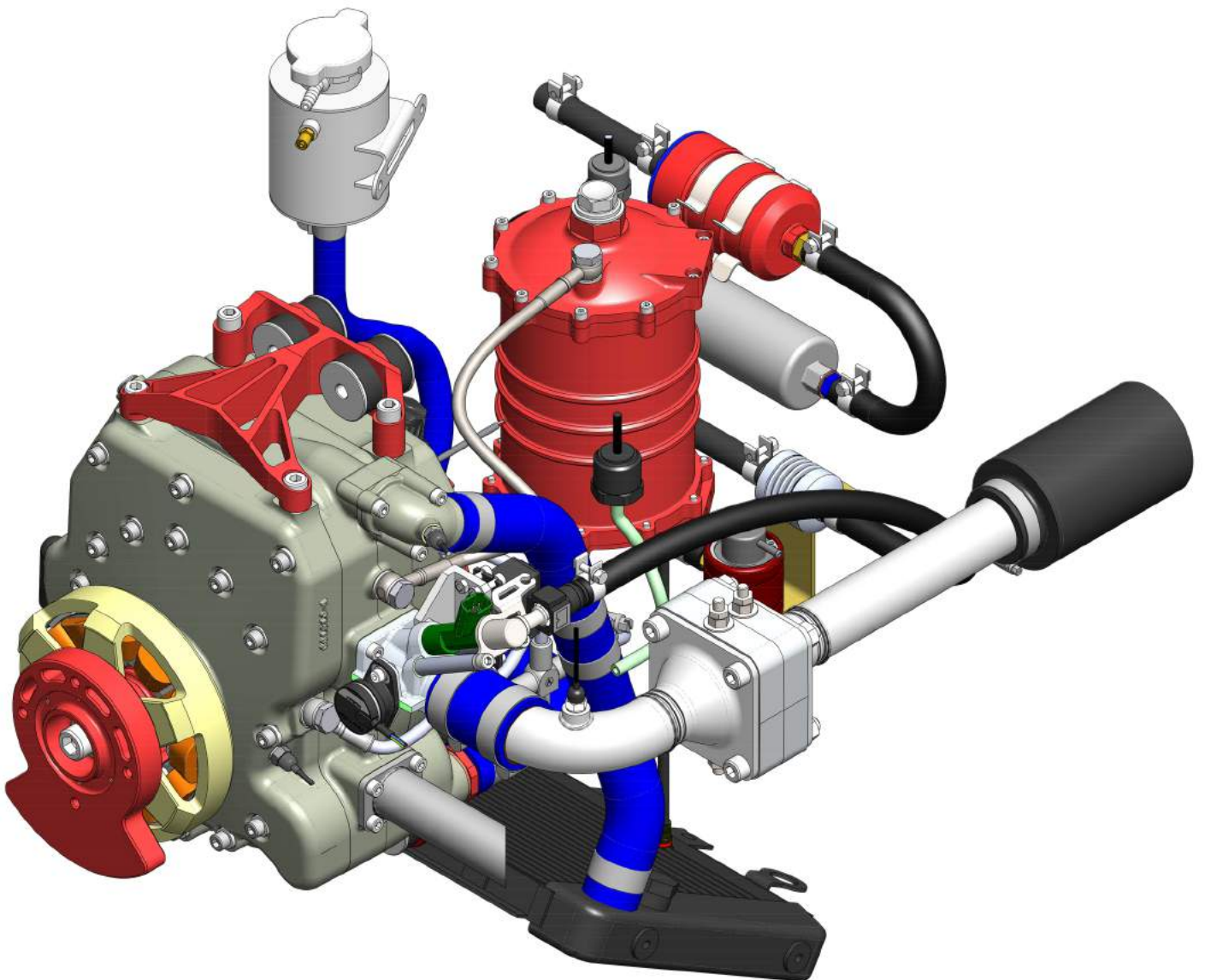


Wankel Rotary Engine **225CS 40 BHP**





About AIE

Advanced Innovative Engineering are the latest incarnation of a Wankel rotary engine development, design and manufacturing heritage that stretches back to Norton in the 1960s and beyond. Our combined 100 years' experience in engineering research and design across a number of industries means that we can offer you a wealth of world-class knowledge and expertise that you won't find elsewhere.



We'll design, build and test the right solution for your requirements

Our first job is always to establish exactly what you need. We'll then design, build and test a product designed around your requirements. We'll turn your concept into reality using cutting-edge software, systems and manufacturing capability, all based at our state-of-the-art facility in the heart of the UK's advanced manufacturing industry.

