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To be performed by the customer Description

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## Garage without door (basement garage)



Before lowering the platform, the vehicle parked on the lower parking space must be driven off!

## 2061-160



| height | car height <br> upper | car height <br> lower |
| :---: | :---: | :---: |
| 320 | 150 | 150 |

## 2061-190



| height | car height <br> upper | car height <br> lower |
| :---: | :---: | :---: |
| $\mathbf{3 8 0}$ | $\mathbf{1 8 0}$ | 180 |
| $(350)$ | 150 | 180 |



| height | car height <br> upper |
| :---: | :---: |
| 340 | 160 |
| $(330)$ | car height <br> lower |

## 2061-200


$\left.\begin{array}{|cc|}\hline \text { height } & \begin{array}{c}\text { car height } \\ \text { upper }\end{array} \\ \hline 400 & 190\end{array} \begin{array}{c}\text { car height } \\ \text { lower }\end{array}\right]$.

PRODUCT DATA

## singlevario 2061

## 2000 kg • / 2600 kg •

## Loadable A system for all height!

 up to 2600 kg ! Subsequently adjustable
## Dimensions

All space requirements are minimum finished dimensions.
Tolerances for space requirements ${ }_{0}^{+3}$. Dimensions in cm.
EB (single platform) $=2$ vehicles

## Suitable for

Standard passenger cars:
Limousine, station wagon, SUV, van according to clearance and maximal surface load.

|  | Standard | Special |
| :---: | :---: | :---: |
| width | 190 cm 4 | 190 cm 4 |
| weight | max. 2000 kg , | max. 2600 kg |
| heel load | ax. 500 | max. 650 kg |

Clearance profile


## 2061-180



| height | car height <br> upper |
| :---: | :---: |
| 360 | 170 |
| $(340)$ | 150 |

## 2061-210



| height | car height <br> upper | car height <br> lower |
| :---: | :---: | :---: |
| 420 | 200 | 200 |
| $(370)$ | 150 | 200 |

(1) Standard type
(2) Special system: maximum load for extra charge.
(3) To follow the minimum finished dimensions, make sure to consider the tolerances according to VOB, part C (DIN 18330 and 18331) and the DIN 18202.
(4) Car width for platform width 230 cm . If wider platforms are used it is also possible to park wider cars.
(5) If a higher ceiling height is available higher cars can be parked.
(6) For dividing walls: cutting through $10 \times 10 \mathrm{~cm}$.

7 Potential equalization from foundation grounding connection to system (provided by the customer).

8 In compliance with DIN EN $14010,10 \mathrm{~cm}$ wide yellow-black markings compliant to ISO 3864must be applied by the customer to the edge of the platform in the access area to mark the danger zone in front of the supporting surface of the upper platform edge (see „Load Plan" Page 4)
9. Variable steel pillar bases in two sizes (see „Load Plan" Page 4)
(10) For convenient use of your parking space and due to the fact that the cars keep becoming longer we recommend a length of 540 cm .
(11) Must be at least as high as the greatest car height +5 cm .

## Page 3

 Width dim. with doorWidth dimensions for garage without door (basement garage)



Columns outside of system zone


Double arrangement ( $2 \times \mathrm{EB}$ )
Tripple arrangement ( $3 \times \mathrm{EB}$ )



For parking boxes on the edges and boxes with intermediate walls we recommend our maximum platform width of 270 cm . Problems may occur if smaller platform widths are used (depending on car type, access and individual driving behaviour and capability).

For larger limousines and SUV wider driveways are necessary (in particular on the boxes on the sides due to the missing manoeuvring radius).

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med by the
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Double arrangement (2 x EB)


## Function

System lifted


System lowered


## Page 2

## Approach



The illustrated maximum approach angles must not be exceeded. Incorrect approach angles will cause serious maneouvring \& positioning problems on the parking system for which the local agency of KLAUS Multiparking accepts no responsibility.

## Load plan

Option 1: short steel pillar base
Option 2: long steel pillar base


The steel pillar base can be selected optionally (short or long). Please make sure to note the corresponding forces that apply!

