Westfalia®

AUTOMATED PARKING SYSTEM —

PALLET–BASED CRANE

APPLICATION

> Medium to large systems

> Lower system througput requirements

> Residential or mixed–use developments

> Lower system cost requirements

> Vehicle storage

SYSTEM OVERVIEW

Westfalia's pallet–based crane system leverages our automated storage and retrieval machine (S/RM) technology, commonly used in warehouses and manufacturing facilities. The crane moves vehicles horizontally and vertically simultaneously, ensuring efficient storage and retrieval. It facilitates all automated movements between the vehicle lifts and the parking positions.

Vehicles are placed on vehicle pallets by users in designated transfer areas. Vehicle lifts then move the cars into the system, where Westfalia's Satellite® technology transports them onto the crane platform for storage.

The user experience is seamless, with well–lit, comfortable transfer areas where vehicles are parked and retrieved. Since users only interact with the transfer areas, developers can create a high–end, luxurious experience with minimal additional costs.

CONFIGURATION OPTIONS

The system can be configured with one or two rows of vehicles on either side of the vehicle crane aisle, with the option for three or even four rows in long-term storage applications. The crane aisle length is highly adaptable and can be customized to fit the building layout.
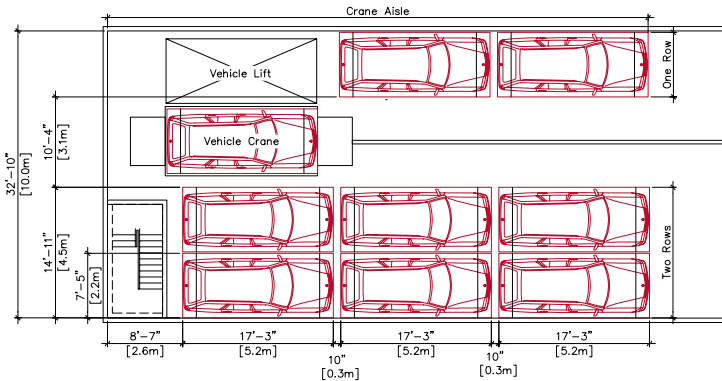
Vehicles are stored on pallets within a steel frame or rack on each parking level, and the vehicle crane moves along a central crane rail within the aisle.
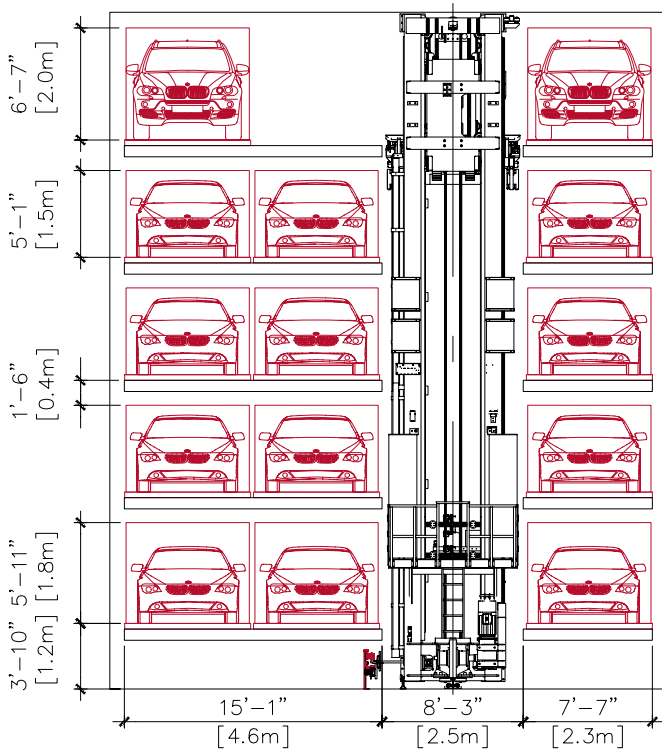
Parking level heights are flexible and can accommodate SUVs, sedans, or a combination of both, depending on specific customer requirements.

Vehicle Crane: The vehicle crane system, based on proven S/RM technology used in warehouses and manufacturing facilities, simultaneously handles horizontal and vertical vehicle movements within the system.

Transfer Area: Transfer areas are where users park and retrieve their vehicles. They can be designed for vehicle entry, exit, or both, and can be located on one or both sides of the system.

Lift: Lifts transport vehicles from the entry or exit level to the parking system, where the vehicle crane collects or deposits the vehicle pallet.

Turntable: Turntables rotate vehicles 180°, typically in transfer areas or other designated locations, to ensure vehicles are positioned for easy exit, enhancing user convenience.

Vehicle Pallets: All vehicles are stored on dedicated parking pallets, ensuring no contact is made with the vehicles during storage or retrieval.

Savanna.NET® Parking Control Software: Savanna.NET® software manages the system, coordinating vehicle storage and retrieval operations. Built on Microsoft® .NET technology, it supports ongoing updates for continuous system optimization.

