



MECHANICAL
ATTENDED SYSTEMS
FOR BASIC STACKING



AUTOMATED
ADVANCED TECHNOLOGIES FOR
ROBOTIC PARKING SOLUTIONS



SEMI AUTOMATED
HYBRID DESIGN FOR
SELF-PARK OR ATTENDED STACKING



CUSTOM UNITS
CREATIVE SOLUTIONS FOR
CUSTOM DESIGN & EXPOSURE

INFO@PARKPLUSINC.COM

AGV

AUTOMATED GUIDED VEHICLE

Parking System

OUR GLOBAL FOOTPRINT



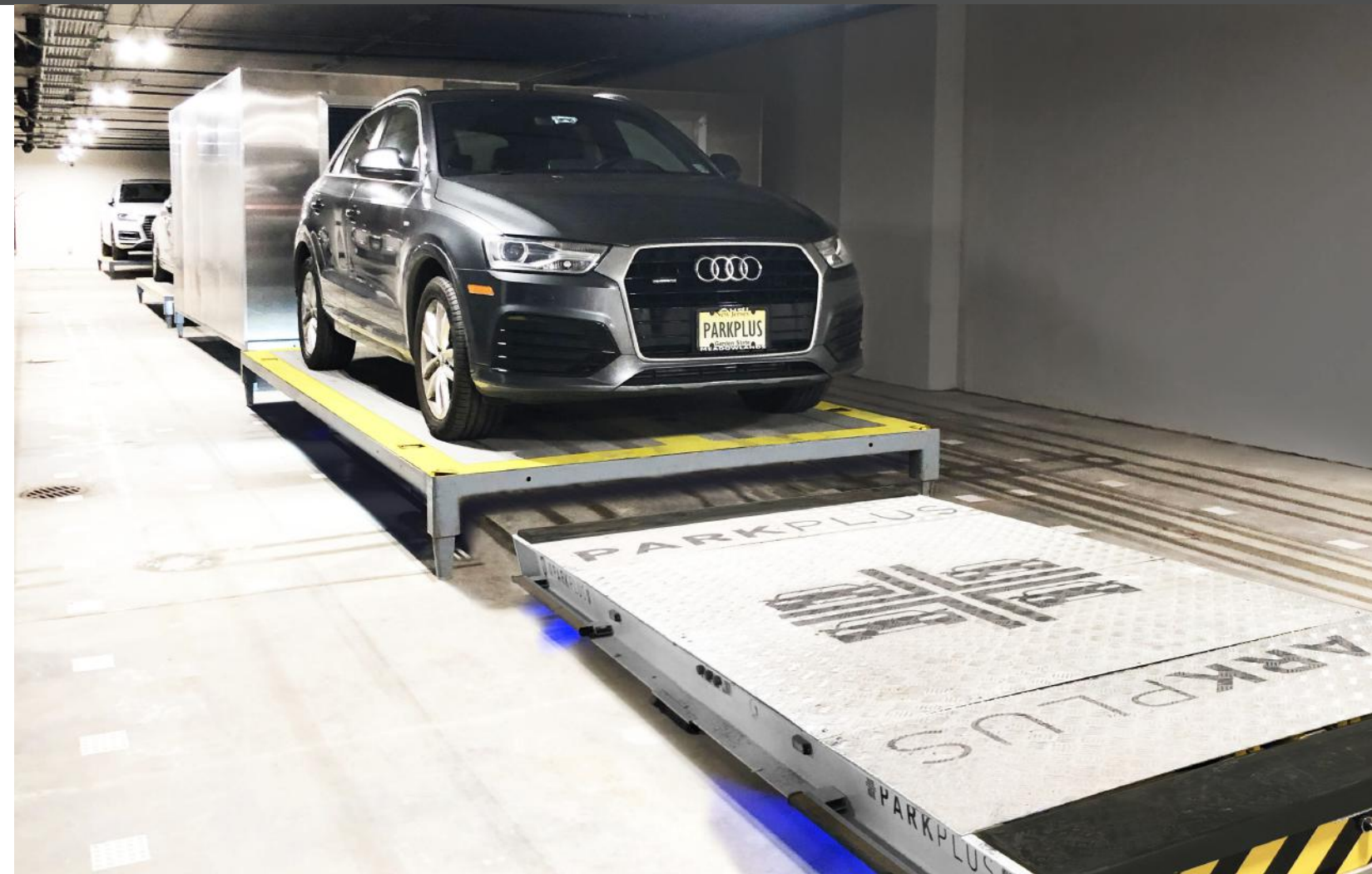
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SPEC SHEET

