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100 YEARS OF THE BUGATTI TYPE 13 "BRESCIA" — A DRIVING LEGEND



With the "Brescia", Ettore Bugatti fundamentally changed the racing scene.

A legend is turning 100. In 1921, the Bugatti Type 13 "Brescia" heralded a new trend in motorsport. The open-top sports car brought the era of large, heavy racing cars to an end. The lightweight body, superior chassis and powerful engines made the Type 13 a race car that was way ahead of its time.
The open-top two-seater weighed just 490 kilograms and was powered by a water-cooled four-cylinder engine with a capacity of just under 1.5 liters and a power output initially of 40 PS, and later of 50 PS. The race car had a top speed of 150 km/h — a speed that 100 years ago only considerably heavier and more powerful cars could achieve. However, even these cars

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rarely stood a chance against the light and agile Type 13 before the first bend. Their bodies were heavier, their chassis less precise, and their tires could rarely withstand the ordeal of racing for long.

Ettore Bugatti, on the other hand, discovered over 100 years ago that weight was the real enemy in motorsport, and started to systematically turn his focus to lightweight design. Weight optimization was already a priority in the first car to be built in his name, the Type 10. Work began on the Type 13 in 1910, and the car was continuously developed and optimized over the coming years. Bugatti took the Type 13 to the next level in 1921 with the Type 13 "Brescia". The former had been equipped with a 1.35-liter engine since 1914. Due to the outbreak of the First World War, production was suspended shortly after, with the result that it was only after the war in 1919 when Bugatti developed a slightly modified model: now with 1,368 cc of displacement, modern four-valve technology, a vertical shaft and 30 PS of power. This made the Type 13 one of the first automobiles with four-valve technology. The use of white alloy for the crankshaft bearings and pistons was just as original 100 years ago, as was a fuel pump and a pump that sprayed oil onto specifically targeted components. A lightweight and easy-to-shift four-speed gearbox enabled the driver to change gears more easily.

Two years later, Ettore Bugatti increased the cylinder bore to 68 millimeters, which expanded the engine volume to 1,453 cc. In addition to the series production car, he also designed a vehicle for competitions. For this vehicle, he continued to fine-tune the details, used ball bearings, among other things, to make the crankshaft run more smoothly, increased the compression ratio of the engines and the carburetor flow rate, and used a magnetic dual ignition for two spark plugs per combustion chamber. Thus, the racing engine compensated for the inertia of the sparks at high engine speeds, initially of 2,700 rpm, and subsequently rising to 4,500 rpm, and ensured reliable and powerful combustion. The Type 13 reacted quickly to throttle inputs, and was easy to maneuver through corners thanks to extremely precise steering. Lightweight wire-spoked wheels instead of heavy wooden wheels reduced the unsprung masses and increased agility.

FAST AND TECHNICALLY SUPERIOR

"What already set Bugatti cars apart 100 years ago was high material performance and quality, as well as careful workmanship," explains Luigi Galli, Specialist Heritage & Certification at Bugatti. "This made the legendary Type 13 not only the fastest, but also the most agile and reliable car on the Grand Prix racetracks of the last century, and caused a sensation from its very first appearances at the beginning of the 1920s."

The model celebrated its greatest triumph at the Grand Prix for Voiturettes in Brescia in September 1921, thereby cementing its status as unbeatable. Four Type 13 cars finished in the top four places — the remarkable victory became synonymous with the model. And this remains true up to the present day. In the 1920s, the cars won almost every competition they entered. Especially in the tough road and mountain races, with their tight bends, poor road surface, potholes, sand, and piles of stones, the lightweight, powerful sports cars from Molsheim had the edge over their competitors.

The Bugatti Type 13 heralded a golden decade, and the company flourished. Over the next few years, the French factory sold 711 cars of this type with the 16-valve racing engine, in addition to 388 cars with engines featuring a smooth-rotating crankshaft with ball bearings.

Bugatti continued to implement the concept of the Type 13 successfully with different vehicle lengths, for example in the Type 15, Type 17, Type 22 and Type 23. The Type 13 was produced in Molsheim until 1926. Bugatti sold around 2,000 of the model in total. Employees already started assembling the Type 35 in 1925. This model took the successful series forward, and followed in the tire tracks of its legendary predecessor. Over the next few years, it was to become the most successful race car of all time, clocking up over 2,000 victories.

The glorious Grand Prix days of the marque continue to be an important part of Bugatti's company history, and the historic models like the Type 13 and Type 35 are still a source of inspiration for the modern hyper sports cars. Even though a modern day Bugatti is no longer built for motor racing, it matches the historic race cars in terms of speed, agility and extraordenary quality. At the end of 2020, production began in Molsheim on the hyper sports car which perfectly embodies its ancestors: the Bugatti Chiron Pur Sport. With its optimized aerodynamics, shorter-ratio gearbox and all-new tires, the most agile member of the Chiron family is bringing the performance of its legendary predecessor back to modern-day roads. The basic price of the production version of the hyper sports car, limited to 60 units, is three million euros (net).