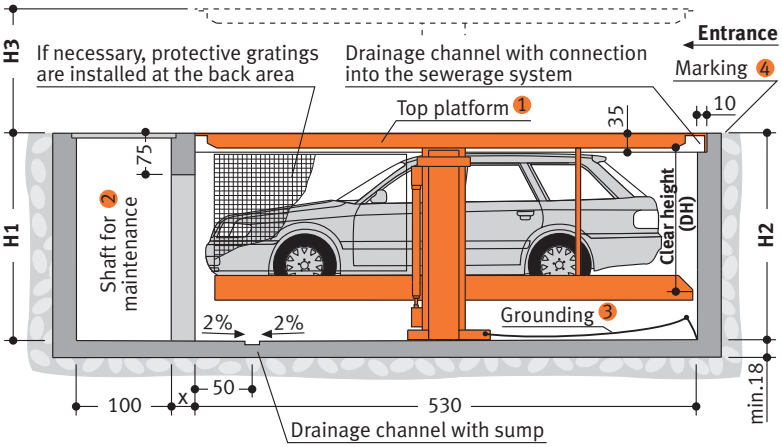
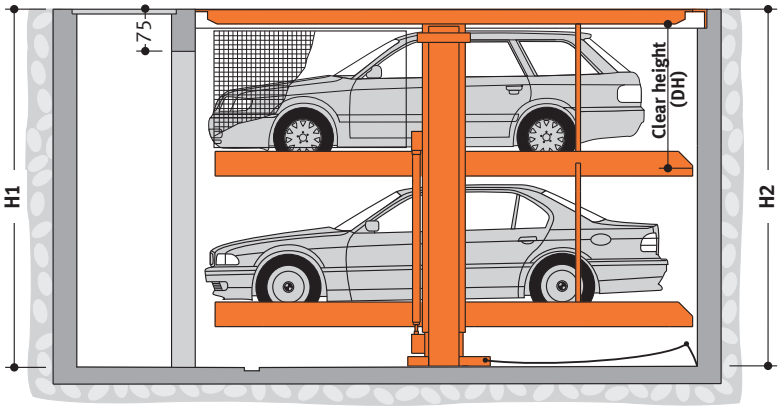
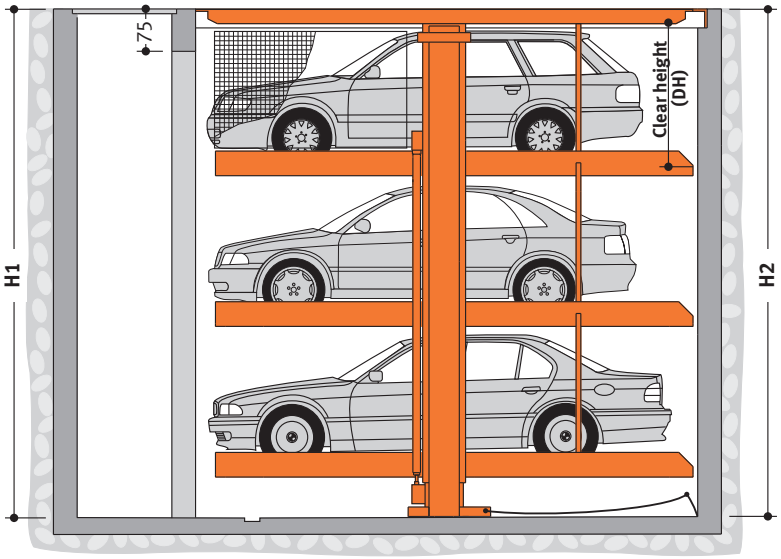
Stack Parker G61 Underfloor



Stack Parker G62 Underfloor



Stack Parker G63 Underfloor



Notes

1. The upper platform is a welded construction (according to EN ISO 13920, tolerance class C). Flooring can be provided by the customer (e.g. soil/turf, sandbed/turfblock, sandbed/marble, etc.). Please contact Klaus for information regarding maximum load and sealing.

   The upper platform is at ground level and is traversible when in lowered position (vehicle load: 2,500 kg maximum, wheel load: 625 kg maximum). On special conditions the upper platform of G61 UF and G62 UF may be used as parking space – please contact Klaus.

   For larger loads (e.g. for fire brigade access lanes) please contact Klaus for information .

