

The head of the household has just arrived at Schüttgut in the Austrian town of Zell am See. Wearing a thick coat on this winter's day, he kneels on the asphalt. Dr. Wolfgang Porsche is inspecting the wheel hub of a most unusual vehicle that also has just arrived at the family estate. Dr. Porsche rises, shakes the dust from his trousers, and beams like someone whose very first brand-new Porsche stands outside the door.

In this case, it's the very first Porsche in the world—designed and built in 1898 by his grandfather and company founder Ferdinand Porsche. It was put into a warehouse in 1902 and then forgotten for more than a hundred years. This Egger-Lohner "Model C.2" electric car is a sensational component in the history of technology. When the car was found and awakened from its long slumber, its drive system had just come back into fashion again.



Ferdinand Porsche joined Béla Egger & Co., which later became the "Vereinigte Electricitäts-A.-G.," in Vienna as an apprentice in 1893. He quickly rose to become head of the testing department, where he met the visionary carriage-maker Ludwig Lohner. As proprietor of the "K. u. K. Hofwagenfabrik Jacob Lohner & Comp.," Lohner had realized that the declining sales of his luxury carriages signaled the end of the age of horse-drawn coaches. On investigative trips through Europe and America,

Dr. Wolfgang Porsche with the P1—his grandfather's first design—and his 911



Back to the Future

The first Porsche is always something special. But the first Porsche in the world is a sensation. Discovered more than a century after it was made, it is still full of innovations.

By Dieter Landenberger Photos by Jürgen Skarwan

The young designer marked his intellectual property with a "P1" for "Porsche 1"



The "Tudor system" 44-cell battery had a charge volume of 120 ampere-hours



This electric car from 1898 is in its original, non-restored condition



A single-speed differential gearbox transmitted power via sprockets to annular-toothed wheel hubs

he developed a sense for the radical changes of his time, and decided to manufacture both gasoline and electricity-powered cars. He had especially high hopes for the success of the latter, which were expected to attract more buyers on account of their lower levels of noise and pollution. He ordered the electric systems for his cars from the "Vereinigte Electricitäts-A.-G.," and had the chassis and car bodies built by his own company in Vienna-Floridsdorf.

The first Lohner electric car, whose development team had included Ferdinand Porsche, was presented in 1898. With an electric motor lying laterally between its front wheels and steering done via its rear wheels, it was far from ready for series production. The company's next test vehicles were designed entirely in accord with the ideas of young Mr. Porsche, who favored front axle-pivot steering and an electric motor at the rear. Known as the "Egger-Lohner-Elektromobil C.2," this car drove onto the streets of Vienna on June 26, 1898. And Porsche? He established his designership discreetly but unequivocally by carving the abbreviation "P1" into all of the major components, which gave the electric car its nickname.

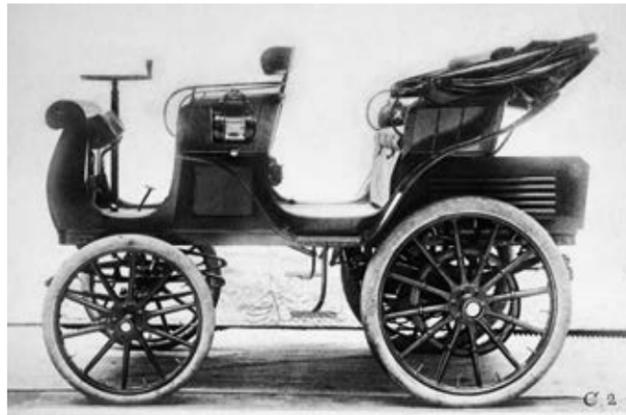


The car embodies the fruition of an astonishing number of ideas. For the drive system, Ferdinand Porsche used an octagon motor which he designed, and which acquired that name on account of its eight-sided housing.

