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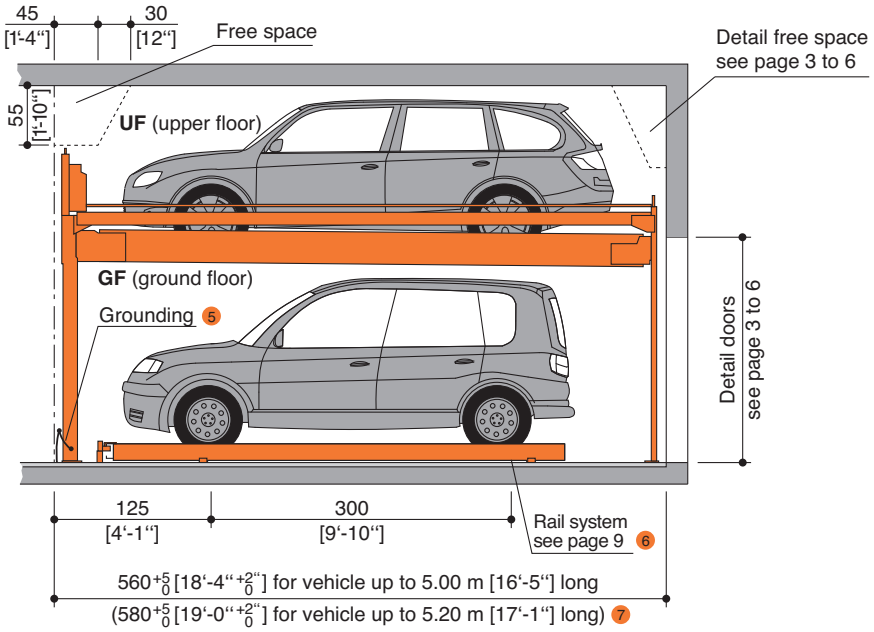
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PRODUCT DATA

trendvario 4000

2000 kg [4400 lbs] 1
2600 kg [5730 lbs] 2

Loadable up to 2600 kg [5730 lbs] Single parking spaces can also be upgraded to handle heavier loads at a later date!



Dimensions

Tolerances for space requirements +3 0 [+1“ 0] 3

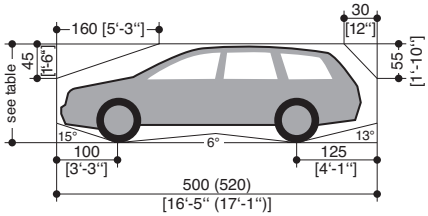
Dimensions:	cm [ft]	(1 cm = 0,393 in)
Weights:	kg [lbs]	(1 kg = 2.2 lbs)
Forces:	kN [lbf]	(1 kN = 224.8 lbf)
Temperature:	°C [°F]	(0° C = 32° F)

Suitable for

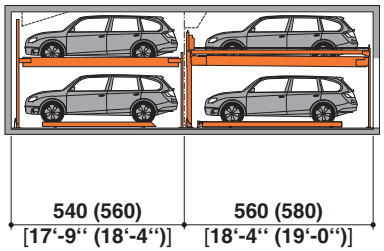
Standard passenger cars:
Limousine, Station Sagon, SUV, Van according to clearance and maximum surface load.

	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]

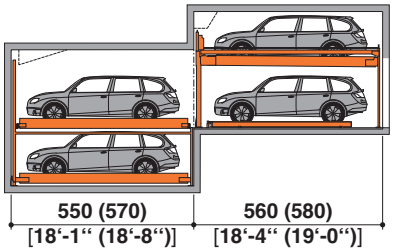
Clearance profile



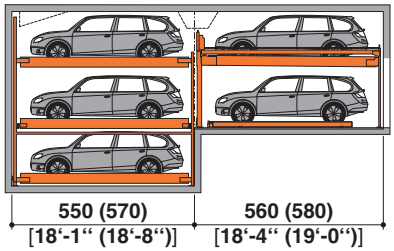
Combination 4200 with 4000



Combination 4100 with 4000

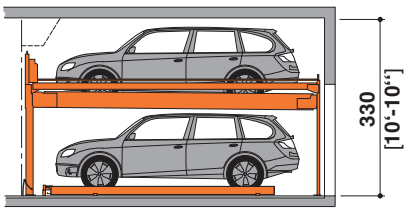


Combination 4300 with 4000

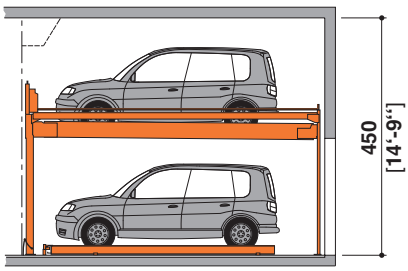


Height dimensions

See page 2 for all pit and height dimensions.



Smallest type



Biggest type

1 Standard type
2 Special system: maximum load for extra charge.
3 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.
4 Car width for platform width 230 cm [7’-7”]. If wider platforms are used it is also possible to park wider cars.
5 Potential equalization from foundation grounding connection to system (provided by the customer).
6 Tolerances for the evenness of the carriageway (floor) must be strictly complied with in accordance with DIN (=German Industrial Standard) No. 18202, chart 3, line 3.
7 For convenient use of your parking space and due to the fact that the cars keep becoming longer we recommend a pit length of 580 cm [19’-0”].

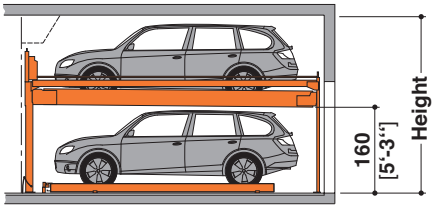
! If sprinklers are required make sure to provide the necessary free spaces during the planning stage.

TrendVario 4000 | Code number 585.84.710-012 | Version 04.2019

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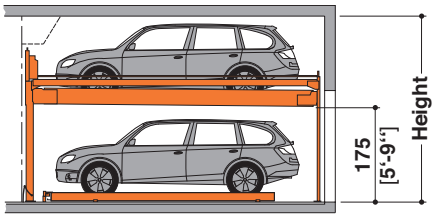
Height dimensions

4000-160 [5'-3"]



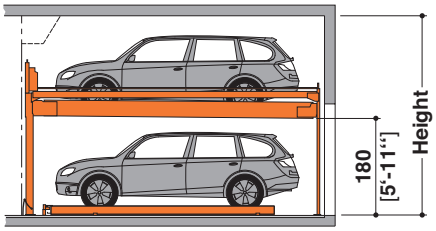
Height	Car height UF	Car height GF
330 [10'-10"]	150 [4'-11"]	150 [4'-11"]
335 [11'-0"]	155 [5'-1"]	150 [4'-11"]
340 [11'-2"]	160 [5'-3"]	150 [4'-11"]

4000-175 [5'-9"]



