



# ZERO ELECTRIC MOTORCYCLES

*A road, a dualsport and an offroad e-bike*

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**Pics: Meghan McCabe**

This Californian brand is probably the world's most famous name in electric motorcycles, having been around since 2006, when the idea of any electric vehicle was still a somewhat foreign concept, and reserved for the horrible, little, plastic, eco boxes that plagued Europe at the time. As we then expected, times moved on, cellphones are now personal assistants more than mobile communication devices, you can film and edit your own HD video feature using a little onboard camera that is purchasable for less than five grand instead of hiring a film crew for half a million and the fastest motorcycle available at the moment is an electric one, beating the Hayabusas and ZX-10Rs of this world. The fastest electric bike isn't a Zero, but then neither is Zero the most expensive, and they are now available in South Africa. They are imported by the Cape pairing of Craig Marshall and Dalene Stiff, who brought them up to Joburg as part of their

demo road show. Craig is a enthusiastic fellow that can speak all day about Zero, as was seen at his stall at the 1000 Bike Show, where he spoke non-stop for two consecutive days. This means that he is very keen on his brand, which something everyone wants from someone they are buying something from, and he is also the proprietor of Dualsport Africa, a company also based in the Cape that rents out adventure motorcycles and does adventure tours, thus is a pro-active member of the motorcycling fraternity. He and Dalene did all the riding in the pics for this story, which is convenient, because it is difficult to film yourself while you are riding. It takes way too long. Dalene has challenging task of being Craig's mother-in-law. They spent their Joburg stint in Roodpoort North, thus we made our way there, to a luxurious property on a golf course, in one of the richest areas in South Africa. The fact that this is a somewhat larry area is interesting not because

that's where the friends they were staying with lived, but because there are many houses where rich and therefore forthright people stay, the kind that don't take too kindly to motorcycles zooming up and down their road. They had three models on hand – the S, the DS and the FX, the S being a street-fighter, the DS being a dualsport and the FX, obviously, being the offroad model. The whole approach to electric bikes is different. Firstly, they are small – well, these ones are, especially the S street model, which even Dalene, blessed with a feminine stature, can sit on with both feet successfully making firm contact with the earth. As a sport bike, this doesn't bode well, because, as everyone knows, sport bikes are supposed to be big, and mean, and menacing, and this becomes difficult when the bike feels as though it could fit in your pocket. It's meant to be a dagger, not a pen knife. Also, you turn it on, the lights on the dash go through the Christmas celebration all



lights on dashes go through when you turn the bike on, and then nothing happens. There's no starter button, no further start up procedure, if you want to you can maybe make sure the emergency kill switch is not on and really that's it. You sit there in a vague silence. As you dismiss the notion that anything meaningful has happened, you nonchalantly twist the throttle, and nearly hit a nearby wall. Okay, this thing works, so you nervously ride it in a more daunting silence up the seemingly endless golf estate driveway and out of large entrance gate onto the newly-tarred, Roodepoort North road. Right, there are no walls that would pose any immediate danger, and with that knowledge securely in your mind, you still brace for impact and open the throttle again...

Normally, we'd offer a metaphor involving an explosion, but an explosive metaphor implies some sort of auditory pantomime, like a bunch of little explosions that propel a piston connected to a crankshaft, the sends power to a clutch, and then sends power through a gearbox. The Zero has none of those, which is why an explosion is a terrible metaphor. Let's offer an anal-

ogy instead: Opening the throttle on a Zero feels like someone has taken an elastic band, a giant elastic band, a kilometre long, tied one end to a tree, tied the other to the front your bike, stretched the elastic as far as it can go and tethered the bike to another tree. The act of opening the throttle is the equivalent of cutting the tether.

The bike moves forward, steadily at first, and then seems to just build acceleration more and more until you are going very, very fast in no time at all.

Well, the top speed of the S is a little more than 160 km/h, which in the world of hyper-sport motorcycles is slightly pedestrian, but this is more of a sports commuter than a long distance hauler, thus you really don't need

much more than 160 km/h, plus it will most likely get to 160 km/h far faster that whatever you are riding now.

Part of this is down to the fact that it has no clutch, no gear lever and nothing to interrupt its acceleration. From standstill,



*Aussie rising star Jack Miller accepted full responsibility for a crash at Misano. This might have made him unpopular since the MotoGP paddock, and most racers and race officials everywhere have an unwritten rule. "Never admit to mistakes!"*



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you open the throttle and the bike just goes, and carries on going until you are very much somewhere else. And it does it in utter silence. People on the side of the road will hear what sounds like a remote control car coming, and will be surprised to see a motorcycle whizz past. You hear only a bit of wind noise, as the invisible elastic band pulls you along. We spent the day blasting up and down the roads in Roodepoort North, with large walls cordoning off large properties looking on each side, with many a woe's house wife waiting behind them for something to complain about. In this instance, they had buggerall. These bikes sound like subtle remote controlled cars, and their soft whizz can barely penetrate the foot-thick walls. We even spent much of the day riding the offroad bike in a nearby veldt. Imagine if we had done that with a petrol bike, emitting the signature petrol bark of an offroad bike. We would have been *moered*.

