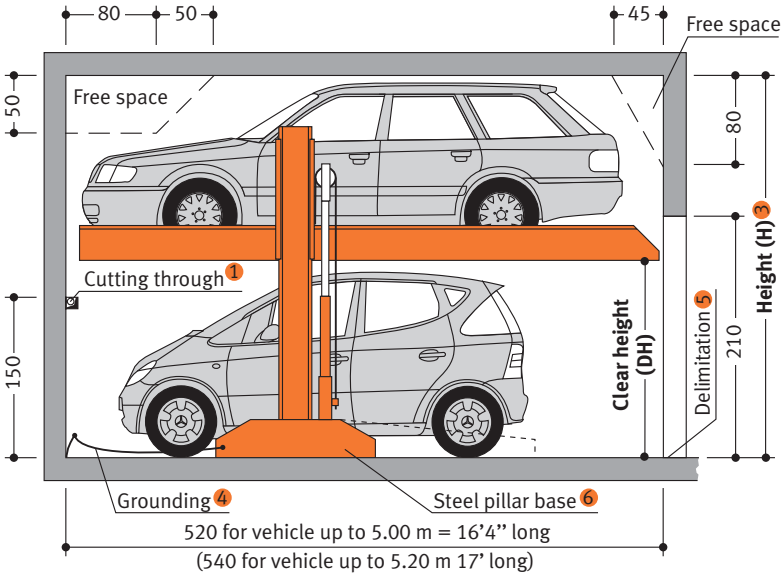
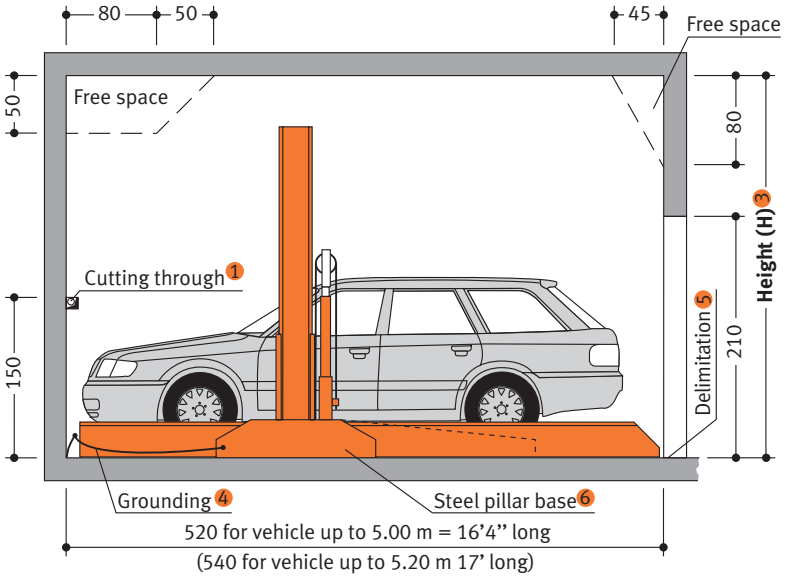
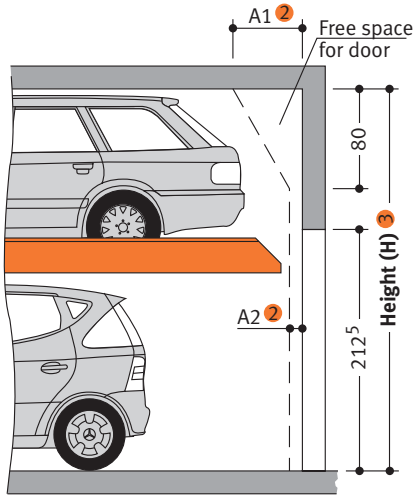
## SingleVario 2061




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




## Garage with door in front of the car parking system




## Notes

1. For dividing walls: cutting through 10 x 10 cm (for pipes).
2. Dimensions A1, A2 and A3 must be coordinated with the door supplier.
3. If the total height is greater, the max. vehicle height for the upper parking space increases accordingly.
4. Potential equalization from foundation grounding connection to system (provided by the customer).
5. In compliance with DIN EN 14 010, 10 cm wide yellow-black markings compliant to ISO 3864 must 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 3)
6. Variable steel pillar bases in two sizes (see »Load Plan«, Page 3).
7. Maximum load of 2,500 kg for extra charge.

