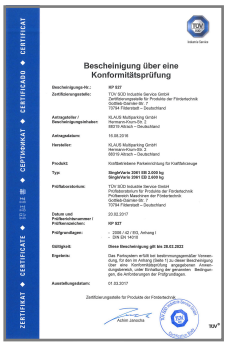
KLAUS multiparking

Product Data

Dimensions, Technical Information and Performance Specification

singlevario 2061


Bescheinigung über eine Konformitätsprüfung

PARK & SMILE

multiparkingusa.com

Contents

Symbols

Platforms accessible horizontally.

Maximum load per parking space in lbs.
Upweights above 4400 lbs possible with surcharge (*see "Vehicle data", page 3*).

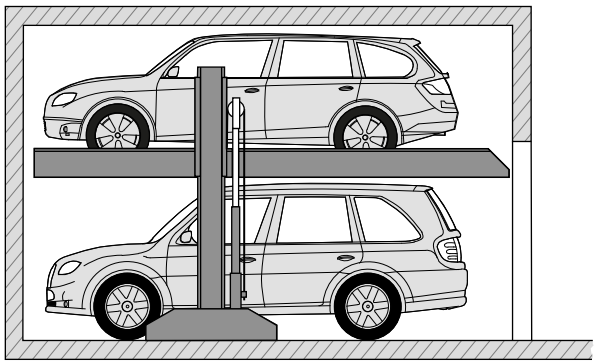
Height can be subsequently adjusted (*see "Overview of system types & ceiling heights", page 4*).
Parking space load can be subsequently upweighted (*see "Vehicle data", page 3*).

The quoted systems correspond to DIN EN 14010 and EU Machinery Directive 2006/42/EC.

In addition, this system has undergone a voluntary conformity test by TÜV SÜD.

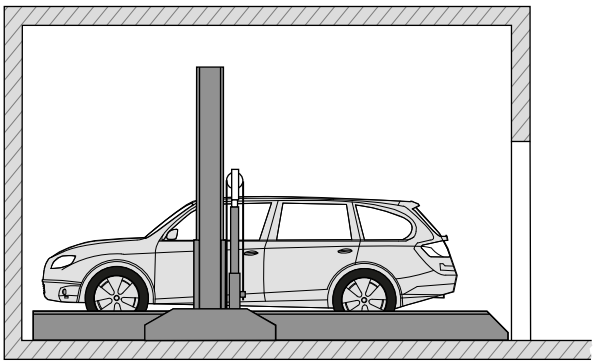
Parking positions

Lower parking space



The lower vehicle can enter or exit the parking space.

Upper parking space



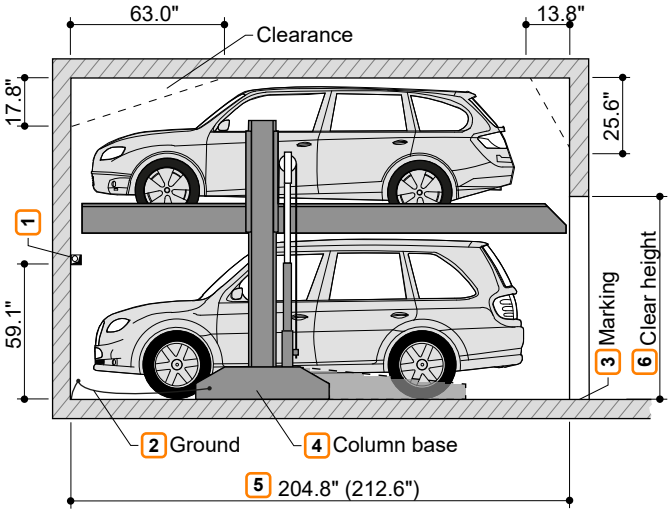
The upper vehicle can enter or exit the parking space.

Dimensional specifications & tolerances

All structural dimensions are minimum finished dimensions.
Tolerance for structural dimensions: +1.2/-0". Dimensions in inches (in).
The tolerances specified in the German Construction Contract Procedures (VOB), Part C (DIN 18330 and 18331) as well as DIN 18202 must also be taken into account in order to adhere to the minimum finish dimensions.

