

* 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.

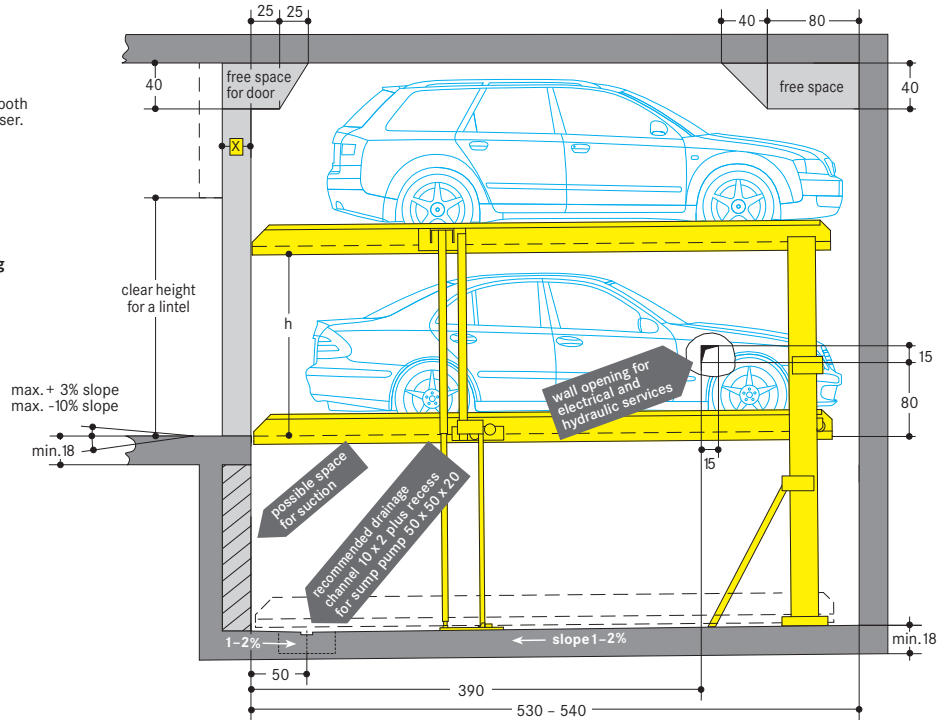
Special reinforced units
 for higher platform loadings
 are available (see 440-2.6).

Both platforms are in a
 horizontal position to drive in.

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

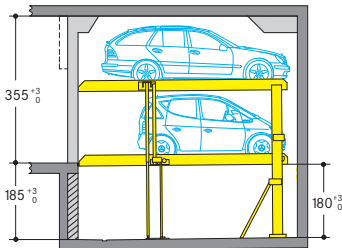
X = only applicable if garage
 doors are to be fitted.
 For roller doors see x = 10 / 15 cm

X = to be clarified with
 door supplier



Dimensions in cm

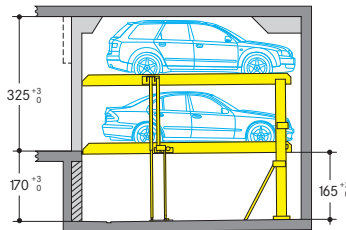
Standard type 440-185/180 · 2000 kg



	car height	distance (h)
Upper level	saloon/estate cars up to 165 cm	
Lower level	saloon/estate cars up to 165 cm	170

Clear height of 340 cm is sufficient, if just cars up to a height of 150 cm shall be parked on the **upper level**.

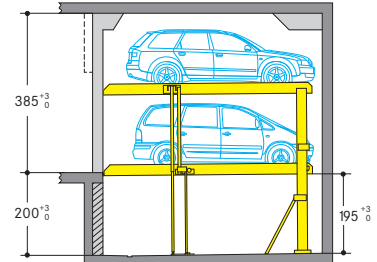
Compact type 440-170/165 · 2000 kg



	car height	distance (h)
Upper level	saloon/estate cars up to 150 cm	
Lower level	saloon/estate cars up to 150 cm	155

Please attend to restricted car- and platform distance height!

