



## Indac Parking Systems Pvt. Ltd.

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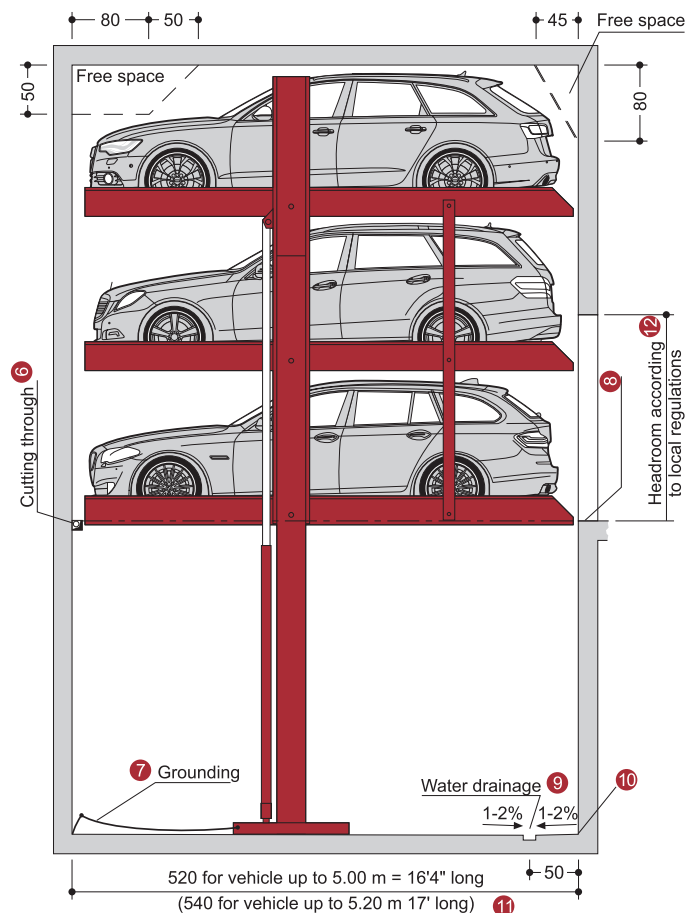
E-mail: info@indacparking.com

## PRODUCT DATA

**S 33**

**2000 kg<sup>1</sup> 2500 kg<sup>2</sup>**

### Garage without door (basement garage)



### Dimensions

All space requirements are minimum finished dimensions.

Tolerances for space requirements<sup>+3</sup><sub>0</sub><sup>3</sup>

Dimensions in cm.

SP (single platform) = 3 vehicles

DP (double platform) = 6 vehicles

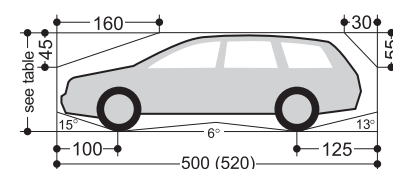
### Suitable for

Standard passenger cars:

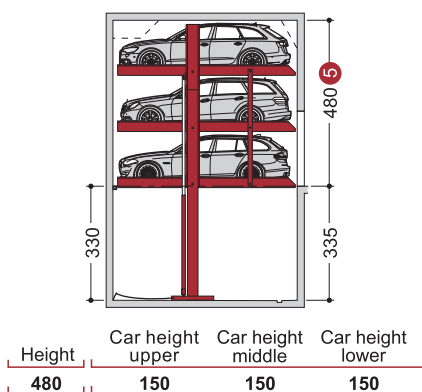
For PW 2.3 m. according to clearance and maximal surface load.

