



Press release
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Pioneering innovations

Laboratory on wheels and a vision of the future: 60 years since Borgward's presentation of its "Traumwagen"

Stuttgart — Carl F. W. Borgward repeatedly turned to the United States for automotive inspiration, especially after the Second World War. The "Big Three" in the USA had begun developing what are known as concept cars in the early 1950s. General Motors, for example, would present these vehicles at its Motorama shows. Borgward also wanted to develop such a vehicle right after the war in order to point the way forward in terms of style, and also to demonstrate the technological capabilities of its brand.

Because there was never any plan to mass produce or sell the vehicle that would result from Borgward's new project, which would later be given the name "Traumwagen" (Dream Car), the engineers who worked on it were free to fully explore the extreme limits of what was then considered possible. They were also given nearly complete freedom to experiment with various styles. In other words, the project started out more or less from scratch.

One aspect of the Traumwagen's concept has since become extremely important in modern car manufacturing, as Borgward used its silver experimental vehicle to explore the limits of lightweight design. The Traumwagen's unusually styled body was made mostly of light metal, for example. On the other hand, Borgward also used nylon and nylon 6 ("Perlon") in the cabin (which could be partially lowered), as well as in other parts of the Traumwagen's interior. This marked the first time that such materials had been utilised in a car. The experimental vehicle was also equipped with a front-wheel drive system.

Plans called for its newly developed flat engine with 2.0–2.5 litres displacement and an anticipated output of 100–160 hp to be tested under real driving conditions. The engines were also made out of "Elektron" — a magnesium alloy — and even made use of silumin. A fuel injection system was available as an option. The engineers opted for a short-stroke flat engine because it ran more smoothly than other engines. They planned to use the same engine later in the P 100. Development engineer Erich Übelacker wanted the flat engine to serve as the basis for introducing a modular design system at Borgward. The single four-cylinder engine in various displacement classes would have been used for passenger cars, while a tandem unit would have been installed in a lorry and four coupled engines would have driven a tank. An initial two-litre unit equipped with a manifold injection system generated 100 hp on a test rig. The Borgward team was also

simultaneously testing a 2.5-litre engine with two carburettors and a Hirth coupling on the crankshaft. This engine immediately delivered 130 hp on the engine test rig.

The Borgward team experimented extensively with carburettor combinations and different injection parameters. In 1954, Borgward's Prototype Construction department began building the Traumwagen as a one-off in order to thoroughly test this new generation of engines. Because of the high output of the new engines, Borgward technicians decided to install disc brakes on all four wheels for the first time.

Test drives with the new flat engine in the completely new vehicle began as early as the end of March 1955. During test drives in August, however, an accident apparently caused by a defective brake occurred in Bremen. Unfortunately, the team was unable to get the experimental car back into shape for a presentation at the IAA International Motor Show in Frankfurt, where the company had hoped the vehicle would attract a lot of attention at the Borgward stand. When the team got back to rebuilding the Traumwagen, Erich Übelacker altered the roof in a way that allowed it to be raised as a single segment. After conducting wind tunnel tests, aerodynamics specialists also shortened the vertical stabilisers on the Traumwagen in order to optimise handling at high speeds.

Unfortunately, the story of this sophisticated and extremely interesting milestone in automobile design had a sad ending: Borgward actually sold the vehicle in 1962, but overzealous company workers had already scrapped the only Traumwagen ever built. Nevertheless, the few photos of the Traumwagen that still exist offer a very vivid picture of how Carl F. W. Borgward envisioned the future of the automobile back in 1955. In this form, the Traumwagen would still today stand as a symbol of outstanding innovation in automotive design.

Caption:

The Borgward "Traumwagen" explored the use of new technologies.

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