UN_845 DEPENDENT PARKING SYSTEM 1+1

DEPENDENT 1+1 PARKING SYSTEM

A dependent parking system is a type of two-level car parking solution where the upper car can only be accessed after moving the lower car. It is commonly used in residential and private parking areas where the same owner or a small group of users manage both vehicles.

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UNIQUE
Manthos Lift Solutions

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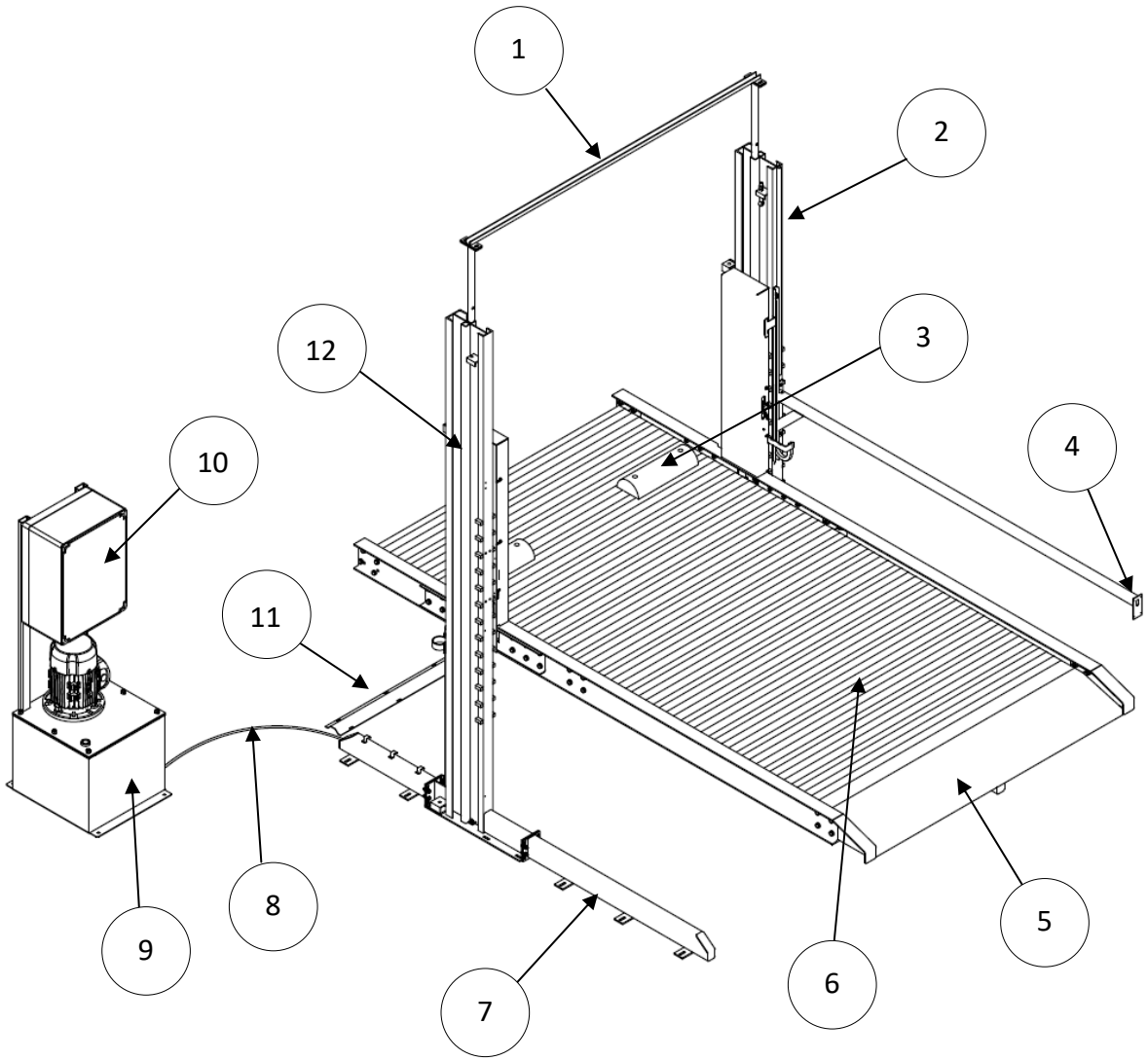
PRODUCT DESCRIPTION