PARKPLUS AGV AUTOMATED GUIDED VEHICLE

- In-house Design, Manufacturing, Installation & Service
- Intelligent Traffic Management Software
- Flexible Floor Plan Configuration
- 24/7 Video Monitoring & Remote Access



The **PARKPLUS** Fully Automated Guided Vehicle (AGV) Parking System consists of free-roaming, battery-operated, omni-directional robots using traffic management software, markers, vision systems and lasers for self-guidance to manage the automated storage and retrieval of vehicles.

The **PARKPLUS** AGV Parking System is designed to be installed in an enclosed parking vault. In addition to the parking superstructure and storage area, the AGV system includes 6 main components:

- 1. Automated Guided Vehicle (AGV):** Battery-operated robotic device.
- 2. Loading Zone:** Entry/exit area where users leave/retrieve vehicle.
- 3. Vertical Reciprocating Conveyor (VRC):** Car lift to transport vehicle between floors/levels.
- 4. Control System:** Manages automated storage and retrieval of vehicle.
- 5. Vehicle Storage Tray:** Platform vehicles park on. Handled by AGV to transfer vehicle to/from storage vault.
- 6. Tray Accumulator:** Stacks Trays to maximize storage.

System can be installed in multiple regular and irregular configurations on multiple levels above, on and below grade to maximize parking efficiencies. Basic system design and components are determined by peak demand throughput requirements of the parking system.

ADA requirements can be accommodated. Each city may have minimum height requirements and different clear requirements for code required parking. Owner/Architect should review with local planning and building departments. **MEP coordination with project team must meet code requirements and satisfy equipment clearances.**



Suitable for

- Standard passenger vehicles
- SUVs
- Vans
- *Custom solutions available

Specifications

| | |
|------------------------------|----------------|
| Maximum Vehicle Load: | 6,000 lbs |
| Length of Stall: | 17' to 20' |
| Width of stall: | 7'-6" min |
| Clearance: | 6'-8" to 8'-2" |

Control: Touchscreen Kiosk
Mobile App (Optional)
Key Fob (Optional)
Remote Control (Optional)
Maestro™ Traffic Manag. Software

Power & Electrical

208 Volt, 3 Phase Power.
Approx. 300-1000 Amps depending on system size and components.
Contact **PARKPLUS** for project-specific requirements.

Operation

Vehicle is always parked on a pallet. AGV transfers pallet containing vehicle to and from storage area, or may transfer it to a VRC for storage on another level. User will always park & retrieve car from Loading Zone/s.



ENTRY: User parks and exits vehicle in Loading Zone

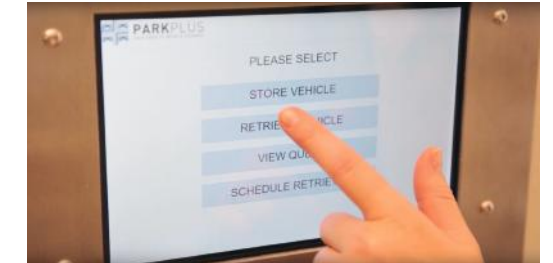


STORAGE: Vehicle is automatically parked by AGV

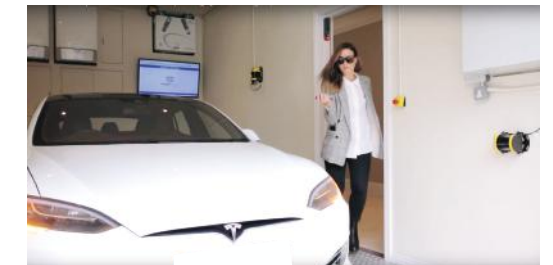
Applications

AGV System can be installed in self-park applications:

