



February 2003

New high-performance version of the mid-engined roadster

## Speedster Turbo: Opel's Supercar for Driving Enthusiasts

- 200 hp 2.0-liter turbocharged ECOTEC engine delivers a maximum torque of 250 Nm
- Super-sports car performance with go-kart-style handling
- Even sportier looks and potent engine sound underlines the special character

Rüsselsheim. For driving enthusiasts and those who like plenty of power under their right foot, Opel is now making a unique offer, the new Speedster Turbo. Its 147 kW (200 hp) 2.0-liter turbocharged ECOTEC engine delivers a maximum torque of 250 Newton meters at only 1950 rpm. With this kind of pulling power, the lightweight mid-engine roadster performs like a real supercar. The Opel Speedster Turbo races from zero to 100 kilometers an hour in 4.9 seconds. It has impressive mid-range performance and a top speed of 243 km/h.

With its rear wheel drive and exceptionally stable aluminum chassis and fiber glass reinforced bodywork (weight: 930 Kilograms), this open two-seater is truly at home on twisting country roads, where it can fully demonstrate its agile handling abilities. The Speedster's double-wishbone suspension is based on proven auto racing design principles specially adapted by Opel's engineers to handle the increased power of the Speedster Turbo (power-to-weight ratio: 4.7 kg/hp). The aerodynamics have been optimized with front and rear spoilers. A modified grille allows an improved airflow to the radiator, and the Speedster Turbo's side mounted 'gills' have been modified in order to supply more air to the turbocharged engine. In addition to their technical function, these details mean the Speedster Turbo's design is even more dynamic. Special 17-inch alloy wheels with a sporty 5-spoke design reinforce its dynamic looks. The Speedster Turbo's

*The information contained in this press release is subject to alteration. Information concerning specifications and equipment applies to the models offered in Germany. There may be differences in other markets.*



interior is dominated by the extensive use of aluminum. New optional extras such as cross-drilled disc brakes are additionally available than a hint of luxury, while a new exhaust system gives the Speedster Turbo the appropriate engine sound. Like the original Opel Speedster with its 108 kW (147 hp) 2.2 ECOTEC engine, the new 200 hp high-performance model is produced by the English sports-car specialists, Lotus Cars.

**Positioning: The Speedster Turbo is for sports car driving enthusiasts**

Carl-Peter Forster, Chairman and Managing Director says, "The Speedster Turbo is for driving enthusiasts. More than any other Opel, it symbolizes the brand' s dynamic core values. In the future, exclusive and highly emotive ' niche models' with technology suitable for everyday life will account for about 20 percent of Opel' s product program."

The Opel Speedster Turbo is aimed at sports car enthusiasts who value performance and individuality more than luxurious electronic devices and the mere practical benefit a car provides. The essential character of this no-nonsense roadster demands that anything not necessary can be discarded in order to save weight. The Speedster Turbo is more affordable than other exotic models and is therefore accessible to a younger and wider public. With its exceptional price and performance and its power weight ratio of 4.7 kg/hp, the open-air two-seater has no rivals.

**Production: exclusively hand-built with careful attention to detail**

The sports-car specialists at Lotus Cars in Hethel, England, assemble the Opel Speedster Turbo by hand. Three days are needed before each car has passed through the complete production and quality process. Furthermore, the Speedster Turbo upon completion is put through a series of predetermined tests on Lotus' in-house proving track. The exclusive character of the Speedster Turbo is reflected in each car' s dashboard mounted plaque listing its individual production number.

Hans H. Demant, Opel' s Technical Director says, " The Speedster Turbo uncompromisingly combines a powerful engine with consequent weight-saving design in a single exciting high-performance sports car. Our development and manufacturing



competence paired with Lotus Engineering' s rich sports car heritage and expertise have been brought together to develop the Speedster Turbo.”

### **The turbocharged 2.0 ECOTEC engine: 200 hp opens up a new performance level**

The original Opel Speedster with its 2.2 ECOTEC engine, 108 kW (147 hp) was sufficient to whisk the car from a standstill to 100 km/h in 5.9 seconds – and provide an abundance of driving fun while doing it. Now, for those who want even more power, Opel has installed its 147 kW (200 hp) 2.0-liter turbocharged ECOTEC engine in its thoroughbred roadster. Originally seen in the top versions of the Astra Coupé and Astra Cabrio, and also used in the Zafira OPC, Astra OPC and Astra Caravan OPC, this well-known engine has generous reserves of power and can achieve high on-road performance. The Speedster Turbo sprints from zero to 100 km/h in only 4.9 seconds, and can continue to accelerate until it reaches its 243 km/h limit imposed by rolling resistance and aerodynamic drag. Thanks to a flat torque curve, 250 Newton meters are available between 1950 and 5500 rpm; there is also plenty of pulling power in the intermediate gears. In 4th gear the Speedster Turbo needs only 5.1 seconds to accelerate from 80 to 120 km/h, and the same sprint takes only 6.7 seconds in fifth. Power is transmitted to the rear wheels via a close-ratio five-speed gearbox.

