

# Product Overview

VERSION 01/2015



## Made in Germany



# Nussbaum

TECHNOLOGIES ■ ■ ■ ... more than 50 years of experience in construction of machinery

## Vision | Mission | Strategy

Our strategy is focused on the design and production processes aided by the permanent optimization of the current production techniques. The development of our products and components – with several patents – corresponds to a distinct in-house production depth.

A wide competence in hydraulics, mechanics, sensor technologies as well as in-house development of Hardware and Software thanks to well trained employees. An extensive related to practice formation followed by dual studies is an important asset for NUSSBAUM.





**Nussbaum**  
TECHNOLOGIES ■ ■ ■

**HYDRAULIK  
SEEHAUSEN**

**kmf**

**krauth technology**

**Nussbaum** · **ATT**

**Nussbaum**  
NUSSBAUM PARKING

#### The NUSSBAUM Group

Managing Director  
Nussbaum Technologies

Hans-Georg Nußbaum (CEO)

Managing Director  
Nussbaum Automotive

Steffen Nußbaum (CEO)

Business Areas

Workshop Equipment  
Parking & Displaying  
Industrial Applications  
Public Transport

Locations

Otto Nußbaum GmbH & Co. KG | Kehl am Rhein  
Hydraulik Seehausen GmbH | Stadt Wanzleben-Börde  
Nussbaum Parking GmbH | Markranstädt bei Leipzig  
kmf Kemptener Maschinenfabrik GmbH | Kempten  
ATT Automotive Testing Technologies GmbH | Kehl-Auenheim  
Nussbaum Technologies – SMT GmbH | Kehl-Sundheim  
SCS Satellite Car Service GmbH | Kehl-Sundheim  
krauth technology GmbH | Eberbach bei Heidelberg





# Product Overview 01/2015

We offer innovative solutions  
based on more than 50 years of experience in construction of machinery.



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# Automatic Parking Systems

Maximum surface use, without ramps and driving lanes, for residential and office buildings



## Automatic Car Parking Systems for vehicles

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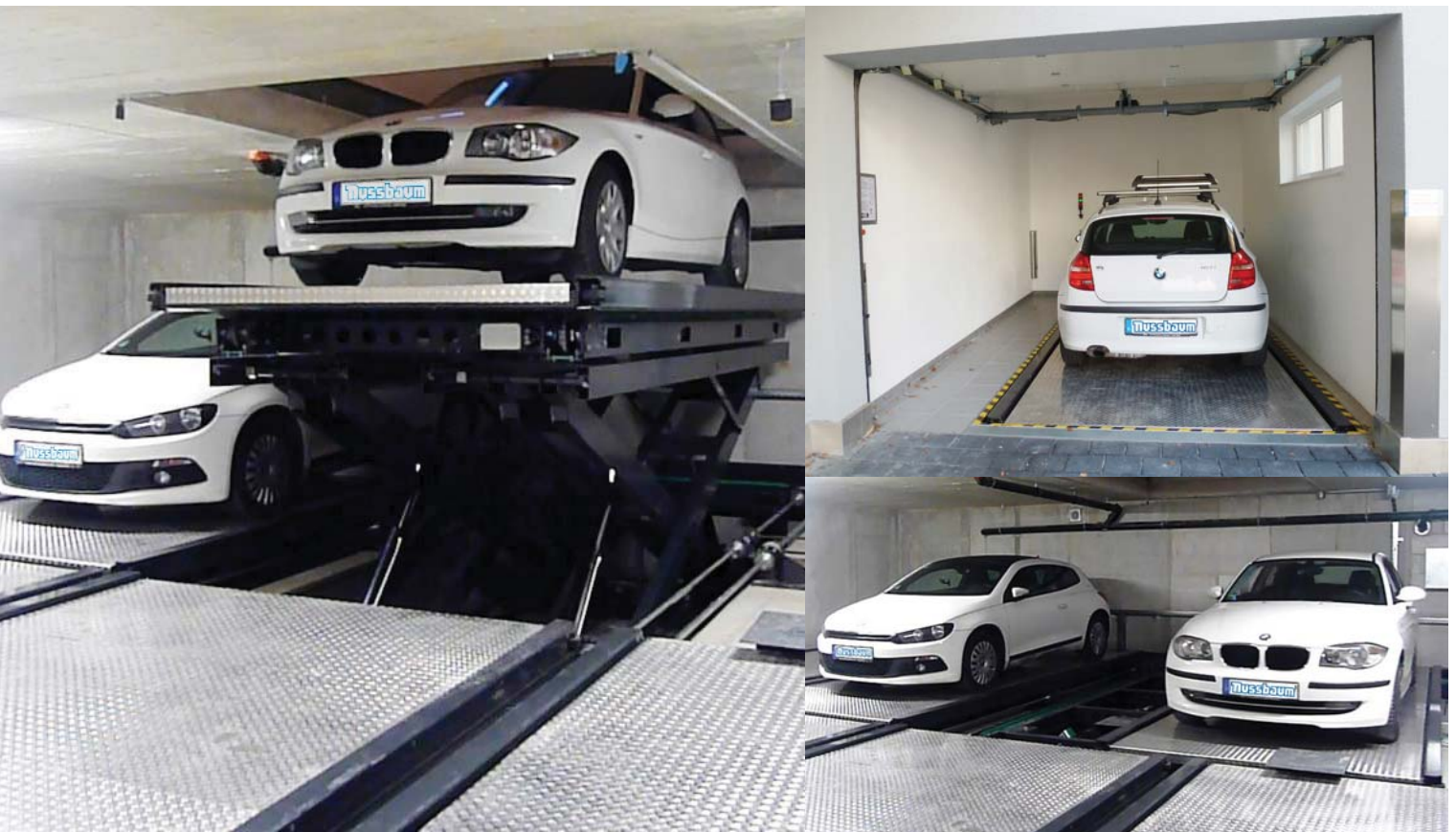


Automatic car parking systems

## SQUAREPARKER

XY-PALETTES IN A PUZZLE PRINCIPLE

The **NUSSBAUM** SQUAREPARKER is the optimal solution for full automatic parking for vehicle up to 4 floors and rows one after another. The vehicles are reordered in the puzzle principle. Without ramps and alleyways the concept feature high economy because of an optimal land use, protection against vandalism and theft, as well as environment friendliness because of a compact architecture.



### ADVANTAGES

- WITHOUT RAMPS AND ALLEYWAYS
- LESS LAND REQUIREMENTS
- INDIVIDUAL PROJECT ADAPTION (LOOP OF BUILDING SUPPORT POSSIBLE)
- PROTECTION AGAINST VANDALISM AND THEFT
- HIGH USE FRIENDLINESS:  
much more using alternatives (remote control, RFID, smartphone, etc.)