INFORMATION

1. **Column Connection Bar (Optional)** – It serves as a cable feedthrough.
2. **Column** – Supports the platform and vehicle load.
3. **Car Wheel Stopper** – It prevents the vehicles from rolling off.
4. **Controller** – Regulates the lifting and lowering of the platform, ensuring precise movement and smooth operation.
5. **Ramp** – A sloped entryway designed with an anti-slip surface for safe access.
6. **Sheet Metal Floor** – The durable, galvanized steel platform where vehicles are parked, designed for high load capacity and slip resistance.
7. **Hose Channel** – It serves as a hose feedthrough.
8. **Rubber Hose** – Flexible tubing used to transport hydraulic fluid within the system.
9. **Power Unit** – Responsible for supplying energy to the parking system.
10. **Control Panel**– Monitors and manages the parking system's functions.
11. **Cable Protector** – Safeguards electrical and hydraulic cables from damage.
12. **Telescopic Hydraulic Cylinder** – Raises and lowers the platform, utilizing high-pressure fluid for smooth and efficient movement.

SPECIFICATIONS

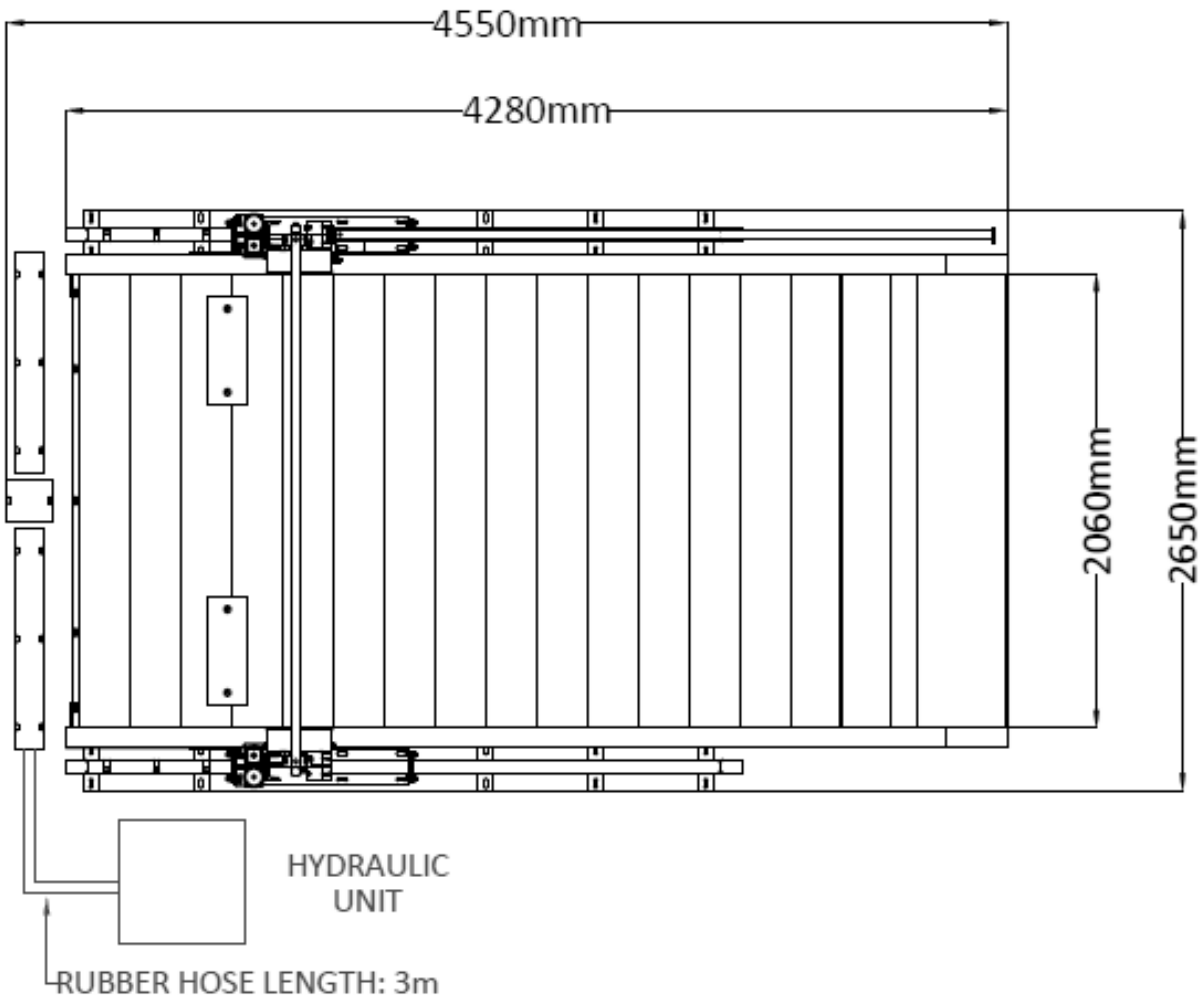
- **Loading Capacity:** 2500 kg
- **Clear Platform Dimensions:** W 2060 × D 4280 mm
- **External Platform Dimensions:** W 2650 × D 4550 mm
- **Machine Height:** 3610 mm
- **Minimum Required Basement Height:** 3700 mm
- **Lifting Speed:** 0.04 – 0.06 m/s
- **Rubber Hose Length:** 3 m
- **Hydraulic Cylinder Diameter:** 60x5, 80x5
- **Rod Diameter:** Φ40
- **Motor:** 2.2kW / 3Hp / 380V (3-phase)
- **Locking Device:** Dynamic locking system
- **Lock Release:** Electric auto-release
- **Operation Mode:** Key switch
- **Floor Type:** Galvanized for durability and rust protection
- **Machine Color:** RAL 7040 (Indoor Use)
- **Upon request,** the entire platform can undergo hot-dip galvanizing—a process where the steel is immersed in molten zinc—to provide robust corrosion protection
- Certified under **Machinery Directive 2006/42/EC**
- **Examination Certificate** for compliance with European safety standards

