Nussbaum

UNIPARKER N5404

THE SEMI-AUTOMATIC PARKING SYSTEM ON 4 LEVELS, ONE OF THEM IN THE PIT

SEMI-AUTOMATICS

UNIPARKER SERIES

SHORT DESCRIPTION

- INDEPENDENT PARKING SYSTEMON 4 LEVELS, WITH 1 PIT LEVEL
- LOWEST LEVEL WITH LIFTING/SLIDING PLATFORMS, ENTRANCE LEVEL WITH SLIDING PLATFORMS, UPPER LEVELS WITH LIFTING PLATFORMS 2 EMPTY SPACES PER SYSTEM
- MODULAR CONSTRUCTION: DEPENDING ON THE CONDITIONS ON SITE, IT CAN BE POSSIBLE TO ADD SEGMENTS AT WILL
- LOAD PER PARKING SPACE: STANDARD 2.000 KG OPTIONAL UP TO 2.300 KG OR 2.600 KG

EINSATZBEREICH

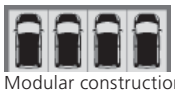
F0R INTERIORS AND EXTERIORS
ONE AND MULTI-FAMILY DWELLINGS
HOTELS
OFFICE BUILDINGS
CONDOMINIUMS
COMMERCIALS
CAR DEALERS
FOR PERMANENT USERS ONLY

Made in Germany

NOTE

The total height of the car including roof rail and antenna fixture must not exceed the maximum car height mentioned in the table below. Standard cars do not feature sport equipment (e.g. spoiler, etc.)

HEIGHT MEASUREMENTS

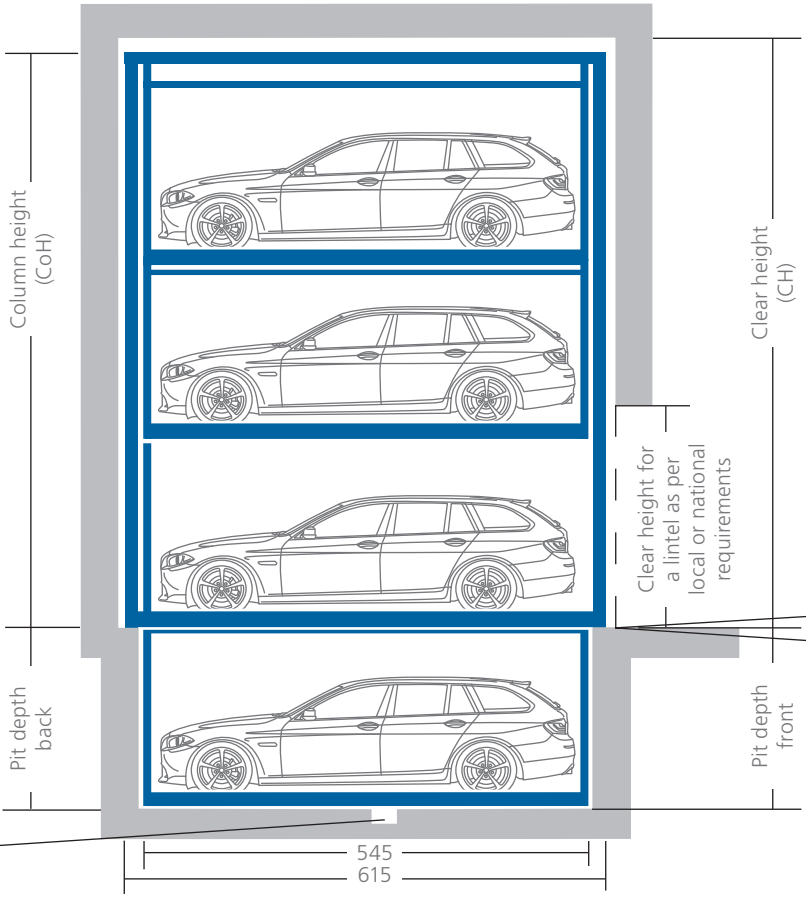


Modular construction extensible at will

The system is provided with single columns at the back, on the front with common columns.

Platforms can be driven horizontally.

For a constant, trained group of users.



Direct power transmission with lifting platforms directly welded to the lifting carriages: less moving parts and high operational safety.

Drainage channel 10x10 with collecting pit 50x50x20. Inclination to the channel can be chosen at will from 2%.

