

## THE GIUGIARO-DESIGNED BRIVIDO IS UNVEILED AT GENEVA

**Extensive research has gone into increasing the on-board comfort of this GT, designed and produced entirely in the company's Moncalieri factories. The vehicle offers supercar performance, respect for the environment and the most advanced technology and innovative solutions for a working prototype which is ready to make its on-road debut.**

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**B R I V I D O**

For its 42<sup>nd</sup> appearance at the Geneva International Motor Show, Italdesign Giugiaro makes the world premiere of a functional, hybrid, four-seat prototype developed on a mechanics of the Volkswagen Group. Capable of reaching 100 km/h in 5.8 seconds, with a maximum speed of 275 km/h without compromising on-board comfort or space, and inspired by technological innovation, the name of the car—*Brivido* ("Thrill")—sums up its soul.

"For the last few big appearances at the Geneva Motor Show," **explains Giorgetto Giugiaro**, "I focused my research on cars that offered great roominess with compact dimensions, and proposing concrete solutions to concrete problems.

2012 will be an important year for us and for the Group, and with this car we want to continue to allow people to dream and to imagine the future. This is an exercise to show a vehicle that delivers awesome sports car performance in an eco-friendly manner, to show great technological content, and above all to have superb comfort. Today true luxury is all about travelling in comfort. Following the research into city cars, this year I wanted to test myself with a GT which is 4.98 metres long and capable of reaching speeds of up to 275 km/h. I would not say the *Brivido* is a dream car—after all, this is not an object which is destined to remain an unachievable dream. My intention has always been to design something which is close to industrial reality and can easily be released into the market".

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*Brivido* was designed, engineered and manufactured in the Italdesign Giugiaro plant at Moncalieri (Turin).

### **Exterior: lines of light designed by air**

Aluminium, carbon fibre, and glass are the materials that define the *Brivido's* exterior. The lines of the body, painted in Xirallic pearl lustre red, are sinuous and aerodynamic and accentuate the sporty, elegant character of this latest Gran Turismo from Giugiaro.

The windscreen, roof, rear window, and large door windows form a glass dome that lets natural light pour into the passenger compartment. There the occupants are surrounded by an exclusive level of finish and high-technology, whilst they enjoy the surrounding scenery and urban landscapes as they travel.

"This is a quest for a genuine four seater," continues Giugiaro, "to offer comfort and visibility, especially for the rear passengers, which is usually sacrificed in this type of vehicle. As always, I've tried to offer solutions which can be achieved practically. The inclusion of a pair of wide doors that rise like gull wings is the only "exotic" concession which makes the *Brivido* a show car. The rest of the solutions are perfectly applicable for vehicles destined for the market. The rear passengers, specifically, can access their seats without having to duck down or lower the front backrests. Instead they can enter the vehicle easily and naturally".

**The side view** is dominated by the specially designed single door which uses glass as a genuine structural element. This allows all occupants to access the passenger compartment at the same time.

The waistline hugs the curve of the wheel arch and is interrupted by the door's side window, which in turn continues below the waistline to significantly increase the transparent surface. As on the *Structura* prototype, this feature offers the driver increased visibility when manoeuvring as s/he can easily see the pavement to the side of the car. At the same time this allows the rear occupants to enjoy great outside visibility. To facilitate window-down interactions such as toll payments, a small portion of the glass can be lowered electronically while the rest remains fixed.

### **A record-breaking light cluster**

Visibility is also a watchword on the outside of the passenger compartment as the *Brivido* showcases real innovation in exterior lighting. Thanks to LED technology, the headlight clusters are not only functional, but also represent a never-before-seen stylistic feature. Extending 2600 mm from the front bonnet, each cluster hugs the sinuous lines of the body and finishes midway along the side panel, at the height of the side door. These clusters thus also act as both sidelights and direction indicators.