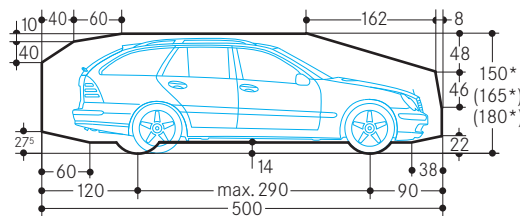
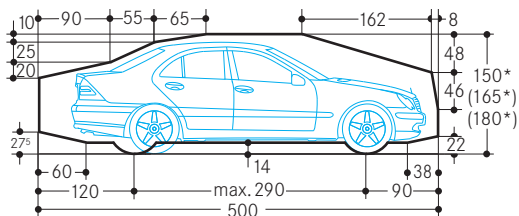
Comfort type 440-200/195 · 2000 kg



	car height	distance (h)
Upper level	cars/vans up to 180 cm and max. 2000 kg	
Lower level	cars/vans up to 180 cm and max. 2000 kg	185

Clear height of 355 cm is sufficient, if just cars up to a height of 150 cm shall be parked on the **upper level**.

Clearance profile (standard saloon/estate car)



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

Notes

1. Car width max. 190 cm (see width details page 2). In case of special platform widths narrower than 230 and 460 cm respectively, the maximum vehicle width is reduced accordingly. For cars with two outside mirrors, a minimum platform width of 250-270 cm or 500-540 cm is recommended.
2. Due to recent increases in car length dimensions, and potential future developments, a pit length of 540 cm is advisable. This offers bigger safety distances also for future cars.
3. 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).
4. 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.
5. The manufacturer reserves the right to modify or alter above specifications.

Width dimensions · Underground garages

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

The access to the Parkliff is possible with max. 3% declination and max. 10% inclination.

If not stated differently in the offer, platform widths of 230 cm or 460 cm will be delivered. Bigger/smaller platform widths can be delivered at additional price.

With platform widths 250, 260 and 270 cm special reinforced units with max. platform loading capacity of 2.300 kg are available for big limousines e.g. Mercedes-Benz S-class

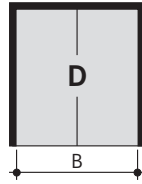
Wall to wall

Single unit (2 cars)



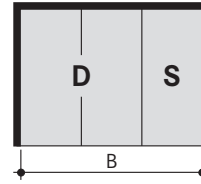
Space required B	gives clear platform width
260	230
270	240
280	250
290	260
300	270

Double unit (4 cars)



Space required B	gives clear platform width
490	460
510	480
530	500
550	520
570	540

Combinated unit (6 cars)



Space required B	gives clear platform width
750	460+230
780	480+240
810	500+250
840	520+260
870	540+270

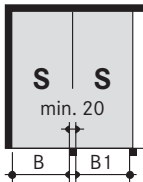
Wall openings required between partitions for electrical and hydraulic conduits must be provided where applicable. Wall openings may not be closed after installation.

Minimum driveway width according to local requirements

Further width combinations as well as smaller widths are possible

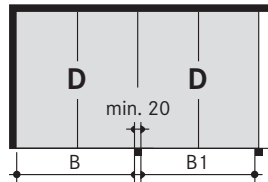
Pillars outside pit

Single unit (2 cars)



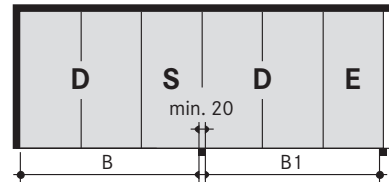
Space required wall-pillar B	pillar-pillar B1	gives clear platform width
250	240	230
260	250	240
270	260	250
280	270	260
290	280	270

Double unit (4 cars)



Space required wall-pillar B	pillar-pillar B1	gives clear platform width
480	470	460
500	490	480
520	510	500
540	530	520
560	550	540

