

Product data

Dimensions, Technical Information and
Performance Specification



spacevario CP2062



Table of contents

Explanation of symbols.....	2	Loading schedule	7
Parking positions.....	2	Entry inclinations.....	8
Dimensions specifications & tolerances.....	2	Clearances for installations.....	8
Overview of building design.....	3	Electrical installation.....	9
Vehicle data.....	3	Technical information.....	10
Overview of system types & ceiling heights.....	4	Performance specification.....	11
Width dimensions.....	5	Performance provided by the customer.....	12
Width dimensions with door.....	5	Right to technical changes.....	12
Width dimensions without door.....	6		

Explanation of symbols

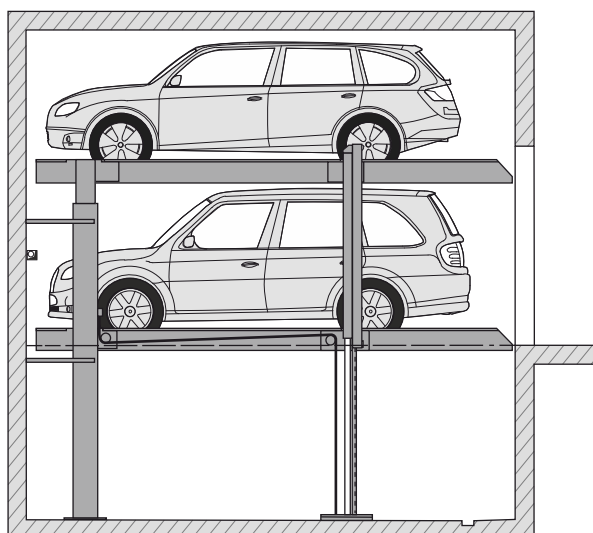
-  Platforms accessible horizontally.
-  Outdoor installation
-  Maximum load per parking space in lbs.
-  The quoted systems correspond to DIN EN 14010 and EU Machinery Directive 2006/42/EC.



This system has also undergone a voluntary compliance test conducted by TÜV SÜD

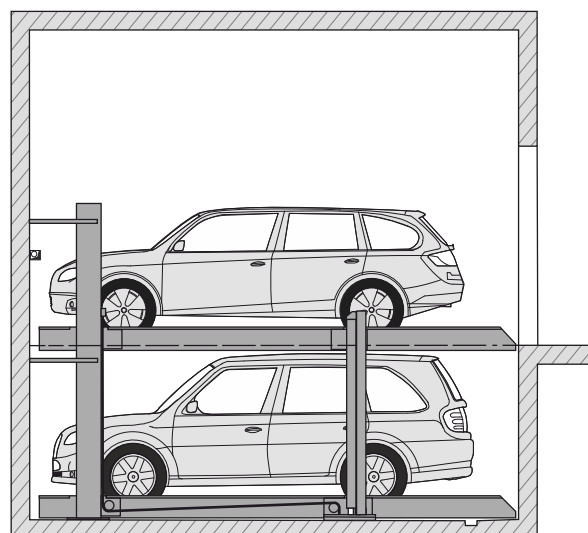
Parking positions

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



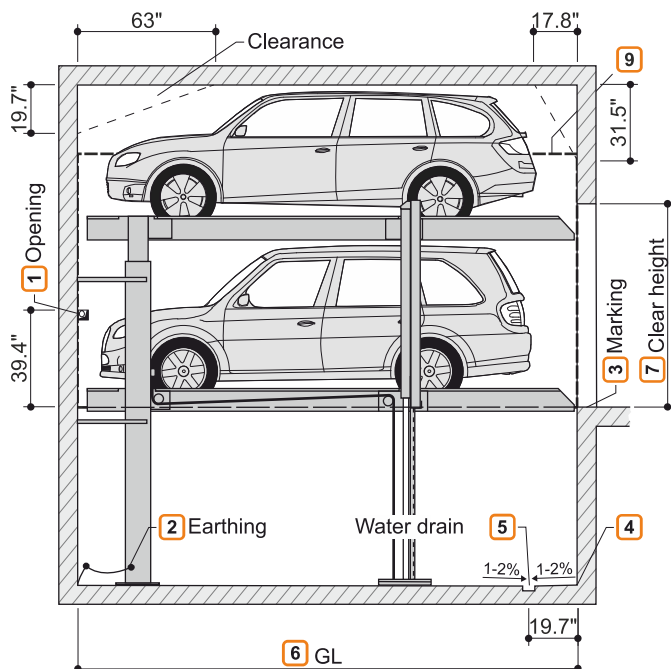
All structural dimensions are minimum finished dimensions.

