

Series GA

MAGNETIC DRIVE GEAR PUMP

EAGLEDRIVE™



When you need a low-flow pump that delivers high performance in a small package, Series GA is an excellent option. Series GA 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

5.2 Bar (75 psi)

MAX FLOW RATE

900 mL/min (0.238 gpm)

MAX RATED SYSTEM PRESSURE

21 Bar (300 psi)

TEMPERATURE RANGE

-46 to 120°C (-50 to 248°F)

VISCOSITY RANGE

0.2 to 1500 cps

HIGH PERFORMANCE OPERATION

- ▶ 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

- ▶ Precision design 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

- ▶ Carbon Graphite
- ▶ PEEK
- ▶ PPS

STATIC SEALS

- ▶ Viton®
- ▶ TEV

PUMP CONSTRUCTION

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

MAGNETS

DRIVEN

- ▶ Ferrite

DRIVING

- ▶ Electromagnet

DRIVE SPECIFICATIONS FOR EAGLEDRIVE™ MSE

SPEED

- ▶ 1000 to 8000 rpm (36V)
- ▶ 500 to 5500 rpm (24V)
- ▶ 250 to 2660 rpm (12V)

SPEED (AT RATED TORQUE)

- ▶ 3750 rpm @10 oz-in (24V)

CURRENT (AT RATED TORQUE)

- ▶ .2A @10 oz-in (24V)

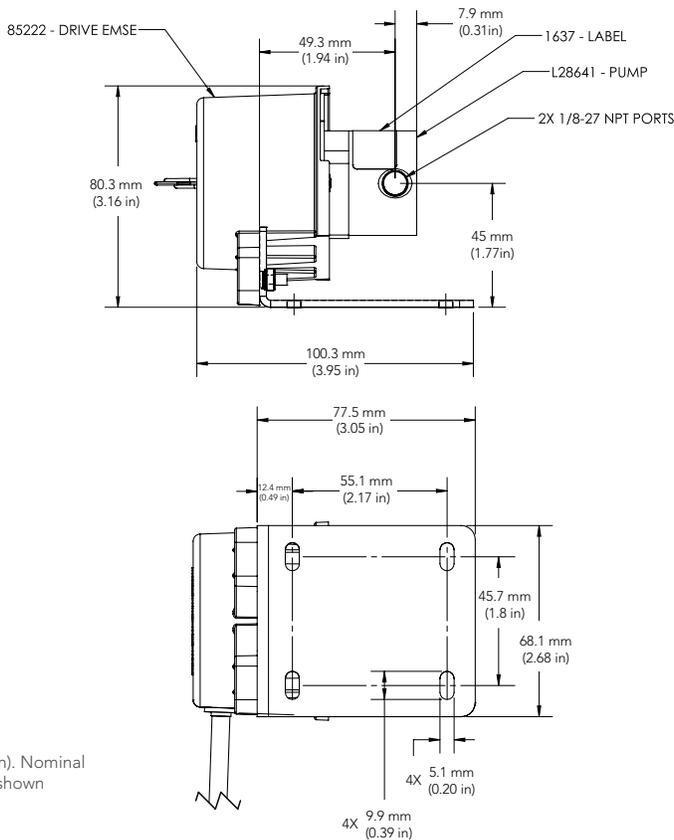
POWER SUPPLY

- ▶ 10V to 38V DC

THERMAL PROTECTION-SAFETY

- ▶ Ambient Temperature: 120 °C Max
- ▶ 85 °C at Max Power

DIMENSIONS



*Units: mm(in). Nominal dimensions shown



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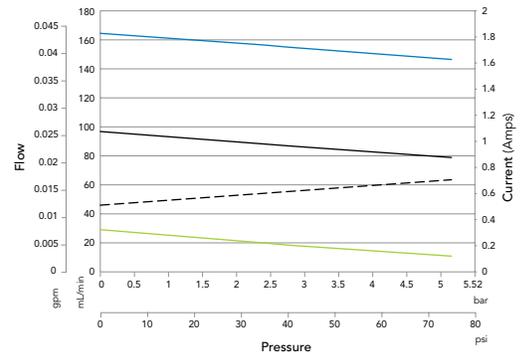
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REV. 09/13/13

PUMP PERFORMANCE

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

GA-X21-DEMSE Performance

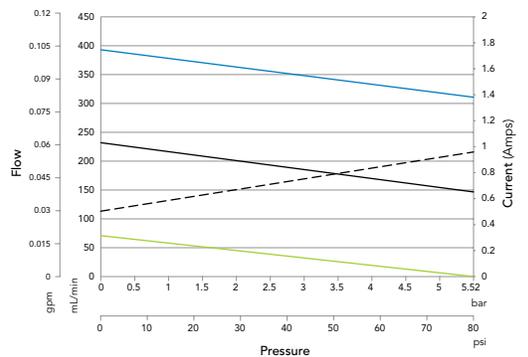


FLOW RATE NOMINAL: 80 mL/min (@ 2.8 Bar, 3V)

FLOW RATE MAX: 160 mL/min (@ 0 Bar, 5V)

DISPLACEMENT: 0.017 mL/rev

GA-V21-DEMSE Performance

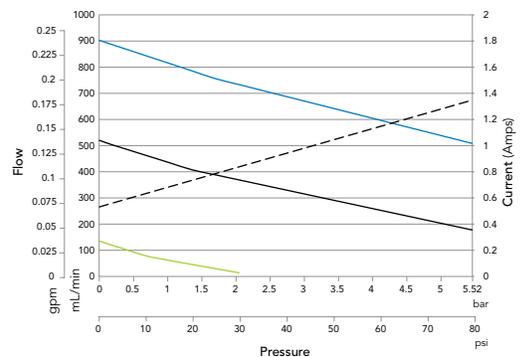


FLOW RATE NOMINAL: 180 mL/min (@ 2.8 Bar, 3V)

FLOW RATE MAX: 380 mL/min (@ 0 Bar, 5V)

DISPLACEMENT: 0.042 mL/rev

GA-T23-DEMSE Performance



FLOW RATE NOMINAL: 330 mL/min (@ 2.8 Bar, 3V)

FLOW RATE MAX: 900 mL/min (@ 0 Bar, 5V)

DISPLACEMENT: 0.092 mL/rev