IdealPark

Project report: The invisible lift

Location: Lissone, Milan, Italy

Project: Studio-alfa
Via Giacomo Matteotti, 61 Lissone, Milan

Architect Designer: Fossati Desirena

Systems supply: Idealpark, Verona

Mod. IP1-CM FF41

Project report No. 10/2012

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Via Mazzini, Lissone - Monza e Brianza
Renovation of a private house

The project created by Studio Alpha, based in Lissone, Monza-Brianza, provided for the renovation of a traditional single-storey dwelling and storage spaces for handicraft activities which were located along the perimeter of a 65x43 metre plot of land, bounded by two roads. Architect Designer Desirena Fossati has focused on a solution to meet the customer's demands, namely, the desire to create an intimate space, closed to public view, in the same place where he had grown up as a child, which required the partial demolition of the existing structures.

Pre-existing structure on a 65x43 metre plot of land. The part used as storage/warehouse was replaced with the owner's actual residence, entirely distributed on the ground floor, leaving space for some upstairs rooms featuring a mansard roof.

The architectural design is aimed at giving "character" to the simple and anonymous volumes of the old buildings. Studio Alfa is a mix between a professional firm, experimental art studio, real estate and interior design firm. Therefore, all these "contaminations" make the design work varied, comprehensive and dynamic.

The living room of this second house has been obtained restoring the old farm shed, with a gabled roof in laminated wood with natural varnishing that becomes a warm and distinctive furnishing element, and a "greenhouse"-style glass window of the same size as the old wooden door, overlooking the inner courtyard.

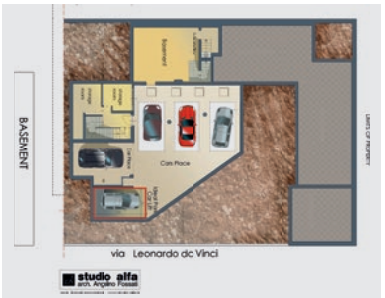
With regards to the above-ground portion, the design tried to keep the "memories" of the Client, both in terms of the structure's volume and of the materials used.

The structure of the building is shaped so as to direct sunlight up to the ground floor living area for as many hours as possible.
All the latest technological solutions have been sought and then "concealed" in ad hoc compartments designed to be completely invisible, but present.

This part is characterized by volume linearity; a white parallelepiped suspended above ground level, covered by a curved roof, which owes its shaping to the sun rays which, in April, can surpass the ridge and hit the glass doors and windows on the ground floor and inside the courtyard.

Two cute windows overlooking the road swivel diagonally in an attempt to capture as much southern sunlight as possible.

In addition to residential building, the design of the Studio Alfa firm always provides for a broader view of the context, also proposing the creation of outdoor spaces (new roads, car parks, public parks, connections) to complete a facility. Therefore, the fact of having to create "important" foundations has led Arch. Fossati to develop the excavation basement floor as a large multiple-car garage, to house up to 5 vehicles, and that could be used as storage or covered play area if necessary.



Not to devour the inner garden with open-air concrete ramps, the Architect immediately came up with the solution of a concealed car lift to take a number of vehicles to the basement, which would no longer take up space on the ground floor.

The quiet garden conceals ventilation shafts, used for the building technology systems, underneath its walkways, allowing access for maintenance work or for the addition of new components that will be used in the near future (fibre optics, remote heating systems...), thus making it possible to easily implement future changes to the building on the basis of needs yet to come.

Car lift Mod. IP1-CM FF41 used to carry vehicles to the underlying garage housing up to 5 cars.
Thanks to the realisation of the car elevator, parking spaces or access ramps to the garage were avoided that would have reduced the garden surface.

The benefit has also been in terms of costs, because with only one lift, the purchase of external car ports and the renunciation of a large part of the garden have been avoided.

The car lift of this project features the IP1-CM FF41 model with a covering roof and 4 side columns without central bulking, allowing the entire, comfortable opening of the car doors.

