

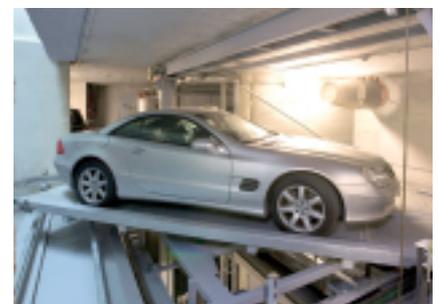
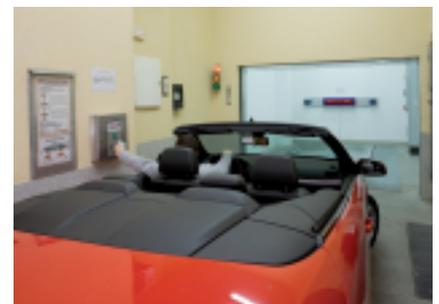


The automatic shelf system is arranged similar to a high-bay storage system and particularly suited for narrow and long premises.

The shelf system can be designed as above-ground or underground system or as a combination of both variants.

- Storage and retrieval unit with horizontal and vertical conveying unit
- Optional turning unit
- Up to 8 parking levels
- Vehicle height variable
- Different level height possible
- Floor loads per parking space: 2500 kg
- Higher loads per parking space possible upon request

**Please note the separate technical information.**

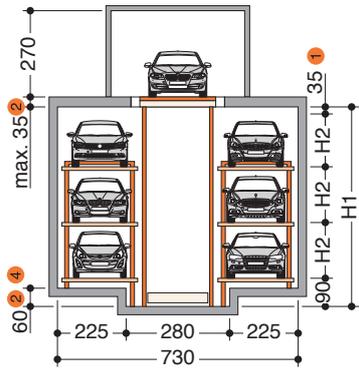


- Page 1  
Title page
- Page 2  
Shaft  
with walls
- Page 3  
Shaft  
without walls
- Page 4  
Tower/shaft  
with walls
- Page 5  
Tower/shaft  
without walls
- Page 6  
Variants

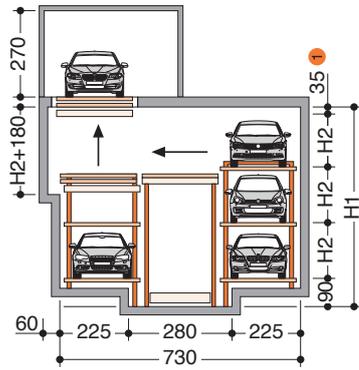
## Shaft design. With walls or support between the parking spaces

- For 1–8 levels
- Up to 80 metres length
- Transfer cabin located directly above storage and retrieval unit
- Parking levels with different heights for variable vehicle heights
- Multi-row arrangement possible
- Turning unit optional (in transfer cabin or in system)

### Transfer cabin above storage and retrieval unit

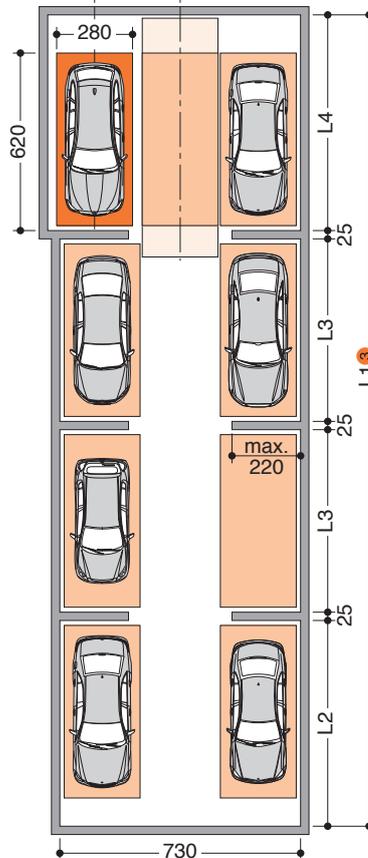
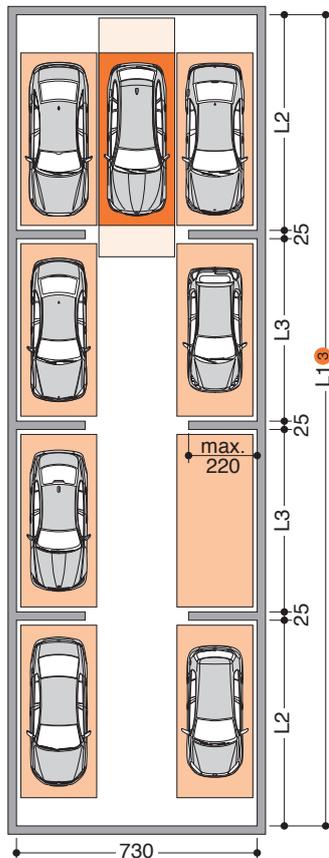