	Standard	Special <sup>2</sup>
Width	190 cm <sup>4</sup>	190 cm <sup>4</sup>
Weight	max. 2000 kg	max. 2500 kg
Wheel load	max. 500 kg	max. 625 kg

### Clearance profile

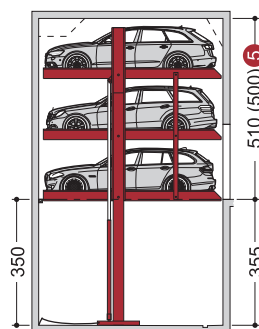


### S33-330



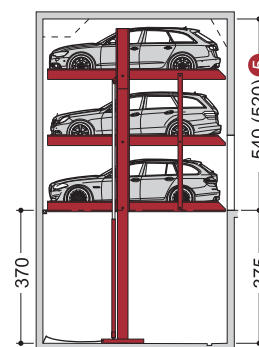
Height	Car height upper	Car height middle	Car height lower
480	150	150	150

### S33-350



Height	Car height upper	Car height middle	Car height lower
510 (500)	160 150	160 160	160 160

### S33-370



Height	Car height upper	Car height middle	Car height lower
540 (520)	170 150	170 170	170 170

<sup>1</sup> Standard type

<sup>2</sup> Special system: maximum load (only SP) for extra charge.

<sup>3</sup> To follow the minimum finished dimensions, make sure to consider the tolerances during construction.

<sup>4</sup> Car width for platform width 230 cm. If wider platforms are used, it is also possible to park wider cars.

<sup>5</sup> If a higher ceiling height is available, higher cars can be parked at top level platform.

<sup>6</sup> For dividing walls: cutting through 10 x 10 cm.

<sup>7</sup> Potential equalization from foundation grounding connection to system (provided by the customer).

<sup>8</sup> 10 cm wide yellow-black marking must be applied by the customer to the edge of the pit in the entry area to mark the danger zone (see "load plan" page 4).

<sup>9</sup> Slope with drainage channel and sump.

<sup>10</sup> At the transition section between pit floor and walls no hollow mouldings/coves are possible. If hollow mouldings/coves are required, the systems must be designed smaller or the pits accordingly wider.

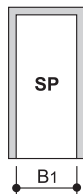
<sup>11</sup> For convenient use of your parking space and due to the fact that the cars keep becoming longer we recommend a pit length of 540 cm.

<sup>12</sup> Must be at least as high as the greatest car height + 5 cm.

## Width dimensions for garage without door (basement garage)

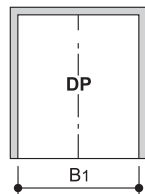
### Dividing walls

Single platform (SP)



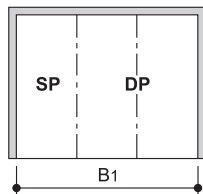
Usable platform width	B1
230	270
240	280
<b>250</b>	<b>290</b>
<b>260</b>	<b>300</b>
<b>270</b>	<b>310</b>

Double Platform (DP)



Usable platform width	B1
460	500
470	510
480	520
490	530
<b>500</b>	<b>540</b>

Single and Double Platform (SP + DP) - Example

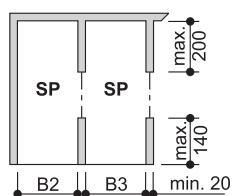


Usable platform width	B1
230 + 460	760
240 + 470	780
250 + 480	800
<b>250 + 500</b>	<b>820</b>
<b>270 + 500</b>	<b>840</b>

Driveway in  
accordance with  
local regulations

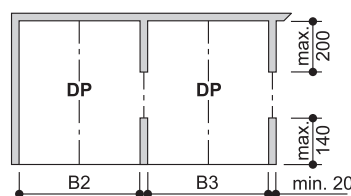
### Columns in pit

Single platform (SP)



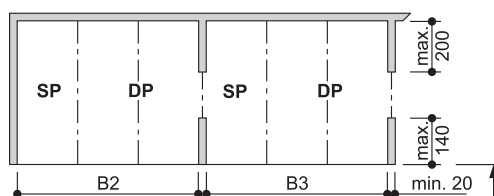
Usable platform width	B2	B3
230	255	250
240	265	260
<b>250</b>	<b>275</b>	<b>270</b>
<b>260</b>	<b>285</b>	<b>280</b>
<b>270</b>	<b>295</b>	<b>290</b>

Double platform (DP)