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.

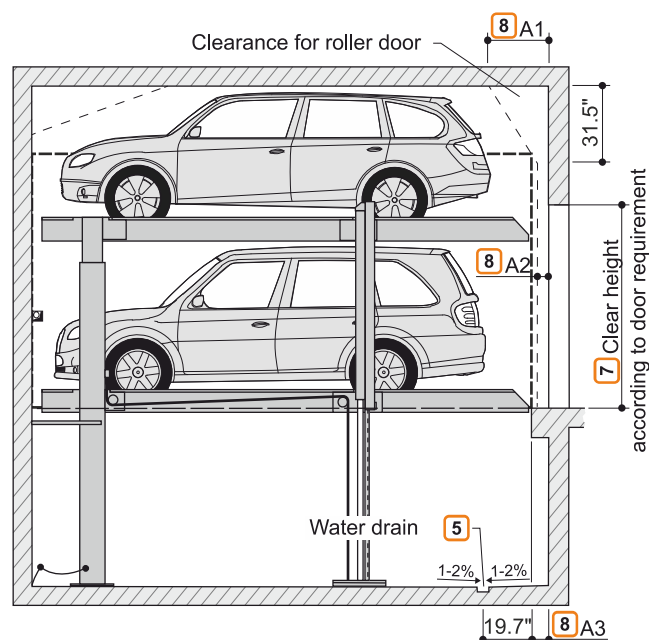
Overview of building design

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 at the edge of the pit in the entry area to mark the danger area. (see "Loading schedule", page 7).
- 4 Grooves/concrete haunches are not possible at the transition from the pit floor and the walls. If grooves/concrete haunches are required, then the system must be narrower or the pits wider.
- 5 Slope with water collection channel (see "Drainage", page 12).

Building design with door



- 6 GL = building length
 - 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 pit length of 212.6".
- 7 Clear height as per local regulations. At least largest possible vehicle height + 4".
- 8 Dimensions A1 and A2 must be coordinated between the door manufacturer and the customer.
- 9 Three side barriers in accordance with DINEN ISO 13857 depending on location, configuration as wind protection for outdoor installation.

Vehicle data

Version

SP (single platform) = 2 vehicles
DP (double platform) = 4 vehicles

Parking options

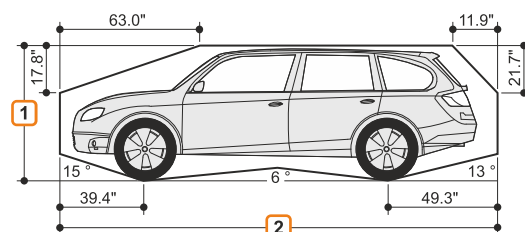
Production vehicles:
Sedan, station wagon, SUV, and van as per clearance gauge and maximum parking space load.

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

For the countries in which snow load need to be taken into account the parking option on the upper parking space is reduced in accordance.

	SP		DP	
Weight	3300 lbs	4400 lbs	3300 lbs	4400 lbs
Wheel load	825 lbs	1100 lbs	825 lbs	1100 lbs