### Transfer cabin within the area of the parking spaces



### Electrical cabinet

Close to the transfer cabin room for an electrical cabinet is to be provided.  
Minimum dimensions:  
l: 240 cm, w: 200 cm, h: 230 cm.



### Height dimensions

levels	all levels for vehicles up to 160 cm			with 1 level for vehicles up to 200 cm		
	H1	car height	H2	H1	car height	H2
1	261	160	172	308	200	212
2	472	160	172	481	160	172
3	644	160	172	679	160	172
4	831	160	172	852	160	172
5 <sup>5</sup>	1030	160	172	1025	160	172
6	1175	160	172	1198	160	172
7	1362	160	172	1371	160	172
max. 8	1534	160	172	1544	160	172

### Length dimensions

parking spaces per level	only 1 level <sup>6</sup>			from 2 levels			
	L1	L2	L3	L1	L2	L3	L4
6	1905	655	545	1960	665	580	690
8	2475	655	545	2565	665	580	690
10	3045	655	545	3170	665	580	690
12	3615	655	545	3775	665	580	690
14	4185	655	545	4380	665	580	690
16	4755	655	545	4985	665	580	690
18	5325	655	545	5590	665	580	690
20	5895	655	545	6195	665	580	690

**!** Depending on the location of the transfer cabin the number of parking spaces may differ.

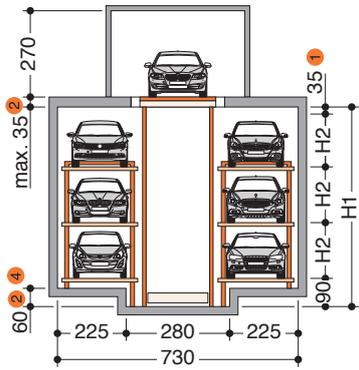
- <sup>1</sup> From 2 parking levels an additional height of 35 cm is required for the storage and retrieval unit.
- <sup>2</sup> In case of ceiling thicknesses greater 35 cm the dimension 60 must be increased by the same value.
- <sup>3</sup> All length (L) are examples and depending on the actual width of the intermediate walls or supports.
- <sup>4</sup> If a turning unit is used on the storage and retrieval unit, the dimension 60 must be increased by 50 cm.
- <sup>5</sup> In case of more than 4 levels crossbars are to be provided in each third level (+ 15 cm).
- <sup>6</sup> System with entry above storage and retrieval unit.

- Page 1  
Title page
- Page 2  
Shaft  
with walls
- Page 3  
Shaft  
without walls
- Page 4  
Tower/shaft  
with walls
- Page 5  
Tower/shaft  
without walls
- Page 6  
Variants

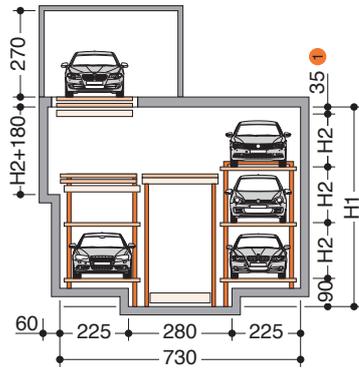
**Shaft design. Without walls or support between the parking spaces**