Various technical modifications were needed before the 2.0 turbo ECOTEC engine could be used in the Speedster. First of all, the air supply had to be directed to the turbocharged engine – located transversely between the passenger area and the rear axle. Opel' s engineers developed a special charged-air intercooler for the turbocharged engine, that pulls air through a pair of extended vertical ‘ gills’ located directly behind the Speedster’ s doors. The front end has also been modified. A larger grille area not only makes the Speedster Turbo look more dynamic but also increases the airflow to the radiator.

Excess engine heat is dissipated upwards through the enlarged opening in the engine cover.



Opel has devoted considerable attention to the acoustic tuning of the newly developed twin-pipe exhaust system, eliminating unwanted noise from the driveline and boosting the lower frequencies of the sound spectrum. The engine has a breathy intake sound and the typical hiss of a turbocharged engine with a closed throttle. The result is a sonorous, growling sound that emphasizes the Speedster Turbo' s exceptional performance.



### **Intelligent weight-saving construction: essentials only**

The Opel Speedster Turbo is all about pure sporty driving. By strictly adhering to a policy of “less is more”, the engineering team eliminated much that was not directly related to driving or safety from the Speedster. The high quality components that make up the Speedster Turbo’s standard specification have all been proven in auto racing. The main load-bearing element and a key to the car’s low weight of 930 kilograms (without the driver) is its ultra-light and extremely stable chassis (monocoque) made from aluminum extrusions bonded together with adhesive. The entire structure weighs only 74 kilograms and supports the exceptionally lightweight fiberglass body elements.

The chassis’ ability to keep its shape and the additional high-strength crash box developed in F1 racing made of composite material ensures high passive safety for the car’s two occupants. Essential safety systems including a driver’s airbag, automatic lap-and-shoulder seat belts with pyrotechnic tensioners, ABS, a brake booster servo and a strong rollover hoop provide additional occupant protection.

### **Handling and road behavior: a racing car licensed for the road**

The Opel Speedster Turbo’s suspension is another element taken from the world of motor-sports. Double wishbones with front and rear coil springs guarantee accurate wheel location and outstanding agility. Opel’s suspension specialists optimized the car’s dynamic characteristics and tuned the springs and shock absorbers to match the turbocharged version’s additional weight and power output. Compared with the Speedster 2.2, the springs are approximately 10 percent firmer. Together with a wider track (front 1/450 mm, rear 1/488 mm), exceptionally well-balanced weight distribution, a low center of gravity and direct steering without power assistance, the Speedster Turbo’s handling resembles that of a go-kart. Ample stopping power is provided by a high-performance ABS brake system with ventilated disks on all wheels (diameter 288 millimeters) and a brake booster servo. Cross-drilled disc brakes are an optional extra for motor sports enthusiasts.



The Speedster Turbo's design specification not only demands exceptional direction accuracy and dynamics, but also insists on the highest level of active safety. In order to counteract the innate tendency of mid-engined cars to oversteer, experts from Opel's International Technical Development Center (ITDC) performed multiple simulations with a variety of different wheels and front width axels. In the end they decided to use the same solution used for the Speedster 2.2 in order to balance front and rear grip. The special front wheels are 5-spoke, 5.5-inch wide, 17-inch diameter alloy wheels with 175/55 R 17 tires; the rear wheels are slightly larger 7.5-inch wide, 17-inch diameter rims with 225/25 R 17 low aspect-ratio tires. Formula 1 tire manufacturer Bridgestone developed special Potenza Series tires for the Opel Speedster.

#### **Design and aerodynamics: expressive Speedster styling optimized**

To distinguish the Opel Speedster Turbo from its non-turbocharged brother requires an eye for details. The dynamic styling that turns heads whenever the compact roadster drives by is still present. Its sporty appearance is based on sharp bodylines, tension-charged surfaces, muscular wheel arches and numerous vents for cooling air. Details like the eye catching futuristic looking headlamps and taillights, compact circular fog lamps and the Speedster's two vertically aligned chrome-plated exhaust tailpipes are all seamlessly integrated into the fiberglass body.