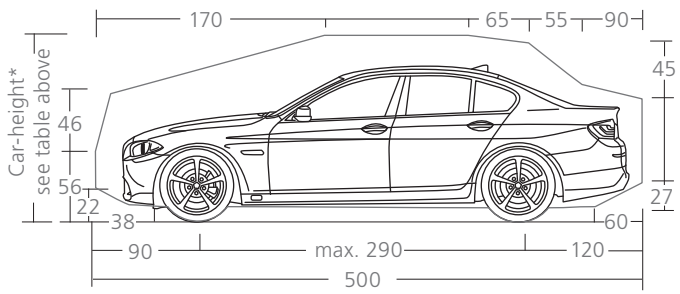
Necessary pit length: 5.45m for 5.00m long cars. Out of the pit the system length is 35 cm longer on both sides, i.e.: 6.15m in total.

Concrete: min. 18 cm, C25, floor evenness acc. to DIN 18202 tab. 3, line 3.

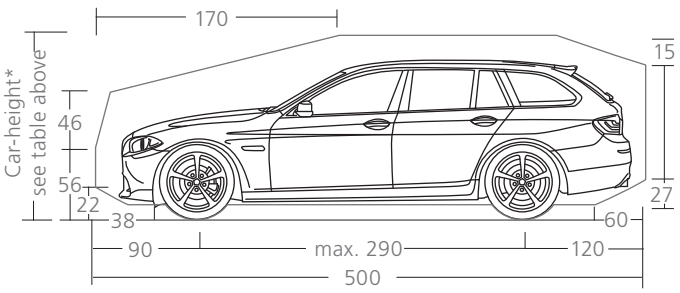
Load per parking space: max. 2.000kg, wheel load: max. 500kg. Optionally up to 2.300 kg or max. 2.600kg, wheel load max. 650kg.

PIT DEPTH FRONT/BACK	COLUMN HEIGHT (CoH)	CLEAR HEIGHT (CH)	CAR-HEIGHT IN THE PIT	CAR-HEIGHT AT THE ENTRANCE	CAR-HEIGHT UPPER LEVELS
220	200	from 560	160	from 160	160/160
230	210	from 590	170	from 170	170/170
240	220	from 620	180	from 180	180/180
250	230	from 650	190	from 190	190/190
260	240	from 680	200	from 200	200/200

VEHICLE DATA: STANDARD CAR



VEHICLE DATA: STANDARD ESTATE CAR

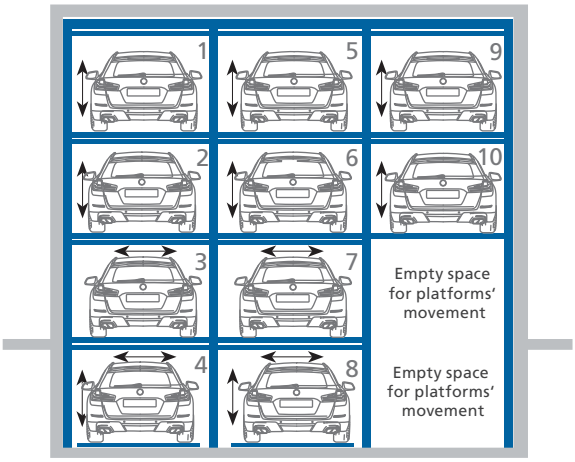


Made in Germany

WIDTH MEASUREMENTS AND EXAMPLES

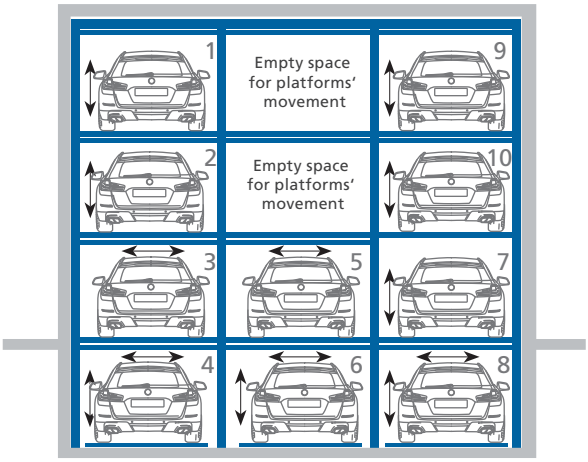
All dimensions in cm. All dimensions are minimum dimensions. Advice for planning and tendering: Generally masonry and concrete works are to be conducted according to the German norm VOB/C (DIN 18330 and DIN 18331).
In the mentioned norm are pointed the tollerances that are to be fulfilled according to DIN 18202. In this norm are defined the maximum permissible dimension variations as exceedance and shortfall of the nominal size. The nominal size should be planned in order to meet the minimum dimensions necessary for the parking system.

