



ALFA ROMEO DISCO VOLANTE SPYDER BY TOURING WORLD PREMIERE AT THE 2016 GENEVA MOTOR SHOW

- Touring Superleggera's 90th anniversary celebrations kickoff with the launch of the new Alfa Romeo Disco Volante Spyder.
- Reinventing the industry of coach building, Touring gains recognition in the growing market of bespoke super-luxury motor cars.
- First of a series of seven hand-built units, the Disco Volante Spyder has been technically developed with the support of Alfa Romeo on the 8C Competizione Spider chassis, merging traditional hand beaten aluminium panelling to carbon fibre modelling.
- Innovative twin carbon fibre roof converts the Disco Volante Spyder into a comfortable fixed head coupe allowing daily usage with outstanding comfort.
- The Disco Volante Spyder is inspired by the 1952 Alfa Romeo C52 of which the example from the collection of Museo Nazionale dell'Automobile Giovanni Agnelli of Turin is also showcased. The Museum will host a Touring retrospective encompassing the whole history later this year.

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Touring at the 86th Geneva Motor Show

Touring turns ninety and celebrates this important anniversary at the Geneva Motor Show with a brand new car. A bold interpretation of the open top car, fully devoted to the pleasure of riding with wind tousling one's hair.

The Alfa Romeo Disco Volante Spyder is a two-seater open top car, based on the Alfa Romeo 8C Competizione Spider. It is built for discerning customers in just seven examples, more than half of which have been sold already. The model being showcased at Geneva is the first of the series.

90th anniversary

"The Disco Volante Spyder is the perfect example of the haute couture philosophy that made Touring a respected player in the luxury car scene in recent years." *Piero Mancardi, CEO.*

Bringing together under one roof a talented design team and skilled craftsmen who preserve and maintain the art of the panel beating whilst integrating the most advanced engineering tools. This is the formula that allows Touring to fulfil the rising demand for truly exclusive coach built cars. "We are immensely grateful to Alfa Romeo for having supported this project. Customers and manufacturers give us their trust and we see a bright future ahead of us." *Piero Mancardi, CEO.*

Heritage

The Disco Volante Spyder is inspired by the 1952 Alfa Romeo C52 also present on the Touring stand courtesy of Museo Nazionale dell'Automobile "Giovanni Agnelli" of Turin. The Museo will host a retrospective exhibition encompassing the whole history of Touring in autumn this year.

On its way to the 1953 New York motor show, the C52 had already gained the *Disco Volante* nickname, Italian for 'Flying Saucer'. Once again, Touring had sparked the public's imagination with a groundbreaking shape on what was the eve of space age.

As usual with Touring Superleggera, the lines and volumes were dictated by a strict functional requirement: the new car had to be "insensitive to wind". The Disco Volante was to become the best example of Touring's founder, Felice Bianchi Anderloni's philosophy: "*Weight is the enemy, air resistance the obstacle*".

Using Alfa Romeo 1900 C elements, the car received a new tubular chassis, and a lightweight, striking and efficient aluminium body.

The public embraced the Disco Volante and its revolutionary streamlined contours, though the car's impact went far further: the bodywork was so innovative that it influenced for decades numerous celebrated sports cars.

Chosen by Alfa Romeo to mark its centenary celebration with a bronze sculpture now displayed in Milan, the C52 Disco Volante is one of the most significant models in automotive history.

Design

This is the first open top production car in Touring's recent history. As such it had to be a bold design statement which starts to outline Touring's future design language. The 1952 car was revolutionary. The Disco Volante Spyder is as astonishing and exciting as a coach built car should be.

"We did not want to compromise the pleasure of driving open top. This car is designed as if there was no roof at all." *Louis de Fabribeckers, Head of Design.*

The windscreen is low, sharp edged, without a visible top frame. This gives lightness and a more dynamic look to the car. The uninterrupted razor sharp edge continues through the side windows and fairings, encircling the whole car with a seamless and exciting trait.

