

\* In case of short time user - only possible on upper platform and only if technically adjusted, ask WÖHR!  
 Or with attendant or valet parking both levels are possible for short time user.

Special reinforced units for higher parking platform load are available.

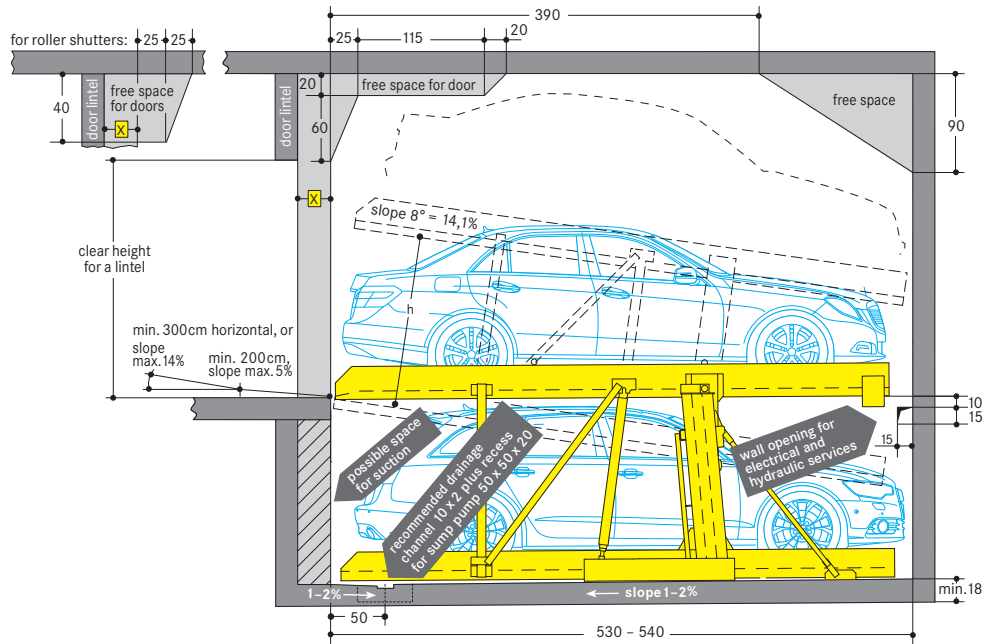
Upper platform is in a horizontal position to drive on.  
 Lower platform is in an inclined position to drive on.

**Load per platform 2000 kg**  
**(load per wheel max. 500 kg)**

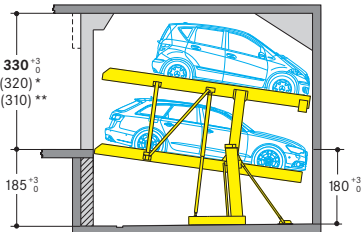
**X** = only applicable if garage doors are to be fitted.  
 For sectional doors: X = 25 cm  
 For roller shutters: X = 10 / 15 cm

**X** = to be clarified with doors supplier

Dimensions in cm



## Standard type 402-185/180



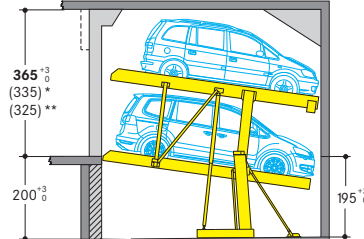
	car height	distance (h)
<b>UL</b>	cars/station wagons up to 165 cm	
<b>LL</b>	cars/station wagons up to 165 cm	170
UL = upper level, LL = lower level		

**Station wagons can access the upper level only if roller shutter doors are present and if the free space for the door is not utilised.**

\* If only cars up to **165 cm** high and station wagons up to **150 cm** high are parked on the **upper level**, a clear height of **320 cm** above the entrance level is sufficient.

\*\* If only cars with a height of up to **150 cm** and no station wagons are parked on the **upper level**, a clear height of **310 cm** above the entrance level is sufficient.

