



# Series GJR

MAGNETIC DRIVE GEAR PUMP  
EAGLEDRIVE™

Series GJR pumps deliver exceptional pumping performance and long life in abrasive fluid applications. Abrasive fluids, such as pigmented paints and inks, often cause significant pump wear, dramatically shortening pump life. Micropump’s Series GJR pumps use advanced materials and design processes to extend pump life.

These compact magnetically driven gear pumps feature a cavity style design for smooth pulseless fluid delivery. The magnetic drive eliminates leak points associated with dynamic shaft seals, while providing energy-efficient fluid delivery. This pump, standard with an electromagnetic EagleDrive™, provides a highly efficient, compact pumping package that easily integrates into your system design.

## PERFORMANCE SUMMARY

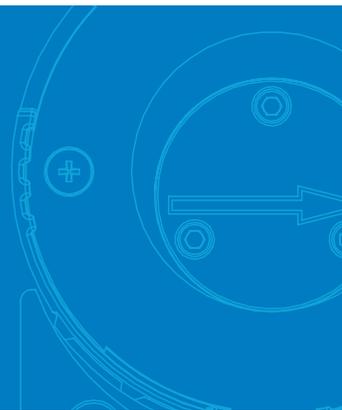
**MAX RATED DIFFERENTIAL PRESSURE**  
4.0 Bar (58 psi)

**MAX FLOW RATE (5500 RPM)**  
3.5 L/min (0.93 US gpm)

**MAX RATED SYSTEM PRESSURE**  
21 Bar (300 psi)

**TEMPERATURE RANGE**  
-40 to 54°C (-40 to 130°F)

**VISCOSITY RANGE**  
0.5 to 1500 cps



### HIGH PERFORMANCE OPERATION

- ▶ Positive displacement, precision gears for smooth pulseless fluid delivery
- ▶ Electromagnetic drive, with low inertia and high torque, for fast response times
- ▶ Automotive grade electrical components for high temperature operation (up to 120°C) and durability
- ▶ Cavity Style pumps are excellent for wide-ranging inlet and outlet operating conditions, and allow for intermittent reverse operation

### FLUID PATH INTEGRITY

- ▶ The magnetic drive eliminates dynamic shaft seals, keeping the fluid in and contaminants out.

### LONG LIFE

- ▶ Precisely designed and manufactured gears stand the test of rugged duty
- ▶ Chemically resistant construction materials stand up to chemically aggressive fluids
- ▶ Electromagnetic drive means fewer moving parts
- ▶ Series GJR pumps are easy to service using a Micropump service kit and simple hand tools

### EASY DESIGN INTEGRATION

- ▶ Series GJR pump and EagleDrive provides a compact package, enabling easy integration into system designs
- ▶ Supports wide range of power supply voltages (10-38V)
- ▶ Error signals for easy error detection and diagnosis

## PUMP CONSTRUCTION

- ▶ Magnetic drive gear pump
- ▶ Cavity style
- ▶ Spur gear
- ▶ Sleeve bushings
- ▶ PTFE Seal

## MAGNETS

### DRIVEN

- ▶ Rare Earth

### DRIVING

- ▶ Electromagnet

## DRIVE SPECIFICATIONS FOR EAGLEDRIVE™ DEMSE

### SPEED

- ▶ 1000 to 8000 rpm (36V)
- ▶ 500 to 5500 rpm (24V)
- ▶ 250 to 2650 rpm (12V)

### SPEED (AT RATED TORQUE)

- ▶ 3750 rpm @ 10 oz-in (24V)

### CURRENT AT RATED TORQUE

- ▶ 2A @ 10 oz-in (24V)

