HE-MAN ROBOPARK

AUTOMATED MULTILEVEL CAR PARKING

HE-MAN GROUP

HE-MAN

HE-MAN ROBOTIC CAR PARKING SYSTEMS

Automobiles are synonyms for mobility and freedom. With the growing number of vehicles and the consequent shortage of parking space, there is haphazard and totally unregulated parking of vehicles all over. In densely populated areas they are a real challenge for city planners, architects and developers. The need to offer sufficient parking spaces is a task for specialists. This situation calls for the need for an automated parking system that not only regulates parking in a given area but also keeps the manual control to a minimum. With a mission & vision of maximum utilization of given area we, He-Man Auto Robopark Pvt. Ltd with our most efficient technology specially devised for the harsh environment gives the best solution for space constraints in this sophisticated world.

REDUCE CASTING AREA

He-Man Robopark parking system use steel platforms to place or store cars which eliminates RCC floor casting in the car parking area. Since the space requirement for our system is less compared with ramp parking, the total height of the building could be minimized.

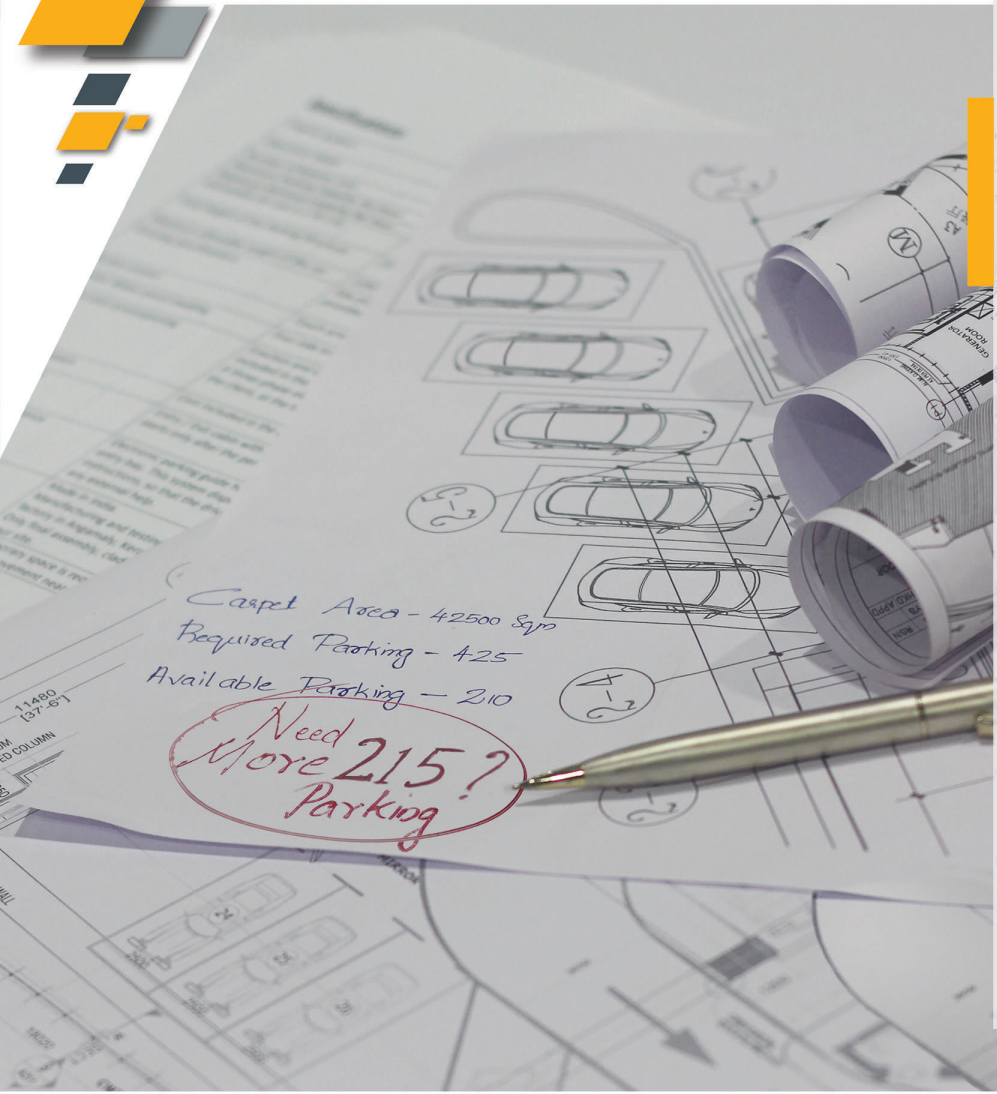
CUT DOWN YOUR PROJECT COST

Planning to build a new high rise building?

