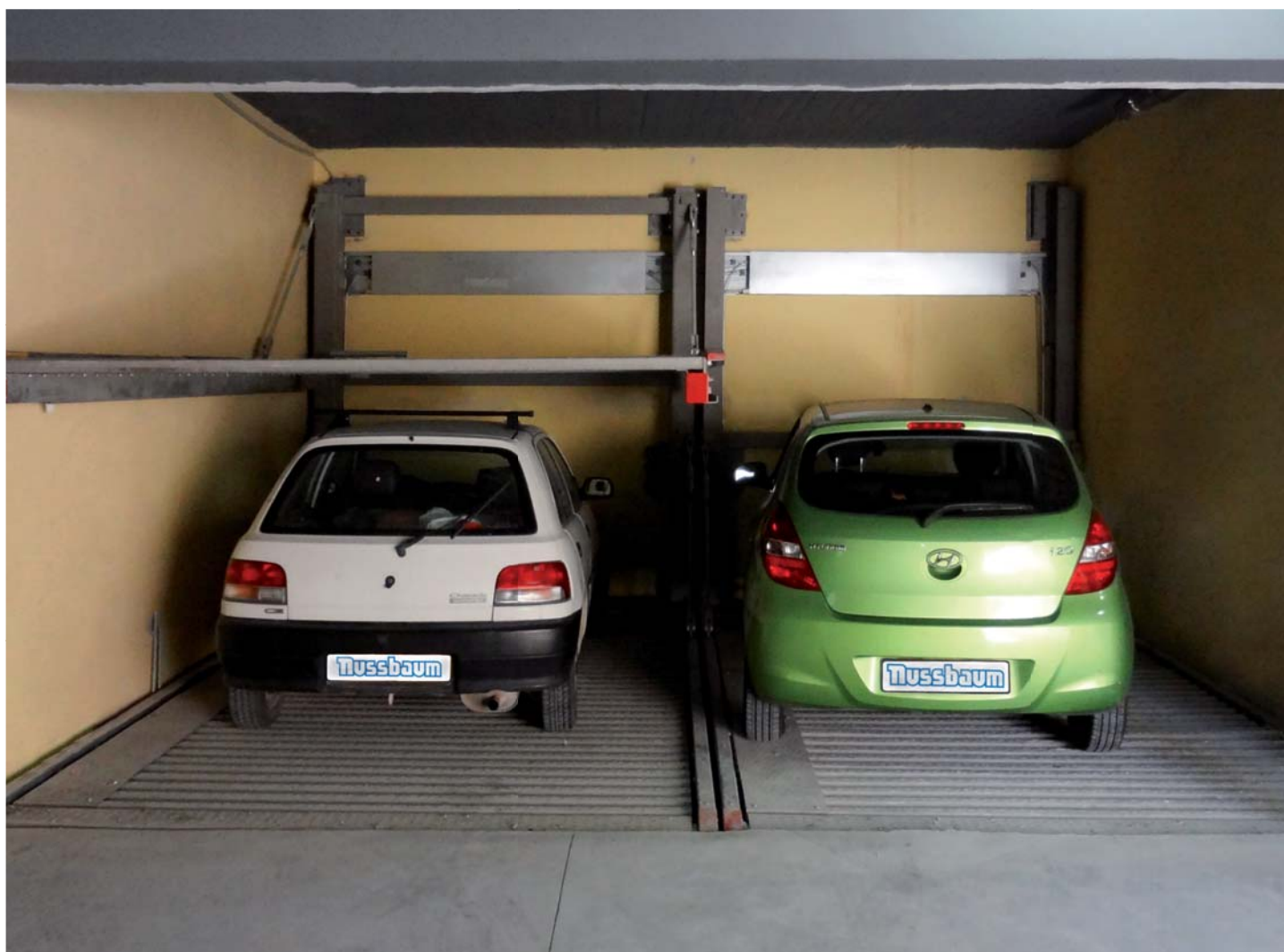


# Nussbaum

BY CAR STACKERS INTERNATIONAL

## LIFTPARKER N4802

THE SOLUTION FOR OPTIMIZED PARKING WIDTHS, AS SINGLE SYSTEM ONLY



### SHORT DESCRIPTION

INDEPENDENT PARKING ON 2 LEVELS  
LIFTING COLUMNS ON THE BACK WALL  
HORIZONTALLY ACCESSIBLE PLATFORMS  
ONLY AVAILABLE AS SINGLE SYSTEM  
