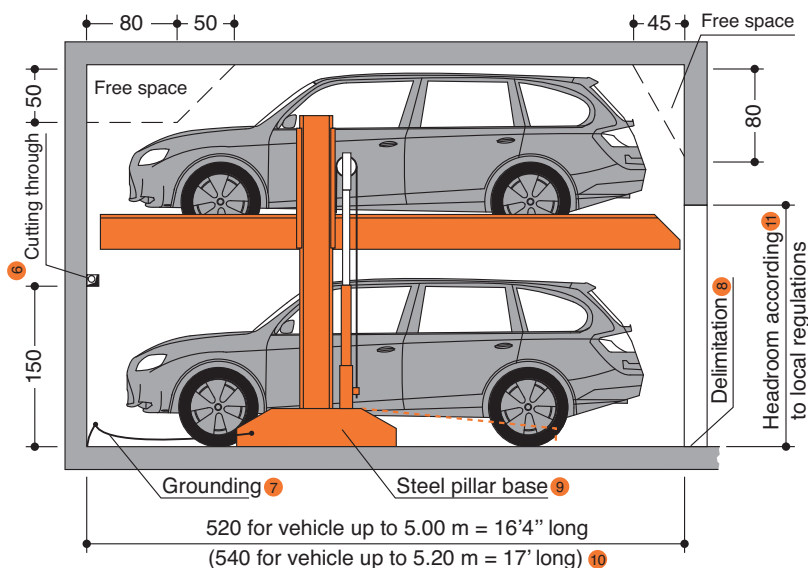


Garage without door (basement garage)



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

Loadable up to 2600 kg! A system for all height! Subsequently adjustable!

Dimensions

All space requirements are minimum finished dimensions.

Tolerances for space requirements ³ 0. Dimensions in cm.

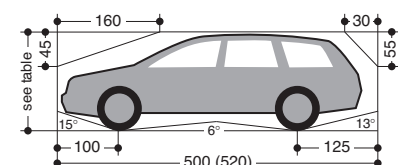
EB (single platform) = 2 vehicles

Suitable for

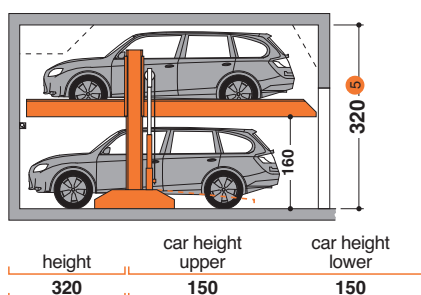
Standard passenger cars:
Limousine, station wagon, SUV, van
according to clearance and maximal surface load.

	Standard	Special ²
width	190 cm ⁴	190 cm ⁴
weight	max. 2000 kg	max. 2600 kg
wheel load	max. 500 kg	max. 650 kg