"For several years now, thanks to new technologies like LEDs," continues Giorgetto Giugiaro, "even quintessentially functional elements like **light clusters have become something more: a distinctive element and a design signature.** With these innovative light clusters we are confident that the *Brivido* will be instantly recognizable even in the total darkness of night."

The side of the Brivido hides a final technological treasure: the side mirrors have been replaced by an innovative system comprising of **two cameras which literally emerge from the body**. When the control is activated, the wings concealing the two micro-cameras, positioned at the height of the side air intakes, open up 90 degrees and activate the cameras. The camera images are then displayed on monitors built into the steering wheel column.

**From the front** we are greeted with an aggressive, ultra-technological front end. The vehicle is equipped with a single carbon fibre panel that occupies the width of the vehicle. This allows ample air flow to cool the engine and also acts as rear spoiler. On top of this there are the DRL system, the driving lights, and the fog lights.

**The tail end**, also in **carbon fibre**, flaunts two diagonal friezes that diverge from the centre and continue along the body, housing the rear light clusters, the brake lights, the indicators, and the rear fog lights. As well as the rear windscreen, which offers access to the titanium fibre covered luggage compartment, there is a small spoiler that is activated electronically at high speeds to ensure optimum road grip.

Finally, the large side exhausts frame the race-inspired flow deviator.

The generous surface of the **bonnet**, emblazoned with the inlaid "V" in satin aluminium that contrasts with the red paint finish, conceals a **3000 cc engine** which offers 360 HP. "The satin aluminium frieze," **points out Giorgetto Giugiaro**, "is not just a simple aesthetic quirk. We have included it in order to remedy the problem of hard spots and to achieve a lower profile. The red bonnet hides the engine and rises in the event of impact with a pedestrian to soften the impact. Beneath the "V" structure, we have housed actuators directly onto the engine basement, making it an active safety system. Here, once again, what seems like a designer's quirk, is actually a concrete solution to a problem".

### **The Human Machine Interface**

The Volkswagen Group Electronics Research Lab (ERL) in California collaborated with IDG to develop and build the interactive electronics and displays for the Brivido. This includes a unique docking system in the dashboard allows an iPad to be completely hidden away or, with a gesture of the hand, partially exposed to work in a "Minimal" interaction mode. The ERL also helped to create the climate and comfort controls in which the driver and passengers can access "Basic" and "Extended" features on a capacitive touchscreen. Enhancing the transition between these modes, physical buttons emerge from the control surface when needed, and hide away when not needed.

### **Interiors: R&D of classic materials and technological innovation**

Technology, roominess, ergonomic design, comfort, and luxury are the watchwords that characterise the interior trim of the *Brivido*. The cabin offers a genuine *open space* where a

unique environment encases the front and rear seats and the luggage compartment in a continuous solution, thanks in part to the use of extremely durable and lightweight **Titan-Tex®** titanium fibre.

**The dashboard** is structured symmetrically for both driver and passenger. Key information is displayed on the two LCD monitors housed inside two binnacles, one located behind the steering wheel and the other above the iPad dock. This allows the passenger to access the same information as the driver (journey, speed, rpm, etc.) or manage the options for on-board entertainment.

**Italdesign Giugiaro has patented its specific steering column design.** At the top of the steering column are two monitors onto which images from the side and rear cameras are displayed. In this way, the driver has complete control of the vehicle without ever having to take his/her attention off the road.

The main controls are housed on two *touch*-sensitive panels on the spokes of the steering wheel. The left-hand panel is used to operate the infotainment system, the lights and the graphic interface on the dashboard, while the right-hand panel is used to manage the climate control system settings.

With just a simple touch, the driver can select the driving mode of the *Brivido*: "Comfort" or "Sport". The dashboard on the passenger side houses the **iPad integration system**.

On the tablet, the *Brivido* application allows the passenger to control media, navigation, and access online content from his or her lap. The passenger can then stow away the entire tablet in the dashboard via an automatic mechanism or partially dock it to use as an interface area. S/he can then control the media and navigation content in the passenger binnacle display.

