KLAUS MULTIPARKING

PRODUCT DATA

DIMENSIONS, TECHNICAL INFORMATION AND PERFORMANCE SPECIFICATION

multibase G63

2000 EB 2000 DB

PARK & SMILE

www.multiparking.com

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Explanation of symbols

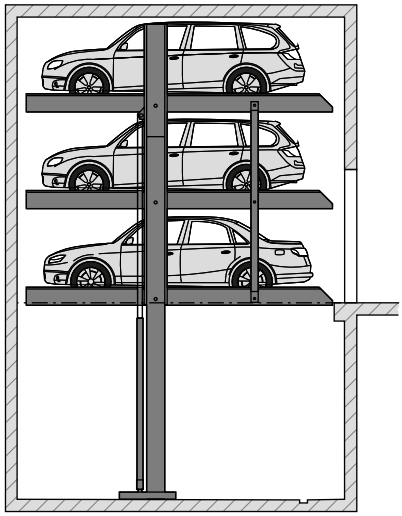
Platforms accessible horizontally.

Max. load per parking space in kg.
Upweighting over 2000 kg possible with surcharge (*see "Vehicle data", page 4*).

The systems provided are consistent with DIN EN 14010 and the EC Machinery Directive 2006/42/EC.

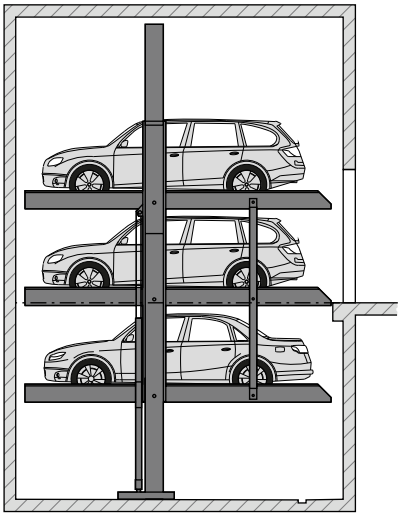
Parking positions

Lower parking space



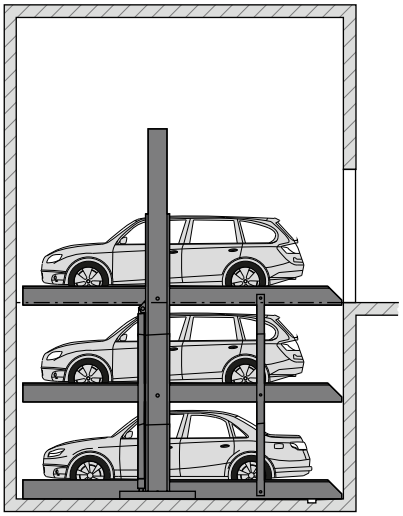
The lower vehicle can park in or leave the parking space.

Middle parking space



The middle vehicle can park in or leave the parking space.

Upper parking space



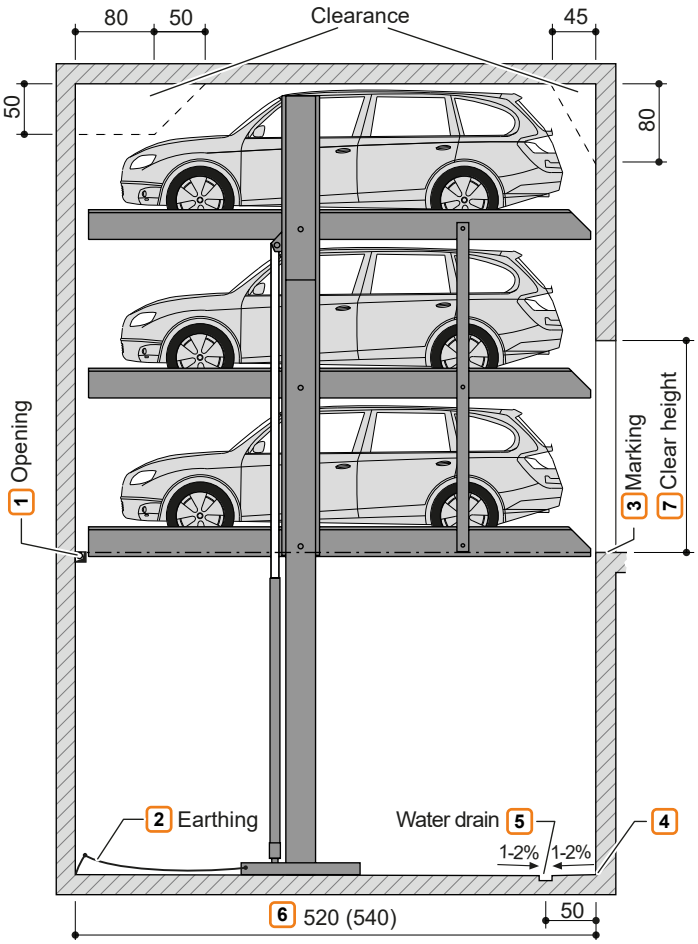
The upper vehicle can park in or leave the parking space.