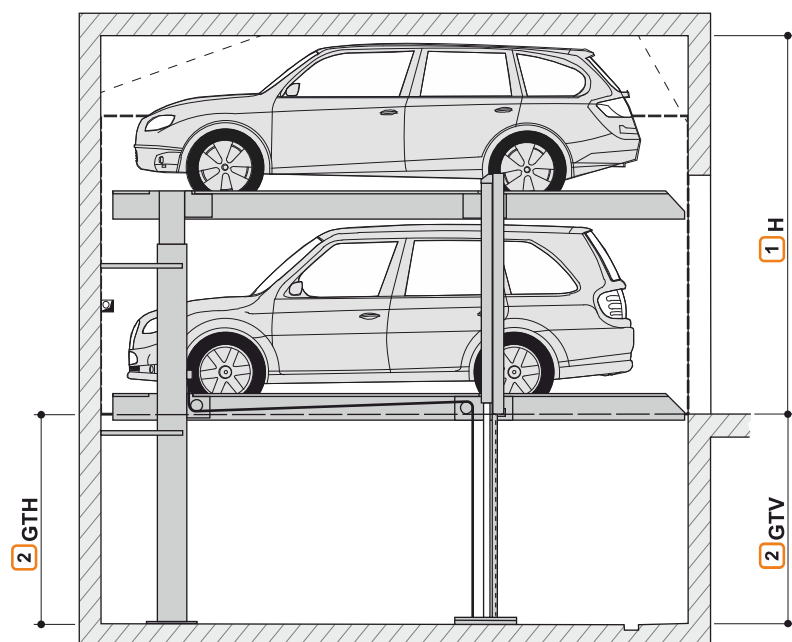
Clearance gauge



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

- 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 up weighted to 5720 lbs

Overview of system types & ceiling heights



H: Ceiling height
 GTV: Pit depth, front
 GTH: Pit depth, rear

- 1 If the ceiling is higher, correspondingly higher vehicles can be parked on the top.
- 2 If the minimum dimensions are not reached, then there will be access problems and limitations on the vehicle height.

Type	GTH	GTV	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"	
CP2062-170	67.0"	68.9"	59.1"	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	153.6	
CP2062-185	72.9"	74.9"	65.0"	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	
CP2062-195	76.8"	78.8"	68.9"	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	
CP2062-205	80.8"	82.7"	72.9"	141.8	143.8	145.7	147.7	149.7	151.6	153.6	155.6	157.5	159.6	161.5	163.4	165.4	167.4	
CP2062-215	84.7"	86.7"	76.8"	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 - Ceiling height

Example configuration



Example: Vehicle height, lower 165 cm and vehicle height, upper 190 cm.

Type: CP2060-185

Ceiling height: 380 cm

Type	GTH	GTV	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"	
CP2062-170	67.0"	68.9"	59.1"	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	153.6	
CP2062-185	72.9"	74.9"	65.0"	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	
CP2062-195	76.8"	78.8"	68.9"	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	
CP2062-205	80.8"	82.7"	72.9"	141.8	143.8	145.7	147.7	149.7	151.6	153.6	155.6	157.5	159.6	161.5	163.4	165.4	167.4	

H - Ceiling height

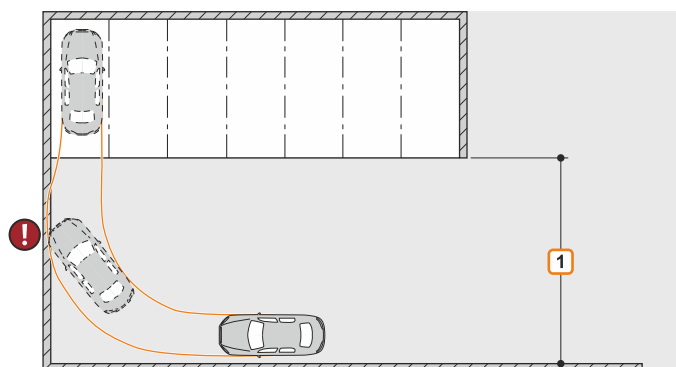
Width dimensions



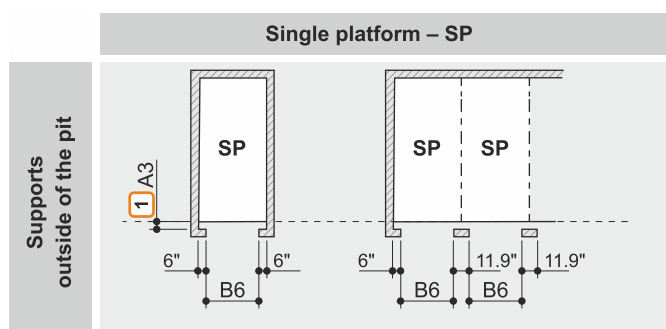
We recommend a platform width of at least 98.5" and driving lane widths of 256" to ensure convenient vehicle access to the multiparking system and easy entry into and exit from the vehicle. Narrower platforms can make parking more difficult, depending on the following criteria.