In line with the current fashion trends, the *Brivido* exudes an understated elegance. For the interior furnishings, the Color&Trim department at Italdesign Giugiaro invested in research and development on methodologies and materials, opting for a sewing method never used before in the automotive sector: **raw cut seams**. The hides, specially produced for this prototype, are dyed in two contrasting colours - light on the "upside" and dark on the "backside." When it comes to seaming, the hides are bonded and raw cut to enhance the thickness, which is otherwise usually folded under and therefore hidden. In this way, the light-dark chromatic contrast creates a graphic line that outlines and emphasises shapes.

The **front seats** are asymmetrical with a cushion overhanging the door sill on the outer sides. This enables the occupants to get in and out of the car with ease. Occupants sit on this "protruding wing" and slide comfortably inside.

The sides of the **rear seats** house an LED system that makes entry easier in low visibility by optically following the design of the seats. Hiding inside are 3D glasses which make up part of the *infotainment* system. Wearing them allows passengers to watch a film, access travel

information or, by connecting to the Brivido's cameras, watch the road. The controls for adjusting the climate are housed on a touchscreen monitor that descends from the ceiling on request.

The tunnel accommodates the fourteen buttons that activate all the main controls (door opening, parking brake, stability control system, lights) and the 8-speed automatic transmission, as well as contains the classic storage compartments and cup holders.

The display in the middle of the dashboard replicates key information on the climate control system, fuel consumption, and the hybrid system configuration. Depending on the graphical configuration of the display, the buttons required to activate and deactivate the corresponding functions emerge from the dashboard alongside the monitor. New touchscreen technology and the experience of high-quality rocker switches come together to create a new control system.

#### **About the ERL**

Located in the heart of Silicon Valley, the Electronics Research Laboratory represents the Volkswagen Group in applied research and development. Our mission is to develop innovations and technologies for future generations of cars, and to transfer technologies from many industries into the automotive domain. We design and build technical solutions that assist the driver in safe, intelligent, and enjoyable interaction with the vehicle environment.

Further information is available at [www.vwerl.com](http://www.vwerl.com)

#### **ITALDESIGN GIUGIARO**

The roots of the Italdesign Giugiaro Group go back to February 1968 when Giorgetto Giugiaro set up a design studio that represented an innovative formula for the car industry: a firm set up to act as an independent service company, with the aim of delivering creativity, engineering, construction of preseries prototypes, production start-up assistance and all the support required to put a new product into production.

Italdesign Giugiaro has been a part of the Volkswagen Group since 2010.

Since 1968, some 200 car models have been created that have spawned 50 million standard production units produced by leading international car manufacturers.

Further information is available at [www.italdesign.it](http://www.italdesign.it)

## TECHNICAL SPECIFICATIONS

<b>DIMENSIONS</b>	Length	(mm)	4.980
	Height	(mm)	1.298
	Width	(mm)	1.960
	Wheelbase	(mm)	2.910
	Front track	(mm)	1.692
	Rear track	(mm)	1.680
	Tyres	front	
rear			295/35 R21
	Luggage compartment	(l)	355/1326

<b>PERFORMANCE</b>	Top speed	(km/h)	275
	0-100 km/h	(sec)	5.8 sec.

<b>POWERTRAIN</b>			
<b>Engine</b>	Position		Front
	Displacement	(l)	3,0
	Cylinders		V-6
	Valves		24
	Charger		Compressor
	Power	kW (HP)	265 (360)
	Torque	(Nm)	460
<b>Hybrid System</b>	Power	kW (HP)	300 (408)
	Torque	(Nm)	600
<b>Emissions</b>			154 g/km

<b>GEARBOX</b>	Gears	8
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<b>DRIVE</b>		rear
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<b>SUSPENSION</b>	Front	Double-wishbone Adaptive air suspension with leveling system and ride height adjustment
	Rear	Multilink Adaptive air suspension with leveling system and ride height adjustment