Dimensions and tolerances

All dimensions and minimum final dimensions.
Tolerance for dimensions +3/0. Dimensions in cm.
In order to adhere to the minimum final dimensions, the tolerances in accordance with the German Construction Tendering and Contract Regulations [VOB], Part C (DIN 18330 and 18331) and DIN 18202 must also be taken into account.

Overview of building configuration

Building configuration without door



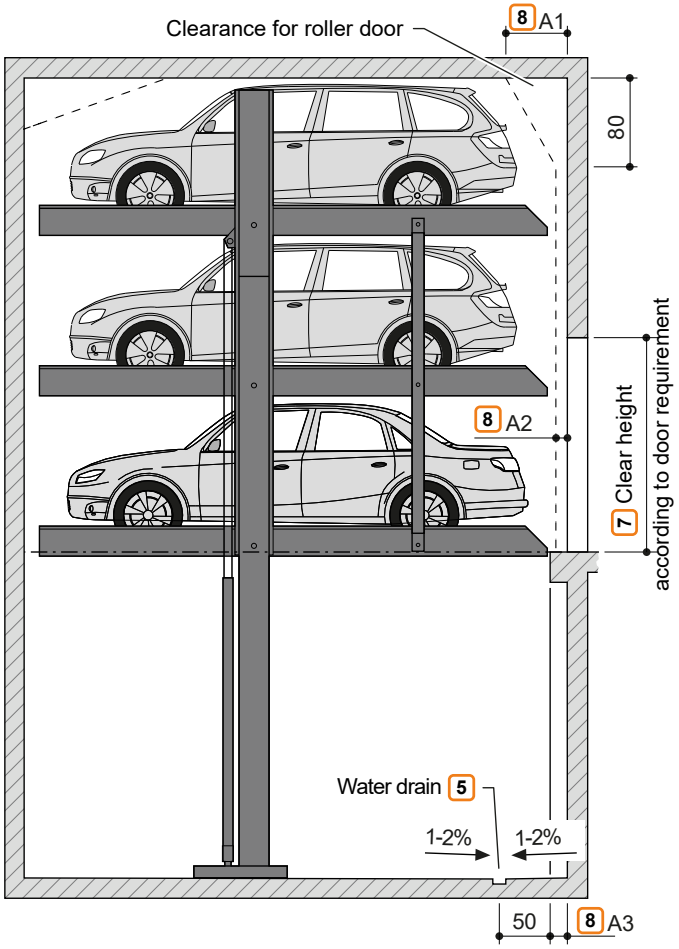
1 If there are dividing walls: Wall opening 10 x 10 cm.

2 Equipotential bonding from the foundation earth connection to the system (on site).

3 In accordance with DIN EN 14010, the customer must provide 10 cm wide, yellow/black marking in accordance with DIN ISO 3864 in the access area along the edge of the pit to identify the hazard area. (*see "Loading schedule", page 7*).

4 No fillets/haunches are permitted at the transition from the pit floor to the walls. If fillets/haunches are required, the systems must be narrower or the pits wider.

Building configuration with door



5 Slope with water collection channel (*see "Drainage", page 12*).

6
- 520 cm for vehicles up to 5.0 m long
- 540 cm for vehicles up to 5.2 m long

Shorter versions are possible on request - observe local regulations on parking space lengths.
We recommend a pit length of 540 cm. for comfortable use of your parking space and increasingly longer vehicles.

7 Clear height in accordance with local regulations. Maximum vehicle height + 5 cm.

8 Dimensions A1, A2 and A3 must be agreed on-site with the door manufacturer.

Vehicle data

Version

SP (single platform) = 3 vehicles
DP (double platform) = 6 vehicles

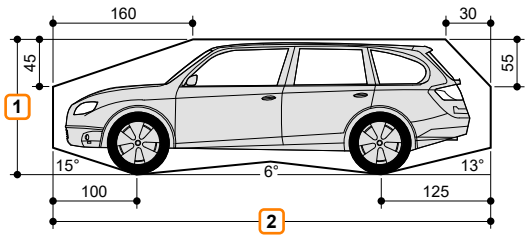
Parking options

Series vehicles:
saloon, estate, SUV, van in accordance with clearance gauge and maximum parking space load.