## Comfort type 402-200/195



	car height	distance (h)
<b>UL</b>	cars/vans up to 180 cm	
<b>LL</b>	cars/vans up to 180 cm	185
cars/vans up to 2000 kg max.		

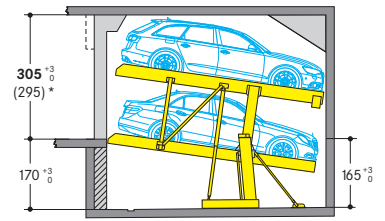
**Station wagons can access the upper level only if roller shutter doors are present and if the free space for the door is not utilised.**

\* If only cars up to **165 cm** high and station wagons up to **150 cm** high are parked on the **upper level**, a clear height of **335 cm** above the entrance level is sufficient.

\*\* If only cars with a height of up to **150 cm** and no station wagons are parked on the **upper level**, a clear height of **325 cm** above the entrance level is sufficient.

**Pit length min. 540 cm!**

## Compact type 402-170/165



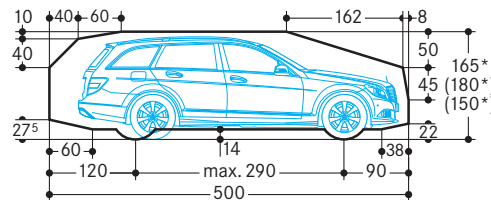
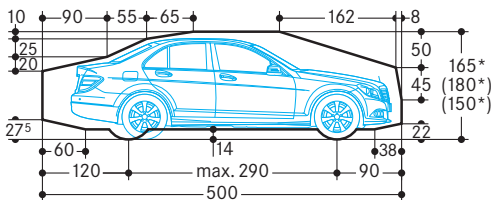
	car height	distance (h)
<b>UL</b>	cars/station wagons up to 150 cm	
<b>LL</b>	cars/station wagons up to 150 cm	155

**Station wagons can access the upper level only if roller shutter doors are present and if the free space for the door is not utilised.**

\* If only cars with a height of up to **150 cm** and no station wagons are parked on the **upper level**, a clear height of **295 cm** above the entrance level is sufficient.

Please attend to restricted car- and platform distance height!

## Clearance profile (car/station wagon)



\*The total car height includes roof rail and antenna fixture and must not exceed the mentioned max. height dimension.

## Notes

- Clear platform width of 250 cm for car widths 190 cm (see width dimensions stated on page 2). For large touring sedans we recommend a clear platform width of at least 260-270 cm for single and 500 cm for double systems.
- Due to recent increases in car length dimensions, and potential future developments, a pit length of 540 cm is advisable. This also offers a greater safety distance for future car sizes
- At the edge of the pit a 10 cm wide, yellow-black marking according to ISO 3864 has to be provided by the purchaser (see "statics and construction requirements" on page 3).
- It is not possible to have channels or undercuts and/or concrete haunches along the pit floor-to-wall joints. In the event that channels or undercuts are necessary, the system width needs to be reduced or the pit needs to be wider.
- The manufacturer reserves the right to construction or model modifications and/or alterations. Furthermore, the right to any subsequent part modification and/or variations and amendments in procedures and standards due to technical and engineering progresses in the art or due to environmental regulation changes, are also hereby reserved.

## Width dimensions · Underground garages

All dimensions shown are minimum. Construction tolerances must be taken into consideration.  
All dimensions in cm.

The access to the Parklift is flat of with an declination of max. 5% for a distance of 200 cm immediately in front of the pit.  
Beyond this the slope should not exceed 14%.

250, 260 and 270 cm platform widths are also available in special construction options (only for the upper level), with a 2300 kg parking platform load capacity. Please contact us for information on the relative surcharges.