LOAD PER PARKING SPACE: 2.000 KG (STANDARD)  
UP TO 2.300 KG OR 2.600 KG (OPTIONAL)

### APPLICATION

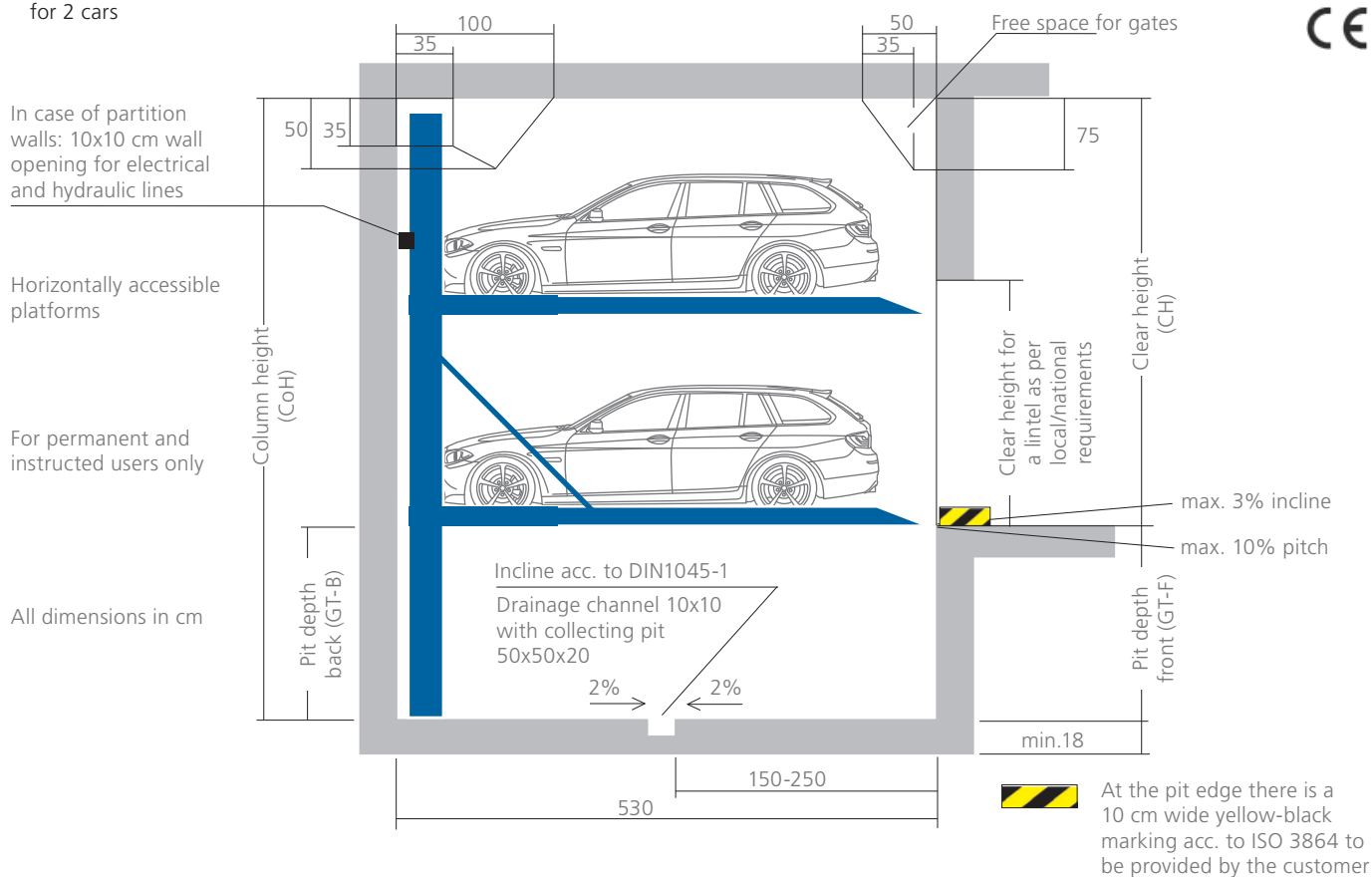
FOR INTERIORS, WITH PIT  
ONE AND MULTI-FAMILY DWELLINGS  
HOTELS AND OFFICE BUILDINGS  
CONDOMINIUMS AND COMMERCIALS  
ABOVEGROUND AND READYMADE GARAGES  
FOR PERMANENT USERS ONLY



