

Powered by Rotamax

ROTARY AIRCRAFT ENGINES

www.rotaryaircraftengines.com

www.rotamax.net

Nathan Oldham
Rotary Aircraft Engines
nate@rotaryaircraftengines.com
801-380-7028

Eric McCall
Rotamax Inc.
emccall@rotamax.net
419-694-3000 Ext. 260



INTRODUCING A NEW LINE OF ROTARY ENGINES FOR AVIATION.

Please complete a survey on the following pages to help us configure this line of engines to meet your specific wishes and needs. Early collaboration will allow you to guide us so that the aviation version of these rotary engines will be just the kind of improvement you have been wanting for years.

Why haven't aviation engines advanced like car engines?

Most general aviation aircraft are still flying with engines whose basic design is 50 years old. Can you remember the last car engine that was air cooled? Wasn't that the old Volkswagen? When was the last time a car engine had a carburetor? Why haven't known advances in engine design come to general aviation?

Can you even imagine having to deal with your fuel mixture to make sure your car engine doesn't overheat? Yet general aviation pilots do that all the time, right while they need to be paying attention to other things. It is way past time for a fuel injected, water cooled, thermostat temperature controlled engine, that is designed for aviation use. Especially if such an engine costs less to buy, and costs way less to maintain.

You should just be able to start the engine and fly. Let the computerized engine controller adjust the fuel injection for altitude compensation and fuel efficiency. Let the thermostat control the engine temperature. And let the

built in redundancy features like dual spark plugs and dual ignition take care of basic component failures in flight. Engine related pilot workload? Forget about it – with a modern aircraft engine design.

These engines are American-made in Ohio and branded as "RotaMax" rotary engines. Continued research and development has resulted in an efficient, reliable, and affordable rotary engine that is well suited to many applications, including aviation.

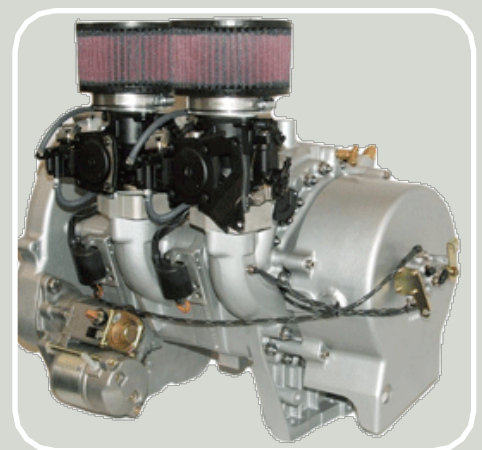
The engines have high power-to-weight, low vibration, small size, and broad torque. Our goal, is to provide an alternative aviation engine that is low maintenance, yet offers good fuel economy and low emissions.

Rotary Engine Successes:

There have been several successes with Rotary engine technology. Mazda has produced and sold over 1.5 million rotary engines in their flagship RX Series cars over the last three decades.

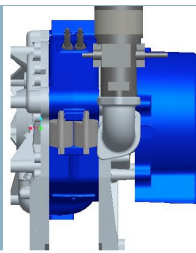
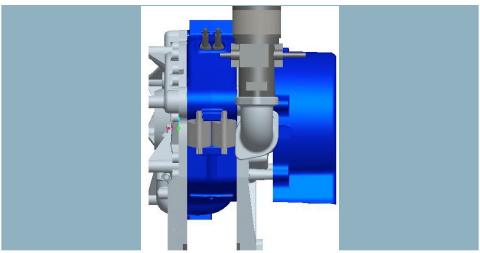
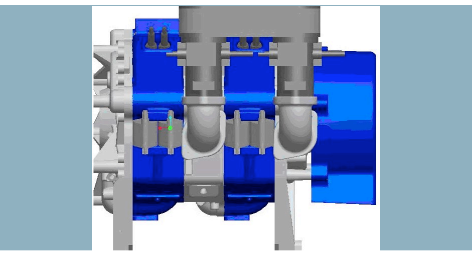
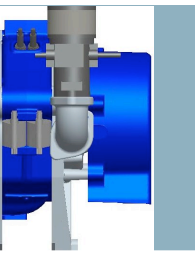
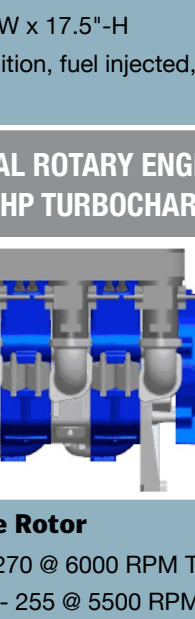
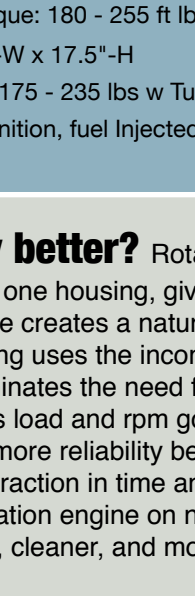
Mazda won the 24 hours of Le Mans race with a four rotor engine.