   After operation, the system must always be run into the lowest final position (key interlock).

2. A separate maintenance manhole must be installed by the customer (with manhole cover, ladder and a connecting passage to the pit). A save maintenance access with a door has to be provided by the customer – please contact Klaus. The hydraulic power unit and ventilation system are also housed in the maintenance manhole

3. Potential equalization from foundation grounding connection to system (provided by the customer).

4. 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 pit on all four sides to mark the danger zone (see »load plan« page 3).

5. Maximum load of 2,600 kg for extra charge.

Product Data
Stack Parker
G61/G62/G63
Underfloor

CE CONFORMITY

Dimensions:
All space requirements are minimum finished dimensions. Tolerances for space requirements $^{+3}_{0}$. Dimensions in cm.

EB (single platform)

DB (double platform)

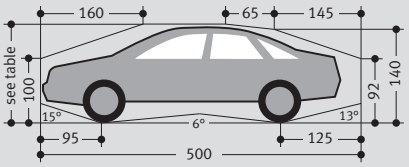
Suitable for:
Standard passenger car and station wagon. Height and length according to contur.

Type	Pit depth H1	Pit depth H2	H3**	DH*	Car height
G61 UF	255	250	210	170	165
	290	285	245	205	200
G62 UF	430	425	385	170	165
	500	495	455	205	200
G63 UF	610	605	565	170	165

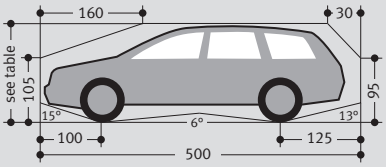
* = without car
** = heigth upper end position

width	1.90 m
weight	max. 2000/2600 kg 5
wheel load	max. 500/650 kg

Standard passenger car



Standard station wagon



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

KLAUS multiparking

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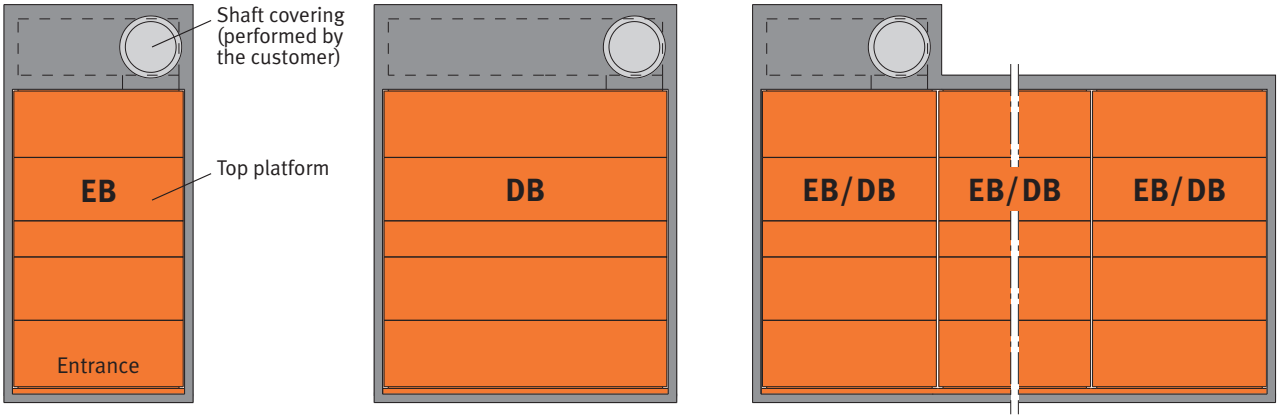
E-Mail **info@multiparking.com**
Internet **www.multiparking.com**

