

Garage without door (basement garage)

Loadable up to **2600 kg [5730 lbs]** A system for all height! Subsequently adjustable!

Dimensions

All space requirements are minimum finished dimensions.

Tolerances for space requirements $+3_0$ [$+1''$] ³

EB (single platform) = 2 vehicles

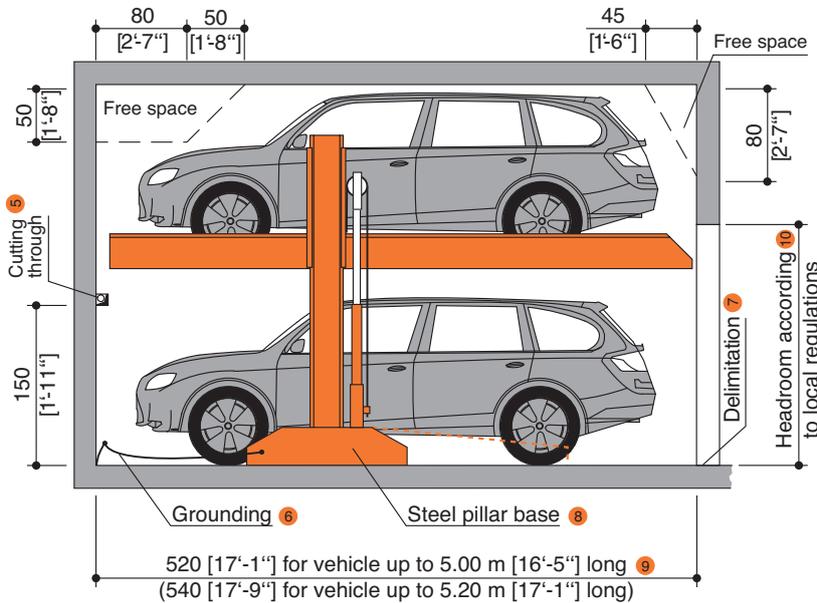
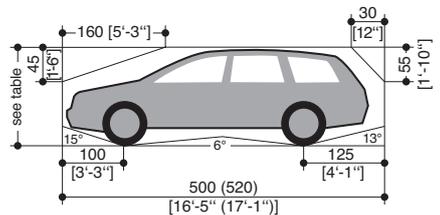
Dimensions: cm [ft] (1 cm = 0,393 in)
 Weights: kg [lbs] (1 kg = 2.2 lbs)
 Forces: kN [lbf] (1 kN = 224.8 lbf)
 Temperature: °C [°F] (0° C = 32° F)

Suitable for

Standard passenger cars:
 Limousine, Station Wagon, SUV, Van
 according to clearance and maximum surface load.

	Standard	Special ²
Width	190 cm [6'-3"] ⁴	190 cm [6'-3"] ⁴
Weight	max. 2000 kg [max. 4400 lbs]	max. 2600 kg [max. 5730 lbs]
Wheel load	max. 500 kg [max. 1100 lbs]	max. 650 kg [max. 1430 lbs]

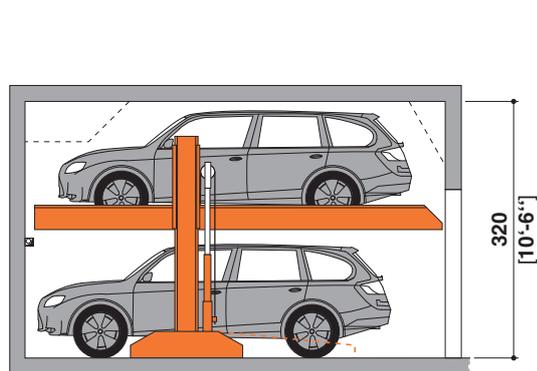
Clearance profile



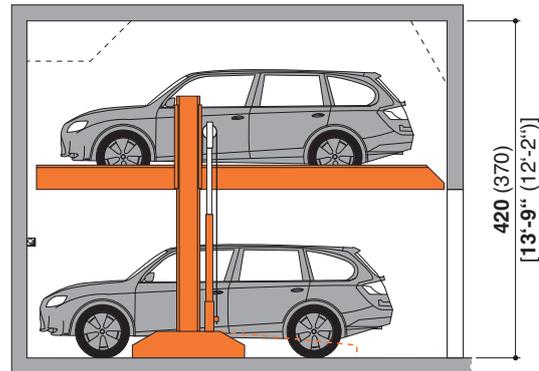
! Before lowering the platform, the vehicle parked on the lower parking space must be driven off!

Height dimensions

See page 2 for all height dimensions.



Smallest type



Biggest type

- Standard type
- Special system: maximum load for extra charge.
- To follow the minimum finished dimensions, make sure to consider the tolerances according to VOB, part C (DIN 18330 and 18331) and the DIN 18202.
- Car width for platform width 230 cm [7'-7"]. If wider platforms are used it is also possible to park wider cars.
- For dividing walls: cutting through 10 x 10 cm [4" x 4"].
- Potential equalization from foundation grounding connection to system (provided by the customer).
- In compliance with DIN EN 14010, 10 cm [4"] wide yellow-black markings compliant to ISO 3864 must be applied by the customer to the edge of the platform in the access area to mark the danger zone in front of the supporting surface of the upper platform edge (see „Load Plan“ Page 7)
- Variable steel pillar bases in two sizes (see „Load Plan“ Page 7).
- For convenient use of your parking space and due to the fact that the cars keep becoming longer we recommend a length of 540 cm [17'-9"].
- Must be at least as high as the greatest car height + 5 cm [+ 2"].