Usable platform width	B2	B3
460	490	480
470	500	490
480	510	500
490	520	510
<b>500</b>	<b>530</b>	<b>520</b>

Single and double platform (SP + DP) - Example

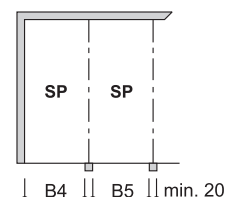


Usable platform width	B1	B3
230 + 460	750	745
240 + 470	770	765
250 + 480	790	785
<b>250 + 500</b>	<b>810</b>	<b>805</b>
<b>270 + 500</b>	<b>830</b>	<b>825</b>

Driveway in  
accordance with  
local regulations

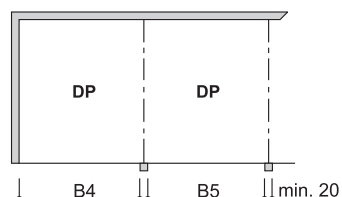
### Columns outside pit

Single platform (SP)



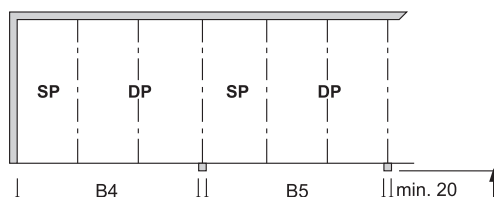
Usable platform width	B4	B5
230	250	240
240	260	250
<b>250</b>	<b>270</b>	<b>260</b>
<b>260</b>	<b>280</b>	<b>270</b>
<b>270</b>	<b>290</b>	<b>280</b>

Double platform (DP)



Usable platform width	B4	B5
460	490	480
470	500	490
480	510	500
490	520	510
<b>500</b>	<b>530</b>	<b>520</b>

Single and double platform (SP + DP) - Example



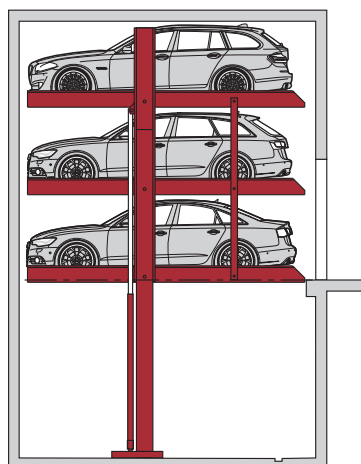
Usable platform width	B4	B5
230 + 460	750	740
240 + 470	770	760
250 + 480	790	780
<b>250 + 500</b>	<b>810</b>	<b>800</b>
<b>270 + 500</b>	<b>830</b>	<b>820</b>

Driveway in  
accordance with  
local regulations

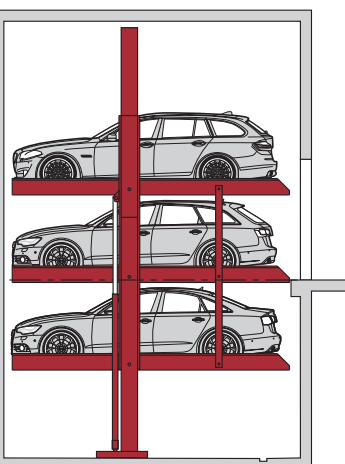
**!** End parking spaces are generally more difficult to drive into. Therefore, we recommend our wider platforms for end parking spaces. Parking larger vehicles on standard width platforms may make getting into and out of the vehicle difficult. This depends on the type of the vehicle, entrance and above all, on the driver's skill.