He-man Robopark brings you an opportunity to reduce your total project cost. Taking the total cost of a building, a conventional ramp parking construction cost will be a good fraction of it. With ventilation, lighting, toilets, cameras, lifts and security personals on every parking floor, which increases the cost to a great level. Here what we offer is the best solution for this problem by offering the best system with cost 50-60% less compared to a ramp parking. Also, the operation/maintenance cost of the system is very less compared to another Mechanised parking system. Since all the parking structure of He-Man Robopark is made of steel, even after decommissioning, the scrap value of the steel will provide a good part of the parking project cost.

SHORTER PROJECT PERIOD

All parking levels of our automated parking systems are made of steel structures. Since we meet all the requirements for the manufacturing in our factory itself, the total project period will be comparatively less.



GET MORE SPACES TO SATISFY THE BUILDING RULES

With the elimination of ramps, driving lanes, pedestrians and the reduction in ceiling heights, He-Man Robopark system requires substantially less area than the multi-story ramp parking. Our system utilizes a steel framework rather than the monolithic concrete design of the multi-story ramp parking. Instead of ramps to move the car up and down, we use robotic units. He-Man Robopark systems have two outstanding models, High and Ultra Density Car parking systems to get the maximum number of car parking slots in a given area. In these models, cars are parked in front of another car, to save the driveway area. To retrieve the outer car, the front car is automatically shifted to the nearest vacant parking slot.

DESIGN FLEXIBILITY

By virtue of our relatively smaller volume, mechanized parking systems are used to replace space consuming and costly ramp parking. Like under or inside of existing or new structures or between irregularly shaped structures.

Energy Efficiency

He-Man Robotic parking system is one of the most Energy efficient automated parking systems present in the world with just 0.3 Units (KWh) of Energy consumption for parking and retrieval of a single car

Innovative Design

Automated parking itself is an innovative idea of the 21st century and He-Man Robopark brings the most advanced technologies such as EDS, Diagonal Movement, robotic parking and smart card access to it.

Recyclable Materials

The major part of He-Man Robopark is Steel Structure which is a 100% recyclable material. All the structure follow nut and bolt design. This makes it easy to dismantle and relocate to another place.

Less Carbon Footprint

Inside a ramp parking, fuel driven cars create more carbon footprints searching for a parking lot, resulting in increased pollution. He-Man Robopark system offers Entry Cabins on ground floor thereby eliminating the need for a drive-through.

Indoor Air Quality

Since the parking is done by highly-efficient electric motors and advanced robotic systems, the quality of air within the building is clean.

Energy Regeneration

Our system has the technology for regenerating electric power from Kinetic Energy while Robotic Unit moves down with a car.

GREEN DESIGN

The major part of the He-Man Robopark is steel structure which is 100% recyclable. This is actually a big advantage if you are looking for LEED Certification (Leadership in Energy and Environment Design Certification) of your building. Conventional ramp parking structures are not eco-friendly, considering air pollution, fuel consumption, and energy conservation. He-Man Robopark will transform parking into the most Eco-friendly part of your building, with no air pollution, clean and Energy efficient Parking structures.

MODULAR DESIGN

Modular design is a design approach that subdivides a complex system into smaller parts called modules that can be independently created and installed.

MODULAR ROBOTIC PARKING SYSTEMS

Our Robotic car parking System is divided into Modules that can handle up to 50-100 cars. A Module will have a Robotic Unit, Entry / Exit Cabins, and Parking slots. Each Module is independent of others Modules. Modules are designed in such a way that there is no space loss in between when two modules are attached together. The large installation will have **multiple Entry / Exit cabins** to avoid queue up. Each Entry/Exit cabin can handle about 30 Cars per hour. For example, a large installation with 3000+ cars will have approximately 45 Entry/Exit cabins that can handle up to 1350 cars per hour together. Maintenance shutdown/breakdown of a Module won't affect the functionality of any other Modules. Modular design makes the mechanical and electrical integration of large installations easy.

STANDALONE SYSTEMS

Standalone Modules are mainly used for small installation of sizes in between 50-100 car spaces. In such cases, outside cladding and DG Set with automatic change over will be installed by He-Man Robopark for uninterrupted operation of the system.

