

Cutting-Edge Filter Manufacturing – Reactive Plastic Systems & Dispensing Technology by RAMPF

Sealing foams, casting resins, material processing systems, and contract manufacturing services at AHR Expo – Booth 4790

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Wixom, MI, USA, January 23, 2025. One-stop solution provider for ultra-fast filter manufacturing – RAMPF Group, Inc. is presenting sealing foams, casting resins, dispensing systems, and contract manufacturing services at AHR Expo in Orlando, FL, from February 10 to 12 – Booth 4790.



Key Facts

1. RAMPF's polyurethane-based sealing foams and casting resins provide effective, long-lasting protection for filters and filter elements in heating, ventilation, air conditioning (HVAC) as well as oil and hydraulic systems.
2. RAMPF's automated mixing and dispensing systems ensure ultra-fast, highly precise sealing, casting, and bonding of reactive resin systems used for filter manufacturing.
3. RAMPF combines its materials and processing know-how to deliver cost-effective, fast, and flexible contract manufacturing services for the filter industry.

Sealing foams

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RAMPF liquid and thixotropic polyurethane FIPFG sealing foams of the RAKU[®] PUR brand feature

- First-class physical properties
- Fast processing and short curing times
- Very low density, minimal material usage
- Excellent adhesion to metal and plastics
- Broad temperature resistance from -40 °C to +120 °C

Sealing foams tailored for special requirements are also available, including options with antibacterial properties certified to DIN EN ISO 846 (11/2020).

Casting resins

Compact casting resins of the RAKU[®] PUR brand are used to securely bond filter elements, such as end caps, to the filter frame. These silicone-free systems offer exceptional mechanical strength, excellent flow characteristics, and superior adhesive properties. Thanks to their strong adhesion to plastics, particularly ABS and PS, the connecting bridges of the filters can function as supporting elements, significantly enhancing the stability of the filter components.

RAMPF also offers

- Conductive casting resins for filter elements in ATEX environments (explosion-proof environments). These feature an exceptionally high conductivity of 0.01 MOhm/cm, eliminating the need for complex mechanical solutions that dissipate electrical charges from the filter medium to the end caps via metal wires.
- Antibacterial casting resins with excellent mechanical properties, rapid curing for very short process times, and high chemical, temperature, and impact resistance.
- Conductive casting compounds with FDA 21CFR175.105 approval. The resin systems offer exceptional conductivity below 1 MOhm/cm while maintaining a low mixed viscosity of 3,500–5,500 mPas, ensuring high flowability and self-leveling properties. This eliminates the need for complex conveying systems, simplifying and streamlining casting applications.

Automated production systems with integrated dispensing technology

High-performance, low-maintenance mixing and dispensing systems from RAMPF ensure precise and efficient processing of reactive plastic systems for sealing, casting, and bonding applications in the filter industry:

- Dynamic mixing technology for optimum material reactivity across various viscosities

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- Precise coordination of material feeding and preparation as well as dispensing technology for perfect application results
- High degree of automation with robotic systems, integration of component handling, plasma pre-treatment, image processing and sensor technology

Contract manufacturing services

RAMPF combines its materials and processing know-how to deliver cost-effective, fast, and flexible contract manufacturing services for the filter industry:

- **Liquid Gaskets:** Using high-precision robotic CNC dispensing, RAMPF produces custom FIPG (formed in place gaskets) and FIPFG (formed in place foam gaskets). These gaskets bond quickly and expand directly on components, reducing cycle times and enhancing processing efficiency.
- **Sealing Systems:** Durable polyurethane seals are designed to withstand high pressure and temperature while offering excellent chemical resistance, ensuring long-term reliability in demanding environments.
- **Casting:** By dispensing reactive, thermally, or electrically conductive polymers, RAMPF safeguards electronic components from contact, moisture, and damage, preserving their high-performance functionality.

With operations in Wixom, MI, and Suwanee, GA, RAMPF is a trusted partner for manufacturing solutions in the filter industry and beyond, thanks to its commitment to quality, flexibility, and innovation.

Visit RAMPF at AHR Expo in Orlando, FL, from February 10 to 12 – Booth 4790!

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www.rampf-group.com/en-us/



RAMPF Group, Inc., based in Wixom, Michigan, USA, is a market-leading specialist for

- > Mixing & dispensing systems for the reliable processing of polymers
- > Two-component polymer 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)

RAMPF Group, Inc., is a company of the international RAMPF Group based in Grafenberg, Germany.

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