## Product Data SingleVario 2061

CE CONFORMITY

Loadable up to 2,500 kg
A system for any height
subsequently adjustable!

### Dimensions:

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

| Type | H | DH** |
|---|---|---|
| 2061-160 | 320 | 160 |
| 2061-170* | 330 | 170 |
| 2061-180 | 340 | 180 |
| 2061-190 | 350 | 190 |
| 2061-200 | 360 | 200 |
| 2061-210 | 370 | 210 |

* = standard type ** = without car

### Suitable for:

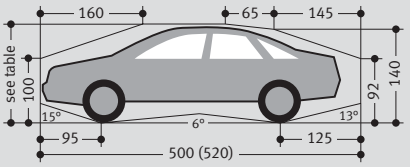
Standard passenger car, station wagon/Van/SUV. Height and length according to contur.

| Type | H | car height upper | car height lower |
|---|---|---|---|
| 2061-160 | 320 | 150 | 150 |
| 2061-170* | 330 | 150 | 160 |
| 2061-180 | 340 | 150 | 170 |
| 2061-190 | 350 | 150 | 180 |
| 2061-200 | 360 | 150 | 190 |
| 2061-210 | 370 | 150 | 200 |

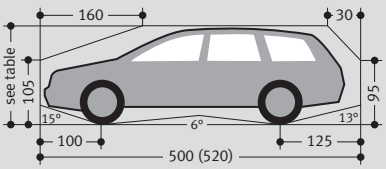
* = standard type

| | |
|---|---|
| width | 190 cm |
| weight 7 | max. 2000/2500 kg |
| wheel load | max. 500/625 kg |

**Standard passenger car**




**Standard station wagon/Van/SUV**




Standard passenger cars are vehicles without any sports options such as spoilers, low-profile tyres etc.

KLAUS multiparking

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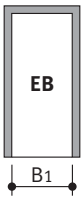
# Width for basement garage

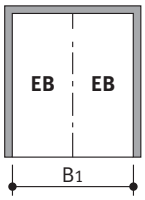
## Dividing walls

Single Platform (EB)



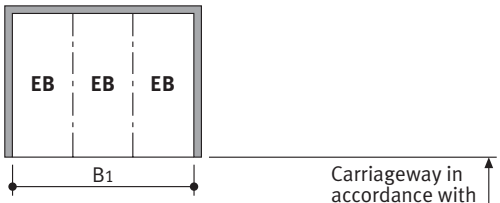

| usable platform width | B1 |
|---|---|
| **230 *** | **260** |
| 240 | 270 |
| 250 | 280 |
| 260 | 290 |
| 270 | 300 |

Double arrangement (2 x EB)




| usable platform width | B1 |
|---|---|
| **230 *** | **520** |
| 240 | 540 |
| 250 | 560 |
| 260 | 580 |
| 270 | 600 |

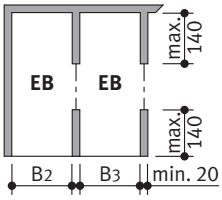
Tripple arrangement (3 x EB)




| usable platform width | B1 |
|---|---|
| **230 *** | **780** |
| 240 | 810 |
| 250 | 840 |
| 260 | 870 |
| 270 | 900 |

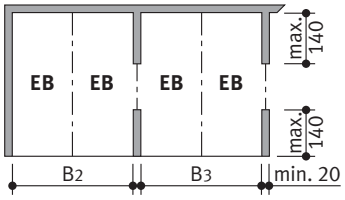
## Columns in system zone

Single Platform (EB)