	Single platform / double platform	Special equipment [3]
Weight	2000 kg	2500 kg
Wheel load	500 kg	625 kg

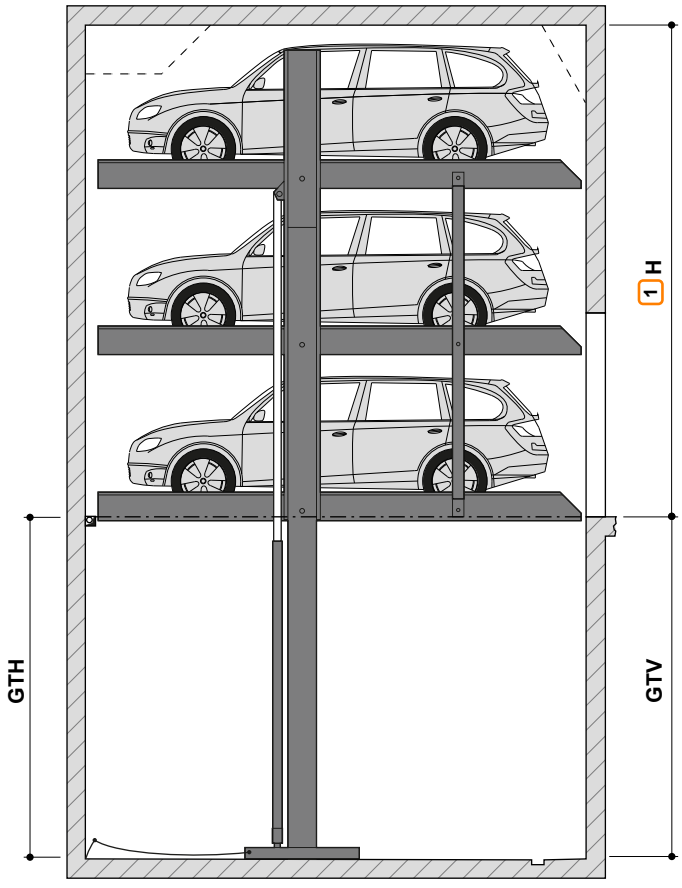
[1] Vehicle height (*see "Overview of system types and ceiling heights", page 4*)
[2] Vehicle length (*see "Overview of building configuration", page 3*)
[3] Upweight with a single platform only available on payment of a surcharge

Clearance gauge



Vehicle width 190 cm with platform width 230 cm. Correspondingly wider vehicles can be parked with wider platforms.

Overview of system types and 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.

Type	GTH	GTV	Vehicle height middle/lower	Vehicle height, upper		
				150	160	170
G63-330	330	335	**150**	480	-	-
G63-350	350	355	**160**	500	510	-
G63-370	370	375	**170**	520	-	540

H
Ceiling height

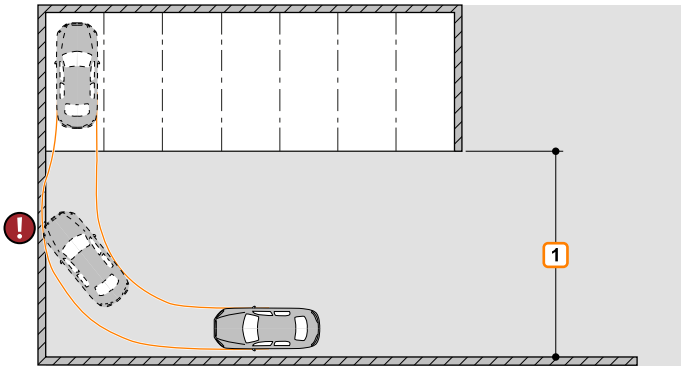
Width dimensions

We recommend platform widths of minimum 250 cm and driving lane widths of 650 cm in order that vehicles can comfortably access the Multiparking system and enter and leave without difficulty.

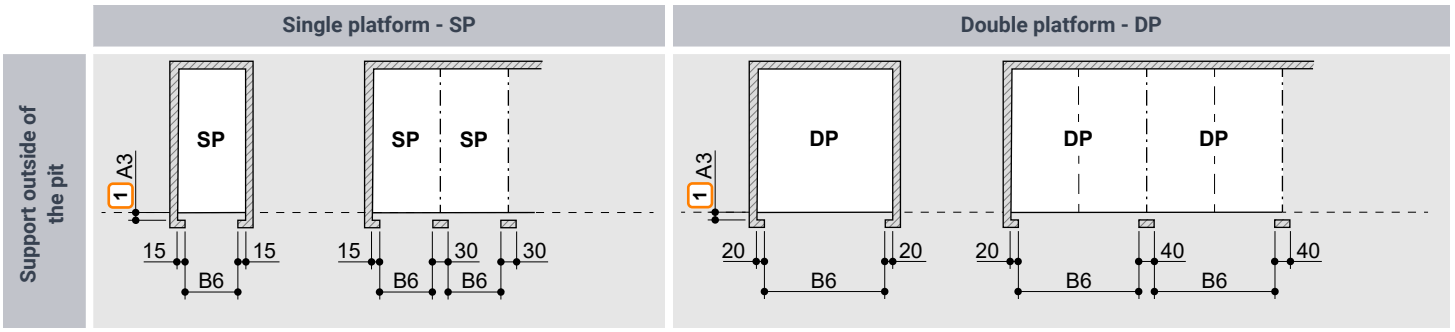
Narrower platforms may impede parking according to the following criteria.