### EQUIPMENT

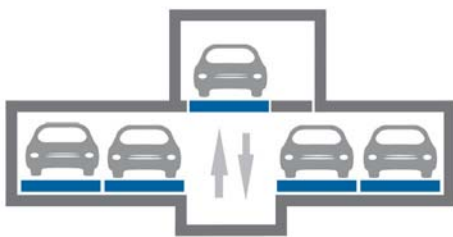
- Transfer station: closed cabin, transfer of the vehicles from user to the parking system, with vehicle measuring and positioning
- Vertical conveyor for transportation of the vehicles to the parking level(s) as scissor lift or four post lift available
- Parking palettes with dewatering system for placing the vehicles at the parking level(s)
- Conveying system at the parking level for sliding the palettes in X-Direction and Y-Direction (XY)
- Optional with turning system at the transfer station or at the parking level



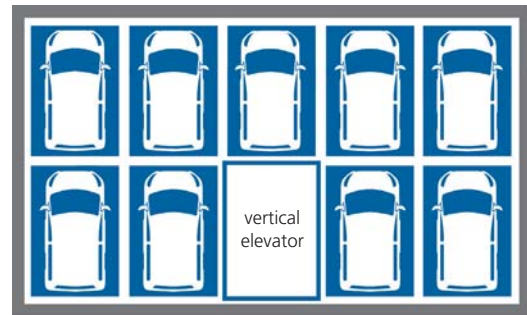
### 1st project example

- 9 parking spaces
- 1 parking level
- parking spaces arranged in two rows behind each other (without empty space)
- empty position is provided on the vertical elevator
- transfer area on the level above, can be placed also on another position
- movements in XY-principle, also with small circular movements
- movements around building pillars is possible
- supporting structure: concrete floor

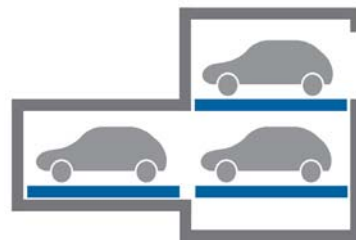
Front view



Top view parking level



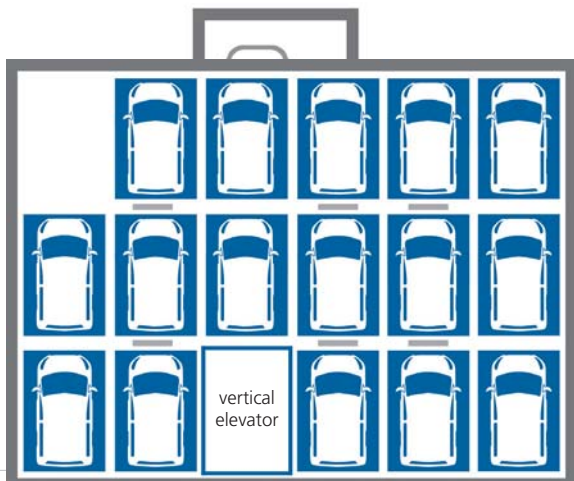
Side view



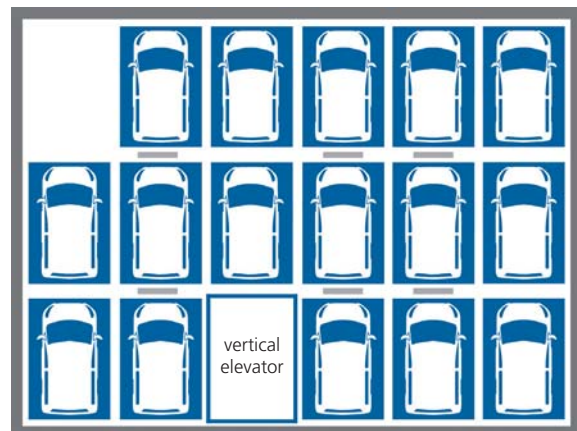
### 2nd project example

- 48 parking spaces
- 3 parking levels
- parking spaces arranged in three rows behind each other
- minimum 1 empty space is requested, further empty position is provided on the vertical elevator
- transfer area on the level above, can be placed also on another position
- movements in XY-principle, also with small circular movements
- movements around building pillars is possible
- supporting structure: concrete floor

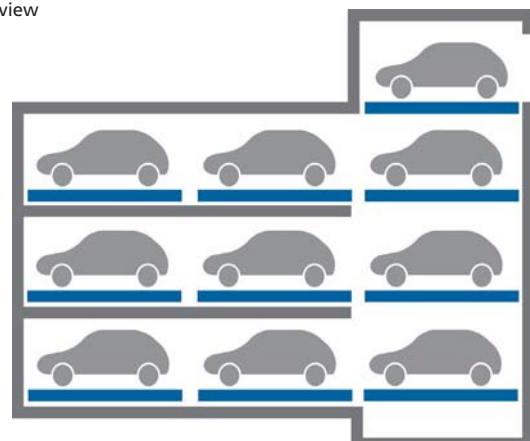
Front view



Top view parking level



Side view





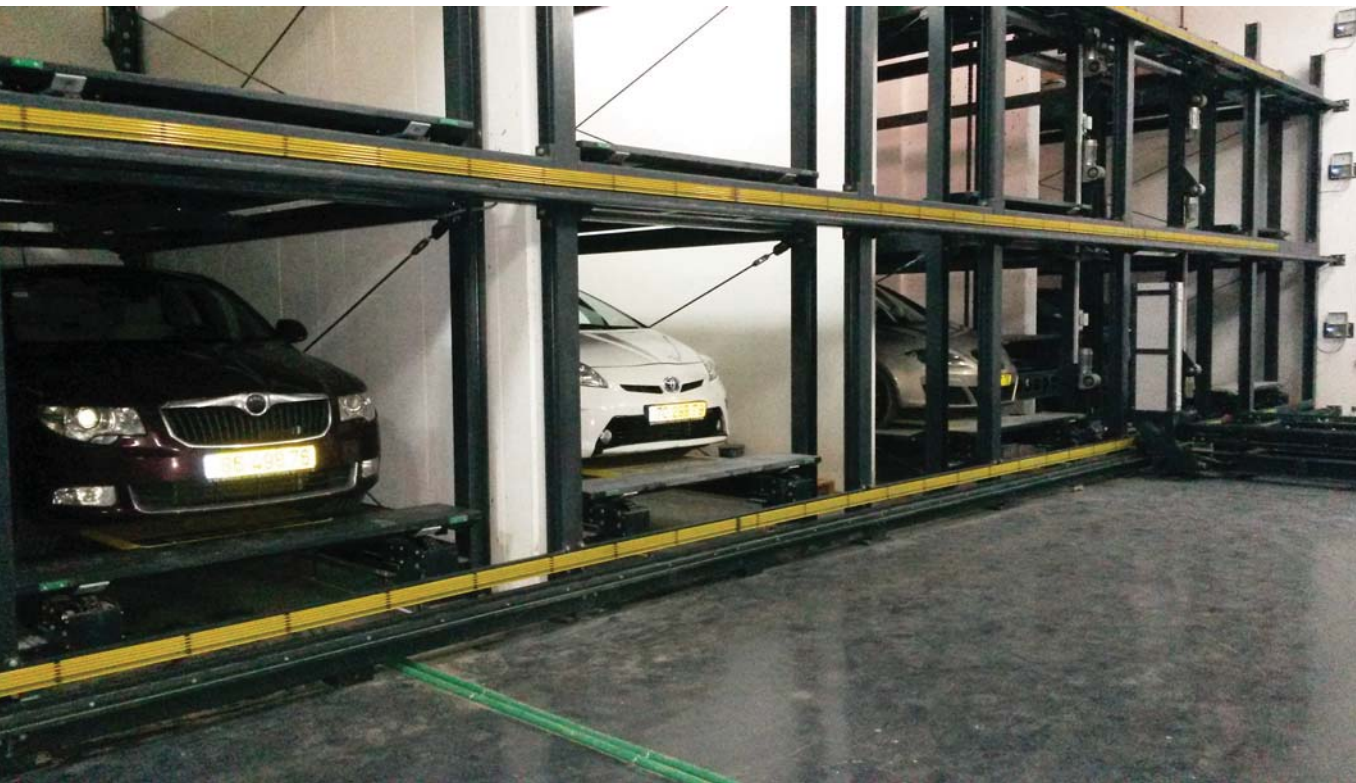


Automatic car parking systems

## HYPARKER MAX

X-PALETTES OR Y-PALETTES WITH INTELLIGENT CONVEYOR SYSTEMS

The **NUSSBAUM** HYPARKER MAX offers comfort during parking, economy thanks to maximum land use, flexibility because of project adaptation and a lot more.