S-system  
for 2 cars

#### 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.).



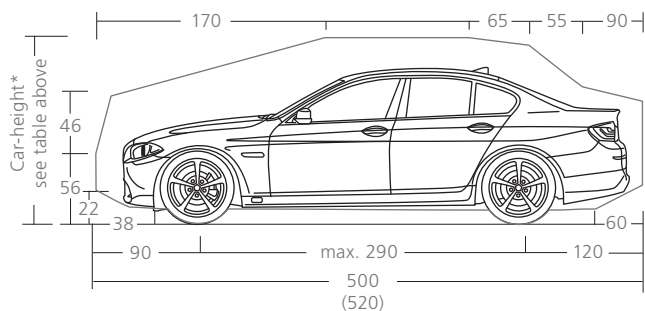
Pit length 530 cm, for a 500 cm car. Further pit lengths, e.g. 540 cm, available on request

Load per parking space: max. 2.000 kg, wheel load: max. 500 kg (Optional up to max. 2.600 kg, wheel load max. 650kg).

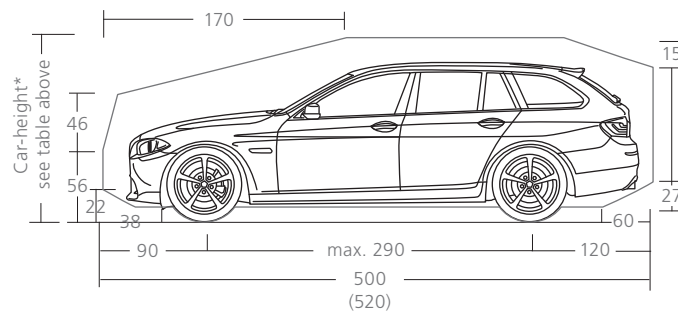
In case higher clear height is available it is possible to park correspondingly higher cars on the upper platform.

| PIT DEPTH<br>FRONT (GT-F) | PIT DEPTH<br>BACK (GT-B) | CLEAR HEIGHT<br>(CH) | COLUMN HEIGHT<br>(CoH) | CAR-HEIGHT<br>BELOW | CAR-HEIGHT<br>ABOVE |                                  |
|---------------------------|--------------------------|----------------------|------------------------|---------------------|---------------------|----------------------------------|
| ≥ 170                     | 170                      | from 320             | 475                    | 150                 | from 150            | Only available as single system. |
| ≥ 175                     | 175                      | from 325             | 480                    | 155                 | from 150            | Platform below:                  |
| ≥ 180                     | 180                      | from 330             | 485                    | 160                 | from 150            | Even access.                     |
| ≥ 185                     | 185                      | from 335             | 490                    | 165                 | from 150            | platform above:                  |
| ≥ 190                     | 190                      | from 340             | 495                    | 170                 | from 150            | with drive-on                    |
| ≥ 195                     | 195                      | from 345             | 500                    | 175                 | from 150            | sheet.                           |
| ≥ 200                     | 200                      | from 350             | 505                    | 180                 | from 150            |                                  |

