



## Press release

### Lamborghini Murciélago LP 670-4 SuperVeloce - the new king of the bulls - is even more powerful, lighter and faster

Sant'Agata Bolognese, 2<sup>nd</sup> March 2009 - The Lamborghini Murciélago is one of the most extraordinary super sports cars of all time. Automobili Lamborghini has now expanded its model range with a new, exceptionally purist and even more extreme top model - the Murciélago LP 670-4 SuperVeloce is even more powerful, lighter and faster than the Murciélago LP 640. With the output of the 6.5 liter V12 increased to 670 hp and a weight reduction of 100 kg (220 lbs), the Murciélago LP 670-4 SuperVeloce boasts a power-to-weight ratio of 2.3 kg (5.1 lbs) per hp. This catapults it from 0 to 100 km/h (62 mph) in a breathtaking 3.2 seconds and powers it on to a top speed of around 342 km/h (212 mph). Distinctive design refinements ensure that each of this 350-unit limited edition series conveys its full potential from the very first glance.

With its outstanding performance, razor-sharp precision and exceptional high-speed stability, the Lamborghini Murciélago LP 670-4 SuperVeloce is the ultimate performance car for advanced sports car drivers. The super sports car has been extensively redesigned with a new front and rear, an innovative engine bonnet and a choice of two aerodynamic set-ups featuring either a small or large rear spoiler. The interior in Alcantara and carbon fiber provides a purist and minimalist approach.

In order to achieve the substantial weight reduction of 100 kilograms (220 lbs), the Murciélago LP 670-4 SuperVeloce was extensively reworked and redeveloped in virtually every aspect - from chassis to engine and transmission, right through to the interior. The increase in engine output from 640 to 670 hp is the result of optimized valve timing and a reworked intake system. The significantly modified aerodynamics with substantially increased downforce brings considerable improvement to vehicle stability at very high speeds. With the small standard-fit rear spoiler, top speed stands at 342 km/h (212 mph), while the large "Aeropack Wing" and its added downforce gives a top speed of 337 km/h (209 mph).

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“The new Murciélago LP 670-4 SuperVeloce is the systematic continuation of our brand philosophy. It is more extreme and uncompromising than virtually any other automobile,” says Stephan Winkelmann, President and CEO of Automobili Lamborghini. “As the new top model of the highly successful Murciélago range, the SuperVeloce displays not only outstanding driving dynamics, it is also further evidence of our company’s technological expertise. Customers can look forward to an utterly unparalleled driving experience.”

## **Design and aerodynamics**

The Murciélago is an icon of the Lamborghini brand - a sports machine of menacing character and brutal power. Its unique design radiates a supreme form of highly concentrated sensuality. Wide, low, with its glass area pushed way forward and a long, taut back - the interplay between the soft contours of the basic form and razor sharp edges is the perfect expression of the Lamborghini design language. In the totality of its character, the Murciélago is without comparison on the sports car market.

Yet even a character like this can be further refined - the new Lamborghini Murciélago LP 670-4 SuperVeloce is the more extreme, even more purist pinnacle of the model range. This is clearly evident from the very first glimpse of its completely redesigned front end - pulled way forward and finished in matt black paint, the carbon fiber front spoiler is connected to the front end via two vertical elements. The large air intakes for the front brakes are more powerfully emphasized. The new front fenders feature additional air intakes for brake ventilation. The air vent for the oil cooler located in the driver-side sill area is painted matt black to match the sills.

The modifications are even more apparent around the mighty engine bay of the Murciélago LP 670-4 SuperVeloce. The twelve-cylinder engine is presented as an engineering masterpiece under a transparent engine bonnet that boasts a completely new architecture. Hexagonal polymer plates made from transparent polycarbonate are set on three levels within a carbon fiber framework. The layers are open towards the rear, playing a key role in the thermodynamics of the high-performance engine.

The impressive rear end of the SuperVeloce is dominated by a veritably noble, flat and extremely wide exhaust tailpipe and, on the underside, by a two-level diffuser system finished entirely in carbon fiber. The rear light clusters display their signals in that distinctive Y-shape that has been a fixed element of Lamborghini design since the Murciélago LP 640, Reventón and Gallardo LP



560-4. The panel between the lights is made from carbon fiber, while the large intake mesh below expands across the full width of the rear end. Made from thick-walled aluminum, the hexagonal pattern is laser-cut and a Teflon coating provides the necessary heat protection.