The Speedster Turbo sports some visual changes that give the turbocharged model an even more dynamic appearance. Front and rear spoilers provide just the right amount of additional negative lift when driving at high speeds. The black front grill has no crossbar, which lets a greater airflow reach the radiator. The turbocharged engine's charged-air intercooler gets its additional air supply from vents located behind the car's doors. The boldly styled alloy wheels distinguish the 200-horsepower turbocharged model from the original Speedster while also reducing its un-sprung weight. This contributes to the Turbo version's improved handling and ensures sufficient brake cooling. For a more dynamic and sleeker look, the material surrounding the light clusters has been painted black. A 'Turbo' nameplate done in the Speedster's signature font is located on the tail of the car. Even when viewed at a stop, the Speedster Turbo looks more than hint at its impressive performance potential.



Opel' s Design Director Martin Smith – who also owns his own Opel Speedster – says, “ The Speedster is the first statement of the new dynamic Opel design. The ideas first expressed here have been further developed and are also expressed in the new Vectra, Signum and Meriva models. The Speedster Turbo continues this visual approach but with a deliberate emphasis on its status as an unmistakably exceptional sports car. It' s timeless design builds on Opel' s long tradition of creating sports cars like the legendary Opel GT.”

#### **Interior equipment and trim: aluminum and leather add a touch of luxury**

The new Speedster Turbo remains loyal to the original Speedster' s ‘ minimalist’ philosophy; with only essential items included and the use of aluminum and exposed technical features, the Opel Speedster Turbo' s interior might be described as ‘ spartan,’ but it definitely not uncomfortable. Both the driver and passenger sit in body hugging bucket seats with integral head restraints, which ensure the perfect seating position. The small sporty leather-covered steering wheel has an integrated airbag. Leather upholstery and trim on the seats and inside door in black, red, blue or beige, and a black leather finish for the center console are available optionally. The Speedster Turbo' s instruments have silver dials and there is a new, more easily legible fuel gauge with LCD bar graphics. A warning lamp in the revolutions counter lets the driver know when to shift gears – just like in a Formula 1 racecar. The start button, the gearshift knob, the window handles and the solid aluminum handbrake lever and pedals create an authentic auto-racing ambience. Practical items include a cup holder; storage pockets for maps and – new in the Turbo version – two compartments for a mobile phone, coins or other small items.

The Speedster Turbo comes with everything that a true sports car needs and nothing more. In order to boost its dynamic performance to the extreme, every superfluous detail has been eliminated. However, a short list of optional extras is available for people who prefer their Speedster Turbo to come with an added degree of personalized luxury. Three different stereo radios with CD player, MP3 function and integral navigation system are available and the two top radio options include two additional loudspeakers at the front.



Also available are remote control electronic locks, a two-level fixed passenger footrest, stainless steel windowsill trim with “ Turbo” inscribed on them and cross-drilled brake disks and a. If this is chosen, Opel also offers a “ Touring” package, which contains black carpeting with noise-insulating mats under it. For Speedster Turbo owners who intend to drive their open air soft top two-seater year round, a lightweight hardtop is available making the ‘ extreme’ sports car suitable for day-to-day driving in the winter, spring, summer or fall. New, evocative paint finishes which match the Speedster’ s black, blue, red or green fabric soft-top are also available.

### The Opel Speedster Turbo – Technical Data Overview

Length (mm)	Width (mm)	Height (mm)	Wheelbase (mm)	Turning circle (m)	Weight (kg)	Payload (kg)	Power-to-weight ratio (kg/hp)
3786	1708	1117	2330	11.6	930	145	4.7

Width excluding outside mirrors

Unloaded weight with a 75 kg driver (70156 EEC standard) = 1005 kg

Engine	2.0 ECOTEC Turbo
Cylinders/valves	4/16
Displacement (cc)	1998
Max. output (kW/hp) at engine speed (rpm)	147/200 at 5500
Max. torque (Nm) at engine speed (rpm)	250 at 1950-5500
Top speed (km/h)	243
Acceleration, 0-100 km/h (s)	4.9
Flexibility, 80-120 km/h in 4th gear (s)	5.1
Flexibility, 80-120 km/h in 5th gear (s)	6.7
Fuel consumption (liters/100 km)	8.5
Emission category	Euro 4

Fuel consumption: total MVEG (99/100/EC) standard test figure