SAFETY FEATURES

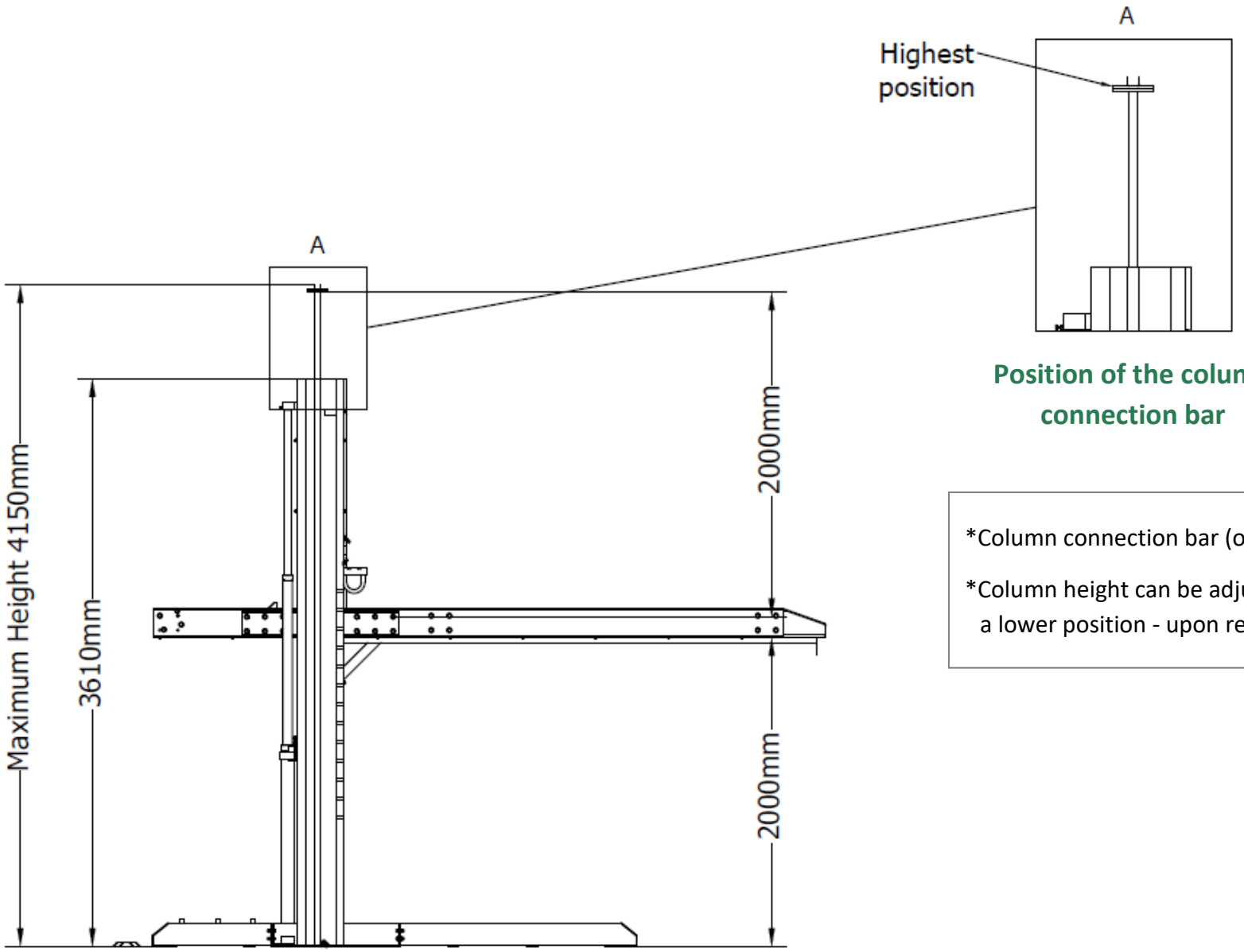
- **Safety Valve at the Bottom of the Cylinder** – Automatically stops the system in case of a broken hydraulic hose or tube, preventing sudden drops.
- **Hydraulic Overload Protection** – Ensures the system does not operate beyond its designed weight capacity, complying with safety regulations.
- **Descent Speed Control Valve** – Regulates the platform's lowering speed, ensuring smooth and controlled descent to prevent sudden drops.
- **Dynamic Locking System** – Automatically secures the platform in place once raised, preventing accidental drops.
- **Photocell Sensor** – Installed to detect the presence of a vehicle in the lower parking space.
- **Rope - Wire Calibration System** – Ensures perfect column alignment and prevents any tilting of the system.

TECHNICAL DESIGNS – STANDARD DIMENSIONS

Top View



Side View



Position of the column connection bar

*Column connection bar (optional)

*Column height can be adjusted to a lower position - upon request

3d View

BENEFITS

- **Simple and Efficient** – Requires no special modifications or groundwork in the surrounding area.
- **No Shaft Construction Needed** – Eliminates the need for additional structural work.
- **Self-standing and Self-supporting –** A stable design that eliminates the need for external support on walls or buildings.
- **Versatile Installation** – Suitable for both indoor and outdoor environments.
- **Flexible Design** – Accommodates different vehicle heights and building constraints.
- **Quick and Easy Installation** – Can be set up with minimal effort.
- **Low Operating Costs** – Energy-efficient with minimal maintenance requirements.
- **Secure and Reliable** – Features a dynamic locking system for added safety.
- **Portable and Relocatable** – Can be moved to a different location if needed.
- **Adjustable Platform Heights** – Allows the platform to stop at different levels for convenience.
- **Built-in Safety Mechanisms** – Includes hydraulic overload protection for enhanced durability.
- **Certified Quality** – CE Marked, ensuring compliance with European safety standards.

CONSTRUCTION REQUIREMENTS

Concrete Strength

- **Minimum:** C20/25 (for standard applications)

Concrete Thickness

- **Minimum:** 180 – 200 mm (for standard applications)

Surface Finish & Treatment

- **Flat and Level Surface:** Essential for proper alignment of the parking system.
- **Non-slip finish** for safety.