EXAMPLE WITH 3 SEGMENTS FOR 7 PARKING SPACES



Example 1 - Basis position

The picture shows the basis position: on the entrance level there are 2 sliding platforms (3 and 7). The platforms on the levels in the pit build „boxes“, which can be slid either together with the sliding platforms on the entrance level or lifted out of the pit towards the entrance level.
On both upper levels there are lifting platforms, which can be lowered as boxes towards one of the lower levels.



Example 2

In the picture above the lifting platforms 5 and 6 have been lowered, then the sliding platform 7 and the lifting/sliding platform 8 have been slid towards the empty spaces.
Now it is possibleto drive out cars on 2 sliding platforms (3 and 5) and on one lifting platform (7).

THE UNIPARKER N5404 AT A GLANCE

The entrance level is provided with sliding platforms. In the pit there are lifting/sliding platforms, while both upper levels are provided with lifting platforms. The system has 2 empty spaces to allow the movement of the platforms.
The smallest unit is composed by 2 Segments for 6 cars. The system can be extended at will by adding segments. Anyway we suggest to combine no more than 10 segments with an only common power unit, to keep a quick access time.

WIDTH MEASUREMENTS

PLATFORM-WIDTH	OUTER FRAME	TOTAL MEASUREMENTS FOR x SEGMENTS								
		2	3	4	5	6	7	8	9	10
230	260	530	780	1030	1280	1530	1780	2030	2280	2530
240	270	550	810	1070	1330	1590	1850	2110	2370	2630
250	280	570	840	1110	1380	1650	1920	2190	2460	2730

The power unit is installed at the back wall between 2 system columns, otherwise out of the system. Power unit's measurements: (LxWxH) 45 x 22 x 60 cm.

Mind the measurements of the switch cabinet (positioned outside the system) during planning! Space needed: 100 x 100 x 100 cm, including cabinet doors' opening.

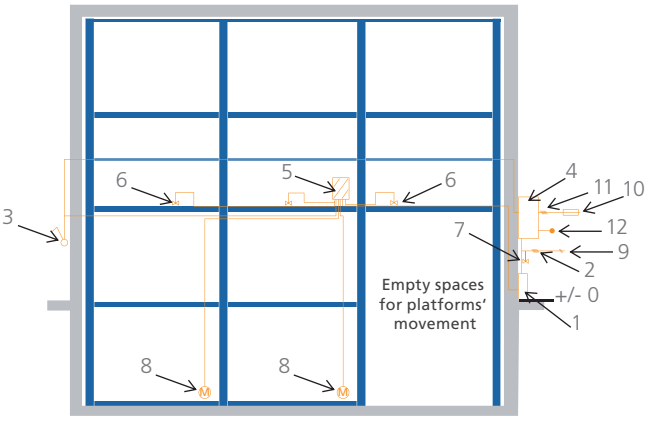
ELECTRICAL INSTALLATION AND FOUNDATION LOADS

Please observe during planning!

Services covered by the NUSSBAUM Company

POS.	QTY.	DESCRIPTION
1	1x	Hydraulic power unit with three-phase motor 400V, 50Hz, 3,0kW
2	1x	Bus cable 1x2x0,2
	1x	Control line 1x12G1
3	1x	Control unit with emergency-off
4	1x	Switch cabinet
5	1x	Segment box
6	1x	Segment valve
7	1x	Hydraulic valve
8	1x	Electrical motor for sliding
9	1x	Line 5x 4,0mm² (3 PH+N+PE) with marked leads + protective earth conductor

Installation diagram



Services to be provided by the customer

POS.	QTY.	DESCRIPTION	POSITION	FREQUENCY
10	1x	Blade fuse or circuit breaker 3x 20A, slow acc. to DIN VDE 0100 part 430	in the supply line	1x power unit
11	1x	Supply line 5x 2,5mm² (3 PH + N + PE) with marked leads + protective earth conductor	to the switch cabinet	1x power unit
12	1x	Equipotential bonding according to DIN EN 60204 from the connector of the foundation earth electrodes to the system		1x system
13	1x	Empty pipe DN 40 with taut wire to the power unit and control element	Project based	1x power unit

Positions 1 to 9 are included in the scope of delivery of the NUSSBAUM company, unless otherwise agreed in the offer or in the contract.

