

Stuttgart. The first nine-speed automatic transmission with torque converter, the 9G-TRONIC for premium vehicles, is celebrating its world premiere: equipped with the innovative power transmission, the E 350 BlueTEC is set to become one of the most fuel-efficient six-cylinder diesel models in its class. Thanks to the high level of efficiency of the patented transmission design, NEDC fuel consumption in the E-Class is reduced to 5.3 litres of diesel per 100 km. As is typical of the brand, the transmission features outstanding comfort and barely perceptible gear changes. The E 350 BlueTEC featuring the 9G-TRONIC as standard is available to order with immediate effect. Despite the extended scope of functions, the pricing for both the Saloon and Estate models remains unchanged.

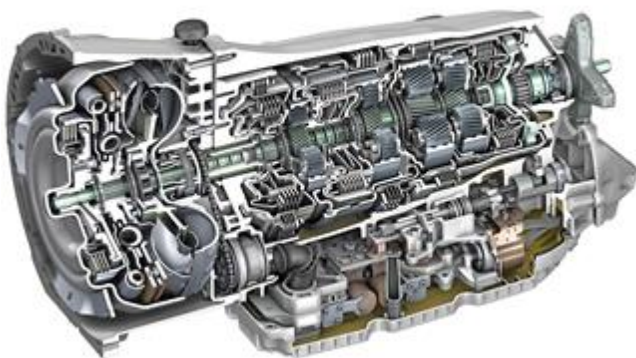
In the E 350 BlueTEC, which is available as Saloon and Estate models and comes fitted with the new 9G-TRONIC as standard, the 185 kW (252 hp) V6 diesel engine has an average NEDC fuel consumption of 5.3 litres of diesel per 100 kilometres (Estate: 5.5 l/100 km), corresponding to CO₂ emissions of 138 g/km (Estate: 144 g/km). As a result, the new models with 9G-TRONIC undercut their predecessors in terms of both consumption and CO₂ emissions. The higher number of gears and the broader gear ratio spread help to increase drive comfort and enable a significant enhancement to be achieved in terms of converting engine power into traction.

Perfect interaction: E 350 BlueTEC with V6 diesel engine and 9G-TRONIC

On the one hand, the overall reduction in engine speed improves NVH comfort and therefore the pleasant sense of well-being on board the E-Class, and on the other also cuts down external noise by up to 4 dB(A), thus reducing the strain on the environment.

The reduced fuel consumption of the E 350 BlueTEC with 9G-TRONIC has primarily been achieved as a result of the high level of efficiency of the transmission. As part of this, the broad ratio spread of 9.15 for gears one to nine enables a clearly perceptible reduction in engine speed and is a decisive factor behind the high level of energy efficiency and ride comfort. Shortened shift and reaction times ensure optimum spontaneity combined with outstanding ease of shifting. In manual mode and the S programme in particular, the 9G-TRONIC responds significantly more spontaneously and enhances driving pleasure.

The particular ease of shifting of the new 9G-TRONIC – a focal point during development and a hallmark feature of a Mercedes-Benz automatic transmission - comes courtesy of a comprehensive package of measures. These include the novel direct control system which enables short, barely perceptible gear changes. The combination of double torsional damper and centrifugal pendulum technology in the torque converter ensures outstanding drive comfort. Together with the extended gear ratio spread, higher speeds can now be driven at lower engine speeds for even greater comfort. In reality this translates for example into being able to drive at 120 km/h in 9th gear with an engine speed of around only 1350 rpm.



Advanced technology for superior power transmission

In the case of the 9-speed automatic transmission, the development engineers also focused on the area of "compact lightweight construction". Despite two additional gears and a maximum transferable torque of up to 1000 Newton metres, the new automatic transmission requires as little installation space as its predecessor and, in addition, is lighter. The two-piece housing design has been retained: the torque converter housing is made of lightweight aluminium, while the transmission housing with weight-optimised plastic oil pan is made of an even lighter magnesium alloy.

Another goal was to implement the nine gears with a minimal number of planetary gear sets and shift elements. Intensive, computer-based system analysis and mock-up made it possible to realise this goal with just four simple planetary gear sets and six shift elements. Three speed sensors monitor operation and provide the transmission control system with corresponding data for effective shifting. Here it is possible for several gears to be jumped when accelerating or decelerating, should the driving conditions call for it.

To ensure the reliable and at the same time highly efficient supply of the durable and shear-resistant 2nd-generation synthetic fuel economy engine oil, the new automatic transmission is fitted with two pumps. The considerably smaller mechanical main pump, featuring an off-axis design, is located next to the main shaft and is chain-driven and fed by a separate electric auxiliary pump. This design enables the flow of lubrication and coolant to be controlled actively on demand and also means that the 9G-TRONIC can benefit from a start/stop system. Thanks to the world's first direct control system in a planetary automatic transmission with nine

gears, it has also been possible to significantly increase hydraulic efficiency within the transmission.