Overview of building design

Building design without door



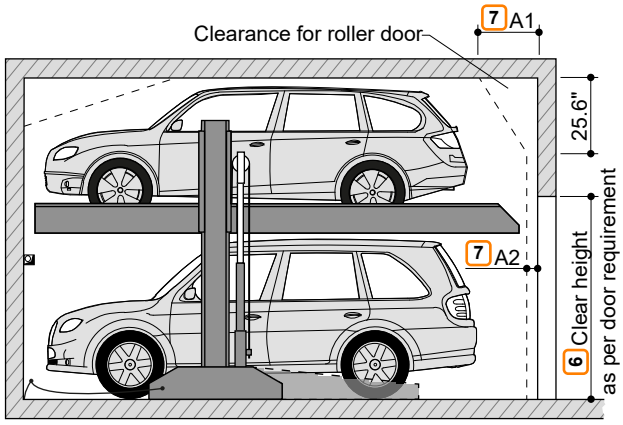
1 For dividing walls: Wall opening: 4" x 4".

2 Equipotential bonding from the foundation ground connection to the system (provided by customer).

3 As per DIN EN 14010, the customer must apply a 4" wide gold and black marking as per DIN ISO 3864 in front of the bearing area of the top platform edge in the entry area to mark the danger area. (*see "Loading schedule", page 7*).

4 Variable column foot in two sizes (*see "Loading schedule", page 7*).

Building design with door



5 ■ 204.7" for vehicles up to 196.9" in length
■ 212.6" for vehicles up to 204.8" in length
Shorter designs possible upon request. Observe local regulations for parking space length!
So that you can conveniently use your parking space and due to the ever increasing length of vehicles, we recommend a length of 212.6".

6 Clear height as per local regulations. Minimum largest possible vehicle height + 4".

7 The customer must coordinate dimension A1 and A2 with the door manufacturer.

The lower vehicle must exit before the platform is lowered.

Vehicle data

Design

SP (single platform) = 2 vehicles

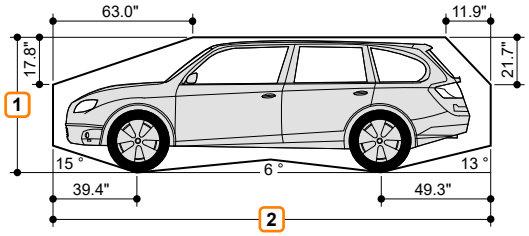
Parking options

Production vehicles:
Sedan, station wagen, SUV, and van as per clearance gauge and maximum parking space load.

	SP	
Weight 3	4400 lbs	5720 lbs
Wheel load	1100 lbs	1430 lbs

1 Vehicle height (*see "Overview of system types & ceiling heights", page 4*)
2 Vehicle length (*see "Overview of building design", page 3*)
3 Space load can be subsequently upweighted to 5,720 lbs.

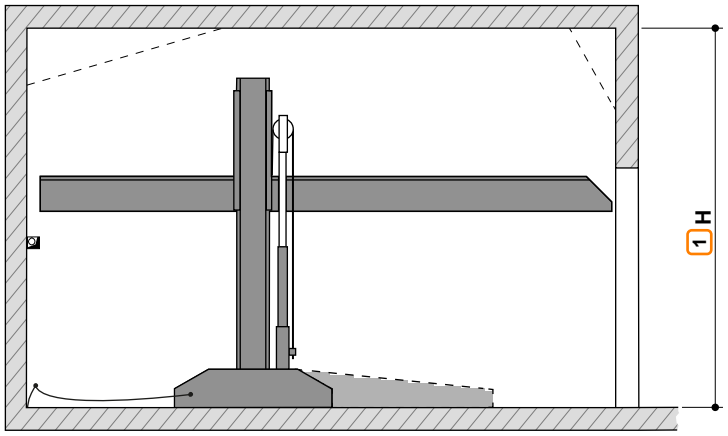
Clearance gauge



Vehicle width of 74.9" with a platform width of 90.6". Wider platforms allow correspondingly wider vehicles to be parked.

Overview of system types & ceiling heights

Heights can be subsequently adjusted.



H: Building height:

1 A higher deck height allows correspondingly taller vehicles to be parked.

Type	Lower vehicle height	Upper vehicle height													
		59.1"	61.1"	63.0"	65.0"	67.0"	68.9"	70.9"	72.9"	74.9"	76.8"	78.8"	80.8"	82.7"	84.7"
2061-160	**59.1"**	126.0	128.0	130.0	131.9	133.9	135.9	137.8	139.8	141.8	143.8	145.7	147.7	149.7	151.6
2061-170	**63.0"**	130.0	131.9	133.9	135.9	137.8	139.8	141.8	143.8	145.7	147.7	149.7	151.6	153.6	155.6
2061-180	**67.0"**	133.9	135.9	137.8	139.8	141.8	143.8	145.7	147.7	149.7	151.6	153.6	155.6	157.5	159.5
2061-190	**70.9"**	137.8	139.8	141.8	143.8	145.7	147.7	149.7	151.6	153.6	155.6	157.5	159.5	161.5	163.4
2061-200	**74.9"**	141.8	143.8	145.7	147.7	149.7	151.6	153.6	155.6	157.5	159.5	161.5	163.4	165.4	167.4
2061-210	**78.8"**	145.7	147.7	149.7	151.6	153.6	155.6	157.5	159.5	161.5	163.4	165.4	167.4	169.3	171.3

