

# Series GAF

MAGNETIC DRIVE GEAR PUMP  
EAGLEDRIVE™



When you need a high-differential pressure, low-flow pump that delivers high performance in a small package, Series GAF is an excellent option. Series GAF gear pumps provide precise, pulseless flow, and features Micropump's suction shoe design. The suction shoe self-compensates for wear, ensuring near zero slip and long pump life. This pump, standard with an electromagnetic EagleDrive™, provides a highly efficient, compact pumping package that easily integrates into your design.

## PERFORMANCE SUMMARY

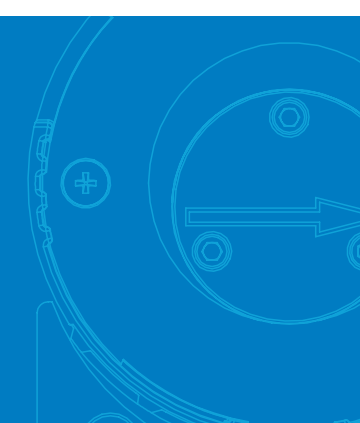
**MAX RATED DIFFERENTIAL PRESSURE**  
17.2 Bar (250 psi)

**MAX FLOW RATE (5500 rpm)**  
506 mL/min (0.134 US gpm)

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

**TEMPERATURE RANGE**  
-40 to 120°C (-40 to 248°F)

**VISCOSITY RANGE**  
0.5 to 1500 cps



### HIGH PERFORMANCE OPERATION

- ▶ High Differential Pressure – advanced design and materials support differential pressures up to 17 bar (250psi).
- ▶ Positive displacement, precision gears for smooth pulseless fluid delivery
- ▶ Suction shoe style pumps for improved efficiencies when pumping at higher pressures
- ▶ 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

### 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 GA pumps are easy to service using a Micropump service kit and simple hand tools.

### EASY DESIGN INTEGRATION

- ▶ Series GA 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

## WETTED MATERIALS

### BASE MATERIAL

- ▶ 316 stainless steel

### GEARS

- ▶ PEEK

### STATIC SEALS

- ▶ EPDM

## PUMP CONSTRUCTION

- ▶ Magnetic drive gear pump
- ▶ Suction shoe style
- ▶ Spur gears
- ▶ Stationary shafts
- ▶ O-ring 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)

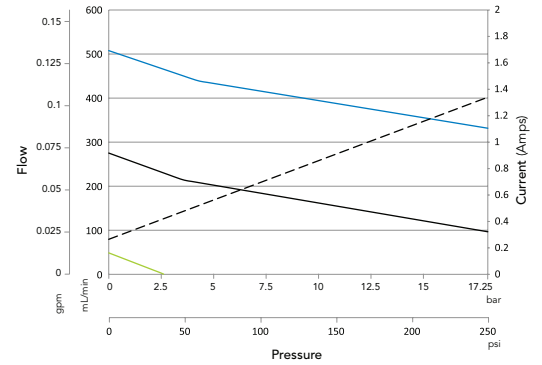
## PUMP PERFORMANCE

Power Supply Voltage = 24 VDC

Water @ 1cps

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

### GAF-T23-DEMSE Performance

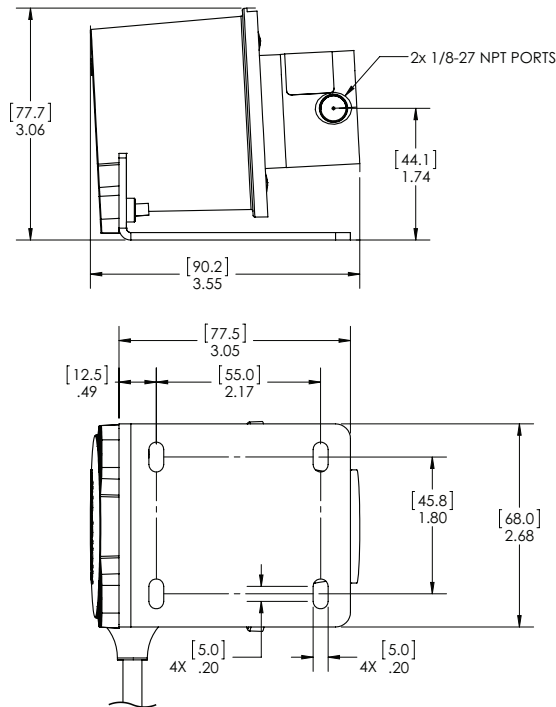


**FLOW RATE NOMINAL:** 190 mL/min (@ 8.6 Bar, 3V)

**FLOW RATE MAX:** 506 mL/min (@ 0 Bar, 5V)

**DISPLACEMENT:** 0.092 mL/rev (0.02 gal/1000 rev)

## DIMENSIONS



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

## MICROPUMP®

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