PARKING PLUS COMMERCIAL SPACES

Parking along with commercial spaces is the current trend of parking development. Ground floor and first floor will be constructed for the commercial purpose. Parking will be on top of it or beneath the ground.

INVEST IN CAR PARKING

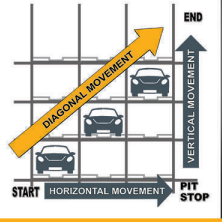
Commercial Viability of car parking projects depends on Operational/Maintenance cost, Project cost, land area cost and per hour parking charges. **Operational/Maintenance cost** of conventional ramp parking is higher because of 24x7 Securities Personal Manpower, Lifts, Camera, Lighting and Ventilation requirement on every parking floor. For He-Man Robopark systems, there is no such requirement as the system is Fully Automated and no human access to the parked cars. Since the energy consumed by our system is just 0.3(KWh) for parking and retrieval, electricity cost is also less. Our Project Execution time is around 6-9 Months and this makes revenue generation to start the very next year. The land area required for He-Man Robotic parking system is also minimal.

MAKE SMART CITIES

"Modernisation of cities" is an area where He-Man Robopark enables a big opportunity for investors. For example, the Smart Cities Mission of India. The initial investment for construction will be granted by the government and Yearly profit needed to be shared with them.

UNIQUE FEATURES OF HE-MAN ROBOPARK

Diagonal Motion



He-Man Robopark system does both horizontal and vertical motion simultaneously (Diagonal Movement of the unit). Since each motion requires Acceleration, Full speed running, Deceleration and tuning phases, this technology save valuable time.

Fully Automated

He-Man Robotic car parking system is a fully automated car parking system which requires no operators for its functionality. We also provide Automatic Shutters, Automatic smartcard issuing machines and magnetically locked as factory built in the System.

Fast Car Retrieval

He-Man Robopark can be retrieved from any parking slot in less than 2 minutes in EasyPark Model. This is enabled by incorporating the latest technologies of robotic parking. This makes it one of the fastest Automated Parking System in the Industry.

Double Shutters

Entry and Exit bay (which is the only human access area) is guarded by Double Shutters. The outer shutter of the parking bay opens, only after the inner shutter closes. This is to prevent human access to the machine-operating area of the parking tower.

Service Tracking

This system monitors and reports different parameters like warning signals from sensors, delay in processor input power malfunctions, to the central monitoring station. This helps the service center to predict and repair the faults and minimize the downtime.

Made In INDIA

The system is designed, developed and manufactured in India. This makes the parts available for a lifetime, regardless of India's diplomatic relation to any foreign country. This also avails direct and speedy access to the service.

SAFETY AND RELIABILITY

He-Man Robopark systems are designed as a rugged system to cope with harsh environments. Energy supply in India means at least one power outage per hour, plus frequent power fluctuations. He-Man Robopark systems are specially designed to withstand this unstable electrical supply. In Standalone parking buildings, the system comes with Aluminium roof sheet, ACP and Glass cladding, all these are proven to be the best for Indian environments. He-Man Robopark System uses a **fixed steel structure** for parking the cars. There are no moving parts in the parking platforms which make them very reliable. Central Robotic Unit is the part which holds all the moving parts and sensors. We also use **Triple modular redundancy (TMR)** system in the sensor logic to point out faulty sensor without affecting functionality.

Weather Proof

The system has a weather proof Cladding. This keeps the parked cars in clean condition and increases life of Parking system.

No Human Access

Double shutters and magnetic lock doors prevent human access to parked cars. This makes cars safe from theft or scratch.

Local service support

Local service support will be available for installations on a 24/7 basis.

Smart card & Touch screen

Smart card is issued by the system from Entry Cabin Touch Screen. The details of parked car are written in this card. This card is used for the retrieval of the car.

Electronic Parking Assistance

This system displays forward-reverse and stops instructions so that the driver can easily park the car without any external help.

Power Fail Safe

Upon a power failure, the system uses the regenerative energy from motors to stop it safely. DG set with AMF panel assures immediate power backup for uninterrupted operation

E.D.S

Embedded Double-Engine System (EDS) is a redundancy technique in which all major motor will have an actively connected paired backup motor.

Less Moving Parts

Only 5 motors are employed in parking/retrieval function of a module with approximately 50-100 car spaces. Central unit holds these motors.

