

# Geared for Success

# MICROPUMP<sup>®</sup>



## Micropump's History Promises Future Success

Micropump is a leader in magnetically driven gear pumps. For the past 40 years, they have continuously developed innovative solutions for a wide variety of markets. Specializing in OEM and industrial high-precision pumps, Micropump was the originator of magnetic drive gear pump technology, providing a "leak-free" pumping solution. Through the years they have remained dedicated to product development, quality manufacturing, and advanced engineering.

Micropump's innovation has led to significant advancements in engineered composite gear materials, creating gears that resist fluid absorption and expansion for exceptional, long term accuracy. New magnetic drive technology has also been developed, leading to the patented Integral Series® electro-magnetically driven pump. With these and many other creative solutions to their credit, Micropump looks to the future with anticipation as they continue to engineer the most advanced gear pumps available.



### **Solutions for any Pumping Need**

Available in cavity style or Micropump's unique "suction shoe" design, Micropump magnetic drive gear pumps are engineered to deliver peak performance in any application. Both pump designs feature pulseless delivery, promising a smooth and continuous flow that can be easily varied by altering the speed of the pump. Also, with high system pressure versions

available, Micropump pumps have the power to handle any fluid delivery need.

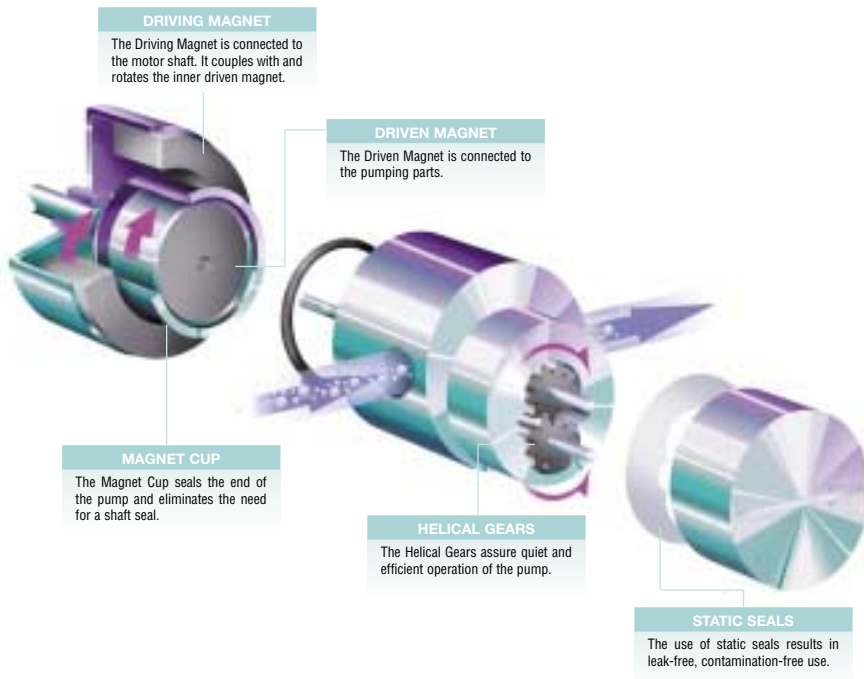
### **Leak-Free Magnetic Drives**

Each of Micropump's high-precision magnetic drive gear pumps features an advanced, leak-free drive, ensuring reliable performance for any application. The pump is driven by a coupling action when an external drive magnet turns an internal driven

magnet sealed within a magnet cup. As a safety measure, decoupling will occur if the pump load exceeds the coupling torque. To ensure leak-free performance, Micropump gear pumps use a static seal in place of a dynamic seal. Using a static seal greatly reduces maintenance and virtually eliminates the possibility of contamination or leakage.