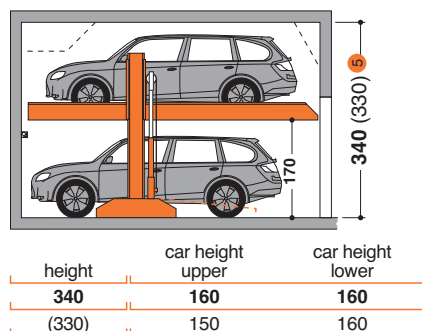
Clearance profile



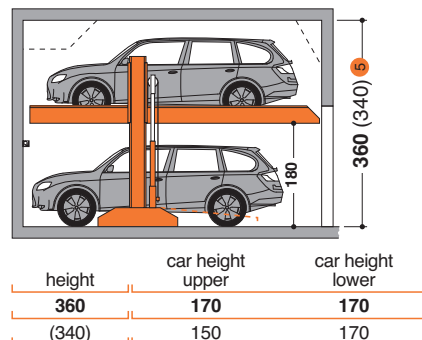
2061-160



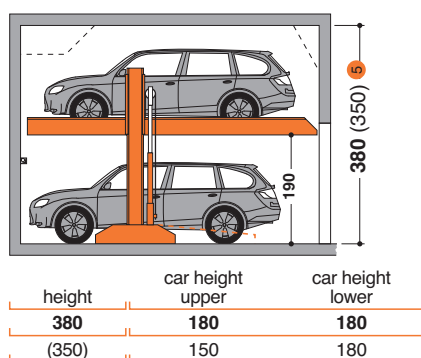
2061-170



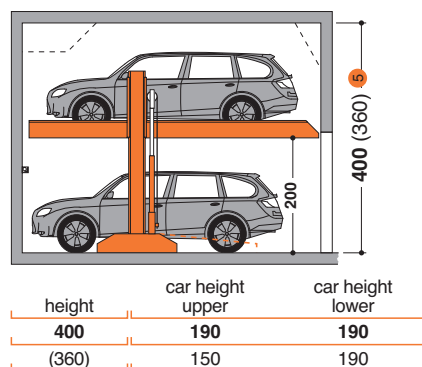
2061-180



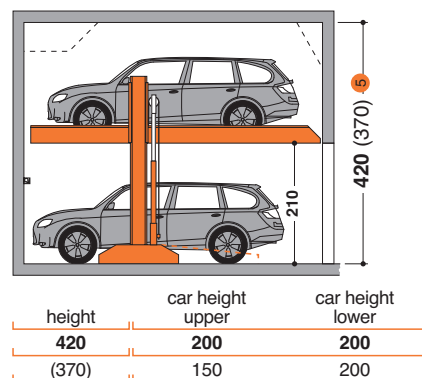
2061-190



2061-200



2061-210

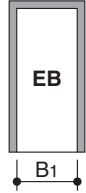


- 1 Standard type
- 2 Special system: maximum load for extra charge.
- 3 To follow the minimum finished dimensions, make sure to consider the tolerances according to VOB, part C (DIN 18330 and 18331) and the DIN 18202.
- 4 Car width for platform width 230 cm. If wider platforms are used it is also possible to park wider cars.
- 5 If a higher ceiling height is available higher cars can be parked.
- 6 For dividing walls: cutting through 10 x 10 cm.
- 7 Potential equalization from foundation grounding connection to system (provided by the customer).
- 8 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 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.

Width dimensions for garage without door (basement garage)

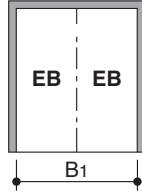
Dividing walls

Single Platform (EB)



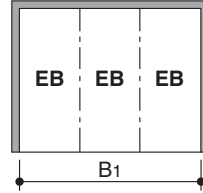
usable platform width	B1
230	260
240	270
250	280
260	290
270	300

Double arrangement (2 x EB)



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

Tripple arrangement (3 x EB)

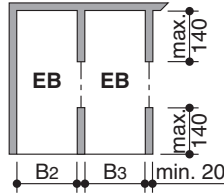


usable platform width	B1
230	780
240	810
250	840
260	870
270	900

Carriageway in accordance with local regulations

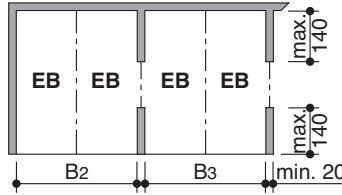
Columns in system zone

Single Platform (EB)



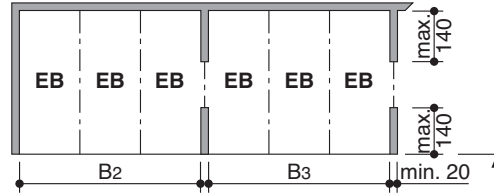
usable platform width	B2	B3
230	255	245
240	265	255
250	275	265
260	285	275
270	295	285

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)

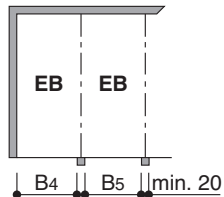


usable platform width	B2	B3
230	775	770
240	805	800
250	835	830
260	865	860
270	895	890