WestfaliaX®

AUTOMATED PARKING SYSTEM —

PALLET–BASED LONGITUDINAL SHUTTLE

APPLICATION

- › Larger systems
- › Higher system throughput requirements
- › Residential or mixed–use developments
- › Infill developments
- › Vehicle storage

SYSTEM OVERVIEW

Westfalia's longitudinal shuttle system uses Satellite® technology to move vehicles, which are parked on pallets, to and from designated parking locations. Users park their vehicles on pallets in well–lit, comfortable transfer areas. Since these are the only areas users interact with in the automated garage, developers can offer a luxurious experience at minimal cost.

In this system, the pallets that users park their vehicles on rest directly on a vehicle lift in the transfer area. Once the lift lowers the vehicle into the parking system, Westfalia's Satellite® moves under the pallet, lifts it, and transfers both the vehicle and pallet onto the longitudinal shuttle. The shuttle then moves horizontally along its designated path to place the pallet into the assigned parking position.

Each shuttle operates on a single level, providing high system throughput by requiring a dedicated shuttle per level. Vertical movement is managed by vehicle lifts, which travel the entire height of the parking system.

CONFIGURATION OPTIONS

The system can be configured with one or two rows of vehicles on either side of the shuttle aisle, with the option for three or four rows in long-term storage applications. The length of the shuttle aisle is highly flexible and can be customized based on the building's design.
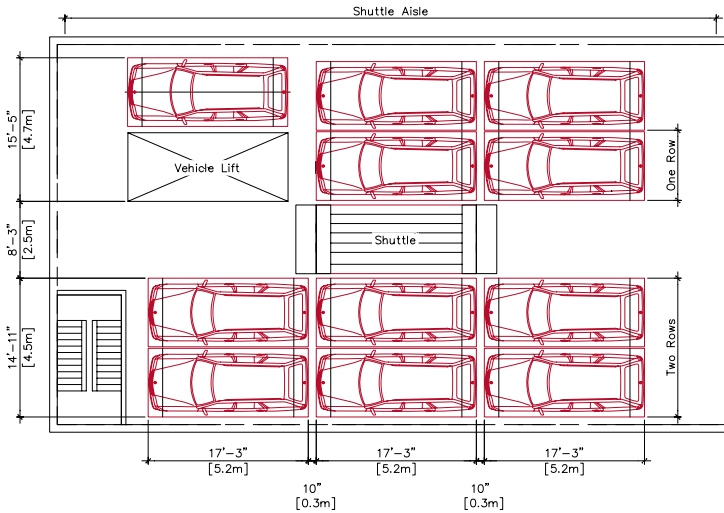
Vehicles are stored on pallets at each parking level within a steel frame or rack, on a concrete floor, or within a hybrid structure, depending on the architectural and structural requirements.
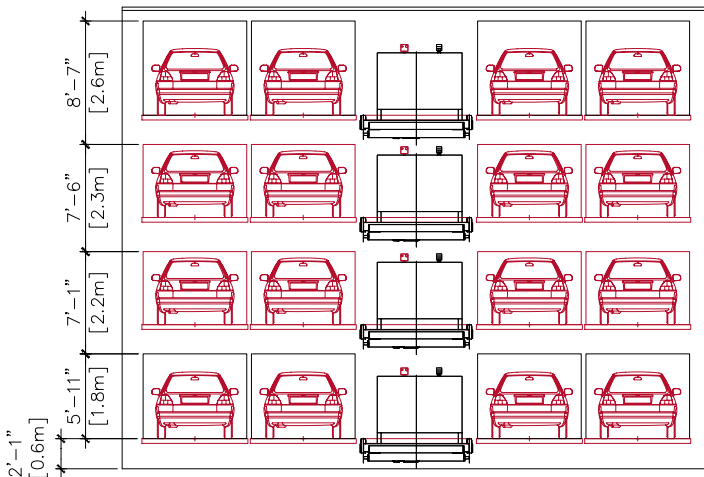
Parking level heights are adaptable to accommodate SUVs, sedans, or a combination of both, offering complete flexibility based on customer specifications.

SYSTEM COMPONENTS

Longitudinal Shuttle: The shuttle moves vehicles horizontally within the parking system, using on-board Satellite® technology to park and retrieve vehicles from designated positions. The number of shuttles is proportional to the number of parking levels in the system, with one shuttle per level.

Transfer Area: Transfer areas are where users park and retrieve their vehicles. These areas can be designed for entry, exit, or both, and may be positioned on one or both sides of the system.

Lift: Lifts move vehicles vertically between the entry or exit level and all parking levels within the system, facilitating vehicle transfer to and from the shuttle.

Turntable: Turntables rotate vehicles 180°, typically in transfer areas or other strategic locations, to ensure vehicles are positioned for easy exit. This feature enhances user convenience by aligning the vehicle for a smooth drive-out experience.

Vehicle Pallets: Vehicles are stored on dedicated parking pallets, ensuring no direct contact with the vehicle during storage or retrieval.

Savanna.NET® Parking Control Software: Savanna.NET® software manages the system's operations, coordinating the storage and retrieval of vehicles. Built on Microsoft® .NET technology, the software allows for ongoing updates to ensure optimal system performance.