H - Building height

Configuration example

Example: Lower vehicle height of 67.0" & upper vehicle height of 74.9".
Type: 2061-180
Building height: 149.7"

Type	Lower vehicle height	Upper vehicle height													
		59.1"	61.1"	63.0"	65.0"	67.0"	68.9"	70.9"	72.9"	74.9"	76.8"	78.8"	80.8"	82.7"	84.7"
2061-160	59.1"	126.0	128.0	130.0	131.9	133.9	135.9	137.8	139.8	141.8	143.8	145.7	147.7	149.7	151.6
2061-170	63.0"	130.0	131.9	133.9	135.9	137.8	139.8	141.8	143.8	145.7	147.7	149.7	151.6	153.6	155.6
2061-180	**67.0"**	133.9	135.9	137.8	139.8	141.8	143.8	145.7	147.7	**149.7**	151.6	153.6	155.6	157.5	159.5
2061-190	70.9"	137.8	139.8	141.8	143.8	145.7	147.7	149.7	151.6	153.6	155.6	157.5	159.5	161.5	163.4

H

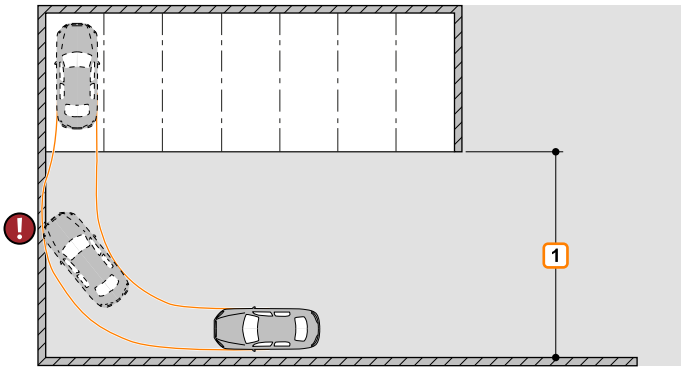
Width dimensions

We recommend a platform width of at least 98.5" and driving lane widths of 256" to ensure convenient vehicle access to the multiparking system and easy entry into and exit from the vehicle.

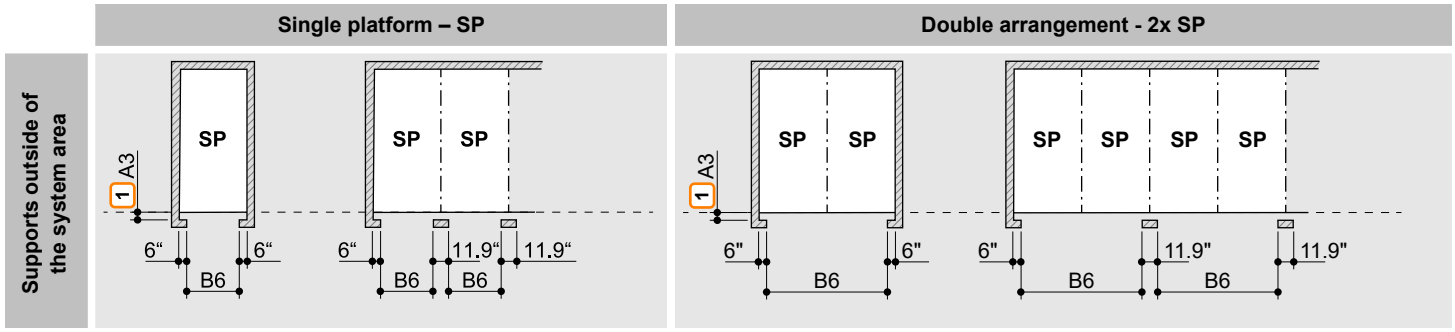
Narrower platforms can make parking more difficult, depending on the following criteria.

- Driving lane width
- Entry conditions
- Vehicle dimensions

[1] Observe the minimum driving lane width specified by local regulations!