Around 22 million automatic transmissions from Mercedes-Benz since 1961

Mercedes-Benz has been developing and producing high-quality automatic transmissions featuring outstanding ease of shifting, optimum energy efficiency and dependable durability for more than 50 years. To date, a total of around 22 million automatic passenger car transmissions have left the manufacturing plant at Stuttgart-Hedelfingen, close to the Group's headquarters in Stuttgart-Untertürkheim.

The 9G-TRONIC is suitable for rear-wheel and all-wheel drives as well as hybrid and plug-in hybrid drive systems and will be used in almost all model series and engines in the coming years.

The E 350 BlueTEC fitted with the 9G-TRONIC as standard is available to order as Saloon or Estate models with immediate effect. As such the benefits of the new automatic transmission are being passed on to customers at no extra cost. The market launch will take place in September 2013.

Prices for Germany (incl. 19% VAT):

E 350 BlueTEC Saloon	54,710.25 euros
E 350 BlueTEC Estate	57,923.25 euros

Mercedes-Benz E 350 BlueTEC Saloon (9G-TRONIC)

Engine

Number of cylinders/ V6, 4 valves per cylinder

Displacement	cc	2987
Bore x stroke	mm	83.0 x 92.0
Rated output	kW/ hp	185/252 at 3600 rpm
Rated torque	Nm	620 at 1600-2400 rpm
Compression ratio		15.5:1
Mixture formation		High-pressure fuel injection with common-rail technology, VNT turbocharger, EDC

Power transmission

Transmission		9G-TRONIC automatic transmission
Gear ratios	Final-drive ratio	2.24
	1st gear	5.50
	2nd gear	3.33
	3rd gear	2.32
	4th gear	1.66
	5th gear	1.21
	6th gear	1.00
	7th gear	0.87
	8th gear	0.72
	9th gear	0.60
	Reverse	-4.93

Chassis and suspension

Front axle	Independent multi-link front suspension, coil springs, twin-tube gas-filled shock absorbers, anti-roll bar
Rear axle	Independent multi-link rear suspension, coil springs, single-tube shock absorbers, anti-roll bar
Braking system	Internally ventilated and perforated disc brakes at front, internally ventilated disc brakes at rear, electric parking brake, ABS, Brake Assist, ESP [®]

Steerin Electromechanical rack-and-pinion power steering

g

Wheels 7.5 J x 16

Tyres 225/55 R 16 W

Dimensions and weights

Wheelbase	mm	2874
Track, front/rear	mm	1583/1599
Length (overall)	mm	4879
Width (overall)	mm	1854
Height (overall)	mm	1475
Turning circle	m	11.28
Boot capacity max.*	l	490
Kerb weight acc. to EC	kg	1885
Payload	kg	555
Gross vehicle weight	kg	2440
Tank capacity/incl. reserve of	l	59.0/8.0

Performance and fuel consumption

Acceleration 0-100 km/h	sec.	6.6
Top speed	km/h	250
Combined fuel consumption	l/100 km	5.3 - 5.6
CO ₂ emissions	g/km	138 - 148

*acc. to VDA measuring method

Mercedes-Benz E 350 BlueTEC Estate (9G-TRONIC)

Engine

Number of cylinders/
arrangement

V6, 4 valves per cylinder

Displacement cc 2987

Bore x stroke	m 83.0 x 92.0
	m
Rated output	kW185/252 at 3600 rpm
	/hp
Rated torque	N 620 at 1600-2400 rpm
	m
Compression ratio	15.5:1
Mixture formation	High-pressure fuel injection with common-rail technology, VNT turbocharger, EDC

Power transmission

Transmission	9G-TRONIC automatic transmission
Gear ratios	Final-drive ratio2.24
	1st gear 5.50
	2nd gear 3.33
	3rd gear 2.31
	4th gear 1.66
	5th gear 1.21
	6th gear 1.00
	7th gear 0.87
	8th gear 0.72
	9th gear 0.60
	Reverse -4.93

Chassis and suspension

Front axle	Independent multi-link front suspension, coil springs, twin-tube gas-filled shock absorbers, anti-roll bar
Rear axle	Independent multi-link rear suspension, air springs, twin-tube gas-filled shock absorbers, anti-roll bar
Braking	Internally ventilated and perforated disc brakes at front, internally ventilated disc brakes at rear, electric parking

Steerin Electromechanical rack-and-pinion power steering

g

Wheels 7.5 J x 16

Tyres 225/55 R 16 W

Dimensions and weights

Wheelbase	mm	2874
Track, front/rear	mm	1583/1604
Length (overall)	mm	4905
Width (overall)	mm	1854
Height (overall)	mm	1507
Turning circle	m	11.28
Boot capacity max.*	l	1855
Kerb weight acc. to EC	kg	1955
Payload	kg	595
Gross vehicle weight	kg	2550
Tank capacity/incl. reserve of l		59.0/8.0

Performance and fuel consumption

Acceleration 0-100 km/h	sec.	6.9
Top speed	km/h	250
Combined fuel consumption	l/100 km	5.5 - 5.7
CO ₂ emissions	g/km	144 - 150

*acc. to VDA measuring method