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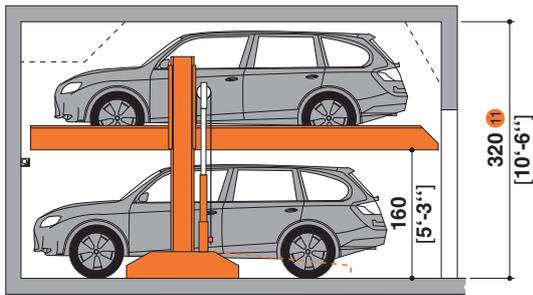
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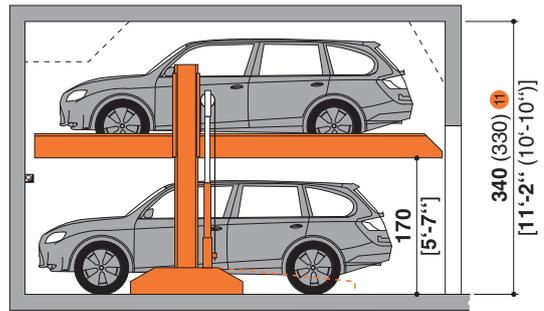
Height dimensions for garage without door (basement garage)

2061-160 [5'-3"]



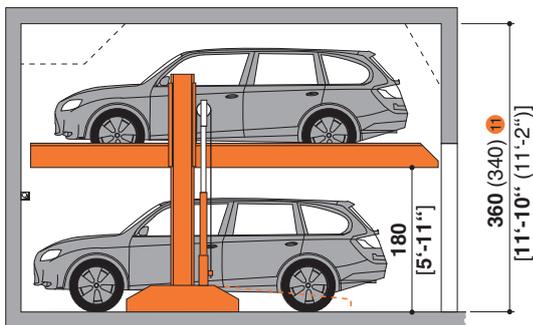
Height	Car height upper level	Car height lower level
320 [10'-6"]	150 [4'-11"]	150 [4'-11"]

2061-170 [5'-7"]



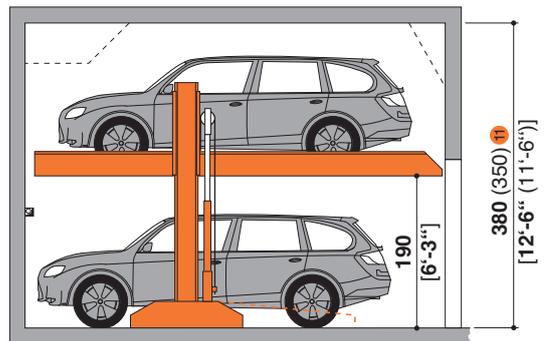
Height	Car height upper level	Car height lower level
340 [11'-2"]	160 [5'-3"]	160 [5'-3"]
(330) [10'-10"]	150 [4'-11"]	160 [5'-3"]

2061-180 [5'-11"]



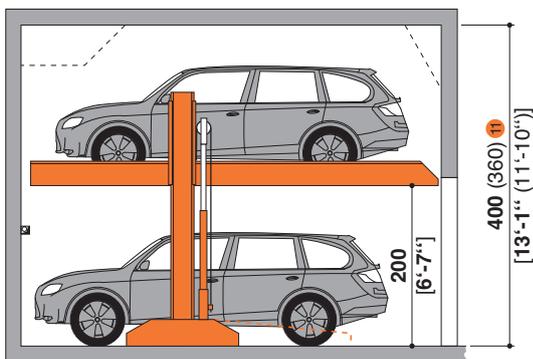
Height	Car height upper level	Car height lower level
360 [11'-10"]	170 [5'-7"]	170 [5'-7"]
(340) [11'-2"]	150 [4'-11"]	170 [5'-7"]

2061-190 [6'-3"]



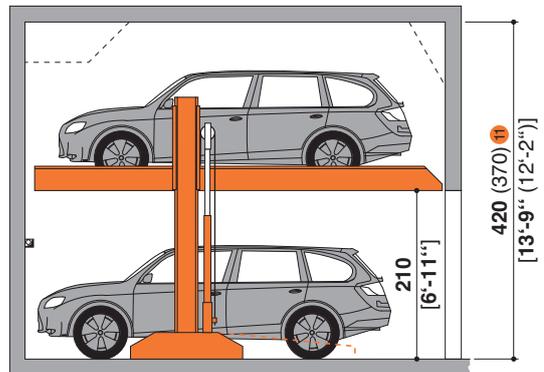
Height	Car height upper level	Car height lower level
380 [12'-6"]	180 [5'-11"]	180 [5'-11"]
(350) [11'-6"]	150 [4'-11"]	180 [5'-11"]

2061-200 [6'-7"]



Height	Car height upper level	Car height lower level
400 [13'-1"]	190 [6'-3"]	190 [6'-3"]
(360) [11'-10"]	150 [4'-11"]	190 [6'-3"]

2061-210 [6'-11"]



Height	Car height upper level	Car height lower level
420 [13'-9"]	200 [6'-7"]	200 [6'-7"]
(370) [12'-2"]	150 [4'-11"]	200 [6'-7"]

¹⁾ If a higher ceiling height is available higher cars can be parked.