"Our idea was that the new project should be dynamic, fast and circular, without being aggressive". *Louis de Fabribeckers, Head of Design.*

The fairings' design certainly draws inspiration from the old Disco Volante and the aerodynamic approach which it expressed. In the present Spyder this concept is made extreme. The fairings are not a discrete element, rather they elongate the horizontal line of the windscreen, giving a surprising "streamlined" effect to the car.

The Spyder maintains most traits that made the Disco Volante an icon. The stylish covered front wheels give a sense of speed and sportiness, whilst the uncovered rear wheels highlight the more muscular details, giving the car a real sense of power.

Just as every Touring car should be, the lines are essential. Volumes and surfaces take the leading role. Just as every Touring car should be, the Spyder is timeless.

Personal commissioning

In line with Touring's philosophy of personal commissioning, all details are dictated by the customer's taste. The exterior paint chosen for the first unit is "Blu Ceruleo" (sky-blue in English). Where indeed does a Disco Volante come from?

Shades of natural beige and black were chosen for the hides, whilst contrasting elements painted in the body colour provide continuity between exterior and interior, as appropriate in an open car.

The Disco Volante Spyder marks the renewed cooperation with Connolly Bros., a cooperation dating back to 1927. During the 20th Century, Connolly leather covered the benches and seats of the Houses of Lords and Commons, the Cunard Liners Queen Elizabeth and Mary, the Concorde, the British Library, and the Dorchester and Ritz hotels, not to mention the most exclusive motor cars.

One of the aspects of Connolly leather was the way it was made, that gave a sort of "aroma" for which Connolly became famous. This aroma was not an added perfume, but was a result of a

special process. “So when the customer smelt the aroma of the first Disco Volante Spyder he said it was fantastic, because it was like the old leather. What we have made for Touring is an hybrid leather, a combination of modern technology with the old process inside.” *Jonathan Connolly, CEO of Connolly Bros.*

Split personality

The briefing for this car was not to impair the pleasure of driving even in poor weather. The Anniversary car must be as fit for the Grande Corniche as it is for the Cotswolds.

Touring therefore decided to apply an innovative twin carbon roof allowing the car to have all the protection of a true coupé. This design allows for other advantages too: beauty, lightness and practicality.

Louis de Fabribeckers: “Personally I would have a very hard time choosing the configuration I enjoy most between open top or carbon roof. Both have their own essence without compromising on style”.

With each roof weighing a bare 3.5 Kg, it is designed to be comfortably stored in the boot, whilst still leaving room for a real luggage set.

Substantial weight is removed from the upper part of the vehicle, conceding great advantages both to handling and performance.

Spyder or spider?

The term “Spider” is widely used for a two-seat open top car, but the term “Spyder” does not exist in the English dictionary. In the Sixties though the Italian car designers felt the misspelled term would be more exotic and appealing. Touring deliberately choose to respect the “Italian touch” as a homage to the Italian coachbuilders’ tradition.

Engineering

Every new Disco Volante Spyder component is CAD-designed and documented. The meticulous engineering process run with the support of Alfa Romeo’s engineering team covers feasibility, safety, homologation, aerodynamics and structural analysis through the use of the most advanced IT tools and simulations.

Sound insulation is paramount for riding pleasure at high speed with an open roof. Computational Fluid Dynamics helped achieve outstanding acoustic comfort in cabin, with noise level limited to 24-50dB at 180 Km/h in the driver and passenger zone.

CFD studies were also performed to enhance airflow and ensure optimal downforce in the rear section.

Since torsional stiffness is of critical importance, an intensive study with FEM calculations was carried out in cooperation with Alfa Romeo to design the new single-piece windscreen frame and the cross roll-bar piece. Together with the roof, they are made from structural carbon fibre. The ensemble provides crucial torsional stiffness advantages and saves weight in the upper section of the car, where it is most beneficial for performance.

Faithful to its philosophy of personalisation, Touring provides a bespoke set-up of suspensions to match each customer’s preference.

