



BREMBO FOR THE FIRST TIME AT THE NEW YORK INTERNATIONAL AUTO SHOW

Displayed the latest technological evolutions of the brake systems

Brembo offers visitors the best of the braking systems, exposing its latest news at the 88th edition of the New York International Auto Show, an important occasion to see technologies of the future and to get an idea of the best components available on the market.

New Brembo braking system for Formula E

If the future of cars is electric, Brembo wants to play a prominent role in braking systems for both street legal and competition vehicles. This is why Brembo will be the exclusive supplier of the braking systems which will equip the cars in Formula E, the most important racing championship for electric vehicles, beginning from season 5 (2018/19) and for the subsequent two-year period for seasons 6 (2019/20) and 7 (2020/2021).

The new Formula E single-seaters, the first equipped with a battery that allows them to complete an entire race without a pit-stop, will all be fitted with Brembo braking systems: no small engineering feat for the need to design and develop from scratch the discs and carbon pads most suitable for these models.

A Formula E single-seater, driver included, weighs 1,940 lbs (about 331 lbs more than the Formula 1 cars), has 18 inch wheels and sits 49.21 inches off the ground. All of this has an impact on the characteristics of the braking system, which must be perfectly sized to reduce braking distances to a minimum, but without weighing too much.

New Brembo caliper with a revolutionary design

Brembo engineers utilized improved topology optimization in creating this cast aluminum caliper for a road car. Topology optimization is a software tool that allows the user to simulate the stiffness of a component while identifying areas of excess material. This software is often used in the geometric design of racing brake systems made from billet to develop components with optimized performance, stiffness and weight.

A significant reduction of 400 grams per corner allows this caliper to reach the highest ratio of lightweight/stiffness ever for a cast aluminum caliper for road use. The weight optimization ensures a decrease in unsprung weight, resulting in an improvement in the performance and behavior of the car, as well as a reduction in fuel consumption.

The quality, functionality and attention to design of this caliper, enhances its ability to be matched perfectly to the shape and color of the exclusive cars for which it was designed. For this reason, it was Pagani's first choice of brake equipment for the Huayra BC.

Brake by Wire, the brake of the future

Brake by Wire, as we all know, is characterized by the replacement of hydraulic and mechanical mechanisms with electronically managed functions. This system improves safety because the system is more powerful, thanks to regenerative braking, and it no longer has dragging torque. It also decreases CO2 emissions and optimizes energy consumption.

Since 2014, Brembo has successfully used Brake by Wire in Formula 1 and has also extended the application to a few street legal models.

The latest version has further improved the already outstanding quality of the previous models. In fact, the latest evolution ensures a system response time (Time To Lock) of 100 milliseconds, compared to the traditional 300-500 milliseconds.

If you think about the fact that a car traveling 74.56 mph travels 12 yards every 300 milliseconds, you will realize how much this improvement can save lives or at the very least prevent costs due to accidents.

The new Brembo BbW also allows a drastic reduction in system development times, from a few months to a few weeks, therefore streamlining final tuning on the vehicle. Furthermore, our BbW maintains the parking brake built into the rear caliper, as well as the possibility for the driver to set braking sensitivity.



The caliper color choices

At one time, all brake calipers were a single color, the characteristic color of the material used to produce them. This was an oddity in the world of cars which for decades showed of colorful wheel rims, seats, steering wheels and even sound systems. In order to overcome this limitation, in 1992 Brembo launched the first red colored calipers, laying the foundation for them to become true icons of design.

Nowadays, Brembo makes calipers in more than 100 colors, several of which have become distinctive for some vehicle models. Seeing them on the screen is one thing, but seeing them up close and live, as visitors did at the New York Show, is something else, because you can admire the quality and the paint finishes.

This value increases even more as the months pass, because new shades are constantly being developed both at the request of car manufacturers and based on input from our engineers.

Stezzano, March 2018

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