- For 1–8 levels
- Up to 80 metres length
- Transfer cabin located directly above storage and retrieval unit
- Parking levels with different heights for variable vehicle heights
- Multi-row arrangement possible
- Turning unit optional (in transfer cabin or in system)

**Transfer cabin above storage and retrieval unit**

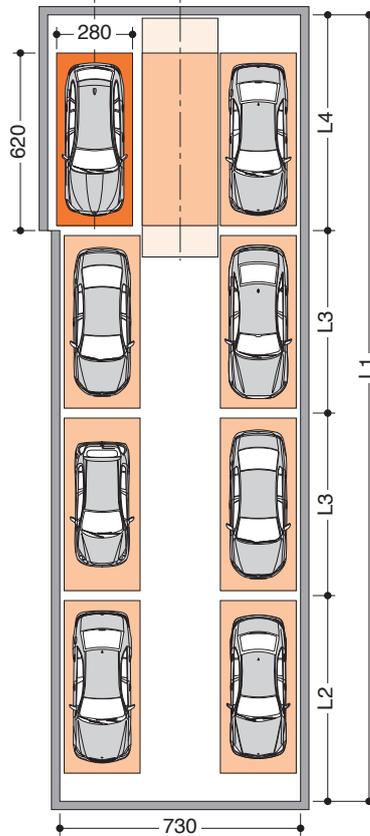
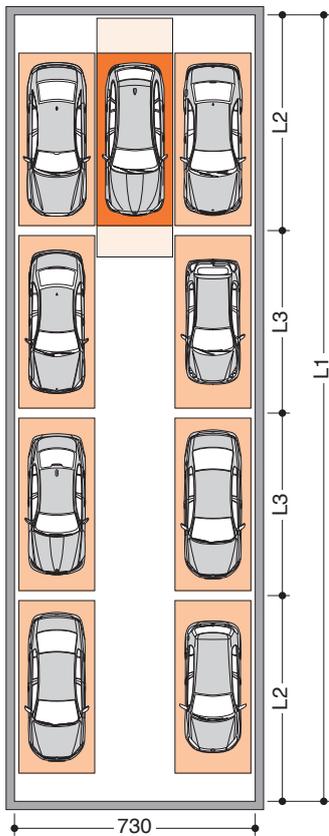


**Transfer cabin within the area of the parking spaces**



**Electrical cabinet**

Close to the transfer cabin room for an electrical cabinet is to be provided.  
Minimum dimensions:  
l: 240 cm, w: 200 cm, h: 230 cm.



**Height dimensions**

levels	all levels for vehicles up to 160 cm			with 1 level for vehicles up to 200 cm		
	H1	car height	H2	H1	car height	H2
1	261	160	172	308	200	212
2	472	160	172	481	160	172
3	644	160	172	679	160	172
4	831	160	172	852	160	172
5 ⑤	1030	160	172	1025	160	172
6	1175	160	172	1198	160	172
7	1362	160	172	1371	160	172
max. 8	1534	160	172	1544	160	172

**Length dimensions**

parking spaces per level	only 1 level ⑥			from 2 levels			
	L1	L2	L3	L1	L2	L3	L4
6	1850	655	540	1870	655	560	690
8	2390	655	540	2430	655	560	690
10	3470	655	540	2990	655	560	690
12	4010	655	540	3550	655	560	690
14	4550	655	540	4110	655	560	690
16	4700	655	540	4670	655	560	690
18	5100	655	540	5230	655	560	690
20	5640	655	540	5790	655	560	690

⚠ Depending on the location of the transfer cabin the number of parking spaces may differ.