Width

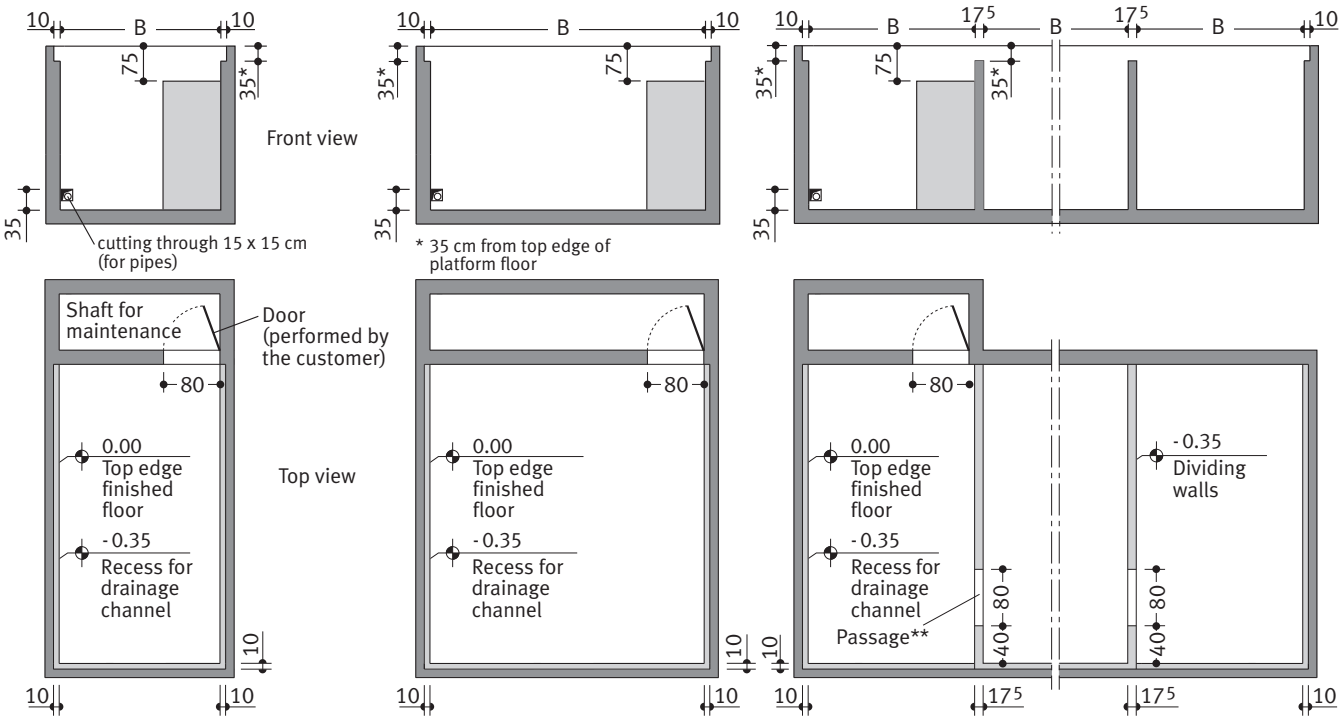
Top view closed pit

Single platform (EB) | Double platform (DB) | Serial system (EB and DB can be combined)



Pit dimensions

Pit dimensions



Pit dimensions EB B	Usable platform width Parking levels	Usable platform width Top platform
275	**230** *	**290**
285	240	300
295	250	310
305	260	320
315	270	330

Pit dimensions DB B	Usable platform width Parking levels	Usable platform width Top platform
505	**460** *	**520**
525	480	540
545	500	560

* = standard width (parking space width 2.30 m)

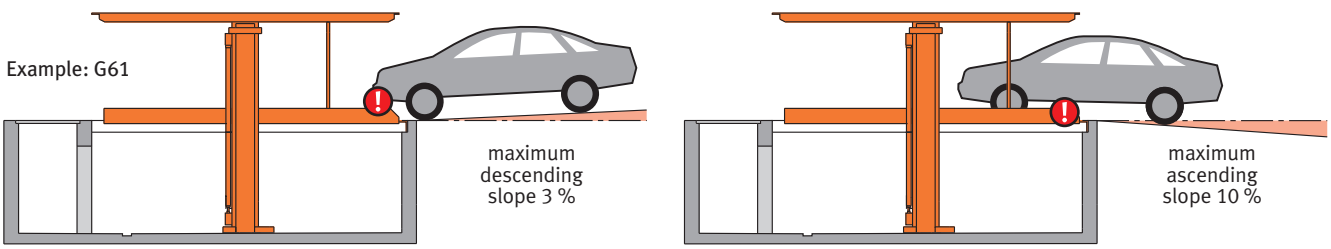
A rectangular angle is required from the sidewalls to the front side. Max. tolerances are 1 cm!