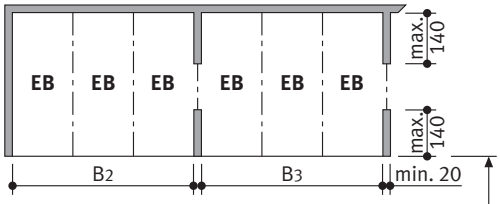

| usable platform width | B2 | B3 |
|---|---|---|
| **230 *** | **255** | **250** |
| 240 | 265 | 260 |
| 250 | 275 | 270 |
| 260 | 285 | 280 |
| 270 | 295 | 290 |

Double arrangement (2 x EB)




| usable platform width | B2 | B3 |
|---|---|---|
| **230 *** | **515** | **510** |
| 240 | 535 | 530 |
| 250 | 555 | 550 |
| 260 | 575 | 570 |
| 270 | 595 | 590 |

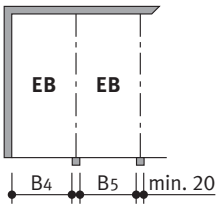
Tripple arrangement (3 x EB)




| usable platform width | B2 | B3 |
|---|---|---|
| **230 *** | **775** | **770** |
| 240 | 805 | 800 |
| 250 | 835 | 830 |
| 260 | 865 | 860 |
| 270 | 895 | 890 |

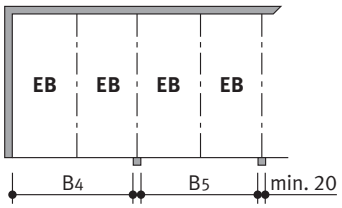
## Columns outside of system zone

Single Platform (EB)



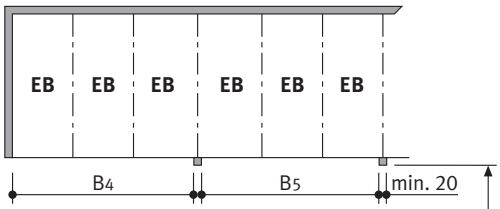

| usable platform width | B4 | B5 |
|---|---|---|
| **230 *** | **250** | **240** |
| 240 | 260 | 250 |
| 250 | 270 | 260 |
| 260 | 280 | 270 |
| 270 | 290 | 280 |

Double arrangement (2 x EB)




| usable platform width | B4 | B5 |
|---|---|---|
| **230 *** | **510** | **500** |
| 240 | 530 | 520 |
| 250 | 550 | 540 |
| 260 | 570 | 560 |
| 270 | 590 | 580 |

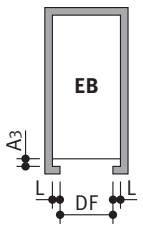
Tripple arrangement (3 x EB)

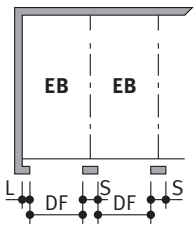



| usable platform width | B4 | B5 |
|---|---|---|
| **230 *** | **770** | **760** |
| 240 | 800 | 790 |
| 250 | 830 | 820 |
| 260 | 860 | 840 |
| 270 | 890 | 860 |

# Widths for garage with door in front of car parking system

## Single platform (EB)



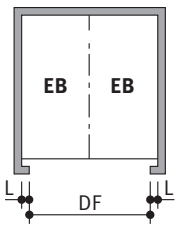

A3 = seat-engaging surface (dimensions require coordination with door supplier.)

