**Parkist 11** and **Parkist 22** provide independent parking solution by creating a parking space on the lower floor, which double the capacity of your parking garage.

**ADVANTAGES**

- The system provides independent parking utility by placing the vehicle on the lower platform.
- The system increases the efficiency of your parking area by creating an upper floor for short-term users and a lower floor for permanent users.
- By raising the lower platform, the vehicle on the pit can be retrieved and parked comfortably and easily, without having to replace the upper vehicle.
- Innovative plain platform surface design makes both walking and driving more comfortable.
- The valet service is not required as the drivers can park themselves comfortably in the system.
### Variant For Car Height

<table>
<thead>
<tr>
<th>Variant</th>
<th>Height</th>
<th>Car Profile Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VARIANT 150</strong></td>
<td>H 320</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>H_p_b 170/165</td>
<td>150</td>
</tr>
<tr>
<td><strong>VARIANT 160</strong></td>
<td>H 330</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>H_p_b 180/175</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>H 340</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>H_p_b 180/175</td>
<td>150</td>
</tr>
<tr>
<td><strong>VARIANT 170</strong></td>
<td>H 340</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>H_p_b 190/185</td>
<td>150</td>
</tr>
<tr>
<td><strong>VARIANT 180</strong></td>
<td>H 360</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>H_p_b 190/185</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>H 350</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>H_p_b 200/195</td>
<td>150</td>
</tr>
</tbody>
</table>

**CAR PROFILE DIMENSION**

The "car height" including roof rails, antenna and others must not exceed the mentioned max car height dimension.
System Width

Between walls

**Parkist 11**
Single system S
S = 2 spaces

**Parkist 22**
Double system D
D = 4 spaces

**Parkist 22 - 11**
Mixed D, S
D, S = 4, 2 spaces

Pillars in the pit

**Parkist 11**
Single system S
S = 2 spaces

**Parkist 22**
Double system D
D = 4 spaces

**Parkist 22 - 11**
Mixed D, S
D, S = 4, 2 spaces

Pillars in front of the pit

**Parkist 11**
Single system S
S = 2 spaces

**Parkist 22**
Double system D
D = 4 spaces

**Parkist 22 - 11**
Mixed D, S
D, S = 4, 2 spaces

*CLEAR SPACE WIDTH*

- Shown dimensions are minimum. See also page 6.
- “Clear space width” is according to Garage Code or local/regional regulations.
- Nevertheless, the supplier recommends due to the increasing width of cars a minimum “clear space width” of 250 cm or even more for SUV and luxury limousines.
- End boxes are difficult to enter out of the car curve radius. For endboxes and systems between walls, the supplier recommends the maximum available “clear space width”.
- Any growth of the driving lane supports the comfort.
For comfortable walking

“*A savior*” flat platform surface design.

Users deserve more comfort. Our platform design offers comfort beyond your expectations. The flat platforms provide much comfort while walking and driving on. Whoever uses it like it: Elderly or young, male or female. High heels are no longer an issue.

**Design: Safety & Comfort**

**STRONG BUT SMOOTH LOW BUT ROBUST**

The profiles on both sides of the platform are strong due to them being constituted of one single long piece, in addition to their soft slope from low to high. This latter eliminated the risk of collision that may damage the vehicle and the wheels and provides easy and safe maneuvering. The teardrop pattern used at the entry ramp facilitates holding the vehicles’ wheels and prevents slipping. Due to their low height, the profiles on both sides are both robust and eliminate the risk of collision while opening the doors. Moreover, adjustable wheel stoppers are used to assist the driver in positioning the vehicle on the platform.

**WE OFFER WHAT YOU NEED**

**PARKING SPACE CAPACITY AND WHEEL LOAD**

Cars with overweight. The biggest Switzerland motorcyclist association remeasured the weight of cars, which is figured out in the car registration certificate according to regulation 92/21/EEC. In most of the cases the car was heavier than stated on document. Often individual options are not calculated. Sliding roof, bigger wheels, hifi systems, motors for seats, etc might increase the weight, which can be up to 150 - 200 kg higher on a car like Mercedes E-Class, BMW 5-Series, Audi A6. Therefore the supplier offers a standard parking space capacity of 2,200 kg and 550 kg wheel load, option 2,800 kg and 700 kg wheel load.

**SHIFTED COLUMNS**

Modern parking systems use 4 column technique for more comfort. However, it is important where these columns are placed in detail: We have positioned them in the car clearance profile with a car achsies distance of about 290 cm. Not before and not behind. Besides the statical advantage, this provides advantage not only to the front but also to the back door. Railing and side sheets should support those higlights.

**CONTROL SOUND EMISSIONS**

Car parking systems are sustainable, but also produce sound emissions that can affect health and care during use and operation. Compliance of sound emissions is important and effects R&D, planning and execution. We differ between air borne and body sound emission. For the latter the heavy duty support as well as the hydraulic insulation are of importance. Driving noise from the platform are part of the subjective perception and affect the quality impression.

**CLEANING AND VALUE PRESERVATION**

A car parking system represents a major investment financially. Cleaning and care services can ensure a proper appearance, value preservation, function, availability and might lengthen the life time cycle. In reality one main reason for the poor and sometimes rusty look is, that the platform design is exceptionally difficult to clean and thus the necessary processes often are neglected. The supplier has developed a user friendly platform design, that provides the possibility to clean and maintain professionally.
Electrical Supply

**Parkolay**
- 5.1. Up and down operating terminal
  - On the left, if possible. Outside the motion zone. The cable feed is below.