Full automatic parking on several floors, in rows side by side, one after another, opposed, transport systems for vertical and lengthwise conveyor – the **HYPARKER MAX** makes everything possible. Without searching for a parking place the user drives comfortable in the transfer station at the entrance level. From these point the system transport the vehicles full automatically to a free parking place.

Using alternatives are manifold: Use the **HYPARKER MAX** with a Touch-Screen, remote control, chip card, smartphone or RFID – you can choose the most suitable solution to your needs. The possibility to connect payment systems create a maximum efficiency and a multifunctional range of use.

The installation of the parking system is mostly realized in a building shaft. According to the local conditions cement inserted ceiling or a steel structure work as supporting construction.



### Transfer area

The user parks his vehicle in the transfer station on a palette. Optionally a stoplight system or a monitor signal the right parking position. The entry gate is integrated in the control system, as in car lifting systems. Also the check of the vehicle parameter takes place in the transfer station.



Transfer area

### Vertical conveyor systems

Minimum one vertical lifting system transport the vehicles to the parking level(s). The vehicles will transported correct and safe thanks to an intelligent supporting construction.

#### Structure

Steel structure or cement inserted ceiling



Vertical conveyor system with turntable

### Horizontal conveyor systems

The cross and lengthwise path conveyors allow a horizontal transport of the pallets at the parking levels. Often they are used as paths between the pallets to reduce the access time.

### Parking pallets

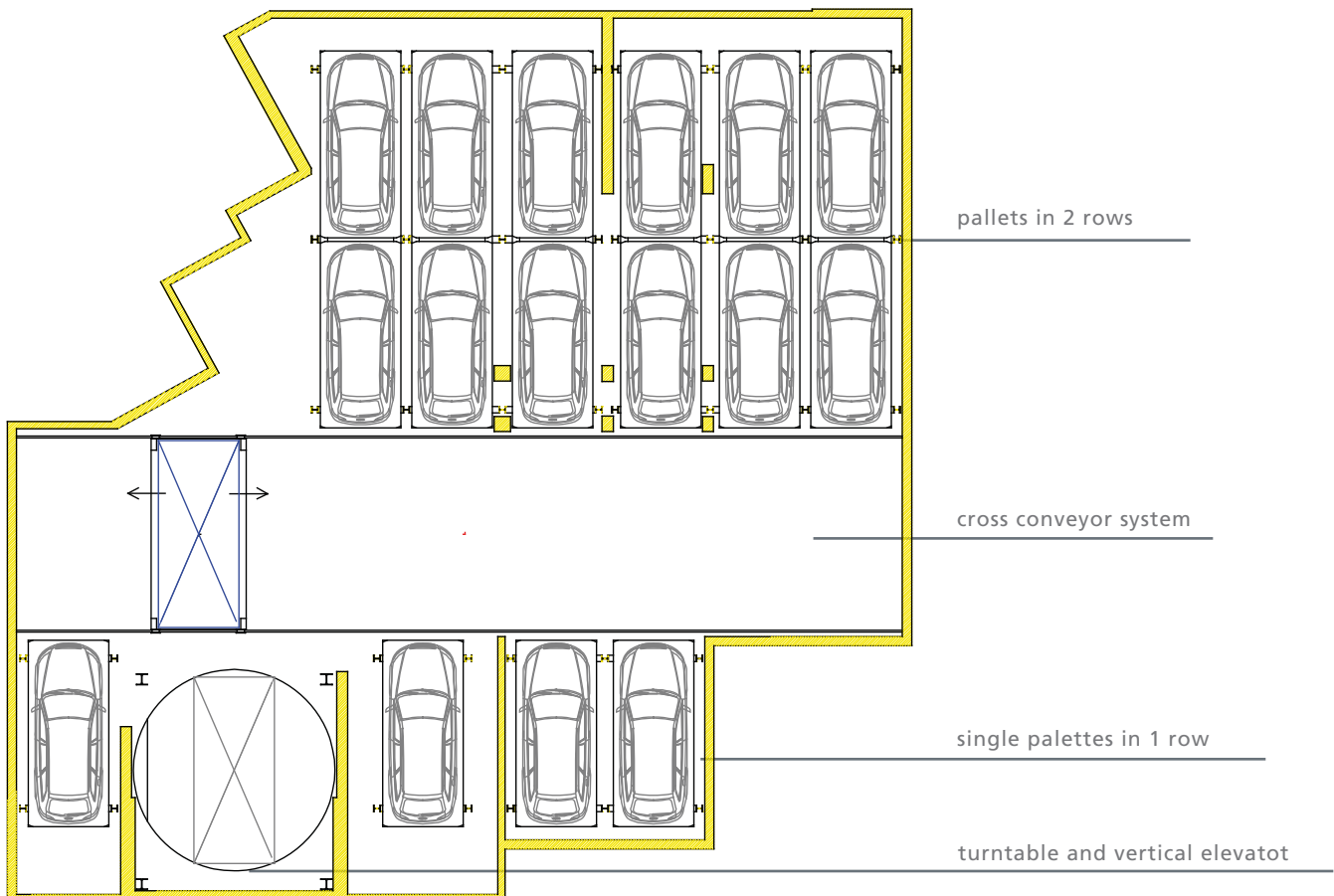
The parking pallets receive the vehicles. Diversity types allows conveyor in X-lengthwise direction and/or Y-cross direction and provide a maximum parking density. According to the arrangement of the pallets free places are needed. Choose your individual design with a selection of ground facings like aluminum bulb plate or wood.

### Turntable

No routing thanks to our turn table which turn the vehicles into the transfer station in the right exit position.

## Project example

Top view parking levels with 16 parking spaces







Automatic car parking systems

## SMART PARKER MAX

SHAFT VERSION FOR UNDERGROUND PARKING

Suitable for

- Multi-family houses
- Hotels
- Business buildings
- Residential and commercial buildings
- etc.

The **NUSSBAUM** SMART PARKER MAX serves full automatic parking of vehicles – underground – on several parking levels. At the ground floor the vehicles went to palettes in the transfer station and get transported full automatically to the underground parking levels with a vertical conveyor. The structure for picking up the palettes is built by a steel or cement construction. The arrangement of the palettes can be realized in different ways, according to the local conditions also with several transfer stations. The integrated turn table turn the vehicles in the right exit position and allows faster access times.



