Fuel Injector Options

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Currawong Engineering can supply a range of fuel injectors specially configured to meet the customer's engine requirements. These injectors are one component of a comprehensive electronic fuel injection program.

1 Flow Rates Available:

Required fuel flow rates are obtained by varying the number and size of holes in the director disk. The design of the director disk is a function of the delivery pressure, the required flow rate and the type of fuel to be used. Flow rates are also affected the ratio of oil if two-stroke mix is being used.

Currawong Engineering will provide an appropriate director plate configuration to meet the operating requirements of the customer.

Currawong has several standard injectors, having the following flow rates:

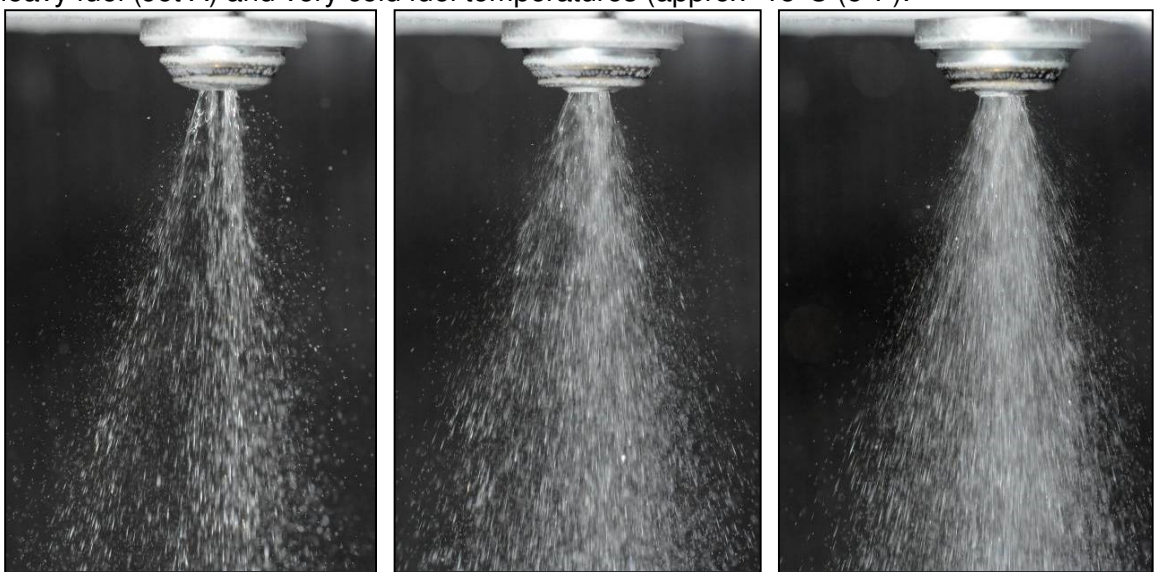
Flow rate at 3 bar pressure*	Flow rate at 6 bar pressure*
13 g/min	18 g/min
22 g/min	31 g/min
22 g/min	31 g/min
32 g/min	45 g/min
42 g/min	59 g/min
43 g/min	61 g/min

- *These flow rates are typical for standard gasoline with a 50:1 fuel/oil ratio mix.
- Other fuel types and/or oil mixtures will have slightly different flow rates.
- These flow rates are for 100% duty cycle. For a typical engine the maximum fuel requirements should be no more than 80% of the maximum possible injector flow rate as shown in the table above.

2 Misting Performance:

For best performance the fuel that exits from an injector should be broken up into a mist of very small droplets. Currawong has developed special director plate designs that guarantee good misting performance even at very cold temperatures.

The photos* below show the misting performance at pressures of **3 bar**, **4 bar** and **6 bar** respectively using heavy fuel (Jet A) and very cold fuel temperatures (approx -15°C (5°F).