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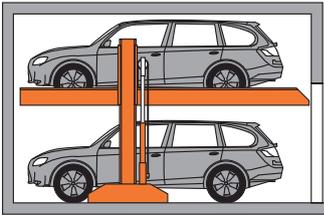
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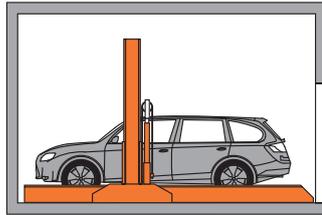
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Function

System lifted



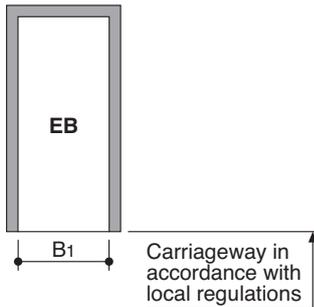
System lowered



Width dimensions for garage without door (basement garage)

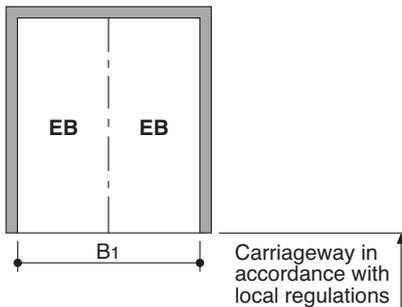
Dividing walls

Single Platform (EB)



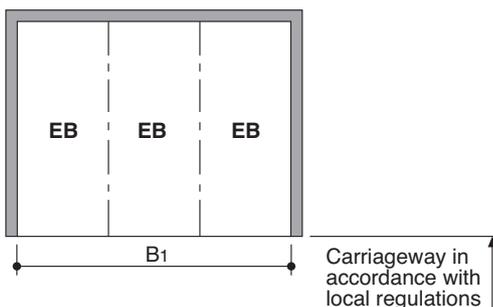
Usable platform width	B1
230 [7'-7"	260 [8'-6"
240 [7'-10"	270 [8'-10"
250 [8'-2"	280 [9'-2"
260 [8'-6"	290 [9'-6"
270 [8'-10"	300 [9'-10"

Double arrangement (2 x EB)



Usable platform width	B1
230 [7'-7"	520 [17'-1"
240 [7'-10"	540 [17'-9"
250 [8'-2"	560 [18'-4"
260 [8'-6"	580 [19'-0"
270 [8'-10"	600 [19'-8"

Tripple arrangement (3 x EB)



Usable platform width	B1
230 [7'-7"	780 [25'-7"
240 [7'-10"	810 [26'-7"
250 [8'-2"	840 [27'-7"
260 [8'-6"	870 [28'-7"
270 [8'-10"	900 [28'-6"



For parking boxes on the edges and boxes with intermediate walls we recommend our maximum platform width of 270 cm [8'-10"]. Problems may occur if smaller platform widths are used (depending on car type, access and individual driving behaviour and capability).

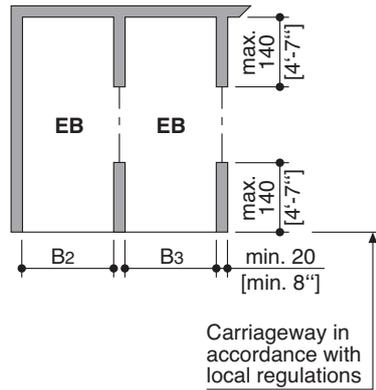
For larger limousines and SUV wider driveways are necessary (in particular on the boxes on the sides due to the missing manoeuvring radius).

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Width dimensions for garage without door (basement garage)

Columns in system zone

Single Platform (EB)



Usable platform width	B2	B3
230 [7'-7"]	255 [8'-4"]	245 [8'-0"]
240 [7'-10"]	265 [8'-8"]	255 [8'-4"]
250 [8'-2"]	275 [9'-0"]	265 [8'-8"]
260 [8'-6"]	285 [9'-4"]	275 [9'-0"]
270 [8'-10"]	295 [9'-8"]	285 [9'-4"]

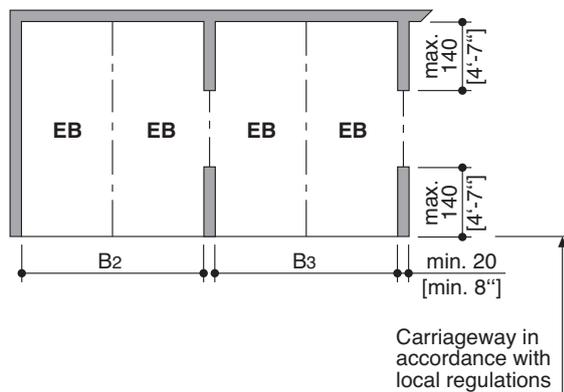
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Double arrangement (2 x EB)