SMART PARKER MAX-X  
(lengthwise conveyor)



SMART PARKER MAX-Y  
(cross conveyor)



SMART PARKER MAX-XY  
(lengthwise and cross conveyor)

### Its advantages at a glance

- Flexible with project requests thanks to different system versions (lengthwise platform, cross platform, combination of lengthwise and cross platform)
- Space saving parking
- Custom-made construction: Adaption of the SMART PARKER MAX to the local conditions
- Without ramps and alleyways
- Comfortable usage and operation
- Protection against vandalism and theft
- Integration of a turn table
- No more time consuming search for parking space
- Several parking levels realizable

### Components of the SMART PARKER MAX

- Transfer station to entrance and exit of the vehicles
- Lifting system (vertical conveyor) to transport the vehicles to the parking level(s)
- Palette system
- Steel construction to pick up the palette system or cement insert ceiling
- Drive and control technology

### Operation

- Touch screen terminal (standard)
- Remote control (option)
- Smartphone (option)
- Chip card
- etc.

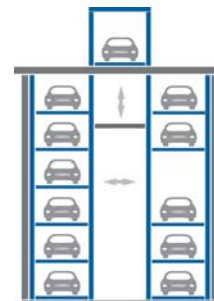
### System variations

- SMART PARKER MAX-X (lengthwise conveyor)
- SMART PARKER MAX-Y (cross conveyor)
- SMART PARKER MAX-XY (lengthwise and cross conveyor)



## Technical data

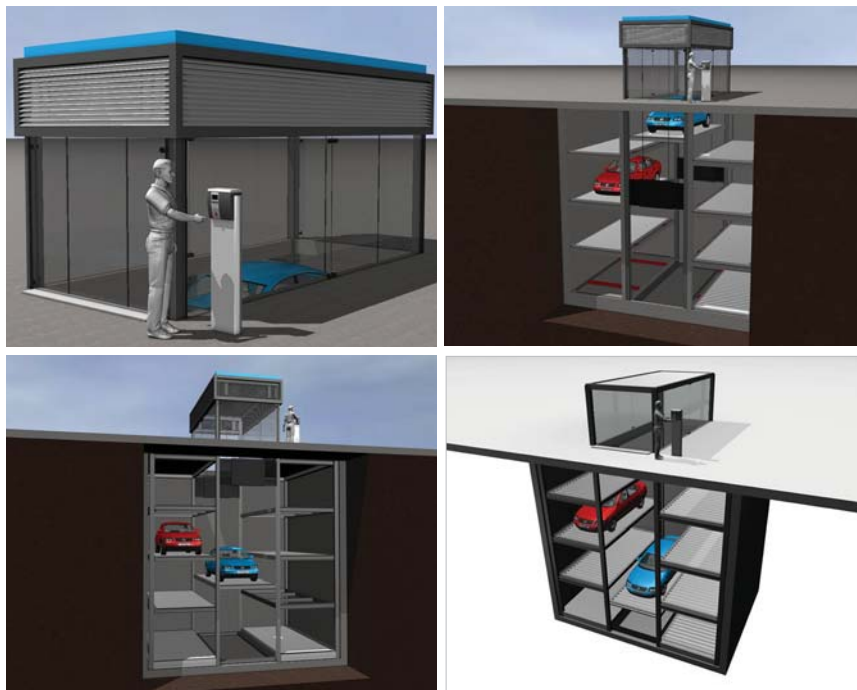
SMART PARKER MAX			
Parking levels	4	to	6
Lifting height of the lifting system (cm)	800	to	1650
Clear height per level (cm)	200	to	270
Car height (cm)	150	to	220
Parking space width (cm)	220	to	280
Parking space length (cm)	500	to	600
Load per parking space (kg)	2.000	to	3.000



Other dimensions available upon request. Dimensions and construction modifications reserved. | Stand 01.2015

## Case example

### SMART PARKER MAX-X on 4 parking levels for 8 vehicles







## PARK TOWER MULTI

TOWER VERSION - ABOVE GROUND - AUTOMATIC PARKING

The **NUSSBAUM** PARK TOWER MULTI is the ideal solution for public parking on several floors. Further floors can be built underground if requested. The City Parktower is a fully automatic system with the latest access and paying systems as well as telematic equipment. It is designed for all climatic conditions and adapted for public use.



### Function

#### Parking in:

The user drives in front of the door. On the left side a ticket machine is placed. By pushing a button the user asks for a parking ticket.

The system checks the availability. If no empty space exists, the ticket machine shows the message „parking complete“. If this is not the case, the user will get a ticket.

The shuttle drives an empty pallet to the ground floor and the double winged door opens.

The user drives the car on the pallet, leaves his car locked and goes through a door in a separate customer area. The customer area has an exit door.

#### Parking out:

The user comes back to the customer area. A cash machine for the parking is located inside. The user pushes his ticket in the cash machine and pays for his parking time. After payment the lift transports the vehicle with the pallet

to the ground floor fully automatically. The user picks up his car and drives out through a further double winged door. The outside barrier opens after the user gives the ticket in an exit cabinet.





Several models available for every need

### Cubator

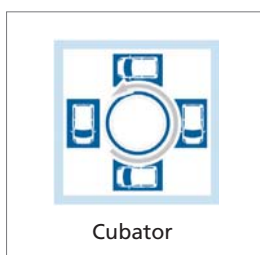
- square floor design
- base area: 11m x 11m
- 6 to 15 floors
- 4 vehicles per floor, ground floor with 2 vehicles and entrance door as well as an exit door
- lifting system with turntable

### Orbis

- circular floor design
- base area: 18m x 18m
- 6 to 15 floors
- 9 vehicles per floor, ground floor with 7 vehicles and entrance door as well as an exit door
- lifting system with turntable

### Duplo

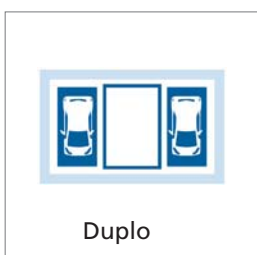
- longitudinal shaped floor design
- base area: 8m x 6m
- 6 to 15 floors
- 2 vehicles per floor
- lifting system without turntable
- turntable available as an option



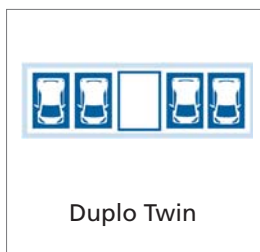
Cubator



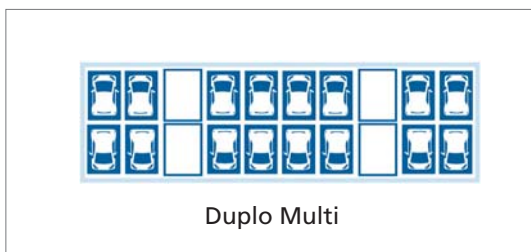
Orbis



Duplo



Duplo Twin



Duplo Multi

### Its advantages at a glance:

- maximum surface use and high Parking density
- protection from vandalism, theft and weather
- facade can be used as advertisement surface
- available in several models
- project specific design of the tower: amount of floors, surface and amount of the parking spaces and more
- if desired available with payment and control system

### Duplo Twin

- longitudinal shaped floor design
- base area: 13m x 6m
- 6 to 15 floors
- 4 vehicles per floor, less one space for the stock transfer
- lifting system without turntable

### Duplo Multi

- Special design with maximum storage capacity
- base area: customizable
- 6 to 15 floors
- 4 vehicles per floor, less one space for the stock transfer
- lifting system without turntable, turntable available optionally





100 Towers installed  
and taken into operation



# Presentation systems

Exclusive vehicle presentation for dealerships,  
classic cars and collector's vehicles