# Advanced Technology Keeps Our Pumps Flowing



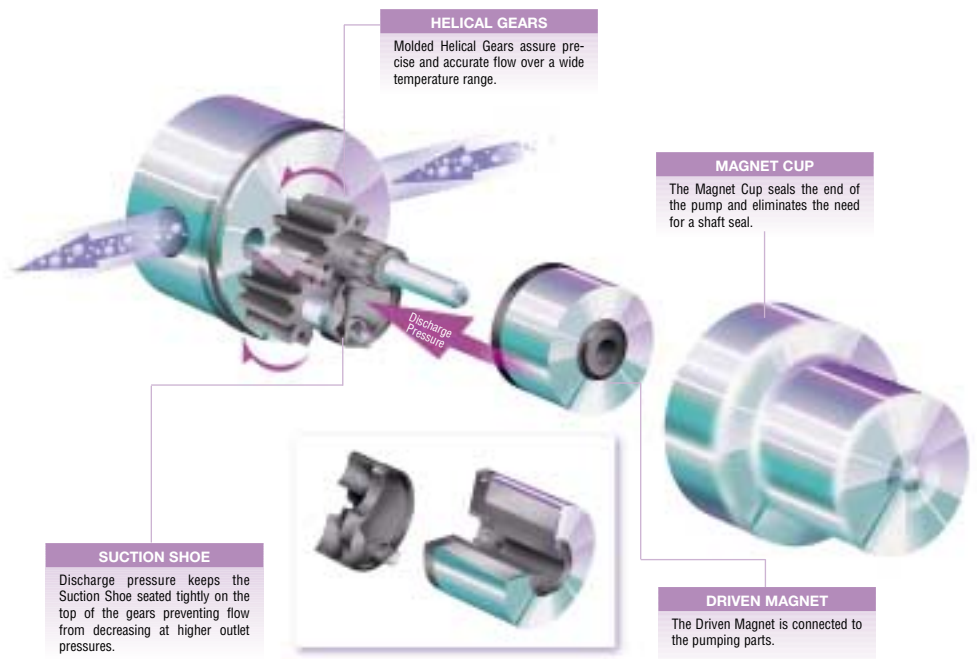
## Cavity Design

Cavity style gear pumps feature a conventional design that uses gears rotating within a precision cavity to carry fluid from the pump's inlet to the outlet. Benefits of the cavity style pumps include excellent lift capability, moderate pressure capability, high system pressure on selected models, and exceptional chemical resistance. These pumps deliver accurate metering for a wide range of precision applications and offer fewer wearing parts, easy installation, and user-friendly operation.



## Suction Shoe Design

Developed by Micropump, the revolutionary suction shoe pressure loaded gear pump design features a "suction shoe", that allows the pump to self-compensate for wear. Suction shoe pumps maintain high volumetric efficiency, even at elevated pressures. In addition, by reducing the parts needed for operation to a minimum, the suction shoe design minimizes downtime and simplifies servicing. Additional benefits include near zero slip for more accurate metering, longer life and better performance as pump components wear or thermally expand, and good chemical resistance.



*Micropump gear pumps. Built with quality, engineered with excellence.*

# Smoothly

## Drives and Motors



Micropump leak-free magnetic drives are available in a variety of configurations to fit a wide range of motors, providing an ideal solution for almost any application.

Choose from:

- AC
- DC (brush and brushless)
- Industrial 56C and 143/145TC
- Industrial IEC 56 through 80
- Air motors
- Benchtop programmable drives
- Custom OEM drives

Several choices of industrial adapters allow all Micropump pumpheads to be

quickly and easily fitted to industrial NEMA and IEC frame size motors. In addition, Micropump regularly supplies custom adapters for OEM applications.

## Pumping Solutions for Today's Markets

Serving both process and OEM customers, Micropump's advanced engineering and manufacturing expertise make Micropump magnetic drive gear pumps ideal for any application.