- Driving lane width
- Entrance conditions
- Vehicle dimensions

[1] Observe minimum driving lane width in accordance with local regulations.



Width dimension with door



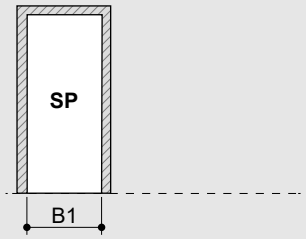
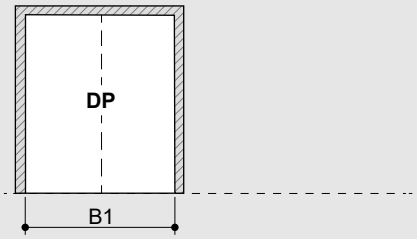
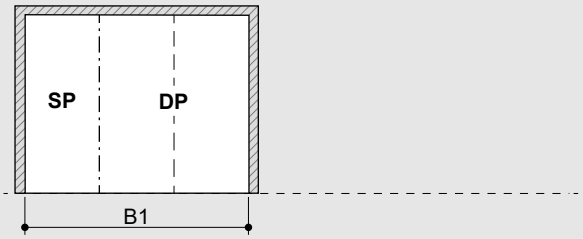
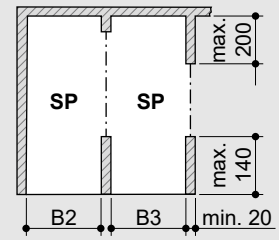
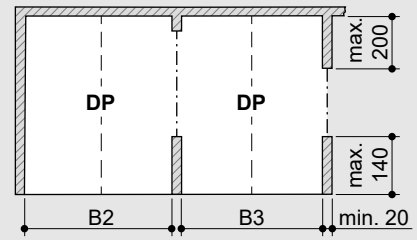
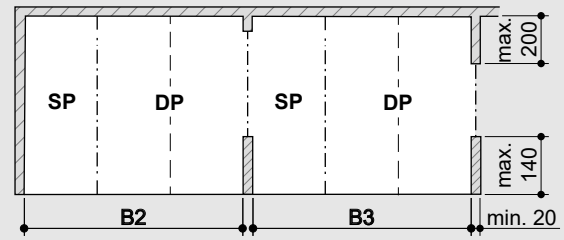
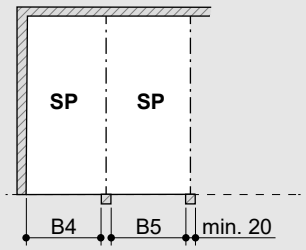
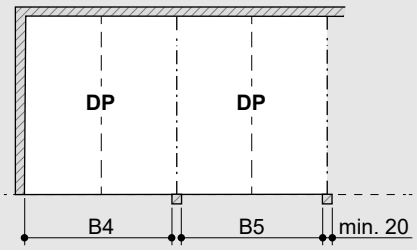
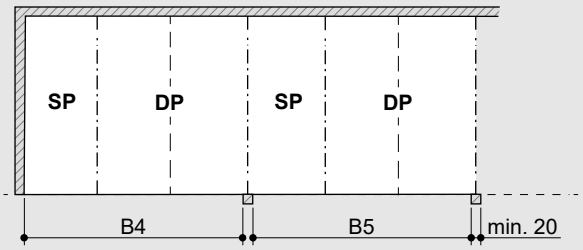
	Clear platform width	Passage width B6
SP	230	230
	240	240
	250	250
	260	260
	270	270

	Clear platform width	Passage width B6
DP	460	460
	470	470
	480	480
	490	490
	500	500

[1] Door section (dimension A3 must be agreed on-site with the door manufacturer). With lateral closing doors, coordination between the door manufacturer and KLAUS Multiparking is required.

With edge boxes and boxes with dividing walls, we generally recommend planning based on our maximum platform widths of 270 cm for single platforms and 500 cm for double platforms. Problems may arise with narrower platform widths (dependent on the car type, access and individual driver behaviour).
For large saloon cars and SUVs, driving lanes may need to be widened under some circumstances (especially in the case of kerbside bays due to the lack of manoeuvring space).