The aerodynamics of the Murciélago LP 670-4 SuperVeloce have been completely redeveloped. Alongside the enlarged front spoiler and the twin rear diffuser, the new fixed rear spoiler also plays an important role. Customers can choose between two versions, with the small rear spoiler providing improved downforce at high speeds. As an option, the Murciélago LP 670-4 SuperVeloce can be supplied with the “Aeropack Wing” - a large, fixed, carbon-fiber wing mounted on two carbon-fiber brackets. The new aerodynamic set-up provides a significant boost to directional stability at the very highest speeds. The top-speed downforce on the Murciélago LP 670-4 SuperVeloce with Aeropack is strongly increased.

### **Bodyshell and lightweight construction**

With the construction of the Murciélago LP 670-4 SuperVeloce, Lamborghini proves its expertise in the manufacture of lightweight materials and in working with hi-tech carbon fiber. The structure of the super sports car is a composite construction of extremely stiff carbon components and a tubular steel frame - as in a race car. The transmission tunnel and the floor are made of carbon fiber, attached to the steel frame using rivets and high-strength adhesives. The roof and the exterior door panels are formed in sheet steel, while the remainder of the outer skin is made from carbon composite material.

For the Murciélago LP 670-4 SuperVeloce, engineers in Sant’Agata Bolognese recalculated the framework and selected a new, super high-strength sectional steel. This achieved two objectives - on the one hand, they increased the torsional stiffness of the chassis by 12 percent to provide improved handling precision and, on the other, they were able to reduce weight by 20 kg (44 lbs), making a significant contribution to the reduction of overall vehicle weight. And the systematic approach to lightweight design continues throughout the entire bodyshell. The front fenders, the rear side panels/fenders and the casing for the third brake light are made of a modified carbon-fiber material. Combined with the removal of the drive for the moveable spoiler, this brings a further weight reduction of 13 kg (28.6 lbs).



Added to the 33 kg (72.6 lbs) of weight reduction from the chassis and exterior, are 34 kg (74.8 lbs) from the interior, as well as over 33 kg (72.6 lbs) removed from the engine and drive train.

## **Power unit and transmission**

The longitudinally mounted 6.5 liter V12 delivers the infernal power for an unparalleled driving experience. With 670 hp (493 kW), the engine in the Murciélago LP 670-4 SuperVeloce is 30 hp more powerful than in the Murciélago LP 640. The twelve-cylinder sends its mighty 660 Nm (487 lb-ft) of torque to the crankshaft at 6,500 rpm; maximum power is reached at 8,000 rpm, with an average piston speed of 23.7 meters per second - a figure almost comparable to race engines.

The V12 is eager to deliver its performance - it brings its menacing power with immediacy and precision to guarantee breathtaking performance - after only 3.2 seconds the SuperVeloce has already reached 100 km/h (62 mph).

The engine block and heads of the V12, positioned at the ideal cylinder angle of 60 degrees, are made from aluminum. The four chain-driven camshafts are variably controlled, while the intake manifold operates in three stages - both technologies add even greater thrust to the merciless pushing power. To increase the performance of the SuperVeloce, the intake system was modified, the valve train optimized and, most importantly, valve travel was increased.

The control electronics for the V12 were developed internally by Lamborghini - each cylinder bank has its own high-performance processor. If the engine needs more cooling air, intake funnels emerge from the rear pillars: when not in operation, they lie flush with the bodyshell. Dry sump lubrication enables the V12 to be mounted extremely low down, benefiting the handling dynamics: this also guarantees oil supply under extremely dynamic driving conditions. With 12 liters of lubricating oil in circulation, the oil cooler is located on the left side of the vehicle and cooled by air flowing through the aperture in the sill.

The weight reduction of more than 26 kg (57 lbs) in the engine area was derived primarily from the completely new exhaust system. The muffler has been redesigned and even the mighty tailpipe of the SuperVeloce manufactured from new materials is lighter than on the Murciélago LP 640. But most of all,



the new exhaust system makes for an acoustic experience that is surely equal to the driving performance - from the heavy rumble of a stormy night, through the trumpeting of mighty elephants to the roar of a raging lion, the SuperVeloce performs the grand opera for 12 cylinders, 48 valves and 8,000 revs.

The SuperVeloce is equipped as standard with the sequential, automated manual transmission e.gear, which uses electro-hydraulics to shift gear extremely quickly and smoothly. A cockpit display informs the driver of the gear currently engaged. In addition a special "Corsa" mode and a "Low adherence" mode are available.