#### VEHICLE DATA: STANDARD CAR



#### VEHICLE DATA: STANDARD ESTATE CAR



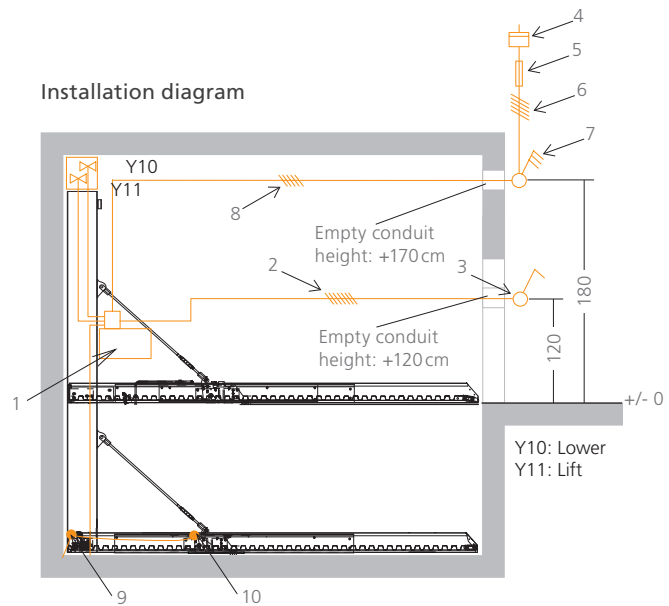
## ELECTRICAL INSTALLATION

### Services covered by the NUSSBAUM Company

| POS. | QUANTITY | DESCRIPTION   |
|------|----------|---|
| 1    | 1x       | Hydraulic power unit with three-phase motor 230/400V, 50Hz, 3,0kW           |
| 2    | 1x       | Control cable 4x 1,0 <sup>2</sup> (control by standard key-operated switch) |
|      | option   | Control cable 7x 1,0 <sup>2</sup> (only with lockable key-operated switch)  |
| 3    | 1x       | Control element   |

Positions 1 to 3 are covered by the Nussbaum company unless otherwise agreed in the offer or in the contract.

Installation diagram



### Services to be provided by the customer

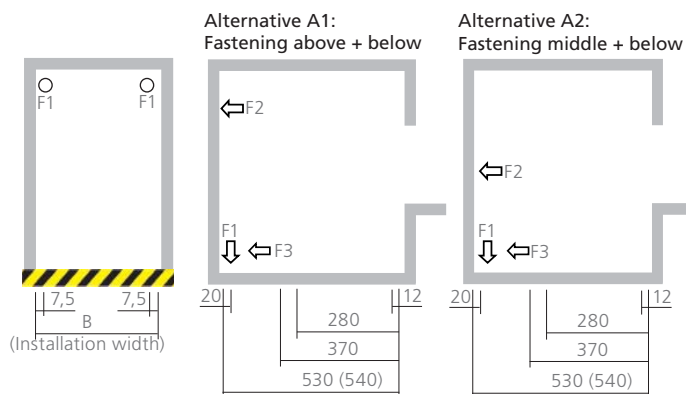
| POS. | QUANTITY | DESCRIPTION  | POSITION            | HÄUFIGKEIT    |
|------|----------|--|---------------------|---------------|
| 4    | 1x       | Electricity meter  | in the supply line  |               |
| 5    | 1x       | Blade fuse or circuit breaker 3x 16A, slow acc. to DIN VDE 0100 part 430                           | in the supply line  | 1x power unit |
| 6    | 1x       | Supply line 5x 2,5 mm <sup>2</sup> (3 PH + N + PE) with marked leads + protective earth conductor  | to the mains switch | 1x power unit |
| 7    | 1x       | Lockable network facility (main control switch)  | near power unit     | 1x power unit |
| 8    | 1x       | Supply line 5x 2,5 mm <sup>2</sup> (3 PH + N + PE) with marked leads + protective earth conductor  | to the power unit   | 1x power unit |
| 9    | 1x       | Foundation earth electrodes  | pit floor corner    | 1x pit        |
| 10   | 1x       | Equipotential bonding acc. to DIN EN 60204 from connector of foundation earth electrodes to system | at the column foot  | 1x system     |