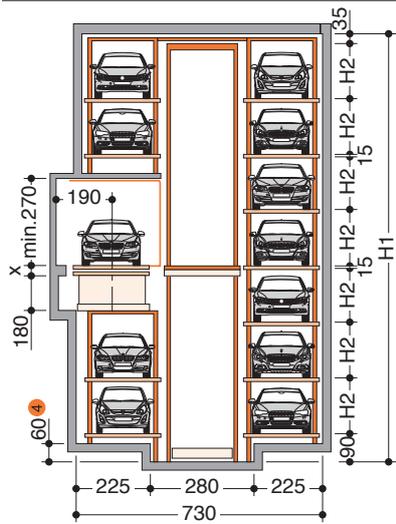
- ① From 2 parking levels an additional height of 35 cm is required for the storage and retrieval unit.
- ② In case of ceiling thicknesses greater 35 cm the dimension 60 must be increased by the same value.
- ③ All length (L) are examples and depending on the actual width of the intermediate walls or supports.
- ④ If a turning unit is used on the storage and retrieval unit, the dimension 60 must be increased by 50 cm.
- ⑤ In case of more than 4 levels crossbars are to be provided in each third level (+ 15 cm).
- ⑥ System with entry above storage and retrieval unit.

- Page 1  
Title page
- Page 2  
Shaft  
with walls
- Page 3  
Shaft  
without walls
- Page 4  
Tower/shaft  
with walls
- Page 5  
Tower/shaft  
without walls
- Page 6  
Variants

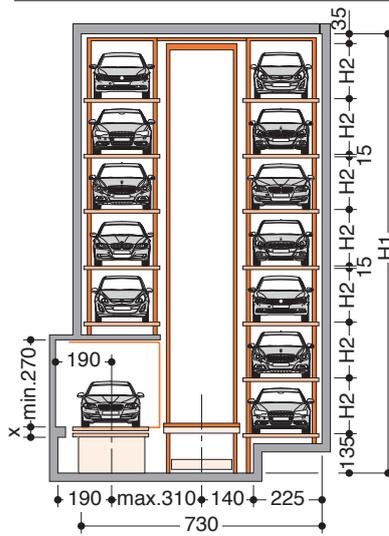
## Tower/shaft design or tower design. With walls or support between the parking spaces

- For 4–8 levels
- Parking levels with different heights for variable vehicle heights
- Up to 80 metres length
- Multi-row arrangement possible
- Transfer cabin within the area of the parking spaces
- Turning unit optional

### Tower/shaft design



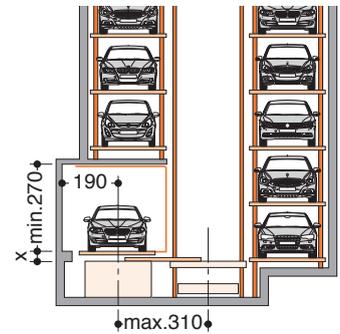
### Tower design



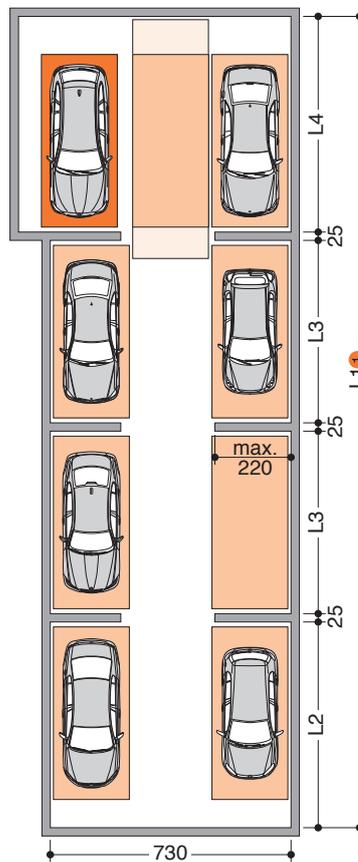
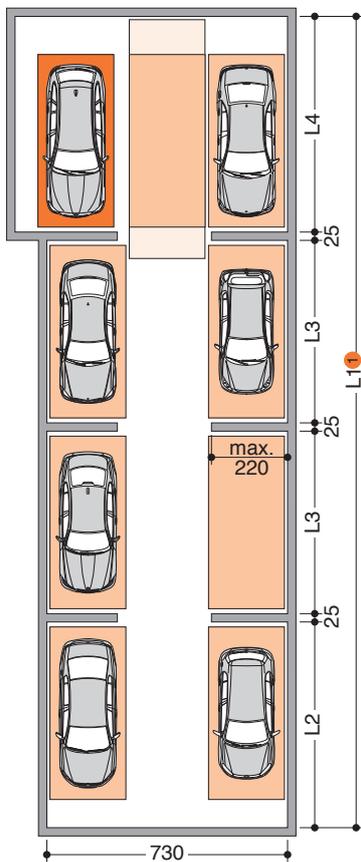
### Electrical cabinet

Close to the transfer cabin room for an electrical cabinet is to be provided. Minimum dimensions:  
l: 240 cm, w: 200 cm, h: 230 cm.