As a no-premium option, the SuperVeloce is available with a six-speed manual transmission. Its short metal shift stick runs in an open gate of classic Italian elegance. In both variants, the new lightweight clutch makes its own contribution to the weight loss program.

### **All-wheel drive and chassis**

The Murciélago LP 670-4 SuperVeloce delivers its extreme power to the road with great reliability - assured by its permanent all-wheel drive. Before the rear wheels spin, the viscous coupling sends up to 35 percent of driving force via its additional shaft to the front wheels. The front and rear limited-slip differentials are set at 25 and 45 percent. With its four driven wheels and traction, the Murciélago delivers a decisive advantage over rear-wheel drive sports cars when it comes to accelerating out of a corner - and always with maximum stability. The rear axle bears 58 percent of its overall weight - a distribution ratio that is highly beneficial to traction.

Explosive dynamics, tenacious cornering and extreme speeds - the Murciélago LP 670-4 SuperVeloce is a super sports car packed with aggressive power, but by no means a mean-spirited car. Its steering requires very little power support, giving full control of the car to the driver. Those prepared to tackle the beast head on are quickly rewarded with intimate contact and trust - as speed increases, so the Murciélago reveals its strengths, thus exposing a character with no hidden surprises and behavior that can always be anticipated.

The Murciélago is fitted with double wishbone suspension all round. Spring struts - two on each of the rear wheels and one on each of the front - control the loads transferred from the road. The standard-fit lifting system enables the



front end of the vehicle to be raised by 45 mm (1.8 inches) to avoid obstacles such as garage entryways. The SuperVeloce is equipped with exclusive "Ares" alloy-forged wheels, bearing the exclusive five twin-spoke design. The front wheels are clad in 245/35 ZR 18 rubber, while the rears sport 335/30 ZR 18. High-grip Pirelli P Zero Corsa tires come as standard.

Four brakes controlled by a hi-tech ABS system are capable of mighty stopping power when required. The Carbon Ceramic (CCB) brakes are fanned by cooling air flowing through enlarged channels in the bodyshell, while openings in the front fenders provide additional ventilation for the SuperVeloce. The ceramic discs are exceptionally lightweight, fade-free and capable of extremely high operational performance.

### **Interior and equipment**

Even stepping into the Murciélago LP 670-4 SuperVeloce is an experience as individual as the vehicle itself. The upward-opening doors - a solution developed by Lamborghini in the early seventies for the Countach - are released via small latches, then swing wide open to reveal a panorama of the exclusive interior of the Murciélago LP 670-4 SuperVeloce. The dominating materials are Alcantara and carbon fiber, which make for an ambience that is as high-quality as it is sporty.

The sports bucket seats come as standard and provide exceptionally firm support around the hip and shoulder areas. The bucket seats are made from lightweight and highly robust carbon fiber and guarantee the driver perfect support, even in the most extreme driving situations. The Murciélago's standard seats are also available on the SuperVeloce as an option free of charge.

Not only the seats are upholstered in black Alcantara micro-fiber; the cockpit and the roof lining are also finished in this high-quality, lightweight material. The Y-shaped perforations on the seats and roof lining bring additional finesse, with an inlaid backing material in the same color as the exterior paintwork. The Murciélago LP 670-4 SuperVeloce can be delivered with the paint finishes Giallo Orion, Arancio Atlas, Bianco Isis, Grigio Telesto and Nero Aldebaran, as well as Bianco Canopus (white matt) and Nero Nemesis (black matt) as an option.

Naturally, the interior also makes its contribution to weight reduction. The door panels are clad in carbon fiber, as is the wide center tunnel. The application of



Alcantara instead of leather is another weight-saver, just like the selection of sports bucket seats and the omission of the radio-navigation system (if requested, this is available as an option). At the end of the day, the music in a Murciélago comes from the engine compartment. Overall, modifications to the interior contribute over 34 kg (75 lbs) to the SuperVeloce weight loss program.

But absolutely no corners have been cut when it comes to one characteristic that is a feature of all Lamborghini super sports cars - the exceptionally high quality of the workmanship. The craftsmen in Sant'Agata Bolognese are all masters of their respective trades; the three-year warranty bears testimony to absolute faith in product quality.