Usable platform width	B2	B3
230 [7'-7"]	515 [16'-11"]	510 [16'-9"]
240 [7'-10"]	535 [17'-7"]	530 [17'-5"]
250 [8'-2"]	555 [18'-3"]	550 [18'-1"]
260 [8'-6"]	575 [18'-10"]	570 [18'-8"]
270 [8'-10"]	595 [19'-6"]	590 [19'-4"]

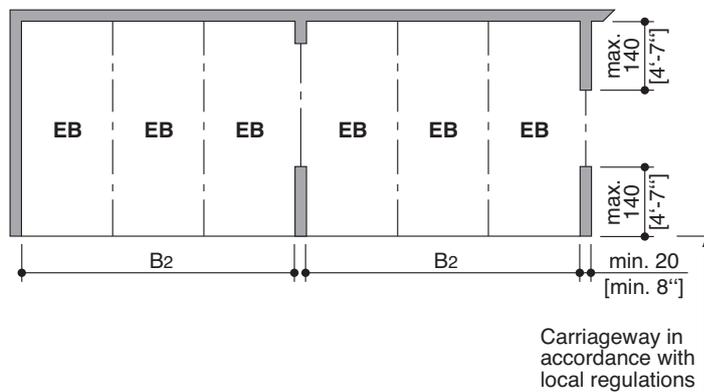
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Tripple arrangement (3 x EB)



Usable platform width	B2	B3
230 [7'-7"]	775 [25'-5"]	770 [25'-3"]
240 [7'-10"]	805 [26'-5"]	800 [26'-3"]
250 [8'-2"]	835 [27'-5"]	830 [27'-3"]
260 [8'-6"]	865 [28'-5"]	860 [28'-3"]
270 [8'-10"]	895 [29'-4"]	890 [29'-2"]

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For parking boxes on the edges and boxes with intermediate walls we recommend our maximum platform width of 270 cm [8'-10"]. Problems may occur if smaller platform widths are used (depending on car type, access and individual driving behaviour and capability).

For larger limousines and SUV wider driveways are necessary (in particular on the boxes on the sides due to the missing manoeuvring radius).

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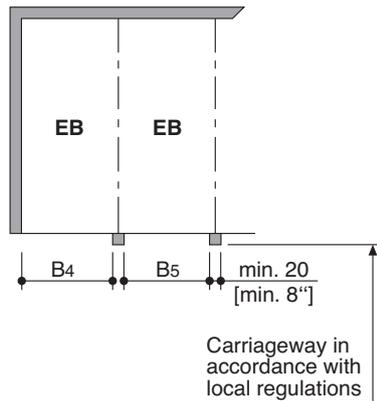
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Width dimensions for garage without door (basement garage)

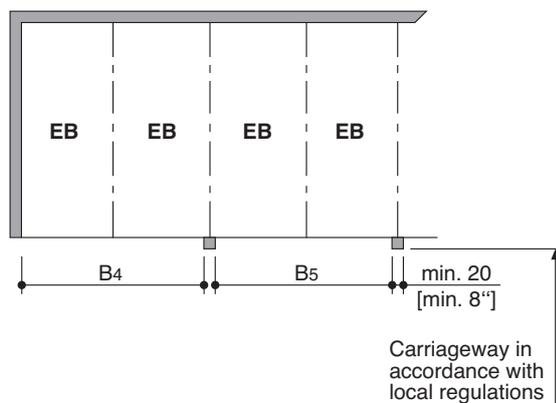
Columns outside of system zone

Single Platform (EB)



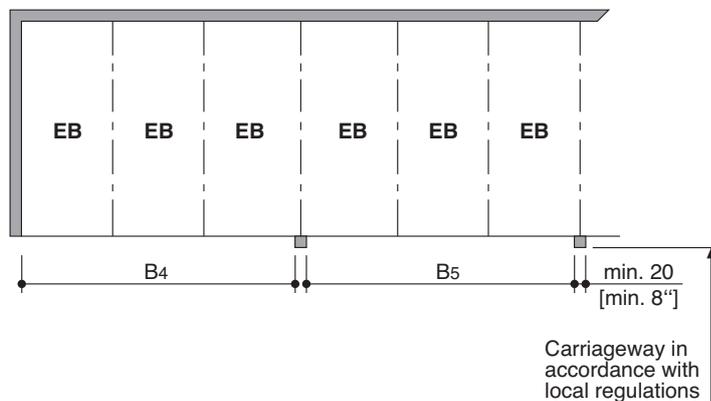
Usable platform width	B4	B5
230 [7'-7"]	250 [8'-2"]	240 [7'-10"]
240 [7'-10"]	260 [8'-6"]	250 [8'-2"]
250 [8'-2"]	270 [8'-10"]	260 [8'-6"]
260 [8'-6"]	280 [9'-2"]	270 [8'-10"]
270 [8'-10"]	290 [9'-6"]	280 [9'-2"]