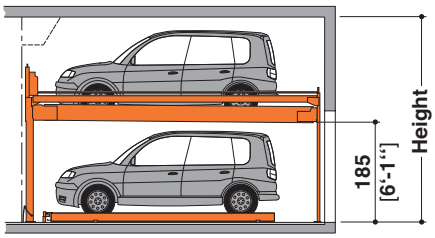
Height	Car height UF	Car height GF
345 [11'-4"]	150 [4'-11"]	165 [5'-5"]
360 [11'-10"]	165 [5'-5"]	165 [5'-5"]
370 [12'-2"]	175 [5'-9"]	165 [5'-5"]

4000-180 [5'-11"]



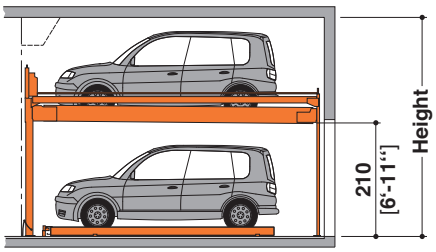
Height	Car height UF	Car height GF
350 [11'-6"]	150 [4'-11"]	170 [5'-7"]
365 [12'-0"]	165 [5'-5"]	170 [5'-7"]
380 [12'-6"]	180 [5'-11"]	170 [5'-7"]

4000-185 [6'-11"]



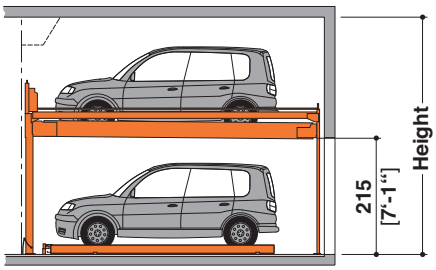
Height	Car height UF	Car height GF
355 [11'-8"]	150 [4'-11"]	175 [5'-9"]
375 [12'-4"]	170 [5'-7"]	175 [5'-9"]
390 [12'-10"]	185 [6'-1"]	175 [5'-9"]

4000-210 [6'-11"]



Height	Car height UF	Car height GF
380 [12'-6"]	150 [4'-11"]	200 [6'-7"]
405 [13'-3"]	175 [5'-9"]	200 [6'-7"]
440 [14'-5"]	210 [6'-11"]	200 [6'-7"]

4000-215 [7'-1"]

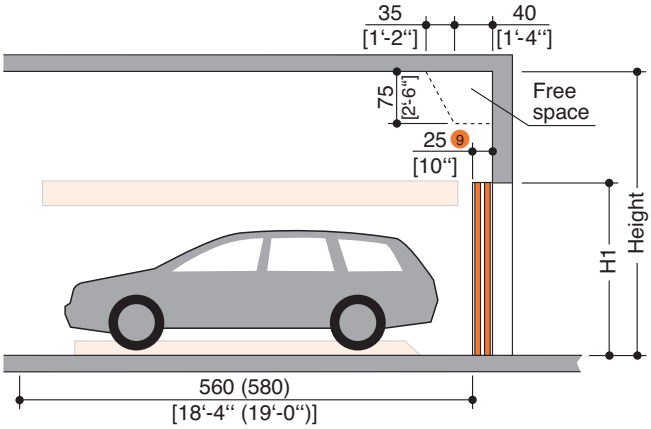


Height	Car height UF	Car height GF
385 [12'-8"]	150 [4'-11"]	205 [6'-9"]
415 [13'-7"]	180 [5'-11"]	205 [6'-9"]
450 [14'-9"]	215 [7'-1"]	205 [6'-9"]

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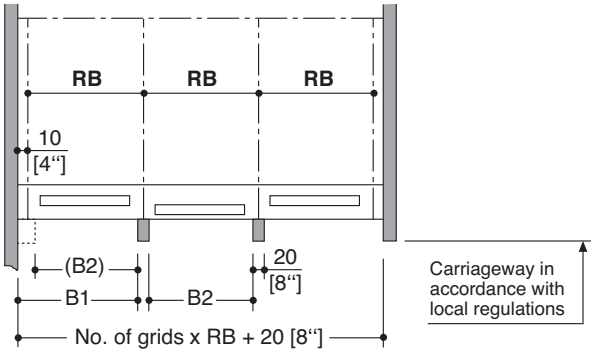
Garages with sliding doors (standard) I Widths dimensions

Sliding door behind columns



Type	GT	Height	H1
4000	160 [5‘-3“]	330/335/340 [10‘-10“/11‘-0“/11‘-2“]	210 [6‘-11“]
4000	175 [5‘-9“]	345/360/370 [11‘-4“/11‘-10“/12‘-2“]	220 [7‘-3“]
4000	180 [5‘-11“]	350/365/380 [11‘-6“/12‘-0“/12‘-6“]	210 [6‘-11“]
4000	185 [6‘-1“]	355/375/390 [11‘-8“/12‘-4“/12‘-10“]	210 [6‘-11“]
4000	210 [6‘-11“]	380/405 [12‘-6“/13‘-3“]	220 [7‘-3“]
4000	210 [6‘-11“]	440 [14‘-5“]	230 [7‘-7“]
4000	215 [7‘-1“]	385/415 [12‘-8“/13‘-7“]	225 [7‘-5“]
4000	215 [7‘-1“]	450 [14‘-9“]	235 [7‘-9“]

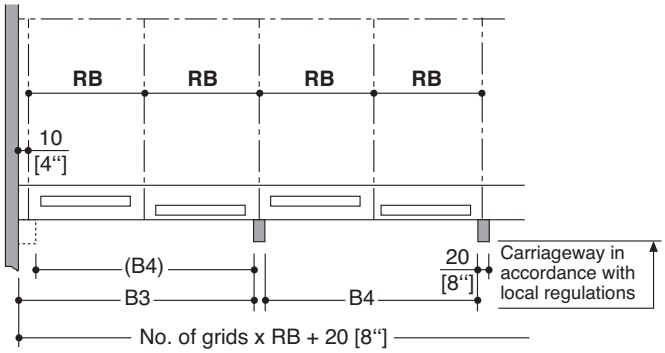
Columns per each grid unit



Usable platform width

UF	GF	RB 8	B1	B2
230 [7‘-7“]	220 [7‘-3“]	250 [8‘-2“]	250 [8‘-2“]	230 [7‘-7“]
240 [7‘-10“]	230 [7‘-7“]	260 [8‘-6“]	260 [8‘-6“]	240 [7‘-10“]
250 [8‘-2“]	**240 [7‘-10“]**	**270 [8‘-10“]**	**270 [8‘-10“]**	**250 [8‘-2“]**
260 [8‘-6“]	**250 [8‘-2“]**	**280 [9‘-2“]**	**280 [9‘-2“]**	**260 [8‘-6“]**
270 [8‘-10“]	**260 [8‘-6“]**	**290 [9‘-6“]**	**290 [9‘-6“]**	**270 [8‘-10“]**