Warning: If the side or backside is freely accessible these areas must be safeguarded (railing, marking, electric traction rope switch, etc.). Measures to be taken according to project.

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

For vehicle widths larger 190 cm a platform width of 270/500 cm is required in order to enable the driver to get in and out of the car on one side.

Approach



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

Pit edge/Drainage

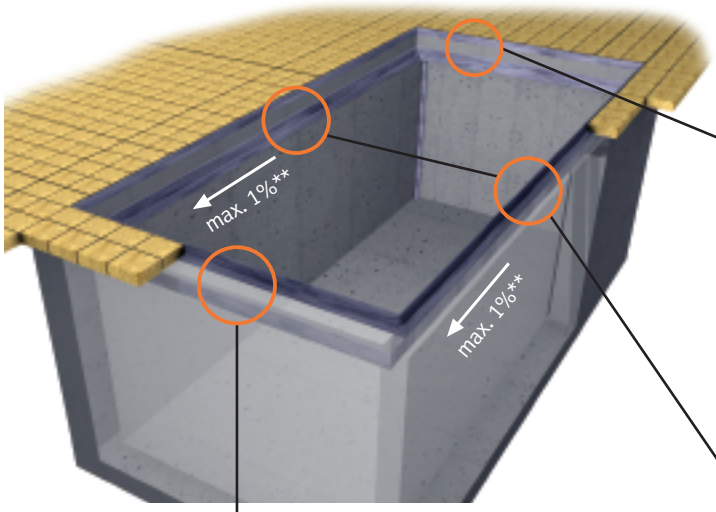
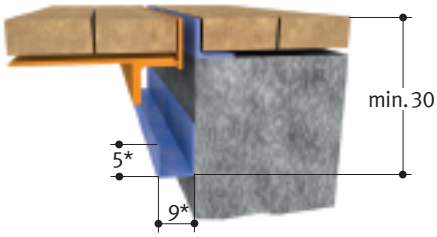


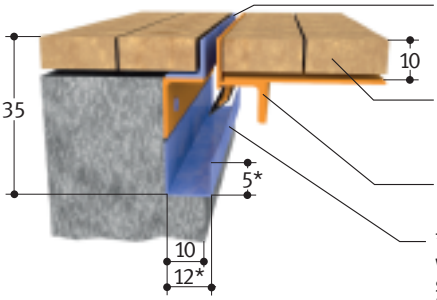
Illustration with stone coating, without parker

** max. 1% slope of drainage channel to entrance side

Pit edge rear (with stone coating)



Pit edge entrance (with stone coating)



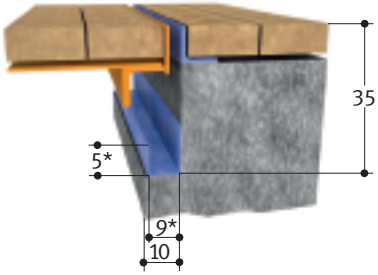
Containing profile, provided by customer

Sealing and stone coating, provided by customer (max. 250 kg/m²)

Orange parts: contained in delivery by Klaus

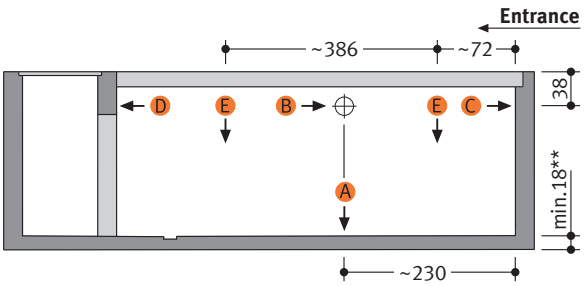
* circular drainage channel with connection into the sewerage system provided by customer

Pit edge lateral (with stone coating)

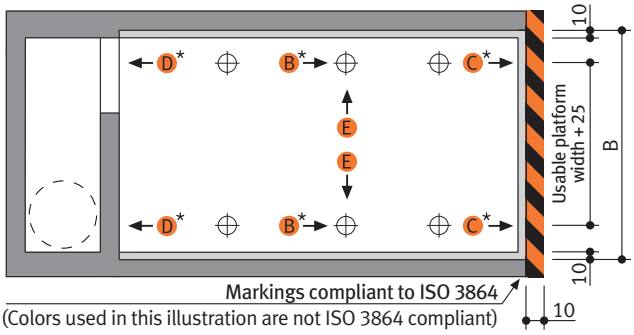


Load plan

Section



Top view



Forces

Stack Parker G61 (2000 kg)
top platform with stone coating

	EB	DB
A	+ 84 kN	+ 139 kN
B	± 13 kN	± 16 kN
C	+ 13 kN	+ 16 kN
D	+ 13 kN	+ 16 kN
E	+ 11 kN	+ 11 kN

