Israel firm wants super-efficient engine to power car revolution

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Israeli firm Aquarius Engines says its reinvented internal combustion engine can allow cars to travel over 1,600 kilometres (990 miles) on a single tank of fuel

An Israeli firm says a super-efficient engine it has created could drastically reduce fuel consumption and help power an auto industry revolution as manufacturers search for environmentally sound alternatives.

Industry analysts, however, question the reinvented internal combustion engine's chances of success at a time when purely electric car technology is advancing and attracting investors.

The invention from Israeli-based Aquarius Engines is currently being discussed by France's Peugeot, the firm said.

Aquarius says the cost of the engine will be as low as $100 (92 euros).

According to the firm, the engine can allow cars to travel more than 1,600 kilometres (990 miles) on a single tank of fuel, more than double current distances.

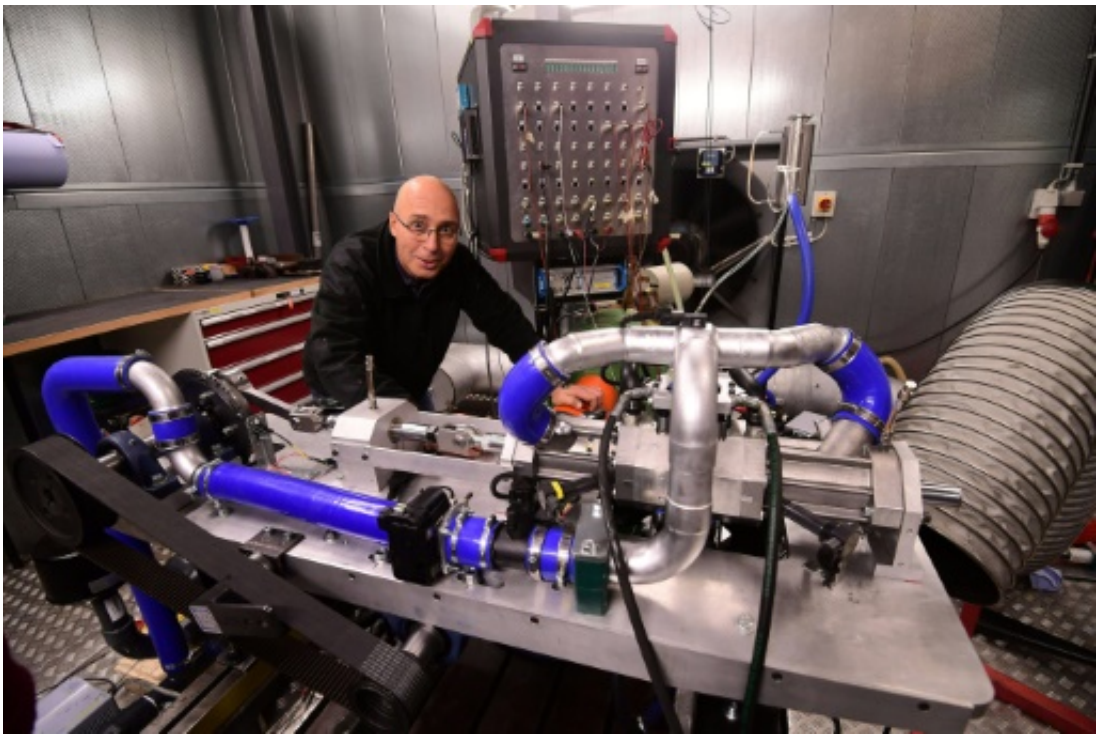
Such efficiency is vital as countries seek to reduce carbon dioxide emissions—a main cause of climate change. Car engines are a major source of CO2 emissions.

Aquarius's technology works by stripping back the traditional engine under the bonnet.

It replaces the combustion engine with its multiple pistons thrusting up and down with a single piston that goes side-to-side.

It has fewer than 20 parts and a single action, the company said.

In tests by the German engineering company FEV, the Aquarius engine's efficiency was more than double that of traditional engines.



Shaul Yakobi, inventor and co-founder of Aquarius Engines, poses next to a single piston combustion engine invented by the firm to drastically reduce fuel consumption

"It is the highest efficiency you will probably meet," co-founder Gal Fridman told AFP at the company's offices near the Israeli commercial capital of Tel Aviv.

"It has the lowest emissions and the highest power-to-weight ratio."

A Peugeot spokesman said: "We are discussing with them, as with many other start-ups, without obligation or a specific project."

For Peugeot and others, the engine could help them compete with the growing popularity of electric cars, John German, senior fellow at the International Council on Clean Transportation, said.

He said the engine would work best as part of a plug-in hybrid system, with manufacturers looking at "the idea of putting a smaller, inexpensive, range extender" alongside a battery and motor.

But he said Aquarius's radical design, and the changes it would require to manufacturing lines, might make companies in a risk-averse industry hesitant.

Undermining electric cars?

The technology can also be used to make more efficient back-up generators and other products, the company says.