Columns every second grid unit



Usable platform width

UF	GF	RB 8	B3	B4
230 [7‘-7“]	220 [7‘-3“]	250 [8‘-2“]	500 [16‘-5“]	480 [15‘-9“]
240 [7‘-10“]	230 [7‘-7“]	260 [8‘-6“]	520 [17‘-1“]	500 [16‘-5“]
250 [8‘-2“]	**240 [7‘-10“]**	**270 [8‘-10“]**	**540 [17‘-9“]**	**520 [17‘-1“]**
260 [8‘-6“]	**250 [8‘-2“]**	**280 [9‘-2“]**	**560 [18‘-4“]**	**540 [17‘-9“]**
270 [8‘-10“]	**260 [8‘-6“]**	**290 [9‘-6“]**	**580 [19‘-0“]**	**560 [18‘-4“]**

According to the ASR A1.7 , an inspection book is required for the commercial use of a gate with electric drive. Prior to commissioning, and then once a year, the gate has to be inspected by an expert and the findings entered in the inspection book. The inspection has to be carried out independent of any maintenance work.

For parking boxes on the edges and boxes with intermediate walls we recommend our maximum platform width of 270 cm [8’-10”]. Please consider adjoining grids. 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).

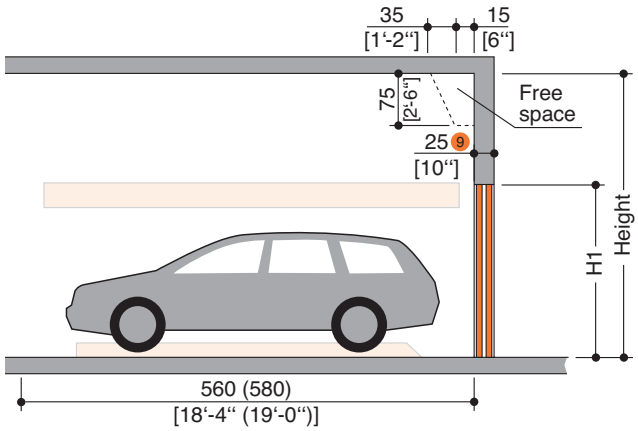
8 RB = Grid unit width **must** strictly conform to dimensions quoted!

9 Only applies to manually operated doors. The electrically driven doors must have 35 cm [1’-2”].

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Garages with sliding doors (standard) I Widths dimensions

Sliding door between columns

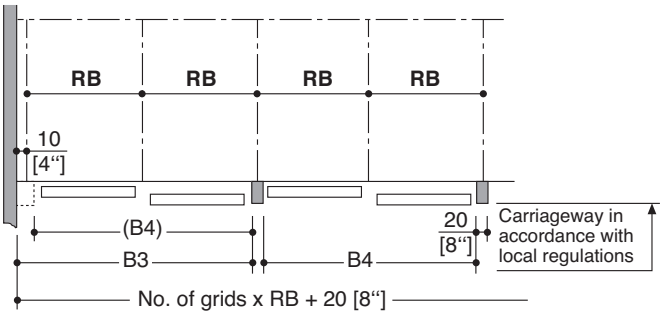


Type	GT	Height	H1
4000	160 [5‘-3“]	330/335/340 [10‘-10“/11‘-0“/11‘-2“]	220 [7‘-3“]
4000	175 [5‘-9“]	345/360/370 [11‘-4“/11‘-10“/12‘-2“]	230 [7‘-7“]
4000	180 [5‘-11“]	350/365/380 [11‘-6“/12‘-0“/12‘-6“]	220 [7‘-3“]
4000	185 [6‘-1“]	355/375/390 [11‘-8“/12‘-4“/12‘-10“]	220 [7‘-3“]
4000	210 [6‘-11“]	380/405 [12‘-6“/13‘-3“]	230 [7‘-7“]
4000	210 [6‘-11“]	440 [14‘-5“]	240 [7‘-10“]
4000	215 [7‘-1“]	385/415 [12‘-8“/13‘-7“]	235 [7‘-9“]
4000	215 [7‘-1“]	450 [14‘-9“]	245 [8‘-0“]

Columns per each grid unit

Not available!

Columns every second grid unit



Usable platform width

UF	GF	RB 8	B3	B4
230 [7‘-7“]	220 [7‘-3“]	250 [8‘-2“]	500 [16‘-5“]	480 [15‘-9“]
240 [7‘-10“]	230 [7‘-7“]	260 [8‘-6“]	520 [17‘-1“]	500 [16‘-5“]
250 [8‘-2“]	**240 [7‘-10“]**	**270 [8‘-10“]**	**540 [17‘-9“]**	**520 [17‘-1“]**
260 [8‘-6“]	**250 [8‘-2“]**	**280 [9‘-2“]**	**560 [18‘-4“]**	**540 [17‘-9“]**
270 [8‘-10“]	**260 [8‘-6“]**	**290 [9‘-6“]**	**580 [19‘-0“]**	**560 [18‘-4“]**

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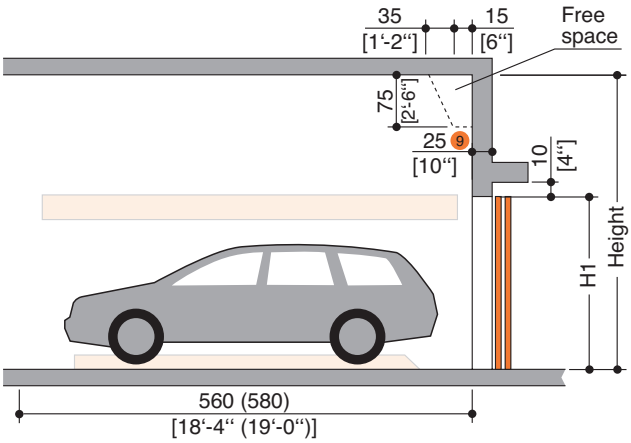
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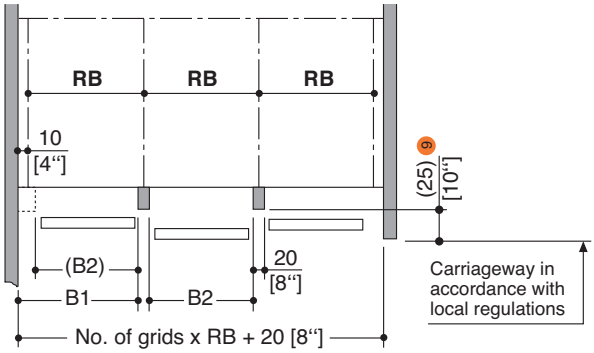
Garages with sliding doors (standard) I Widths dimensions