Micropump's cavity style and suction shoe pumps can improve your process and increase efficiency with precise fluid delivery, reliable operation, and

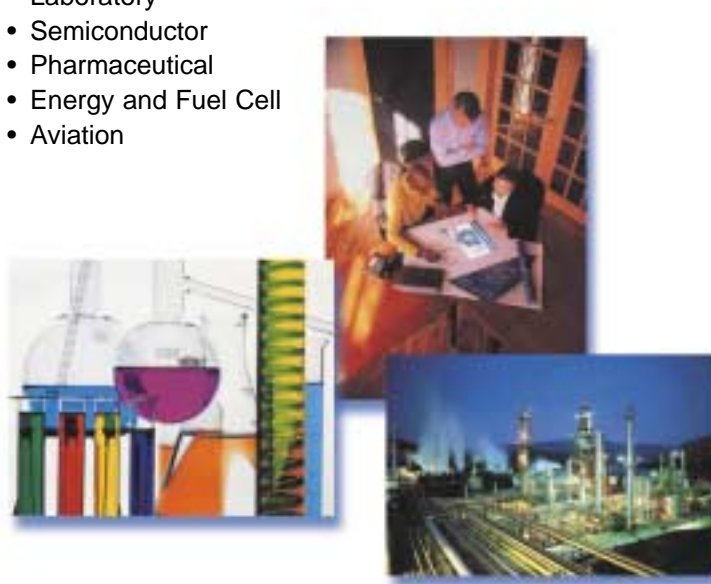
features that are tailored to your specific pumping needs.

Markets served by Micropump's magnetic drive gear pumps include:

- Chemical Processing
- Medical
- Industrial
- Paints and Inks
- Laboratory
- Semiconductor
- Pharmaceutical
- Energy and Fuel Cell
- Aviation

Use Micropump pumps for these applications:

- Sampling
- Dosing
- Metering
- Cooling
- Transfer
- Delivery
- Circulation
- Injection



## Construction Materials

Micropump magnetic drive gear pumps come in an assortment of material options, including advanced engineered composite gear materials that resist fluid absorption and expansion to deliver exceptionally durable performance and precision.

### Gears

- PEEK
- Teflon®
- Ryton® (PPS)
- Carbon Graphite
- Hardened Steel

### Base or Body

- 316 Stainless Steel
- Alloy 20
- Hastelloy® C-276 and B-2
- Titanium

### Static Seals

- Buna N
- EP
- Kalrez®
- Teflon
- Teflon encapsulated Viton®
- Viton and Viton Extreme®