- Driving lane width
- Entry conditions
- Vehicle dimensions

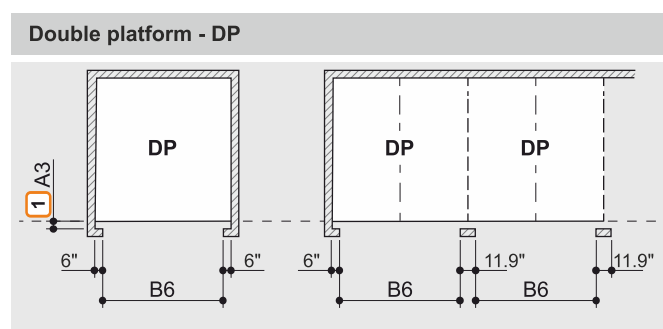
1 Observe the minimum driving lane width specified by local regulations!



Width dimensions with door



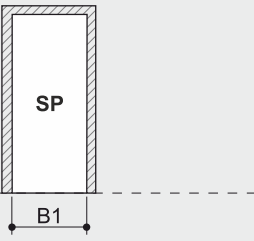
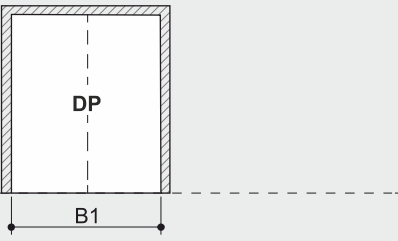
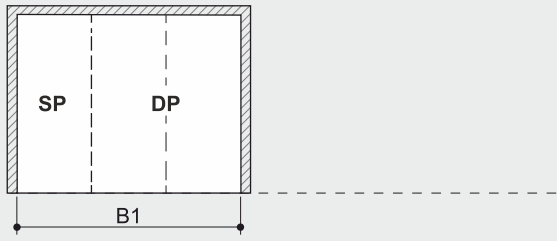
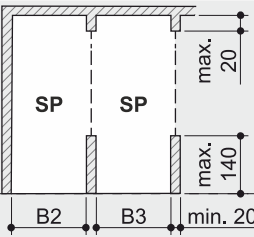
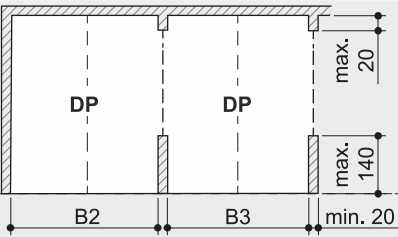
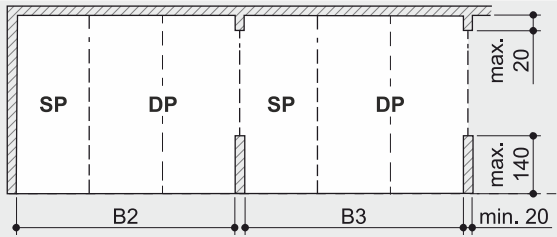
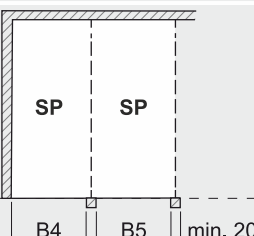
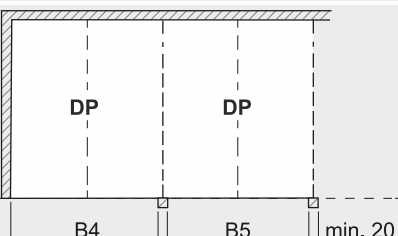
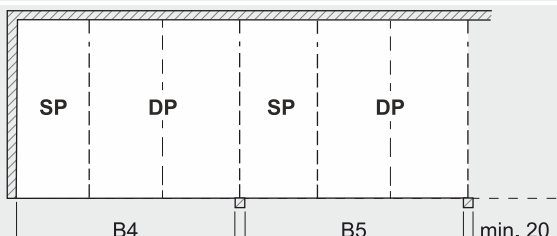
	Clear platform width 2	Passage width B6
SP	90.6"	90.6"
	94.5"	94.5"
	98.5"	98.5"
	102.4"	102.4"
	106.3"	106.3"



	Clear platform width	Passage width B6
DP	181.2"	181.2"
	185.1"	185.1"
	189.0"	189.0"
	193.0"	193.0"
	196.9"	196.9"
	200.8"	200.8"
	204.8"	204.8"
	208.7"	208.7"
	212.6"	212.6"

- 1** The door section (dimension A3) must be coordinated between the door manufacturer and the customer. With lateral closing doors, coordination between the door manufacturer and KLAUS Multiparking is required.
- 2** Narrower platform widths are possible on request. Please note that reducing the platform width can make parking more difficult and limit the usage range of the parking space. In many cases, they are not considered demonstrable vehicle parking spaces - observe local regulations.s.