### Pallet changer



Schematic representation of the pallet changer in the transfer cabin on the side.



### Height dimensions for tower/shaft design

all levels for vehicles up to 160 cm			
levels	H1	car height	H2
4	831	160	172
5	1030	160	172
6	1175	160	172
7	1362	160	172
max. 8	1534	160	172

with 1 level for vehicles up to 200 cm			
levels	H1	car height	H2
4	852	200	212
5	1025	200	172
6	1198	160	172
7	1371	160	172
max. 8	1544	160	172

### Height dimensions for tower design

all levels for vehicles up to 160 cm			
levels	H1	car height	H2
4	831	160	172
5	1030	160	172
6	1175	160	172
7	1362	160	172
max. 8	1534	160	172

with 1 level for vehicles up to 200 cm			
levels	H1	car height	H2
4	852	200	212
5	1025	200	172
6	1198	160	172
7	1371	160	172
max. 8	1544	160	172

### Length dimensions

parking spaces per level	from 4 levels			
	L1	L2	L3	L4
6	1960	665	580	690
8	2565	665	580	690
10	3170	665	580	690
12	3775	665	580	690
14	4380	665	580	690
16	4985	665	580	690
18	5590	665	580	690
20	6195	665	580	690

**!** Depending on the location of the transfer cabin the number of parking spaces may differ.

- 1 All length (L) are examples and depending on the actual width of the intermediate walls or supports.
- 4 If a turning unit is used on the storage and retrieval unit, the dimension 60 must be increased by 50 cm.

Page 1  
Title page

Page 2  
Shaft  
with walls

Page 3  
Shaft  
without walls

Page 4  
Tower/shaft  
with walls

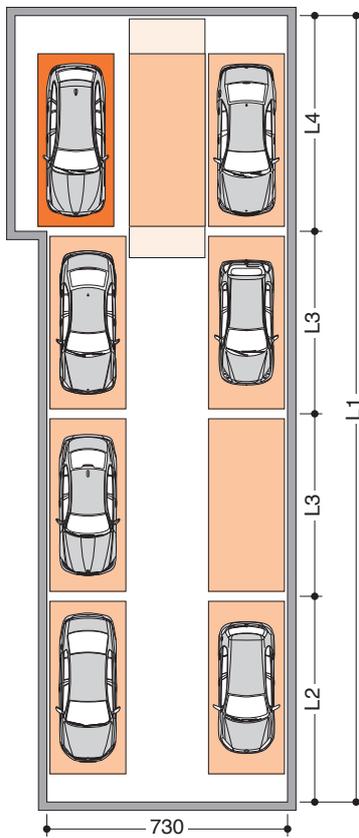
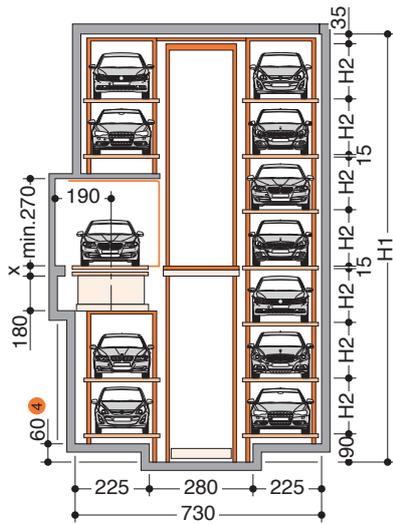
Page 5  
Tower/shaft  
without walls

