



Engine Type:	Air-cooled 2-stroke single Cylinder
Displacement:	29cc
Typical Weight	3.17kg (6.98lb)
	Engine, generator & exhaust 1976g
	Isolation Mount 415g
	EFI 388g
	Power Supply & Harness 390g
Power Output	1.8kW (2.4HP) at 8000RPM
Fuel Consumption	500 g/kW-hr (0.82 lb/HP-hr) at cruise
Generator Output	250 W

The Corvid-29 engine package includes

- Base engine with modified crankcase
- Induction system with manifold and throttle body
- CDI ignition system
- Miniature engine control unit (ECU)
- Self-priming fuel pump
- Super atomizing fuel injector
- Manifold and cylinder head temperature sensors
- Crank sensors
- Isolation mount
- Generator (optional)
- Low noise exhaust (optional)
- Power supply (optional) with on board starting feature (refer to Cortex Hybrid Power System)
- Associated wiring
- Detailed operation, ICD and service manual

Features

- Low noise exhaust design
- Stall-resistant throttle response
- Significantly expanded throttle-RPM envelope
- Full EFI suite including automotive-quality ECU processor, self-priming fuel pump, ignition, sensors, injector and custom intake, all with over 40,000 hours on UAV platforms
- Can be calibrated for the customer's application
- The EFI system is plug-and-play compatible with Piccolo and Veronte Autopilots as well as having a documented API for CAN and Serial
- Integrated generator for use in powering the EFI system and providing power to charge on-board batteries and other electrical and electronic devices
- Excellent reliability in all regimes of flight. EFI system eliminates issues like carburetor icing, top-of-climb engine stalls or incorrect fuel-air ratios, regardless of the conditions
- Ability to be started from cold between -20°C and +50°C (~0°F and 120°F)
- Reduced BSFC compared with carbureted engines of similar capacity
- Improved power output compared with carbureted engines of similar capacity
- Has passed two 150150-hour endurance tests (based on the US FAR 33 standard) without the need for a major overhaul
- Cortex Hybrid Power System provides up to 500W of electrical power, integrated engine restarting and engine boost / overdrive capability, and has three independent regulated output rails.

Description

In 2013 Currawong teamed up with Power4Flight and Cobra Aero to create the 29cc single cylinder two stroke fuel injected Corvid-29 engine. It has a 3W-28 engine as its base with a completely new custom designed crankcase, throttle body and low noise exhaust. Currawong's robust electronic fuel injection (EFI) system is also integrated into the engine system.

The generator is mounted alongside the engine rather than concentrically on the crankshaft to allow for a higher power density motor to minimise the weight of the aircraft, insulate the generator from the heat of the engine and to provide much easier air cooling of the generator.

Typical Performance Curves