ELECTRICAL REQUIREMENTS

- **Power Supply:** 380V (3-phase), (2,2 kW)
- **Current Operation:** 16A
- **Main Required Fuse:** 3 x fuse 16 A (slow) or circuit breaker 3 x 16 A (trigger characteristic K or C)

CONTROL SYSTEM – LOP

- **Safety Key** – Provided with a specific key to activate or deactivate the system, ensuring restricted access.
- **On-Off Switch** – Toggles between two states: "On" (closed circuit) and "Off" (open circuit).
- **Up and Down Buttons** – Activates downward and upward movement of the platform (Requires continuous pressing to stay activated; releases to turn off).
- **Emergency Stop (Red Mushroom Button)** – Immediately interrupts all the operations. Must be rotated to reactivate the system.
- **Labels** – Clear and easy-to-read labels, using numbers or names in an international language to ensure user-friendly operation.

CONTROL PANEL & HYDRAULIC UNIT

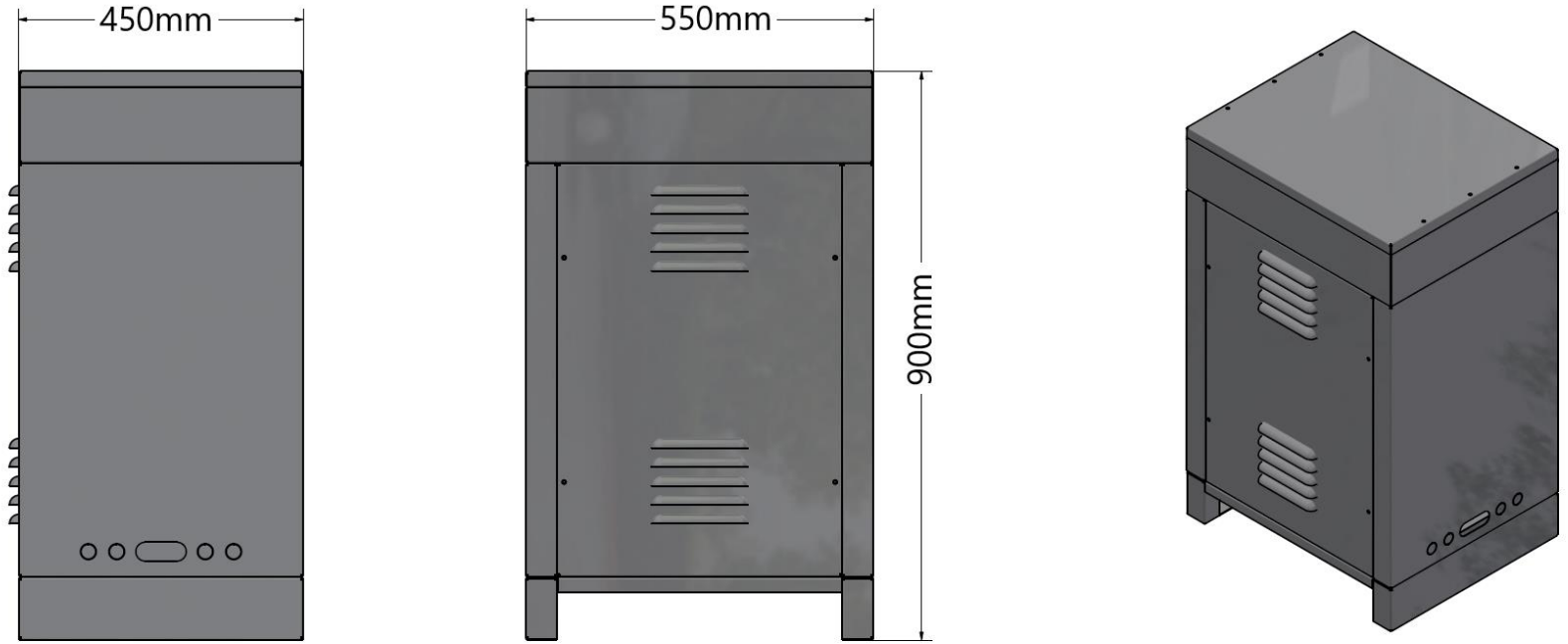
The oil tank has a capacity of 30L
The max pressure is up to 80 -120 bar.