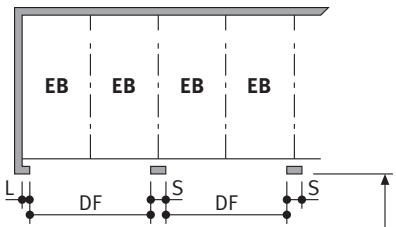
Allround door dimensions require coordination between door supplier and local agency of Klaus Multiparking.

| usable platform width | door entrance width DF | L | S |
|---|---|---|---|
| **230 *** | **237[5]** | **12[5]** | **25** |
| 240 | 250 | 12[5] | 25 |
| 250 | 250 | 15 | 30 |
| 260 | 260 | 15 | 30 |
| 270 | 270 | 15 | 30 |

* = standard width (parking space width 2.30 m)

## Double arrangement (2 x EB)



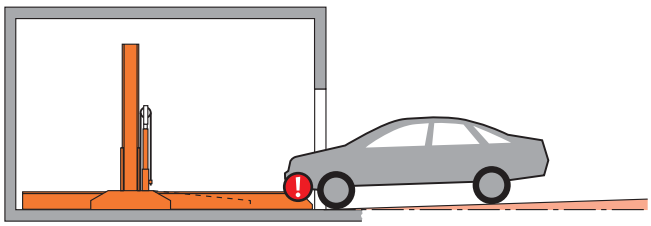

| usable platform width | door entrance width DF | L | S |
|---|---|---|---|
| **230 *** | **475** | **22[5]** | **45** |
| 240 | 500 | 20 | 40 |
| 250 | 520 [1] | 20 | 40 |
| 260 | 540 [1] | 20 | 40 |
| 270 | 560 [1] | 20 | 40 |

[1] = no standard width for doors!

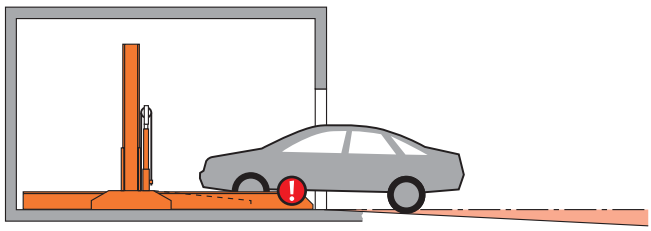
# Please note:

End parking spaces are generally more difficult to drive into. Therefore we recommended for end parking spaces our wider platforms. Parking on standard width platforms with larger vehicles may make getting into and out of the vehicle difficult. This depends on type of vehicle, approach and above all on the individual driver's skill.

## Approach



maximum descending slope 4 %

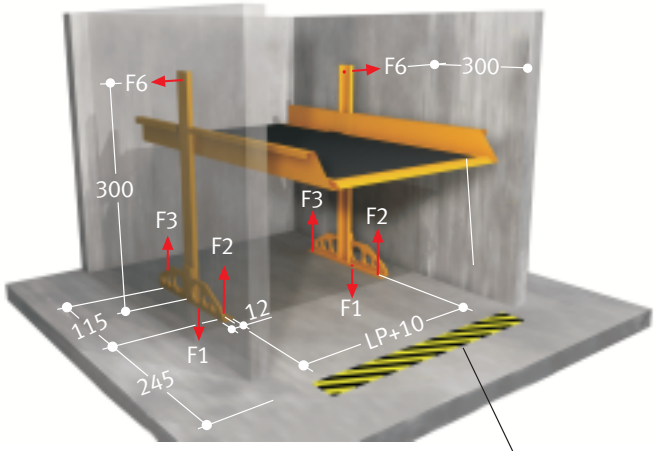


maximum ascending slope 14 %

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 accepts no responsibility.