Stack Parker G61 (2600 kg)
top platform with stone coating

	EB	DB
A	+ 93 kN	+ 160 kN
B	± 13 kN	± 17 kN
C	+ 13 kN	+ 17 kN
D	+ 13 kN	+ 17 kN
E	+ 13 kN	+ 13 kN

Stack Parker G62 (2000 kg)
top platform with stone coating

	EB	DB
A	+ 104 kN	+ 172 kN
B	± 9 kN	± 12 kN
C	+ 9 kN	+ 12 kN
D	+ 9 kN	+ 12 kN
E	+ 12 kN	+ 12 kN

Stack Parker G62 (2600 kg)
top platform with stone coating

	EB	DB
A	+ 112 kN	+ 208 kN
B	± 9 kN	± 13 kN
C	+ 9 kN	+ 13 kN
D	+ 9 kN	+ 13 kN
E	+ 13 kN	+ 13 kN

Stack Parker G63 (2000 kg)
top platform with stone coating

	EB	DB
A	+ 106 kN	+ 180 kN
B	± 8 kN	± 11 kN
C	+ 8 kN	+ 11 kN
D	+ 8 kN	+ 11 kN
E	+ 13 kN	+ 13 kN

Stack Parker G63 (2600 kg)
top platform with stone coating

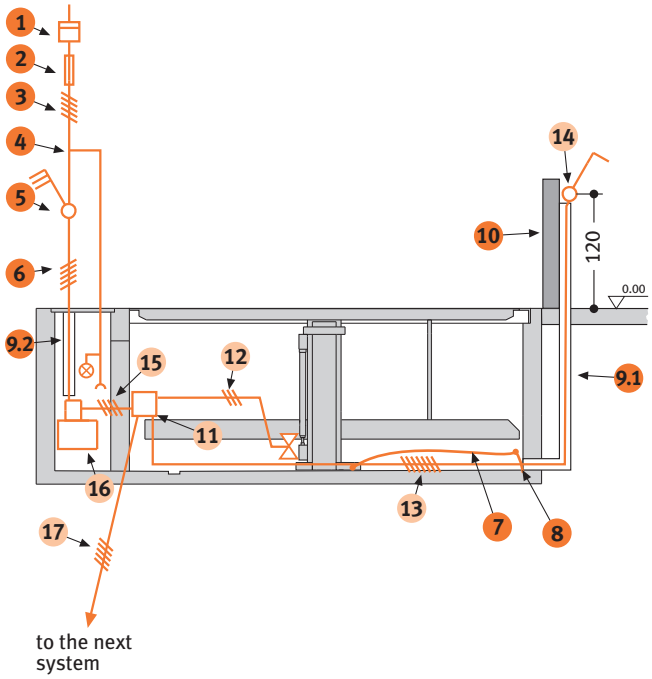
	EB	DB
A	+ 125 kN	+ 221 kN
B	± 8 kN	± 12 kN
C	+ 8 kN	+ 12 kN
D	+ 8 kN	+ 12 kN
E	+ 15 kN	+ 15 kN

* Force B is only applied if the stands are mounted to the sidewalls.
Forces C and D are applied if the stands are mounted to the sidewalls.
**The loading capacity of the base plate must be proved by a structural engineer. Possibly stronger base plate could be necessary.

Units are dowelled to the floor. Drilling depth: approx. 15 cm.
Floor and walls below the drive-in level are to be made of concrete (quality minimum C20/25)!

