



Date: Feb 1, 2025

## A33HF

Datasheet - Page1

240 Uran Street  
Hillsdale, MI 49242



P: 517-437-9100



F: 517-437-9101



[www.cobra-aero.com](http://www.cobra-aero.com)



## DESCRIPTION

The A33HF Propulsion System from Cobra AERO is the same core engine as the A33N with special modifications to optimize heavy fuel operation.



- High power to weight
- Low acoustic signature
- Additively manufactured cylinder, mount, intake, and exhaust system unlock design potential that other manufacturing methods can't (performance, weight, package, sound, efficiency)
- Hardware, electronics and software all designed specifically for UAS applications
- Machined crankcase with integrated belt driven starter-generator
- Integrated focal isolation mount
- Active cooling duct for optimal operating temperatures across a variety of ambient conditions
- Parallel hybrid capabilities boost output when bursts of climb or sprint power are required

## SPECIFICATIONS

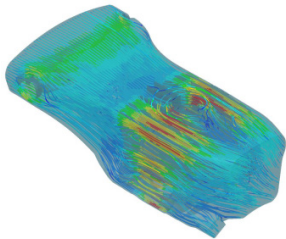
<b>Engine Type:</b>	Air-cooled 2-stroke single
<b>Displacement:</b>	33 cc (2.0 ci)
<b>Mass:</b>	3.15 kg (6.94 lbs) (Includes core engine, exhaust, focal isolation mount, ECU, fuel pump and accumulator, injector, ignition, generator, harnesses)
<b>Power Output:</b>	1.9 kW (2.5 HP) at 8050 RPM
<b>PreHeat:</b>	10 minutes @ 110 Watts
<b>Fuel Consumption:</b>	500 g/kW-hr (0.83 lb/hp-hr) cruise
<b>Generator Output:</b>	200W (400 W intermittent)
<b>Fuel Type:</b>	JP-5, Jet A, VP, P4F heavy fuel 50:1 premix

## SYSTEM INCLUDES

- Power4Flight IntelliJect ECU
- Self-priming fuel pump and accumulator
- All required EFI sensors and wire harnessing
  - CHT, MAT and Fuel pressure
  - Baro and MAP
  - CDI module
- Integrated preheating system
- Electric power generator
- Cooling duct with active control
- Optional IntelliGen PMU for starting charging and power augmentation capabilities
- Available NDAA-848 compliant ECU

## FEATURES

- Altitude compensation
- Onboard data logging, maintenance schedule, and logbook
- Full size spark plug for high altitude performance and improved MTBO
- Plug n' Play with multiple autopilots
- Free communications ICD and software developers kit for CAN and serial
- Free user interface for engine and configuration development





Date: Feb 1, 2025  
**A33HF**  
Datasheet - Page2

240 Uran Street  
Hillsdale, MI 49242

P: 517-437-9100

F: 517-437-9101

[www.cobra-aero.com](http://www.cobra-aero.com)

### A33HF Performance Preliminary

