



Description

This is a lightweight and compact fuel injector and has been specially designed by Currawong for operation of small fuel injected engines. It is particularly suited for use in the UAV industry.

It features customisable flow rates obtained by Currawong proprietary processes.

Currawong 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.



Specifications

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

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

Fuel line connector: Barbed fitting to suit 4 mm (0.16") polyurethane tube

Harness sleeving: Robust polyurethane tube, 4 mm (0.16") diameter

Harness connector: A variety of connector options is available

Resistance of solenoid coil: 12.5 ohms

Overall length: 53 mm (2")

Diameter of O-Ring: 14.7 mm (0.58")

Mounting hole diameter: 14.3 mm (0.56")

Weight (with fittings): 35 grams (1.2 oz)

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Configuration Options

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 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*
10 g/min
19 g/min
31 g/min
45 g/min
49 g/min
78 g/min
123 g/min
160 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.

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 (approximately -15°C (5°F)).



The effective shutter speed for these photos was determined by flash duration and is approx 0.1 millisecond.