*Effective shutter speed for these photos was determined by flash duration and is approx 0.1 mse

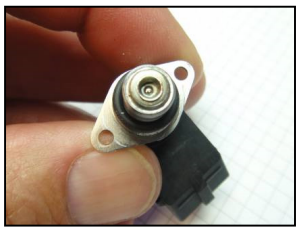
3 Fuel Line and Electrical Connections:

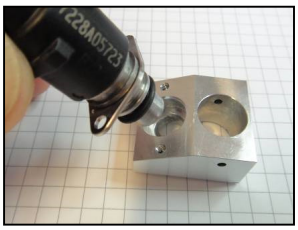
Currawong injectors are normally supplied with a compact fuel line fitting designed to suit 4mm polyurethane tube (as shown above).

The electrical connection is via an Omnetics micro-miniature circular connector, as shown, but other types of connectors can be supplied on request.

4 Mounting Options:

The injector can be supplied with a mounting flange that is laser welded to the injector nose to facilitate easy mounting. The flange can be oriented in any desired direction as shown in the examples below:

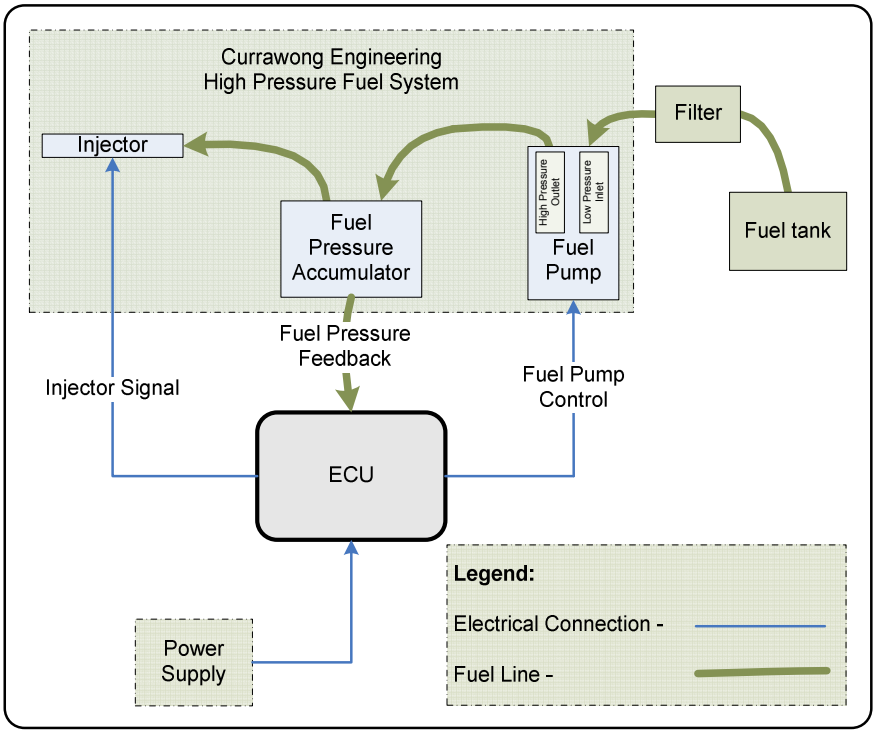




Currawong can also supply customized transition pieces such as shown in the right hand view.

5 Complete System:

The injector can be supplied as a stand-alone item or as part of a complete electronic fuel injection system as shown in the block diagram below:



6 Specifications

Flow rate: The injector can be configured to suit engine capacities from 10cc and upwards.

Director plate: Hole diameters and patterns can be customized to suit user requirements.

Fuel line connector: Barbed fitting to suit 4mm polyurethane tube.

Harness sleeving: Robust polyurethane tube, 4 mm diameter.

Harness Connector: Omnetics miniature 5-pin. Pin 1 is earth, pin 3 is the drive signal.

Resistance of solenoid coil: 12.5 ohms.

Overall Length: 53 mm (2 inches)

Diameter of O-Ring: 14.7 mm

Mounting Hole: 14.3 mm (9/16”)

Weight (with fittings): 33 g (1.2 oz).