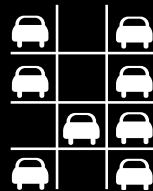


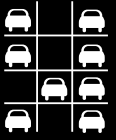


Integrated Parking Solutions
For High-Density Communities

DATA SHEET:

Fully Automated System





Fully Automated System

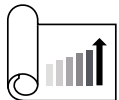
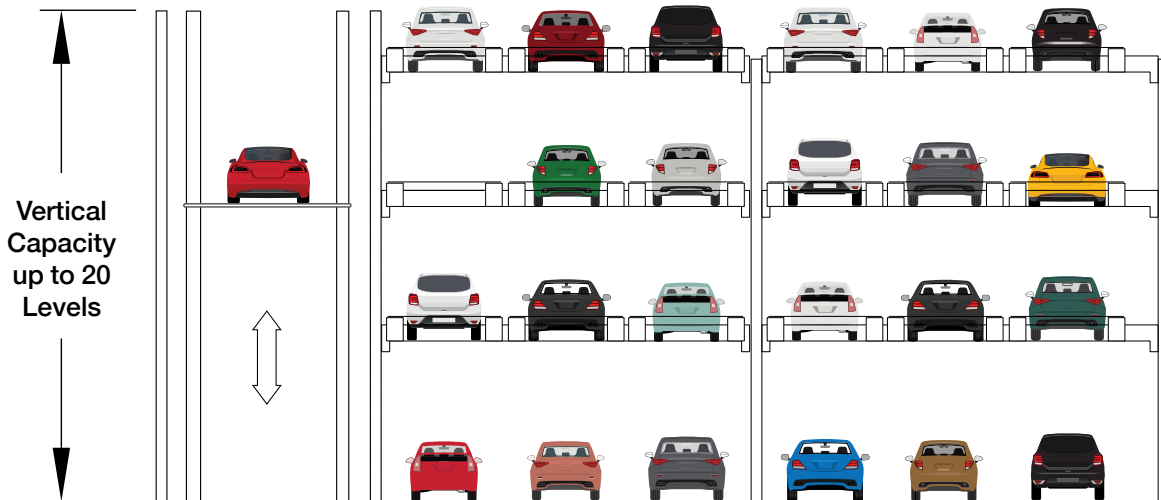
SilMan Automated Parking Systems (SAPS) is a leading provider of mechanical parking solutions, helping architects and developers create efficient spaces and build sustainable communities. The Fully Automated System is our premier offering, a tailor-made approach to optimize vehicle storage and enhance user experience.

All SAPS systems meet ASME B 20.1 v2024 and NFPA 79 v2024 standards.

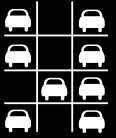
System Overview

The Fully Automated System deploys multiple mechanical operations to maximize parking density and traffic flow in residential and commercial developments. Vehicle rotation provides forward entrance and exit for driver convenience while minimizing drive aisles.

The Fully Automated System accommodates up to 20 total levels of parking, including below-ground capability to -2 levels (-2 / +18), and can be customized to meet the specific requirements of your development.



Watch for **Enhanced Performance** alerts throughout this document for ways to optimize your system operations and user experience.