Combinated unit (6 cars)



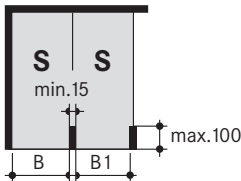
Space required wall-pillar B	pillar-pillar B1	gives clear platform width
740	730	460+230
770	760	480+240
800	790	500+250
830	820	520+260
860	850	540+270

Minimum driveway width according to local requirements

Further width combinations as well as smaller widths are possible

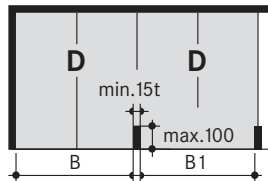
Pillars inside pit

Single unit (2 cars)



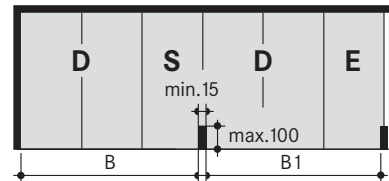
Space required wall-pillar B	pillar-pillar B1	gives clear platform width
255	245	230
265	255	240
275	265	250
285	275	260
295	285	270

Double unit (4 cars)



Space required wall-pillar B	pillar-pillar B1	gives clear platform width
485	475	460
505	495	480
525	515	500
545	535	520
565	555	540

Combinated unit (6 cars)



Space required wall-pillar B	pillar-pillar B1	gives clear platform width
745	735	460+230
775	765	480+240
805	795	500+250
835	825	520+260
865	855	540+270

Minimum driveway width according to local requirements

Further 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.

Cars wider than 190 cm should be parked on platforms 270/540 cm width only.

For spaces against walls, or at end of rows, we recommend that largest possible platform widths are utilized to assist turning motion.

Width dimensions · Garages with doors

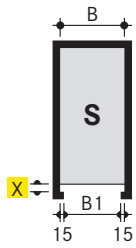
All dimensions shown are minimum. Construction tolerances must be taken into consideration.
All dimensions in cm.

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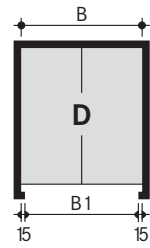
With platform widths 250, 260 and 270 cm special reinforced units with max. platform loading capacity of 2.300 kg are available for big limousines e.g. Mercedes-Benz S-class

Single garages (2 cars)



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

Double garages (4 cars)



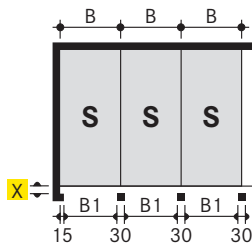
Space required B	B1	gives clear platform width
490	460	460
510	480	480
530	500	500
550	520	520
570	540	540

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.

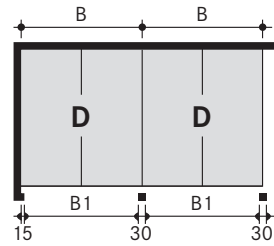
Minimum driveway width according to local requirements

Serial garages with single doors (2 cars)



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

Serial garages with double doors (4 cars)

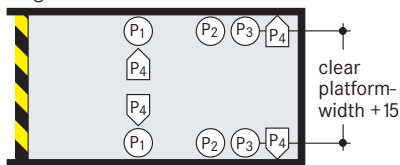


Space required B	B1	gives clear platform width
490	460	460
510	480	480
530	500	500
550	520	520
570	540	540