Sliding door in front of columns



Type	GT	Height	H1
4000	160 [5'-3"]	330/335/340 [10'-10"/11'-0"/11'-2"]	210 [6'-11"]
4000	175 [5'-9"]	345/360/370 [11'-4"/11'-10"/12'-2"]	220 [7'-3"]
4000	180 [5'-11"]	350/365/380 [11'-6"/12'-0"/12'-6"]	210 [6'-11"]
4000	185 [6'-1"]	355/375/390 [11'-8"/12'-4"/12'-10"]	210 [6'-11"]
4000	210 [6'-11"]	380/405 [12'-6"/13'-3"]	220 [7'-3"]
4000	210 [6'-11"]	440 [14'-5"]	230 [7'-7"]
4000	215 [7'-1"]	385/415 [12'-8"/13'-7"]	225 [7'-5"]
4000	215 [7'-1"]	450 [14'-9"]	235 [7'-9"]

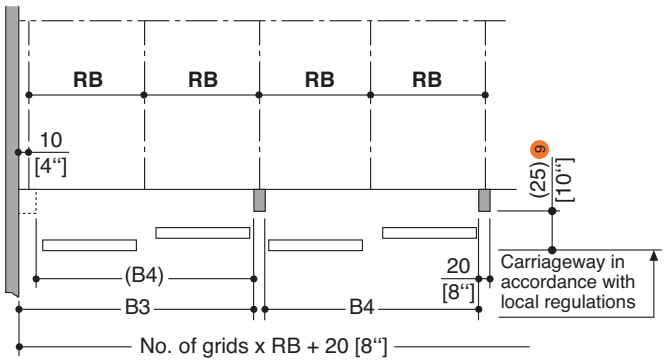
Columns per each grid unit



Usable platform width

UF	GF	RB 8	B1	B2
230 [7'-7"]	220 [7'-3"]	250 [8'-2"]	250 [8'-2"]	230 [7'-7"]
240 [7'-10"]	230 [7'-7"]	260 [8'-6"]	260 [8'-6"]	240 [7'-10"]
250 [8'-2"]	**240 [7'-10"]**	**270 [8'-10"]**	**270 [8'-10"]**	**250 [8'-2"]**
260 [8'-6"]	**250 [8'-2"]**	**280 [9'-2"]**	**280 [9'-2"]**	**260 [8'-6"]**
270 [8'-10"]	**260 [8'-6"]**	**290 [9'-6"]**	**290 [9'-6"]**	**270 [8'-10"]**

Columns every second grid unit



Usable platform width

UF	GF	RB 8	B3	B4
230 [7'-7"]	220 [7'-3"]	250 [8'-2"]	500 [16'-5"]	480 [15'-9"]
240 [7'-10"]	230 [7'-7"]	260 [8'-6"]	520 [17'-1"]	500 [16'-5"]
250 [8'-2"]	**240 [7'-10"]**	**270 [8'-10"]**	**540 [17'-9"]**	**520 [17'-1"]**
260 [8'-6"]	**250 [8'-2"]**	**280 [9'-2"]**	**560 [18'-4"]**	**540 [17'-9"]**
270 [8'-10"]	**260 [8'-6"]**	**290 [9'-6"]**	**580 [19'-0"]**	**560 [18'-4"]**

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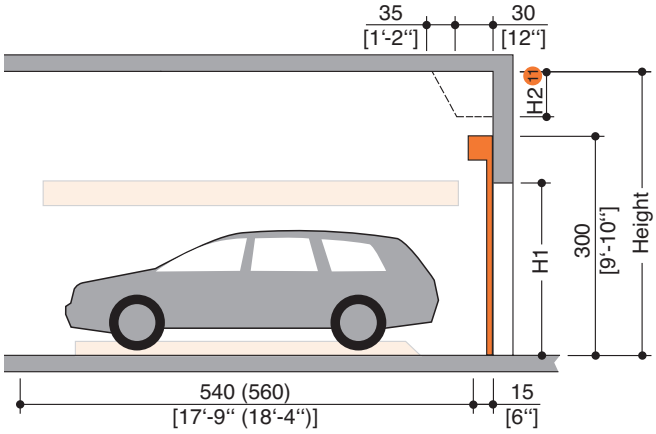
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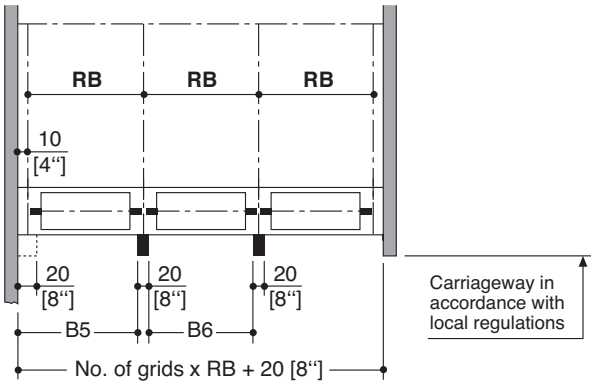
Garages with roll doors I Widths dimensions

Roll door behind columns



Type	GT	Height	H1
4000	160 [5‘-3“]	330/335/340 [10‘-10“/11‘-0“/11‘-2“]	210 [6‘-11“]
4000	175 [5‘-9“]	345/360/370 [11‘-4“/11‘-10“/12‘-2“]	220 [7‘-3“]
4000	180 [5‘-11“]	350/365/380 [11‘-6“/12‘-0“/12‘-6“]	210 [6‘-11“]
4000	185 [6‘-1“]	355/375/390 [11‘-8“/12‘-4“/12‘-10“]	210 [6‘-11“]
4000	210 [6‘-11“]	380/405 [12‘-6“/13‘-3“]	220 [7‘-3“]
4000	210 [6‘-11“]	440 [14‘-5“]	230 [7‘-7“]
4000	215 [7‘-1“]	385/415 [12‘-8“/13‘-7“]	225 [7‘-5“]
4000	215 [7‘-1“]	450 [14‘-9“]	235 [7‘-9“]

Columns per each grid unit



Usable platform width

UF	UF	RB 10	B5	B6
230 [7‘-7“]	220 [7‘-3“]	250 [8‘-2“]	250 [8‘-2“]	230 [7‘-7“]
240 [7‘-10“]	230 [7‘-7“]	260 [8‘-6“]	260 [8‘-6“]	240 [7‘-10“]
250 [8‘-2“]	**240 [7‘-10“]**	**270 [8‘-10“]**	**270 [8‘-10“]**	**250 [8‘-2“]**
260 [8‘-6“]	**250 [8‘-2“]**	**280 [9‘-2“]**	**280 [9‘-2“]**	**260 [8‘-6“]**
270 [8‘-10“]	**260 [8‘-6“]**	**290 [9‘-6“]**	**290 [9‘-6“]**	**270 [8‘-10“]**

According to the ASR A1.7 , an inspection book is required for the commercial use of a gate with electric drive. Prior to commissioning, and then once a year, the gate has to be inspected by an expert and the findings entered in the inspection book. The inspection has to be carried out independent of any maintenance work.