You'll benefit from a high quality, cost-effective solution built by engineers with decades of experience. Engines developed by the team at AIE have been used in applications as diverse as motorcycles and Unmanned Aerial Vehicles (UAVs). Our engineers have developed propulsion systems that have seen over one million flight hours of operational service.

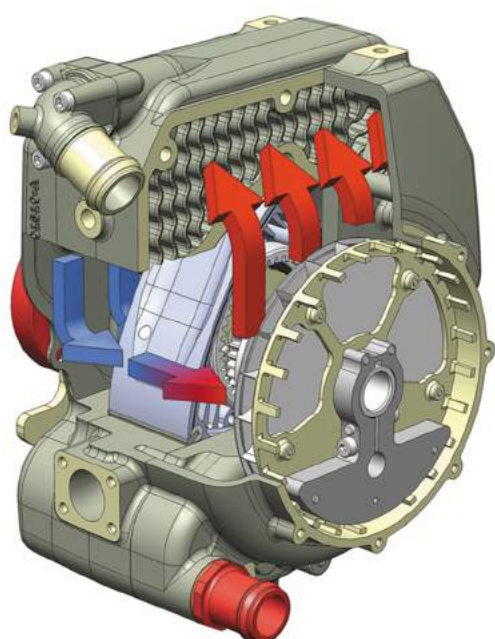
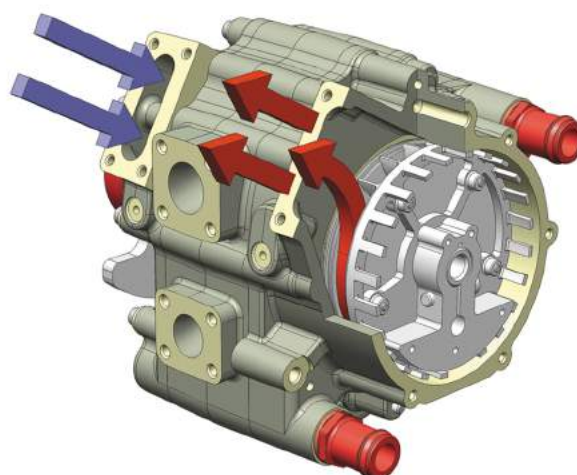


Revolutionary Technology

The unrivalled power and durability of AIE lightweight rotary engines are made possible through the use of revolutionary new technologies that effectively eliminate drawbacks found in many other rotary engine developments. Access to the latest inventions from leading names in rotary engine design together with advanced manufacturing capabilities enable AIE to pass on unique benefits to their customers through patented technology as detailed below.

SPARCS

AIE patented SPARCS (Self-Pressurising-Air Rotor Cooling System) is rewriting the rules in rotary engine design with the advanced ability to utilise pressurised gases from the combustion process as a cooling medium. By means of an external heat exchanger to deliver superior heat rejection and a completely sealed engine core, SPARCS provides AIE Wankel rotary engines with longer engine life and zero wet oil loss for increased performance.

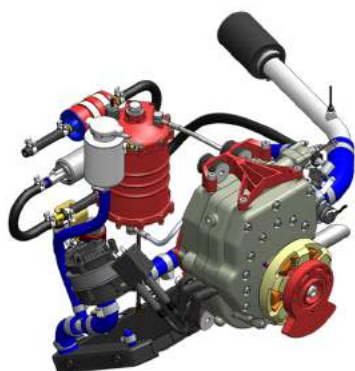


Compact SPARCS

A marvel in lightweight engine development, AIE patented Liquid-Cooled Compact SPARCS (Self-Pressurising-Air Rotor Cooling System) delivers exceptional thermal balancing with surprisingly small form factor and fewer components. Utilising a pressurised oil-gas mixture and internal heat exchanger, Compact SPARCS efficiently rejects heat from the engine core to its main liquid cooling system, resulting long engine life in a lightweight package.



AIE 225CS Wankel Rotary Engine



225CS - 017 (Gasoline + 2kW Generator)

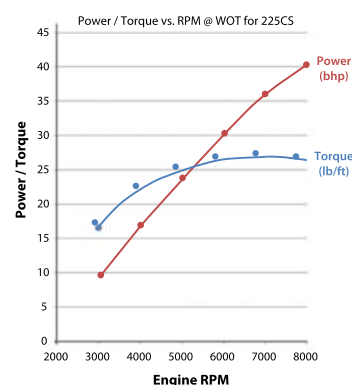
The world-class 225CS – 40 BHP rotary engine that delivers market-leading performance in terms of power, weight, efficiency and reliability. Combining all the advantages of a Wankel rotary engine with our patented Compact SPARCS cooling system, you benefit from a clean and powerful engine that offers low total cost of ownership.

