

# FUEL ADDITIVE INJECTION

**MICROPUMP®**





# FUEL ADDITI

Fuel can be improved, changed or enhanced through the addition of fuel additives according to specific performance and usage requirements.

Pumps used in this environment need to be able to withstand the chemicals and wear. It is also important for the pumps utilized to deliver a smooth, controlled flow of the appropriate amount of fluid for the correct solution based on intended paper brightness.

#### Typical examples include:

- Refining additives
- Detergent additives to keep fuel injectors clean
- Color dyes to identify fuel grades
- Lead-based additives for aviation
- Corrosion inhibitors
- Lubricants for extended engine and pump life
- Anti-icing additives for jet fuel
- Static dissipater additives

Additives can be added at the rack in a distribution terminal, at a service station style dispenser, or into the fuel stream dispensed from a delivery truck.

## MICROPUMP SOLUTION

Micropump pumps deliver precise and pulseless flow control for in-flow additive injection. Coupled with variable speed DC drives, our pumps are the solution for pumping a wide variety of fuel additives into an injection manifold to facilitate mixing during fuel dispensing.

Micropump suction shoe style pumps are commonly used for this application. Series GB are best suited for lower flows, and Series GC for higher flows.

# VE INJECTION

Suction Shoe style gear pumps provide more consistent flow with varying differential pressure, and extended pump wear, than standard cavity style gear pumps. Additionally, the suction shoe pumps also perform better with wide ranging temperature changes than cavity style pumps.

## Flow Rate

- 0.5 to 10 L/min (7.925 to 158.5 USG/hr) flow rates
- Variable speed pumps for this application with flows from 0.131 to 13.9 L/min (2.1 to 221 USG/hr)

## Chemical Resistant To Hydrocarbons

- Chemically resistant construction materials stand up to the aggressive fluids found in fuel additives

## Precise, Metered Flow Control

- Gear pumps with variable speed DC drives provide precise flow control

## Smooth, Pulseless Flow

- Gear pumps offer the virtually pulseless flow required for in-flow additive dispense

## Reliability

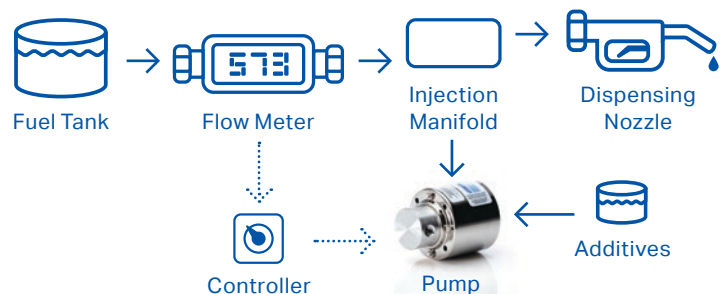
- Precision design and manufactured gears stand the test of rugged use

## Leak Free

- Magnetic drives eliminates dynamic shaft seals, keeping fluid securely inside the pump and potential contaminants out

## Maintainability

- Service Kits for easy field serviceability



*Micropump pumps deliver smooth, controlled flows of fuel additive into a fuel dispensing system.*

## GB Specifications

- Displacement: 0.26 ml/rev (P23) | 0.58 ml/rev (P25) | 1.17 ml/rev (P35)
- Min Flow Rate: 131 mL/min | 2.1 US gal/hr
- Max Flow Rate: 0.131 to 6.4 L/min (2.1 to 102 USG/hr)
- Max Differential Pressure: 125 psi (8.6 Bar)
- Max System Pressure: 300 psi (21 Bar)
- Temp range: -46 to 177 °C (-50 to 351 °F)

## GC Specifications

- Displacement: 0.811 ml/rev (M23) | 1.82 ml/rev (M25) | 3.48 ml/rev (M35)
- Min Flow Rate: 405 mL/min | 0.11 US gpm
- Max Flow Rate: 0.405 to 13.9L/min (6.4 to 221 USG/hr)
- Max Differential Pressure: 125 psi (8.6 Bar)
- Max System Pressure: 1500 psi (103 Bar)
- Temp range: -46 to 177 °C (-50 to 350 °F)

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