For parking boxes on the edges and boxes with intermediate walls we recommend our maximum platform width of 270 cm [8’-10”]. Please consider adjoining grids. 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).

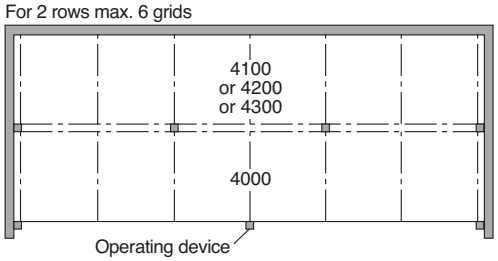
10 RB = Grid unit width **must** strictly conform to dimensions quoted!

11 H2 for heigth >360 = 20 / H2 for heigth ≥380 = 75
[H2 for heigth >11’-10” = 8” / H2 for heigth ≥12’-6” = 2’-6”]

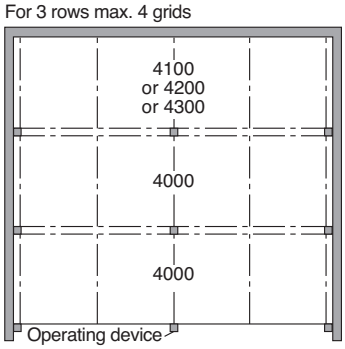
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Grid arrangement

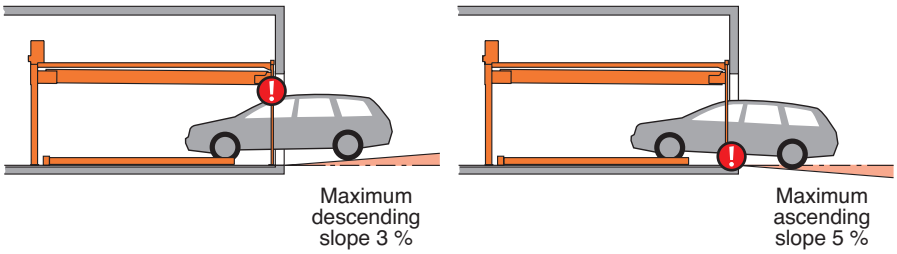
For 2 rows max. 6 grids



For 3 rows max. 4 grids

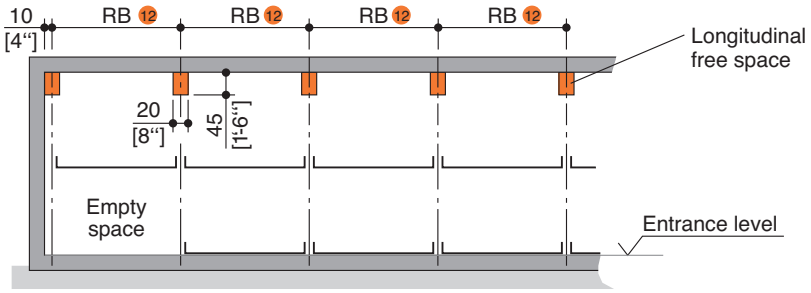


Approach



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 Multiparking accepts no responsibility.

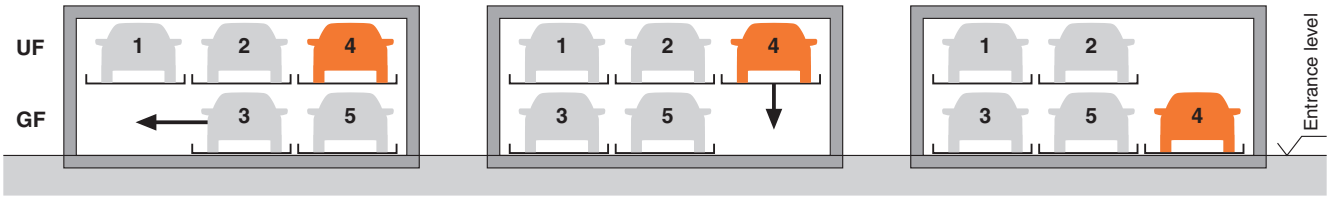
Longitudinal free space



12 RB = Grid unit width **must** strictly conform to dimensions quoted!

Function with standard numbering and identification of parking levels

e.g. for parking space No. 4: Check first that all doors are closed, then select No. 4 on operating panel.



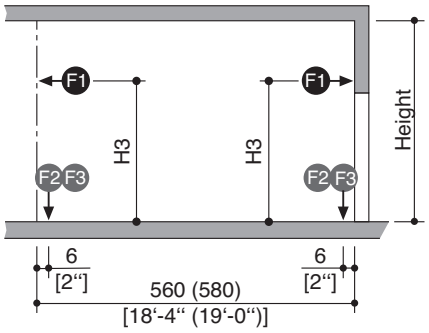
For driving the vehicle off platform No. 4 the ground floor parking platforms are shifted to the left.

The empty space is now below the vehicle which shall be driven off the platform. The platform No. 4 will be lowered.

The vehicle on platform No. 4 can now be driven off the platform.

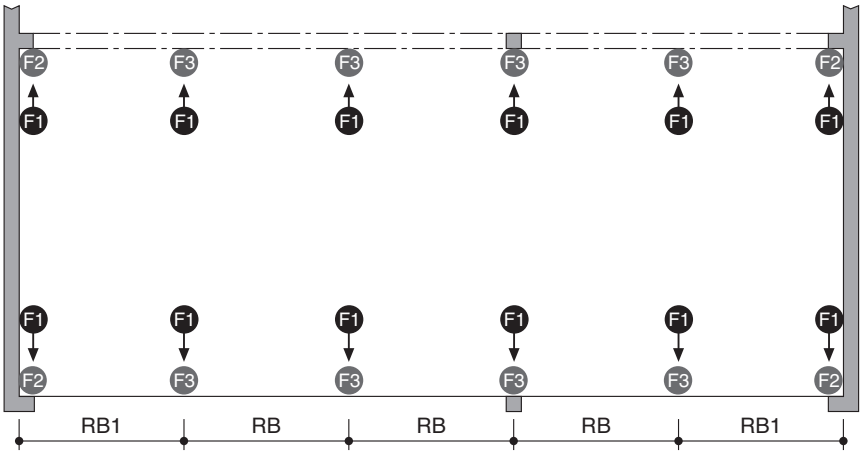
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Load plan



Type	GT	Height	H3
4000	160 [5‘-3“]	330/335/340 [10‘-10“/11‘-0“/11‘-2“]	210 [6‘-11“]
4000	175 [5‘-9“]	345/360/370 [11‘-4“/11‘-10“/12‘-2“]	225 [7‘-5“]
4000	180 [5‘-11“]	350/365/380 [11‘-6“/12‘-0“/12‘-6“]	230 [7‘-7“]
4000	185 [6‘-1“]	355/375/390 [11‘-8“/12‘-4“/12‘-10“]	235 [7‘-9“]
4000	210 [6‘-11“]	380/405/440 [12‘-6“/13‘-3“/14‘-5“]	260 [8‘-6“]
4000	215 [7‘-1“]	385/415/450 [12‘-8“/13‘-7“/14‘-9“]	265 [8‘-8“]

