

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** Parking System includes 6 main components:

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

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 throughout requirements of the parking system.

ADA requirements can be accommodated. 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

Vehicle Load:	6,000 lbs. max.
Vehicle Length:	18' max.
Vehicle Width:	7'-3" max.
Vehicle Height:	6'-8" max.
Control:	<ul style="list-style-type: none"> • Touchscreen Kiosk • Mobile App (optional) • Key Fob (optional) • Remote Control (optional) • Maestro™ Traffic Management Software

Power & Electrical

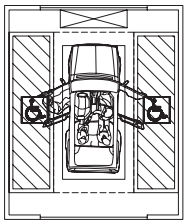
208 Volt, 3 Phase Power

Approx. 300-1,000 Amps depending on system size and components.

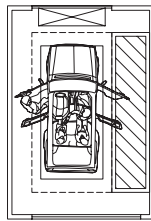
Contact **PARKPLUS** for project-specific requirements.

Components

❶ Loading Zone



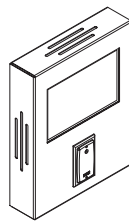
ADA Van Accessible
Loading Zone



Standard
Loading Zone

❷ Control System

PARKPLUS Maestro Traffic
Management Platform

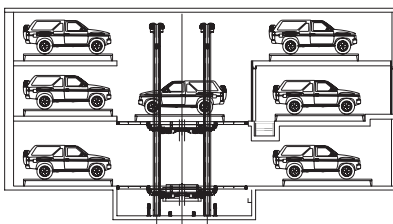


PARKPLUS Kiosk

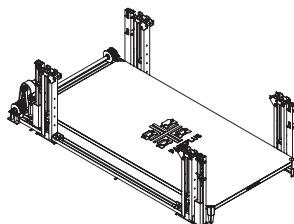


PARKPLUS Mobile App

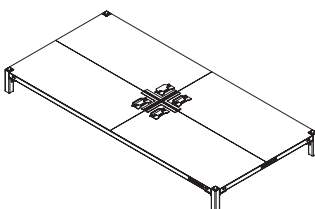
❸ Vertical Reciprocating Conveyor (VRC)



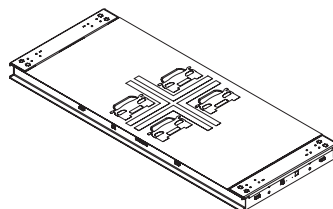
❹ Tray Accumulator



❺ Vehicle Storage Tray



❻ Automated Guided Vehicle (AGV)



◇ IN-HOUSE DESIGN, MANUFACTURING, INSTALLATION & SERVICE

◇ INTELLIGENT TRAFFIC MANAGEMENT SOFTWARE

◇ FLEXIBLE FLOOR PLAN CONFIGURATION

◇ 24/7 VIDEO MONITORING & REMOTE ACCESS

Operation

Vehicle is always parked on a tray. **AGV** transfers tray 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 Parking System can be installed in self-park applications:

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

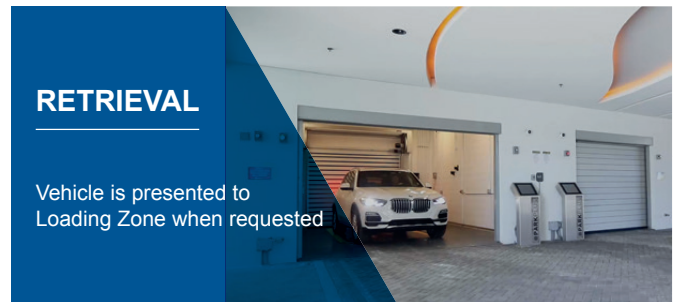
OPERATION

System is activated by Touchscreen Kiosk/Mobile App



RETRIEVAL

Vehicle is presented to Loading Zone when requested



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 Protection

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 different 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 50%.

Loading

Structural design and loading is provided on a project by project basis and is dependant on seismic zones, soil 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.