Double arrangement (2 x EB)



Usable platform width	B4	B5
230 [7'-7"]	510 [16'-9"]	500 [16'-5"]
240 [7'-10"]	530 [17'-5"]	520 [17'-1"]
250 [8'-2"]	550 [18'-1"]	540 [17'-9"]
260 [8'-6"]	570 [18'-8"]	560 [18'-4"]
270 [8'-10"]	590 [19'-4"]	580 [19'-0"]

Tripple arrangement (3 x EB)



Usable platform width	B4	B5
230 [7'-7"]	770 [25'-3"]	760 [24'-11"]
240 [7'-10"]	800 [26'-3"]	790 [25'-11"]
250 [8'-2"]	830 [27'-3"]	820 [26'-11"]
260 [8'-6"]	860 [28'-3"]	850 [27'-11"]
270 [8'-10"]	890 [29'-2"]	880 [28'-10"]



For parking boxes on the edges and boxes with intermediate walls we recommend our maximum platform width of 270 cm [8'-10"]. Problems may occur if smaller platform widths are used (depending on car type, access and individual driving behaviour and capability).

For larger limousines and SUV wider driveways are necessary (in particular on the boxes on the sides due to the missing manoeuvring radius).

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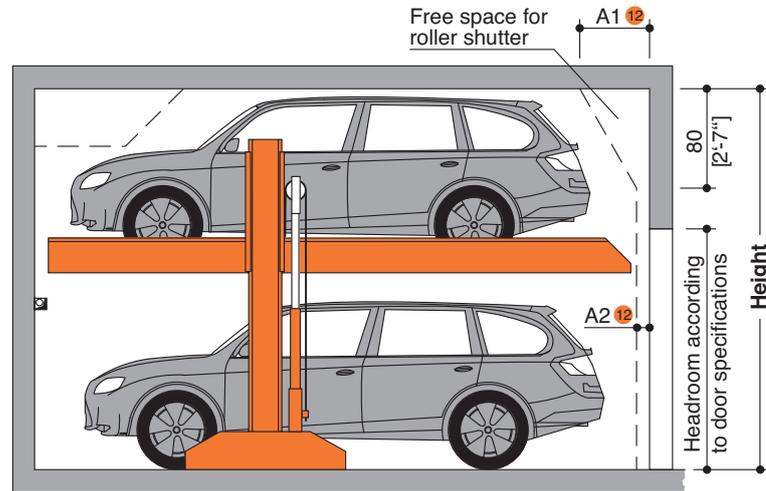
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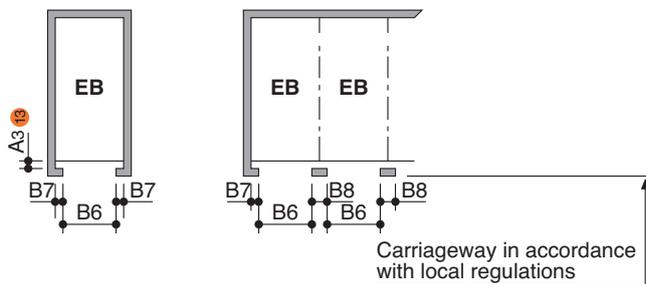
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Garage with door



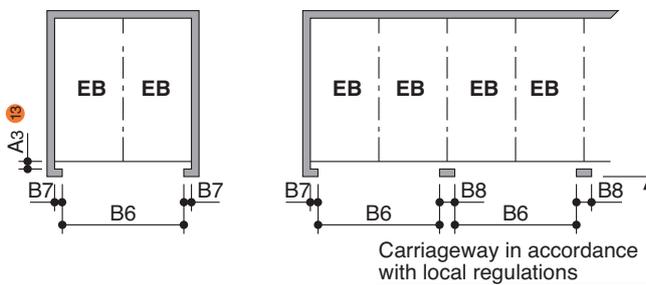
Width dimensions for garage with door

Single platform (EB)



Usable platform width	Door entrance width B6	B7	B8
230 [7'-7"]	230 [7'-7"]	15 [6"]	30 [12"]
240 [7'-10"]	240 [7'-10"]	15 [6"]	30 [12"]
250 [8'-2"]	250 [8'-2"]	15 [6"]	30 [12"]
260 [8'-6"]	260 [8'-6"]	15 [6"]	30 [12"]
270 [8'-10"]	270 [8'-10"]	15 [6"]	30 [12"]

Double arrangement (2 x EB)



Usable platform width	Door entrance width B6	B7	B8
230 [7'-7"]	490 [16'-1"]	15 [6"]	30 [12"]
240 [7'-10"]	510 [16'-9"]	15 [6"]	30 [12"]
250 [8'-2"]	530 [17'-5"]	15 [6"]	30 [12"]
260 [8'-6"]	550 [18'-1"]	15 [6"]	30 [12"]
270 [8'-10"]	570 [18'-8"]	15 [6"]	30 [12"]

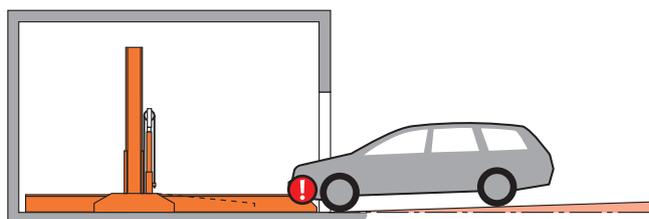
! For parking boxes on the edges and boxes with intermediate walls we recommend our maximum platform width of 270 cm [8'-10"]. Problems may occur if smaller platform widths are used (depending on car type, access and individual driving behaviour and capability).