Fully Automated System

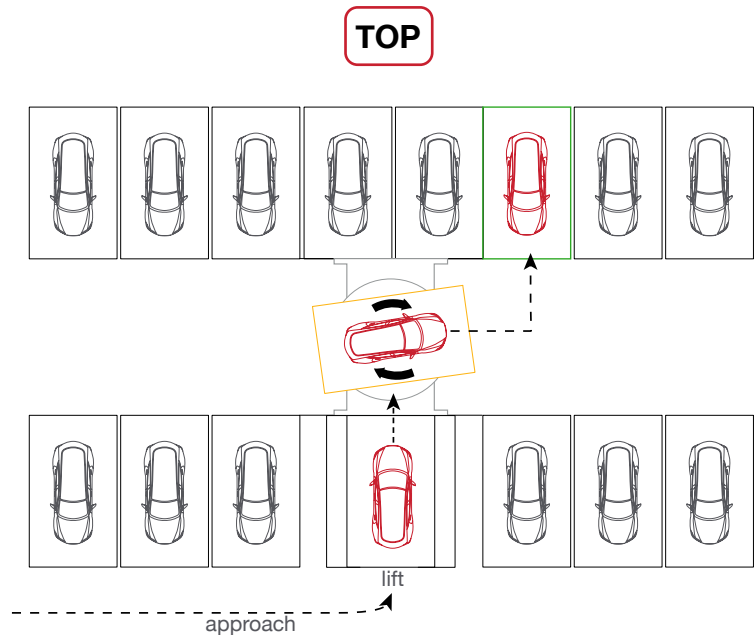
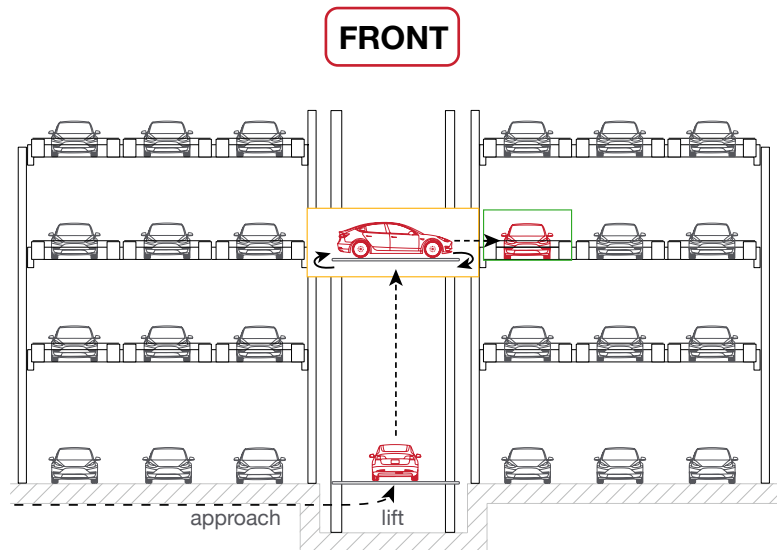
Fully Automated System Operation

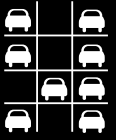
The Fully Automated System is a custom solution that achieves efficiency for users and owners operating in constrained areas.

Drivers enter the Fully Automated System, deposit their vehicle in a staging area within the lift system, and exit the parking structure. The pallet and vehicle are raised or lowered to the designated level and transferred to a rotate/traverse module. The vehicle is rotated and transported to the vehicle's assigned parking location.

Users store and retrieve vehicles from the ground level, where the system is alerted to their intent by a fob or touchscreen kiosk interface. An attendant is not required.

[View a video of the Fully Automated System](#)





Fully Automated System

System Details

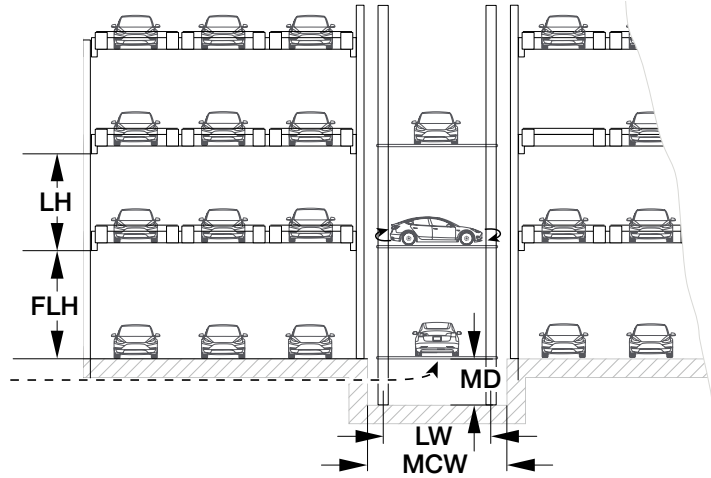
Dimensions

Center Line Below Grade Clearances

Detailed dimensions for the Fully Automated System vary due to its flexibility. This section provides information for a “base model” example, including parking space and lift dimensions, outside dimensions, below-ground elements, and necessary clearances.

