GV7
Fuel Injection Valve for Automotive Engines

Application
The GV7 injector has been designed for automotive gaseous ported fuel injection applications. The GV7 has been specially adapted to operate with hydrogen but can be used for any variety of methane-based gaseous fuels. The GV7 installation geometry has also been designed to reduce the transfer of noise-causing vibration from the injector to the intake manifold, resulting in reduced ambient noise.

Construction
Materials
The housing is manufactured from high strength anodized aluminium.
All parts exposed to the gas are resistant to corrosion and stress corrosion cracking.

Mounting
The GV7 can be mounted in any orientation; however a vertical (outlet down) is preferred. Orientation and position of GV7 should be designed to minimize the risk of condensates flowing back into the valve.

Gas Inlet Hole Diameter ........6mm (0,24in)
Gas Outlet Hole Diameter.....11mm (0,43in)

Specifications
Equivalent Flow Area .................. 7mm²
Steady State Flow-Rate .................. 3.0g/s H₂ @ P₁=6barg,
(Can be used for specific application) P₂=ATM
8.4g/s NG @ P₁=6barg
Internal Leakage..........................<0.2% of steady state flow-Rate
Nominal Differential Pressure .......... 6barg (87psig)
Maximum Differential Pressure ......... 10barg (145psig)
Maximum Backfire Pressure Spike ....... 2barg (29psig)
(without backflowing through valve)
Maximum Housing Pressure .............. 20barg (290psig)
(Non operating)
Opening Time of Valve .................. 1ms*
Response Time............................ 1ms*
Voltage Supply .......................... 12V–24V
Peak Current ................................ 9amps
Hold Current .............................. 2amps
*(assumes the use of a HOERBIGER SDM (Solenoid Driver Module) or Provebo bench test hardware)
(Boost Voltage 90-110V; Peak time 0,7ms)
Max. particle size within fuel gas ..........<5µm
Max. particle concentration: .............. 1ppm
Ambient Temperature: ................... -20–95°C (-4–203°F)
Fuel Gas Temperature: ................... -20–85°C (-4–185°F)
Flame Retardant, High Temperature and Thermoset Insulated Wires with Both CSA and UL Certification. (AWG 18)