Units are dowelled to the floor. Drilling depth: approx. 15 cm .
Floor and walls are to be made of concrete (quality minimum C20/25)!
The dimensions for the points of support are rounded values. If the exact position is required, please contact KLAUS Multiparking.
(14) The system must be laterally supported on both sides. If there are no walls on the sides, an additional stand must be attached. For this stand, a base area of $40 \times 25 \mathrm{~cm}$ is required (quality minimum C20/25).
(15 Marking compliant to ISO 3864 (colors used in this illustration are not ISO 3864 compliant)
(16 All forces in kN

Installation data - Free space for longitudinal and vertical ducts (e.g. ventilation)


Free space only applicable if vehicle is parked forwards = FRONT FIRST and driver's door on the left side.

16 Size 15 cm is reduced to 5 cm for type 2061-160
17 Dimensions B1, B2 and B3 see page 2.

Electrical installation



## Technical data

## Field of application

By default, the system can only be used for a fixed number of users.
If different users use the system - only on the lower parking spaces - (e.g. short-time parkers in office buildings or hotels) the Multiparking system needs to be adjusted. If required, would you please contact us.

## Units

Low-noise power units mounted to rubber-bonded-to metal mountings are installed. Nevertheless we recommend that parking system's garage be built separately from the dwelling.

## Available documents

- wall recess plans
- maintenance offer/contrac
- declaration of conformity
- test sheet on airborne and slid-borne sound

Environmental condifions
Environmental conditions for the area of multiparking systems: Temperature range -10 to $+40^{\circ} \mathrm{C}$. Relative humidity $50 \%$ at a maximum outside temperature of $+40^{\circ} \mathrm{C}$.
If lifting or lowering times are specified, they refer to an environmental temperature of $+10^{\circ} \mathrm{C}$ and with the system set up directly next to the hydraulic unit. At lower temperatures or with longer hydraulic lines, these times increase.

## Sound insulation

According to DIN 4109 (Sound insulation in buildings), para. 4, annotation 4, KLAUS Multiparkers are part of the building services (garage systems).

## Normal sound insulation:

DIN 4109, para. 4, Sound insulation against noises from building services.
Table 4 in para. 4.1 contains the permissible sound level values emitted from building services for personal living and working areas. According to line 2 the maximum sound level in persona living andworking areas must not exceed $30 \mathrm{~dB}(\mathrm{~A})$.
Noises created by users are not subject to the requirements (see table 4, DIN 4109).
The following measures are to be taken to comply with this value:

- Sound protection package according to offer/order
(KLAUS Multiparking GmbH)
- Minimum sound insulation of building $\mathrm{R}_{\mathrm{w}}=57 \mathrm{~dB}$ (to be provided by customer)


## Increased sound insulation (special agreement):

Draft DIN 4109-10, Information on planning and execution, proposals for increased sound insulation.
Agreement: Maximum sound level in personal living and working areas $25 \mathrm{~dB}(\mathrm{~A})$. Noises created by users are not subject to the requirements (see table 4, DIN 4109).
The following measures are to be taken to comply with this value:

- Sound protection package according to offer/order (KLAUS Multiparking GmbH)
- Minimum sound insulation of building $\mathrm{R}_{\mathrm{w}}=62 \mathrm{~dB}$ (to be provided by customer)

Note: User noises are noises created by individual users in our Multiparking systems. These can be noises from accessing the platforms, slamming of vehicle doors, motor and brake noises.

## Building application documents

According to LBO and GaVo (garage regulations) the Multiparking systems are subject to approval. We will provide the required building application documents.

## Care

To avoid damages resulting from corrosion, make sure to follow our cleaning and care instructions and to provide good ventilation of your garage.

## Corrosion protection

See separate sheet regarding corrosion protection.

## Railings

If there are traffic routes next to or behind the installations, railings compliant to DIN EN ISO 13857 must be installed by the customer. Railings must also be in place during construction.

## CE Certification

The systems on offer comply with DIN EN 14010 and EC Machine Directive 2006/42/EC. Furthermore, this system underwent voluntary conformity testing by TÜV SÜD


## To be performed by the customer

## Safety fences

Any constraints that may be necessary according to DIN EN ISO 13857 in order to provide protection, for pathways directly in front, next to or behind the unit. This is also valid during construction.