They are small, so you can throw them around, deviating as slow moving traffic dictates your path, and all the while opening and closing the throttle letting the elastic pull you excitedly to your will. Then, after about 130 km, it will run out of electricity and will come to a very final halt, with no quick fix by popping it to a garage. But there are ways around this. The 130 km range is at full torque, full horsepower and with the bike being ridden by a juvenile journalist with a nifty new toy that he'd have to give back by the end of the day and so is making the most of it. If you ride at more normal speeds, and if you take the option of an extra battery, you can get as much as 276 km on one charge. Let's be honest, though, most people don't do more than 130 km in a day – that's the equivalent of Pretoria to Sandton and back, Hillcrest to Durban and back or Paarl to Cape Town. Then, you get home, you plug it into an

ordinary plug in your garage, and seven and a half hours later, or a good night's sleep's time, its petrol tank is full. You can buy a booster, and it will take three and a half hours to fill, use two charging boosters and it will be even faster, and stack as many as four boosters and then the job will be done in no time at all.

There are more ways of ensuring more life out of you battery, though. You can download something called an App, which goes on



*The S is small and nimble, and easily dodges through the city streets, as Dalene Stiff shows. The day after this, they took these bikes to Red Star Raceway, where that gang did some less suburban laps. Apparently, there are some people on 600s who now have a somewhat reduced ego.*



*This is the Zero S, and it is far from the horrible eco-boxes that the car people go on about. Most of where the engine would normally be is battery, and the engine sits where the swingarm joins the frame.*



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something called a smartphone that connects to your bike via something called bluetooth. It can then adjust bike's power level, the torque output, the top speed, the coasting regeneration and you can run motorcycle diagnostics.

So, if you lower the torque, power and top speed, you will get somewhere around 200 km on a "tank". The regeneration works like engine braking, whereby the motor, while free wheeling, can recharge the battery. The more regenera-

tion you add, the more the bike feels like it has engine braking.

If you no longer feel like riding with only 10% power, there is a mode switch on the right handlebar that will put the bike into Sport mode, negating all power saving measures. Of course, the same button puts it back into Eco mode.

The DS model is based on the same chassis and engine as the S, but with more ground clearance, more suspension, more comfort and more offroad,

while the FX is all offroad, except for the flickers and the numberplate, which means that it can go on public roads. Engine wise, they are mostly the same as the S model, although the FX has slightly less battery, and slightly less engine which is fine because, let's be honest, you don't really do the same distance offroad.

The DS has the same battery and motor as the S, and therefore probably isn't great for doing long distance touring, un-



**FX Mode button:**

You can program your bike, via your smartphone, giving it a chosen amount of horsepower, torque and top speed, mostly in an effort to save battery life. By a push of this button, you can switch between Eco and Sport mode.



Here are the people behind Zero, Dalene Stiff and Craig Marshall, with the Zero S, DS and FX models.

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less you want to stop every 200-odd km and take a few hours to refill the tank. It could take some time to get to whatever exotic destination you are aiming for. It is still good at the commute or shorter weekend rides, especially if you work on a farm on top of a hill with a dirt road leading up to it.

Then we get to the price of these bikes, and please don't stop reading after seeing it, because there is more to it than a number. The S and the DS are R162,000. The FX is R130,000.

Before you throw up your arms in despair, keep in mind how much you are spending on your current bike. The Zeros

don't consume any petrol, any oil, any coolant, they don't need any engine servicing, they don't have clutch plates, they don't have spark plugs, no valves, no piston and rings, or even bearings. There is also no gearbox at all, even a CVC or automatic one.

The batteries have a service life of 500,000 km, while the engine has a service life of more than one million km. So when you sell the bike on five years later with 150,000 km on the clock, the new buyer can take it happy in the knowledge that it is barely run in. All that will eventually require replacing is the brake pads, the brake fluid, the drive belt and possibly

some suspension servicing.

While the initial outlay might be hefty, its steady cruising after that, especially when you look at the price of fuel and the way it is being increased steadily. The newest proposed scheme by our esteemed rulers is to do away with their ill-conceived e-toll and instead add the bill to our fuel tax.

By that logic, if you really want to screw the government over, buy an electric bike.

Suckers.

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The dash is a digital unit, showing everything you need to know, including an oddly-shaped fuel gauge.



Most of where the engine compartment would normally be is now battery, and the engine is this unit found near where the swingarm meets the frame. It's called a Z-Force 75-7 passively air-cooled, high efficiency, radial flux permanent magnet, brushless motor, which we hope is good. It pushes 54 hp, but more importantly it pushes 92 Nm torque, which is available instantly thanks to no clutches and gearbox and other things that get in the way.



The S and DS come with a "tank" bag, that sits in the empty space not occupied by a petrol tank. Otherwise, you can put a whole extra battery in there, increasing your range to as much as 276 km