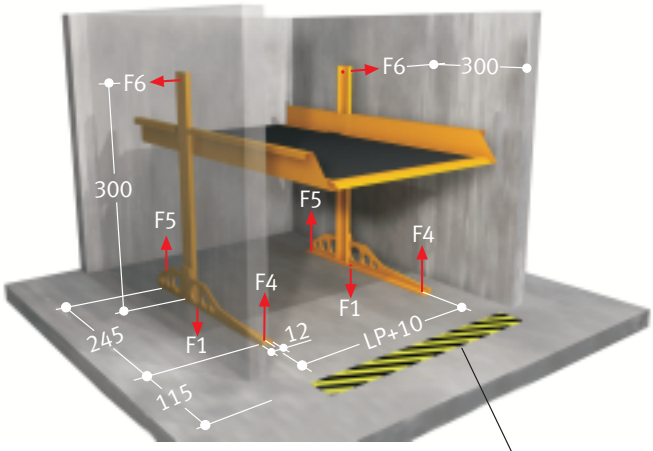
## Load plan

Option 1: short steel pillar base




10 cm wide marking compliant to ISO 3864

Option 2: long steel pillar base




10 cm wide marking compliant to ISO 3864

| platform load | F1 | F2 | F3 | F4 | F5 | F6 |
|---|---|---|---|---|---|---|
| 2,000 kg | 30 | 1.1 | 7.4 | 0.5 | 7.7 | ±1 |
| 2,500 kg | 35 | 1.3 | 8.9 | 0.6 | 9.3 | ±1 |

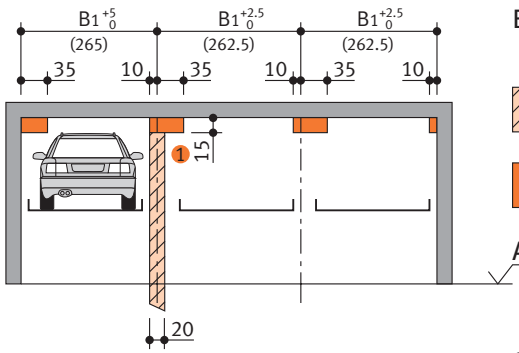
Forces in kN

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)!

## Installation data

**Free space for longitudinal and vertical ducts (e.g. ventilation)**

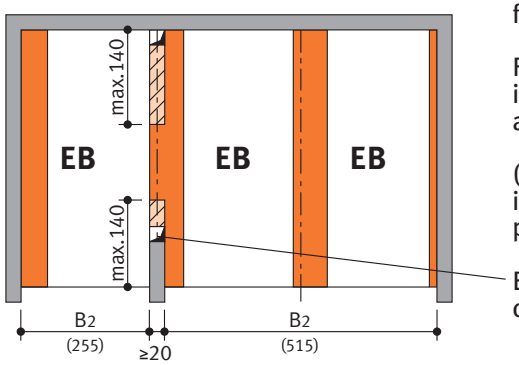



$B_1$, $B_2$ = (see table on page 2)

Free space for vertical pipelines, ventilation branch canals

Free space for horizontal ducting

Approach level




1 Size 15 cm is reduced to 5 cm for type 2061-160

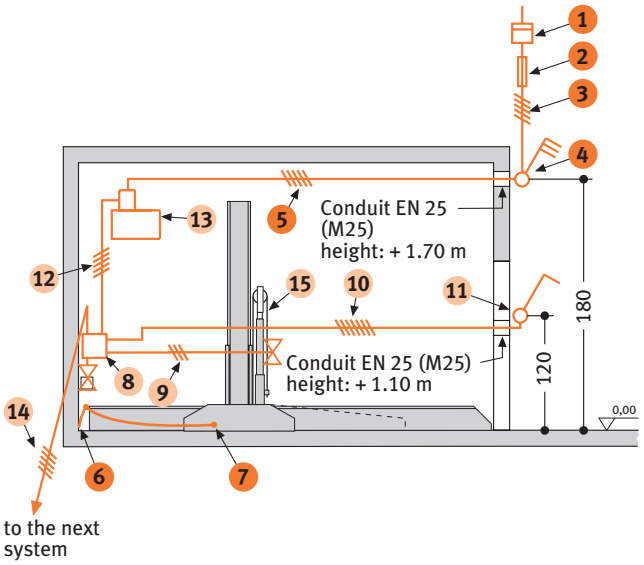
Free space only applicable if vehicle is parked forwards = FRONT FIRST and driver's door on the left side.