## FOUNDATION LOADS AND CONSTRUCTION

Foundation and pit walls must be planned so that they can absorb the loads of the parking system according to the schematic diagram shown below. All forces are discharged to the ground by base plates with a minimum area of 150cm<sup>2</sup>.

The base plates of the parking system are fastened with metal heavy duty anchor bolts; the borehole is approx. 14cm deep. Optionally the base plates can be fastened using shear connectors, e.g. in case of watertight concrete or increased noise insulation. The clarification of the fastening methods shall be realized by the customer, if necessary, the shear connectors can be delivered against surcharge.

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 (below the entrance level) made of armoured concrete, concrete quality at least: C25/30.



| LOADS<br>F | S-SYSTEM<br>2.000KG |       | S-SYSTEM<br>2.300KG |       | S-SYSTEM<br>2.600KG |       |
|------------|---------------------|-------|---------------------|-------|---------------------|-------|
|            | A1                  | A2    | A1                  | A2    | A1                  | A2    |
| F1         | 40 kN               | 40 kN | 48 kN               | 48 kN | 56 kN               | 56 kN |
| F2         | 18 kN               | 29 kN | 22 kN               | 35 kN | 25 kN               | 25 kN |
| F3         | 18 kN               | 29 kN | 22 kN               | 35 kN | 25 kN               | 25 kN |

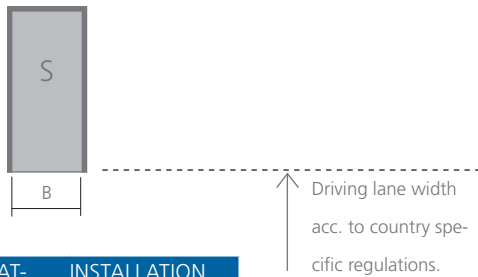
Dimensions in cm. All Dimensions are minimum dimensions. | Tolerances shall be taken into account additionally, see page „width dimensions for garages...“.

## WIDTH DIMENSIONS FOR GARAGES AND GARAGES WITH GATES

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 tolerances 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.

### PARTITION WALLS

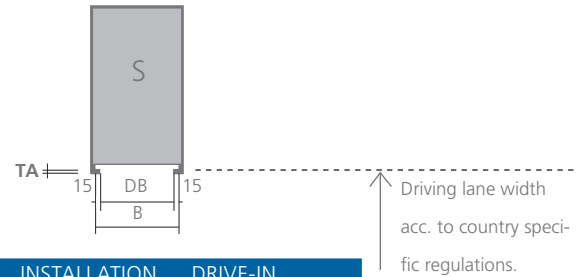
#### Single system for 2 cars



| CLEAR PLATFORM WIDTH | INSTALLATION WIDTH B |
|----------------------|----------------------|
| 230                  | 250                  |
| 240                  | 260                  |
| 250                  | 270                  |
| 260                  | 280                  |
| 270                  | 290                  |

