

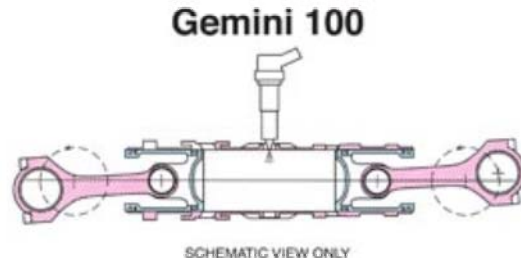
PRESS RELEASE

TECNAM will announce the introduction of a new piston diesel engine called GEMINI100 at the AERO 2009 in Friedrichshafen Hall A7-131 to be installed to its well known P92 Aircraft (High Wing). **TECNAM** will have a mock up and an assistant from Powerplant Developments Limited to respond all customers enquiries.

The Gemini 100 engine is being brought to market by Powerplant Developments Limited. Located in West Sussex, England, Powerplant Developments Limited is a joint venture formed by the alliance of two experienced aircraft engine companies in the United Kingdom — Westlake Air Services which is known for advanced piston engine design and engineering, and Norvic Aero Engines, Ltd. an aviation engine repair and overhaul facility.

Engine basics

The Gemini 100 is a two-stroke, three-cylinder, six-piston 100 horsepower engine that has been designed to meet the needs of LSA designers, manufacturers, and owners. It was named the “Gemini” because of its twin-crankshaft, two-pistons per cylinder layout. Powerplant Developments says the Gemini will deliver a significant number of advantages over the Avgas- and diesel-powered engines currently available to LSAs. Some of these benefits include improved power-to-weight ratio, greater reliability, easier operation, flexibility to run on both Jet-A and diesel fuels, and lower engine/accessory installed weights.



Engine design

The Gemini engine is an example of simplicity in design and operation. The Gemini 100's twin-cylinder, opposed piston engine has two pistons in each cylinder with the combustion chamber formed between the crowns of the pistons.

This design eliminates the need for cylinder heads, camshaft, and associated valve gear. It has two half-length crankshafts linked by a gear train driving a centrally mounted propeller. There is no long, centralized, crankshaft in the engine. Instead, the Gemini engine has two half-length crankshafts that are shorter than a conventional crankshaft; providing excellent torsional stiffness.

In addition, to ensure that crankshaft problems are eliminated in the Gemini 100 engine, the half-length crankshafts are manufactured with high-quality “EN40” steel — a material frequently used in Formula One racing engines routinely operating at up to 19,000 rpm.

Engine weight

The 100-horsepower Gemini engine weighs only 155.43 pounds (70.5 kg), giving it a high power-to-weight ratio. The installed Gemini engine, including the heat exchanger, associated hoses, and fittings, is an amazing 190.5 pounds providing LSA designers with a significant weight advantage with the Gemini.

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Fuel

Powerplant Developments states the Gemini 100 engine will provide operators with fuel efficiency and cost-savings. Its projections show that at cruise power settings, (75 percent power at 5,000 feet) the Gemini 100 will have an hourly fuel consumption of 4.75 gph of Jet-A compared to the 6.6 gph of Avgas required by a typical Rotax 912 engine.

The Gemini 100 engine not only burns less fuel, it uses less-costly Jet-A fuel. The Gemini 100 engine is designed to provide a 2,000-hour TBO.

