

# THE PAGANI HUAYRA BC

The name "BC" represents the initials of **Benny Caiola**, a person who has greatly inspired Horacio Pagani over the years. Benny was so impressed by the passion and technology of the cars Horacio was designing from the very beginning, he made history as the first customer to buy a Pagani Automobile.

The **Huayra BC** is the most technologically advanced Huayra Coupé yet, introducing innovative technical solutions which will be applied in the Pagani cars of the future. **This not just a "restyling" of the Huayra, but a product that includes innovative changes in every part of the vehicle.** It's a car that has a completely different personality to that of the **Huayra Coupé**.

Conceived primarily as road going car that will give the maximum exhilaration and performance during track days and special events, **the Huayra BC** has been inspired by its "**track focused**" predecessors: the Pagani Zonda R and the Zonda Cinque.

In recent years we have been presented with products that have delivered a new direction for the supercar, introducing hybrid propulsion, a combination of combustion engine and electric motor.





After much careful consideration and research, Pagani Automobili decided not to go the route that others have followed and chosen instead to focus efforts on other technological areas of development that aimed to:

- Create the lightest, globally homologated, Hypercar
- Develop chassis and suspension systems that are derived from motorsport to deliver dynamic and secure car, fast and fun, that retains the comfort typical of a Pagani.
- Develop a completely new AMT (Automated Manual Transmission) paying particular attention to both **the performance and comfort**, without compromising the weight and balance of the car.

### Engine

**The Huayra BC** is powered by a **V12 Bi-Turbo** engine developed by **Mercedes AMG** exclusively for Pagani. The engine unleashes more than 750 horsepower, and **is approved CARB and EU6**. The sports exhaust includes a low back pressure muffler and is substantially lighter compared to the system used on the Huayra coupe. The result of careful acoustic design in geometries and materials such as titanium, the sound of the car with the sports exhaust system becomes even more intense and exciting delivering a **truly unique experience** when driving **the Pagani Huayra BC** on track.





#### TRANSMISSION

The Huayra BC features a **7-speed AMT (Automated Manual Transmission)** developed from scratch and represents a new benchmark in this transmission technology. The gearbox, developed and manufactured by **Xtrac**, features a new electro-hydraulic actuation system and **new carbon fibre synchronizers**, designed to increase the precision of gear engagement and further reduce gearshift times. The clutch control program has also been heavily revised, allowing greater accuracy, despite the increased torque of the engine.

A brand new electronic active differential has been introduced to the platform. The advanced electronic differential control allows the differential to adapt to a full range of demanding driving conditions, from low grip situations, to the extreme driving performance required on the track, always maximizing the traction and increasing the stability of the vehicle. The result is a **highly rewarding and dynamic experience that always inspires confidence.** 

The weight of the gearbox, including the electronic differential, **is approximately 40% lower compared to that of a dual clutch transmission of the present generation.** The transverse layout contributes towards the compact packaging and focuses the mass towards the vehicles' centre of gravity. The net result is that it reduces the polar moment of inertia which has a negative effect on the stability and can create a tendency to oversteer.





To complete enhancements to the transmission package, there are **all new tripod axle drive shafts**, derived from the world of Le Mans racing. No drive shaft system used on other road cars can guarantee the same efficiencies in the transference of the power through the drivetrain compared to the solution now adopted by **Pagani** and this represents a significant step in introducing this pinnacle of drivetrain technology to a road car platform.

#### **SUSPENSION**

The specially developed, bespoke suspension system of the Huayra BC, is the lightest and most effective ever applied to a road going hi-performance vehicle. The suspension components themselves are forged from **HiForg**, a **lightweight aeronautic aluminium alloy** of exceptionally high strength. Continuous evaluation, calculations and testing have allowed us to optimize the design to achieve a weight saving of 25% compared to the suspension of the Huayra Coupe. Even the uprights have been completely redesigned, reducing the weight and increasing the rigidity of the components. This translates into a noticeable increase in the dynamic capabilities of the car, being even more responsive and reactive than before

# BRAKING SYSTEM

**Brembo** is a long standing partner of Pagani Automobili and for the Huayra BC they have developed a dedicated CCM (carbon-ceramic) braking system, with a design that integrates seamlessly and is able to





withstand the additional demands that are a result of the increased performance of the vehicle. The callipers are made with a new proprietary manufacturing technology developed by **Brembo**, through which their engineers have managed to significantly reduce unsprung weight. The calliper is also stiffer thus allowing increased stability in performance under repetitive high performance braking scenarios which is critical to the design requirements of a Pagani.