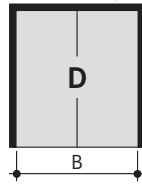
### Wall to wall

Single unit (2 cars)



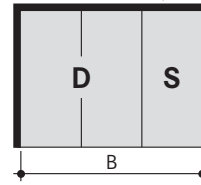
Space required B	gives clear platform width
260	230
270	240
<b>280</b>	<b>250</b>
<b>290</b>	<b>260</b>
<b>300</b>	<b>270</b>

Double unit (4 cars)



Space required B	gives clear platform width
490	460
510	480
<b>530</b>	<b>500</b>

Combinated unit (6 cars)



Space required B	gives clear platform width
750	460+230
780	480+240
<b>810</b>	<b>500+250</b>
<b>820</b>	<b>500+260</b>
<b>830</b>	<b>500+270</b>

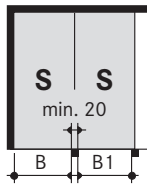
Wall openings required between partitions for electrical and hydraulic conduits must be provided where applicable. Wall openings may not be closed after installation.

The driving aisle width to be compliant with country regulations locally in force.

Other width combinations as well as smaller widths are possible.

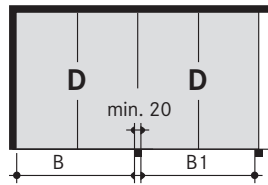
### Pillars outside pit

Single unit (2 cars)



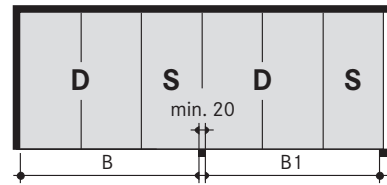
Space required wall-pillar B	pillar-pillar B1	gives clear platform width
250	240	230
260	250	240
<b>270</b>	<b>260</b>	<b>250</b>
<b>280</b>	<b>270</b>	<b>260</b>
<b>290</b>	<b>280</b>	<b>270</b>

Double unit (4 cars)



Space required wall-pillar B	pillar-pillar B1	gives clear platform width
480	470	460
500	490	480
<b>520</b>	<b>510</b>	<b>500</b>

Combinated unit (6 cars)



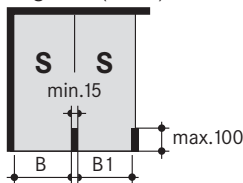
Space required wall-pillar B	pillar-pillar B1	gives clear platform width
740	730	460+230
770	760	480+240
<b>800</b>	<b>790</b>	<b>500+250</b>
<b>810</b>	<b>800</b>	<b>500+260</b>
<b>820</b>	<b>810</b>	<b>500+270</b>

The driving aisle width to be compliant with country regulations locally in force.

Other width combinations as well as smaller widths are possible.

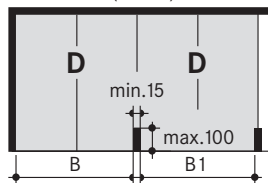
### Pillars inside pit

Single unit (2 cars)



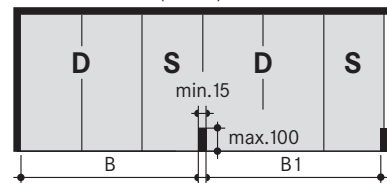
Space required wall-pillar B	pillar-pillar B1	gives clear platform width
255	245	230
265	255	240
<b>275</b>	<b>265</b>	<b>250</b>
<b>285</b>	<b>275</b>	<b>260</b>
<b>295</b>	<b>285</b>	<b>270</b>

Double unit (4 cars)



Space required wall-pillar B	pillar-pillar B1	gives clear platform width
485	475	460
505	495	480
<b>525</b>	<b>515</b>	<b>500</b>

Combinated unit (6 cars)



Space required wall-pillar B	pillar-pillar B1	gives clear platform width
745	735	460+230
775	765	480+240
<b>805</b>	<b>795</b>	<b>500+250</b>
<b>815</b>	<b>805</b>	<b>500+260</b>
<b>825</b>	<b>815</b>	<b>500+270</b>

The driving aisle width to be compliant with country regulations locally in force.