CABINET – OPTIONAL

The control panel and the hydraulic unit can be installed into a cabinet **upon request**.

Space - Saving Design: Measuring at 900mm in height, 450mm in width and 550mm in depth, this cabinet fits seamlessly into tight spaces, making it ideal for installations with limited room.

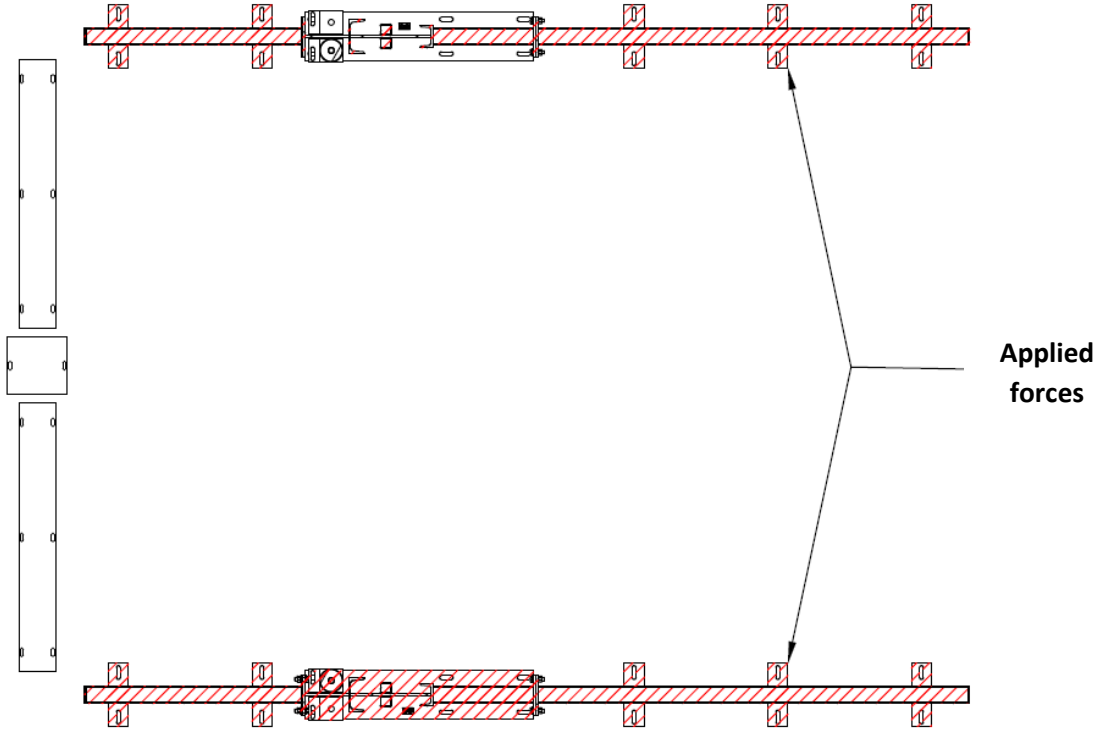
Durable Construction: Built with galvanized sheet metal panels and painted in RAL 7040, the cabinet offers corrosion and water resistance (IP54), ensuring long-term durability.



APPLIED FORCES

A fully loaded parking system can apply a force up to **30.000N per column**

The areas subjected to these forces are highlighted in red in the illustration below.



PARKING SYSTEMS WITH SHARED COLUMNS

A **1+1 parking system with shared columns** is a **semi-automatic, space-saving parking solution** where multiple adjacent parking units share the same structural support columns. This design increases efficiency and reduces material costs while maintaining functionality.