AUTOMATED PARKING SYSTEM —

PALLET–BASED TRANSVERSE SHUTTLE

APPLICATION

> Larger systems

> Higher system throughput requirements

> Residential or mixed–use developments

> Vehicle storage

SYSTEM OVERVIEW

Westfalia's transverse shuttle system uses Satellite® technology to move vehicles, which are parked on pallets, to and from designated parking locations. Users park their vehicles on pallets in well–lit, comfortable transfer areas. Since these are the only areas users interact with in the automated garage, developers can offer a high–end user experience with minimal additional cost.

In this system, vehicle pallets in the transfer area rest directly on a vehicle lift. When the lift lowers the vehicle into the parking system, Westfalia's Satellite® moves under the pallet, lifts it, and transfers both the vehicle and pallet onto the transverse shuttle. The shuttle then moves horizontally in a transverse direction to position the pallet in its designated storage location.

Each shuttle operates on a single level, providing high system throughput by assigning one shuttle per parking level. Vertical movements are managed by vehicle lifts, which travel the entire height of the parking system.

CONFIGURATION OPTIONS

The system can be configured with one or two rows of vehicles on either side of the shuttle aisle, with the option for three or four rows in long-term storage applications. The length of the shuttle aisle is flexible and can be customized based on the building layout.
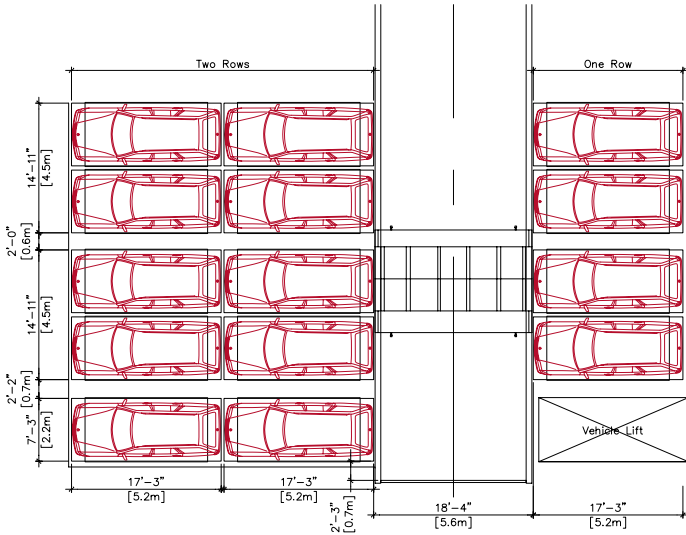
Vehicles are stored on pallets on each parking level in a steel frame, rack, concrete floor, or a hybrid structure, depending on the architectural design and structural requirements.
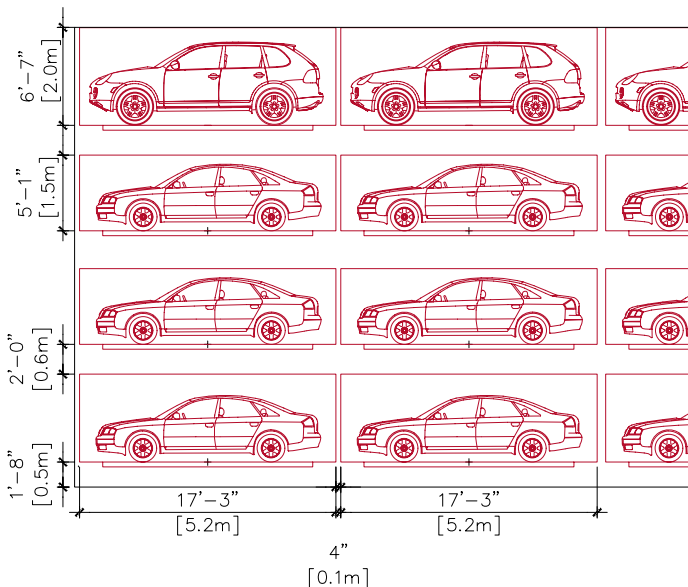
Parking level heights are adaptable to accommodate SUVs, sedans, or a combination of both, offering full flexibility based on customer needs.

SYSTEM COMPONENTS

Transverse Shuttle: The transverse shuttles move vehicles horizontally within the parking system, using on-board Satellite® technology to park and retrieve vehicles from designated positions. The number of shuttles is determined by the number of parking levels, with one shuttle per level.

Transfer Area: Transfer areas are where users park and retrieve their vehicles. These areas can be designed for entry, exit, or both, and may be positioned on one or both sides of the system.

Lift: Lifts transport vehicles vertically from the entry or exit level to all parking levels within the system, facilitating movement to and from the transverse shuttle.

Turntable: Turntables rotate vehicles 180°, usually in the transfer areas or other locations, ensuring the vehicle is positioned for easy exit. This feature enhances user convenience by aligning the vehicle for a smooth drive-out experience.

Vehicle Pallets: Vehicles are stored on dedicated parking pallets, ensuring no direct contact with the vehicles during storage or retrieval processes.

Savanna.NET® Parking Control Software: Savanna.NET® software manages the system's operations, coordinating vehicle storage and retrieval. Built on Microsoft® .NET technology, it ensures ongoing updates and optimal system performance.