Other width combinations as well as smaller widths are possible.

### Important notes

If maximum platform widths are not installed, difficulties might arise when entering or exiting the cars on the parking units. This depends on the car type, the access and the individual driving behaviour.

For parking slots at edges or between walls, we recommend going for our maximum platform widths.

For cars wider than 190 cm, platform width of 270/500 cm is required to enter and exit the car at drivers-side.

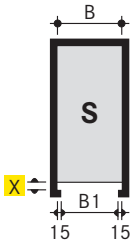
## Width dimensions · Garages with doors

All dimensions shown are minimum. Construction tolerances must be taken into consideration.  
All dimensions in cm.

The access to the Parklift is flat of with an declination of max. 5% for a distance of 200 cm immediately in front of the pit.  
Beyond this the slope should not exceed 14%.

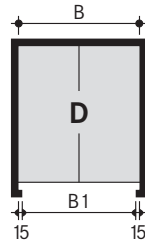
250, 260 and 270 cm platform widths are also available in special construction options (only for the upper level), with a 2300 kg parking platform load capacity. Please contact us for information on the relative surcharges.

### Single garages (2 cars)



Space required B	B1	gives clear platform width
260	230	230
270	240	240
<b>280</b>	<b>250</b>	<b>250</b>
<b>290</b>	<b>260</b>	<b>260</b>
<b>300</b>	<b>270</b>	<b>270</b>

### Double garages (4 cars)



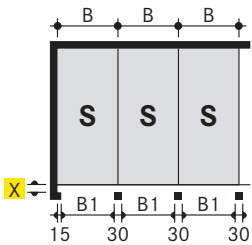
Space required B	B1	gives clear platform width
490	460	460
510	480	480
<b>530</b>	<b>500</b>	<b>500</b>

x = for doors. See page 1

Wall openings required between partitions for electrical and hydraulic conduits must be provided where applicable. Wall openings may not be closed after installation.

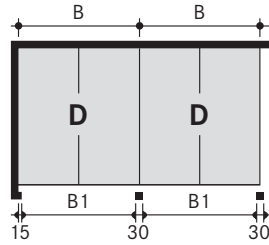
The driving aisle width to be compliant with country regulations locally in force.

### Serial garages with single doors (2 cars)



Space required B	B1	gives clear platform width
260	230	230
270	240	240
<b>280</b>	<b>250</b>	<b>250</b>
<b>290</b>	<b>260</b>	<b>260</b>
<b>300</b>	<b>270</b>	<b>270</b>

### Serial garages with double doors (4 cars)

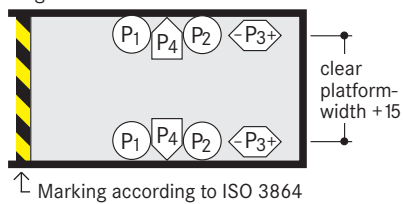


Space required B	B1	gives clear platform width
490	460	460
510	480	480
<b>530</b>	<b>500</b>	<b>500</b>

The driving aisle width to be compliant with country regulations locally in force.

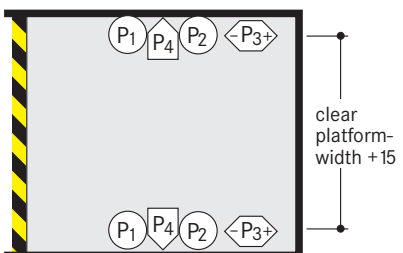
## Statics and construction requirements

Single unit



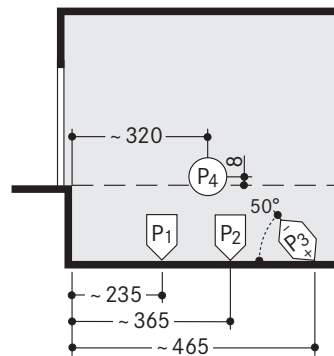
P1 = +30,0 kN \*  
P2 = +12,0 kN  
P3 = +10,0 kN  
P4 = + 3,0kN

Double unit



P1 = +50,0 kN  
P2 = +20,0 kN  
P3 = +15,0 kN  
P4 = + 3,0kN

\*all static loadings include the weight of the car



Bearing loads are transmitted to the pit floor by base plates of approximately 140 cm<sup>2</sup>, fixed by heavy duty anchor bolts to a depth of approximately 10–12 cm. Base plate thickness min. 18 cm.