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A swinging axle suspension protected the electric motor from impacts



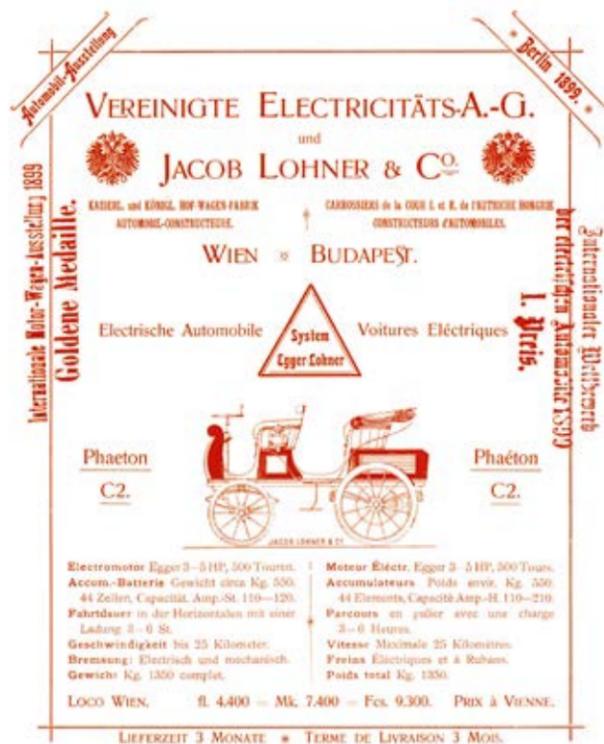
Historical photo of the P1 with a four-seat phaeton carriage

The very compact electric drive, which weighed just 130 kilograms, had an output of about 3 horsepower (2.24 kW) at 350 rpm. For short stretches it was even capable of about 5 horsepower (3.73 kW), which enabled it to reach 35 km/h—a veritably fantastical speed given its carriage.

Speed could be regulated by means of a twelve-step control mechanism consisting of six forward gears, two reverse gears, and four levels of braking. Porsche was able to achieve this by switching the electric motor's collectors sequentially or in parallel, by altering electric resistance in the circuit, and by switching individual battery cells on or off. Thanks to its "Tudor" batteries, which weighed around 500 kilos, the car had an impressive range of 80 kilometers. Two different brake systems were responsible for deceleration. In addition to a mechanical belt brake, drivers could activate an electric brake by pressing on the rim of the steering wheel, which would promptly interrupt the flow of current. Another innovation consisted of exchangeable car bodies. "Coupe" and "Mylord" carriages meant that the car could be used in both summer and winter.

The P1's first litmus test took place in September of 1899 at the International Motor Show in Berlin. There was a lot of competition among drive systems at the time. Of the 120 participants in the show, the 19 makers of electric cars had to hold their own against the more numerous makers

Instruments kept P1 drivers informed of voltage and current



This leaflet lists a peak speed of 25 km/h, but short spurts of 35 km/h were also possible

of gasoline-powered vehicles. To demonstrate their cars' performance and cost-effectiveness, they announced an "electric car price race" for September 28. The route was 40 kilometers long and included several gradients, an 8.6-kilometer high-speed stretch, and a 7.8-kilometer cost-efficiency evaluation. With three passengers on board, Ferdinand Porsche crossed the finish line 18 minutes ahead of the next competitor. Gold medal!



In November of 1899, Porsche went to Lohner-Werke as head designer, where he was able to put his next big idea into practice, namely, the electric wheel-hub motor. By 1900, an electric car known as the Lohner-Porsche that was powered and steered by wheel-hub motors caused a stir at the world's fair in Paris. Ferdinand Porsche went on to reveal his innovative spirit in ever more impressive ways. A race car equipped with four electric wheel-hub motors became the world's first all-wheel-

drive passenger car, also making a name for itself with all-wheel brakes. His next idea was no less visionary. Still in the year 1900, he combined a battery-fed wheel-hub drive with a gasoline engine—and the idea of a series hybrid-drive was born.

But only the best is good enough. And that principle brought an end to the P1's success story in November of 1902. With a handwritten note by Ferdinand Porsche, the electric car was placed into a vehicle storehouse, where it waited 110 years before being found. When Dr. Wolfgang Porsche heard of the discovery, he naturally wanted to have the—very first—Porsche.

The P1 has left Schüttgut as part of the activities marking the fifth anniversary of the Porsche Museum in Stuttgart-Zuffenhausen in 2014. As the oldest vehicle in the permanent exhibition, the P1 plays a key role in the museum—by bridging the past and the present.



Dr. Porsche examines one of his grandfather's design sketches