

IdealPark



Project report: The car lift for super luxury cars

Location: Automobili Lamborghini Inc.
Sant'Agata Bolognese (BO) - Italy

Project: Engineer Luca Bernardoni
Prospazio, Modena

Systems supply: Idealpark, Verona

2 elevators for cars with drivers on board
Mod. IP1-HMT V07

Project report No. 11/2013

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Protoshop Lamborghini

Sant'Agata Bolognese (BO) / Industrial building

Construction of a new multi-story Class A building

The new multi-story Lamborghini building, designed in collaboration with the engineering and architecture studio Prospazio from Modena, was built to obtain Class A energy certification and is the first in Italy, in the industrial field, created entirely with these characteristics.

Design, safety and energy saving are the elements on which Prospazio studio based the creation of this work of architecture and engineering that reflects the extreme style of Lamborghini. Clear shapes, a muscular character and sharp edges are the foundation of the underlying architectural concept, transforming a simple industrial space into an incredible piece of architecture with a strong identity.

The Class A energy certification was obtained thanks to the use of state-of-the-art solutions and techniques, even with regards to external appearance. The exterior facades consist of special three-layer polycarbonate walls and ventilated walls covered with ultra-thin ceramic slabs, created specifically in "Lamborghini Black", which guarantees a high level of thermal insulation.

On the second floor of the building, a 'mini' assembly line has been designed with state-of-the-art technology, that allows for the reproduction of all the assembly phases in a standard production line. This allows accurate analysis of the phases of assembly of the different pre-series models, thus ensuring high standards of quality in subsequent industrial production.



The facade of the new Protoshop of Lamborghini is in part created with a system of ventilated walls to satisfy all thermal and acoustical requirements.



Night view of the facade of the building. The new Protoshop is located in an area with high seismic risk. For this reason, the building was designed and developed in compliance with all the latest regulations regarding earthquakes.



Special 3m x 1m laminated stoneware plates in "Lamborghini Black" were laid horizontally with an exposed anchoring system.

Lamborghini's new building, intended for the development of prototypes and pre-series vehicles, represents a further element of Lamborghini's strategy in terms of environmental sustainability, with the ultimate goal of becoming a zero-impact company, namely "CO2 free", by 2015. The company is therefore aiming at a far greater energy efficiency than that required by law 1362/2010. When compared with traditional industrial buildings of the same size, the energy saving calculated in trees "useful" to offset CO2 emissions provides for a quantity of 200 for normal buildings, while only 80 are required for this new building. The building will also be equipped with a photovoltaic system that will ensure full coverage of the annual electrical energy required, allowing it to result in zero CO2 impact. This requirement will become a standard for all new Lamborghini buildings.

Automobili Lamborghini was the first car manufacturer in Italy to obtain the ISO 5001 certification in October 2011, which confirms the strong commitment of the company towards constant improvement in energy performance in all areas of activity.

The time needed for design and execution was also impressive: less than 15 months from the first draft to inauguration, 300 days from the beginning of construction to the finish, perfectly in line with a company accustomed to great speed.



Covering some 5,000 square meters, Protoshop has very high-tech and functional operational areas organized on different levels.



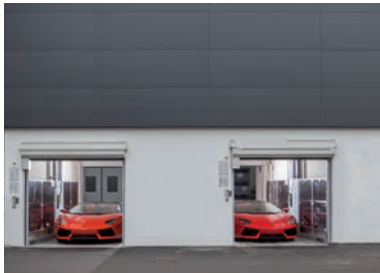
The building is in compliance with all the latest regulations regarding earthquakes.



Large windows made of triple-layer polycarbonate mounted with double chambers and filters to reduce refracted sunlight ensure proper solar illumination and a high level of thermal insulation.

At Lamborghini Protoshop, have been installed two car lifts Mod. IP1-HMT V07 with dual-access, certified IMQ (Italian certification body) for the transport of car and driver. Car lifts are used to move Lamborghini cars during the different phases of assembly. The platforms are 2.7 m wide and 5.37 m long, with a load capacity of 2,700 kg, which makes it possible to carry all types of cars made by the Company.