Rolling chassis

The Alfa Romeo 8C Competizione Spider was chosen as donor car for its light and stiff structure and its outstanding dynamic properties. It forms the perfect basis for the coach-built bodywork of the Disco Volante Spyder, which integrally conserves the rolling chassis and drive train.

The Alfa Romeo 8C’s steel space-frame and other structural elements are retained to guarantee torsion stiffness, high performance and quality standards. The frame parts and the central carbon cell remain unchanged. Elements of the underpinning and the body, such as the engine bay and firewall, the cowl, the locks and hinges have been retained too, just as the dashboard, the instruments, the pedals and the steering wheel.

Parts like doorframes and the c-pillar have been modified to match the new shape.

The layout of the front-central mounted engine, the transaxle transmission and the rear-wheel drive offer an optimal weight distribution of 49-51% between the front and rear axles. To ensure excellent handling the front and rear double-wishbone suspension scheme is combined with hub carriers made of forged aluminium and additional trailing arms for the rear suspension.

The lightweight and compact 4.7 litre V8 engine delivers 450HP and 480Nm peak torque. It is coupled with a six-speed sequential transaxle gearbox with electronic control and paddle-shift gear selection. Combined with a limited-slip differential and a state-of-the-art carbon-ceramic braking system including large diameter, ventilated discs, the package ensures a precise, dynamic and proactive drive.

The Disco Volante Spyder can accelerate from 0 to 100 km/h (0-62 mph) in 4,5 seconds and has a top speed of approximately 292 Km/h (181 mph).

Manufacturing process

Touring Superleggera is synonymous with the manufacture of lightweight bodywork. The weight advantage of aluminium is one of the assets of Touring Superleggera's construction methods. Nowadays however, the crafted hand-beaten aluminium panels are widely combined with carbon fibre. Precise studies have defined the optimal choice of materials for the bodywork in terms of weight, resistance, precision, finish, quality, and ease of repair in case of damage.

Carbon fibre is used for the front bumper and grille, the bonnet, the skirts, the boot lid, the integrated windscreen frame, the rear cross member and the roof. Bonnet and boot lid are sandwich-built with Nomex filler to obtain a better stiffness/weight ratio and to dampen vibration and noise.

The aluminium panels are hand-beaten using an epoxy mould. Since the inner frames of most parts of the bodywork are made from carbon fibre, this requires gluing of aluminium on carbon fibre. This technique adds to the rigidity due to the glue's structural properties.

The body panels are pre-assembled on a laser measurement platform using a jig. This ensures that the strict tolerance requirements are respected. After adjustment, the panels are either welded or glued. The body-in-white is then used to preassemble and fit all trim components, brightware and moulding.

To ensure constant and repeatable quality, the entire production process is documented and digitally logged. Like in series production, there is a quantified manufacturing cycle and a Bill of Materials. Tolerances, measurements and other quality standards are quantified.

Dynamic tests on proving grounds concentrate on high-speed runs, cornering, braking and other handling trials on several surface types.

Type approval

The Alfa Romeo Disco Volante Spyder has received EU type-approval under the EU-Directive 2007/46 EC for small series.

Price, terms, warranty

The price of the Disco Volante Spyder is on demand.

Touring Superleggera delivers the complete car six months after the donor Alfa Romeo 8C Spider is made available.

All Touring-produced or modified parts have a two-year unlimited-mileage warranty, subject to the usual industry terms. Alfa Romeo dealers are qualified for maintenance and service of the technical components, while Touring supplies repair instructions and parts for the Touring-designed components and systems.

Sales enquiries can be addressed to the factory in Milan.