Electrical installation

Installation diagram



Electrical data (to be performed by the customer)

No.	Qunatity	Description	Position	Frequency
1	1	Electricity meter	in the supply line	
2	1	Main fuse: 3 x fuse 25 A [32 A*] (slow) or circuit breaker 3 x 25 A [32 A*] (trigger characteristic K or C)	in the supply line	1 per unit
3	1	Supply line 5 x 2,5 mm² [5 x 4 mm²*] (3 PH + N + PE) with marked wire and protective conductor	to main switch	1 per unit
4	1	Separate supply line (230 V) with lighting and power outlet	from supply line into the shaft	1 per system
5	1	Lockable main switch	defined at the plan evaluation	1 per unit
6	1	Supply line 5 x 2,5 mm² [5 x 4 mm²*] (3 PH + N + PE) with marked wire and protective conductor	from main switch to unit	1 per unit
7	every 10 m	Foundation earth connector	corner pit floor	
8	1	Equipotential bonding in accordance with DIN EN 60204 from foundation earth connector to the system		1 per system
9.1	1	Empty pipe DN 40 with taut wire	base pit to operating device	1 per system
9.2	1	Empty pipe DN 40 with taut wire	supply line to hydraulic unit	1 per system
10	1	Stand for operating device		1 per system

* = for 2 x 5.5 kW hydraulic unit

Electrical data (included in delivery of Klaus Multiparking)

No.	Description
11	Terminal box
12	Control line 3 x 1.5 mm² (PH + N + PE)
13	Control line 7 x 1.5 mm² with marked wire and protective conductor
14	Operating device
15	Control line 4 x 1.5 mm² with marked wire and protective conductor
16	Hydraulic unit 5.5 kW (2 x 5.5 kW = G62, G63), three-phase current, 400 V / 50 Hz
17	Control line 5 x 1.5 mm² with marked wire and protective conductor

Technical data

Range of application

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

Units

Low-noise power units mounted to rubber-bonded-to metal mountings are installed. Nevertheless we recommend that parking system's garage be built separately from the dwelling.

Available documents

- wall recess plans
- maintenance offer/contract
- declaration of conformity
- test sheet on airborne and slid-borne sound

Corrosion protection

See separate sheet regarding corrosion protection.

Railings

If the permissible drop opening is exceeded, railings are to be mounted on the systems. If there are traffic routes next to or behind the installations, railings compliant to DIN EN ISO 13857 must be installed by the customer. Railings must also be in place during construction.

Environmental conditions

Environmental conditions for the area of multiparking systems: Temperature range –10 to +40° C. Relative humidity 50 % at a maximum outside temperature of +40° C.
If lifting or lowering times are specified, they refer to an environmental temperature of +10° C and with the system set up directly next to the hydraulic unit. At lower temperatures or with longer hydraulic lines, these times increase.

Sound insulation

According to DIN 4109 (Sound insulation in buildings), para. 4, annotation 4, Klaus Multiparkers are part of the building services (garage systems).

Normal sound insulation:

DIN 4109, para. 4, Sound insulation against noises from building services.

Table 4 in para. 4.1 contains the permissible sound level values emitted from building services for personal living and working areas. According to line 2 the maximum sound level in personal living and working areas must not exceed 30 dB (A).
Noises created by users are not subject to the requirements (see table 4 , DIN 4109).

The following measures are to be taken to comply with this value:

- Sound protection package according to offer/order (Klaus Multiparking GmbH)
- Minimum sound insulation of building R'_w = 57 dB (to be provided by customer)

Increased sound insulation (special agreement):

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

Agreement: Maximum sound level in personal living and working areas 25 dB (A). *Noises created by users are not subject to the requirements (see table 4 , DIN 4109).*

The following measures are to be taken to comply with this value:

- Sound protection package according to offer/order (Klaus Multiparking GmbH)
- Minimum sound insulation of building R'_w = 62 dB (to be provided by customer)

Note: User noises are noises created by individual users in our Multiparking systems. These can be noises from accessing the platforms, slamming of vehicle doors, motor and brake noises.

To be performed by the customer

Safety fences
Any constraints that may be necessary according to DIN EN ISO 13857 in order to provide protection for the park pits for pathways directly in front, next to or behind the unit. This is also valid during construction. Railings for the system are included in the series delivery when necessary.

Numbering of parking spaces
Consecutive numbering of parking spaces.

Building services
Lighting, ventilation, fire extinguishing and fire alarm systems.

Drainage
The customer shall install a water drainage channel made of sheet metal around the periphery in the recess on the pit edge that leads to the sewerage system. A drainage pipe to the sewerage system can be installed in one corner of the pit at the lowest point on the water drainage channel.