Carriageway in accordance with local regulations

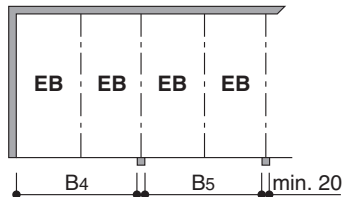
Columns outside of system zone

Single Platform (EB)



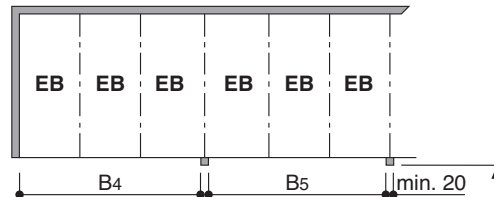
usable platform width	B4	B5
230	250	240
240	260	250
250	270	260
260	280	270
270	290	280

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	850
270	890	880

Carriageway in accordance with local regulations



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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Section
Dimensions
Car data

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Width dim.
without door

Page 3
Width dim.
with door
Function

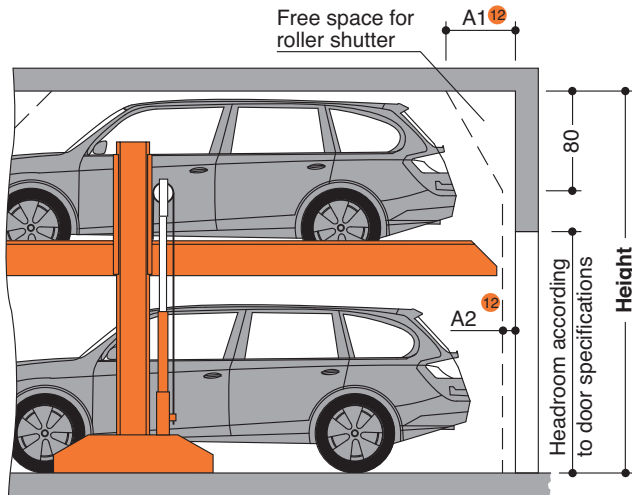
Page 4
Approach
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Garage with door

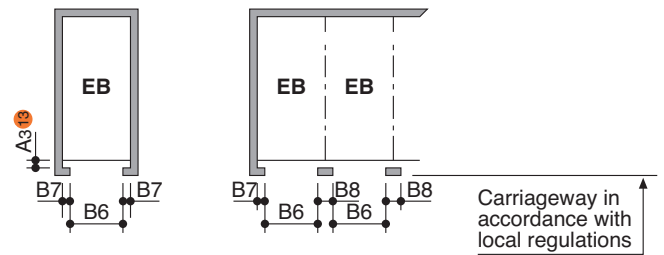


¹² Dimensions A1, A2 and A3 must be coordinated with the door supplier (provided by the customer).

¹³ Seat-engaging surface (dimensions require coordination with door supplier.) Allround door dimensions require coordination between door supplier and local agency of KLAUS Multiparking.

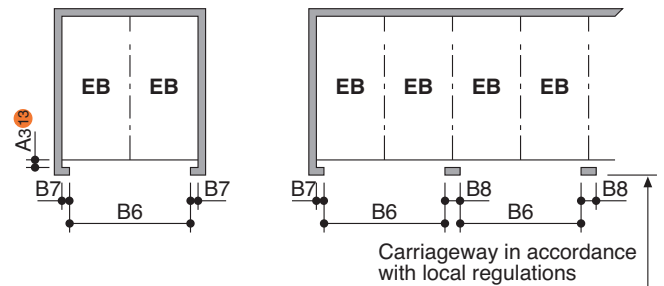
Width dimensions for garage with door

Single platform (EB)



usable platform width	door entrance width B6	B7	B8
230	230	15	30
240	240	15	30
250	250	15	30
260	260	15	30
270	270	15	30

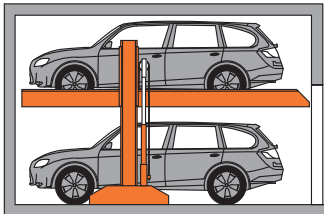
Double arrangement (2 x EB)



