



## Birdcage 75th

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With the Birdcage 75th, based on the Maserati heritage and on its most advanced mechanics and realized in collaboration with Motorola, Pininfarina revives the storied theme of the true dream car now proposed in a synthesis of the vision of the three companies: exclusive design, sports DNA and technological innovation.

For 2005, in celebration of its 75th anniversary, Pininfarina has chosen to rekindle creative spirit. The Birdcage 75th is a concept of a road car where everything – style, performance, use and conception of the car – is extreme so as to get the maximum impact on the collective imagination. The car is a futuristic extension of the Maserati brand, and at the same time it serves to reinforce the Tridente's potent design heritage, and continues its grand tradition of advanced technology enveloped in sporting elegance. Integrating some Motorola technologies make the 'seamless mobility' vision real, or the fluidity of the technologies as a subsequent stage of the Internet revolution.

### Concept

The Birdcage 75th, in homage to the spirit of the dream car era, is based on the road racing chassis of the Maserati MC12 and seeks to capture the ultimate expression of speed, sensuality and elegance – to create a functional and dynamic automotive sculpture. The contrast struck between its organic fluidity and the severe tension of its mechanicals, creates a dynamism seldom realized.

The clear goal of breaking away from traditional styling solutions and creating a coherent and unique visual experience, led to a particularly innovative integration of the exterior and interior design and construction. Rather than pen the exterior in a traditional manner, and thereafter by consequence approach the design of the interior, the Birdcage 75th was designed as an integrated singular object.

### The design challenge

While the main goal of the Birdcage 75th was to push new stylistic boundaries and techniques, the Maserati's over 700 horsepower V12 engine signified that the design concept had to be true to certain race car ideals. Without limiting the project's creative potential, the design began with the study of the mechanicals themselves, and how they themselves could relate, and thus communicate with the impending exterior design to create a coherent and seamless object.

The first necessity became to envelope the mechanicals in the most efficient manner possible. As research has shown, the aerodynamic forms most effectively and frequently applied in race car design are the teardrop and the inverted wing form. With this in mind, the concept of the Birdcage 75th was born. Upon studying the mechanicals, one can see the chassis is naturally blessed by its delta shaped plan view as the small and efficient passenger cell tapers rearward to embrace the engine and drivetrain. So, the concept became clear, a teardrop central volume would encapsulate the passenger cell and the mechanicals creating an extremely streamlined and efficient frontal area. In turn, this central cell is suspended within a vast inverted wing form which maintains an exceptionally low profile to aid in the air flow above and under the vehicle.

The floating central cell is seamlessly divided into two halves, the upper portion being transparent, and the lower portion serving as a structural aerodynamic skirt. The large transparent area of the upper surface not only grants its occupants outstanding visibility, but allows all of the Maserati mechanicals, from its pushrod suspension to the beautifully crafted carbon fibre inlet trumpets of its V12 engine to be showcased and appreciated.

Staying true to its race car roots, the exterior surfaces are kept as low and uncluttered as possible only to ebb and flow into the four independently pronounced fenders which house the massive alloy wheels. The alloy wheels, which measure an impressive 20" (front) and 22" (rear) in diameter respectively, are specifically designed to recall the Tridente's logo, and as on the racing cars, are attached via a single center locking

### Technical specifications

wheel nut. The low undulating exterior has a natural but purposeful fluidity, appearing as if mercury was merely poured over the mechanics. The result is a powerful yet elegant form which, at a mere meter tall, gives the impression of movement even at a standstill.

Not incidentally, the resulting geometry of volumes is a futuristic extension of the great Maserati race cars of yesteryear, whose bodies stemmed from a simple extruded fuselage onto which the independent fenders were grafted.

It is therefore no coincidence the name of the prototype directly recalls the legendary Birdcage Tipo 63. Nicknamed the birdcage due to the radically triangulated tube construction of its chassis, these cars were truly unique in that the chassis and mechanicals were left in view under unusually large transparent front wind screens. The central engine initially mounted was a 4-cylinder 260 HP model later replaced by the V12 3000 developing 320 HP at 8,200 rpm, based on the 350S prototype and the 250F T2 Grand Prix. Over and above fourth place in the Le Mans 24-Hour event, the Tipo 63 also achieved excellent results in 1961 with Walt Hansgen in American races, winning at Bridgehampton, New York and the Elkhart Lake 500-mile in Wisconsin.