## Function

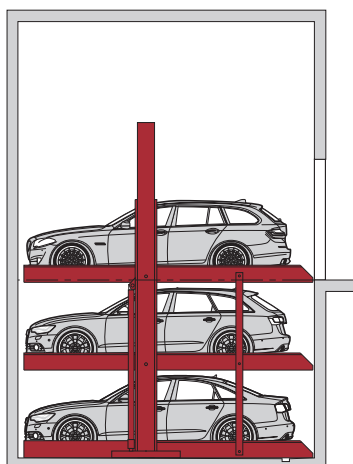
System lifted



System in middle position



System lowered



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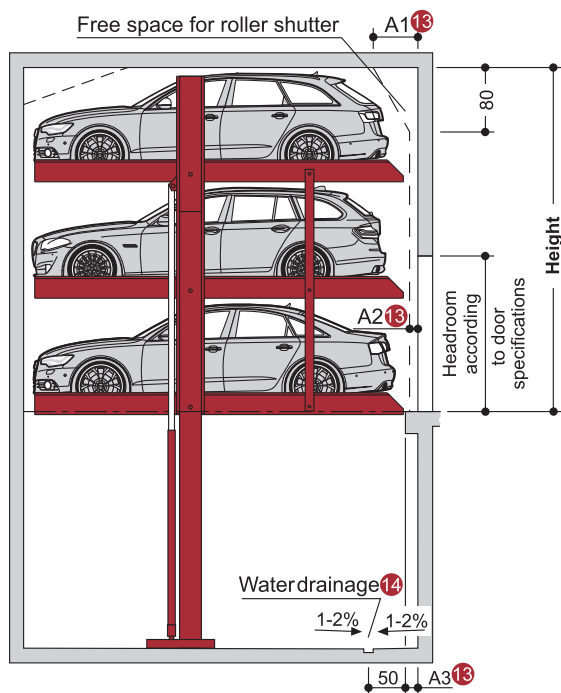
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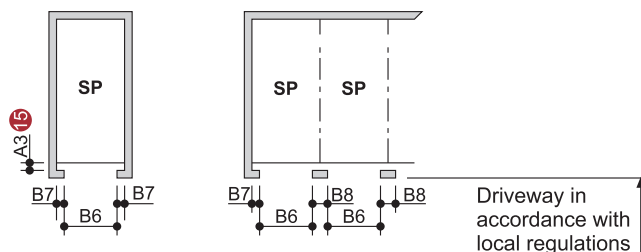
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## Garage with door



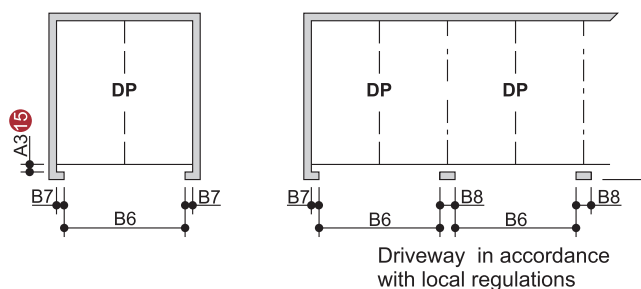
## Width dimensions for garage with door

### Single platform (SP)



Usable platform width	Door entrance width B6	B7	B8
230	230	15	30
240	240	15	30
250	250	15	30
260	260	15	30
270	270	15	30

### Double platform (DP)



usable platform width	Door entrance width B6	B7	B8
460	460	20	40
470	470	20	40
480	480	20	40
490	490	20	40
500	500	20	40