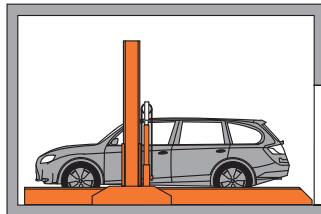
usable platform width	door entrance width B6	B7	B8
230	490	15	30
240	510	15	30
250	530	15	30
260	550	15	30
270	570	15	30

Function

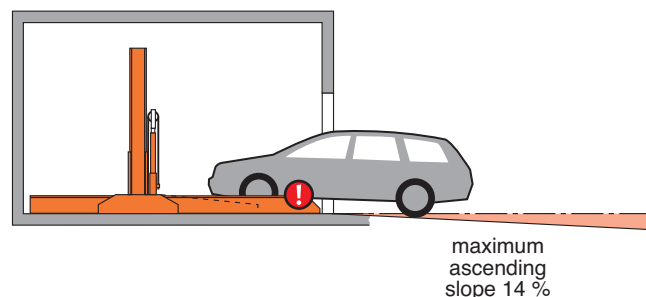
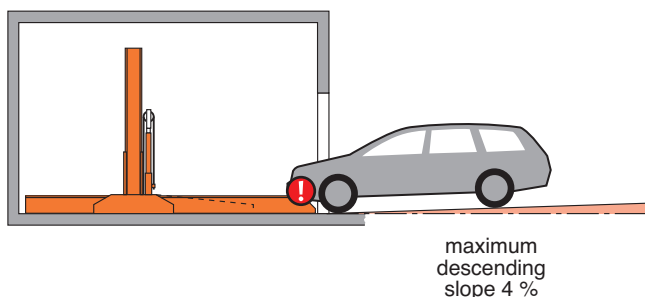
System lifted



System lowered



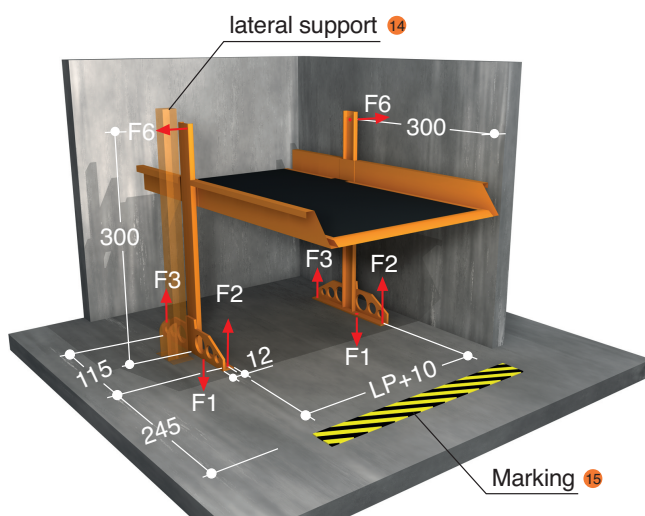
Approach



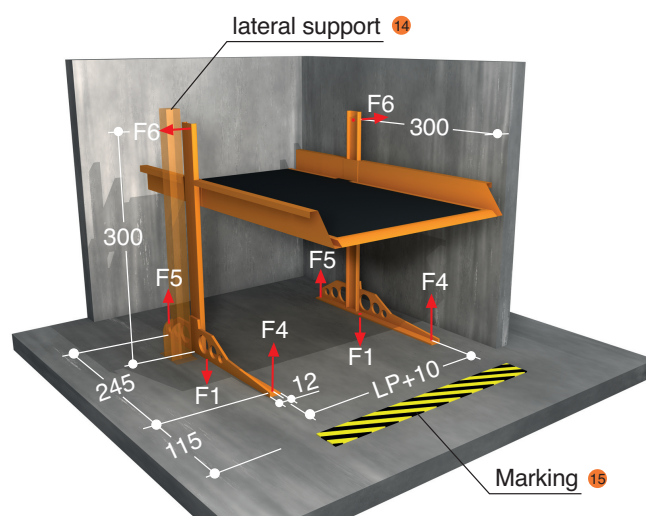
! The illustrated maximum approach angles must not be exceeded. Incorrect approach angles will cause serious manoeuvring & positioning problems on the parking system for which the local agency of KLAUS Multiparking accepts no responsibility.