For larger limousines and SUV wider driveways are necessary (in particular on the boxes on the sides due to the missing manoeuvring radius).

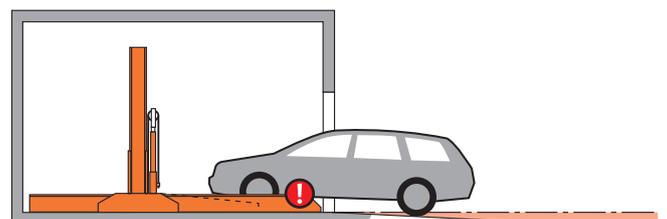
12 Dimensions A1, A2 and A3 must be coordinated with the door supplier (provided by the customer).

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

Approach



maximum
descending
slope 4 %



maximum
ascending
slope 14 %

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

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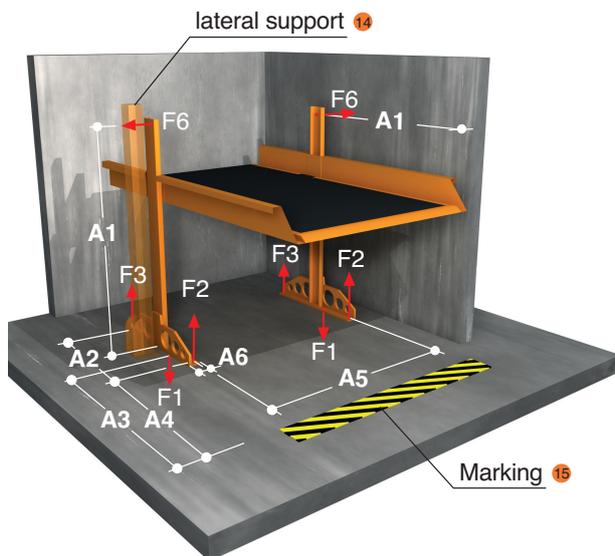
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Load plan Option 1: short steel pillar base



Dimensions

A1	300	[9'-10"]
A2	115	[3'-9"]
A3	290	[9'-6"]
A4	245	[8'-0"]
A5	LP+10	[LP+4"]
A6	12	[0'-5"]

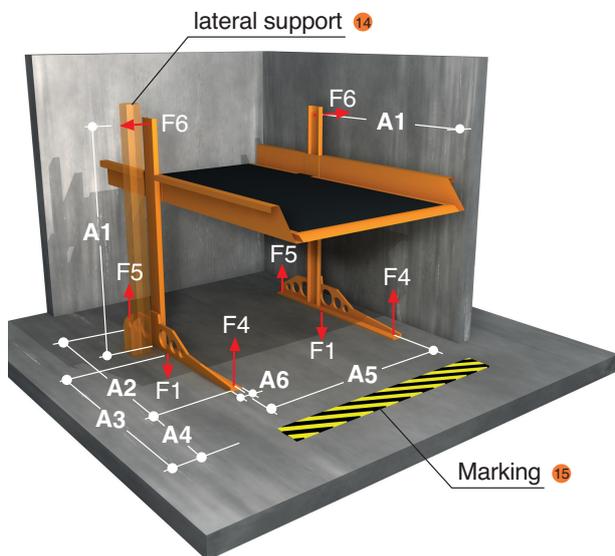
Platform load in kg

Platform load	F1	F2	F3	F6
2000 kg	+30	+1,1	+7,4	±1
2600 kg	+36	+1,4	+9,3	±1

Platform load in lbs

Platform load	F1	F2	F3	F6
4400 lbs	+6,744	+247	+1,664	±225
5730 lbs	+8,093	+315	+2,091	±225

Load plan Option 2: long steel pillar base



Dimensions

A1	300	[9'-10"]
A2	245	[8'-0"]
A3	290	[9'-6"]
A4	115	[3'-9"]
A5	LP+10	[LP+4"]
A6	12	[0'-5"]

Platform load in kg

Platform load	F1	F4	F5	F6
2000 kg	+30	+0,5	+7,7	±1
2600 kg	+36	+0,7	+9,8	±1

Platform load in lbs

Platform load	F1	F4	F5	F6
4400 lbs	+6,744	+112	+1,731	±225
5730 lbs	+8,093	+157	+2,203	±225

! The steel pillar base can be selected optionally (short or long). Please make sure to note the corresponding forces that apply!

Units are dowelled to the floor. Drilling depth: approx. 15 cm [6"].

Floor and walls are to be made of concrete (quality minimum C20/25)!

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

14 The system must be laterally supported on both sides. If there are no walls on the sides, an additional stand must be attached. For this stand, a base area of 40 x 25 cm [1'-4" x 10"] is required (quality minimum C20/25).