Width dimensions with door

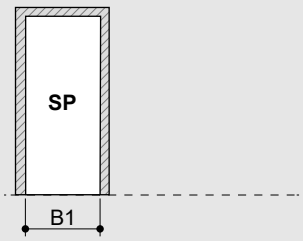
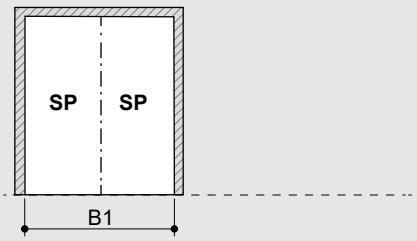
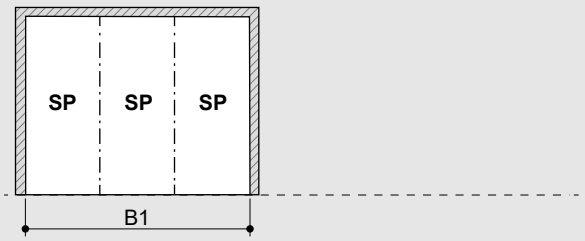
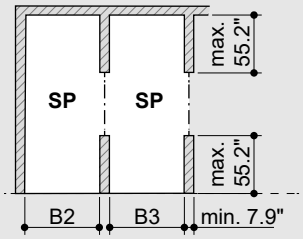
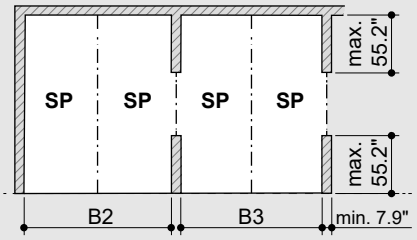
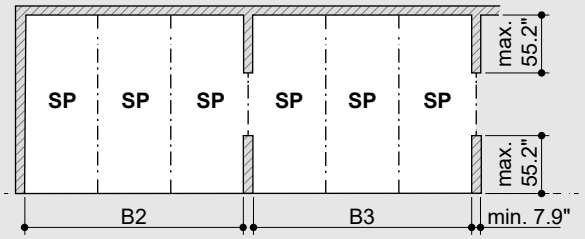
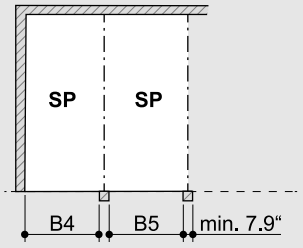
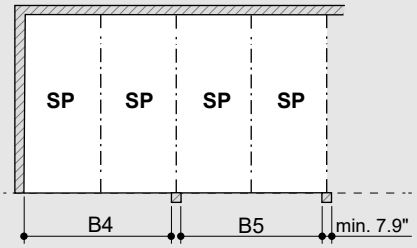
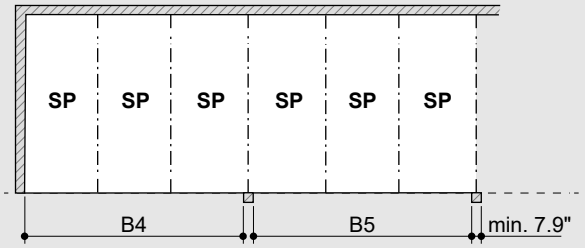


	Clear platform width	Passage width B6
SP	90.6"	90.6"
	94.5"	94.5"
	98.5"	98.5"
	102.4"	102.4"
	106.3"	106.3"

	Clear platform width	Passage width B6
2x SP	90.6"	193.0"
	94.5"	200.8"
	98.5"	208.7"
	102.4"	216.6"
	106.3"	224.5"

[1] Door offset (customer must coordinate dimension A3 with the door manufacturer). Lateral closing doors require coordination between the door manufacturer and KLAUS Multiparking.

Width dimensions without door

	Single platform – SP	Double arrangement - 2x SP	Triple arrangement - 3x SP
Dividing walls			
Supports in the system area			
Supports outside of the system area			