**Forces**
- 2.1. Supply line, Equipotential earthing connection according to DIN T5 EN 60204
- 2.2. 5 x 4 mm² supply cable (40 kW / 55 kW, 400V, 50Hz) goes from customer power distribution panel to system control panel set for each control panel and hydraulic power unit.

**Customer**
- 1.1. Electric power distribution panel
- 1.2. 3 x 16 A slow character MCB (Miniature Circuit Breaker) for each control panel and hydraulic power unit set

**Structural Forces**

<table>
<thead>
<tr>
<th>Forces kN**</th>
<th>S</th>
<th>S*</th>
<th>D</th>
<th>D*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>car version kg</strong></td>
<td>2.200</td>
<td>2.800</td>
<td>2.200</td>
<td>2.800</td>
</tr>
<tr>
<td>F1</td>
<td>22</td>
<td>27</td>
<td>43</td>
<td>52</td>
</tr>
<tr>
<td>F2</td>
<td>22</td>
<td>27</td>
<td>43</td>
<td>52</td>
</tr>
<tr>
<td>F3</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>F4</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

**With car load**

* Option

**Foundation**
- Systems are fixed by heavy duty anchor bolts with a drilling depth of approx. 14 cm.
- Floor and walls below the drive-in level are to be made of reinforced concrete, min thickness 18 cm, quality minimum C20/25.
- Chemical anchors are option for water-proof concrete.

**Customer**
- 1.1. Electric power distribution panel
- 1.2. 3 x 16 A slow character MCB (Miniature Circuit Breaker) for each control panel and hydraulic power unit set
Corrosion protection and Prevention
Besides the maintenance, the systems have to be cleaned regularly. This is for the systems, at least for the platforms as well as for all parts being exposed to corrosive substances, e.g. salt water, dirt, car fluids, sand, etc. Garages also have to be ventilated and deaerated. The base plates have to be dewatered and dry.

Marking band
According to DIN EN 14010/ ISO 3864 a yellow/ black 10cm wide safety warning band must be placed at the edge of the parking pit by customer.

ISO 3864

Safety fences
DIN EN ISO 13857
According to DIN EN ISO 13857 safety fences have to be provided by customer for pathways directly around the parking boxes (besides or behind the units). Also during construction.

Railings on the systems are provided by supplier, if necessary.

Fire safety
Designing fire safety in the proposed garage or area must comply with local/ regional regulations. The compliance must be managed by customer. Depending on the location and the fire department there might be very different and specific requirements. The supplier has to be informed in advance by the customer.

Dewatering
Dewatering involves controlling water in the pit with the possibility of pumping it out of a watercollecting pump sump. Water may occur from snow on the car, leaking shell, ground water, wet cleaning the systems (to prevent corrosion) or others. Necessary are slopes from pit back to pit front, slope to the drainage channel 10 x 2 cm (1-2 degrees), slope of the drainage system to the pump sump (50 x 50 x 20 cm).

Car development
The analysis of cars incorporates developments i.a. in more width and height. Even the classes of family cars and SUV are expanding. Reports show that just upper middle class cars can be in total heavier than 2.000 kg. Therefore the supplier recommends a “parking space width” of 250 cm and a min car height of 160/ 170 cm. The supplier provides for the car capacity a standard of 2.200 kg, wheel load 550 kg (Option 2.800/ 700 kg).

Sound insulation
DIN 4109: 2016-07
“Sound insulation in buildings”. According to the german norm a value of 30 dB(A) is allowed in living quarters. This can be fulfilled with: option noise protection according to offer supplier. Sound insulation of building R’w = 57 dB. Surrounding walls/ ceilings (e.g. monolithic and rigid) of parking should be made of min m’ = 300/ 400 kg/ m². Superior. The adjacent critical building element should be min m’ = 580 kg/ m². User noises are created by individual users. These can be from driving up/ down the platforms, slamming of vehicle doors, motor and brake noises. They are not subject to the limit. “Increased sound insulation” is made on special offer and discussion and needs more space.

MINIMUM DIMENSIONS & TOLERANCES
Shown dimensions are minimum. Tolerances according to VOB part C (DIN 18330 and 18331) and the DIN 18202 have to be considered additionally. Tolerances for space requirements are +3 cm/ 0 cm. Dimensions are in cm.

ENVIRONMENTAL RANGE
Temperature range -10 to +40° C. Relative humidity 50% at maximum outside temperature of +40° C.

LIGHTING
There must be sufficient lighting in the parking garage and parking area according to regulations, supplied by customer.

CE AND CONFORMITY
The systems correspond to DIN EN 14010 and the EC Machinery Directive 2006/42/EC.

RIGHTS TO CHANGE
The manufacturer reserves the right to change, alter, modify parts, groups or general design in procedures or standards due to technical progress.

HYDRAULIC POWER UNITS
Several parking systems can be operated with one power unit. The power unit(s) need(s) additional space (depth 35 cm), which has to be in/ near the parking area and should be clarified with the drawing approval (e.g. wall recesses, moving with platform, others).