Specifications

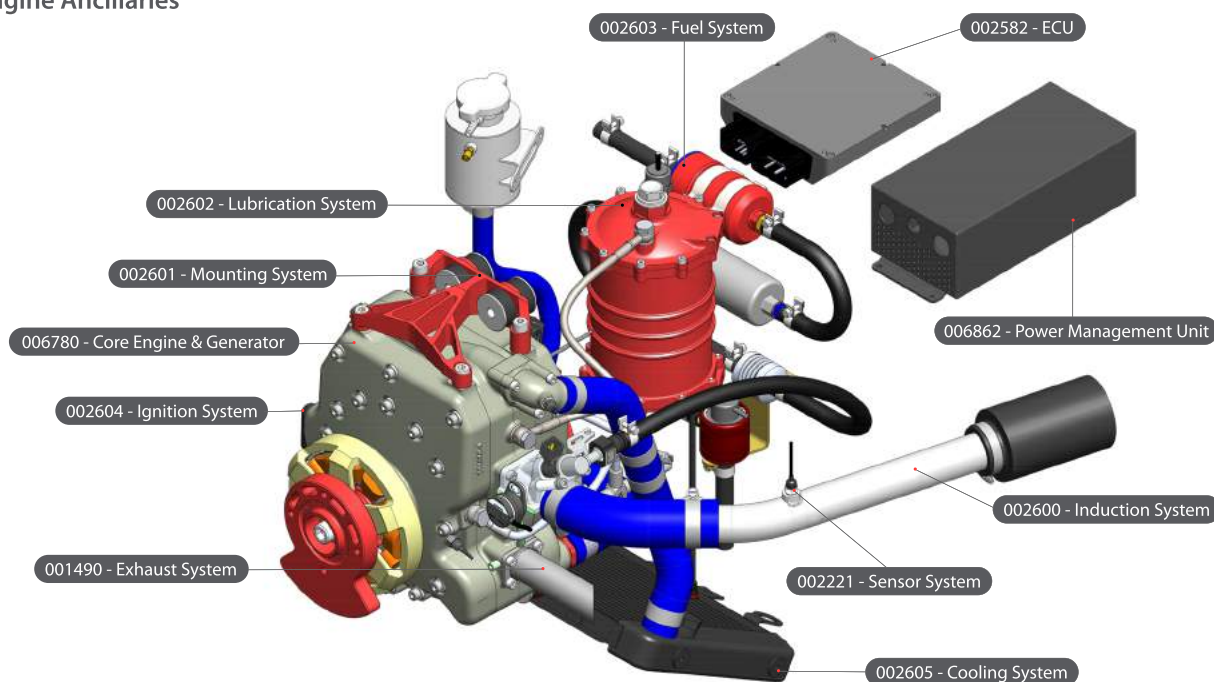
Engine Type	Single Rotor	Cooling System	Liquid-Cooled Patented SPARCS*
Power Output	40 bhp (30 kW)	Ignition System	Twin Spark Plug
Core Engine Weight	22 lb (10 kg)	Engine Control System	Full Electronic Engine Management
System Dry Weight	46.7 lb (21.2 kg)	Oil System	Digitally Optimised Lubrication
Displacement	13.7 cu in (225cc)	Core Engine Dimensions	339 mm x 274 mm x 213 mm
Fuel Type	Gasoline	Generator	2 kW

*Self-Pressurising-Air Rotor Cooling System

Performance

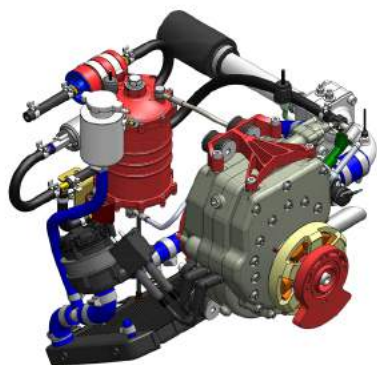


Engine Ancillaries





AIE 225CS Wankel Rotary Engine



225CS - 018 (Heavy Fuel + 2kW Generator)

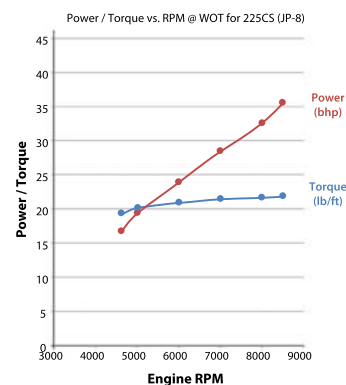
The versatile 225CS rotary engine runs on kerosene heavy fuel where a low logistical footprint and higher flash point are required. Combining the advantages of a Wankel engine with patented Compact SPARCS, this multi-fuel unit offers enhanced capabilities in a robust propulsion system for mission-critical applications without compromising on performance.