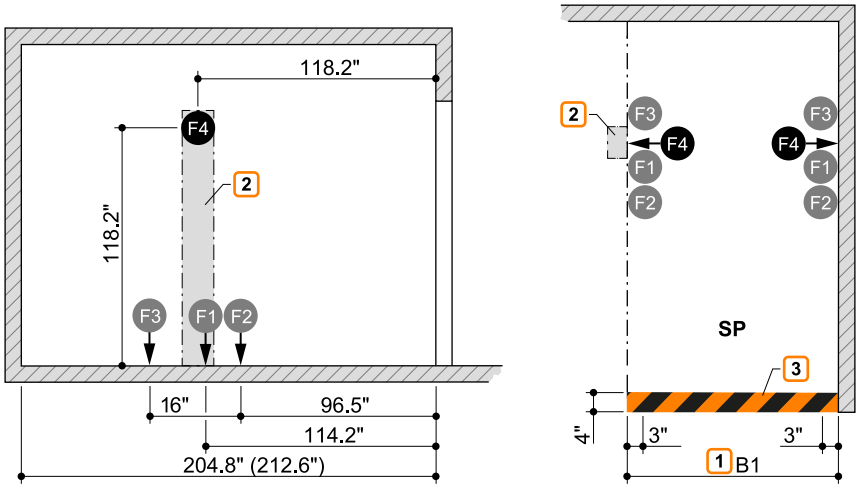
	Clear platform width	Dividing walls	Supports in the system area		Supports outside of the system area	
		B1	B2	B3	B4	B5
SP	90.6"	102.4"	100.4"	96.5"	98.5"	94.5"
	94.5"	106.3"	104.4"	100.4"	102.4"	98.5"
	98.5"	110.3"	108.3"	104.4"	106.3"	102.4"
	102.4"	114.2"	112.3"	108.3"	110.3"	106.3"
	106.3"	118.2"	116.2"	112.3"	114.2"	110.3"
2x SP	90.6"	204.8"	202.8"	200.8"	200.8"	196.9"
	94.5"	212.6"	210.7"	208.7"	208.7"	204.8"
	98.5"	220.5"	218.6"	216.6"	216.6"	212.6"
	102.4"	228.4"	226.4"	224.5"	224.5"	220.5"
	106.3"	236.3"	234.3"	232.3"	232.3"	228.4"
3x SP	90.6"	307.1"	305.2"	303.2"	303.2"	299.3"
	94.5"	318.9"	317.0"	315.0"	315.0"	311.1"
	98.5"	330.8"	328.8"	326.8"	326.8"	322.9"
	102.4"	342.6"	340.6"	338.6"	338.6"	334.7"
	106.3"	354.4"	352.4"	350.4"	350.4"	346.5"

Loading schedule

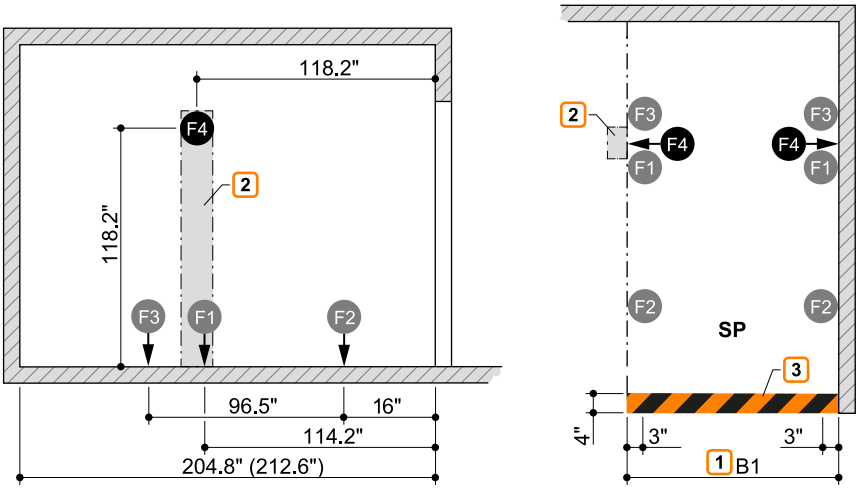
The systems are doweled to the floor. The drill hole depth in the floor plate is approx. 6", in the walls approx. 4.8".
The floor plate and walls must be of concrete (concrete quality min. C20/25)!
The dimensions for the bearing points have been rounded. If you need to know the exact position, please contact KLAUS Multiparking.

Column bases can be variably selected (short or long configuration). Always observe the corresponding forces.

Variant 1 (V1): short column bases



Variant 2 (V2): long column bases



Parking space load		F1	F2	F3	F4
V1	4400 lbs	+ 6745 lbf	+ 248 lbf	+ 1664 lbf	± 225 lbf
	5720 lbs	+ 8094 lbf	+ 315 lbf	+ 2091 lbf	± 225 lbf
V2	4400 lbs	+ 6745 lbf	+ 113 lbf	+ 1732 lbf	± 225 lbf
	5720 lbs	+ 8094 lbf	+ 158 lbf	+ 2204 lbf	± 225 lbf