Minimum driveway width according to local requirements

Statics and construction requirements

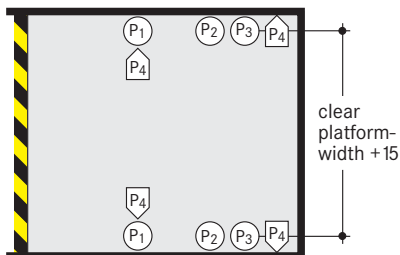
Single unit



Marking according to ISO 3864

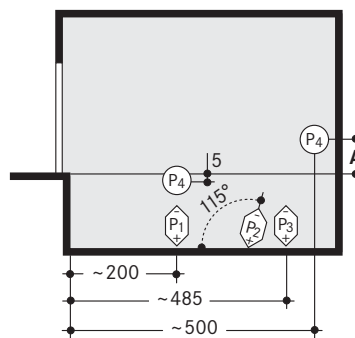
P1 = +36 kN *
- 7 kN
P2 = + 2 kN
- 3 kN
P3 = +14 kN
- 3 kN
P4 = + 3 kN

Double unit



P1 = +66 kN
- 6 kN
P2 = + 3 kN
- 6 kN
P3 = +23 kN
- 3 kN
P4 = + 3 kN

* all static loadings include the weight of the car



	A
Parkliff 440-165/170	72
Parkliff 440-185/180	57
Parkliff 440-200/195	42

Bearing loads are transmitted to the pit floor by base plates of approximately 140 cm², fixed by heavy duty anchor bolts to a depth of approximately 10–12cm. Base plate thickness min. 18 cm. Concrete quality according to the static requirements of the building, but for the dowel fastening we require a concrete quality of min. C20/25. When fixing to waterproof concrete floors chemical anchors are employed (to be advised 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 follows:

Dimensions are in cm	1 – 5 Parkliffs	6 – 10 Parkliffs
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 connection to the system	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 ²	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. $m' = 300$ kg/m²
- solid ceiling above the parking systems with min. $m' = 400$ kg/m²

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° 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. To prevent any possibility of contamination of the ground-water we recommend that the pit floor is coated with an oil proof paint.

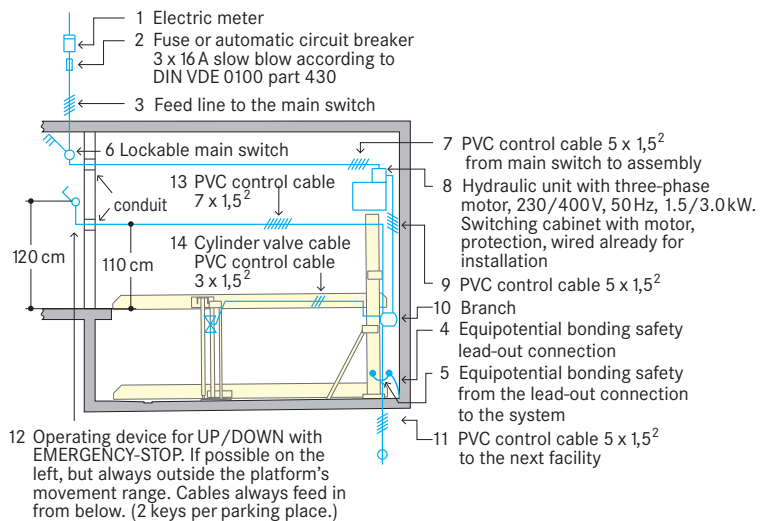
Conformity test

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

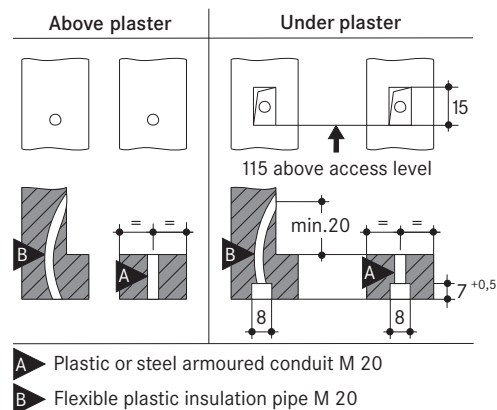
Illumination

Illumination has to be considered acc. to local requirements by client.

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 client acc. to local requirements, height min. 200 cm - this is applicable during the construction phase too.

Free spaces

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

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 be always ventilated and deaired well.

Dimensions

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