Specifications

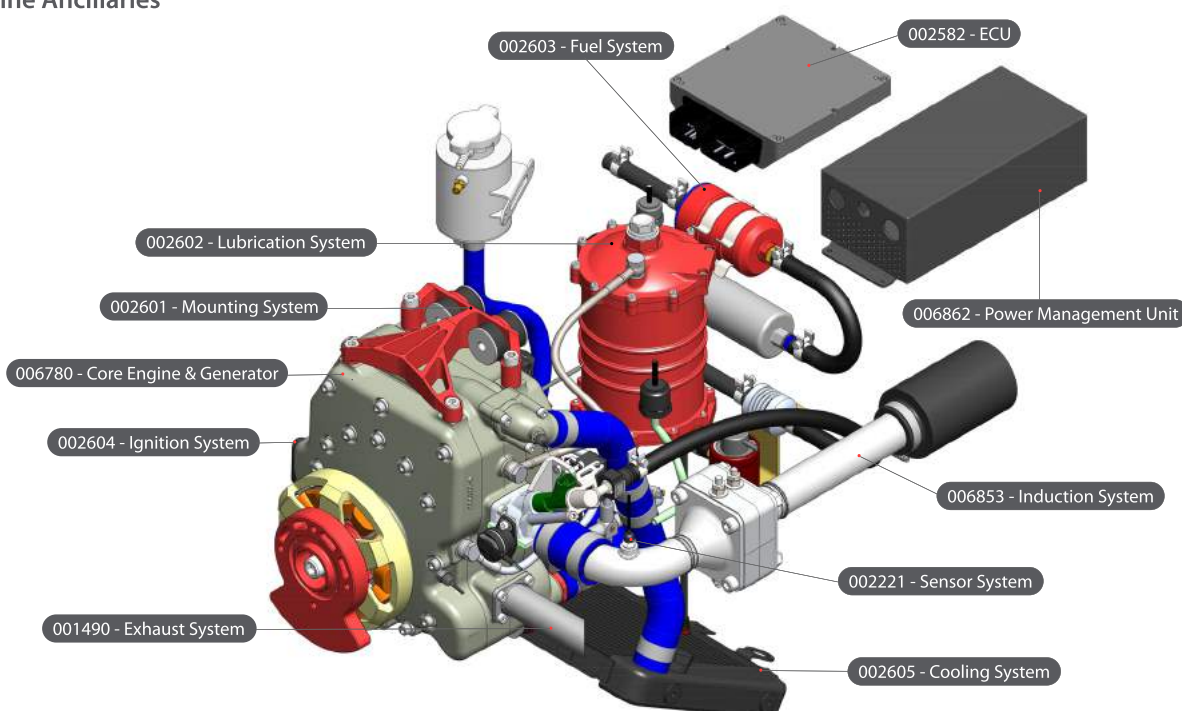
Engine Type	Single Rotor	Cooling System	Liquid-Cooled Patented SPARCS*
Power Output	36 bhp (26 kW)	Ignition System	Twin Spark Plug
Core Engine Weight	22 lb (10 kg)	Engine Control System	Full Electronic Engine Management
System Dry Weight	48.6 lb (22 kg)	Oil System	Digitally Optimised Lubrication
Displacement	13.7 cu in (225cc)	Core Engine Dimensions	339 mm x 274 mm x 213 mm
Fuel Type	Jet-A / JP-8	Generator	2 kW

*Self-Pressurising-Air Rotor Cooling System

Performance



Engine Ancillaries





Engine Ancillary Details for 225CS



Core Engine & Generator

Part No: 006780
Weight: 26.9 lb (12.22kg)



Ignition System

Part No: 002604
Weight: 0.75 lb (0.34kg)



Sensor System

Part No: 002221
Weight: 0.56 lb (0.25kg)



Mounting System

Part No: 002601
Weight: 1.46 lb (0.66kg)



Cooling System

Part No: 002605
Weight: 5.30lb (2.40kg)



ECU

Part No: 002582
Weight: 0.83 lb (0.38kg)



Induction System

Part No: 002600
Weight: 1.41 lb (0.64kg)



Fuel System

Part No: 002603
Weight: 2.84 lb (1.29kg)



Oil System

Part No: 002602
Weight: 3.92 lb (1.78kg)



Exhaust System

Part No: 001490
Weight: 0.26 lb (0.11kg)



Power Management Unit

Part No: 006862
Weight: 2.75 lb (1.25kg)



Induction System

Part No: 006853
Weight: 3.31 lb (1.50kg)

*Component sizes are not shown to scale



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