

RAMPF adhesives deliver unbeatable value for the money and are 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).

RAMPF Group, Inc. also offers high-class adhesives for attaching displays, frames, 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.

Visit RAMPF at [Display Week 2018](#) – Booth 732 (German pavilion)!

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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
- > machine bases, machine frames, and other structural components made from mineral casting (polymer concrete)

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 800 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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