

Via Provinciale, 33  
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# dallara *Stradale*

A dream nurtured on racetracks all over the world. The racing technology applied to the pleasure of driving. A unique product, designed to enhance the company's key skills: carbon fiber structures, aerodynamics and vehicle dynamics.

Varano de' Melegari, November 16 2017 - The first model of *Dallara Stradale* was handed over to its owner on the day of his birthday. Giampaolo Dallara, a life as an Engineer, went out to drive the street-legal Dallara right from the building in which he started his business activity 45 years ago in Varano de' Melegari, not far from the house where he was born on November 16, 1936.

In 2015, after a long processing period, twenty engineers and five mechanics were entrusted to a Technical Director: Giampaolo Dallara. The goal was clear: making a car to rediscover the real pleasure of driving on the road or on the track. "I like to think that Colin Chapman, which I began to admire since the days of his Lotus Seven, would appreciate the essentiality and simplicity of this car," says **Mr. Giampaolo Dallara, President of Dallara Automobili.** "This project," adds Mr. Dallara, "sums up everything we learned from racing and from collaborations with our clients, and I am convinced that those who will use this car will be able to try the pleasure of driving for the sake of driving. They will get in the car to take a nice ride and to experience the pleasure of driving".

## Product

In the base configuration, the *Dallara Stradale* is a *barchetta* without doors, like a single-seater racing car. It can be customized in a *roadster* configuration with the addition of a windshield. Adding a *T-Frame*, the car becomes a *targa*. With the further addition of two doors with a seagull wing opening, the car becomes a *coupe*. For those who want to use the car mostly on track, there is the possibility to install a rear wing, which provides access to exceptional levels of downforce.

The car customizations in terms of performance are not limited only to the addition of the rear wing, but it is possible to install adjustable suspensions which allow to lower the car in track set-up, guaranteeing a high comfort standard in any condition. The *Dallara Stradale* provides a six-speed manual transmission, but among the optional equipment a "paddle-shift" system is provided for the robotized gearbox which minimizes the time shifting, equipped of two methods and two different mappings, *automatic*: Normal and Sport; and *manual*: Normal and Sport.

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Thanks to its low weight, an accurate study of vehicle dynamics and high aerodynamic load, the performance is of a true racing car.

- Its 855 kg as a total car weight are a result of the extensive use of composite materials and carbon fiber. The logic behind materials and processes is "materials and processes suitable for their function": *pre-impregnated* in an autoclave for the monocoque; *long fiber compression moulding* in structural components of the bodywork; *body panel system* in exterior panels; *carbon sheet moulding* in reinforcements.
- The kinematics of the suspensions and the calibration of springs and bars and dampers have been defined to maximize the compromise between grip and comfort. Dynamic characteristics of the vehicle have been set, developed and defined in numerous sessions at the Dallara Driving Simulator: expert test drivers have worked closely with technicians and engineers to define the specifications of the suspensions, aerodynamics, engine and ergonomics suitable for an exceptional driving pleasure.
- Thanks to the virtual development of the CFD and several Wind Tunnel sessions, the aerodynamic load coefficient obtained allows obtaining vertical load values (downforce) among the highest between GT roadcars (more than 820kg @ TopSpeed).

The combination of weight, vehicle dynamics and aerodynamics, along with customized tyres, allows to reach lateral accelerations beyond 2G under normal conditions of use.

The *Dallara Stradale* is equipped with the latest Bosch ESP stability control systems (which includes ABS-EBD-TCS-VDC) to ensure an excellent control of the car in all conditions of use.

The powertrain is a 4-cylinder 2.3 L supercharged capable of delivering 400 HP, the result of an accurate selection and optimization of engine components, combined with the electronic control system developed in close collaboration with Bosch.

The first prototype was presented on 16<sup>th</sup> November 2016, when Mr. Dallara turned 80 years old. Since then, the road testing activities have begun, with car homologation and production equipment setting.