Width dimensions without door

	Single platform - SP	Double platform - DP	Example combination
Dividing walls			
Supports in the pit			
Supports outside of the pit			

	Clear platform width ¹	Dividing walls B1	Supports in the pit		Supports outside of the pit	
			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"
DP	181.2"	193.0"	191.0"	187.1"	189.0"	185.1"
	185.1"	196.9"	194.9"	191.0"	193.0"	189.0"
	189.0"	200.8"	198.9"	194.9"	196.9"	193.0"
	193.0"	204.8"	202.8"	198.9"	200.8"	196.9"
	196.9"	208.7"	206.7"	202.8"	204.8"	200.8"
	200.8"	212.6"	210.7"	206.7"	208.7"	204.8"
	204.8"	216.6"	214.6"	210.7"	212.6"	208.7"
	208.7"	220.5"	218.6"	214.6"	216.6"	212.6"
Combination	212.6"	224.5"	222.5"	218.6"	220.5"	216.6"
	90.6" + 181.2"	295.3"	293.4"	289.4"	291.4"	287.5"
	94.5" + 185.1"	303.2"	301.2"	297.3"	299.3"	295.3"
	98.5" + 189.0"	311.1"	309.1"	305.2"	307.1"	303.2"
	98.5" + 196.9"	318.9"	317.0"	313.0"	315.0"	311.1"
	106.3" + 196.9"	326.8"	324.9"	320.9"	322.9"	318.9"
	106.3" + 200.8"	330.8"	328.8"	324.9"	326.8"	322.9"
	106.3" + 204.8"	334.7"	332.7"	328.8"	330.8"	326.8"
	106.3" + 208.7"	338.6"	336.7"	332.7"	334.7"	330.8"
	106.3" + 212.6"	342.6"	340.6"	336.7"	338.6"	334.7"

¹ Narrower platform widths are possible on request. Please note that reducing the platform width can make parking more difficult and limit the usage range of the parking space. In many cases, they are not considered demonstrable vehicle parking spaces - observe local regulations.

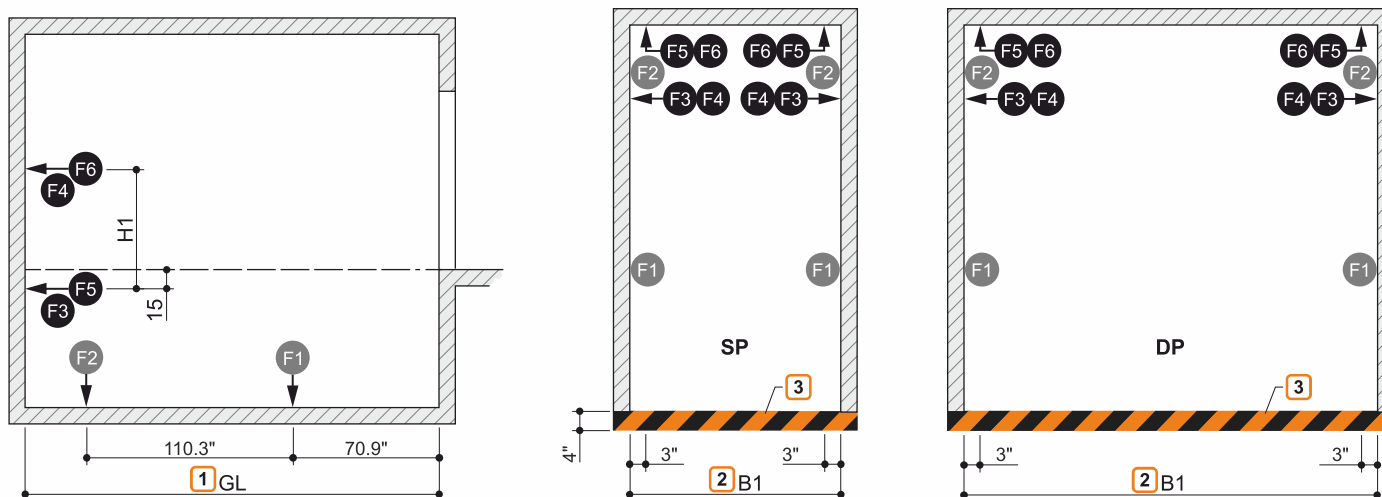
Loading schedule



The systems are doweled to the floor. The depth of the boreholes in the floor plate is approximately 6", and approximately 4.8" in the walls.