Width dimension without door

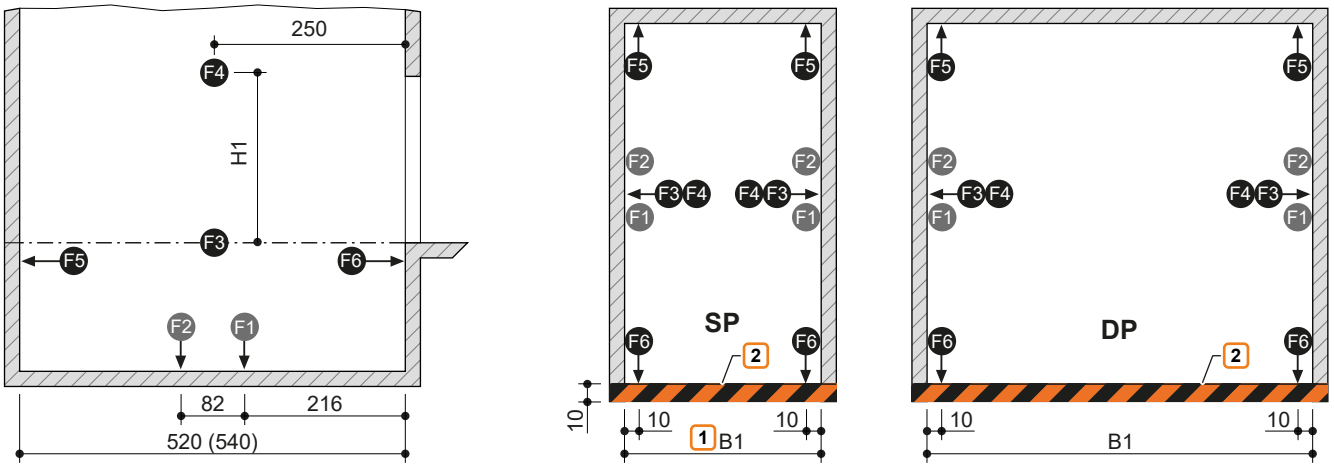
	Single platform - SP	Double platform - DP	Example combination
Dividing walls			
Support in the pit			
Support outside of the pit			

	Clear platform width	Dividing walls	Support in the pit		Support outside of the pit	
		B1	B2	B3	B4	B5
SP	230	260	255	250	250	240
	240	270	265	260	260	250
	250	280	275	270	270	260
	260	290	285	280	280	270
	270	300	295	290	290	280
DP	460	500	490	480	490	480
	470	510	500	490	500	490
	480	520	510	500	510	500
	490	530	520	510	520	510
	500	540	530	520	530	520
Combination	230 + 460	760	750	745	750	740
	240 + 470	780	770	765	770	760
	250 + 480	800	790	785	790	780
	250 + 500	820	810	805	810	800
	270 + 500	840	830	825	830	820

With edge boxes and boxes with dividing walls, we generally recommend planning based on our maximum platform widths of 270 cm for single platforms and 500 cm for double platforms. Problems may arise with narrower platform widths (dependent on the car type, access and individual driver behaviour).
For large saloon cars and SUVs, driving lanes may need to be widened under some circumstances (especially in the case of kerbside bays due to the lack of manoeuvring space).

Loading schedule

The systems are dowelled into the ground. The depth of the boreholes in the floor plate is approximately 15 cm, and approximately 12 cm in the walls.
The floor plate and walls below entrance level must be from concrete (concrete quality min. C20/25).
The dimensions for the bearing points have been rounded. If the precise figures are required, please consult KLAUS Multiparking.



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

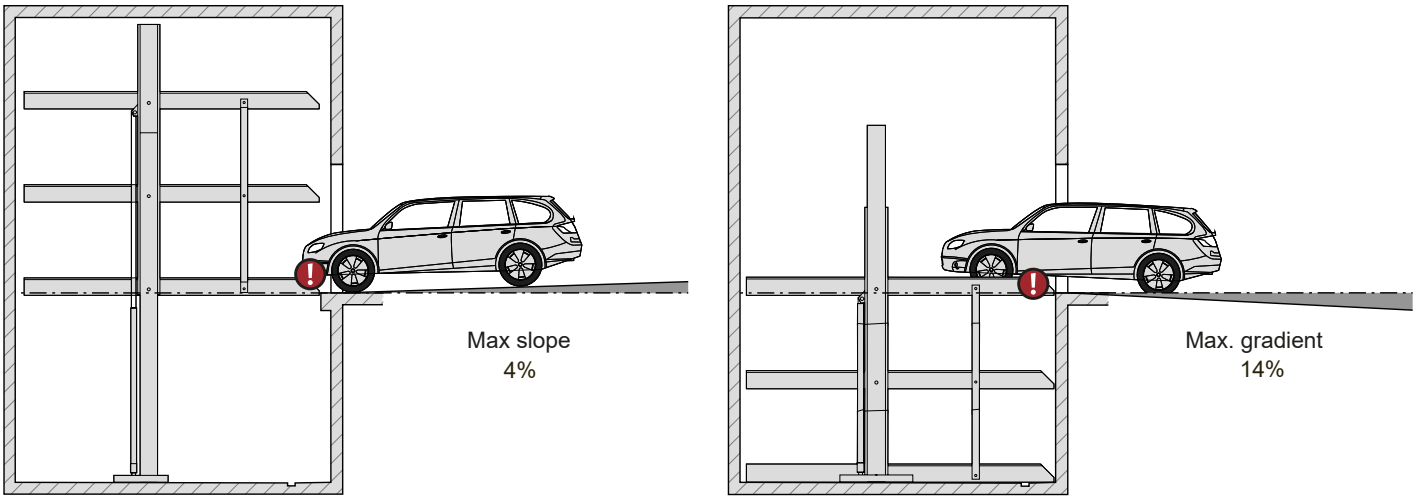
2 Marking in accordance with DIN ISO 3864 (illustration colour not consistent with DIN ISO 3864)