15 Marking compliant to ISO 3864 (colors used in this illustration are not ISO 3864 compliant)

16 All forces in kN

17 All forces in lbf

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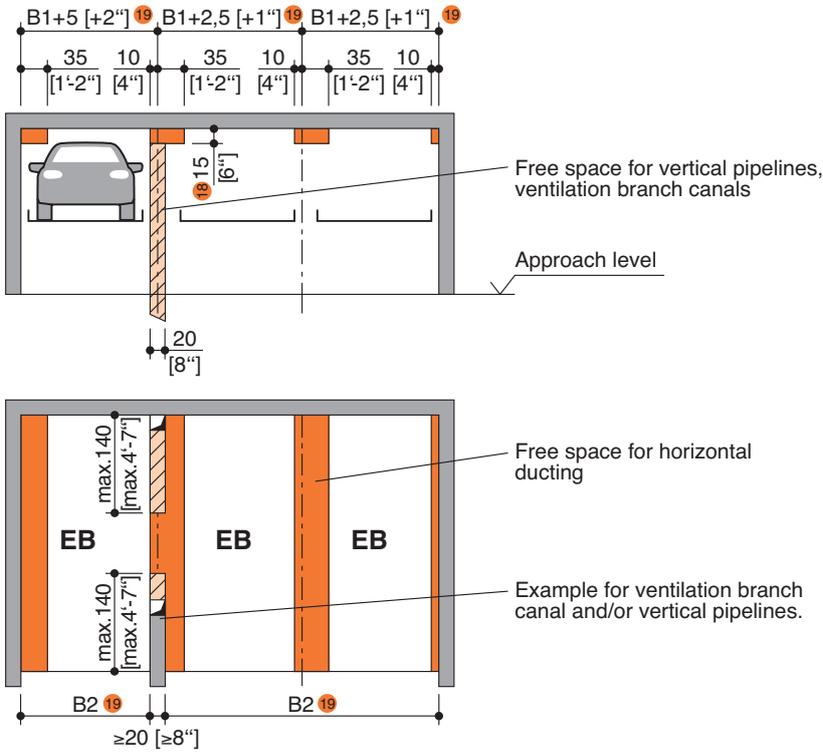
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Installation data – Free space for longitudinal and vertical ducts (e.g. ventilation)



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

- 15** Size 15 cm [6"] is reduced to 5 cm [2"] for type 2061-160.
- 15** Dimensions B1, B2 and B3 see page 3 and 4.

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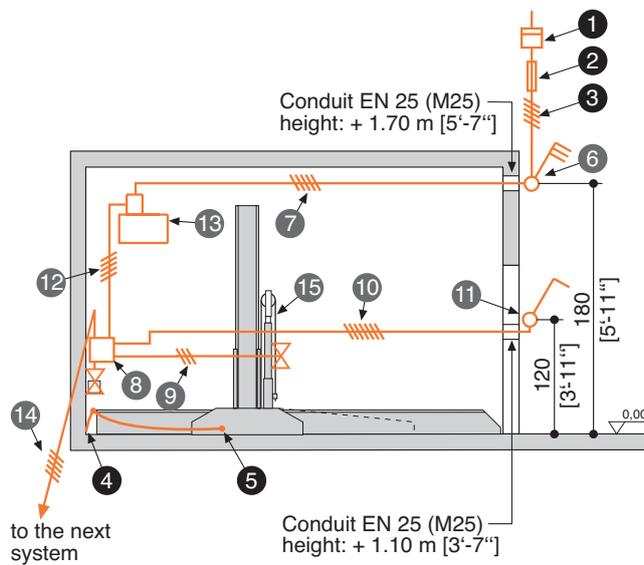
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Electrical installation

Installation diagram



Electrical data (to be performed by the customer)

No.	Quantity	Description	Position	Frequency
1	1	Electricity meter	in the supply line	
2	1	Main fuse: 3 x fuse 16 A (slow) or circuit breaker 3 x 16 A (trigger characteristic K or C) 2 x fuse 32 A (slow) or circuit breaker 2 x 32 A (trigger characteristic K or C) 3 x fuse 25 A (slow) or circuit breaker 3 x 25 A (trigger characteristic K or C)	in the supply line	1 per 3,0 kW unit 1 per 3,7 kW unit 1 per 4,0 kW unit
3	1	Supply line 5 x 2,5 mm ² (3 PH + N + PE) with marked wire and protective conductor Supply line 4 x AWG 10 (2 PH + PE) with marked wire and protective conductor Supply line 4 x AWG 12 (3 PH + PE) with marked wire and protective conductor	to main switch	1 per 3,0 kW unit 1 per 3,7 kW unit 1 per 4,0 kW unit
4	every 10 m	Foundation earth connector	corner pit floor	
5	1	Equipotential bonding in accordance with DIN EN 60204 from foundation earth connector to the system		1 per system

Electrical data (included in delivery of KLAUS Multiparking)