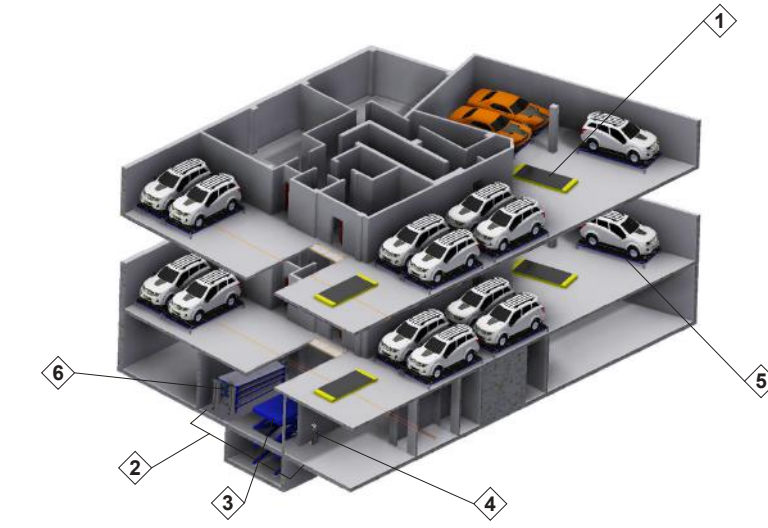
- Multi-Family Residential Buildings
- Indoor Installations
- Low & High Rise Buildings
- Commercial Buildings



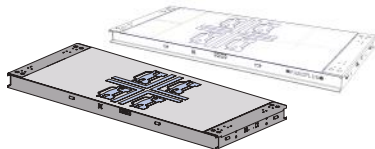
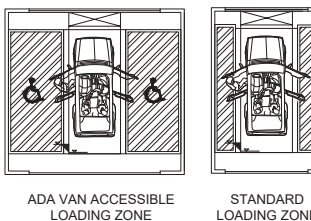
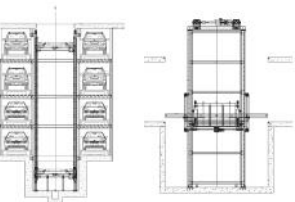


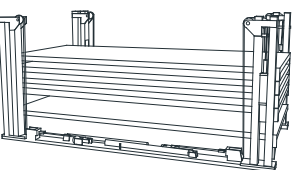
OPERATION: System is activated by Touchscreen Kiosk/Mobile App



RETRIEVAL: Vehicle is presented to Loading Zone when requested



Components

| | |
|---|--|
| <p>1 Automated Guided Vehicle (AGV)</p>  | <p>2 Loading Zone</p>  <p>ADA VAN ACCESSIBLE LOADING ZONE STANDARD LOADING ZONE</p> |
| <p>3 Vertical Reciprocating Conveyor (VRC)</p>  | <p>4 Control System PARKPLUS Maestro Traffic Management Platform</p>  <p>PARKPLUS KIOSK PARKPLUS MOBILE APP</p> |
| <p>5 Vehicle Storage Tray</p>  | <p>6 Tray Accumulator</p>  |

ADDITIONAL INFORMATION

Safety

System may be equipped with Visual and Audible alarms and Emergency Stops. Sensors for vehicle size and positioning ensure system will not initiate unless physical parameters are met. Motion detectors and lasers detect obstructions within system and stop operation in emergency. System requires operator reset to check safety and obstruction removal. Sensor signals, door signals and PLC program protection for sequence operation ensure function as programmed. System includes manual operation methods for system override. System is equipped with limit switches which limit motions to correct system levels and positions. System can be equipped with a secondary safety gate system. System is equipped with 24/7 Video Monitoring.

Fire Protecting

In most metropolitan areas, multi-level automated stacker systems are reviewed as similar to high piled storage. Fire rating of structural racking components is not required. Sprinklers may be required per following section. Each city may have fire department guidelines.

Fire Sprinklers

1. Installation shall be in a sprinklered garage. Additional in-rack sprinkler requirements may apply. 2. Sprinkler Plans filed and approved by local municipality. 3. Sprinkler system designed as required by NFPA 13 and local building codes. 4. Clear building height within parking area must accommodate height of equipment plus additional requirements for adequate coverage of fire sprinklers

Temperature

This system is designed to operate between 50° and 105° F.

Humidity

This system is designed to operate in humidity no higher than 75%.

Loading

Structural design and loading is provided on a project by project basis and is dependent on seismic zones, soils conditions and other environmental conditions.

Warranty & Service

12-month Standard Manufacturer's Warranty. Extended warranty and Service Maintenance Agreement is available at time of purchase.

Suitable for

- OTCR Compliant, City of New York
- Los Angeles County Approved
- ISO Compliant
- California Seismic Code Compliant
- Miami Dade County Compliant
- Approved in multiple US cities