

Delphi Multec[®] GDi Fuel Pump

The Delphi Multec[®] GDi Fuel Pump is a high pressure, engine driven demand control supply pump for gasoline direct injection engine programs. It features a single-piston, high-content integrated design to provide value and to support a wide range of engine program objectives. It delivers operating pressure from 120 bar to 200 bar. A high flow option is also available for larger displacement engines.

The Delphi Multec GDi Fuel Pump includes an integrated flow control valve for accurate demand fuel control and an integrated overpressure relief valve.

► Benefits

- Enables gasoline direct injection systems, which versus conventional port fuel injection systems, offer fuel economy, power, torque and emissions benefits for engine manufacturers.
- High fuel flow capability enables rail pressure build-up more quickly for faster start times.
- Integrated design offers system cost savings and system mass reduction.
- Low pump profile and various outlet position options provide packaging flexibility for the vehicle manufacturer.
- Integrated over-pressure relief valve and outlet fitting further reduce mass and contribute to packaging flexibility.
- Manufactured with corrosion resistant materials.
- Low weight and compact size
 - Approximately 1.25 kg; 85 mm by 63 mm.
- All high pressure seals are vented to low pressure. Leakage is vented to fuel pressure circuit.
- Offers E85 capability.

► Typical Applications

The Delphi Multec GDi Fuel Pump is suitable for most homogeneous and stratified combustion gasoline direct injection engine programs. It is compatible with most market-approved fuels including ethanol blends.

► Performance Advantages

The Delphi's Multec GDi Fuel Pump is compact and offers a 10 percent mass reduction and 20 percent smaller pump profile versus previous designs to provide excellent packaging flexibility. Its roller follower or tappet cam drive interface designs reduce friction and contribute to fuel economy improvement and greater power.

Delphi's Multec GDi Fuel Pump, which features a simplified, single-piston solution, is capable of very high output and provides vehicle manufacturers with superior value compared with 2-piston pumps and 2-pump systems. Its integrated, high content design also contributes to better value. The pump's high flow option is capable of meeting requirements for 450 HP engine applications using E85. For manufacturer convenience, cam or remote drive options are also available.



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The Delphi Multec GDi Fuel Pump is currently produced in North America, but could be produced in Europe, China or other locations to help meet customer requirements. Delphi can supply a complete GDi system including injectors, fuel rail, engine control module with control algorithms, as well the high pressure fuel pump.

▶ **The Delphi Advantage**

With extensive experience in engine management systems development, Delphi provides vehicle manufacturers with unique systems-level knowledge and analysis capabilities. Delphi has a thorough understanding of automotive markets around the world and a long history of supplying gasoline and diesel engine management products throughout the world. Delphi has a global network of resources and is positioned to respond quickly and efficiently with localized component manufacturing facilities and local market calibration expertise. Delphi can help vehicle manufacturers with new product launches almost anywhere in the world.

Only Delphi offers a complete EMS product portfolio, including:

- Fuel injection systems
- Ignition systems
- Air and fuel management
- Electronics
- Sensors and actuators
- Valve train systems
- Fuel handling systems
- Evaporative emissions systems