Floor plates and walls below the level of the entrance must be made of concrete (concrete quality at least C20/25)!

The dimensions for the bearing points have been rounded. If you need to know the exact position, please contact KLAUS Multiparking.



- 1 Pit length GL (see "Overview of building configuration", page 3)
- 2 Width dimension B1 (see "Width dimension without door", page 6)
- 3 Marking in accordance with DIN ISO 3864 (illustration colour not consistent with DIN ISO 3864)

Parking space load	F1	F2	F3	F4	F5	F6
SP						
4400 lbs	+ 7372 lbf	+ 2974 lbf	± 354 lbf	± 354 lbf	± 505 lbf	± 505 lbf
5,720 lbs	- 494 lbf	- 770 lbs				
	+ 8,961 lbf	+ 3,615 lbf	± 428 lbf	± 428 lbf	± 607 lbf	± 607 lbf
	- 607 lbf	- 945 lbf				
DP						
4400 lbs	+ 13,177 lbf	+ 4796 lbf	± 354 lbf	± 354 lbf	± 505 lbf	± 505 lbf
5,720 lbs	- 1034 lbf	- 1061 lbf				
	+ 15,998 lbf	+ 5823 lbs	± 428 lbf	± 428 lbf	± 607 lbf	± 607 lbf
	- 1,259 lbf	- 1,282 lbf				

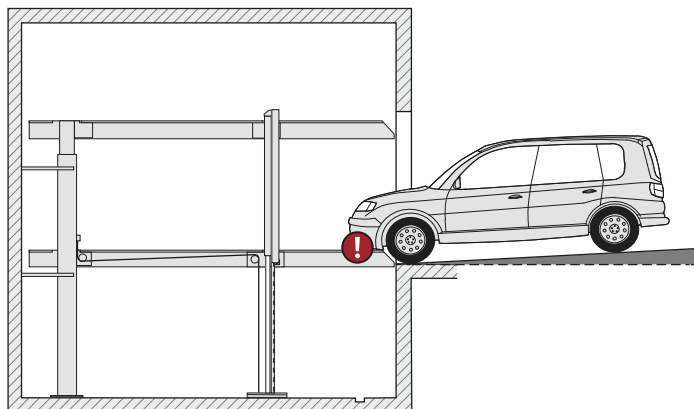
Type	H1
CP2062-170	53.2"
CP2062-185	59.1"
CP2062-195	63.0"
CP2062-205	67.0"
CP2062-215	70.9"

Entry inclinations

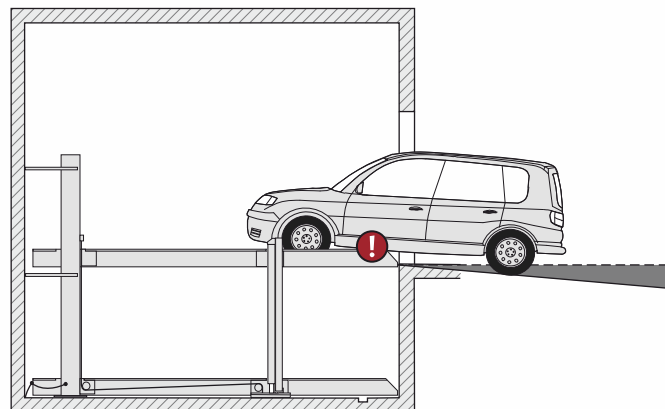


The maximum entry inclinations specified in the sketch must not be exceeded.