Parking space load		F1	F2	F3	F4	F5	F6
SP	2000 kg	+ 25 kN	+ 55 kN - 20 kN	+ 3,5 kN	+ 3,5 kN	+ 12 kN	+ 15 kN
	2500 kg	+ 25 kN	+ 63 kN - 20 kN	+ 3,5 kN	+ 3,5 kN	+ 12 kN	+ 15 kN
DP	2000 kg	+ 35 kN	+ 80 kN - 25 kN	+ 4 kN	+ 4 kN	+ 12 kN	+ 20 kN

Type	H1
G63-330	225
G63-350	245
G63-370	265

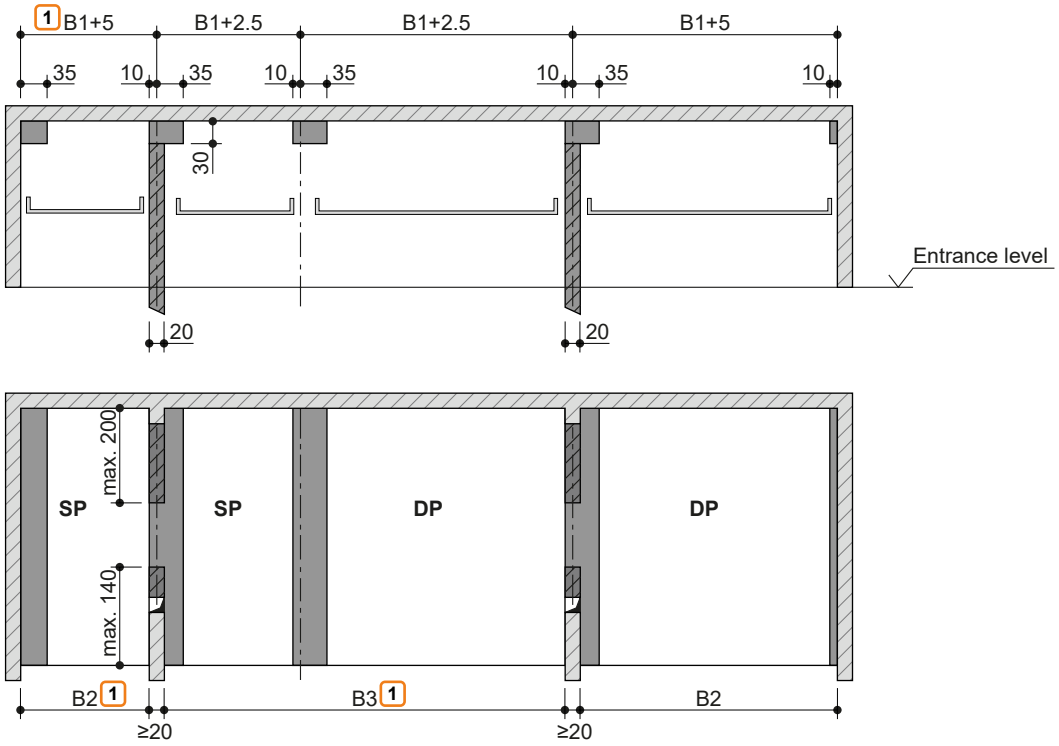
Access incline

The maximum access inclines specified in the symbol sketch must not be exceeded.
Improper configuration can lead to extreme difficulty accessing the system, for which KLAUS Multiparking cannot be held liable.



Clearance for installations

These clearances apply to vehicles parked forwards only, with exit on the left. The clearances must be adjusted for vehicles with exit on the right or parked in reverse.



