



## TOURING SUPERLEGGERA TAKES CENTRE STAGE AT VILLA D'ESTE WITH THE DISCO VOLANTE SPYDER

- **Touring Superleggera's 90<sup>th</sup> anniversary celebration car competes for the Design Award at Concorso d'Eleganza Villa d'Este 2016.**
- **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 rolling chassis, merging traditional hand beaten aluminium with carbon fibre panels.**
- **The 90<sup>th</sup> anniversary celebrations will continue with a retrospective exhibition at the Museo Nazionale dell'Automobile Giovanni Agnelli in Turin later this year.**

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Style, distinction, heritage, words that well describe two realities in the automotive world: the Concorso d'Eleganza Villa d'Este and Touring Superleggera. The history of the Concorso and that of the Carrozzeria are forever intertwined with one another. Touring Superleggera has often chosen the Concorso as a privileged stage to unveil innovative prototypes, to create new stylistic trends and to amaze both audiences and jury.

*"What better stage to celebrate our ninety years?" says Piero Mancardi, CEO of Touring Superleggera. "Villa d'Este has been in our DNA since 1931 so we are excited to compete once again for the Design Award with such a bold design statement".*

The Disco Volante Spyder is a two-seater open-top car based on the Alfa Romeo 8C Competizione Spider rolling chassis. It is the perfect example of the haute couture philosophy which made Touring successful in setting a new benchmark in luxury cars field . This is the first open top production car in Touring's recent history, incorporating hints of the coachbuilder's future design language.

*"The Spyder is inspired by the 1952 Alfa Romeo C52, one of the most significant models in automotive history. It was futuristic and anticipated the upcoming space exploration era. As in the past, we wanted to deliver an uncompromised design, so the current Spyder carries to the extremes the open top car concept. The distinctive feature is the low, sharp-edged windscreen top that continues all the way through the side windows and fairings encircling the whole body with a single, exciting trait. The result is timeless, as every Touring car should be."* Louis de Fabribeckers, Head of Design.

The Spyder maintains many of the features that made the Disco Volante an icon, such as the unusual covered front wheels suggesting speed and elegance, the typical waistline profile and the wide rear shoulders giving the whole body a sense of power.

For the first unit of the series, competing at Villa d'Este, the customer chose a Cerulean Blue shade of paint. To use his own words: "Where else could a Disco Volante come from if not the heavenly sky?" Personalisation obviously extends to the interior: in this case Connolly, a name with which Touring has been collaborating since 1927, was chosen as supplier for the hides with their unmistakable aroma. The cabin sports a combination of dark beige with black accents, whilst the contrasting elements painted in body colour give visual continuity between the exterior and the interior, most appropriate in an open car.

The customer's personal taste is even expressed through the choice of a special Alfa Romeo badge, that of the Disco Volante C52, which bears the word "Milano" so as to underline the comeback of a Touring bodied Alfa Romeo, manufactured in Milan.

## Touring Superleggera and the Concorso d'Eleganza Villa d'Este

Touring Superleggera has been involved in the Concorso since the early editions. Villa d'Este was the ideal stage to showcase innovative prototypes, give rise to new stylistic trends whilst delighting the selected attendees.

A real "Hall of Fame" developed beginning in 1931: the Coppa d'Oro Villa d'Este was assigned to the Isotta Fraschini 8A SS Spider and the Gran Premio Referendum to the Alfa Romeo 6C 1750 Gran Sport Spider, a pair of dream two-seaters introducing the "Flying Star" design. The latter won-over the public after having already conquered the panel, an unusual achievement and a sign of the great interest aroused by the design produced by the Milanese coachworks.

The series continued the following year when the Coppa d'Oro for sedan and Grand Prix bodies was awarded to the sleek and rigorous Alfa Romeo 8C 2300 Spider Coupe.

In 1949 the public judged Touring's coupé version of the Alfa Romeo 6C 2500 SS an absolute masterpiece. From the moment it won the prize the model was named by popular acclaim, "Villa d'Este", thus contributing considerably to spreading the fame of the princely residence in the world of motoring.

In 1953 the Concorso, which had moved to Stresa, saw Touring win the 'Grand Premio d'Onore' with the Pegaso Z102 Berlinetta "Thrill".

Since the competition was revived with the insertion of classic cars, with a decisive contribution by Carlo Felice Bianchi Anderloni who presided the Jury until his death in 2003, the cars designed by Touring obtained another 11 Best of Show or Class Awards.

In 2015 the Coppa d'Oro Villa d'Este was awarded to the 1950 Ferrari 166MM barchetta with Touring Superleggera body, first owned by "L'Avvocato" Gianni Agnelli who personally specified the two-tone blue-green painting and other bespoke details.

## Alfa Romeo Disco Volante Spyder by Touring

### Rolling chassis, Engineering, Manufacturing process

Every new Disco Volante Spyder component is CAD-designed and documented. The meticulous engineering process runs with the support of Alfa Romeo's engineering team and 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 the cabin, with very low noise levels 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 critically important, 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 for suspensions to match each customer's preference.

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 Disco Volante Spyder coach built bodywork which completely preserves 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 forged aluminium hub carriers 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 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).

Touring Superleggera is synonymous with lightweight bodywork manufacturing. 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 lids are sandwich-built with Nomex filler to obtain a better stiffness/weight ratio and to dampen vibrations and noise.

The aluminium panels are hand-beaten using an epoxy mould. Since the inner frame of most bodywork parts is made from carbon fibre, this requires gluing of aluminium onto the 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, whilst 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 coach building. Founded by Felice Bianchi Anderloni and Gaetano Ponzoni in 1926, the company from the very beginning started to produce custom built automotive bodywork with two distinctive features: sporting elegance and lightness.

Early customers were reputed car makers such 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 the 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 Carlo Felice Bianchi Anderloni joined his father in the company, which soon started to receive its first orders from Enzo Ferrari. The 1948 Ferrari 166 MM Touring barchetta was a new milestone for light, elegant and effective design on a competition chassis.

Under Carlo Felice, Touring saw its industrial customer base grow into the mainstream of the expanding automotive industry in Europe and overseas. A number of specialty models were designed and built on the Alfa Romeo 1900, the Lancia Flaminia and the Maserati 3500. A new and inspired car manufacturer from the Bologna area also relied on Touring's skills: Lamborghini commissioned its first GT, the 350. In the same period Touring created another iconic motor car: 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 and virtual crash tests.

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.

These 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 1952 Alfa C52 Disco Volante. 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 in 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, whilst continuing the tradition of classic coachwork construction.

The company aims to perpetuate Touring design's core values: purity, integrity, proportions, simplicity, resulting in timeless sporty elegance.

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