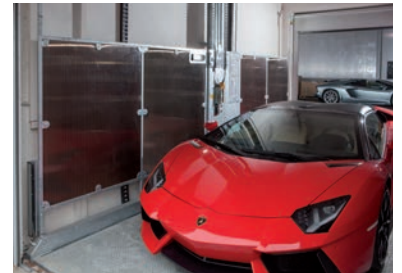
The systems have been treated with a hot-dip galvanizing process and have a 7.4 m rise connecting the two floors of the factory. They feature a speed of 15 cm per sec and a consumption of 9.5 kW.



View of the two IP1-HMT V07 car lifts with driver on board.



Both elevator systems serve the two floors of the building for the movement of cars during the phases of assembly.



Dual-access car lift. Each platform is 2.70 m wide and 5.37 m long with a load capacity of 2,700 kg.

Pendant push-button panels, connected with spiral flexible cables, were especially designed to guarantee comfort to the driver in terms of ergonomics (the push-button panel can be used either applied to a column, or from inside the car thanks to the extension cord).

These push-button panels have been installed on both sides of the car lift so as to be used in both directions, and therefore suited to left-hand drive cars also.

The authentication of the systems commands is performed through a magnetic card (badge) that, positioned in front of a reader, allows the use of the car lifts. The platform is interfaced with flame and heat sensors connected to the fire-alarm system. Furthermore, a sprinkler system has been installed beneath the upper floor of the lift shaft. Polycarbonate side guards, 1800 mm high, have been installed in order to be able to use the system also as a freight elevator. Idealpark car lifts are also in line with the building features as they ensure maximum safety to sports cars, focusing at the same time on aesthetics and user comfort.



The car lift can be controlled through a push-button panel and a magnetic card.



Internal view of one of the car lifts with polycarbonate side guards.



The car lift closures have been supplied by the company Hörmann. They consist of 6 extremely quiet and fast rolling shutters.

Via Gorani, Milan – Italy / Residential building Building renovation and conversion into a residential building

The via Gorani project was undertaken by the company I.M.I.S.A. from Venice which oversaw the renovation of a building in the center of Milan and its conversion into a residential building.

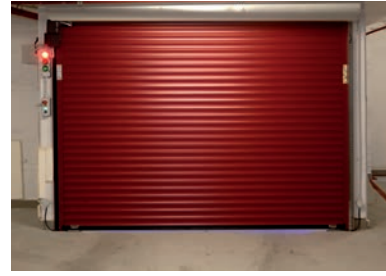
The original building had no garage for cars so IMISA designed two floors of underground parking with 10 parking spaces. The car lift mod. IP1-HMT V07 with driver on board IMQ certified, was installed for use in these two parking levels. With this system the driver can stay comfortably inside his car while it is being raised or lowered to the garage. To illuminate the platform of the car lift and create a very special light effect, two LED strips were applied on the sides of the platform. The LED technology is available in various colours: white, blue, yellow, red, green or RGB. This innovation also allows for substantially increased security at the entrance to the car, unmistakably highlighting the parking area.



Car lift with driver on board IP1-HMT V07. The system and the gate were created with TRI-PLEX treatment, a complete procedure that combines and enhances the anti-corrosive performance of hot-dip galvanizing and features the aesthetic finish of powder coating.



A UPS device allows the descent and opening of the doors of the car lift even in the absence of electricity and, in case of danger, ensures the escape route to the user.



Once the shuttered door is closed, the user, by holding down the button, can descend with his car to the basement.



The system has two lateral columns and is suitable for height differences up to 11.9 m with a minimum shaft of 80 cm and an invisible arch beneath the platform.



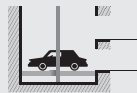
The car lift is controlled via push buttons and remote control to call the platform from the road.



The system can be fitted with a dialer that allows the driver to contact the active rescue center 24 hours a day, in case of emergency.

Car lift with driver on board IP1-HMT V07 series

Technical features:



	IP1-HMT V07
Platform width	from 250 to 270 cm
Platform length	from 500 to 560 cm
Lifting capacity	2.700 kg
Maximum stroke	11,9 m
Shaft depth	min. 80 cm

IMQ certification

Maximum speed 0.15 m/sec

Complete hot galvanizing

Hold-to-run manoeuvre using on board control panel

Automatic operation from the floor push-button

Radio remote control (call for the empty platform from the car in the street)

Automatic opening of doors

Double hoisting rope with voltage detection sensor

UPS Group device for emergency descent and opening of doors

Protective barriers of photocells

Multi-function traffic light on board (instructs the user on the system)

Lighting lamps on board