Load plan – top view



Usable platform width	RB [13]	RB1	RB2
230 [7‘-7“]	250 [8‘-2“]	260 [8‘-6“]	135 [4‘-5“]
240 [7‘-10“]	260 [8‘-6“]	270 [8‘-10“]	140 [4‘-7“]
250 [8‘-2“]	**270 [8‘-10“]**	**280 [9‘-2“]**	**145 [4‘-9“]**
260 [8‘-6“]	**280 [9‘-2“]**	**290 [9‘-6“]**	**150 [4‘-11“]**
270 [8‘-10“]	**290 [9‘-6“]**	**300 [9‘-10“]**	**155 [5‘-1“]**

Platform load in kg

Platform load	F1	F2	F3 [14]
2000 kg	±0,5	+8,5	+17
2600 kg	±0,75	+10	+20

Platform load in lbs

Platform load	F1	F2	F3 [15]
4400 lbs	±112	+1,911	+3,822
5730 lbs	±169	+2,248	+4,496

The system is dowelled to floor and walls. The drilling depth in the floor is approx. 15 cm [6”].
The drilling depth in the walls is approx. 12 cm [5”].

Floor and walls are to be made of concrete (grade of concrete min. C20/25)!

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

13 RB = Grid unit width **must** strictly conform to dimensions quoted!

14 All forces in kN

15 All forces in lbf

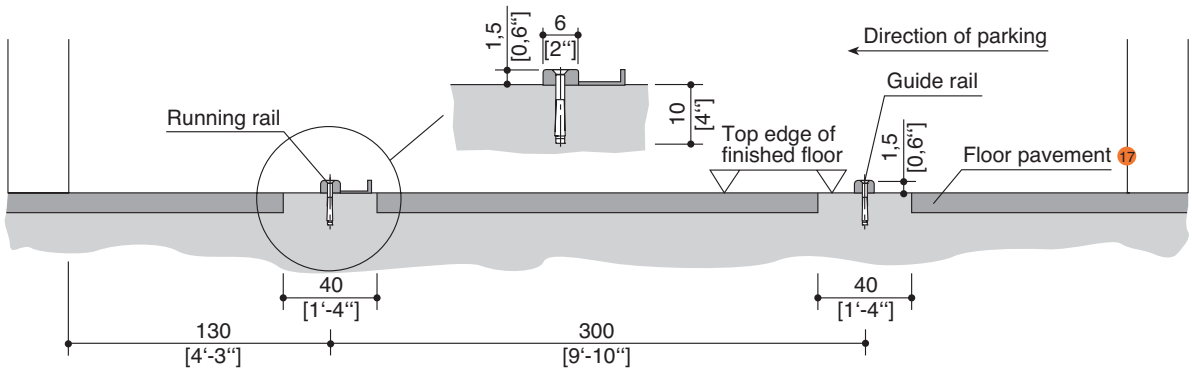
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Recess/Rail system

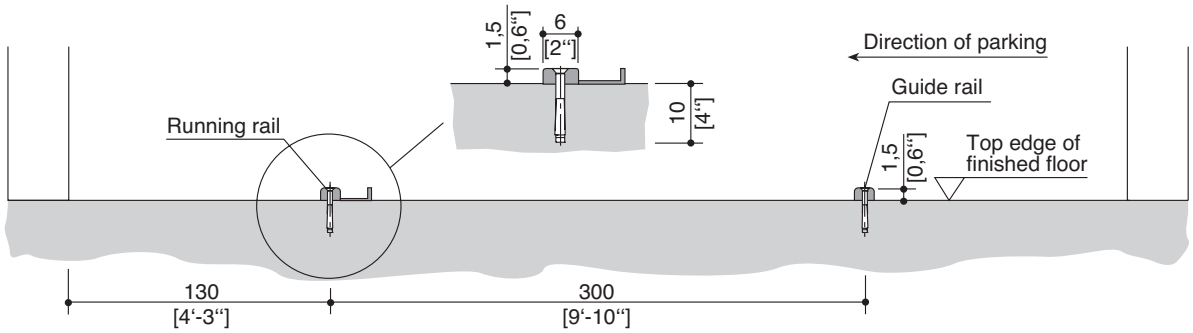
Dependent upon the structural conditions of the garage, several different options are available for installation of the rails.

Rail load by moving traffic load:
– For surface load 2000 kg [4400 lbs]: 6,5 kN [1,461lbf] per wheel
– For surface load 2600 kg [5730 lbs]: 8 kN [1,798 lbf] per wheel

Laying on strip foundation 16



Laying on finished floor 16



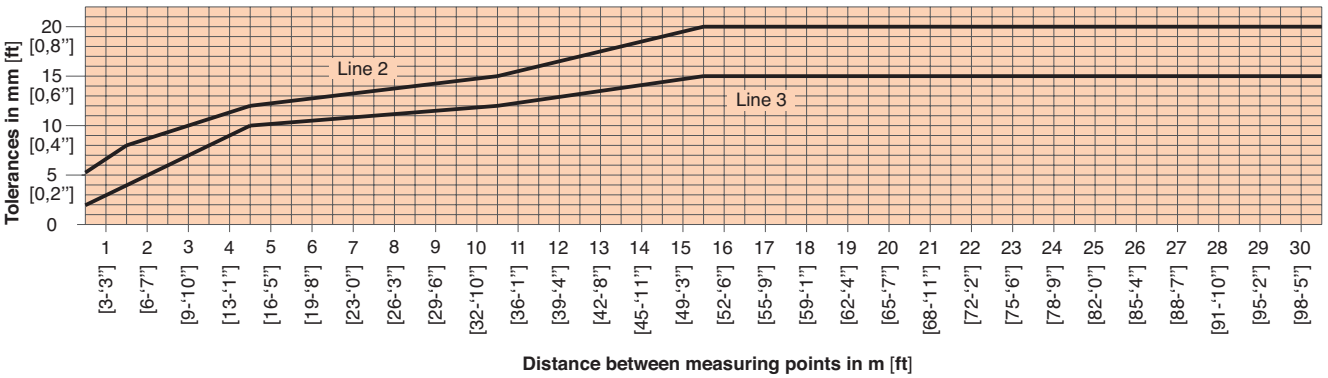
16 Tolerances for the evenness of the carriageway must be strictly complied with in accordance with DIN (= German Industrial Standard) No. 18202, chart 3, line 3. No expansion joints are permitted within the area of the rail system.