Load plan

Option 1: short steel pillar base



Option 2: long steel pillar base



platform load	F1	F2	F3	F4	F5	F6	16
2000 kg	30	1,1	7,4	0,5	7,7	±1	
2600 kg	36	1,4	9,3	0,7	9,8	±1	

! 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)!

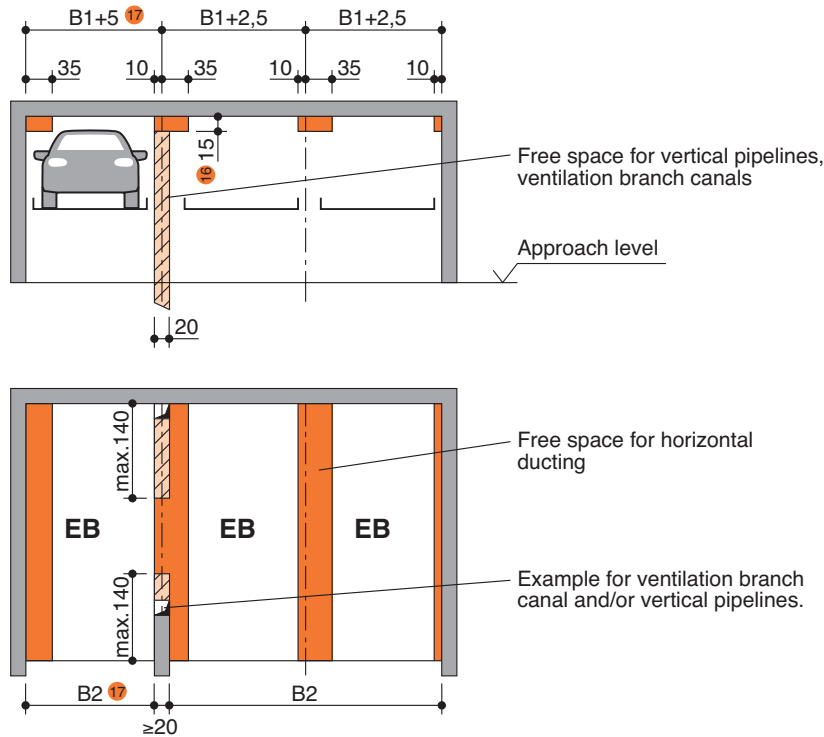
The dimensions for the points of support are rounded values. If the exact position is required, please contact KLAUS Multiparking.

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 x 25 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)



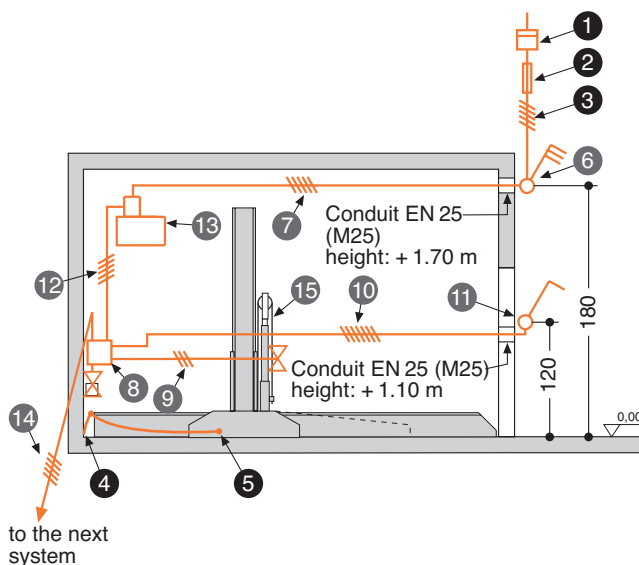
! Free space only applicable if vehicle is parked forwards = FRONT FIRST and driver's door on the left side.