No.	Description
6	Lockable main switch
7	Supply line 5 x 2,5 mm ² (3 PH + N + PE) with marked wire and protective conductor (for 3,0 kW unit) Supply line 4 x AWG 10 (2 PH + PE) with marked wire and protective conductor (for 3,7 kW unit) Supply line 4 x AWG 12 (3 PH + PE) with marked wire and protective conductor (for 4,0 kW unit)
8	Terminal box
9	Control line 3 x 0,75 mm ² (PH + N + PE)
10	Control line 7 x 1,5 mm ² with marked wire and protective conductor
11	Operating device
12	Control line 5 x 1,5 mm ² with marked wire and protective conductor
13	Hydraulic unit 3,0 kW, three-phase current, 230/400 V / 50 Hz 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
14	Control line 5 x 1,5 mm ² with marked wire and protective conductor
15	Chain control

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To be performed by the customer

Safety fences

Any constraints that may be necessary according to DIN EN ISO 13857 in order to provide protection, for pathways directly in front, next to or behind the unit. This is also valid during construction.

Numbering of parking spaces

Consecutive numbering of parking spaces.

Building services

Any required lighting, ventilation, fire extinguishing and fire alarm systems as well as clarification and compliance with the relevant regulatory requirements.

Marking

In compliance with DIN EN 14010, 10 cm [4"] wide yellow-black markings compliant to ISO 3864 must be applied by the customer to the edge of the platform in the access area to mark the danger zone in front of the supporting surface of the upper platform edge.

Wall cuttings

Any necessary wall cuttings according to page 1.

Electrical supply to the main switch / Foundation earth connector

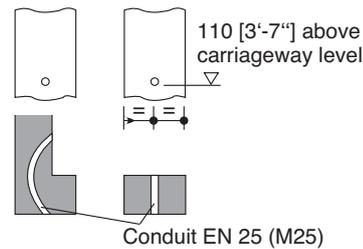
Suitable electrical supply to the main switch must be provided by the customer during installation. The functionality can be monitored on site by our fitters together with the electrician. If this cannot be done during installation for some reason for which the customer is responsible, the customer must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

In accordance with DIN EN 60204 (Safety of Machinery. Electrical Equipment), grounding of the steel structure is necessary, provided by the customer (distance between grounding max. 10 m [32'-10"]).

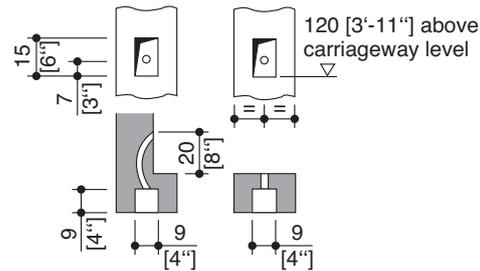
Operating device

Cable conduits and recesses for operating device (for double wing doors: please contact the local agency of KLAUS Multiparking).

Operating device exposed



Operating device concealed / Not available for UL operating device



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

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Description

Description Single platform (EB)

General description

Multiparking system providing dependent parking spaces for 2 cars one on top of the other each. The lower vehicle parks directly on the floor plate. The vehicle parked on the bottom must be driven out before lowering the platform.

The height of the platform can be adjusted flexibly (even subsequently).

Adjustment of maximum load of 2,600 kg can be made subsequently. Dimensions are in accordance with the underlying dimensions of parking pit, height and width

The parking bays are accessed horizontally (installation deviation $\pm 1\%$).

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

Operation via operating device with hold-to-run-device using master keys.

The operating elements are usually mounted either in front of the column or on the outside of the door frame

Operating instructions are attached to each operator's stand.

For garages with doors at the front of the parking system the special dimensional requirements have to be taken into account.

Multiparking system consisting of:

- 2 steel pillars with bases that are mounted on the floor (short or long steel pillar bases can be selected optionally).
- 2 sliding platforms (mounted to the steel pillars with sliding bearings)
- 1 platform
- 1 mechanic synchronization control system (to ensure synchronous operation of the hydraulic cylinders while lowering and lifting the platform)
- 1 hydraulic cylinder
- 1 automatic hydraulic safety valve (prevents accidental lowering of the platform while accessing the platform)
- Dowels, screws, connecting elements, bolts, etc.
- The platforms and parking spaces are end-to-end accessible for parking!

Platforms consisting of:

- Platform base sections
- Adjustable wheel stops
- Cantled access plates
- Side members
- Cross members
- Screws, nuts, washers, distance tubes, etc.

Hydraulic system consisting of:

- Hydraulic cylinder
- Solenoid valve
- Safety valve
- Hydraulic conduits
- Screwed joints
- High-pressure hoses
- Installation material

Electric system consisting of:

- Operating device (Emergency Stop, lock, 1 master key per parking space)
- Terminal box at wall valve
- Electrical locking device
- Chain control

Hydraulic unit consisting of:

- Hydraulic power unit (low-noise, installed onto a console with a rubber-bonded-to-metal mounting)
- Hydraulic oil reservoir
- Oil filling
- Internal geared wheel pump
- Pump holder
- Clutch
- AC-motor
- Contactor (with thermal overcurrent relay and control fuse)
- Test manometer
- Pressure relief valve
- Hydraulic hoses (which reduce noise transmission onto the hydraulic pipe)

We reserve the right to change this specification without further notice

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