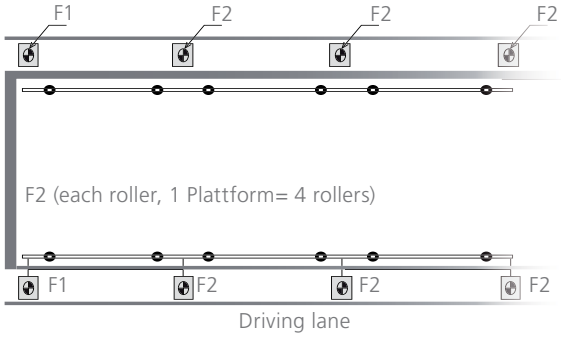
FOUNDATION LOADS AND CONSTRUCTION

Description

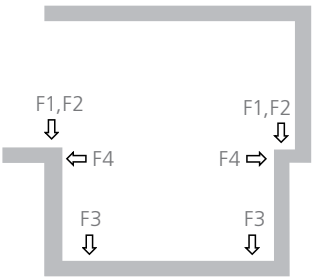
Foundation and pit walls must be planned so that they can absorb the loads of the parking system according to the schematic diagram shown on the right.
If necessary, in case of heightened foundation requirements, the chemical anchors must be provided by the client (deliverable by Nussbaum as option as well). The borehole for the footplates of the parking system must be 18 cm deep.

Foundation, walls and ceilings shall be realized by the customer and completed prior to assembly start and must be true to size, clean and dry. Floor and walls shall be made of armoured concrete. Concrete quality shall be at least: C25/30.

Ground view



Side view



Load details

LOAD PER PARKING SPACE	VERTICAL LOADS			HORIZONTAL LOADS
	F1 (START AND END COLUMNS)	F2 (COLUMNS)	F3 (RAILS)	F4
2000 Kg	21 kN	42 kN	8 kN	20 kN
2300 Kg	24 kN	48 kN	9 kN	23 kN
2600 Kg	27 kN	54 kN	10 kN	26 kN

NOTE
The sliding gates need to be fastened to the available building structure otherwise additional expenses may occur.

METAL SLIDING GATES

Manual metal sliding gates included in the scope of delivery - Electrical gates as option

METAL GATES FOR YOUR SYSTEM: SAFETY AND COMFORT

Metal gates are included in the scope of delivery of your semi-automatic system. Optionally you can also choose other types of gate coverings.

For maximum comfort when driving in and out of the system you can even choose electrical gates, which can be opened and closed by remote control. This way you can comfortably sit in your car while parking your car.