( ) = Dimensions in brackets illustrate an example for usable platform width 230 cm.

Example for ventilation branch canal and/or vertical pipelines.

# Electrical installation

## Installation diagram




## Electrical data (to be performed by the customer)

| No. | Qunatity | Description | Position | Frequency |
|---|---|---|---|---|
| 1 | 1 | Electricity meter | in the supply line | |
| 2 | 1 | Main fuse: 3 x fuse 16 A (slow) or circuit breaker 3 x 16 A (trigger characteristic K or C) | in the supply line | 1 per unit |
| 3 | 1 | Supply line 5 x 2.5 mm² (3 PH + N + PE) with marked wire and protective conductor | to main switch | 1 per unit |
| 4 | 1 | Lockable main switch | defined at the plan evaluation | 1 per unit |
| 5 | 1 | Supply line 5 x 2.5 mm² (3 PH + N + PE) with marked wire and protective conductor | from main switch to unit | 1 per unit |
| 6 | every 10 m | Foundation earth connector | corner pit floor | |
| 7 | 1 | Equipotential bonding in accordance with DIN EN 60204 from foundation earth connector to the system | | 1 per system |

## Electrical data (included in delivery of Klaus Multiparking)

| No. | Description |
|---|---|
| 8 | Terminal box |
| 9 | Control line 3 x 0.75 mm² (PH + N + PE) |
| 10 | Control line 7 x 1.5 mm² with marked wire and protective conductor |
| 11 | Operating device |
| 12 | Control line 5 x 1.5 mm² with marked wire and protective conductor |
| 13 | Hydraulic unit 3.0 kW, three-phase current, 400 V / 50 Hz |
| 14 | Control line 5 x 1.5 mm² with marked wire and protective conductor |
| 15 | Chain control |

# Technical data

## Range of application

Generally, this parking system is not suited for short-time parkers (temporary parkers). Please do not hesitate to contact your local KLAUS agency for further assistance.

## 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/contract
– declaration of conformity
– test sheet on airborne and slid-borne sound

## 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.

## Environmental conditions

Environmental conditions for the area of multiparking systems: Temperature range –10 to +40° C. Relative humidity 50 % at a maximum outside temperature of +40° C.
If lifting or lowering times are specified, they refer to an environmental temperature of +10° 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 personal living and working areas must not exceed 30 dB (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 $R'_w$ = 57 dB (to be provided by customer)

**Increased sound insulation (special agreement):**

DIN 4109, Amendment 2, Information on planning and execution, proposals for increased sound insulation.

Agreement: Maximum sound level in personal living and working areas 25 dB (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 $R'_w$ = 62 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.

# 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.

## Building services

Lighting, ventilation, fire extinguishing and fire alarm systems.

## 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

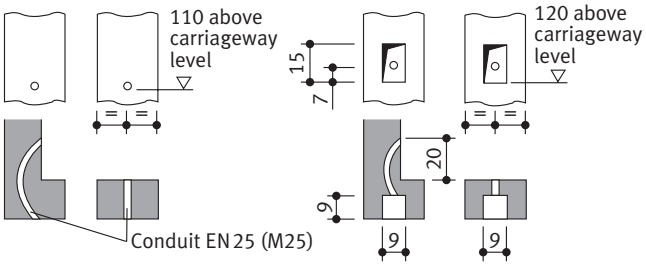
Suitable electrical supply to the main switch and the control wire line must be provided by the customer during installation. The functionality can be monitored on site by our fitters together with the electrician. If this cannot be done during installation for some reason for which the customer is responsible, 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

## 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 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 ± 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!

## Platforms 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 (3.0 kW, 230/400 V, 50 Hz)
- 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

The Klaus company 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.