On that same day, but one year later, on 16<sup>th</sup> November 2017, the deliveries of the *Dallara Stradale* begin, as promised one year ago.

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## dallara *Stradale*

<b>Dimensions</b>	
Lenght	4185 mm
Width	1875 mm
Height	1041 mm
Wheelbase	2475 mm
Dry Weight	855 kg
<b>Powertrain e Layout</b>	
Drivetrain	Rear-wheel
Engine position	Rear Mid-engine
Cylinders	4
Engine Size	2300 cc
Valves	16
Maximum Torque	500 Nm @ 3000-5000RPM
Power	400 cv @ 6200RPM
Aspiration	Turbocharged
Emission Class	Euro 6d
Chassis	Monocoque and Bodywork in Carbon Fiber, Alluminium frames
<b>Aerodynamics</b>	
Downforce @ TopSpeed	> 820 kg (*)
Aero Efficiency	>2,4 (*)
<b>Suspensions</b>	
Diagram	Double wishbones
Dampers	3 way adjustbale with EPA electric system
<b>Perfomance</b>	
Top Speed	280 km/h
0-100 km/h	3,25s
80-120 km/h in 5th gear	3,49s
100-200 km/h in 5° Gear	8,5s
100-0 km/h	31 m
Maximum lateral acceleration	> 2g (*)

(\*) referring to the track day configuration road homologated

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## Partnerships

The *Dallara Stradale* was developed in close cooperation with **Bosch**, which was part of the Dallara team working on the project and was responsible for the development of vehicle and engine electronic control systems and has certified their reliability. Bosch's contribution began with the first engine bench test cycles and continued in all subsequent testing phases on prototype vehicles. **Bernhard Bihr, President Bosch Engineering GmbH**: *"Since the very first day working with the Dallara, what impressed me the most was the passionate and professional yet modest approach in transferring the technology and spirit of a race car into a pure sports car. The effective cooperation between Bosch and Dallara made this development possible in a very short time. We are glad and grateful that we could take part in making this life-long dream of Giampaolo Dallara come true."*

The collaboration with **Pirelli** has allowed to develop a tyre with the driving simulator before the realization of the prototypes, benefitting from the knowledge of Motorsport and Roadcar sectors, creating a real synergy between the two worlds. The front tyre footprint is optimized to let the pilot feel a direct connection with the steering kinematics, transferring all the feelings to the steering wheel and making the steering torque and driving precision more complete. The rear tyre has been designed to ensure maximum lateral acceleration performance while maintaining a good level of comfort in terms of impact on obstacles and relative damping of the asperity. In addition, the use of the state-of-the-art polymers with dedicated structures has made allow to customize tyres aligned with recent Green Mobility technologies. **Stefano Bizzi, Head of Ultra High Performance R & D Pirelli**: *"We are very satisfied with this collaboration and we are willing to continue to collaborate with Dallara in all the fields where it excels, not only with regard to race cars, but also road cars now."*

The car style was made in collaboration with **Granstudio** of **Lowie Vermeersch**. *"Giving the shape to the Dallara Stradale was really like translating Giampaolo Dallara's dream into a sculpture,"* says Lowie Vermeersch. *"A dream rooted in the timeless beauty of his Miura and nourished through a long career full of passion for racing. For this reason we have avoided a pre-established stylistic idea. As a result, the shape has evolved naturally during the project, in continuous interaction with the engineers at Dallara, and was driven by a clear sense of elegance and harmony in the proportions. This is why we tried to mix beauty and performance in a design that could express genuineness. The car has thus become not only a dream come true but also an expression of what we consider one of the fundamental values of Dallara."*

The testing of the car was entrusted to two Italian drivers, Marco Apicella and Loris Biccocchi, to validate the two souls: performance and comfort. *"For some time now, Mr. Dallara has been telling me: 'Loris, when we find the time to make our road car, I would like you to test it for us. I penciled this in since then'"* says **Loris Biccocchi**. *"I am honored and proud to be part of the development team of the Dallara Stradale for it was a dream for me as well. I have always admired Mr. Dallara, since I saw him for the first time at Lamborghini when I was 17 years old. The shape of the Stradale makes how much they worked on aerodynamics. In fact, from the first laps on the track I realized that it represents what Dallara*