## Technical data

### Lamborghini Murciélago LP670-4 SuperVeloce

#### Frame

High strength tubular steel structure with carbon fiber components.
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#### Bodywork

In carbon fiber, except roof and door external panels (steel)
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#### Steering

Type	Mechanical (rack and pinion) power-assisted
Right-hand turning circle	12.55 m (41.17 ft)

#### Wheels and tires

Front	245/35 ZR 18"
Rear	335/30 ZR 18"

#### Engine

Type	12 cylinders at 60°
Bore and stroke	88mm x 89 mm (3.46 in x 3.50 in)
Displacement	6496 cc. (396.41 in <sup>3</sup> )
Compression ratio	(11 ± 0.2):1
Maximum power	670 hp (493 kW) at 8000 rpm
Maximum torque	660Nm ( 487 lb-ft)at 6500 rpm
Engine position in vehicle	Longitudinal central-rear
Cylinder heads and engine block	Aluminum
Intake system	Variable geometry with 3 operating modes

#### Timing

4 valves per cylinder, 4 overhead camshafts	
Timing gear transmission	2 chains
Continuous timing variator (int. and ex.)	Electronically controlled

#### Ignition system

Static type ignition system with individual coils (one for each spark plug). Firing sequence 1-7-4-10-2-8-6-12-3-9-5-11
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#### Fuel system/injection

Lamborghini LIE electronic engine control unit, multipoint, sequential timed, DRIVE BY WIRE
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#### Lubrication system

Type	Dry sump
Recovery pumps	2 gear pumps
Delivery pump (high pressure)	1 gear pump

#### Cooling system

Type	Liquid cooled, with pressurized circuit
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### Transmission

Type of transmission	Permanent all-wheel drive with Viscous Traction system
Gearbox	6-speed e-gear
Clutch	Dry single disc
Clutch disc diameter	272 mm (10.7 in)

### Transmission ratios

Traction Control System	T.C.S.
Gearbox - E-Gear & Manual	
1 <sup>st</sup>	1:3.091
2 <sup>nd</sup>	1:2.105
3 <sup>rd</sup>	1:1.565
4 <sup>th</sup>	1:1.241
5 <sup>th</sup>	1:1.065
6 <sup>th</sup>	1:0.939
Reverse	1:2.692

### Brakes

4 self-ventilated rotors with pedal control, hydraulic transmission with dual independent circuits, one for each axle with vacuum servo. ABS antilock device + DRP function.	
Handbrake	Mechanical, acting on rear wheels
Carbo ceramic brakes (CCB)	
Front rotor	Ø 380 x 38 mm (Ø 14.96 in x 1.5 in)
Front caliper cylinders	n.6 (32-36-38 mm) (1.26 in -1.42 in-1.5 in)
Rear rotor	Ø 380 x 38 mm (Ø 14.96 in x 1.5 in)
Rear caliper cylinders	n.6 (32-36-38 mm) (1.26 in -1.42 in-1.5 in)

### Suspension

4-wheel independent articulated quadrilateral system. Hydraulic shock absorbers and coaxial coil springs. Suspension with dual front and rear struts, anti-roll, anti-dive and anti-squat bar.	
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### Performance data

Top speed with small spoiler	342 km/h (212.5 mph)
Top speed with big wing	337 km/h (209,4 mph)
Acceleration 0-100km/h	3.2 s



### Dimensions

Wheelbase	2665 mm (104.92 in)
Total length	4705 mm (185.23 in)
Total width	2058 mm (81.02 in)
Total height	1135 mm (44.69 in)
Dry weight	1565 Kg. (3450.2 lb)
Front track width	1635 mm (64.37 in)
Rear track width	1695 mm (66.73 in)
Front overhang	1090 mm (42.91 in)
Rear overhang	950 mm (37.40 in)
Maximum overall width with external rear-view mirrors	2240mm (88.19 in)
Weight distribution front /rear	42% - 58%

### Liquid capacities

Fuel tank	100 Liters (26.4 gal)
Engine oil	12 Liters (3.17 gal)
Gearbox oil	3,5 Liters (0.92 gal)
Front differential oil	1 Liter (0.26 gal)
Rear differential oil	2,5 Liters (0.66 gal)
Cooling circuit	15 Liters (3.96 gal)

### Consumption (according with DIR 1999/100/CE)

E-Gear / Manual

CO2 Emission  
[g/km]

City	32 L/100km	
Highway	13.7 L/100	
Combined	20.6 L/100	480

### Consumption USA (according with US EPA guidelines)

Manual

City cycle	8 mpg
Highway cycle	13 mpg
Combined	10 mpg

### Consumption USA (according with US EPA guidelines)

E-Gear

City cycle	9 mpg
Highway cycle	14 mpg
Combined	11 mpg