## Presentation systems for vehicles

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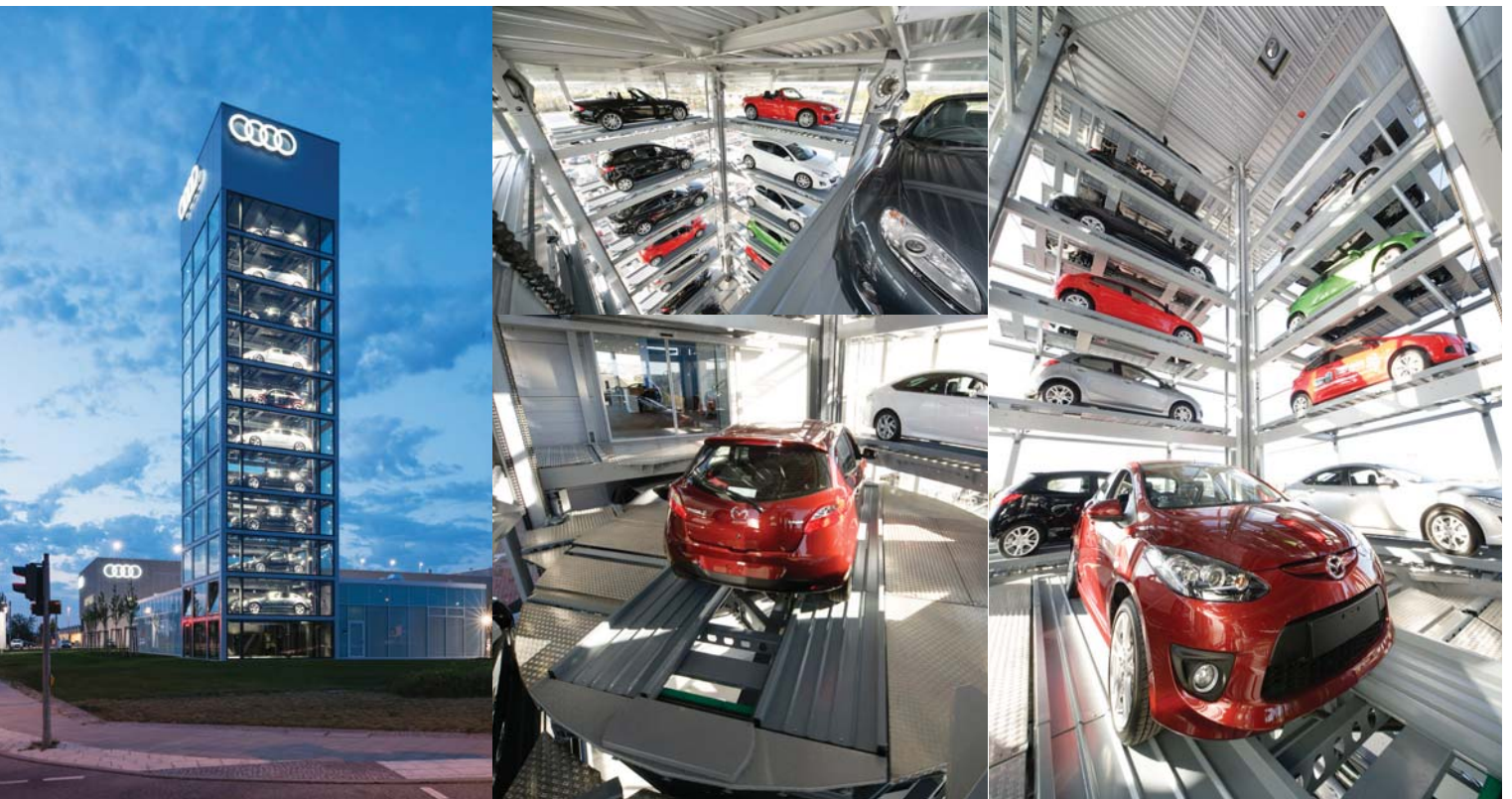




## CAR DISPLAY TOWER

EXCLUSIVE BRAND PRESENTATION IN CAR DEALERSHIPS

The **NUSSBAUM** CAR DISPLAY TOWER allows for storing and displaying vehicles of all brands on a minimal surface and for surface optimization, especially in case of high lot prices. The tower is also an eye catcher, a central identifying feature of the car dealership and it distinguishes the location among the other competitors. A further highlight is represented by the delivery of the cars to the clients directly from the tower: a great experience for the customer.



- Building – Steel structure with flat roof and roof parapet, glass facade with high-quality facade systems
- Lifting technique & pallets – The electric powered lifting system is in the middle of the system and it transports the vehicles from the ground level towards the parking levels. The cars will be placed on pallets
- Turntable – Integrated on the lifting system
- Transfer area – On the entrance level, equipped with Vehicle measurement system and vehicle request
- Operation – Easy-to-use touch screen as interface between users and the system
- As stand-alone or building integration – the tower can be installed as stand-alone or can be connected to a building. The building integration allows driving the cars from the tower to the dealership, and it is possible to serve several building levels.
- Design – the tower can be adapted to the Corporate Design of the respective car brand. We plan the tower according to your needs and desires.









## MINI TOWER

PRESENTATION SYSTEM WITH MINOR STORAGE CAPACITY

The MINI TOWER is a perfect solution for extension of the exhibition space. The system is suitable for storage, parking and presentation of new vehicles up to 5 storage levels.



The Mini Tower is an alternative presentation concept to the great Car Display Tower with more or less storage capacity and therefore adherent with minor charges and investment risk. The Mini Tower is particularly intended for extension of the exhibition space. The system can be connected directly to the showroom of the dealership. With the placement of this Display System a unique selling proposition in comparison to competitors will be achieved.

Space optimisation due to high land prices

On a minimum floor plan of 51 m<sup>2</sup> up to 14 cars can be stored and displayed in the Mini Tower 3PPL for example.

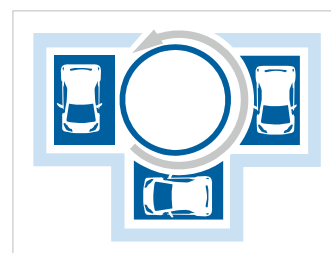
Version: **Mini Tower 2PPL**

- 2 pallets per parking level
- Floor space: approx. 8m x 7m
- A central lifting system is used for transportation of the vehicles to the parking levels
- The cars can be stored in and out without rotation, therefore the Lift requests no turntable



Version: **Mini Tower 3PPL**

- 3 pallets per parking level, entrance level with 2 parking spaces and entrance/exit gate
- Floor space: approx. 11m x 8m
- A central lifting system with integrated turntable is used for transportation of the vehicles to the parking levels





# SMART TOWER

PRESENTATION CONCEPT FOR SMART VEHICLES

70 SMART TOWERS are installed and taken into operation, European-wide

The visionary smart-tower is most identifying element in connection with the name smart. With reference to the Corporate Design, the tower reflects the most significant identification of modern mobility.

Its transparency and lucidity must be considered as a remarkable interpretation of innovative marketing combined with commercial appeal superior to the everyday competition.

The fundamental benefit is to be seen - besides safe and neat storage - in the highly emotional experience when delivering new cars and also seeing them presented in an exclusive ambience form.