An incorrect design can make driving into the system considerably more difficult, for which KLAUS Multiparking is not responsible.



max. 4% slope

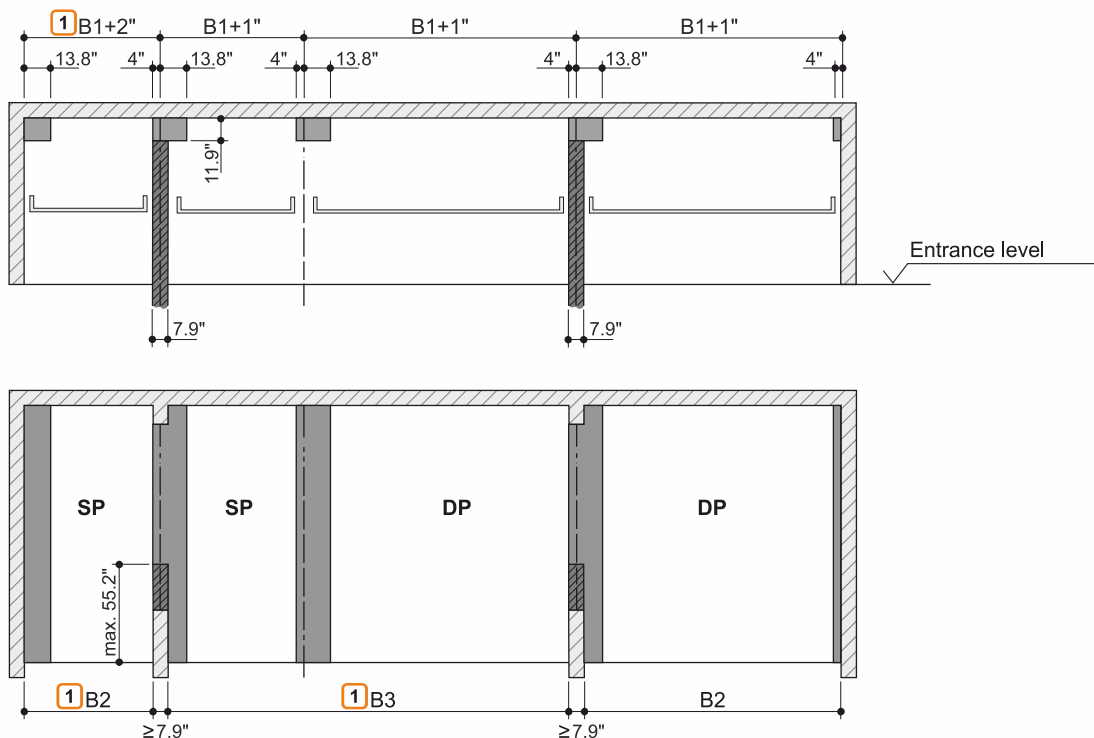


max. 14% gradient

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.



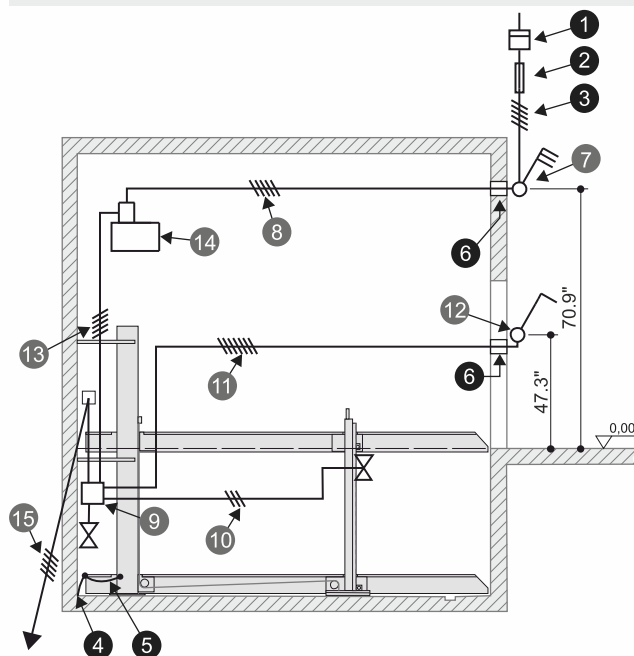
1 Dimensions B1, B2 and B3 (see "Width dimension with door", page 5, "Width dimension without door", page 6)

Clearance for routing lines lengthways

Clearance for vertical pipes, air ducts, etc.