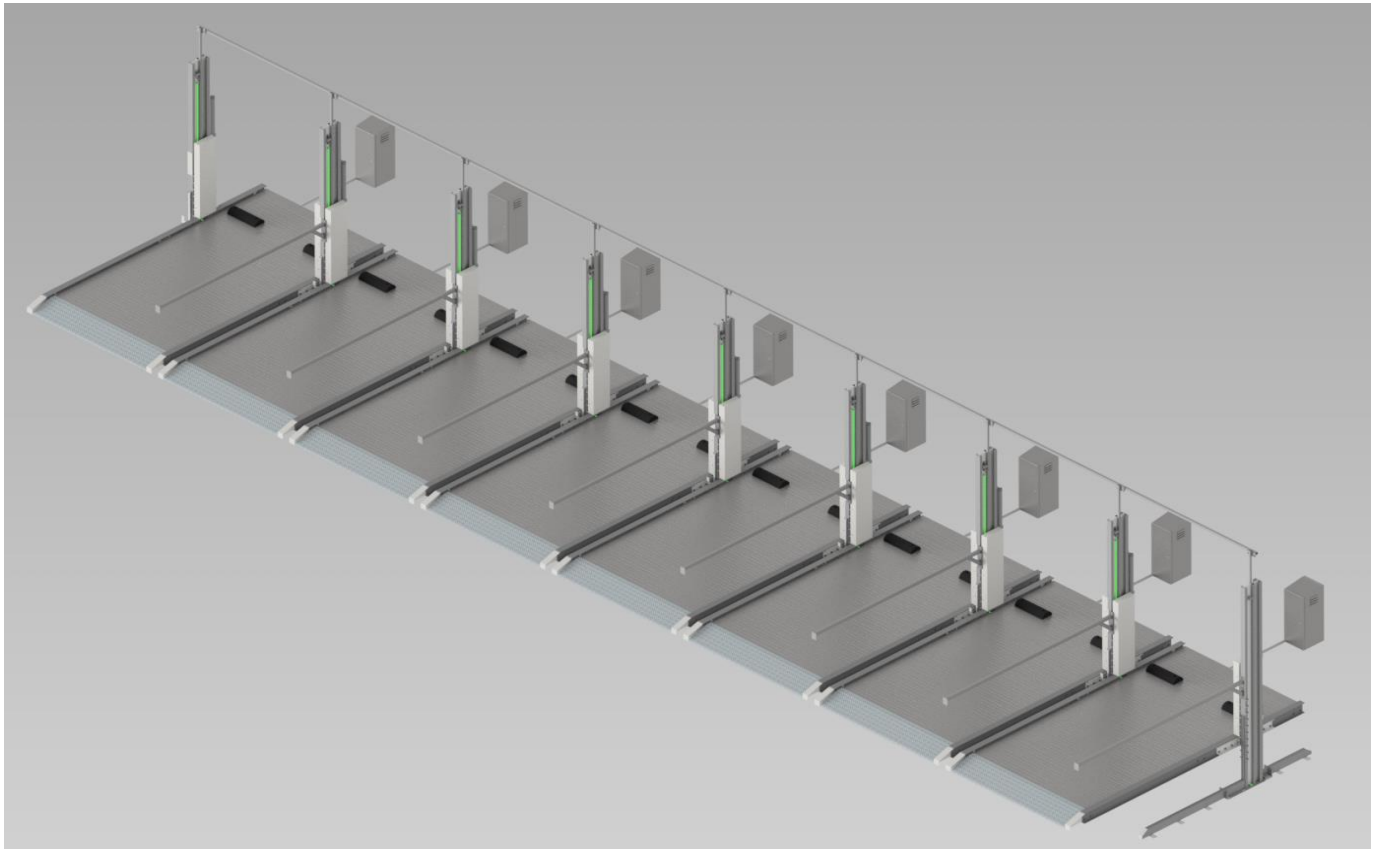
Advantages of Shared - Column Parking Systems

✓ **Reduces Structural Steel Usage**
Minimizes the number of columns, leading to lower material and manufacturing costs.

✓ **Optimized Space Planning**
Allows for compact and efficient parking layouts.

✓ **Lower Maintenance Needs**
Fewer components result in less wear and tear over time.