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

17 Dimensions B1, B2 and B3 see page 2.

Electrical installation

Installation diagram



Electrical data (to be performed by the customer)

No.	Quantity	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 mm ² (3 PH + N + PE) with marked wire and protective conductor	to main switch	1 per unit
4	every 10 m	Foundation earth connector	corner pit floor	
5	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
6	Lockable main switch
7	Supply line 5 x 2.5 mm ² (3 PH + N + PE) with marked wire and protective conductor
8	Terminal box
9	Control line 3 x 0.75 mm ² (PH + N + PE)
10	Control line 7 x 1.5 mm ² with marked wire and protective conductor
11	Operating device
12	Control line 5 x 1.5 mm ² with marked wire and protective conductor
13	Hydraulic unit 3.0 kW, three-phase current, 230/400 V / 50 Hz
14	Control line 5 x 1.5 mm ² with marked wire and protective conductor
15	Chain control

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

Environmental conditions

Environmental conditions for the area of multiparking systems: Temperature range -10 to $+40^{\circ}\text{C}$. Relative humidity 50% at a maximum outside temperature of $+40^{\circ}\text{C}$.

If lifting or lowering times are specified, they refer to an environmental temperature of $+10^{\circ}\text{C}$ 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 Multiparkings 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 $R'_W = 57\text{ dB}$ (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 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 $R'_W = 62\text{ dB}$ (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.

ZERTIFIKAT ◆ CERTIFICATE ◆ CERTIFICADO ◆ CERTIFICAT ◆ 認証証書



Certificate concerning the examination of conformity

Certificate no:	KP 527
Certification body:	TÜV SÜD Industrie Service GmbH Zertifizierungsstelle für Produkte der Fördertechnik Gottlieb-Daimler-Str. 7 70794 Filderstadt - Germany
Applicant / Certification holder:	KLAUS Multiparking GmbH Hermann-Krum-Str. 2 88319 Aitrach - Germany
Date of application:	2016-08-16
Manufacturer:	KLAUS Multiparking GmbH Hermann-Krum-Str. 2 88319 Aitrach - Germany
Product:	Equipment for power driven parking of motor vehicles
Type:	SingleVario 2061 EB 2,000 kg SingleVario 2061 EB 2,600 kg
Test laboratory:	TÜV SÜD Industrie Service GmbH Prüflaboratorium für Produkte der Fördertechnik Prüfbereich Maschinen der Fördertechnik Gottlieb-Daimler-Str. 7 70794 Filderstadt - Germany
Date and number of the test report / mark of conformity:	2017-02-20 KP 527
Test specifications:	- 2006 / 42 / EC, Annex I - DIN EN 14010
Validity:	This Certificate is valid until 2022-02-28
Result:	The equipment fulfills the requirements of the test specifications for the respective scope of application stated in the annex (page 1) of this certificate, keeping the mentioned conditions.
Date of issue:	2017-03-01

Certification body for lifts and cranes



Achim Janocha



TÜV®

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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

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

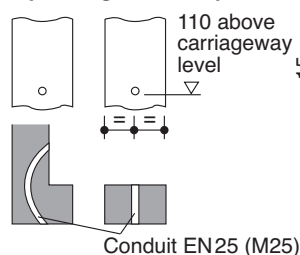
Suitable electrical supply to the main switch must be provided by the customer during installation. The functionality can be monitored on site by our fitters together with the electrician. If this cannot be done during installation for some reason for which the customer is responsible, the customer must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

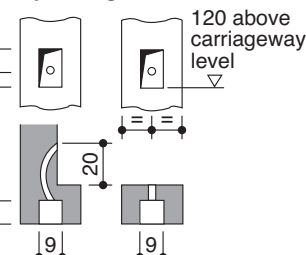
Operating device

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 kg can be made subsequently. Dimensions are in accordance with the underlying dimensions of parking pit, height and width

The parking bays are accessed horizontally (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!

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
- 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.

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