

BUGATTI BOLIDE ENTERS NEXT PHASE OF TESTING



When the Bolide was first revealed as a thought experiment in late 2020, it presented a vision of a lightweight, track-only hyper sports car delivering incomparable performance, built around the iconic W16 engine. That ambitious dream is being transformed into reality, as the Bolide prototype begins its next phase of development testing.

At The Quail, A Motorsports Gathering in August 2021, Bugatti announced that the Bolide¹ would be developed for a limited production run of just 40 units. Centered on the premise of creating the ultimate track-only Bugatti and set to be the most uncompromising model to ever emerge from Molsheim, it represents an entirely new level of engineering, aerodynamic and technological innovation.

For the Bolide, Bugatti started with the quad-turbo W16 engine, and then built the lightest possible car around it. Its minimal bodywork is designed carefully to leverage maximum downforce, most efficient cooling and exceptional power-to-weight ratio. In its final form, the Bolide is expected to deliver 1,600 PS and a dry weight of only 1,450 kg to better the magical 1:1 ratio.

Christophe Piochon, President of Bugatti Automobiles, said: “The Bolide is treading new ground for Bugatti. Never before has such a powerful engine been paired with an ultra-lightweight design to create a track car that delivers motorsport levels of performance. Almost every component has been analyzed and redesigned to ensure Bolide is as light, capable and reliable as our strict targets require it to be. The next phase of development is a major milestone in the creation of a car that takes Bugatti’s “form follows performance” philosophy to a new level.”

Creating the Bolide is a case of bespoke craftsmanship. Although the engine may be familiar in its layout and capacity, it is integrated into the Bolide in a fully different way. A newly shaped carbon monocoque compared with Chiron² meant re-engineering many components, including cooling, transmission and suspension, each of which now had to be packaged within the incredibly compact and aerodynamic design of Bolide, with a matter of millimeters to spare. With new engine mountings, the suspension of Bolide’s drive unit is three times stiffer than the Chiron’s. Together with the uniball suspension bearings, the Bolide gives the driver even more precise feedback. The Bolide also uses 3D-printed titanium rockers to help create intricately shaped and lightweight components.

The engine itself is central to the Bolide experience, but subtly adapted for this car’s unique character. It always operates on all four of its turbochargers — perfect for the racetrack where engine revs are consistently high, but also for weight and packaging reasons. The team has tuned the engine to deliver higher revs per minute and successfully paired it to a modified transmission designed to deliver even sharper performance.

The braking system offers entirely new levels of performance and innovation. In the Chiron, the brakes are an effective and long-lasting carbon ceramic system but the Bolide uses even more heat-resistant carbon-carbon brakes. These must be thoroughly warmed before they reach their peak effectiveness so Bugatti engineers designed completely new calipers that would more efficiently generate and absorb heat. With 18-inch tires, 390 mm brake discs were created and a carbon cover placed on each wheel to help protect the rims from the extreme heat generated by the brakes.

Befitting its status as a track car with the performance of a top-level motorsport machine, the Bolide is fitted with slick tires which — at the rear — can only be found on LMDh vehicles racing in the FIA World Endurance Championship. Thanks to tire manufacturer Michelin’s long-standing partnership with Bugatti, these tires can be used for the Bolide.

First deliveries of the Bolide will commence in 2024, with production limited to just 40 units at a net unit price of four million euros each.

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¹ Bolide: Not subject to Directive 1999/94/EC, as it is a racing vehicle not intended for use on public roads.