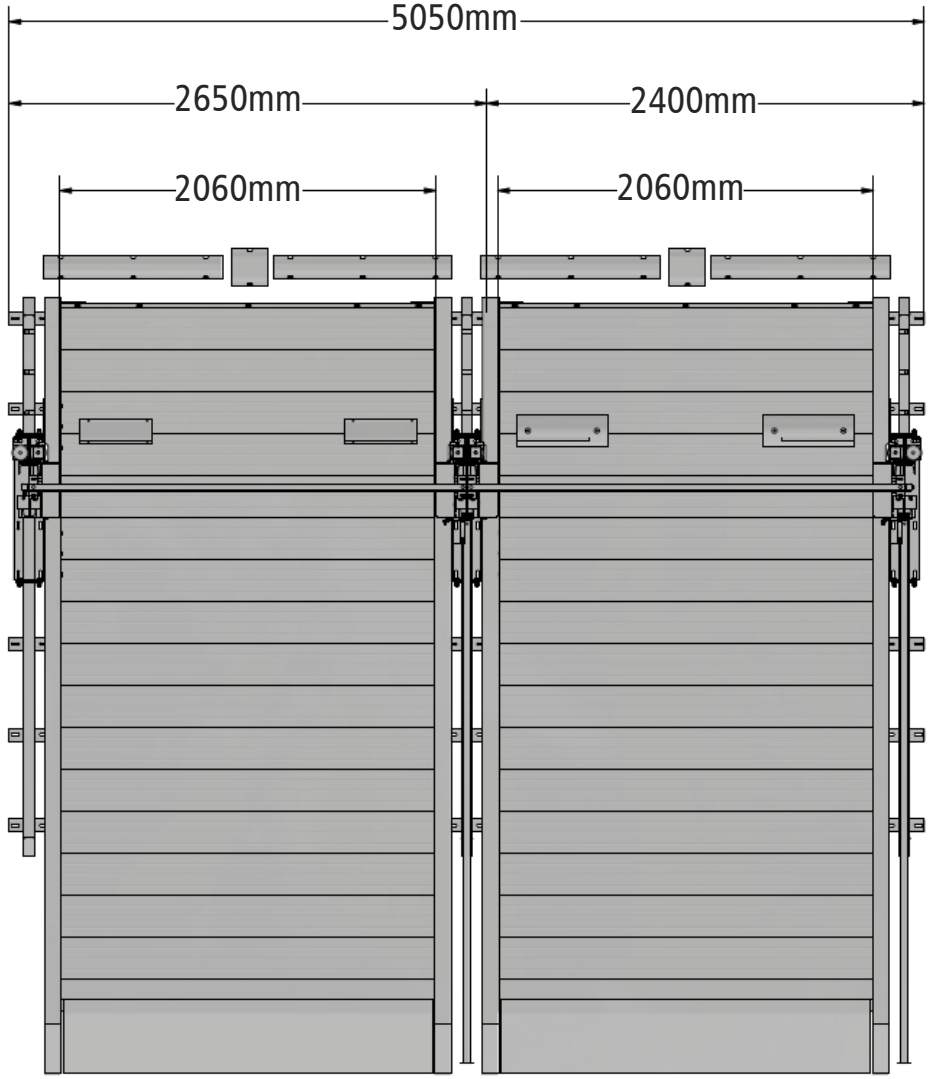
✓ **Scalability**
Can be expanded by adding more shared-column units as needed.



DIMENSIONS OF THE SHARED-COLUMN SYSTEM

By utilizing a shared-column system, each parking unit can save an additional **250mm** of space compared to traditional side-by-side installations with separate columns.

This space-saving design not only maximizes the available parking area but also reduces material usage and installation costs.



CUSTOMIZABLE OPTIONS

Adjustable Platform Width – Up to 500mm Extra Space

Our platform width can be extended by up to **500mm**, with precise **100mm increments** to match your requirements.

✓ **Accommodate Larger Vehicles** – Ideal for SUVs, luxury sedans and wider cars.
✓ **Optimized Space Usage** – Maximize capacity without wasting unnecessary space.
✓ **Strong & Secure** – Engineered for durability, maintaining full load-bearing strength.

Customizable Column Height – Perfect for Low Ceilings

If your basement or parking area has height restrictions, we have got you covered. The column height can be adjusted (upon request), ensuring smooth and efficient installation even in spaces with limited ceiling height.

✓ Seamless Fit – Designed to adapt to underground garages and tight spaces.
✓ Same Strength, Lower Profile – Maintains safety and performance without compromising stability.
✓ Maximize Parking Potential – Even with height limitations, you can still double your parking capacity!