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*cars are well-known for: a stiff chassis, top-quality kinematics and suspensions and an aerodynamics that you begin to feel at 60/80 km per hour. On the road, it passes through deformations, humps and holes without affecting the steering wheel and it maintains a high comfort level. Fast but safe: stability, traction and braking controls seldom intervene. It is amazing” adds Bicocchi " because it lets you drive and does not give you anxiety: it has a great performance both on the mountain roads and on track. It has a brilliant engine, and its the light weight allows an authentic Supercar performance”.*

## **Dallara, the pursuit of excellence**

Dallara Automobili was founded by the current President, Mr. Giampaolo Dallara, who, after working for Ferrari, Maserati, Lamborghini and De Tomaso, wanted to continue to nurture the dream of working in the racing car world in his hometown, Varano de ' Melegari (Parma). It was there that he founded the "Dallara Automobili da Competizione" in 1972.

The success was gradually achieved in Formula 3, first in Italy and then throughout the world, in the United States with the IndyCar, then consulting for major manufacturers. In all these activities, pillar of Dallara has always been the constant attention to technology and innovation. Thanks to this, the company came to be one of the most important reality specialized in design, production and development of racing cars.

The key skills that characterize Dallara are the design with carbon fiber composites; aerodynamics with the Wind Tunnel and CFD; the vehicle dynamics with the Driving Simulator and indoor testing and the high quality prototype production.

Each weekend about 300 Dallara cars race on circuits around the world and in different formulas: in fact, the company provides cars for all Formula 3 Championships and it is the sole car supplier for Indycar, Indy Lights, Formula 2, GP3, Formula 3.5 V8, Super Formula championships. It also manufactures cars for the Formula E, WEC, ELMS and IMSA championships.

In recent years the Engineering business has expanded, both in regards to race cars and in high performance road cars. The company offers consulting service for the most important international car brands, including Alfa Romeo, Audi, Bugatti, Ferrari, KTM, Lamborghini, Maserati and Porsche.

From 2007, Mr. Giampaolo Dallara is supported by Mr. Andrea Pontremoli who, after leaving the office of President and Chief Executive Officer of IBM Italy, became partner and has been appointed as the CEO of the company.

In 2011, the Dallara Indy Car Factory opened in Indianapolis, and it is responsible for the service, production and distribution of spare parts for Dallara racecars in the American championships, as well as for the design and manufacturing of components for the aerospace sector. It is also the

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main office of an "Edutainment" project in collaboration with the Purdue University in Indiana to promote interest in science and technology.

In 2014, the Dallara Group acquired Camattini Meccanica; which is a company specialized in carbon fiber composite materials with headquarters in Collecchio (Parma).

2016 saw the realization of a new research centre for composite materials, called DARC (Dallara Advanced Composite Research Center) in Varano de' Melegari.

In 2017, in the same building where Mr. Dallara started his business activity in Varano de' Melegari, the "Fabbrica Dallara" was inaugurated for the assembly and assistance of the "Dallara Stradale" cars.

In 2018, the educational exhibition center "Dallara Motorsport Academy" will be built in Varano de' Melegari. A competition was held, in 2015, for the selection of the project between Italian architecture studios for the design of the building; the chosen studio "Atelier (s) Alfonso Femia" won the prestigious competition LEAF Awards in London for "Best Building in Construction of 2017". This Centre will host the cars that made the history of Dallara and educational workshops for visitors and students ("Fisica in Auto") to stimulate the passion for technology and innovation. On the second floor of the building, the 2nd year of the Motorvehicle University of Emilia Romagna (MUNER) intra-University Degree in Race Car Design will be held.