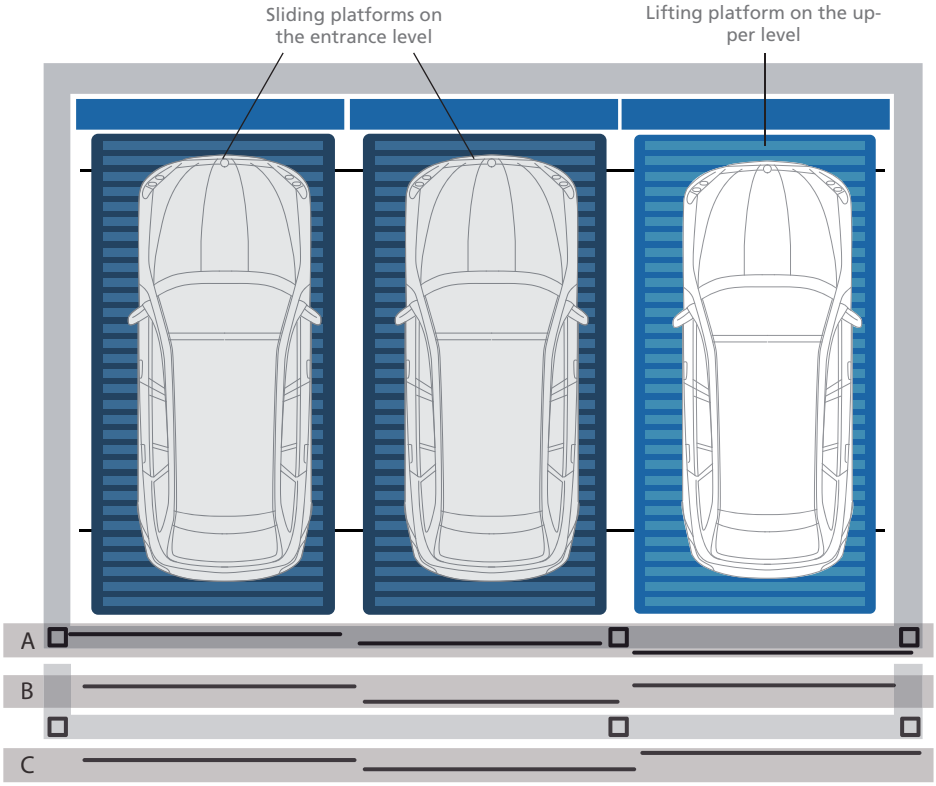
PLACEMENT OF THE OPTIONAL SLIDING GATES

There are three possibilities to install the optional sliding gates:

Layout A:
Sliding gates between the building pillars. The pillars (by client) must be positioned at least each 2 system segments).

Layout B:
Sliding gates behind the building pillars.
(However, behind the gates the necessary system length of 545 cm must still be available).

Layout C:
Sliding gates in front of the building pillars.



NOTE
We suggest periodical maintenance, care and cleaning. Take advantage of NUSSBAUM maintenance agreements.

STANDARD FEATURES

Included in the scope of delivery

COMPONENT PARTS

The system is provided with electrically driven sliding platforms on the entrance level. Lifting/sliding platforms on the level in the pit and hydraulic lifting platforms on the upper levels. With 2 empty spaces, hydraulic power unit and electrical steering. With gates.

DRIVING SHEETS

Platforms feature side carriers and driving sheets made of trapezoidal sheet.

SYSTEM'S MEASUREMENTS

Designed for:
Parking space length: 500 cm
Parking space width: 230 cm
Parking space height: from 150 cm
Load per parking space up to 2.000 kg.

CONTROL ELEMENT

Operation by touch screen with key switch and emergency-off. With brief operating instructions fastened on the wall and cabling to the power unit.

HYDRAULIC POWER UNIT

Power unit „Silencio"

With hydraulic piping and cabling to the system. (The under oil unit is not noisy thanks to the motor-pumps-combination that absorbs sound and insulates form noise).
To shorten access time, we suggest to use one power unit for max. 10 segments.

Measurements in cm (LxWxH):
Power unit: 45 x 22 x 60 cm.
Switch cabinet: 100 x 100 x 100 cm (place for the cabinet doors included).

Positioning of the power unit:
Depending on the local conditions - preferably directly close to the back system columns or cylinders on the back.

CORROSION PROTECTION

C3-Line
For Regions with average snowfall and humidity levels (the standard in Germany).

C2-Line
Recommended only for regions with small or no snowfall and low humidity levels.

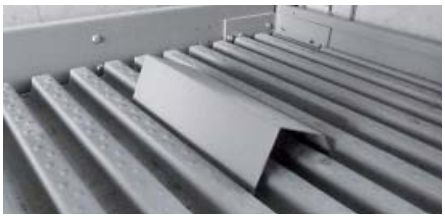
ELECTRICAL INSTALLATION

For a list of services and interfaces please see the respective table in this brochure.

DOCUMENTATION

Brief operating instructions (fastened to the control unit), documentation (test book and operating instructions).

SAFETY DEVICES



- Wedge to help position the vehicle.
- Hydraulic seated valve installed at the cylinders and hydraulic power unit as non-return device, in case of a loss of pressure.
- Fastening of the parking system and hydraulic power unit with stud-bolts, electrical cabling fastened with impact dowels.
- Safety fences on the sides against shear and crushing points, as long as the side walls are missing and they are offered by us as extra position.
- Integrated mechanical safety loop at the sliding platforms, which protects the upper lifting platforms from lowering.
- Several software-driven sensors to control the horizontal and vertical movements of the platforms.

NOTE
We suggest periodical maintenance, care and cleaning. Take advantage of NUSSBAUM maintenance agreements.

OPTIONS AND EXTRA EQUIPMENT

Available upon request - here are illustrated only some examples...

MEASUREMENTS OF THE SYSTEM

Designed for:
Parking space length: from 510 to 530 cm
Parking space width: from 235 to 270 cm
Parking space height: from 155 to 250 cm
Load per parking space up to 2.600 kg.
Fastening of the parking system with chemical anchors in case of heightened foundation requirements.