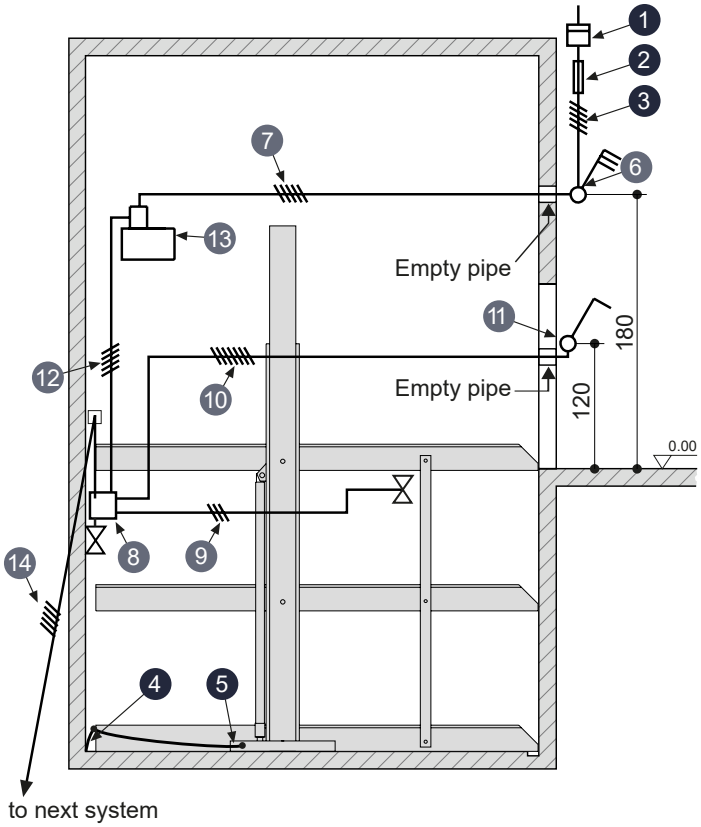
1 Dimensions B1, B2 and B3 (*see "Width dimension without door", page 6*)

Clearance for lengthways cable routing

Clearance for vertical pipes, air ducts, etc.

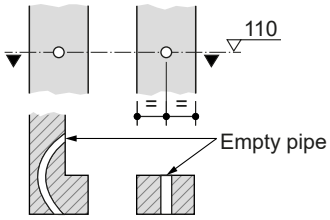
Electrical installation

Electrical installation diagram

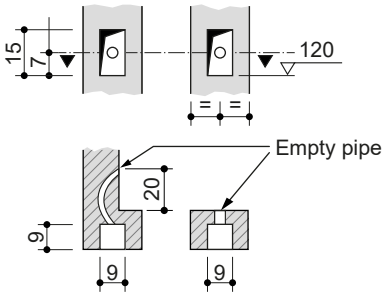


On-site facilities for operating element

Surface-mounted operating element



Flush-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: 3x safety fuse 20 A (slow-blow) or Circuit breaker 3 x 20 A (trip characteristic K)	in the supply cable	1x per unit
3	1	Supply cable 5 x 2.5 mm² (3 PH+N+PE) with marked wires and protective earth	to master switch	1x per unit
4	every 10 m	Foundation earth connection	Corner of pit floor	
5	1	Equipotential bonding in accordance with DIN EN 60204 from foundation earth connection to system		1x per system

Electrical specifications (KLAUS Multiparking scope of supply)

No.	Designation
6	Lockable master switch
7	Supply cable 5 x 2.5 mm² (3 PH+N+PE) with marked wires and protective earth
8	Unit junction box
9	Control cable 3 x 0.75 mm² (PH+N+PE)
10	Control cable 7 x 1.5 mm² with marked wires and protective earth
11	Operating element
12	Control cable 5 x 1.5 mm² with marked wires and protective earth
13	Hydraulic unit 5.2 kW, three-phase current 230/400 V / 50 Hz
14	Control cable 5 x 1.5 mm² with marked wires and protective earth

Technical information

Usage area

The system is suitable for a fixed group of users as standard.
Where users change - in the upper parking spaces only - (e.g. short-term parking in office buildings or hotels), structural modifications to the Multiparking system are required. Please request a consultation if required.

Units

Low-noise, bearing-mounted hydraulic units are installed on rubber-metal blocks. Consequently, we recommend separating the garage body from the residential building.

Ambient conditions

Ambient conditions for the areas around Multiparking systems:
Temperature range –10 to +40° C. Relative humidity 50 % to a maximum external temperature of +40° C.
If ascent/descent times are specified, these relate to an ambient temperature of +10° C and with the system positioned immediately adjacent to the hydraulic unit. These times are increased at lower temperatures or with longer hydraulic lines.

Building application documents

Multiparking systems generally require approval. Please observe local regulations and stipulations.

Care

To prevent corrosion damage, please observe our special cleaning and care instructions and ensure that your garage is well ventilated.

Corrosion protection

In accordance with the ‘Corrosion protection information’ supplement.

Railings

If the permissible fall opening is exceeded, railings must be installed on the systems. If there are roadways immediately adjacent to or behind the systems, the customer must provide barriers in accordance with DIN EN ISO 13857. This also applies during the construction stage.

Noise protection

Standard noise protection:

In accordance with DIN 4109-1 Noise protection in high-rise - Section 9:
Maximum sound pressure level in living and sleeping areas 30 dB (A).
User noise is not subject to the requirements.

The following dimensions are required for adherence to this value:

- Noise protection package in accordance with quote/order (KLAUS Multiparking)
- Sound insulation dimension of the building structure of min. R’w = 57 dB (service to be provided by the customer)

Increased sound protection (special agreement):

In accordance with DIN 4109-5 Increased noise protection in high-rise - Section 8:
Maximum sound pressure level in living and sleeping areas 25 dB (A).
User noise is not subject to the requirements.