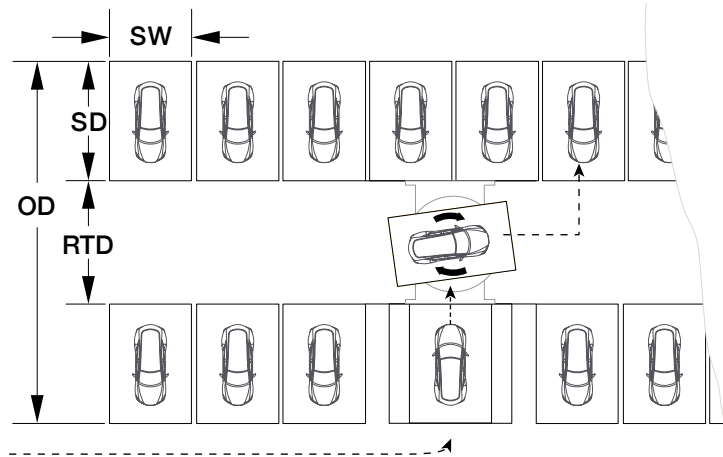
SIDE

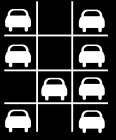
	Area	Dimension
LH	Level Height	5' - 11"
FLH	First Level Height	9' - 11"
MD	Mechanical Depth	6' - 7"
LW	Lift Width	17'
MCW	Mechanical Clearance Width	18' - 6"



TOP

	Area	Dimension
SW	Space Width	8' - 6"
SD	Space Depth	18'
RTD	Rotate Traverse Depth	24'
OD	Overall Depth	60'





Fully Automated System

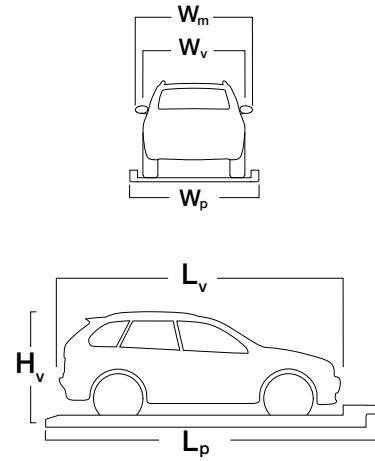
System Details

Standard Capacity

Vehicle Dimensions Pallet Sizes

The Fully Automated System is designed to accommodate a wide range of vehicle sizes and weights. This section outlines the standard vehicle dimensions for the system, along with the corresponding pallet sizes and weight capacities.

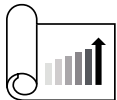
	Dimension	Standard
	Vehicle Weight (lbs)	5,200
Wm	Vehicle Width - Mirror-to-Mirror (ft-in)	8' - 6"
Wv	Vehicle Width - Wheel-to-Wheel (ft-in)	6' - 10 3/4"
Wp	Pallet Width (ft-in)	8' - 6"
Lv	Vehicle Length (ft-in)	17' - 1"
Hv	Max. Height (ft-in)	7' - 0"
Lp	Pallet Length (ft-in)	18' - 1 1/2"



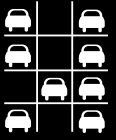
Upgrades

- Vehicle capacity to 6,000 lbs
- Vehicle height from 5' - 0" to 7' - 0"
- Custom pallet sizes

For additional Options, refer to page 9.



Enhanced Performance: Our in-house design team consults directly with you to optimize vehicle size and weight parameters for your project.



Fully Automated System

System Details

Space Required to Access System

Approach/Exit

This section addresses the area needed for entry and exit to and from the system. For reference, here are sample turning radii for various vehicles.

