



Engine Type:	Air-cooled 2-stroke single Cylinder
Displacement:	50cc
Typical Weight:	3.89kg (8.57lb)
	Engine, generator & LN exhaust 2674g
	Isolation Mount 426g
	EFI 487g
	Power Supply & Harness 390g
Power Output:	2.8kW (3.8HP) at 7000RPM
Fuel Consumption:	503 g/kW-hr (0.83 lb/HP-hr) at 5500 RPM & 40% throttle
Generator Output:	250 W

The Corvid-50 engine package includes:

- Currawong three-bearing crank case
- Desert Aircraft DA50 cylinder and piston
- Currawong induction system with manifold and throttle body
- CDI ignition system
- Miniature engine control unit (ECU)
- Self-priming fuel pump
- Automotive grade fuel injector
- Manifold and cylinder head temperature sensors
- Crank sensor
- Integrated isolation mount
- Low noise exhaust
- Starter-generator
- Optional power supply including on-board starting feature (refer to Cortex Hybrid Power System)
- Detailed operation & service manual and interface control document

Features

- Durable customized three-bearing crank case
- Stall-resistant throttle response
- Significantly expanded throttle-RPM envelope
- Full EFI suite including ECU processor, self-priming fuel pump, ignition, sensors, injector and custom intake
- Plug-and-play compatibility with autopilots Piccolo and Veronte, and documented API for CAN and Serial
- Integrated starter-generator for powering EFI system and on-board batteries and other electrical and electronic devices
- Cortex Hybrid Power System provides up to 500W of electrical power and can be delivered from either the generator, or the battery, or both simultaneously. The power unit also provides integrated engine restarting and engine boost / overdrive capability, and has three independent regulated output rails.
- Excellent reliability – the EFI system maintains optimal engine operating parameters in all regimes of flight. Eliminates issues like carburetor icing, top-of-climb engine stalls or incorrect fuel-air ratios, regardless of the conditions
- Reduced BSFC compared with carbureted engines of similar capacity
- Improved power output compared with carbureted engines of similar capacity
- Custom low noise exhaust featuring wrap-around design to minimize cross sectional area
- Outstanding TBO - over 350hrs of endurance operation on a single engine under FAR33 testing profile, with no power loss and minimal wear



Description

The Corvid-50 is the most recent two-stroke UAV engine system developed by Currawong Engineering with US partner Power4Flight.

With an industry workhorse Desert Aircraft DA50 cylinder and piston, the Corvid-50 features a custom crank case, induction manifold, integrated isolation mount and low noise exhaust, paired with proven Currawong products including a starter generator and electronic fuel injection system.

The typical performance of the Corvid-50 engine is shown below.