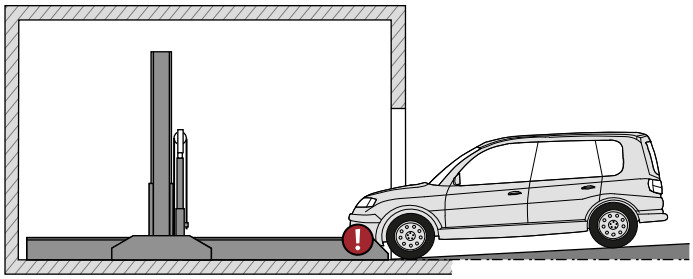
1 Width dimension B1 (*see "Width dimensions without door", page 6*)

2 The system must be laterally supported on both sides. If there are no walls on the sides, an additional stand must be installed. A floor area of 19.7" x 11.9" is required for these stands (concrete quality min. C20/25, drill hole depth approx. 6").

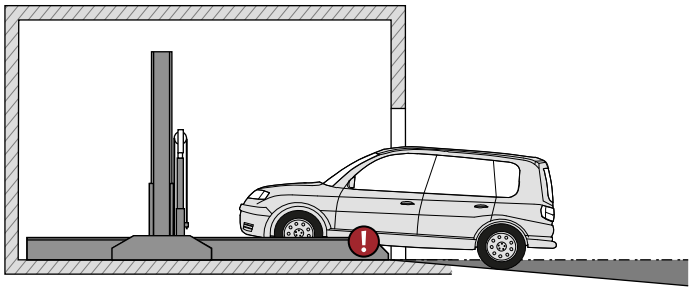
3 Marking as per DIN ISO 3864 (coloring of the marking corresponds to DIN ISO 3864)

Entrance inclination

The maximum entry inclinations specified in the sketch must not be exceeded.
An incorrect design can make driving into the system considerably more difficult, for which KLAUS Multiparking is not responsible.



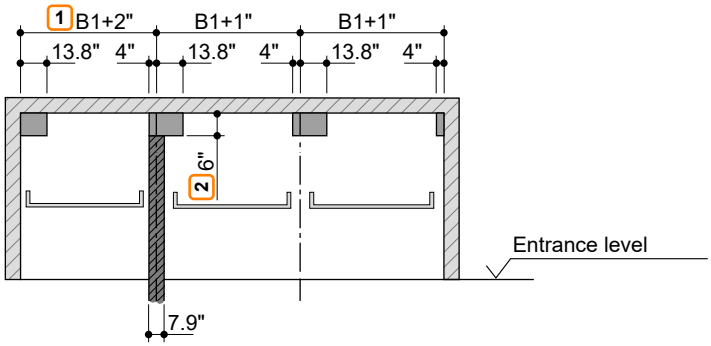
Max. slope: 4%

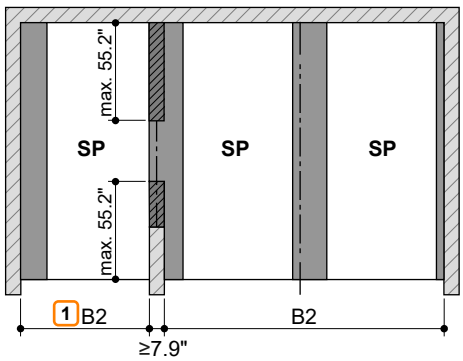


Max. gradient: 14%

Clearances for installations

These clearances apply exclusively to vehicles parked forward with exit on the left. The clearances must be adjusted accordingly for vehicles with exit on the right or if vehicles are backed into the parking space.





1 Dimensions B1 and B2 (*see "Width dimensions with door", page 5*, *"Width dimensions without door", page 6*)

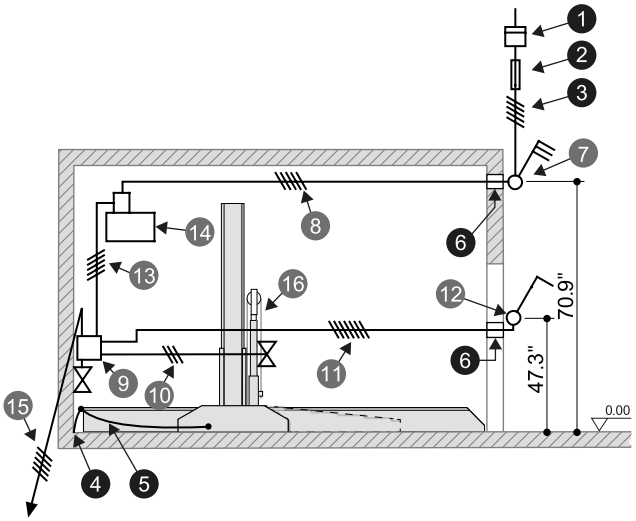
2 Dimension 6" is reduced to 2" on type 2061-160.

