



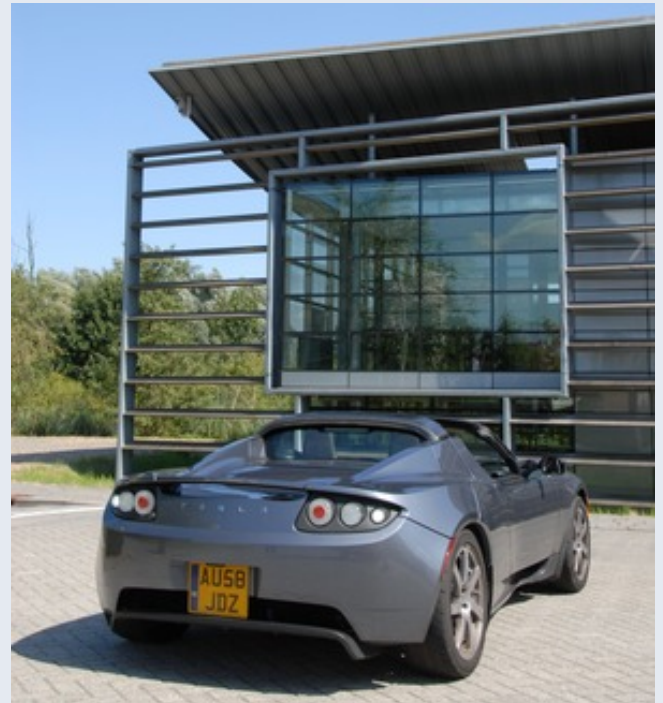
## Tesla Roadster

### The future is here

**A few highlights from recent motoring history: Mini made the small car popular. Not much later Smart did the same for the micro car. The Volkswagen GTI was the first fast family car. Renault is regarded as the inventor of the MPV with the Espace. And now the new American brand "Tesla" wants to join this group of innovators with the "Roadster": the first mass-produced, electric sports car.**

Because Tesla is a new brand, it wants to focus on its own specialism: building electric drive trains. So to build a good car around their electric motor, Tesla asked Lotus for help.

This is why, at first glance, the Tesla Roadster seems to be no more than just an electric Lotus Elise. However, both cars share no more than 7% of the parts, the similarity is limited to the basic design. This means that the Tesla is made out of lightweight materials and that the weight is distributed evenly over the front and rear wheels.



### Ergonomics

To make the car strong, giant reinforcement beams are under the door sills. This makes getting in and out of the Tesla tricky, especially with the roof closed. Although the Tesla is larger than a Lotus Elise, the boot is still minimal.

The cabin is very small and drivers taller than 1.85 metres will touch the roof with their head. Of course when the roof is open headroom is infinite, but tall drivers then find their view blocked by the top beam of the windscreen while the speedometer is obscured by the steering wheel. Visibility is poor by nature because of the small wing mirrors and the huge shoulders.



The standard equipment level is fine and Tesla uses high-tech materials. The "Tesla Roadster Signature Edition" shown here costs £94,000 but gives the feeling of a poorly constructed kit car. Panels in the interior show gaps and colours don't exactly match. Knobs and levers are all made out of cheap plastic. Overall build quality is below average and surfaces are easily scratched.

Besides this, it is obvious that Tesla started out with an existing design and then altered it to suit their own requirements. Buttons and displays have been fitted in the strangest places. For example the display of the trip computer is mounted below the steering wheel so it can not be read safely while driving.

A spokesman of Tesla emphasises that the test car shown here is an American pre-production model ("VP30"); European cars will have better build quality. For 2010 most of the ergonomical problems will be solved.



## Performance

But ... turn the key, enjoy the silence, press the right pedal and all is forgiven and forgotten at once. The first few yards with the Tesla Roadster are a unique experience. Because there is no traditional engine noise, it feels like an invisible force is pushing the car. That invisible force is so strong that the explosive power of a petrol car seems like a mere toy cap gun!