### SINGLE SYSTEM - INSTALLATION IN GARAGES

#### Single system for 2 cars

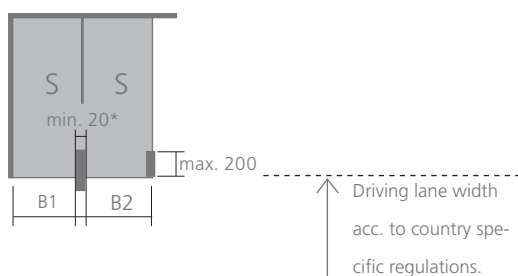


| CLEAR PLATFORM WIDTH | INSTALLATION WIDTH B | DRIVE-IN WIDTH DB |
|----------------------|----------------------|-------------------|
| 230                  | 250                  | 230               |
| 240                  | 260                  | 240               |
| 250                  | 270                  | 250               |
| 260                  | 280                  | 260               |
| 270                  | 290                  | 270               |

TA = seat engaging surface for gates. The dimensions must be agreed on site with the gate manufacturer.

### BUILDING PILLARS IN FRONT OF THE PIT

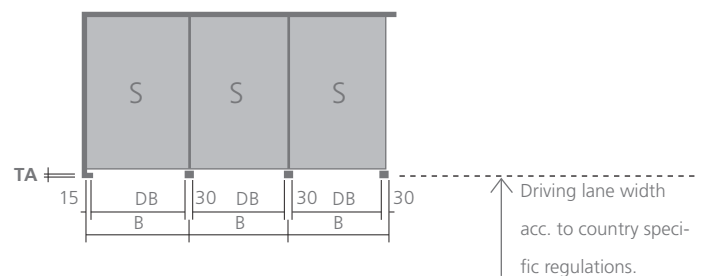
#### Single system for 2 cars



| CLEAR PLATFORM WIDTH | B1  | B2  |
|----------------------|-----|-----|
| 230                  | 250 | 250 |
| 240                  | 260 | 260 |
| 250                  | 270 | 270 |
| 260                  | 280 | 280 |
| 270                  | 290 | 290 |

### GARAGES WITH SINGLE AND DOUBLE GATES

#### Single system for 2 cars



| CLEAR PLATFORM WIDTH | INSTALLATION WIDTH B | DRIVE-IN WIDTH DB |
|----------------------|----------------------|-------------------|
| 230                  | 250                  | 230               |
| 240                  | 260                  | 240               |
| 250                  | 270                  | 250               |
| 260                  | 280                  | 260               |
| 270                  | 290                  | 270               |

Note: the dimensions reported do not include the space necessary for the power unit.

During the planning phase please add the dimensions for the power unit incl. control cabinet.

1–2 systems: 65 x 25 x 60 cm

3–5 systems: 115 x 25 x 60 cm

## CAR STACKER - DATA SHEET

### THE SOLUTION FOR OPTIMIZED PARKING WIDTHS

Only available as single system with one car on each level

Columns fastened to the back wall

Horizontally accessible Platforms



Two lowered systems



Two single systems: one lowered system next to one lifted system

### MADE IN GERMANY



NUSSBAUM product pallet has evolved thanks to many years of experience and constant adaptation to the ever changing market requirements. This happens not only because we come everyday closer to our customers but also thanks to the competence and experience of our own engineers.

NUSSBAUM gives much worth to the development of new solutions, patented techniques and to the unique features of our products. The formation of the personnel and an advanced technical platform constitute the solid basis of our success.

## STANDARD FEATURES – IN THE SCOPE OF DELIVERY

### NOTE

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

### COMPONENT PARTS

#### Single system:

consisting of 2 Platforms, 2 packed columns with hydraulic cylinders, lifting slide and hydraulic block.



Platforms with sidewalls and driving sheets made of Trapezoidal sheet.

### DIMENSIONS OF THE SYSTEM

#### Standard system

Parking space length: 500 cm

Parking space width: 230 cm  
(for max. 190 cm wide cars)

Pit depth: 170/170 cm

Load per parking space: 2000 kg.

### KEY SWITCH



Control unit composed of key-switch with Emergency-off in dead-man's control and with cabling to the hydraulic power unit.