## Numbering of parking spaces

Consecutive numbering of parking spaces.

## Bullding services <br> Any required lighting, ventilation, fire extinguishing and fire alarm systems as well as clarification and compliance with the relevant

 regulatory requirements.
## Marking

According to DIN EN 14 010, a warning that identifies this danger area must be placed in the entrance area that conforms to ISO 3864. This must be done according to EN 92/58/EWG for systems without a pit 10 cm from the edge of the platform.

## Wall cuttings

Any necessary wall cuttings according to page 1 .
Electrical supply to the main switch / Foundation earth connector
Suitable electrical supply to the main switch must be provided by the customer during installation. The functionality can be monitored on site by our fitters together with the electrician. If this cannot be done during installation for some reason for which the customer is responsible, the customer must commission an electrician at their own expense and risk.
In accordance with DIN EN 60204 (Safety of Machinery. Electrical Equipment), grounding of the steel structure is necessary, provided by the customer (distance between grounding max. 10 m ).

## Operating device

Cable conduits and recesses for operating device (for double wing doors: please contact the local agency of KLAUS Multiparking).

## Operating device exposed

Operating device concealed


If the following are not included in the quotation, they will also have to be provided / paid for by the customer:

- Mounting of contactor and terminal box to the wall valve, complete wiring of all elements in accordance with the circuit diagram
- Costs for final technical approval by an authorized body
- Main switch
- Control line from main switch to hydraulic unit


## Description Single platform (EB)

## General description

Multiparking system providing dependent parking spaces for 2 cars one on top of the other each. The lower vehicle parks directly on the floor plate. The vehicle parked on the bottom must be driven out before lowering the platform.
The height of the platform can be adjusted flexibly (even subsequently).
Adjustment of maximum load of $2,500 \mathrm{~kg}$ can be made subsequently. Dimensions are in accordance with the underlying dimensions of parking pit, height and width
The parking bays are accessed horinzotally (installation deviation $\pm 1 \%$ ).
Vehicles are positioned on the upper parking space using wheel stops on the right side (adjust according to operating instructions).
Operation via operating device with hold-to-run-device using master keys.
The operating elements are usually mounted either in front of the column or on the outside of the door frame
Operating instructions are attached to each operator's stand.
For garages with doors at the front of the parking system the special dimensional requirements have to be taken into account.

## Multiparking system consisting of:

- 2 steel pillars with bases that are mounted on the floor
(short or long steel pillar bases can be selected optionally).
-2 sliding platforms (mounted to the steel pillars with sliding bearings)
- 1 platform
- 1 mechanic synchronization control system (to ensure synchronous operation of the hydraulic cylinders while lowering and lifting the platform)
- 1 hydraulic cylinder
- 1 automatic hydraulic safety valve (prevents accidental lowering of the platform while accessing the platform)
- Dowels, screws, connecting elements, bolts, etc.
- The platforms and parking spaces are end-to-end accessible for parking!

Platiorms consisting of:

- Platform base sections
- Adjustable wheel stops
- Canted access plates
- Side members
- Cross members
- Screws, nuts, washers, distance tubes, etc.


## Hydraulic system consisting of:

- Hydraulic cylinder
- Solenoid valve
- Safety valve
- Hydraulic conduits
- Screwed joints
- High-pressure hoses
- Installation material


## Electric system consisting of:

- Operating device (Emergency Stop, lock, 1 master key per parking space)
- Terminal box at wall valve
- Electrical locking device
- Chain control


## Hydraulic unit consisting of:

- Hydraulic power unit (low-noise, installed onto a console with a rubber-bonded-to-metal mounting)
- Hydraulic oil reservoir
- Oil filling
- Internal geared wheel pump
- Pump holder
- Clutch
- 3-phase-AC-motor
- Contactor (with thermal overcurrent relay and control fuse)
- Test manometer
- Pressure relief valve
- Hydraulic hoses (which reduce noise transmission onto the hydraulic pipe


## We reserve the right to change this specification without further notice

KLAUS Multiparking reserves the right in the course of technical progress to use newer or other technologies, systems, processes, procedures or standards in the fulfillment of their obligations other than those originally offered provided the customer derives no disadvantage from their so doing.