The Roadster has just one gear in which it accelerates extremely fast and is seemingly unstoppable. The sprint from 0 to 62 mph takes just 3.9 seconds and even far above that speed the slightest push on the throttle is enough to firmly press both occupants in their seats. It doesn't matter what the speed, the Tesla always accelerates as fiercely whereas the average sports car will only do full throttle in first gear!



Although the acceleration is phenomenal, the sensation is completely different than with an everyday petrol car. The more revs, the more power an internal combustion engine will deliver. The brute increase of power and the mighty roar of an exhaust provides the sensation. The Tesla doesn't build up

power, it's simply always there, instantly. This is why the drama is absent, while the driving experience is more pure.



As soon as the throttle is released, the Tesla slows down. The wheels drive the electric motor, which now acts as a large alternator and generates power. This is one of the reasons why the Tesla approaches the range of a normal car (244 miles). This slowing down when releasing the throttle takes some getting used to, but isn't disturbing at all.

## Handling

The big problem when developing electric cars is storing the required energy. More batteries mean a larger range, but more batteries also make the car heavier and less enjoyable to drive. While most other car makers use traditional batteries, Tesla chooses the same technology ("lithium ion") used in laptop computers. This explains why the car is so expensive, but also means the Roadster "only" carries 450 kg of extra weight.



The extra weight hardly affects the car's handling. Only when making an emergency stop the tyres noticeably have a hard job slowing down all that excess weight.

Steering is very direct and because the weight is concentrated in the centre of the car, the Roadster is very agile. Rolling or tilting in the corners is minimal, while comfort on poor road surfaces is fair. The Roadster is a suitable car for a day of leisurely cruising, but also feels at home on a race track. There this eco-vehicle has razor-sharp handling and is just as sensational to drive as a traditional sports car.



## Environment

The big advantage of an electric car is of course that the Tesla Roadster produces zero emissions. The Tesla can be charged at home on a normal socket (3.5 to 16 hours, depending on the available power).

An electric car seems to just shift the emission problem from

the car to the power plant. But the average European power plant is much more efficient than the engine of a car. A calculation shows that the Tesla exhausts just 69 grams of CO2 per kilometre. For those who also have green power at home they will have no emissions at all, yet their sheer driving pleasure with the Tesla will always be maximised!



## Conclusion

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Every car maker presents its latest model as innovative and the definitive solution to a problem everyone copes with. Most of the time this is just hollow marketing speak. But sometimes a new car is introduced that is indeed revolutionary and the Tesla Roadster is certainly one of these.

This sports car does not have an internal combustion engine, but an electric motor. Unlike other electric cars, the Tesla Roadster is actually for sale right now. The Tesla can travel 211 miles on a single charge and is therefore actually usable for everyday traffic. Performance is excellent: most pure-bred sports cars will lose against the Roadster in a straight-line drag race.

Whether or not the Tesla Roadster is better than a traditional sports car is a matter of personal taste. The driving experience is unique. The Tesla Roadster offers less theatre and more driving pleasure. This is not a car to impress others, but to be enjoyed by the driver. Although the price is high, this fun machine is cheap to run and emission-free. If it was up to Autozine, this is the future of the sports car. ■



# Specifications

## Tesla Roadster Limited Signature Edition

### Size and weight

<b>Length</b>	395 cm
<b>Width</b>	187 cm
<b>Height</b>	113 cm
<b>Wheelbase</b>	235 cm
<b>Kerb weight</b>	1238 kg
<b>Trailer</b>	unknown
<b>Trailer - braked</b>	unknown
<b>Fuel capacity</b>	unknown
<b>Luggage space</b>	unknown



### Engine and performance

<b>Capacity</b>	unknown
<b>Cylinders / valves</b>	unknown
<b>Max power</b>	248 bhp @ 14000 rpm
<b>Max torque</b>	380 Nm @ 5500 rpm
<b>Drive</b>	achterwielen
<b>Acceleration 0 - 62 mph</b>	3.9 secs
<b>Top speed</b>	200 km/h
<b>Average mileage</b>	unknown
<b>Mileage urban</b>	unknown
<b>Mileage extra urban</b>	unknown
<b>CO2 emissions</b>	unknown



### Price

<b>Price</b>	£ 94,000
<b>Price base model</b>	£ 94,000