

# BOTANICAL EXTRACTION

**MICROPUMP®**





# BOTANICAL EX

Botanical extracts are growing in demand due to favorable governmental regulations and adoption of extracts into more and more end-use products from pharmaceuticals or personal care to food and beverages. There are numerous technologies for extraction available on the market. Much of the market success relies on quality of the extracted product and minimal degradation to the natural ingredients. Even more, the technology flexibility and agility to create various product offerings to meet dynamic demand is important to capture market potential.

With the rapidly evolving and increasing market, it is important to design systems that efficiently and reliably extract product. Due to high costs to assemble extraction equipment, designing a system utilizing premium materials help ensure a higher lifespan and more durability. Additionally, taking into account energy-efficient components and integrating automation technology can help reduce operational costs. Whatever the extraction method, optimizing for uptime is a critical design requirement.

## MICROPUMP SOLUTION

Micropump gear pumps answer the botanical extraction industry need for accurate and reliable fluid movement, even in cold temperature applications. You know your technology and system, and we understand what pumping solution you need to give your design the leading edge. When looking for a truly efficient pump, Micropump offers the best fluid movement. Other technology can require a lot of power and lack volumetric efficiency compared to magnetic gear pumps which offer high volumetric efficiency, resulting in less potential degradation of your extract and also high power efficiency for less power consumption. Our pumps deliver the quality your system demands, and our team works with you to enable your system improved performance.



# EXTRACTION

Micropump suction shoe gear pumps are the ideal solution for extraction processes. The suction shoe allows for consistent performance across a wide operating temperature range compared to traditional cavity-style gear pumps. With no adjustment needed, the suction shoe gear pump has the same hydraulic performance from the lowest temperature to the highest temperature allowed by the materials. Similarly, the suction shoe has optimal longevity at higher differential pressures.

We know our pump is just a single component, but it can greatly impact overall system success.

## Extraction Process Stages Where Micropump can offer solutions:

- Solvent
- Solvent recovery
- Filtration
- Winterization

## Wide performance range

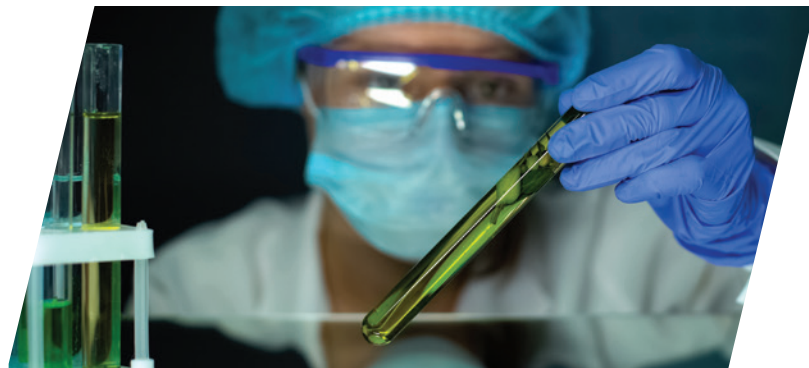
- Low fluid displacement for small-scale, batch processing
- High volumetric efficiency
- High pressure performance
- Wide temperature range
- Fluid displacement range for larger systems

## No-fuss Reliability

- Near-zero slip for accurate metering, long life and consistent performance
- Self compensation for wear for extended life and less maintenance than cavity-style designs
- Low viscosity and lubrication needs
- Chemical inertness of components and material customization options

## System Optimization

- Easy design integration, compact size
- Low parasitic load - hydraulic and electrical performance of gear pumps and electromagnetic drives
- Consistent, pulseless flow for precise control of fluid movement
- Efficient fluid movement - lower speed or friction for less degradation of product



## Suction Shoe Pumps

- GA
- GB
- GC
- GAH
- GAF

## SUCCESS STORY

As a manufacturer from the European Union with high quality standards and delivering products on the European and American markets, COMERG GROUP Ltd. decided to rely on the high quality of Micropump gear pumps. Magnetically coupled GC-M25 and GC-M35 pumps are mainly used in the extraction process.

The GC-M25 pump is used in the 2x10 L extraction system. The GC-M35 pump is used in another product the 2x100 L extraction system. The pumps are used to circulate solvent, and operating pressures vary between 8 and 12 bar. Micropump was chosen due to reliable and precise gear pumps. Other pump technology was originally used in the system and were failing weekly causing costly downtime and maintenance. The customer found greater value in utilizing the Micropump pumps due to the longevity and reliability they offer, with the first pumps still performing for more than 2 years of system operation.

***MICROPUMP***®

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ACTUAL PERFORMANCE MAY VARY. Specifications are subject to change without notice.