



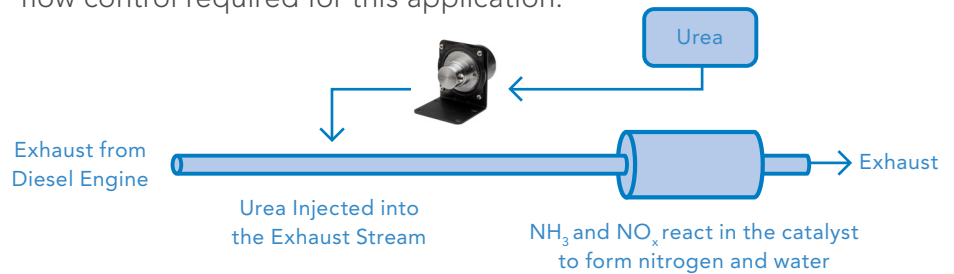
# Diesel Engine Emissions Control

To meet new NO<sub>x</sub> emissions standards, diesel engine manufacturers are turning to Selective Catalytic Reduction (SCR). SCR is an emissions control system that injects liquid urea into the catalytic converter in the exhaust stream of engines. The urea converts the NO<sub>x</sub> into harmless nitrogen and water.

Gear pumps are used to deliver urea under pressure to a nozzle in the exhaust stream. Gear pumps provide the smooth flow and precise flow control required for this application.

**SCR TECHNOLOGY IS USED IN:**

Heavy-duty trucks, automotive, off-road construction, mining, agriculture, power generation, locomotives and ships for diesel engine emissions control.



*Micro pump used to inject urea into the exhaust stream*

PUMPING REQUIREMENTS	MICROPUMP SOLUTIONS
FLOW RATE: 10 to 100 mL/min (0.16 to 1.6 USG/hr)	Our Series GA and GB pumps offer flow rates from 8.5 to 6400 mL/min (0.13 to 102 USG/hr)
MAX DIFFERENTIAL PRESSURE: 8.0 bar (116 psi)	Our Series GB pumps support differential pressure up to 8.6 bar (125 psi)
PRECISE FLOW CONTROL	Our pumps offer smooth, pulseless flow with an integrated drive offering fast responses to changing flow requirements
LEAK-FREE OPERATION	Mag-drive gear pumps minimize leaks by eliminating dynamic shaft seals (no shafts penetrate the pump chamber wall)
SURVIVE HARSH ENVIRONMENTS	Our drives and pumps were built to survive the harsh conditions found in vehicular markets. Our pumps are designed to tolerate freezing liquids and the electronic components in our drives are all automotive rated.
LOW COST-OF-OWNERSHIP	Simplified system design, low maintenance and long life are a winning cost-of-ownership combination for our mag-drive gear pumps

# MICROPUMP PRODUCTS OPTIMIZED FOR THIS APPLICATION

Micropump Series GA and Series GB mag-drive gear pumps are well suited for this application. Their smooth flow, durability, and long life make them the pump of choice over competing diaphragm pumps.



## SERIES GA

### MAGNETIC DRIVE GEAR PUMP

**FLOW RATE:** 8.5 to 506 mL/min (0.13 to 8.0 USG/hr)

**MAX DIFFERENTIAL PRESSURE:** 75 psi (5.2 Bar)

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

**WETTED MATERIALS:** 316SS, PEEK, PPS, Viton®, Kalrex®

**DRIVES:** EagleDrive™ (Electromagnetic, DC Brushless)  
and other Micropump drive mounts



## SERIES GB

### MAGNETIC DRIVE GEAR PUMP

**FLOW RATE:** 0.131 to 6.4 L/min (2.1 to 102 USG/hr)

**MAX DIFFERENTIAL PRESSURE:** 125 psi (8.6 Bar)

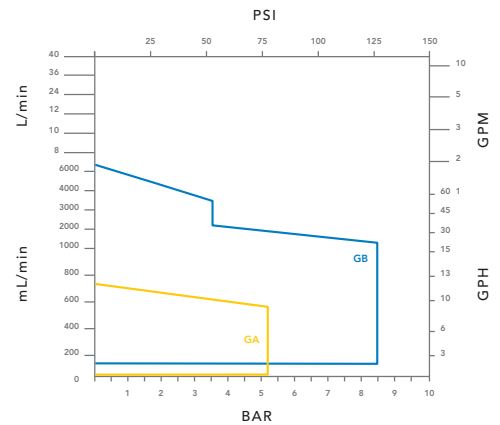
**MAX SYSTEM PRESSURE:** 300 psi (21 Bar)

**WETTED MATERIALS:** 316SS, PEEK, PPS, Viton®, Kalrex®

**DRIVES:** EagleDrive™ (Electromagnetic, DC Brushless)  
and other Micropump drive mounts

## PERFORMANCE SUMMARY

This chart indicates optimal operating ranges for recommended products.



## MICROPUMP ADVANTAGE

The unparalleled quality, performance record, reliability and long operating life of Micropump pumps and our extensive engineering expertise make Micropump a vital partner in this demanding market.



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