## History, Future, Branding



**SMART TOWER CLASSIC**

First generation for storing and presenting of smart fortwo vehicles, approx. 65 smart Towers are installed European-wide



**SMART TOWER SIZE L**

Second generation for storing and presenting of smart Roadster and smart Crossblade vehicles, installed in Germany and the Netherlands



**SMART TOWER SIZE XXL**

Special project planning for smart in Hamburg (Germany), storing and presenting of 86 smart fortwo vehicles on a total height of 24 meters



**SMART TOWER SIZE XL**

The current generation for storing and presenting of smart fortwo vehicles, installed in Germany and France







## CLASSIC CAR PARKER

PRESENTATION SYSTEM FOR CLASSIC CARS AND COLLECTOR'S VEHICLES



Exclusive vehicle presentation in a listed roundhouse in Germany

Glazed parking spaces create a stylish ambience

The NUSSBAUM **CLASSIC CAR PARKER** is a semi-automatic parking on 2 to 4 levels, without pit, with a glass enclosure. The arrangement of the **CLASSIC CAR PARKER** can be adapted to the existing architecture of the building.

The parking spaces in the entrance level of the system are made of sliding platforms with a free space to allow the sliding movements. These parking spaces are directly accessible. In the upper area, the lifting platforms allow lifting and lowering the vehicles. Thanks to the free space in the entrance area it will be possible to slide the platforms and thus free the space necessary for lowering the upper platforms to the ground.

Private classic car' lovers and collector's use the **CLASSIC CAR PARKER** principally to park and show their vehicles, yet also in order to build and keep social contacts with like-minded people.

### Safety of operation

The system doesn't use means such as chains and ropes. The lifting platforms are directly driven by cylinders. Therefore there is no need of monitoring switches, clamping elements and time-consuming setting and checking procedures, thus eliminating the connected possible causes of failure. On the sliding platforms there is a torsion and bend-proof frame bracket, which avoids the platform from inadvertent lowering. Thanks to this solution we don't need any additional catches and therefore the risk of failure is minimized.





#### Steel construction & facade

The filigree steel construction for the glass panels, at the back and front on two levels, is based upon a transom/mullion construction.



#### Glass gates

At the access level the **CLASSIC CAR PARKER** are composed of frame less glass manual sliding gates. The gates are integrated into the control system and can be opened only by the parking space owners.



#### Platforms

The even platforms with minimal drive-on height are based upon a steel construction with side carriers. The driving sheets constitute the inner useful surfaces, which are provided with a galvanized trapezoidal metal sheet covering.



#### Operation by chip-card

The operating terminals are installed directly close to the respective parking systems. The tenants of the parking boxes choose the parking space by chip-cards. The operating terminal is provided with a display, chip-cards port, emergency stop switch and further functions.



#### Comfort-oriented design

The technology of the hydraulic **CLASSIC CAR PARKER** is based upon our parking system "Parkline N5102". Like no other parking system, the Parkline N5102 has only 2 main columns at its back. Since no columns are at the entry, it is possible to park the cars in a more comfortable way and with less collision risk. With its filigree construction, and free and transparent appearance, the **CLASSIC CAR PARKER** is the right choice for vehicles' presentation.



#### At a glance

- Available on 2 to 4 levels
- Adaptation of the system's architecture to the building
- Function of the system governed by the sliding principle
- High safety of operation
- Comfortable construction for maximum usability
- Filigree steel construction with glass facade
- Frame less manual sliding gates
- Even platforms
- Operation by chip-cards

#### Vehicle data

- Width per space: up to 270 cm
- Length per space: up to 610 cm
- Height per space: up to 215 cm
- Capacity per space: up to 3000 kg

#### Accessories



Frame less manual sliding gates at the entrance level



Platforms with minimum drive-on height for a comfortable access





## Car Lifts

Transport your vehicle in a further level with our Nussbaum CAR LIFTS

Integrate the COMBI LIFT MAX or UNI LIFT MAX in your existing building or plan your new building with the hydraulic lifts. Whether showroom, garage or storage space, we fit your lift individually.



## Car Lifts for vehicles

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## COMBI LIFT MAX

4-post lift for transportation of vehicles, without passenger transportation



### Buildings in existence or new building?

- The **COMBI LIFT MAX** is designed to install this also subsequently into existing buildings. Therefore, a ceiling gap must be provided in the upper floor only.
- At a new building the ceiling gap is to be considered in the planning.

### Platform

- The large area platform consists of side carriers with lifting carriage at the long sides.
- A steel construction with trapezoidal sheet as surface covering forms the inner useable area (aluminium bulb plate, etc available as an option).
- Version without pit: Installation above-ground, an integrated ramp in the front area of the platform enables a comfortable drive in and drive out of the vehicles in the lower level, at the upper level the platform stops at the finished floor level.
- Version with pit: Installation of the platform in-ground, pit depth approx. 20 cm

### Operation

- High user comfort is guaranteed by an impulse operation.
- The lift is called by inserting and rotating the key.
- The platform drives to the stop from which the call was initiated.
- The operator can remove the key while the system moves the platform to the upper level.

### Standard – scope of delivery

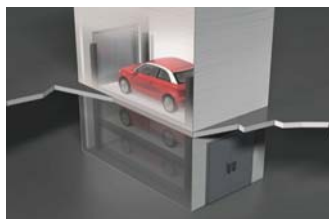
- 4x main columns with hydraulic system
- closed platform with trapezoidal sheet as surface
- control cabinet and hydraulic unit with oil tray
- Rotamess: The way measuring system from Nussbaum enables a perfect synchronization of all columns
- Electricity – control – software
- Main operation unit
- Safety features
- Protection against corrosion: The steel parts are band-galvanized and powder coated in addition, colour in RAL 7016 (anthracite-grey) or RAL 5001 (blue)

### Extra – equipment (available as an option)

- Additional key-switch unit
- Operation via chip cards, etc.
- Aluminium bulb plate or wooden floor as platform coating
- Railings of sheet cassettes, glass, etc.
- Gate of metall, glass, etc.
- Facade of glass or panels
- Design in any RAL-colour
- Special surface treatment, other RAL-colours



## Technical Data


**VERSION 1**  
**NEW BUILDING**

For a new building we recommend to install a closed shaft for the COMBI LIFT MAX or with safety railings in both levels. This solution is only possible for the interior.


**VERSION 2**  
**GALLERY**

This solution is used for the exploitation of an existing gallery. Therefore the customer needs to provide a fully closed lift shaft in the lower level. At the upper stop a balustrade is required. This solution is only possible for the interior.


**VERSION 3**  
**EXTENSION SOLUTION**

Our version enables the COMBI LIFT MAX as extension to an existing building. The lift shaft / cover is delivered as sheet metal construction or by others. In this case a specific project planning is required.


**VERSION 4**  
**PRESENTATION**

For presentation solutions, the version 4 is chosen. It is possible to use the COMBI LIFT MAX in representative areas, for example in car dealerships.

Please note: If you order the elevator doors directly by a door supplier, please contact us to ensure an optimal integration into the control system.

Important planning advise:

An elevator for persons or stairs need to be located close to the COMBI LIFT MAX.