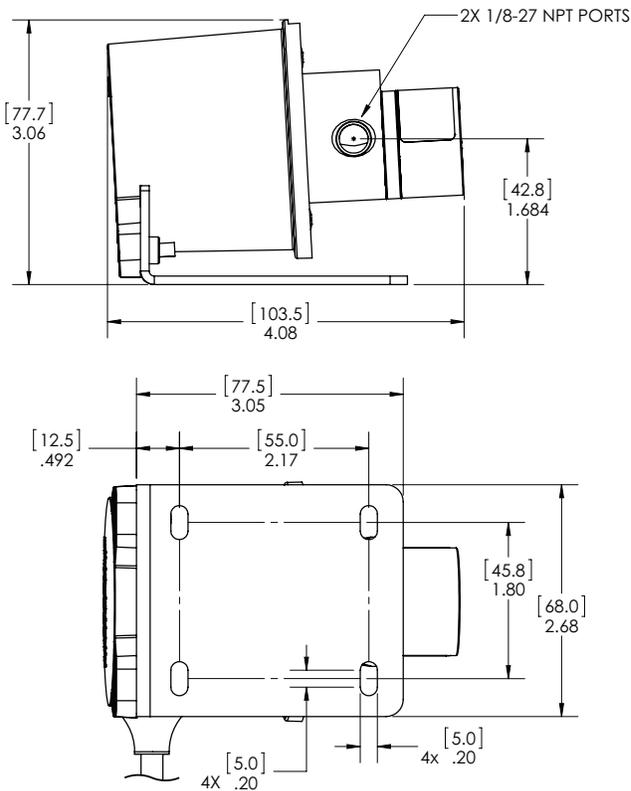
### POWER SUPPLY

- ▶ 10V to 38V DC

### TEMPERATURE RANGE

- ▶ -40 to 120 °C (-40 to 248 °F)

## DIMENSIONS



\*Units: mm(in). Nominal dimensions shown

## MICROPUMP®

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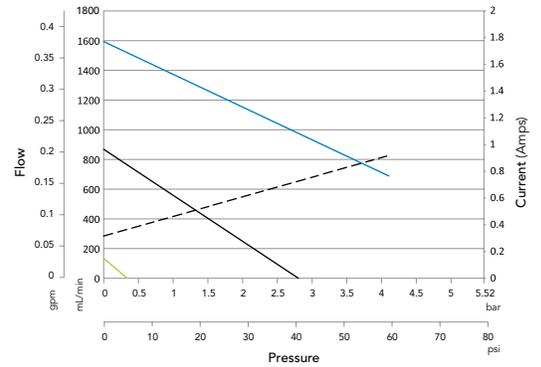
## PUMP PERFORMANCE

Power Supply Voltage = 24 VDC

Water @ 1cps

— Speed control = 5V      — Speed control = 1V  
— Speed control = 3V      - - - Power Supply Current

### GJR-N21-DEMSE Performance

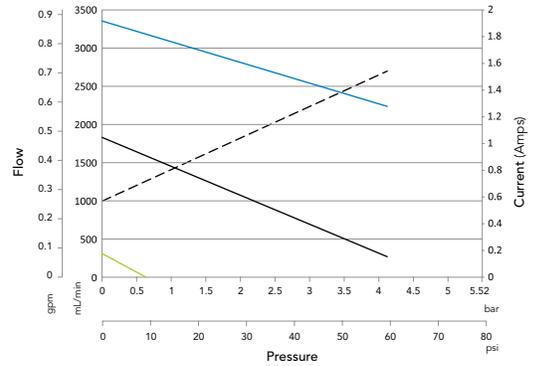


**FLOW RATE NOMINAL:** 325 mL/min (@ 2.07 Bar, 3V)

**FLOW RATE MAX:** 1595 mL/min (@ 0 Bar, 5V)

**DISPLACEMENT:** 0.29 mL/rev

### GJR-N23-DEMSE Performance



**FLOW RATE NOMINAL:** 950 mL/min (@ 2.07 Bar, 3V)

**FLOW RATE MAX:** 3355 mL/min (@ 0psi, 0 Bar, 5V)

**DISPLACEMENT:** 0.61 mL/rev

**VISCOSITY:** 1 cps



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