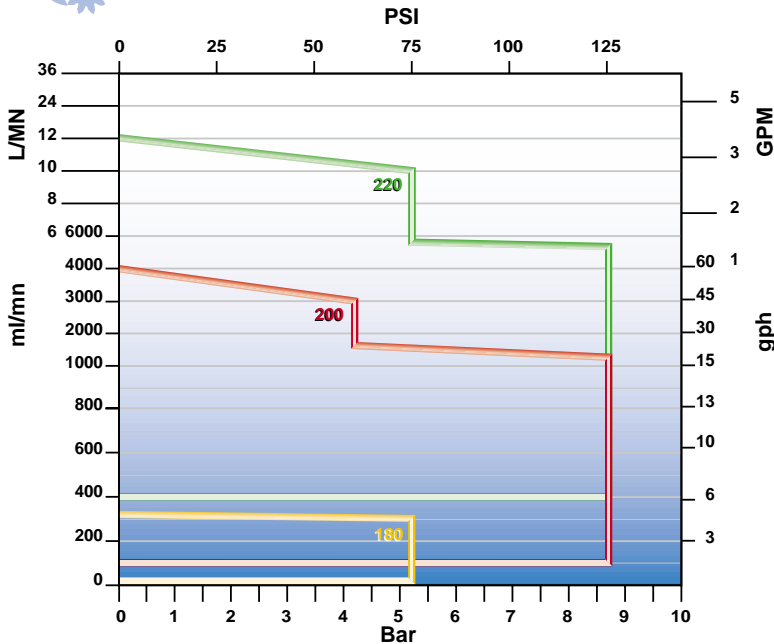


# The Right Solution Begins with the Right Selection

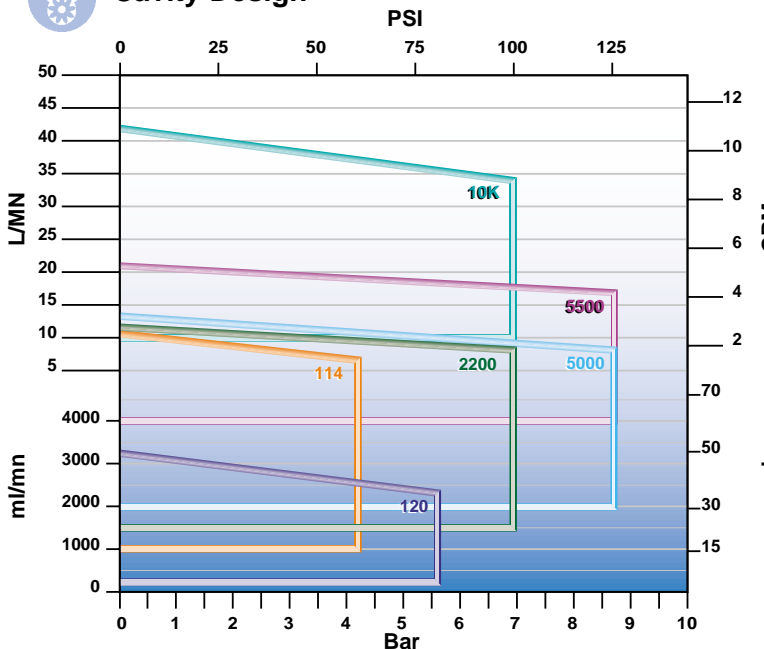
Use the following guide to find the pump that's right for you. For additional details, visit [www.micropump.com](http://www.micropump.com) to refer to the individual pump series datasheets, or contact your local Micropump distributor.



## Suction Shoe Design



## Cavity Design



### Series 180 (GA)

Flow rates to 0.32 L/min (0.09 GPM)  
Outlet pressures to 5.2 bar (75 psi)  
System pressures to 345 bar (5000 psi)  
Displacement: 0.017 / 0.042 / 0.084 / 0.092 ml/rev



### Series 200 (GB)

Flow rates to 4.0 L/min (1.1 GPM)  
Outlet pressures to 8.7 bar (125 psi)  
System pressures to 21 bar (300 psi)  
Displacement: 0.26 / 0.58 / 1.17 ml/rev



### Series 220 (GC)

Flow rates to 12.0 L/min (3.2 GPM)  
Outlet pressures to 8.7 bar (125 psi)  
System pressures to 103 bar (1500 psi)  
Displacement: 0.81 / 1.82 / 3.48 ml/rev



### Series 120 (GJ)

Flow rates to 3.2 L/min (0.85 GPM)  
Outlet pressures to 5.6 bar (80 psi)  
System pressures to 21 bar (300 psi)  
Displacement: 0.316 / 0.64 / 0.91 ml/rev



### Series 2200 (GD)

Flow rates to 12.0 L/min (3.2 GPM)  
Outlet pressures to 6.9 bar (100 psi)  
System pressures to 103 bar (1500 psi)  
Displacement: 3.48 ml/rev



### Series 114 (GK)

Flow rates to 10.9 L/min (2.9 GPM)  
Outlet pressures to 4.1 bar (60 psi)  
System pressures to 103 bar (1500 psi)  
Displacement: 3.15 ml/rev



### Series 5000 (GL)

Flow rates to 13.5 L/min (3.6 GPM)  
Outlet pressures to 8.7 bar (125 psi)  
System pressures to 103 bar (1500 psi)  
Displacement: 4.6 / 6.2 / 7.7 ml/rev



### Series 5500 (GM)

Flow rates to 21 L/min (5.6 GPM)  
Outlet pressures to 8.7 bar (125 psi)  
System pressures to 103 bar (1500 psi)  
Displacement: 7.3 / 9.8 / 12.2 ml/rev



### Series 10K (GN)

Flow rates to 42 L/min (11.1 GPM)  
Outlet pressures to 6.9 bar (100 psi)  
System pressures to 103 bar (1500 psi)  
Displacement: 24.5 ml/rev

Temperature range of all pumps: -46 to 121 °C (-50 to 250 °F). Excludes Series 114: -46 to 54 °C (-50 to 130 °F). High temperature versions available upon request.

## ***Simple Solutions for a Complex World™***

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***Your local distributor is:***