Approvals

- OTCR Compliant, City of New York
- Los Angeles County Approved
- ISO Compliant
- California Seismic Code Compliant
- Miami Dade County Compliant
- Approved in multiple U.S. Cities



TURNKEY PROJECT SOLUTIONS

PARKPLUS is the leading provider of high density parking systems, with the most completed projects, and the most extensive product range, in the United States. **PARKPLUS** was established over 50 years ago, our experience is based on a multitude of projects spanning over half a century.

To ensure the highest quality in our parking solutions, **PARKPLUS** provides complete service across every project. We employ professional full-time staff dedicated to **Design & Engineering**, **Assembly & Installations**, **Procurement & Manufacturing**, and **Service & Support**.

HIGH DENSITY PARKING SYSTEMS



Automated Systems

Advanced technologies for robotic parking solutions

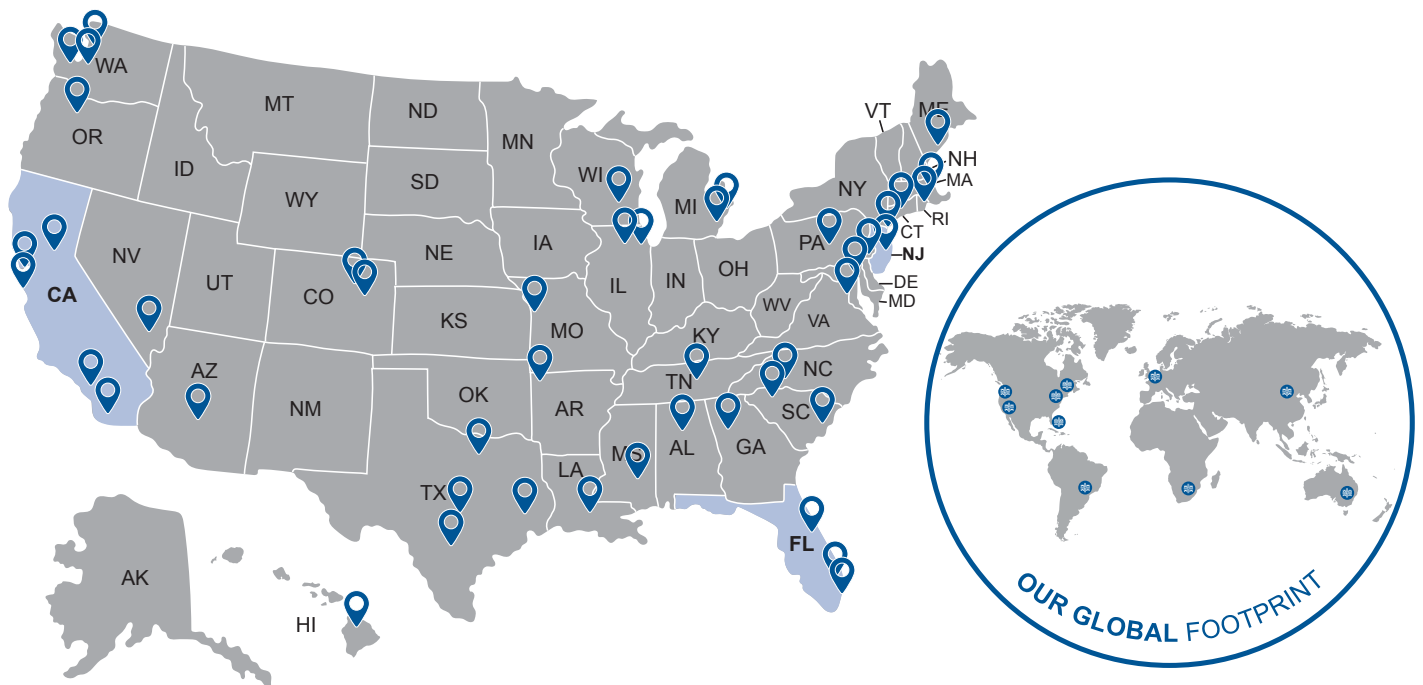
Mechanical Stackers

Attended systems for multi-level basic stacking

Custom Solutions

Creative solutions for custom design & exposure

OUR USA PROJECT FOOTPRINT



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