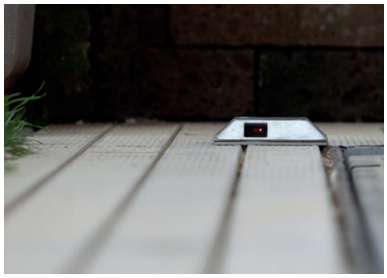
The pit is reduced to 70 cm and maximum load capacity is 2,700 kg.
The system is equipped with a synchronized lifting system using 4 independent cables and 2 hydraulic cylinders positioned horizontally under the floor of the car park.

This lift rise is of 4 m although the free space above was only 3 m. Idealpark has implemented a solution with a telescopic cover roof that is hooked by the platform during the climb.
This way, the above-ground encumbrance with the system raised is reduced to a mere 2.30 m.

The limited height of the above-ground roof allows avoiding the use of unsightly side shields because the risk of falling is minimized.
During descent, the roof leans on special support structures and disengages from the platform which instead continues its run downstairs.

The Designer's concerns to protect the Client's young children from a not very "homely" device were soon dispelled thanks to a technical briefing aimed at highlighting the system security systems.

The manoeuvre is hold-to-run. The user inserts a key in the push-button panel to check there are no people or animals within the system range before its movement.
The push-button panel is placed only on the top floor so that operations are performed only when the system is visible.



The roof perimeter is monitored by four safety photocells.
When detecting an obstacle, they block the system immediately.
The Idealpark solution is the perfect alternative to traditional post-mounted photocells that are bulkier and aesthetically more invasive.

Crossable perimeter protection photocell; safety against the risk of crushing and shearing.
The great advantage of this solution designed by Idealpark lies in its compact sizes (15 x 15 cm) and in the fact that it is crossable by car wheels so that it cannot be damaged by incorrect maneuvers.

The system four lifting columns are not symmetrical.
Given the configuration of the garage, a column was placed in a drawn back position compared to the others, and the hinged door is L-shaped to make manoeuvres in the basement easier.

The roof of the system was covered with concrete sleepers providing an outdoor decking effect.
They do not require maintenance like wood, and are structural. The designer used these to cover "bridged" walkways up to a distance of 150 cm reaching the covering of the lifting roof.

In this car lift model, where the columns are placed at the corners, opening the car door is comfortable because there is no side clearance.

Saint Raphael French Riviera, France
New construction / Private Villa

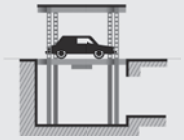
In this beautiful private villa in the French Riviera, Idealpark created a car lift, Mod. IP1-CM, that allowed the owner to enjoy the garden without losing the space required for the access ramp to the underground garage.
The floor of the system roof was covered with the same tiles used for the garden walkways, therefore matching the colours and the overall aesthetics of the surrounding environments for a truly pleasant result.

The covering roof of the car lift is at the same level of the courtyard/garden and is crossable. Cars with an overall weight of 3,000 kg can be parked.

This car lift rise is 270 cm. In this installation, 2 parking spaces were obtained, one on the platform and one in the basement.

The cover, ready to be customized (max. 150 kg/m²), was in this case covered with white tiles.

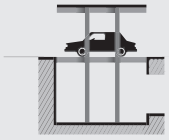
IP1-CM FF41 range car lift
Technical features:



	IP1-CM FF41
Platform width	from 230 to 270 cm
Platform length	from 500 to 540 cm
Lifting capacity	2.700 kg
Maximum run	4,5 m
Reduced pit depth	min. 70 cm
Maximum speed	0,06 m/sec

No clearance for car door opening;
Telescopic roof to reduce overall dimensions;
Lifting system with 4 synchronized columns and chains.

IP1-CM
Technical features:



	IP1-CM
Platform width	from 250 to 300 cm
Platform length	from 500 to 540 cm
Lifting capacity	2.000 or 3000 kg
Maximum run	depending on the model
Reduced pit depth	min. 150/50 cm
Maximum speed	0,06 m/sec

2 small, totally hidden hydraulic cylinders;
Two central cylinders on the sides;
Fixed or telescopic roof.

Features of both models

Totally processed with hot galvanizing;
Hold-to-run control;
Automatic opening of doors on the lower floor;
Perimeter driveway photocells installed for protection against the risks of crushing and shearing;
Cover ready for customizable flooring (max. 150 kg/m²);
Special perimeter duct to collect rainwater and prevent the lower floors flooding.