# WHEELS & TYRES

Like all Pagani models, **the Huayra BC** will be exclusively equipped with Pirelli tyres. Specifically, the car will run on P Zero Corsa in 255/30ZR20 and 355/25ZR21 sizes, guaranteeing the new hypercar from Modena high levels of safety in all usage conditions. The latest P Zero Corsa has a more aggressive-looking asymmetric tread pattern, with three longitudinal grooves reminiscent of the Formula One slick tyres from a few years ago. Another link with Formula One exists in the tyre's geometry and the structure of the bead, which has been designed to absorb the intense stress and flexing generated by a car that puts out more than 1000 horsepower. Pirelli's engineers have created a bespoke product for the Huayra BC that uses new polymers of high molecular weight, improving grip. New mixing systems also mean that the distribution of materials is optimised. Finally, a new structure has reduced the weight of the tyre by around 3%. The lightweight, functionally focused, forged wheels are sized 20 inches on the front axle and 21 inches on the rear axle. In a track optimised specification **the Huayra BC** can be equipped with the Pirelli P Zero Trofeo R on dedicated 19 inch front wheels and 20 inch rear wheels. These tyres have been developed for track use only and help the vehicle to achieve staggering lateral accelerations with **peaks of 2G**.





#### Esp

The **Bosch ESP system** has been specially calibrated to make the most of the newly developed components and in addition to the familiar driving modes of **"Comfort" and "Sport", a third mode has been added for track use, suitably called "Track"**. The modern generation of traction control systems, allow you to optimize performance, and maximize the available traction, assisting even the most experienced drivers, without hindering the driver involvement or enjoyment.

#### **A**ERODYNAMICS

Underpinning the design of the Huayra Coupé was concentration to maximize the aerodynamic efficiency in terms of resistance to attrition and the cancelling out the effect of "lift" on the vehicle body, incorporating for the first time in the history of supercars, active aerodynamics.

The philosophy behind the Huayra BC sought to bring this concept to extremes in the pursuit of aerodynamic performance by increasing downforce even further. During the birth of the Zonda, Horacio Pagani worked in the wind tunnel together with Gian Paolo Dallara, founder of Dallara Automobili and was a great inspiration and mentor to the young Horacio. For the Huayra BC, Horacio and his team have worked extensively on the aerodynamic properties of the car. The many months of study and CFD simulations have defined a form that generates maximum downforce for a performance car like the Huayra BC whilst retaining the unmistakable design language of Pagani.





**Even the internal aerodynamics were treated with equal attention**, in order to extract the maximum available performance. The air speed has been increased in across all ducts and inlets, ensuring not only the effective cooling of the mechanical components, but critically the evacuation of the air, resulting in a dramatic reduction of the aerodynamic drag.

The Huayra BC has been completely redesigned and except for the roof does not share a single body panel with the Huayra Coupé.

### INTERIOR

Less is more - The interior of **the Huayra BC** was designed with appealing traditional Pagani aesthetics and built with a racing emphasis and weight saving in mind.

An electric parking brake replaces the previous mechanical one, saving on some additional weight. The steering wheel is covered in suede leather for optimum grip. The black anthracite colour is a hallmark of the elements of this performance orientated car.





CHASSIS:	PAGANI CARBO-TITANIUM MONOCOQUE, FRONT AND
	REAR FRAME IN STEEL TUBES CRMOVANADIO.
ENGINE:	Mercedes-Benz AMG V12 60 $^{\circ}$ 36 valves; engine
	САРАСІТУ 5980 СС.
Power:	(KW) HP / RPM: (552) +750/6200 TBC*. NM / RPM: 1000/4000.
TRANSMISSION:	REAR ENGINE LONGITUDINAL CENTRAL; REAR-WHEEL DRIVE.
GEARBOX:	$\operatorname{AMT}$ next generation 7-speed (plus reverse)
	WITH ELECTRONIC MECHANICAL DIFFERENTIAL.
<b>BRAKES:</b>	4 ventilated discs Brembo CCM, brake unit.
	ANT. 380x34 MM 6 PISTON CALIPER MONOLITHIC;
	POST. 380x34 MM 4 PISTON CALIPER MONOLITHIC.
WHEELS:	Forged aluminum alloy APP monolithic; front
	20 inch, 21 inch rear (road configuration);
	front 19 inch, 20 inch rear (kit track).
TIRES:	Pirelli P Zero Corsa, Pirelli P Zero Trofeo R
SUSPENSION:	4-WHEEL INDEPENDENT DOUBLE WISHBONE; UPPER
	ROCKER ARM WITH COIL SPRING AND SHOCK ABSORBER
	adjustable Öhlins; anti-roll bar; HiForg arms
	FORGED, MACHINED CNC; UPRIGHTS FORGED AND
	MACHINED CONTROL
WEIGHT:	(Кд) 1218 кд

\*the final engine specification will be released soon







Horaio Pagans