	4.25 CL	4.30 CL	4.35 CL	4.40 CL
Lifting height (mm)	2000–6000*	2000–6000*	2000–6000*	2000–6000*
Lifting capacity (kg)	2500	3000	3500	4000
Platform length (mm)	4920, 5420, 5920	4920, 5420, 5920	4920, 5420, 5920	4920, 5420, 5920
System length (mm)	4960, 5460, 5960	4960, 5460, 5960	4960, 5460, 5960	4960, 5460, 5960
Shaft length (mm)	5000, 5500, 6000	5000, 5500, 6000	5000, 5500, 6000	5000, 5500, 6000
Platform width (mm)	2500, 2700, 3000	2500, 2700, 3000	2500, 2700, 3000	2500, 2700, 3000
System width (mm)	3250, 3500, 3750	3250, 3500, 3750	3250, 3500, 3750	3250, 3500, 3750
Shaft width (mm)	3300, 3550, 3800	3300, 3550, 3800	3300, 3550, 3800	3300, 3550, 3800
Platform height (mm)	225	225	225	225
Motor power (kW)	3	3	3	3
Electrical connection (V/Hz)	400V/50Hz	400V/50Hz	400V/50Hz	400V/50Hz
Control cabinet/hydraulic unit (cm)	60 x 30 x 15	60 x 30 x 15	60 x 30 x 15	60 x 30 x 15

\*Lifting heights up to 12 m can be realized, please contact us

Gladly we offer you other dimensions and designs. Please contact us.





## UNI LIFT MAX

### SCISSOR LIFT FOR TRANSPORTATION OF VEHICLES

The hydraulic scissor lifting system **UNI LIFT MAX** is used for transportation of vehicles in a further level or in further levels. Passenger transportation is prohibited.

#### Drive technology

- The scissor lifting system is driven by hydraulic cylinders. Two hydraulic cylinders are moved together equally from each side.
- A new safety standard is ensured by a redundant hydraulic system with two independent hydraulic circuits.

#### Large area platform

- The large area platform is covered by an even sheet construction.
- As an option the platform can be covered with wooden floor.

#### Operation

The UNI LIFT MAX is operated by a control unit with key-switch and emergency stop in dead man's control.

#### Pit / Foundation

In the basic position the UNI LIFT MAX is completely lowered in a pit. In this position the lifting system is invisible and can be driven over, if applicable. Foundation works are supplied by the Buyer according to prior agreement.

#### Control cabinet and hydraulic unit

- The control cabinet must be placed easily accessible.
- The hydraulic unit can be placed space-saving in the pit (confirmed for each individual case) and is accessible by the maintenance opening in the platform. Alternatively the hydraulic unit can be positioned in any other place next to the system.



#### Safety installations

- Overpressure valve: Safety of the hydraulic system against overpressure, return-valve for safety of the platform against unintended lowering
- Main switch with padlock against unauthorized usage
- Two independent hydraulic cylinders: Safety against unintended lowering.
- Bypass circuit: Slow lowering of the platform shortly before reaching the lower position.
- Dead man's control: By loose the key-switch the system stops the movement immediately.
- Safety of the loads against falling.



## Scope of Delivery &amp; Technical Data

## Standard – Scope of delivery

- UNI LIFT MAX as single scissor construction, completely pre-assembled with integrated hydraulic system for up to 3000 mm lifting height
- UNI LIFT MAX as double scissor construction, completely pre-assembled with integrated hydraulic system for up to 6000 mm lifting height
- Closed platform covered with even sheet construction
- Control cabinet and hydraulic unit with oil tray
- Electricity – control – software
- Main operation as operation unit
- Safety features
- Protection against corrosion: The steel parts are band galvanized and powder-coated in addition, colour in RAL 7016 (anthracite-grey) or RAL 5001 (blue)

## Extra – Equipment (available as an option)

- Operation via chip cards, etc.
- Platform covered with wooden floor
- Railings as grid construction, sheet cassettes or glass
- Gates as grid construction, sheet cassettes or glass
- Complete housing by glass or panels
- Colour design in each RAL- colour
- Special surface treatment by use of Oxygen-care powder-coating developed for NUSSBAUM products for high corrosion protection

UNI LIFT MAX	2000	2500	3000
Lifting height (mm)	2000 – 6000	2000 – 6000	2000 – 6000
Lifting capacity (kg)	2000	2500	3000
Plattform length (mm)	5000 – 6000	5000 – 6000	5000 – 6000
Plattform width (mm)	2000 – 3000	2000 – 3000	2000 – 3000
System height / Foundation depth (mm)	650	650	650
Engine power (kW)	3	3	3
Electrical connection (V/Hz)	3PH   N+PE 400V   50Hz	3PH   N+PE 400V   50Hz	3PH   N+PE 400V   50Hz
Dimensions (HxWxD   cm)	Control cabinet 60 x 30 x 15   Hydraulic unit 64 x 45 x 28		







Discover innovative and individual products and  
plan today your mobility concept of tomorrow.









## RADHAUS

YOUR BIKE AUTOMATICALLY SAFE

The **NUSSBAUM** RADHAUS is a fully automatic parking garage for bicycles and electric bicycles. The building occupies a surface of only approx. 55m<sup>2</sup> and has a height of approx. 10,35m on 5 storage levels. It is possible to park inside it up to 120 bikes, protected from vandalism, theft and weather.



### Function

#### Innovation from Nussbaum technologies

##### Parking a bicycle:

The Green and red LED lights positioned on each gate signal which parking space behind which gate is free. The user just simply needs to open one of the free gates by putting the chip card near to the card reader. Now the bike can be slid backwards into the box; a hinged clamp secures the back wheel against unintentional rolling out. On the box sidewall there's also a hook to hang up a helmet or bag. After parking the bike the user can close the gate by holding the chip card near to the reader until the gate is completely locked.

##### Retrieving a bicycle:

The user can log in on one of the two screens of the system. The system will then display the box where the bike has been parked. The screen will indicate the gate where the bike is and in the meantime the transport pallet with the bicycle will be retrieved from the storage shelf and carried to the ground floor. The gate opens as soon as the bicycle has reached the retrieval position. Now the user can take the bike and close the gate by holding the chip card near to the reader until the gate is completely locked.

##### Simultaneous parking of several bikes:

If there are enough free boxes many users can park their bike at the same time. The SMT Radhaus is therefore particularly suitable for train stations and for every situation in which several people must access or park their bike simultaneously.



## TECHNICAL DATA

## Dimensions:

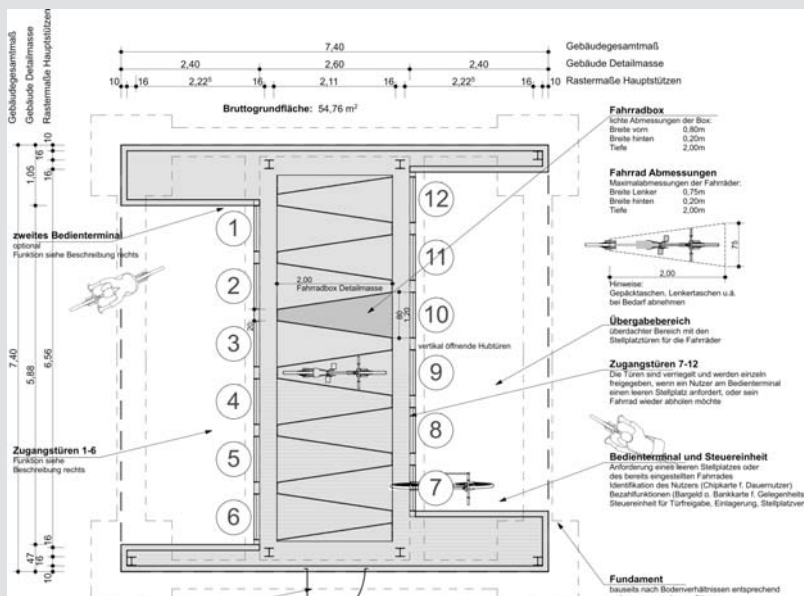
- surface: approx. 7,40m x 7,40m
- height: approx. 10,35m
- gross surface area: approx. 55m<sup>2</sup>
- pit: approx. 0,85m
- foundation: project-specific
- clear height of the transfer area: approx. 2,30m