Clearance for routing lines lengthways

Clearance for vertical pipes, ventilation ducts, etc.

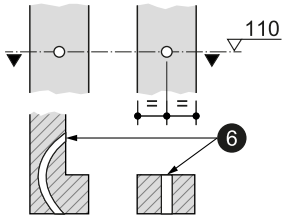
Electrical installation

Electrical installation diagram



Performances provided by customer for operating elements

Surface-mounted operating element



Register of electrical performances (provided by customer)

No.	Quantity	Designation	Position	Frequency
1	1	Power meter	In the supply cable	
2	1	Pre-fuse: 2x fuse 32 A (time-lag) or Circuit breaker 2 x 32 (tripping characteristic K or C)	In the supply cable	1x per 3.7-kW unit
	1	3x fuse 25 A (time-lag) or Circuit breaker 3 x 25 A (tripping characteristic K or C)	In the supply cable	1x per 4.0-kW unit
3	1	Supply cable 3 x AWG 10 (2 PH+PE) with labeled conductors and protective ground	to master switch	1x per 3.7-kW unit
	1	Supply cable 4 x AWG 12 (3 PH+PE) with labeled conductors and protective ground	to master switch	1x per 4.0-kW unit
4	Every 393.8"	Foundation ground connection	Corner of the floor plate	
5	1	Equipotential bonding as per DIN EN 60204 from the foundation ground connection to the system		1x per system
6	2	Empty conduit EN 25 (M25)		

Register of electrical performances – in conformity with UL/CSA (scope of supply of KLAUS Multiparking)

No.	Designation
7	Lockable master switch
8	Supply cable 4 x AWG 10 (2 PH+PE) with labeled conductors and protective ground for 3.7-kW unit
	Supply cable 4 x AWG 12 (3 PH+PE) with labeled conductors and protective ground for 4.0-kW unit
9	Junction box
10	Control cable 3 x AWG 16 with labeled conductors and protective ground
11	Control cable 5 x AWG 16 with labeled conductors and protective ground
12	Operating element
13	Control cable 7 x AWG 14 with labeled conductors and protective ground
14	Hydraulic unit, 3.7 kW, two-phase current, 240 V / 60 Hz
	Hydraulic unit, 4.0 kW, three-phase current, 120/208 V / 60 Hz
15	Control cable 7 x AWG 14 with labeled conductors and protective ground
16	Chain monitoring

CE conformity

The quoted systems correspond to DIN EN 14010 and EU Machinery Directive 2006/42/EC. In addition, this system has undergone a voluntary conformity test by TÜV SÜD.

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

TÜV SÜD Industrie Service

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 SÜD Industrie Service GmbH Certification Body

TÜV®

Technical information

Area of use

In general, the system is best suited for a fixed group of users.
Structural adjustments to the multiparking system are required to accommodate a changing group of users (only in the upper parking spaces), e.g., short-term parkers in office buildings or hotels. If needed, please contact us.

Units

Low-noise power units mounted to rubber-bonded-to metal mountings are installed. Nevertheless, we recommend separating the garage body from the residential building.

Environmental conditions

Environmental conditions for the area of multiparking systems.
Temperature range -4 to +104° F. Relative humidity 50%and a maximum outside temperature of +104° F.
If raising and lowering times are specified, they refer to an ambient temperature of +50° F and a system arranged directly next to the hydraulic unit. These times increase at lower temperatures or with longer hydraulic lines.

Seismic considerations

Local seismic conditions might require special precautionary measures such as struts. Please contact KLAUS Multiparking for seismic reports and advice.

Building permit documents

Multiparking systems are usually subject to approval. Please observe local regulations and ordinances in this regard.

Care

To prevent corrosion damage, please observe our separate cleaning and care instructions, and make sure that your garage is well ventilated.

Corrosion protection

As per "Corrosion Protection" supplement.

Railing

If traffic routes are located immediately next to or behind the systems, then the customer must provide barriers as per DIN EN ISO 13857. This applies during the construction phase as well.

Noise protection

Normal noise protection:

As per DIN 4109-1 "Sound Insulation in Buildings – Part 1: Minimum Requirements," section 9:
The maximum sound pressure level in living and sleeping spaces is 30 dB (A).
User noises are not subject to the requirements.