Concrete quality according to the static building requirements, however for the dowel fixing concrete quality of min. C20/25 is required.

When fixing to waterproof concrete floors, chemical anchor bolts are supplied (to be confirmed by Wöhr).

The front wall of the pits must be formed of concrete and must be perfectly flat and vertical without any protrusions.

The specified lengths to the support points are mean values. Please contact us for exact positions for any variations on the standard units.

## Hydraulic power pack

The location of the hydraulic power pack is determined according to your plan – space requirements are as following:

Dimensions in cm	1–5 Parklifts	6–10 Parklifts
Length:	100	150
Height:	140	140
Depth:	35	35

## Electrical datas

Item	Performance	Quantity	Designation	Position	Frequency
1	by customer	1 unit	electric meter	in the feed cable	
2	by customer	1 unit	fuse or automatic circuit breaker 3 x 16 A slow blow acc. to DIN VDE 0100 p. 430	in the feed cable	1 per power pack
3	by customer	as locally required	acc. to local power supply regulations 3 Ph + N + PE*	feed cable to main switch	1 per power pack
4	by customer	each 10 m	equipotential bonding safety lead-out connection	corner pit floor/ rear wall	
5	by customer	1 unit	equipotential bonding safety compliant to the DIN EN 60204 standard	from the lead-out connection to the system	1 per Parklift
6	by customer	1 unit	marked main switch, lockable to prevent unauthorized switching on	above operating device	1 per power pack
7	by customer	10 m	PVC control cable with marked strands and protective conductor 5 x 1,5 <sup>2</sup>	from main switch to hydraulic power pack	1 per power pack

Items 8-14 are included in Wöhr's scope of delivery unless otherwise specified in the offer/order.

\* DIN VDE 0100 part 410 + 430 (not under permanent load) 3PH+N+PE (three-phase current) Note: Where a door is used to close the garage, the manufacturer of the door must be consulted before the electric cable is laid.

The electrical components supplied by the manufacturer must be connected in accordance with the appropriate wiring diagram and local regulations. German VDE electrical requirements must be adhered to, in order to validate the TÜV tested circuit.

The electrical supply to the power pack(s) must be provided prior to or during installation to

enable our fitters to complete their work satisfactorily and to check the correct functioning of the units.

In compliance with the DIN EN 60204 standard provisions, all systems must be connected directly on site with an earthed equipotential bonding. The lead-out connection must be at a 10 m distance!

## Noise protection

Basis is the German DIN 4109 "Noise protection in buildings".

With the following conditions required 30 dB (A) in rooms can be provided:

- noise protection package from our accessory
- insulation figure of the construction of min.  $R_w = 57$  dB
- walls which are bordering the parking systems must be done as single wall and deflection resistant with min.  $m^2 = 300$  kg/m<sup>2</sup>
- solid ceiling above the parking systems with min.  $m^2 = 400$  kg/m<sup>2</sup>

At differing constructional conditions additional sound absorbing measures are necessary.

The best results are reached by separated sole plates from the construction.

Increased noise protection:

If increased noise protection must be provided planning has to be confirmed on a project basis by Wöhr (further building measures are required).

## Temperature

The installation is designed to operate between +5°C and +40°C. Atmospheric Humidity: 50% at +40°C. If the local circumstances differ from the above please contact Wöhr.