Page 6  
Variants

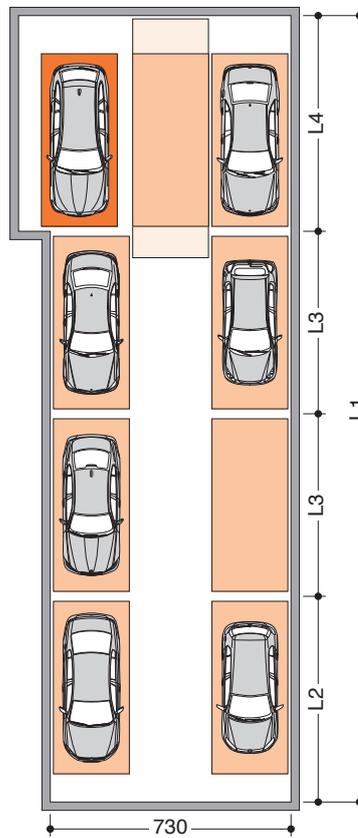
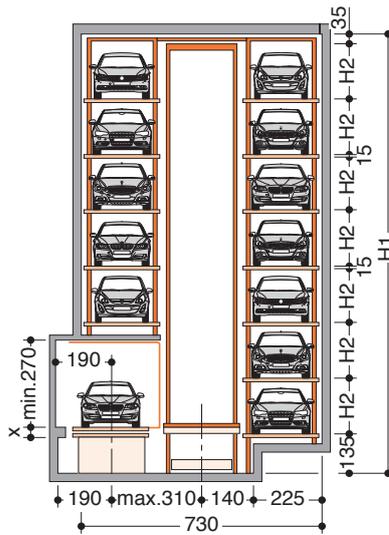
## Tower/shaft design or tower design. Without walls or support between the parking spaces

- For 4–8 levels
- Up to 80 metres length
- Transfer cabin within the area of the parking spaces
- Parking levels with different heights for variable vehicle heights
- Multi-row arrangement possible
- Turning unit optional

### Tower/shaft design



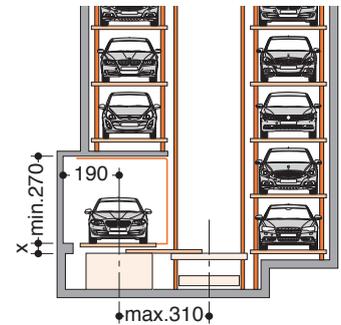
### Tower design



### Electrical cabinet

Close to the transfer cabin room for an electrical cabinet is to be provided. Minimum dimensions: l: 240 cm, w: 200 cm, h: 230 cm.

### Pallet changer



Schematic representation of the pallet changer in the transfer cabin on the side.

### Height dimensions for tower/shaft design

all levels for vehicles up to 160 cm			
levels	H1	car height	H2
4	831	160	172
5	1030	160	172
6	1175	160	172
7	1362	160	172
max. 8	1534	160	172

with 1 level for vehicles up to 200 cm			
levels	H1	car height	H2
4	852	200	212
5	1025	200	172
6	1198	160	172
7	1371	160	172
max. 8	1544	160	172

### Height dimensions for tower design

all levels for vehicles up to 160 cm			
levels	H1	car height	H2
4	831	160	172
5	1030	160	172
6	1175	160	172
7	1362	160	172
max. 8	1534	160	172

with 1 level for vehicles up to 200 cm			
levels	H1	car height	H2
4	852	200	212
5	1025	200	172
6	1198	160	172
7	1371	160	172
max. 8	1544	160	172

### Length dimensions

parking spaces per level	from 4 levels			
	L1	L2	L3	L4
6	1870	655	560	690
8	2430	655	560	690
10	2990	655	560	690
12	3550	655	560	690
14	4110	655	560	690
16	4670	655	560	690
18	5230	655	560	690
20	5790	655	560	690

! Depending on the location of the transfer cabin the number of parking spaces may differ.