## Storing capability:

- storage levels: 5 (not accessible)
- capacity: 120 bicycles
- 2 boxes per storage level
- 12 bicycles per box
- allowed weight per parking space: max. 30 kg

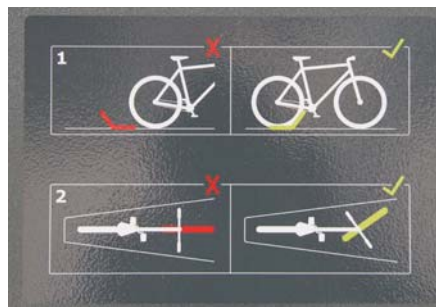
## Allowed bike dimensions:

- total length: 2,00m
- max. height: 1,15m
- maximum height: 1,15m
- width at the handlebar: 0,75m
- hook for the helmet or bag



## Its advantages at a glance:

- high parking volume on minor surface area
- secure wether protected parking spaces for bikes
- fast access to several parking spaces simultaneously
- indication of a bike-friendly infrastructure
- facade can be used as an advertising space







## BIKEBOX

BICYCLES PARKING - STYLISH, SECURE, CLEAN AND DRY

Our **NUSSBAUM** BIKEBOX allows to park bicycles protected from vandalism and weather. Our Bikeboxes are the right solution not only for a big city but also for Bike and Ride places, on company premises or in private places. Their modular construction and the different sizes in which they are available allow you to configure your personal Bikebox parking.



### TECHNICAL DATA – SINGLE BOX

#### Dimensions:

- width: 1035mm
- height: 1500mm
- depth: 2100mm
- foundation dimensions: project specific

#### Allowed bicycle dimensions:

- total length: 2,00m
- maximum height: 1,15m
- width at the handlebar: 0,75m

### TECHNICAL DATA – 10ER BOX

#### Dimensions:

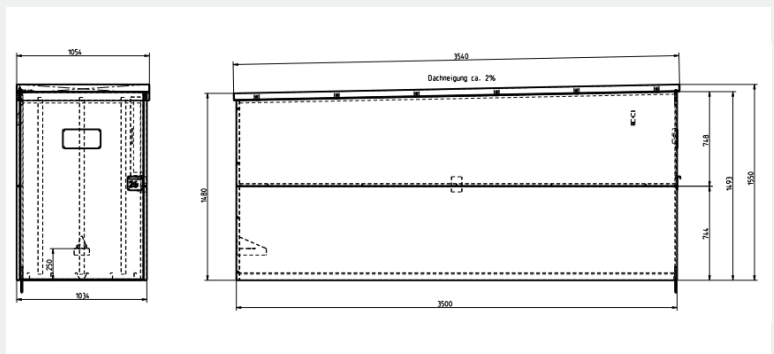
- width: 5500mm
- height: 1500mm
- depth: 2100mm
- foundation dimensions: project specific

#### Allowed bicycle dimensions:

- total length: 2,00m
- maximum height: 1,15m
- width at the handlebar: 0,75m

#### Its advantages at a glance

- space-saving bike parking
- protects from theft, vandalism and weather
- available in several versions: single box, 10er box
- available in several locking systems: key, coins or card
- the external walls of the Bikeboxes can be used as a advertisement-surface
- available in every conventional RAL colour











# Lifting solutions for rail vehicles

Our powerful and reliable lifting systems lift trams, metros, railcars and much more.



## Lifting solutions for rail vehicles

POWER JACK HB ..... 32

TOP JACK HS ..... 34







## POWER JACK HB

TRUE POWERHOUSES AMONG THE LIFTING EQUIPMENT

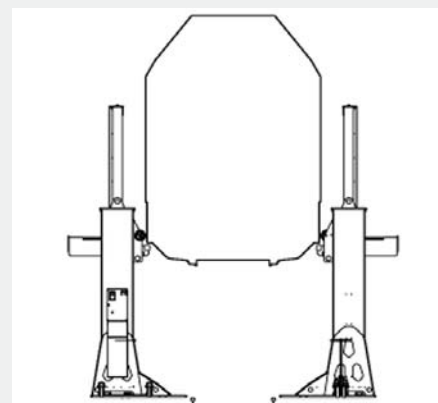
Heavy rail cars, goods wagons or a whole ICE train are no problem for the **NUSSBAUM** POWER JACK HB. Our hydraulic lifting jacks with a very low self-weight of 2.5to are true powerhouses among the lifting equipment. You can trust in a partner with 40 years' experience in lifting vehicles of all types.



Technical data (standard)	HB 1125	HB 1160	HB 1250	HB 1350
Lifting capacity	12,5to	16to	25to	35to
Highest clamp position	2090mm	20090mm	2090mm	2090mm
Lowest clamp position	320mm	320mm	360mm	400mm
Lifting speed	300mm/min	300mm/min	250mm/min	250mm/min
Cable length at each lifting unit	15m	15m	15m	15m

### Its advantages at a glance

- Easily and safely mobile: optional manual roll or electrical rail travelling mechanism
- Safe handling: stationary or mobile controlling unit with group selection and approval button
- Hybrid cable: Energy and control cable (CAN-Bus) optional installed on a cable drum or a sliding rail
- Exact positioning: controlling elements at each lifting unit, automatic weight detection and weight measuring
- Safety first: Visualization with indicator light and safety control incl. synchronization control  $\pm 4\text{mm}$
- Training of the operative staff during installation





## TOP JACK HS

TRAMS AND METROS EASILY LIFTED

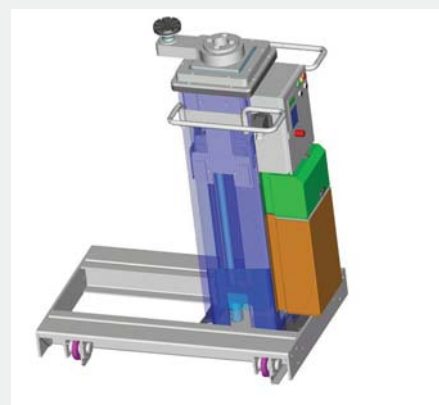
The **NUSSBAUM** TOP JACK HS consists of at least 4 countersunk hydraulic lifting units. Lifting Trams, Metros or Regio Shuttles are no problem for our lifting units. With a synchronization of  $\pm 4\text{mm}$  you can lift up the whole train but also pairwise units.



Technical data (standard)	HS 800
Lifting capacity	8to
Highest clamp position	3100mm
Lowest clamp position	1600mm
Lifting speed	300mm/min
Cable length at each lifting unit	10m

### Its advantages at a glance

- Low installation height: use of double pistons
- Easily and safely mobile: manual roll or electrical rail travelling mechanism
- Safe handling: stationary controlling unit with group selection and approval button
- Hybrid cable: Energy and control cable (CAN-Bus) installed at the pit wall
- Exact positioning: controlling elements at each lifting unit, automatic weight detection and weight measuring
- Safety first: Visualization with indicator light and safety control incl. synchronization control  $\pm 4\text{mm}$
- Training of the operative staff during installation





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