

#### FULLY AUTOMATIC PARKING SYSTEMS

## X-Y-Z Pallet and Elevator System C €

- The most compact and flexible design up to 4 levels (within 40 parking spaces) with multiple adjacent rows to obtain the best parking efficiency. Suitable for small and medium-sized car parking projects and uses up to 90% of the available space
- Entry / Exit cabin is equipped with Laser Scanners to check the position of the car and a traffic light will signal the correct position.
- After getting out of the car through touching keyboard of the control panel or simply with a badge will activate the system
- The cabin door closes and the system automatically proceeds to bring the car to its parking place.
- Lifting elevator, which can be of different types to lift car to desired level then a movement system in the X-Y axes to park/ retrieve the car in a very short time.
- The system can be installed on a steel structure or on a concrete building which is decided on the basis of many factors to be studied case by case.





### Floor-Trolley System C €

• Consisting of one or more high-speed elevators to serve all floors and start from the car entry cabin, well isolated and controlled for safety reasons, bring the Robot Shuttle trolley carrying the car to the parking box.

It is advisable to install a Robot Shuttle trolley on each floor to obtain a high service speed specially for systems over 80 cars. Or a single Robot • Shuttle that will be loaded on the level trolley from time to time by elevator.

 Each floor (level) trolley is moved longitudinally by motors and a highprecision guides installed at edges of each parking level.

To park a car, the system software will activate the movement of the trolley up to the free box, then the Robot Shuttle will transfer the car inside the box. In case of several trolleys in the system, the elevator in the meantime can move to another level to park / retrieve another car.

 The lifting system of the elevator is made of ropes and balanced by counterweights and managed by traffic management software with the necessary electrical panels, limit switches and laser sensors to manage the automatic storage and retrieve of the cars. The system can be installed on multiple levels above and / or below the ground floor to maximize parking efficiency.

# Trans lift Stacker Crane <€

- The stacker crane (mobile tower) differs from the Robot Shuttle trolley system only for the handling way where the structure of the building always has a central transport lane and parking boxes can also be positioned laterally in the second row.
- The stacker crane will load the car as in the floor trolley system and bring it to its parking box with simultaneous movement in both vertical and longitudinal directions, all always managed by a PLC and its software.
- The platform transports the car to the desired free box to park it.
- The mobile tower moves along the guide rails fixed on the concrete ceiling above the parking levels and on the concrete ground floor by means of wheels and tracks with high precision and guarantee.
- The opening of the towing and centering arms is obtained electrically by means of gear motors; the cycle time is about 18 sec while the average parking / retrieving time is 70 S.
- The power required for vertical movement is 30 KW while for horizontal movement it is 4 KW.



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