4 If a turning unit is used on the storage and retrieval unit, the dimension 60 must be increased by 50 cm.

Page 1  
Title page

Page 2  
Shaft  
with walls

Page 3  
Shaft  
without walls

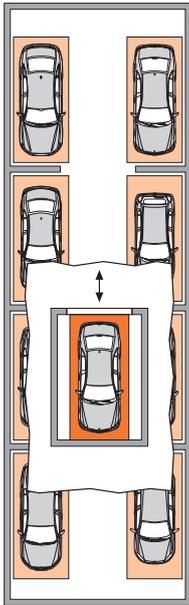
Page 4  
Tower/shaft  
with walls

Page 5  
Tower/shaft  
without walls

Page 6  
Variants

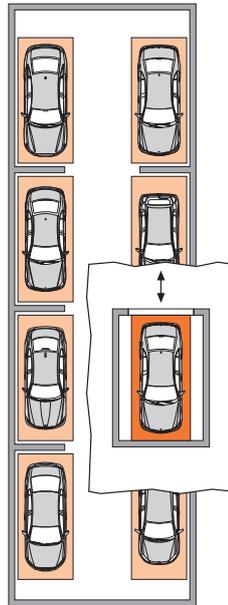
## Arrangement options of the transfer cabin

### Above the storage and retrieval unit



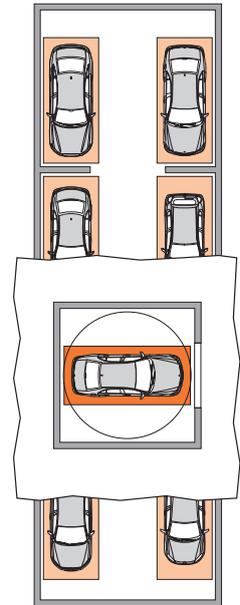
Arrangement of the transfer cabin above the storage and retrieval unit.

### Within the area of the parking spaces



The transfer cabin can be arranged to the left or right of the parking spaces. The location can be above any parking space.

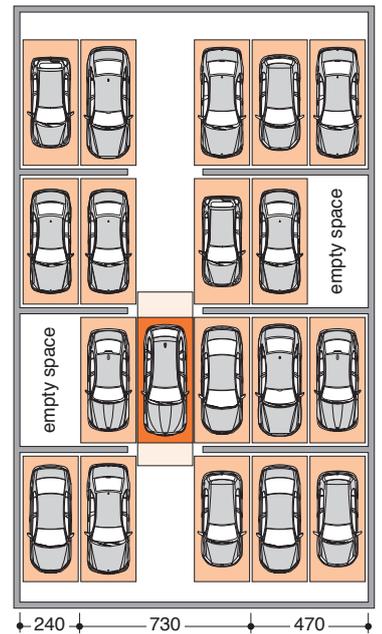
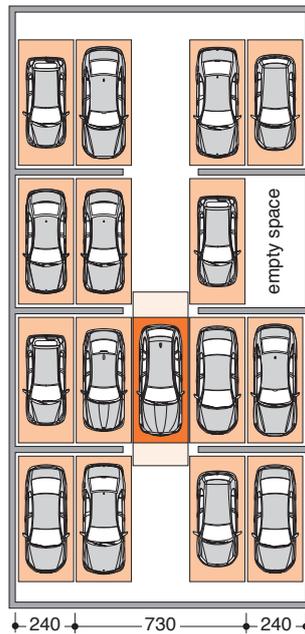
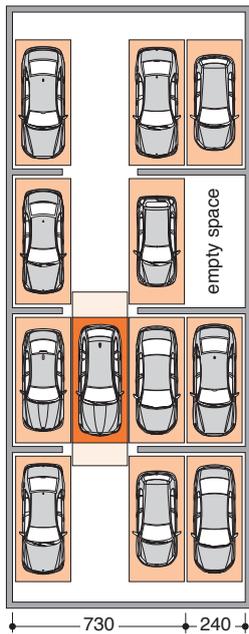
### With turning unit



A turning platform in the transfer cabin allows entering and exiting at any desired angle.

## Multi-row arrangement

The multi-row arrangement allows optimal utilization of the premises. With an empty space up to two rows next to the storage and retrieval unit can be arranged; with two empty spaces even up to three rows.



## 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.