

THE ART OF SIMPLICITY, DESIGNED FOR CRITICAL APPLICATIONS.

The DHK180 engine is a clean-sheet-designed, heavy-fuel engine like nothing before, developed for the efficiency, reliability and performance that critical applications require.

Lightweight and compact, this highly scalable engine architecture develops extraordinary low-end torque and maintains power at high altitudes, making it uniquely suited for power generation, cargo drones, ground support equipment and hybrid propulsion. This powerplant burns JP-8, Jet A, SAF and pump diesel, so it is an ideal choice for missions to locations where fuel can be a concern. It is serviced and maintained with standard tools, virtually eliminating the need for expensive and scarce specialized equipment, and making it EMI-proof as well.

DeltaHawk engines are developed and manufactured in the USA. Numerous patents have been secured, and the DHK180 is FAA type-certified to stringent aviation regulations.



TECHNICAL DESCRIPTION

Displacement	202 cu in (3.3 L)
Bore x Stroke	4 in x 4 in (10.2 cm x 10.2 cm)
Ignition	Compression
Induction	Piston Ported, Turbo and Supercharged, Intercooled
Dry Weight	-357 lbs (162 kg); includes starter, turbo, exhaust, alternator
Dimensions (LxWxH)	33 in x 24 in x 22 in (84 cm x 61 cm x 56 cm)
Oil Pump	External Mechanical Gear-Type
Supercharger	Twin Screw
Mount	Modified Conical/Bed
Accessory Pads	2 Standard: Vacuum Pump or Alternator; Propeller Governor
Thrust Bearings	Bidirectional; Pusher or Tractor Configuration
Configuration	Horizontal. Vertical Model available in the future
Power	180 HP (134.2 kW) SAE (net); higher power versions underway
Torque	363 ft-lbs (492 Nm) @ 2600 rpm
Max Rotational Speed	2700 RPM
Fuel Burn	7.3 gal/hr (27.6 L/hr) at 135 HP Economy Cruise 10.8 gal/hr (40.9 L/hr) at 180 hp
Starter	SkyTech 24V
Alternator	Plane Power 70 amp (future higher power options available)
Prop Governor	Standard may be used (not included)
Fuel System Type	Mechanical Injection
Delivery Fuel Pump	Mechanical Gear
Injection Pumps	4 (1 per cylinder)
Fuel Types	Jet A & Jet A-1 Certification Fuels. Will burn JP8, D1, D2, F-24
Oil Capacity (Dry Sump)	- 6 qt (6 L); installation may vary
Coolant Type	Maxima Coolanol 50/50 blend
Coolant Capacity	- 6 qt (6 L); installation may vary
Oil Filter	Remote Spin-On Champion CH48109-1
Oil	Commercially available Phillips Victory 10W-40 Aviation Oil
Fuel Filters	30-micron Pre-filter/2-micron Fuel Filter

FEATURES

- Burns Jet-A, JP-8 and SAF Fuel**
 - Available worldwide
 - Less emissions
- High Fuel Efficiency**
 - Up to 40% more fuel efficient than gasoline engines
 - Greatly improved range
 - Higher non-fuel payload
 - Lower cost of ownership
- Direct Drive, No Gearbox**
 - High reliability
 - No gearbox to maintain
 - Lower cost of ownership
- Air, Fuel and Cooling Redundancies**
 - High reliability
 - Highest level of safety
- Low Parts Count**
 - Reduced maintenance
 - Reduced downtime
 - Lower cost of ownership
- Smaller Size**
 - Improved packaging
 - Lower aerodynamic drag
- Reduced Weight**
 - Greater payload
- Compression Ignition and Mechanical Fuel Injection**
 - Runs during total electrical failure
 - Safe, simple and reliable system