The following actions are required to comply with this value:
- Noise protection package as per quotation/order (KLAUS Multiparking)
- Sound reduction index of the structure at least R'w = 57 dB (customer-provided performance)

Increased noise protection (separate agreement):

As per DIN 4109-5 "Sound Insulation in Buildings – Part 5: Increased Requirements," section 8:
Maximum sound pressure level in living and sleeping spaces 25 dB (A).
User noises are not subject to the requirements.

The following actions are required to comply with this value:
- Noise protection package as per quotation/order (KLAUS Multiparking)
- Sound reduction index of the structure at least R'w = 62 dB (customer-provided performance)

Note:
User noises are noises that can be influenced individually by the user of our multiparking systems. This includes, e.g., driving onto the platform, slamming vehicle doors, engine noises and breaking noises.

Performance specification

Description

Multiparking system for dependent parking of 2 vehicles, one on top of the other. The lower vehicle parks directly on the floor plate. The lower vehicle must exit before the platform is lowered.
The height of the platform can be flexibly adjusted (including subsequently).
Subsequent upweighting to 5,720 lbs is possible.
Dimensions in accordance with the underlying building width and height dimensions.
Access to the parking spaces horizontally (installation tolerance ±1%).
Vehicle positioning in the upper parking space by positioning aid mounted on one side (to be adjusted in accordance with the operating instructions).
Operation using one operating element with automatic return via common key.
The operating element is usually attached in front of the support or outside on the door jamb.
Brief instruction at each operating point.
In the case of a building design with a door, special dimensions must be observed.

Multiparking system consisting of:

- 2 columns with column bases secured to the floor
  (short or long base configuration can be variably selected)
- 2 sliding pieces (with slideways fastened to the columns)
- 1 platform
- 1 mechanical synchronization system (for synchronized operation of the hydraulic cylinders during lifting and lowering)
- 1 hydraulic cylinder
- Dowels, bolts, fasteners, pins, etc.
- The platforms/parking spaces are end-to-end accessible for parking!

Platform comprising:

- Platform profiles
- Adjustable positioning aid
- Chamfered access plate
- Side beams
- Crossbeams
- Bolts, nuts, washers, spacer tubes, etc.

Hydraulic system consisting of:

- Hydraulic cylinders
- Solenoid valves
- Hydraulic lines
- Threaded connections
- High-pressure hoses
- Fasteners

Electrical system consisting of:

- Operating element (emergency-stop, lock, 1 common key per parking space)
- Junction box on wall valve
- Electrical locking
- Chain monitoring

Hydraulic unit consisting of:

- Hydraulic unit (low-noise, mounted on a console with rubber-bonded-to metal mountings)
- Hydraulic oil tank
- Oil fill
- Internal gear pump
- Pump carrier
- Coupling
- Three-phase motor
- Circuit protection (with thermal overload relay and control fuse)
- Test pressure gage
- Pressure relief valve
- Hydraulic hoses (damping of noise transmission to the hydraulic pipes)

Performances provided by customer

Barriers

Barriers that may be required in accordance with DIN EN ISO 13857 to secure traffic routes immediately in front of, adjacent to or behind the systems. This applies during the construction phase as well.

Parking space numbering

Any parking space numbering required.

Technical building systems

Any required lighting, ventilation, fire extinguishing systems and fire alarm systems, as well as clarification and fulfillment of the associated legal requirements.

Lighting

The customer must observe local regulations regarding the lighting of parking spaces and roadways. As per DIN EN 12464-1 "Light and Lighting – Lighting of Work Places – Part 1: Indoor Work Places" an illuminance of at least 200 lx is recommended for parking spaces and the operating area of the system.

Warning markings

As per DIN EN 14010, the customer must apply a 4" wide gold and black marking as per DIN ISO 3864 in front of the bearing area of the top platform edge in the entry area to mark the danger area.

Wall openings

Any required wall openings as per sectional drawings (*see "Overview of building design", page 3*).

Supply cable to the master switch – foundation ground

The customer must provide the supply cable to the master switch during assembly. Our fitter can check functionality on site together with the electronics technician. If this is not possible during assembly due to reasons for which the customer is responsible, then the customer must contract an electronics technician.
The customer must ground the steel structure using the foundation ground connection (max. ground distance 393.8") and equipotential bonding as per DIN EN 60204.

Operating element

Empty conduits and cutouts for the operating elements (*see "Electrical installation", page 9*). Consultation with KLAUS Multiparking is required for folding doors.

Right to technical changes reserved.

In carrying out its performances in the course of technical progress, KLAUS Multiparking is free to use new or different technologies, systems, processes or standards than those initially quoted, provided this does not result in any disadvantages for the customer.

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