To further underline the Maserati heritage, great care was taken in the rich jewel-like details which contrast the elegant simplicity of its streamlined form. The nose, which like the Quattroporte's features the traditional trapezoidal Maserati plan view, culminates in the large oval mouth flanked by low horizontal eyes. The gaping mouth adorned by a large chrome trident, feeds the central mounted radiator and brake ducts, as well as acting as a downforce creating wing surface. The lights, developed in partnership with OSRAM Opto Semiconductors, feature the world's first homologated LED technology headlamps with OSTAR module. The light housings are milled from solid blocks of aluminum and double as cooling ducts for the heat intensive LEDs.

The rear of the vehicle is characterized by its imposingly deep diffuser, complemented by active aero panels on the upper surface, which raise and lower accordingly to produce the necessary levels of downforce for stability at any speed. When raised, the wings reveal engine bay cooling outlets, which also serve to lower air pressure underneath the wing surface, and thus aid in creating more downforce. The ultra-thin taillamps also utilize the latest LED technology, and feature hot air outlets to aid in engine compartment cooling. Finally, in Maserati tradition, the exhausts are adorned with robust oval tips finished in chrome.

### **The interior**

The interior of the vehicle plays an important role in the visual impact and historic ties to Maserati. True to the concept of the car, the interior is an extension of the car itself, seamlessly integrated in the carbon fibre chassis.

Glancing through the canopy, one can see the large carbon fibre structure of the nose section, which tapers rearward to embrace the passenger cell. Inserted into the cell is an independent passenger sled partially upholstered with Alcantara and the suspended head up display that doubles as the IP. It is here at the center of the car that we see how the car brings together two worlds: the future oriented technology of Motorola combined with the pure and sometimes raw race DNA and heritage of Maserati.

The transparent head up display reveals the intelligent core of the car, updated with its surroundings and connected to the future. In contrast with the virtual non physical nature of the display is the triangulated structure that supports it which nostalgically recalls the interior of the Birdcage Tipo 63, essential in its approach and therefore visually connecting to the mechanicals of the car.

In this way the interior reflects the conviction that successful new technologies are the ones that seamlessly integrate without denying that which is already great today. A symbiosis symbolized in the central typical Maserati clock, physical and virtual at the same time.

As a further characteristic, the car was built entirely of sustainable materials, emphasising the use of recycled

components rather than natural resources.

The Birdcage 75th also extends the concept of car/user interface, as our needs are forever shifting towards a car/mobility interface. The car becomes a central element in our daily communication activities. Through a central mounted navigation device you can navigate through a personalized array of functions and menus. But not only that, the numerous cameras positioned on the car allow you to share your driving experience with others, while projecting the images of the infrared cameras on the transparent head up display allow you to enhance your own driving experience at night.

### **Seamless mobility by Motorola**

The Birdcage 75th is an application of Motorola's vision of seamless mobility. Telephony has revealed the existence of a world in constant movement, to the point that it is difficult today to imagine life without the mobile phone. Nowadays, when we travel, we are no longer content to just make a phone call: we also want to be able to access all manner of services with our phone. Motorola has made all this possible. And it doesn't end there. We want to be able to send images and listen to music: our wishes have been fulfilled. Now Motorola is ready for the next step. People are constantly on the move and they want to have everything with them. They want a seamless mobility world. Solutions that make you live the experience of always being connected, to everything and with all services available. "Mobility" is the next stage in the Internet revolution; it will enable users to communicate and handle information independently of the place they happen to be.

The technologies integrated in the concept car fulfil this vision of seamless mobility and use payment systems, an iPen and a mobile router, putting projection screens into service for man-machine communication.

The idea of building a concept car with Motorola arose when the company in the Pininfarina group dedicated to industrial design, Pininfarina Extra, already a Motorola partner in the design of its last line of cell phones with iDEN technology, began to plan the new line of terminals. The new portfolio of iDEN products combines attractively designed lines with the very latest available technologies, digital cell phones with last generation wireless access to Internet, text pager and two-way radio communication which enables users to communicate instantaneously with one or more individuals simply by pressing a button. So we have integrated Motorola's seamless mobility into a technologically advanced concept car.

This challenge was taken up and carried forward by Pininfarina Extra through its cooperation in the design of the cabin and the accessories of the concept car.

The design philosophy of Motorola's iDEN cell phones is based on the study of bionics: the relationship between design and nature. The design of the concept is inspired by the shark which moves through the water guided by a sensor. In the same way, the car perceives the environment in which it moves.

### **Technical partners**

OSRAM Opto Semiconductors: LED Technology for Optical Systems Torra: Alloy Wheels, Belts