Vehicle Make	Vehicle Model	Turning Radius
Chevrolet	Malibu	18' - 6"
Tesla	Model Y	19' - 10"
Nissan	Altima	18' - 8"

System Finish

Finish Options

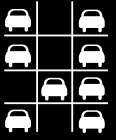
Standard Specifications

The choice of finish depends on the environmental conditions of the installation site. A powder coat is suitable for most environments, while galvanized steel is recommended for areas with harsh weather conditions.

Powder Coat

Galvanized





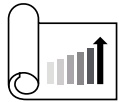
Fully Automated System

Electrical Specifications

Standard Specifications

Automated parking systems are highly customizable. Each implementation varies significantly based on the unique characteristics of the project.

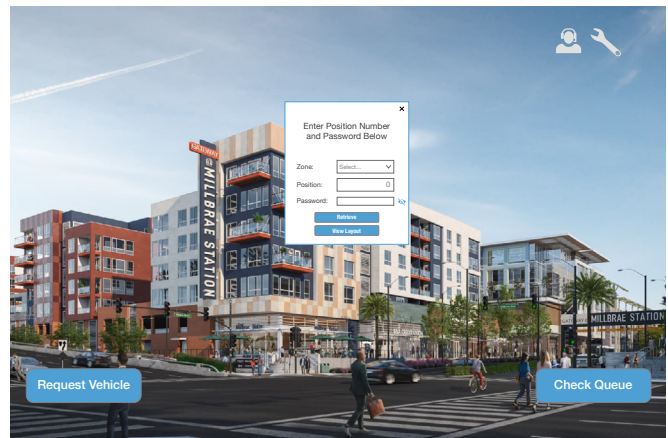
We recommend consultation with a SAPS parking professional to determine the parameters and demands of your system and the most appropriate electrical specifications and system requirements for optimal performance and compliance with relevant standards.

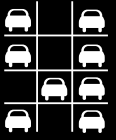


Enhanced Performance: Your user controls interface can be expanded to create a network of kiosk screens for convenient operation. A customized remote interface can also be created for property managers and owners to monitor and administer the parking system. Remote monitoring for quality service and performance is available with the SAPS full-service and support program.

Fob and Touchscreen Kiosk

The Fully Automated System is user-friendly, allowing drivers to alert the system of their intent to store or retrieve their vehicles using a fob or touchscreen kiosk.



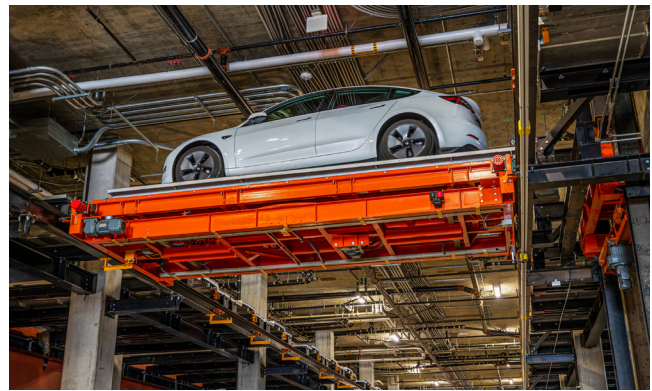


Fully Automated System

Impact on Building Systems

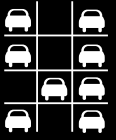
Construction

While the Fully Automated System is typically constructed and supported within the building, it may also be installed as a free-standing, self-supported structure. Automated parking system's versatility enables seamless incorporation into a wide range of building types.



Noise Monitoring and Testing

During operation, the system is intermittently 25 dBA above the ambient garage noise level and is estimated to be 80 – 90 dBA, depending on the surrounding acoustics.



Fully Automated System

Slab, Embedment, and Drain Slope Requirements

Slab

Automated parking systems are highly customizable. Each implementation varies significantly based on the unique characteristics of the project.

For example, a -1/+2 configuration requires a minimum 6-inch (152 mm) thick slab with a compressive strength of 3,000 psi (20.7 MPa). However, since this technology can expand to 20 levels, additional slab thickness and/or compressive strength could be required, as determined by structural engineer analysis and the geographic location of the installation.

We recommend consulting with a SAPS parking professional to determine the requirements for specific implementations.