To divert large amounts of water from the court area, we recommend that the customer install a water drainage channel around the periphery of the pit.

A drainage channel with a water collecting pit (sump) is to be installed in the back portion of the pit by the customer.

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 with a pit (platforms within the pit) 10 cm from the edge of the pit.

Wall cuttings
Any necessary wall cuttings according to page 1.

Operating device
The customer must provide a cable duct (Helfamin-tube) from pit floor to operating device. The location of the control element must be specified according to the project (control stand, house wall, etc.).

Electrical supply to the main switch / Foundation earth connector
Suitable electrical supply to the main switch and the control wire line must be provided by the customer during installation. The functionality can be monitored on site by our fitters together with the electrician. If this cannot be done during installation for some reason for which the customer is responsible, the customer must commission an electrician at their own expense and risk.

In accordance with DIN EN 60204 (Safety of Machinery. Electrical Equipment), grounding of the steel structure is necessary, provided by the customer (distance between grounding max. 10 m).

Installing vertical columns
In general, a crane must be supplied by the customer for installation of the vertical columns.

Type G61 UF: hook clearance min. 400 cm over access level, crane load approx. 700 kg.

Type G62 UF and G63 UF: hook clearance min. 700 cm over access level, crane load approx. 1400 kg.

Maintenance manhole
A separate maintenance manhole with manhole cover, ladder and a connecting passage to the pit must be installed by the customer. In multiple systems, a shared maintenance manhole may be sufficient, depending on the project.

Lighting
The customer must comply with DIN 67528 »Artificial lighting of parking areas and parking houses« for the parking structure lighting. The intensity of illumination in the pit and in the maintenance manhole must be min. 80 Lux.

Ventilation
To achieve a constant exchange of air, reduce humidity, prevent condensation, and reduce vehicle moisture (due to rain, snow, ice, etc.), it is recommended that the customer consult specialized engineers for heating, ventilation, and climate control and install a ventilation system. This will reduce or prevent the hazard of corrosion and its attendant failures.

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) and Double platform (DB)

General description
Multiparking system providing independent parking spaces for:
G61: 1 cars (EB), 1 x 2 cars (DB)
G62: 2 cars (EB), 2 x 2 cars (DB), one on top of the other each
G63: 3 cars (EB), 2 x 3 cars (DB), one on top of the other each

Dimensions are in accordance with the underlying dimensions of parking pit, height and width

The parking bays are accessed horinzotally (installation deviation ± 1 %).

Vehicles are positioned on each parking space using wheel stops on the right side (adjust according to operating instructions).

Operation via operating device with key interlock using master keys.

Operating instructions are attached to each operator's stand.

Multiparking system consisting of:
- 2 steel pillars (mounted on the floor)
- 2 sliding platforms (mounted to the steel pillars with sliding bearings)
- 1 upper platform (flooring provided by the customer – please contact Klaus Multiparking)
- 1 (G61), 2 (G62), 3 (G63) lower platforms
- 1 mechanic synchronization control system (to ensure synchronous operation of the hydraulic cylinders while lowering and lifting the platform)
- 2 hydraulic cylinders
- rigid supports (connect the platforms)
- Dowels, screws, connecting elements, bolts, etc.
- The platforms and parking spaces are end-to-end accessible for parking!

Upper platform consisting of:
- Covering plates
- Side members
- Cross members
- Screws, nuts

Lower platforms consisting of:
- Platform base sections
- Adjustable wheel stops
- Canted access plates
- Side members
- Central side member [only DB]
- Cross members
- Screws, nuts, washers, distance tubes, etc.

Hydraulic system consisting of:
- Hydraulic cylinder
- Magnetic 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

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 (5.5 kW [2 x 5.5 kW = G62, G63], 230/400 V, 50 Hz)
- Contactor (with thermal overcurrent relay and control fuse)
- Test manometer
- Pressure relief valve
- Hydraulic hoses (which reduce noise transmission onto the hydraulic pipe

We reserve the right to change this specification without further notice

The Klaus company reserves the right in the course of technical progress to use newer or other technologies, systems, processes, procedures or standards in the fulfillment of their obligations other than those originally offered provided the customer derives no disadvantage from their so doing.