MINIMIZED SITE DISTURBANCE DURING CONSTRUCTION

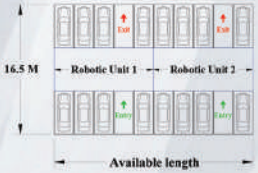
One of the major concern in every development project is the site disturbance during construction. Concretes, Tor steels, Scaffolding, and mud water make a construction site a never-ending nightmare. He-Man Robopark System offers the solution to this problem. A major part of the parking system is Pre Fabricated Steel Structures, which are manufactured in our production unit. A robotic unit is also manufactured and tested in our unit before the installation of the system at the site. Blasting and painting are done in our paint shop. All parts of the system follow nut and bolt design, this makes it easy for transportation and site installation. He-man Robopark is well equipped for parking system installation with truck mounted cranes, trucks and special purpose machines for an underground system.

SHORTER INSTALLATION PERIOD

A Ramp parking system has a long construction period, for example, 1000 car parking spaces need approximately 18 months were as He-Man Robopark systems require 9 months in most of the cases. Moreover, the first 5 months is for manufacturing and site installation is only during the last 4 months.

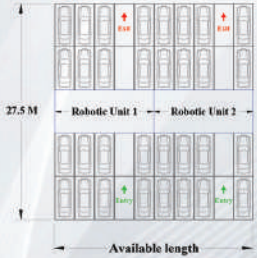
Easy Parking System

In Easy parking system, one block of the parking structure is present on both sides of the central robotic unit. The driver parks his car in entry bay with the help of Electronic parking guides. The central robotic unit takes the car from entry bay and parks it in the nearest free slot. When needed, the central robotic unit takes this car to Exit Bay. These systems have less than 2 minute's retrieval time.



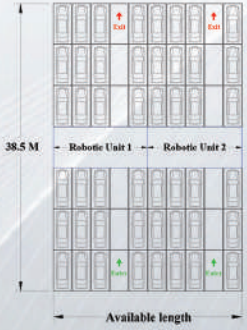
High Density Parking System

In a high-density parking system, two blocks of parking structure are present on both sides of the central robotic unit. The central robotic unit takes the car from entry bay and parks in the nearest outer free slots. After filling the outer slots, cars are parked in the inner slots. To retrieve a car from an outer slot, the car in front (if present) is shifted to another free location.



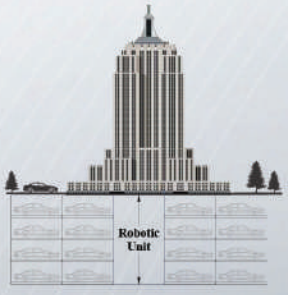
Ultra Density Parking System

In Ultra Density System three blocks of parking structure are present on both sides of the central robotic unit. The central robotic unit takes the car from entry bay and parks in the nearest outer free slots. After filling the outer slots, cars are parked in the inner slots. To retrieve a car from an outer slot, two cars in front (if present) is shifted to other free locations.



Under Ground Parking System

Basement floor of a building is the most suitable for car parking. Unlike other conventional ramp parking system, He-Man underground parking system does not require ramps. The driver parks his car in Entry cabin which is present on the ground floor. Then the car is brought down by car lifts. As underground floors are free of offset rules, maximum cars can be accommodated in that area.



HE-MAN AUTO ROBOPARK TEAM

PROJECTS AND PATENTS

He-Man Auto Robopark (P) Ltd was incorporated in 2012 as a Spin-off from its parent company He-Man Engineers which was established in 1988. He-Man Auto Robopark (P) Ltd has multidisciplinary Design & Development team consisting of a mix of veterans and young dynamic engineers who are poised to face new challenges. Our ISO 9001:2015 certified production unit which broad over One Lack sq.ft area are driven by pure passion for excellence.

2013

31 Cars

M.A.G.J. Hospital
Mookkannoor, Angamaly,
Kerala, India
2042 sq. feet, 4 floors

2014

IRISH PATENT

Government of Ireland has granted patent valid from the date 9th September 2014 for Automatic Multilevel Car Parking System.

2016

INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

INDIAN PATENT

Government of India has granted patent valid from the date 19th August 2010 to He-Man Auto Robopark (P) Ltd for Automatic Multilevel Car Parking System.

2017

UNITED STATES PATENT AND TRADEMARK OFFICE
DEPARTMENT OF COMMERCE

U.S.A. PATENT

United States of America has granted patent valid from the date 3rd January 2017 for Automatic Multilevel Car Parking System.

2017

81 Cars

LISIE Hospital
Ernakulam
Kerala, India
2930 sq. feet,7 floors

2019

3040 Cars

SANDS INFINIT
LULU Group
Smart City, Kakkanad,
Kerala, India
204159 sq. feet, 4 floors

Robotic Parking Division

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