ALUMINIUM: PREMIUM-COVERING

Upper platforms with aluminium-bulb plate driving sheets. (Photo: N5102)

MORE WALKING COMFORT: CATWALKS

Catwalk on trapez. sheet for more walking comfort

Positioning on the left side. 1,5 mm zinced sheets, embossed surface. The catwalk will be screwed to the driving sheet.

CORROSION PROTECTION

C3-Line or C4-Line
Depending on the region, for higher corrosion protection.

EXTRA SOUND INSULATION

Sound insulation hood for the power unit

Airborne noise package - hood
For the power unit to reduce the airborne noise at the installation site.

Structure/borne noise package
Measures to reduce the sound propagation from the parking system to the building.

Note
In order to comply with the norm DIN 4109/A1 Table 4 „requirements for the allowed noise level in areas in need of protection from noises coming from the technical equipment“, the perimetral parts of the garage building shall be built with a sound reduction index Rw´ of at least 57 dB.

HYDRAULICS

HVLP 32-330 oil for extreme temperature variations.

Heated hydraulic power unit.

SLIDING GATES

Other gate coverings instead of wire mesh are available optionally.

ELECTRICAL SLIDING GATES

Electrical sliding gates can be delivered as option. Operation by remote control.

REMOTE CONTROL

The remote control delivered as option in combination with the optional electrical gates. Available in three configurations: with 1, 2 or 3 buttons:
1. (above): request a parking space (radio).
2. (right): close parking system gate (infrared).
3. (below): open/close external barrier or garage gate (radio).

MODEM FOR TELESERVICE

With our CAN-BUS control we can conduct remote service and maintenance via telephone. Delivery incl. modem. Within a few minutes our technicians can connect to the system and analyse the cause of the failure and fix the problem, often without the need of personnel on site.
By client: Modem DSL, DSL connection with fixed IP address and at least 1 MBit/s upstream.

SERVICES TO BE PROVIDED BY THE CUSTOMER AND PLANNING INDICATIONS

During the planning phase please observe and comply with the following notes!

SERVICES TO BE PROVIDED BY THE CUSTOMER

Safety fences
Safety fences acc. to DIN EN ISO 13857 must be provided by the customer.

Parking spaces' numeration
For the allocation of the parking spaces we suggest our customers to numerate the parking spaces.

Noise abatement measures
The compliance with these measures must be carried out by the customer acc. to norm DIN 4109: „Sound insulation in building construction".

Electrical installation
Prior to starting the assembly the customer must provide a lockable main control switch out of the system/pit close to the power unit. Electrical services to be provided by the customer acc. to this brochure's specification.

Fire protection
The customer must agree upon the fire protection requirements and the required measures with the local fire department and realise them.

Lighting
To be carried out by the customer acc. to DIN 67528: „Lighting for parking areas and indoor car parks".

Foundation
To be carried out by the customer acc. to the specifications in this brochure.

Control unit
The customer must make sure that a plain surface of (L x W) 50 cm x 20 cm for the installation of the control unit is directly close to the power unit and out of the platforms' moving area.

Drainage
Drainage channel 10 cm x 10 cm with collecting pit 50 cm x 50 cm x 20 cm acc. to this brochure's spec to be carried out by the customer.

Installation requirements
The compliance with installation requirements acc. to quotation.

Wall openings
In case of partition walls the customer must realise a 10 cm x 10 cm wall opening for hosting hydraulic and electrical cables.

Building permit
The customer must apply for and get the required permits in order to allow the installation of the parking system.

PLANNING INDICATIONS

Parking space width and driving lanes
While planning the parking space and driving lane dimensions please observe and comply with the local/national prescriptions for the Garages' construction. For more parking comfort we suggest you to plan parking spaces of at least 250 cm width.

Group of users
Our parking systems are conceived for a permanent and instructed group of users.

Maintenance and care
We suggest a timely conclusion of a maintenance agreement.
We suggest also to perform maintainance, care and cleaning at regular time intervals.

EG-Machinery directive
Our parking systems comply with the EG-Machinery directive and are CE certified according to the norm DIN EN 14010.

Ramps' inclination
Ramps leading to garages shall not have more than 15% inclination.

Modifications
The company Otto Nußbaum GmbH & Co. KG reserves the right to make dimensional, design and technical modifications.