Embedment

No embedment is required for the installation of the parking system, simplifying the construction process and minimizing disruption to the existing structure.

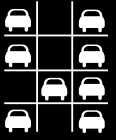
Drain Slope

A drain slope of 2% (1/8 inch per foot) is recommended for proper drainage and to prevent water accumulation within the parking system. Collaboration with the Architect is essential to confirm that the drainage system is compatible with the parking system design and functions effectively.

Options

Fully Automated System Options

- Remote monitoring and support
- Centralized kiosk
- EV charging
- Life-cycle support services



Fully Automated System

Appendix

Warranty

SilMan Automated Parking Systems offers a standard one-year warranty on all mechanical parking systems. This warranty includes a one-year service contract with quarterly onsite inspections to ensure optimal system performance and address any potential issues.

Maintenance, Service, and Support

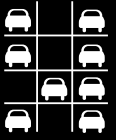
SilMan is committed to providing comprehensive maintenance, service, and support for all of our automated parking systems. We offer a range of service plans to meet your specific needs, ensuring that your system operates smoothly and efficiently throughout its lifespan.

Retrieval Times

Retrieval times are an essential criteria for architects and developers when selecting a high-density parking system. When comparing retrieval times between mechanical parking and surface systems, it is crucial to consider the time spent walking and driving in a surface or ramp parking lot to make an accurate comparison.

Parameters affecting retrieval times:

- Size of system
- Distance of the vehicle from the pick-up location
- Number of users at a given time
- Retrieval activation method
- Number of entries and exits
- Advance queue via remote touchscreen kiosk or mobile app



Fully Automated System

User Safety

Gates and screens restrict access to the system while in use. Testing the safe operation of gates occurs during the commissioning process. Mechanical parking systems also contain uneven walkways and low head clearance, requiring the installation of safety signage before public use of the parking system.

Safety signage, lighting, etc. are outside the parking scope and is installed by others.

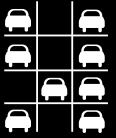
Items Beyond Parking System Scope

ADA Requirements

ADA compliance is typically outside the scope of work for mechanical parking systems. However, fully automated systems may accommodate ADA requirements in certain circumstances. Speak with a SAPS parking professional to assess your project and to learn more.

Fire Suppression and Safety

Fire control systems, safety signage, and lighting are not included in the Fully Automated System and should be installed by qualified professionals to guarantee compliance with safety regulations.



Fully Automated System

Mechanical Parking is Building Value

SAPS Fully Automated Systems improve efficiency, revenue generation, and user satisfaction of your development when challenged by limited spaces and high volume.

Moreover, SilMan’s “One Team” approach delivers unique value as a mechanical parking system provider, offering self-performed services throughout every phase of your project.

SilMan Industries is a well-established automation and industrial service provider. Since 2015, the company has installed over 4,000 automated parking spaces in communities just like yours.

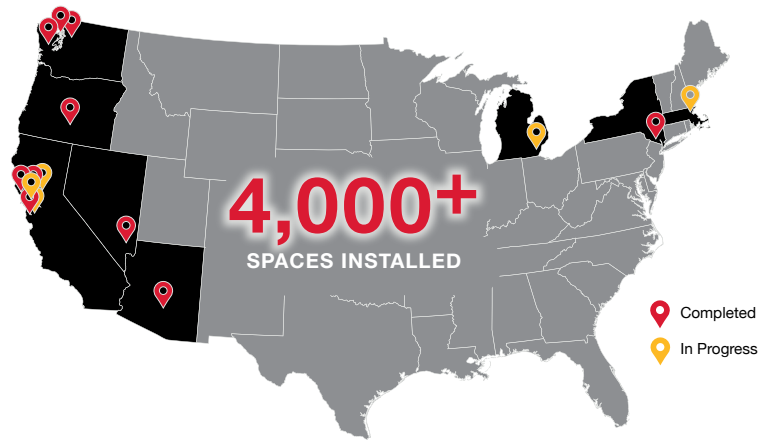
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