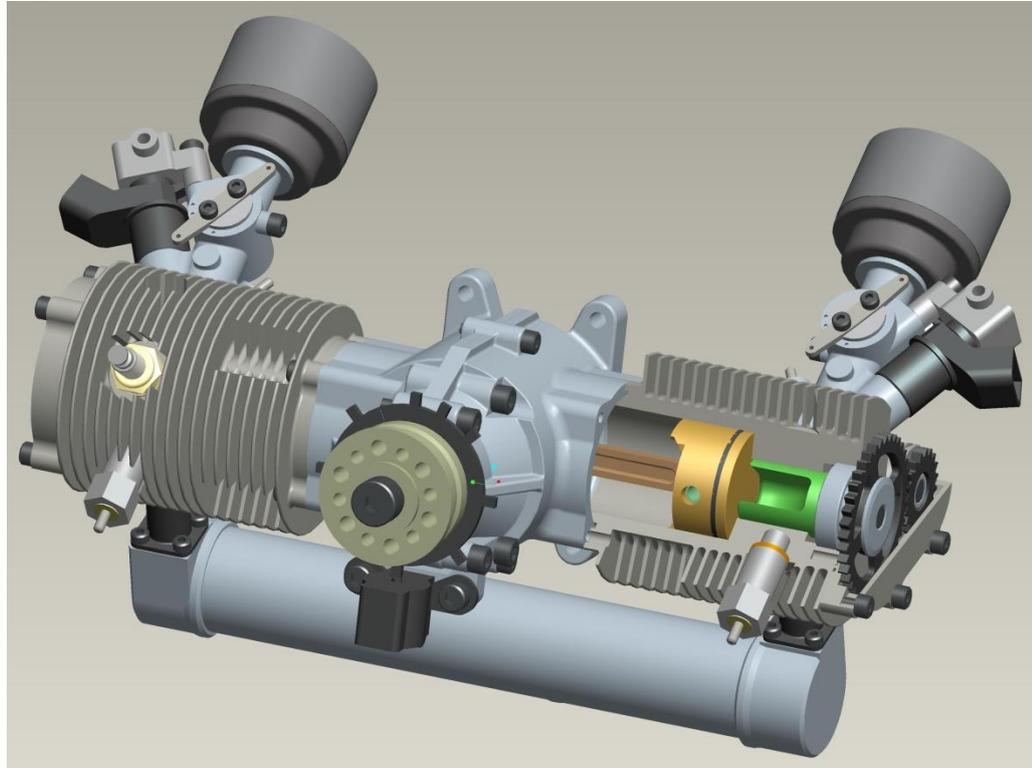




# Heavy Fuel UAV Engines

- 1kW to 4kW
- JP8/JP5/Jet A1
- Gasoline
- Twin and Single
- Fuel Injection
- Rotary Valve
- 4-stroke

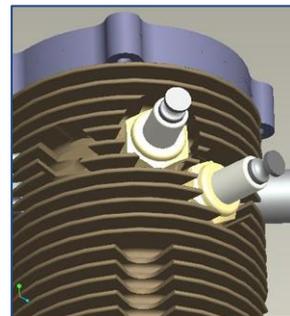


RCV Engines Ltd has a range of UAV engines available for evaluation, production supply and/or licensed manufacture. RCV Engines has licenses in place for its patented rotary valve 4-stroke technology for a range of model aircraft engines and handheld Forest & Garden products.

The flight tested UAV engine design is available as 25cc to 70cc. It can achieve 400 hours durability, 1 hp/lb power to weight and 0.5 lb/hp.hr fuel efficiency. The robust combustion system is tolerant of a wide range of fuels and octane ratings. The engine is easy to calibrate and will provide consistent performance over a wide range of ambient conditions. With controlled operating conditions there is minimal carbonisation operating on heavy fuels.

#### Engines options /features:

- Dual ignition
- Clockwise or anticlockwise rotation
- Cooling fan and shrouds for helicopter use
- Generator
- Multi-fuel operation
- Side starting
- Twins can run on one cylinder in limp home mode
- Muffler and Airbox designs available for low acoustic signature



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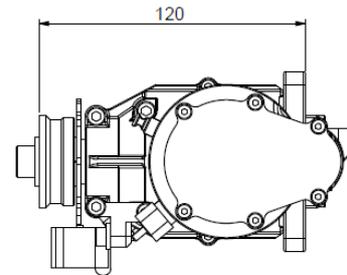
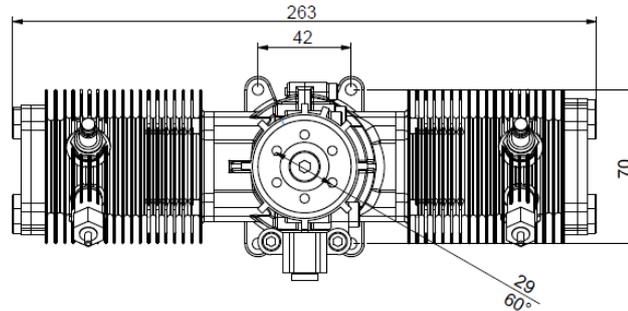
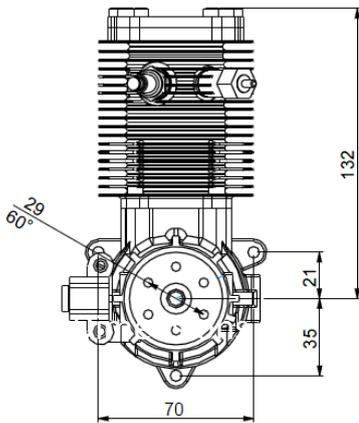
## Specification



	Single Cylinder	Twin Cylinder
Type	Rotary valve, spark ignition, 4-stroke	
Cooling	Air cooling	
Lubrication	Oil in Fuel 1:50	
Fuelling	Low Pressure Manifold Injection with Altitude Compensation	
Heavy Fuel Starting	Cold Start Assisted with Installed Cartridge Heaters	
Capacity	35 cc	70 cc
Speed Range	2000 to 10000 rpm	2000 to 10000 rpm
Power (JP8)	2.0 kW (2.7hp) at 8500 rpm	4.0 kW (5.4 hp) at 8500 rpm
Fuel Consumption (JP8)	350 g/kW.hr (0.58 lb/hp.hr)	330g/kW.hr (0.54 lb/hp.hr)
Weight Complete*	1.9 Kg (4.2 lb)	2.7 Kg (5.9 lb)
TBO - VTOL	150 hrs	150 hrs
TBO - Fixed Wing	300 hrs	300 hrs
Capacity Range	25 to 35 cc	50 to 70 cc

\* Weight includes full engine assembly ready to run with fuel system, ignition, ECU and exhaust. Weight does not include prop, generator or any cowling.

## Typical Dimensions



## Enquiries

RCV Engines has complete design control and as such can either supply an existing unit or configure an engine for a specific platform or application. Subject to establishing confidentiality arrangements 3D CAD data can be made available for installation studies. RCV are also able to evaluate the specific application.

Production engines are either available from RCV Engines or through an arrangement for licensed manufacture so that UAV platform builders can ensure long term production supply.

For all enquiries contact: [info@rcvengines.com](mailto:info@rcvengines.com)

## Applications

The RCV 70cc UAV engine has been evaluated on a number of platforms from ducted fan, helicopter to fixed wing. RCV also has a range of 6 model aircraft engines in production and has provided development engines for portable power applications. All engines are based on rotary valve 4-stroke technology offering reliable operation with a range of fuels. The technology gives particular advantages in the 1kW to 4kW range.