## Drainage

We recommend the provision of a drainage channel at the front of the pit which can either incorporate a pump sump 50 x 50 x 20 cm, or a connection into the storm water sewerage system via a petrol/oil interceptor. If the pump sump is not

accessible for manual drainage, the client must provide a pump on site to empty the pump sump. To prevent any possibility of contamination of the ground-water we recommend that the pit floor is coated with an oil proof paint.

## Conformity test

All our systems are checked according to EC machinery directive 2006/42/EC and EN 14010.

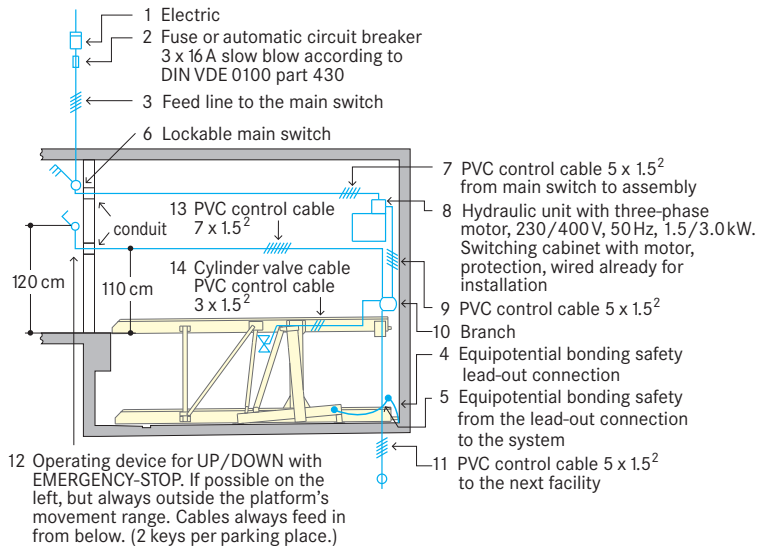
## Illumination

Illumination has to be considered acc. to local requirements by the customer.

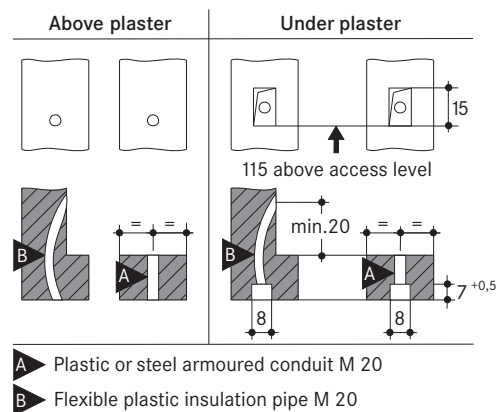
## Free spaces

Special drawings for free spaces to accommodate air ducts or other pipes can be requested at Wöhr Agent!

## Installation diagram



## Recesses and conduits for rotary switches with rolling and sectional gates



## Railings

The units need to be provided acc. EN ISO 13857 with safety railings if the gap between unit and wall exceeds 20cm. If walkways are arranged directly to the side or behind the systems, railings have to be provided by the customer acc. to local requirements, height min. 200 cm - this is applicable during the construction phase too.

## Maintenance

Regular maintenance by qualified personnel can be provided by means of an Annual Service Contract.

## Protection against corrosion

Independent of a maintenance workings has to be carried out acc. to Wöhr Cleaning and Maintenance Instruction regularly.

Clean up galvanized parts and platforms of dirt and road salt as well as other pollution (corrosion danger)!

Pit must always be ventilated and deaired well.

## Parking place width

We recommend a clear platform width of at least 250 cm and/or of at least 500 cm for double systems.

## Dimensions

All dimensions shown are minimum. Construction tolerances must be taken into consideration. All dimensions in cm.

## Fire safety

Each and every fire safety requirement and all possible mandatory item(s) and equipment(s) (fire extinguishing systems and fire alarm systems, etc.) are to be provided by the customer.

## Notes

In case of standard lowered cars with spoilers, contact Company Wöhr or local agent.