

RAMPF – Contract manufacturing for liquid gaskets, sealing, and casting

First-grade quality and value-added services for the automotive, electronics, energy technology, household appliance, lighting, and medical technology industries

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Wixom, MI, USA, June 11, 2018. Cost-effective, flexible, and reliable – RAMPF Group, Inc. is offering contract manufacturing for liquid gaskets, sealing, and casting to customers in the automotive, electronics, energy technology, household appliance, lighting, and medical technology industries.

For customers who would like to outsource their manufacturing due to intermittent production schedules or do not have the volume to warrant equipment purchase, RAMPF Group, Inc. offers the perfect solution – cost-effective, flexible, and reliable.

The company based in Wixom, MI, offers contract manufacturing options out of two manufacturing locations, the other being based Suwanee, GA. Furthermore, RAMPF fully supports large volume contract manufacturing programs in either a customer's facility or one of its own, offering yet another option to customers.

"Being a leading developer and producer of both mixing and dispensing systems as well as two-component polymer systems based on polyurethane, epoxy, and silicone, we know exactly which materials and process technologies deliver the best results for the specific application of our customers. For this we have numerous high-performance machines that guarantee both best quality and high volume flexibility," says Gordon Winter, US Operations Manager at RAMPF Group, Inc.

Liquid gaskets



RAMPF manufactures custom-made FIPG (formed in place gaskets) and FIPFG (formed in place foam gaskets) made of polyurethane using speed-robotic CNC dispensing. The foam gaskets are applied di-



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rectly to the component of the customer, expand in situ, and bond very quickly. This reduces cycle times and ensures efficient processing.

Gasket types:

- > FIPG gaskets are extruded, have no variation in volume, and can be highly viscous to paste-like
- > FIPFG liquid or slightly thixotropic foam gaskets are self-levelling and applied on an even surface with a marked groove
- > FIPFG thixotropic foam gaskets can be applied on three-dimensional surfaces with and without a groove; application on vertical surfaces is also possible

The benefits of liquid gaskets:

- > Excellent sealability
- > Excellent resilience and compression recovery
- > Placement accuracy within 0.01 mm
- > Significant cost benefits over die-cut gaskets
- > Inventory of different parts not required
- > No capital investment
- > Reduced labor costs

Sealing systems



RAMPF manufactures application-specific polyurethane seals. These high-performance systems withstand high pressure and high temperatures, and offer outstanding chemical resistance.



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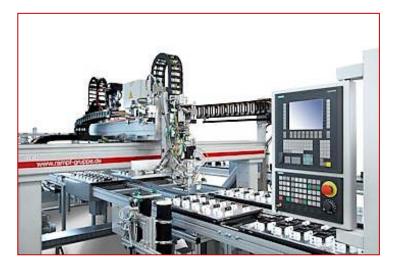
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Casting



RAMPF is a leading expert for the accurate dispensing of reactive, thermally or electrically conductive polymers. The company uses its own cutting-edge dispensing systems to ensure the precise processing of these highly filled materials. The produced parts are reliably protected from contact, moisture, and damage, and thus guarantee for the lasting, high-performance functioning of electronic assemblies.

RAMPF dispensing systems for optimized production processes with best results



Every production process has its own unique requirements. For best dispensing results, it is vital that material transport and preparation, dispensing and mixing technology, and moving axes are perfectly aligned. Embedded in compact dispensing cells or dispensing robots, RAMPF dispensing systems guarantee for ultra-fast and cost-effective production of high-quality parts.



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Liquid gaskets and electro casting resins made by RAMPF

RAMPF has an encompassing portfolio of high-quality liquid gaskets based on polyurethane that exhibit outstanding chemical, physical, and mechanical properties. Foam gaskets can therefore be manufactured using the material provided by the customer or RAMPF's RAKU® PUR brand, which can also be quickly adapted to the customer's individual material and process requirements.

RAMPF also develops and produces high-performance electro casting resins based on polyurethane. The RAKU® PUR brand provides customers with customized, high-quality solutions for insulating, protecting, and embedding sensitive components.

"Material, plant, and process technology from a single source – At RAMPF, customers can expect a full range of services", emphasizes Jürgen Penker, CEO of RAMPF Group, Inc. "Our commitment to generating added value for customers and providing outstanding service is paramount to everything we do."



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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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