The following dimensions are required for adherence to this value:

- Noise protection package in accordance with quote/order (KLAUS Multiparking)
- Sound insulation dimension of the building structure of min. R’w = 62 dB (service to be provided by the customer)

Note:
User noise is noise that can be influenced individually by the user of our Multiparking systems. This includes, e.g., accessing the platform, the slamming of vehicle doors, engine and brake noise.

Performance specification

Description

Multiparking system for independent parking of 3 vehicles (single platform - SP), 2x 3 vehicles (double platform - DP) one on top of the other.
Dimensions in accordance with the underlying pit, width and height dimensions.
Access to the parking spaces horizontally (installation tolerance ± 1%).
Vehicle positioning in any parking space by positioning aid mounted on the right-hand side (to be adjusted in accordance with the operating instructions).
Control via an operating element with automatic reset by means of simultaneous key.
Operating element usually installed in front of the support or on the outside of the door reveal.
Concise instructions at each operating point.
Special dimensions must be observed in buildings with door.

Multiparking system comprising:

- 2 columns (secured to the floor)
- 2 sliders (with sliding guides secured to the columns)
- 3 platforms
- 1 mechanical synchronisation system (for synchronised operation of the hydraulic cylinders when lifting and lowering)
- 2 hydraulic cylinders
- 2 rigid supports (platform connection)
- Welded hydraulic lines to the installed poppet valve
- Dowels, screws, connectors, bolts, etc.
- The platforms are continuously accessible.

Platforms comprising:

- Platform profiles
- Adjustable positioning aids
- Chamfered ramps
- Side beams
- Centre beam (DP only)
- Crossbeams (DP long and short crossbeams)
- Railings (on the upper, middle and lower platform - if required)
- Screws, nuts, washers, spacers, etc.

Hydraulic system comprising:

- Hydraulic cylinders
- Solenoid valves
- Open-circuit guard
- Hydraulic lines
- Bolted connections
- High-pressure hoses
- Attachments

Electrical system comprising:

- Operating element (emergency-stop, key, 1 simultaneous key per parking space)
- Junction box on wall valve
- Reed contact

Hydraulic unit comprising:

- Hydraulic unit (low-noise, fitted to bracket and bearing mounted on rubber-metal block)
- Hydraulic oil tank
- Oil filling
- Internal gear pump
- Pump holder
- Coupling
- Three-phase motor
- Circuit protection (with thermal overload relay and control fuse)
- Test pressure gauge
- Pressure relief valve
- Hydraulic hoses (to attenuate noise transmission to the hydraulic pipes)

Services to be provided by the customer

Barriers

Barriers that may be required in accordance with DIN EN ISO 13857 to secure the pits where there are roadways immediately in front of, adjacent to or behind the systems. This also applies during the construction stage. Railings on the systems, where required, are included as standard.

Parking space numbering

Parking space numbering, if required.

Building services systems

Any lighting, ventilation, fire-extinguishing and fire-alarm systems that may be required, plus clarification and compliance with corresponding official documentation.

Drainage

Functional drainage of the pit must be provided by means of, for example, a water collection channel towards the front that is connected to the sewer system or a pump sump. The channel may contain a lateral slope, but not in the other pit areas (lengthways slope is already provided by the building dimensions). In the interests of environmental protection, we recommend coating the pit floor. Oil and/or fuel separators should be installed in accordance with local regulations.

Strip foundations

Due to structural conditions, the customer must erect an accessible platform when constructing strip foundations, level with the upper edge of the strip foundation.

Warning marking

In accordance with DIN EN 14010, the customer must provide 10 cm wide, yellow/black marking in accordance with DIN ISO 3864 in the access area along the edge of the pit to identify the hazard area.

Wall openings

Any wall openings that may be required should be in accordance with the sectional drawings (*see "Overview of building configuration", page 3*).

Supply cable to master switch - foundation earth

The customer must lay the supply cable to the master switch during assembly. Functional capability can be checked by our engineers on site, in conjunction with the electronics engineer. If this is not possible during assembly for reasons attributable to the customer, the customer must commission an electronics engineer.
The customer must earth the steel structure with a foundation earth connection (earthing distance max. 10 m) and equipotential bonding in accordance with DIN EN 60204.

Operating element

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

If the following item is not listed in the offer, then this too is considered a customer performance:

- Complete wiring of the individual components according to the circuit diagram
- Costs for the competent person's inspection and approval
- Master switch
- Control cable from the master switch to the unit

Subject to technical changes

In the course of technical progress, KLAUS Multiparking shall be entitled to use newer or different technologies, systems, processes or standards to provide the services than initially offered, provided that this does not disadvantage the customer in any way.

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