TECHNICAL SPECIFICATIONS

Dimensions

Length:	4620 mm
Width:	2032 mm
Height:	1309 mm
Wheelbase:	2640 mm
Track front/back:	1591 / 1589 mm
Boot volume:	400 litres (roof up) – 180 litres (roof down)
Fuel tank capacity:	88 litres

Engine

Cylinders / type:	V8, 90°
Cubic capacity:	4691 cc
Nominal output:	331 kW (450PS) 7000 rpm
Max torque:	480 Nm 4750 rpm
Emission level:	Euro 5

Fuel consumption, EU drive cycle

Urban:	24,40 l/100 Km
Extra-urban:	11,60 l/100 Km
Combined:	16,30 l/100 Km
CO2 emissions (combined):	379 g/Km

Driveline

Rear wheel drive.
6-speed, electroactuated sequential gearbox with paddle-shift control and automatic mode.
Limited slip differential.

Wheels

Tires:	Pirelli PZero Rosso front 245/35 ZR20, rear 285/35 ZR20
Wheel type:	Aluminium forged wheels

Performance

Top speed (est.):	292 Kph
Acceleration (est.) 0-100 Kph:	4,5 sec

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The History of Touring Superleggera

Touring Superleggera is recognized worldwide as one of the iconic names in Italian car design and coachbuilding. Founded by Felice Bianchi Anderloni and Gaetano Ponzoni in 1926, the company started to produce custom built automotive bodywork with two distinctive features from the very beginning: sporting elegance and lightness.

Early customers were reputed car makers as Isotta Fraschini and Alfa Romeo. It was the start of a flamboyant period, culminating in the “Flying Star” era that gave birth to several spectacular spider coachworks.

Touring Superleggera also gradually researched the streamlining science. The marriage between aerodynamic study and their Superleggera construction system, using aluminium body panels over a light but rigid tubular steel frame, resulted in masterpieces such as the 1938 Alfa Romeo 8C2900 Touring, which today have become icons of automotive design.

In 1945 the excellent Carlo Felice Bianchi Anderloni joined his father at the company, which soon started to receive its first orders from Enzo Ferrari. The Ferrari 166 MM Touring Barchetta of 1948 was a new milestone for light, elegant and effective design on a competition chassis.

Under Carlo Felice, Touring saw its industrial customer basis grow in the mainstream of the expanding automotive industry in Europe and overseas. A number of specialty models were designed and built on Alfa Romeo 1900, Lancia Flaminia and Maserati 3500. Another new inspired car manufacturer from the Bologna area relied on Touring's skills: Lamborghini, that commissioned its first GT, the 350. In the same period Touring created another iconic automobile: the Aston Martin DB4, followed by the DB5 and 6, manufactured in Newport Pagnell under license for the Superleggera bodywork system.

Since 2008, Carrozzeria Touring is an all-round supplier of automotive design, engineering and body manufacturing. Services range from style research and digital design to body engineering, CAD feasibility studies, FEM/FES analysis, CFD/aerodynamic analysis, virtual crash test.

The manufacturing department provides style models, show cars, rolling concepts, street legal one-offs and limited production series. Recent models include the Bellagio Fastback based on Maserati Quattroporte and the concept two-seater A8GCS Berlinetta winner of the “Best Supercar of the Year” award in 2009.

They were followed by the acclaimed Bentley Continental Flying Star (2010), manufactured in limited run with the endorsement of Bentley Motors, and the Gumpert Tornante by Touring (2011), a superfast Grand Tourer commissioned by the German sports car manufacturer.

In 2012 Touring celebrated a masterpiece from its rich heritage, taking inspiration from the Alfa C52 Disco Volante of sixty years before. The innovative, breathtaking Alfa Romeo Disco Volante, built by hand in a limited run of up to eight units, won the coveted Design Award at Concorso d'Eleganza Villa d'Este 2013.

In 2014 in collaboration with MINI, Touring Superleggera designed and built an elaborately crafted, unique concept car to explore new design languages for the iconic British brand. Exhibited at Villa d'Este as the BMW Group's annual design statement, the MINI Superleggera™ Vision adds the Italian design touch to MINI's British essence, while continuing the tradition of classic coachwork construction.

The company aims at perpetuating the core values of Touring design: purity, integrity, proportions, simplicity, resulting in timeless sporty elegance.

Design, manufacturing and restoration activities are run in the company premises nearby Milan.