### ELECTRICAL INSTALLATION

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

### HYDRAULIC POWER UNIT INCL. ELECTRICAL SWITCH BOX

#### Power unit „Silencio“



With hydraulic canalization and cabling to the main control switch. (The under oil unit is not loud thanks to the motor-pumps-combination that absorbs sound and insulates from noise). Delivery includes electrical switch box.

#### Measurements of the power unit:

1–2 systems: 65 x 25 x 60 cm

3–5 systems: 115 x 25 x 60 cm.

The power unit will be placed in the pit between 2 systems on an approx. 2 m high pillar or, if there is no space available, it will be fastened to the wall. In case of single installations we can also optionally deliver a mobile power unit, installed on the lower platform, on its front left side.

### CORROSION PROTECTION

#### C3-Line

For Regions with average snowfall and humidity levels (standard in Germany).

#### C2-Line

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

### DOCUMENTATION

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

### SAFETY DEVICES

- Lifting sliders as synchronization unit to guarantee synchronous run even in case of irregular load distribution.
- Mechanical catches to safely maintain the platform in the upper position.



- Wedge to help position the vehicle.
- Safety device to avoid lowering in case of pipeline rupture.
- Fastening of the parking system and hydraulic power unit with stud-bolts, electrical cabling fastened with impact dowels.
- Handrails on the platforms where necessary to avoid danger of falling down from the system.

#### Note:

- Safety fences against shear and crushing points are a priority and must be provided by the customer.

## OPTIONS AND EXTRA EQUIPMENT – EXAMPLES

### DIMENSIONS OF THE SYSTEM

Parking space lengths: 510 to 540 cm  
 Parking space widths: 240 to 270 cm  
 Parking space height: 165 to 185 cm  
 Pit depths: 185 to 200 cm.

Fastening of the parking system with chemical anchors in case of heightened foundation requirements.

Hydraulic package „Parallelbetrieb“: Symultaneous lowering of 2 or more systems per power unit with appropriate pump capacity.

### VEHICLE WEIGHT

Higher load per parking space up to 2.300 kg or 2.600 kg.

### BERLIN CONTROL UNIT/ FIRE BRIGADE



Berlin control unit with weatherproof casing and pillar

- Control unit consisting of a lockable key switch (key can be taken off only in the basis position) with emergency-off in dead-man's control. Lifting and lowering by using the respective button.
- Weatherproof casing for the key switch.
- Supporting pillar for the key switch.

### DRIVING SHEETS



Upper platforms with Aluminium-bulb plates driving sheets and special driving wedge to help position the vehicle.

### 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 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  $R_w'$  of at least 57 dB.

### NOTE

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

### GARAGE GATES' INSTALLATION

Ramp if doorjambs are missing for the installation of the door slide rails. The pit must then be at least 535 cm long.

### CORROSION PROTECTION

C4-Line: driving sheets powdered on both sides

For regions with highly corrosive humidity levels.

### CATWALK



Catwalk on trapez. sheet for more walking comfort

#### Catwalk on trapezoidal sheet flooring

Positioned on the left side of the parking space. 1,5 mm galvanized sheet, coined surface area. The catwalk is bolted to the driving sheet.

### HYDRAULIK

- HVLP 32-330 Öl for extreme temperature variations.
- Heated hydraulic power unit.

### UPPER PLATFORM

- Even drive-on instead of drive-on ramp to allow a more comfortable entrance (this means a loss by 8 cm in the car-height below).

## 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“.

#### Lighting

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

#### Pit-foundation

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

#### Electrical installation

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

#### Installation requirements

The compliance with installation requirements acc. to quotation.

#### 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.

#### Fire protection

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

#### Marking

The customer must provide a 10 cm wide yellow-black marking on the front pit edge according to the norm ISO 3864.

#### 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.

#### Control unit

The customer must make sure that a plan 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.

### 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 maintenance, 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.