17 We do not recommend mastic asphalt.

Evenness and Tolerances (abstract from DIN 18 202, table 3)

The distance between the lower flange of the ParkBoards and the garage ground must therefore not exceed 2 cm [4”]. To adhere to the safety regulations and DIN EN 14 010 recommendations and to get the necessary even ground, the tolerances of evenness to DIN 18202, table 3, line 3, must not be exceeded. Therefore exact levelling of the ground by the client is essential.

Column	1	2	3	4	5	6
		Vertical measurement as limits in mm with measuring points distances in m to 18				
Line	Reference	0,1 [4”]	1 [3’-3”]	4 [13’-1”]	10 [32’-10”]	15 [49’-3”]
2	Unfinished to surface of covers, subconcrete and subsoils for higher demands, e.g. as foundation for cast plaster floor, industrial soils, paving tiles and slabstone paving, compund floor paving. Finished surfaces for minor purposes, e.g. warehouses, cellar.	5 [0,2”]	8 [0,3”]	12 [0,5”]	15 [0,6”]	20 [0,8”]
3	Finished grounds, e.g. floor pavement serving as foundation for coverings. Coverings, tile coverings, PVC flooring and glued coverings.	2 [0,08”]	4 [0,15”]	10 [0,4”]	12 [0,5”]	15 [0,6”]



18 Intermediate values are to be taken out the diagram and must be rounded-off.

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Technical data

Field of application

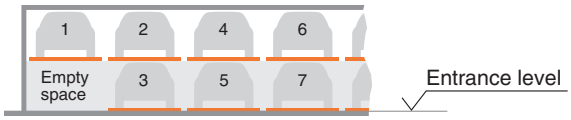
By default, the system can only be used for a fixed number of users.
If different users use the system (e.g. short-time parkers in office buildings or hotels) the Multiparking system needs to be adjusted. If required, would you please contact us.

Available documents

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

Numbering

Standard numbering of the parking spaces:



Different numbering is only possible at extra cost

Please take note of the following specifications:
– In general, the empty space must be arranged to the left.
– The numbers must be provided 8 – 10 weeks before the delivery date.

Sound insulation

As per DIN 4109-1 (sound insulation in building construction), Section 9, KLAUS Multiparker are in the range of technical domestic installations (garage systems).

Normal sound insulation:

DIN 4109-1, Section 9, maximum permissible A-rated sound levels in rooms requiring external protection, generated by technical domestic installations and commercial businesses affiliated with the building.

Table 9 shows the values for the maximum permissible A-rated sound levels in rooms requiring external protection, generated by technical domestic installations and business affiliated with the building. As per line 2, the maximum sound level in living rooms and bedrooms must not exceed 30 dB (A). *User noises are not subject to the requirements (DIN 4109-1, Section 9).*

The following measures are required to comply with this value:
– Sound protection package according to offer/order (KLAUS Multiparking GmbH)
– Minimum sound insulation of the building of min. R'_w = 57 dB (service/item to be provided by the customer)

Increased sound insulation (special agreement):

VDI 4100 (sound insulation in building construction) Assessment and proposals for enhanced sound insulation.

Agreement: Maximum sound level in living rooms and bedrooms 25 dB (A). *User noises are not subject to the requirements (see VDI 4100, Paragraph 1, Scope of application – Notes).*

The following measures are required to comply with this value:
– Sound protection package according to offer/order (KLAUS Multiparking GmbH)
– Minimum sound insulation of the building of min. R'_w = 62 dB (service/item to be provided by the customer)

Note: User noises are basically noises that can be individually influenced by the user of our Multiparking systems. These include, for example, driving on the platform, slamming vehicle doors, engine and brake noises.

Environmental conditions

Environmental conditions for the area of multiparking systems: Temperature range -10 to +40° C [+14 to +104° F].
Relative humidity 50% at a maximum outside temperature of +40° C [+104° F].
If lifting or lowering times are specified, they refer to an environmental temperature of +10° C [+50° F] and with the system set up directly next to the hydraulic unit. At lower temperatures or with longer hydraulic lines, these times increase.

Electrically driven doors

In accordance with ASR A1.7 commercially used power-driven doors must be subjected to annual inspections. We urgently recommend concluding a maintenance agreement that includes this service for the entire system.

Building application documents

According to LBO and GaVo (garage regulations) the Multiparking systems are subject to approval. We will provide the required building application documents.

Care

To avoid damages resulting from corrosion, make sure to follow our cleaning and care instructions and to provide good ventilation of your garage.

Corrosion protection

See separate sheet regarding corrosion protection.

CE Certification

The systems on offer comply with DIN EN 14010 and EC Machine Directive 2006/42/EC. Furthermore, this system underwent voluntary conformity testing by TÜV SÜD.



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

TÜV SÜD Industrie Service

CONFORMITY EXAMINATION CERTIFICATE

Certificate No.:	CA 192/1
Certification Body of the Notified Body:	TÜV SÜD Industrie Service GmbH Westendstr. 199 80686 Munich - Germany
Certificate Holder:	KLAUS Multiparking GmbH Hermann-Krum-Str. 2 88319 Aitrach - Germany
Manufacturer	KLAUS Multiparking GmbH Hermann-Krum-Str. 2 88319 Aitrach - Germany
Product:	Equipment for power driven parking of motor vehicles
Type:	TrendVario 4000 2,000 kg and 2,600 kg
Basis of examination:	- 2006/42/EC, Annex I - EN 14010:2003+A1:2009
Test report:	CA 192/1 dated 2019-01-30
Outcome:	The product conforms to the requirements of the basis of examination if the requirements of the annex to this conformity examination certificate are kept.
Date of Issue:	2019-02-15
Valid until:	2024-02-14

Achim Janocha
Certification Body "lifts and cranes"

TÜV SÜD Industrie Service GmbH Certification Body

TÜV®

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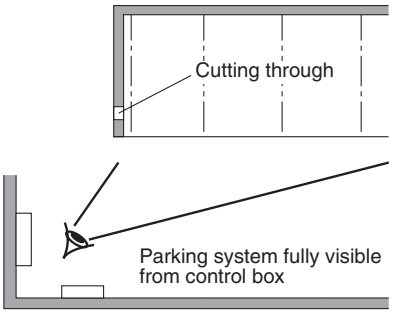
Electrical data

Control box

The control box must be accessible at all times from outside!

Dimensions approx. 100 x 100 x 30 cm [3'-3" x 3'-3" x 12"].

Cutting through of wall from control box to parking system (contact the local agency of KLAUS Multiparking for clarification).



Operating device

Easy-to-survey positioning (e.g. on column).

Protection against unauthorized use.

May also be recessed in wall if required.

Electrical supply to the control box / Foundation earth connector

Up to 2 rows:
Suitable electrical supply min. 5 x 2,5 mm² (3 PH+N+PE) to control box with main fuse 3 x 20 A slow or over-current cut-out 3 x 20 A.
Trigger characteristic K or C. DIN/VDE and local regulations must be taken into consideration.