Outboard Marine Corporation's four-rotor outboards raced during 1973, winning every race in the Unlimited Class. For example, at the Galveston Speed Classic, they placed 1st, 2nd, and 3rd, and lapped the entire field three times!



One rotor and two rotor models:
Above left is the 60 hp single rotor model, and above is the two rotor 120 hp model. See the next page for more information.

One to Four Rotors. 65 to 360 HP. Naturally aspirated or turbocharged.

<p>ULTRALIGHT / FAR 103 ROTARY ENGINE</p>	<p>SPECIAL LIGHT SPORT AIRCRAFT (ASTM-SLSA) ROTARY ENGINE</p>	<p>ECONOMY EXPERIMENTAL ROTARY 130 HP BASIC ENGINE</p>
		
<p>650cc Single Rotor \$5,670 Max HP: 65 @ 6000 RPM For Take Off Cruise HP: 60 @ 5500 RPM Continuous Torque: 60 ft lbs @ 4000 RPM Engine Weight: 85 lbs 17.5"-L x 16.5"-W x 17.5"-H Single Spark Plug, Carbureted, PSRU</p>	<p>650cc Turbocharged \$13,725 Max HP: 100 @ 6000 RPM For Take Off Cruise HP: 90 @ 5500 RPM Continuous Torque: 90 ft lbs @ 4000 RPM Engine Weight: 100 lbs 17.5"-L x 16.5"-W x 17.5"-H Dual spark & ignition, fuel injected, PSRU</p>	<p>1300cc Twin Rotor \$6,600 Max HP: 130 @ 6000 RPM Take Off Cruise HP: 120 @ 5500 RPM Continuous Torque: 120 ft lbs @ 4000 rpm 27.5"-L x 16.5"-W x 17.5"-H Engine Weight: 132 Lbs Single Spark Plug, Carbureted</p>
<p>EXPERIMENTAL ROTARY ENGINE 130 HP - 180 HP TURBOCHARGED</p>	<p>EXPERIMENTAL ROTARY ENGINE 185 HP - 270 HP TURBOCHARGED</p>	<p>EXPERIMENTAL ROTARY ENGINE 260 HP - 360 HP TURBOCHARGED</p>
		
<p>1300cc Twin Rotor \$15,136 - \$20,529 Max HP: 130 - 180 @ 6000 RPM Take Off Cruise HP: 120 - 170 @ 5500 RPM Continuous Torque: 120 - 170 ft lbs 27.5"-L x 16.5"-W x 17.5"-H Engine Weight: 149 - 165 lbs w Turbo Dual Spark & ignition, fuel Injected, PSRU</p>	<p>1950cc Three Rotor Max HP: 185 - 270 @ 6000 RPM Take Off Cruise HP: 180 - 255 @ 5500 RPM Continuous Torque: 180 - 255 ft lbs 32.5"-L x 16.5"-W x 17.5"-H Engine Weight: 175 - 235 lbs w Turbo Dual Spark & Ignition, fuel Injected, PSRU</p>	<p>2600cc Four Rotor Max HP: 260 - 360 @ 6000 RPM Take Off Cruise HP: 240 - 350 @ 5500 RPM Continuous Torque: 240 - 350 ft lbs 37.5"-L x 16.5"-W x 17.5"-H Engine Weight: 240 - 300 lbs w Turbo Dual Spark & Ignition, fuel injected, PSRU</p>

What makes the rotary fundamentally better? Rotary power is nearly vibration free. There is no reciprocating action. Each rotor acts like three pistons in one housing, giving more torque and more horsepower in less space with less weight. A higher exhaust gas temperature creates a naturally occurring thermal reactor to break down hydrocarbons yielding a cleaner exhaust. Our charge cooling uses the incoming fuel and air mixture passing through the rotor as the primary means of cooling the rotor. This eliminates the need for an oil pan, oil sump, oil coolers, and external oil lines. The internal engine temperature will go down as load and rpm go up! Rotary engines have only a few moving parts – hundreds less than piston engines. That means more reliability because there is less to fail. It means much easier maintenance. TBO can be longer. And it will cost only a fraction in time and materials to overhaul a rotary engine. The metered oil system allows you to always run your rotary aviation engine on new oil, and you won't have to change dirty oil and dispose of the oil and filter. A new-oil engine is safer, cleaner, and more reliable.