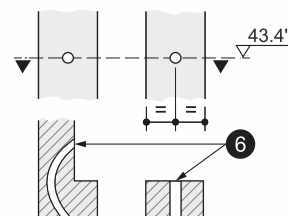
Electrical installation

Electrical installation diagram



Performances provided by customer for operating elements

Surface-mounted operating element



Electrical specifications (services to be provided by the 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
		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 4 x AWG 10 (2 PH+N+PE) with labeled conductors and protective ground	to master switch	1x per 3.7 kW unit
		Supply cable 5 x AWG 12 (3 PH+N+PE) with labeled conductors and protective ground	to master switch	1x per 4.0 kW unit
4	Every 393.8"	Foundation earth connection	Corner to pit floor	
5	1	Equipotential bonding in accordance with DIN EN 60204 from foundation earth connection to system		1x per system
6	2	Empty conduit EN 25 (M25)		

Electrical specifications (KLAUS Multiparking scope of supply)

No.	Designation
7	Lockable master switch
8	Supply cable 4 x AWG 10 (2 PH+N+PE) with labeled conductors and protective ground for 3.7-kW unit
	Supply cable 5 x AWG 12 (3 PH+N+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 to the next system

Technical information

Usage area

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., shortterm 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.

Ambient conditions

Ambient conditions for the areas around Multiparking systems: Temperature range +41 to +104° F. Relative humidity 50 % for a maximum outside temperature of +104° F. If ascent/descent times are specified, these relate to an ambient temperature of +50° F and with the system positioned immediately adjacent to the hydraulic unit. These times increase at lower temperatures and with longer hydraulic lines.

Seismic conditions

The Multiparking system is not suitable for local seismic conditions. Please observe local regulations and conditions in this regard.

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

Our coating system has been designed in accordance with DIN EN ISO 12944-5 Annex A, coating systems for corrosivity category C3. The powder coating has been tested as per DIN EN ISO 12944-6 and fulfillment of the requirements has been verified in test sequences. Zink coatings as per DIN EN ISO 1461 and DIN EN 10346.

Railing

If the permissible fall opening is exceeded, railings are attached to the systems. 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.

CE conformity

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

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).

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.

Outdoor application

This system is suitable for outdoor installation with some additional parts

Note.: For outdoor application the down position key lock is mandatory.

Performance specification

Description

Multiparking system for independent parking of 2 vehicles (single platform –SP), 2 x 2 vehicles (double platform – DP) on top of each other.

Dimensions as per the underlying pit, width and height dimensions.

The parking spaces are accessed horizontally and have a slope of $\pm 1^\circ$ to ensure proper drainage of the platforms.

The special arrangement of the lifting and bearing structure allows doors to be opened without restrictions.

A vehicle positioning aid is mounted on one side of each parking space (must be adjusted as per 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 comprising:

- 2 columns (anchored to the floor)
- 2 sliding pieces (with slideways fastened to the columns)
- 2 platforms
- 1 mechanical synchronisation system (for synchronised operation of the hydraulic cylinders when lifting and lowering)
- 2 hydraulic cylinders
- 2 rigid supports (platform connection)
- 2 chains and chain diversion wheels
- Dowels, bolts, fasteners, pins, etc.
- The platforms are continuously accessible!

Platform comprising:

- Platform profiles
- Adjustable positioning aid
- chamfered ramps
- Side beams
- Centre beam (DP only)
- Crossbeams (DP only)
- Railings (on the upper and lower platform - if required)
- Screws, nuts, washers, spacers, etc.

Hydraulic system comprising:

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

Electrical system comprising:

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

Hydraulic unit comprising:

- 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
- Contactor, motor protection switch and control fuse
- Test pressure gage
- Pressure relief valve
- Hydraulic hoses (damping of noise transmission to the hydraulic pipes)

Performances provided by customer

Barriers

Any barriers required to secure the parking system pit due to traffic routes located immediately in front of, next to or behind the systems as per DIN EN ISO 13857. This applies during the construction phase as well. Any railings needed on the systems are included as standard.

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.

Drainage

Functional drainage of the pit provided by, e.g., a water collection channel in the front area connected to the sewer system or a sump. A lateral slope is possible within the channel but not in the rest of the pit area (a lengthways slope is provided by the structural dimension). As an environmental protection measure, we recommend that the pit floor be painted. Oil or gasoline separators must be appropriately taken into account as per local regulations when the drain is attached to the sewer system.

Strip foundations

If strip foundations are used for structural reasons, the customer must construct a walkable platform at the height of the upper edge of the strip foundations so that the assembly work can be performed.

Warning markings

As per DIN EN 14010, the customer must apply a 4" wide gold and black marking as per DIN ISO 3864 at the edge of the pit 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 master switch - foundation earth

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.

Subject to technical changes

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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