With 3 rows:
Suitable electrical supply min. 5 x 4 mm² (3 PH+N+PE) to control box with main fuse 3 x 25 A slow or over-current cut-out 3 x 25 A.
Trigger characteristic K or C. DIN/VDE and local regulations must be taken into consideration.

Suitable electrical supply to the control box 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"]).

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.

Wall cuttings

Any necessary wall cuttings.

Electrical supply to the control box / Foundation earth connector

Suitable electrical supply to the control box 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"]).

Door suspension

The lintel height H2 (see page 6) is absolutely necessary. With differing heights, additional fixings are required for extra charge.

Door shields

Door shields that may be necessary. If desired, they can be ordered from KLAUS Multiparking for an additional charge.

Floor / Rails

Flooring structure in accordance with our instructions, please see page 9 (recesses, rail systems).

Recesses, tolerances for the evenness of the driving lane must adhere to DIN 18202, sheet 3, line 3.

Stuffing of rail system with cement floor for the whole length.

Bringing in of floor pavement.

If the following are not included in the quotation, they will also have to be provided / paid for by the customer:

– Costs for final technical approval by an authorized body

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Description

General description:

Multiparking system providing independent parking spaces for cars, one on top of the other and side by side.

Dimensions are in accordance with the underlying dimensions of height and width.

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

Along the complete width of the parking automat an approach lane (driving lane in accordance with local regulations) must be available. Parking spaces are arranged on two different levels, one level on top of the other.

The platforms of the upper floor (UF) are moved vertically, the platforms on the ground floor (GF) horizontally. At approach level (GF) there is always one parking space less available. This vacant space is used for shifting the ground floor (GF) parking spaces sideways, thus enabling the upper platform (UF) parking space located above to be lowered to approach/ground level. Consequently, a unit of three parking spaces (1 on the ground floor, 2 on the upper floor) is the smallest unit available for this parking system.

The TrendVario 4000 allows parking of passenger cars and station wagons.

For safety reasons the platforms can only be moved behind locked doors.

All necessary safety devices are installed. This consists mainly of a chain monitoring system, locking lever for the upper platforms and locked doors. The doors can only be opened if the selected parking space has reached the park position.

A steel framework mounted to the floor consisting of:

– Seriated supports
– Steel pillars with sliding platform supports
– Cross and longitudinal members
– running rails for the transversely movable ground floor (GF) platforms

Platforms consisting of:

– Side members
– Cross members
– Platform base sections
– 1 wheel stop (on the right per parking space)
– Screws, small parts, etc.

Lifting device for upper floor (UF) platforms:

– Gear motor
– Chain wheel
– Chains
– Limit switches
– The platforms are suspended on four points and guided along the supports using plastic sliding bearings

Drive unit of transversely movable platforms on the ground floor (GF):

– Gear motor with chain wheel
– Chains
– Running and guide rollers (low-noise)
– Power supply via cable chain

Control system:

– Central control panel (operating device) used to select the desired parking space
– With series installation, the doors are opened manually
If desired, this can also be done using electric motors
– Electric wiring is made from the electric cabinet by the manufacturer

Roller doors:

Size

Dimensions modified based on width and height measurements.

Shutter box

– multipart extruded aluminium box 20°
– lacquered type

Guide rails

– extruded aluminium guide rails with brush insert
– lacquered type

Gate type

– aluminium gate type, extruded
– end rod with electronic safety strip
– lacquered type

Colour options

Shutter box, guide rails and gate type are avialabel with the following colour options:
– RAL 9016 (traffic white)
– RAL 9006 (white aluminium)
– RAL 7016 (anthracite grey)

Door actuation

Powered electrically by means of tube motor in the shaft.

For safety reasons the movement of the platforms is always made behind locked doors. Position sensing, i.e. “door open” and “door closed” is effected by electric signalers.

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Description

Sliding doors:

Size

Sliding door, dimensions: approx. 2500 mm x 2000 mm [8'-2" x 6'-7"]) (width x height).

Frame

– Frame construction with vertical centre stay bar made from extruded aluminium profiles (anodized, layer thickness approx 20 µm [0.0008"]).
– To open the doors a recessed grip is integrated in the aluminium profile.
– A rubber lip is used for the finishing of the closing edge to the building.

Standard door panel

Perforated steel plate
– Thickness 1 mm [0.04"], RV 5/8, galvanized, layer thickness: approx. 20 µm [0.0008"]
– Ventilation cross-section of the panel approx. 40%
– Not suitable for outdoor garages

Alternative door panel

Perforated aluminium plate
– Thickness 2 mm [0.08"], RV 5/8 E6/EV1, anodized, layer thickness: approx. 20 µm [0.0008"]
– Ventilation cross-section of the panel approx. 40%

Beaded steel plate
– Thickness 1mm, galvanized, layer thickness: approx. 20 µm [0.0008"].
– additional power coating, layer thickness: approx. 25 µm [0.001"] on the outside and approx. 12 µm [0.0005"] on the inside
– Colour options for the outside (building view):
RAL 1015 (light ivory), RAL 3003 (ruby),
RAL 5014 (pigeon blue), RAL 6005 (moss green),
RAL 7016 (anthracite grey), RAL 7035 (light grey),
RAL 7040 (window grey), RAL 8014 (sepia),
RAL 9006 (white aluminium), RAL 9016 (traffic white)
– Inside of the gates in light grey

Plain aluminium sheet
– Thickness 2 mm [0.08"], E6/EV1, anodized, layer thickness: approx. 20 µm [0.0008"]

Wooden panelling
– Nordic spruce in grade A
– vertical tongue and groove boards
– preimpregnated colourless

Laminated safety glass
– Laminated safety glass made from single pane safety glass 8/4 mm [0.3"/0.15"]

Wire grating
– Mesh size 12 x 12 mm [0.5" x 0.5"]
– Mesh size 40 x 40 mm [1.6" x 1.6"] (for manual sliding gates only)

Running rails

– The running gear of each doors consists of 2 twin-pair rolling gadgets, adjustable in height
– The running rails of the doors are fixed to brackets or the concrete lintel, or on a building-specific door suspension using ceiling fittings
– The guide consists of 2 plastic rollers mounted to a base plate, which is dowelled to the floor
– Running rails, ceiling fittings and guide roller base plate are hot-dip galvanized

Door actuation

Standard:
– Manually, i.e. the door is opened and closed by hand

Alternatively:
– Electric drive via electric motor mounted to the rail system at the turning point of the sliding doors. The drive pinion engages into the chain mounted to the door.

For safety reasons the movement of the platforms is always made behind locked doors. Position sensing, i.e. "door open" and "door closed" is effected by electric signalers.

Separation (if necessary):

– Upon request

Please note:

Door panels (on the side, cover for running rails, etc.) and door suspensions are not included in the standard version but can be delivered against surcharge as special equipment.

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.