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2014 Volkswagen Electric Golf Test Drive

Volkswagen comes clean on its battery-electric plans with this new concept Golf model, which hits the show rooms for the 2014 model year.

BY ANDREW ENGLISH



Wolfsburg, Germany— Walk round this experimental battery-electric Golf and coachwork stickers aside, there's only one detail that marks it out as anything other than millions of VW hatchbacks already produced. There's no tail pipe. As rivals, including Nissan, prepare lightweight futuristic electric transport for sale this year, VW is a bit behind. But the company believes that acceptance of EVs will take some time and if folks soon want an electric Golf, they'll be ready. We got a chance to sample a very early prototype. Let's see what it's like behind the wheel.

The Specs

VW has been here before, most notably in 1976 when an experimental 25 hp electric

Golf was successfully tested over 12,500 miles. In 1981, VW unveiled a series of CityStromer battery Golf models in conjunction with electricity supplier RWE. Powered with lead-acid batteries, performance and range were gradually increased and VW sold 100 units of its electric Golf. More recently we have seen the plug-in hybrid Golf Twin-Drive, which will enter small-scale production this year.

The big difference here is the inclusion of a 176-pound AC synchronous (brush-less) electric motor driving the front wheels, powered by a 694-pound, 26.4kWh, 180-cell water/air-cooled lithium-ion battery, which is distributed in three places round the car; under the trunk floor, under the rear seats and in a central under-floor tunnel. The extra weight of the battery, current inverter and electric motor is partly compensated by the loss of a fuel tank and piston engine driveline. At 3358 pounds, the battery Golf weighs 452 pounds more than its diesel equivalent with a twin-clutch transmission. The motor punches out a healthy 114 hp and 199 pound-feet of torque to the front wheels. That's enough to give it a top speed of 113mph, with 0 to 62 mph in 11.8 seconds. The bad news is the range is just 87 miles in the NEDC Combined driving cycle. After that you are in for an eight-hour wait if you recharge on a domestic US supply. If they ever arrive on the sidewalks, three-phase 50 kW fast-charge monsters will provide an 85 per cent top up in half an hour, but regular use of such rechargers will reduce the battery's life.

Ironically the Golf/Rabbit GTI launched in Frankfurt almost 35 years ago had a similar top speed and power output, although its weight was almost half that of the battery Golf and it also chucked a fair old balloon of hydrocarbons and carbon dioxide out the back.

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The Drive

Climb in and you'd struggle to see any difference between this interior and that of the standard turbodiesel Golf. The trunk floor loses a couple of inches of capacity to accommodate the battery and 20-foot recharging cord, but that's about it. Wait a moment, though, what's this on the dashboard? In place of the standard rev counter and fuel gauge, VW has brilliantly changed its analogue instruments to show power usage in kilowatts, and the charge left in the battery pack. For the pedantically minded, there are digits available in the pull-down menu, but the dials give you a quick glance at how far you've got left to run. A key start activates the systems and a further twist gets the motor prepared.

The transmission is a single speed, with an automatic-style shifter in the centre with conventional markings of Drive, Neutral, Park, Reverse and Brake, which dials in more regenerated braking energy. You can also use steering wheel paddles to slow the car by regenerating electricity in three progressive stages.

Like all electric cars where peak torque is available from zero revs, the Golf is quick away from the lights. Even with three adults on board, the motor's torque keeps it strong and responsive to the accelerator up to about 50 mph when the torque starts to tail off. This is a problem with single-speed electric motors, but as Tesla have found, sourcing a transmission to handle the getaway grunt is not easy. VW says it is working on it. Despite that drawback, the Golf will cruise happily at 75 mph and pulls gamely up to 90 to 100 mph. It's eerily silent and refined, much better than rivals that are much nearer production.

Throw it through the turns and Golf feels taut with good body control. The low rolling resistance Michelin tires clump about in pot holes, but VW says it has yet to optimize the chassis and that will improve. The engineers won't have to do much with the steering, however, which is well weighted and direct. Production cars will come with a three-stage drive system comprising Comfort, which gives the full 114 hp, Normal which restricts power to 87 and Range+ which further reduces it to 67. As a way of eking out the remaining juice in the battery Range+ works, but if you are trying to struggle to a far-off destination, it's a stressful sort of drive.

The Bottom Line

As far as battery-electric car go, the Blue-e-Motion Golf shows promise even though the Leaf is going to beat it to market by several years. True, there are niggles, the range is too short and this is very much a work in progress, but it's about as normal as electric drive gets. A fleet of these cars will be tested in Europe, China and the U.S. in the next few years. While other companies are quite enthusiastic about the upcoming EVs, the man charged with selling VW's version, VW Group chairman, Martin Winterkorn doesn't think the market is right just yet. "To be a resounding success," he says, "the electric car must be affordable for a wide range of people and must be uncompromisingly practical in everyday use. Only then can one truly speak of the beginning of the era of the electric automobile and of measurable positive effects on the environment."

One thing is for sure: The next decade is going to be very interesting.

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