

Volkswagen's XL1 said to be world's most economical car

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The new Volkswagen XL1 Super Efficient Vehicle

(PhysOrg.com) -- Volkswagen has unveiled its new, prototype super-efficient hybrid vehicle, the XL1, at this week's Qatar motor show. The car has been under development for a decade and Volkswagen claims it is the most economical car in the world.

The XL1 has an 800 cc two-cylinder diesel engine and an electric motor. The lithium-ion battery can be charged by plugging it into a normal household electric outlet, but it is also charged during braking. The vehicle can travel up to 35 km (22 miles) in pure electric mode before the diesel engine kicks in.



The body is made of carbon fiber-reinforced polymer parts (CFRP) to lower the weight and reduce drag. The body is manufactured by a Volkswagen patented method known as advanced Resin Transfer Moulding (aRTM).

The XL1 total weight is 795 kg, of which 227 kg is the drivetrain, 153 kg is running gear, 105 kg for the electrical system, and only 80 kg for the interior, including the two bucket seats. Only 23.2 percent of the [car](#) is manufactured from steel or iron. Other materials used include CFRP, aluminum (steering system), magnesium (wheels), and ceramics (brake discs).

The two-seater super-efficient vehicle (SEV) has been designed to be highly efficient, and all aspects of the design aim to reduce emissions and maximize economy. The company says the new design is much more practical than the earlier hybrids, the 1-liter car unveiled in 2002 and the L1 version of 2009, both of which had tandem seating, whereas the XL1 has traditional side-by-side seating. The new car also has wing doors for easy entry and exit.



Volkswagen says the XL1 hybrid consumes 0.9 liters per 100 km (313 mpg) and its [CO2 emissions](#) are 24 g/km. It can accelerate from 0 to 100 km/h (62 mph) in 11.9 seconds, and its top speed is electronically limited to 160 km/h (99 mph).

Volkswagen expects the car will be available in the UK and Germany at an "affordable price" in 2013.

More information: [www.volkswagen.co.uk/volkswag ... ent-vehicle-in-qatar](http://www.volkswagen.co.uk/volkswag...ent-vehicle-in-qatar)

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