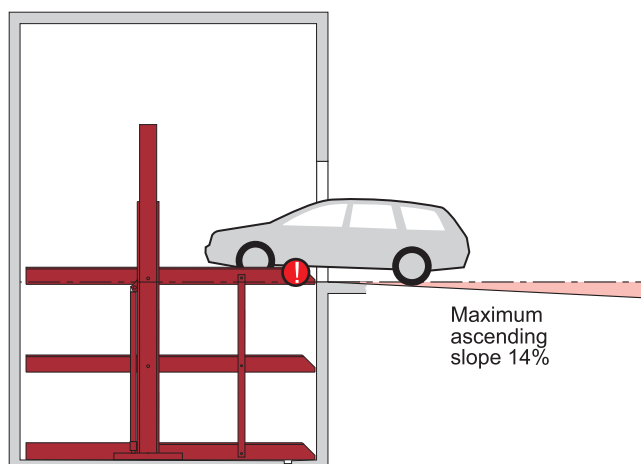
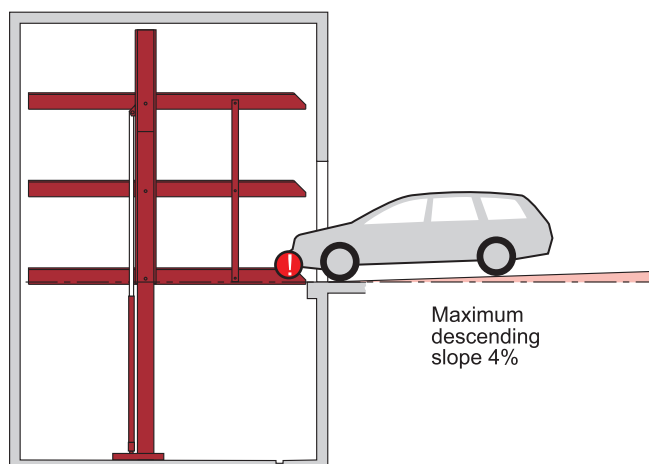
**13** Dimensions A1, A2 and A3 must be coordinated with the door supplier (provided by the customer).

**14** Slope with drainage channel and sump.

**15** Seat-engaging surface (dimensions require coordination with door supplier.) All round door dimensions require coordination between door supplier and local agency of INDAC Parking System.

**!** End parking spaces are generally more difficult to drive into. Therefore, we recommend our wider platforms for end parking spaces. Parking larger vehicles on standard width platforms may make getting into and out of the vehicle difficult. This depends on the type of the vehicle, entrance and above all, on the driver's skill.

## Entrance



**!** The illustrated maximum entrance angles must not be exceeded. Incorrect entrance angles will cause serious maneuvering & positioning problems on the parking system for which the local agency of the INDAC Parking Systems accepts no responsibility.

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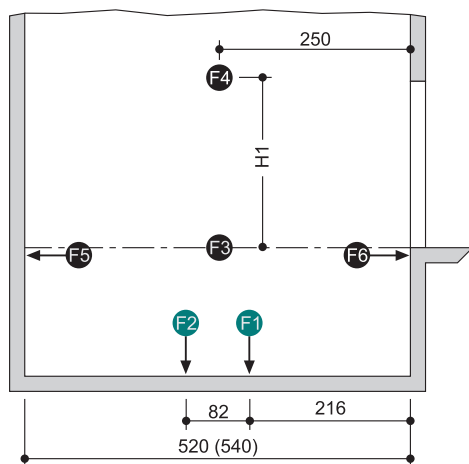
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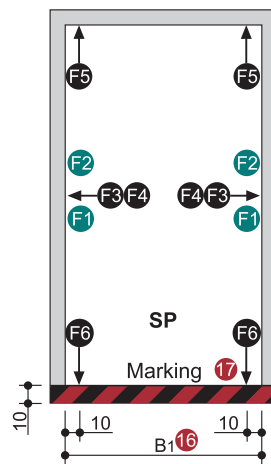
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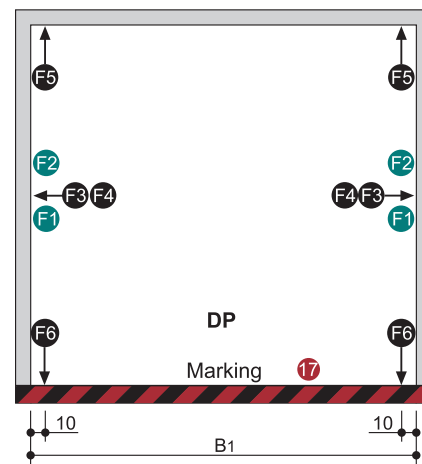
## Load data



Platform load	F1	F2	F3	F4	F5	F6	18
SP 2000 kg	+25	+55 -20	+3,5	+3,5	+12	+15	
SP 2500 kg	+25	+63 -20	+3,5	+3,5	+12	+15	
DP 2000 kg	+35	+80 -25	+4	+4	+12	+20	



Type	H1
S33-330	225
S33-350	245
S33-370	265



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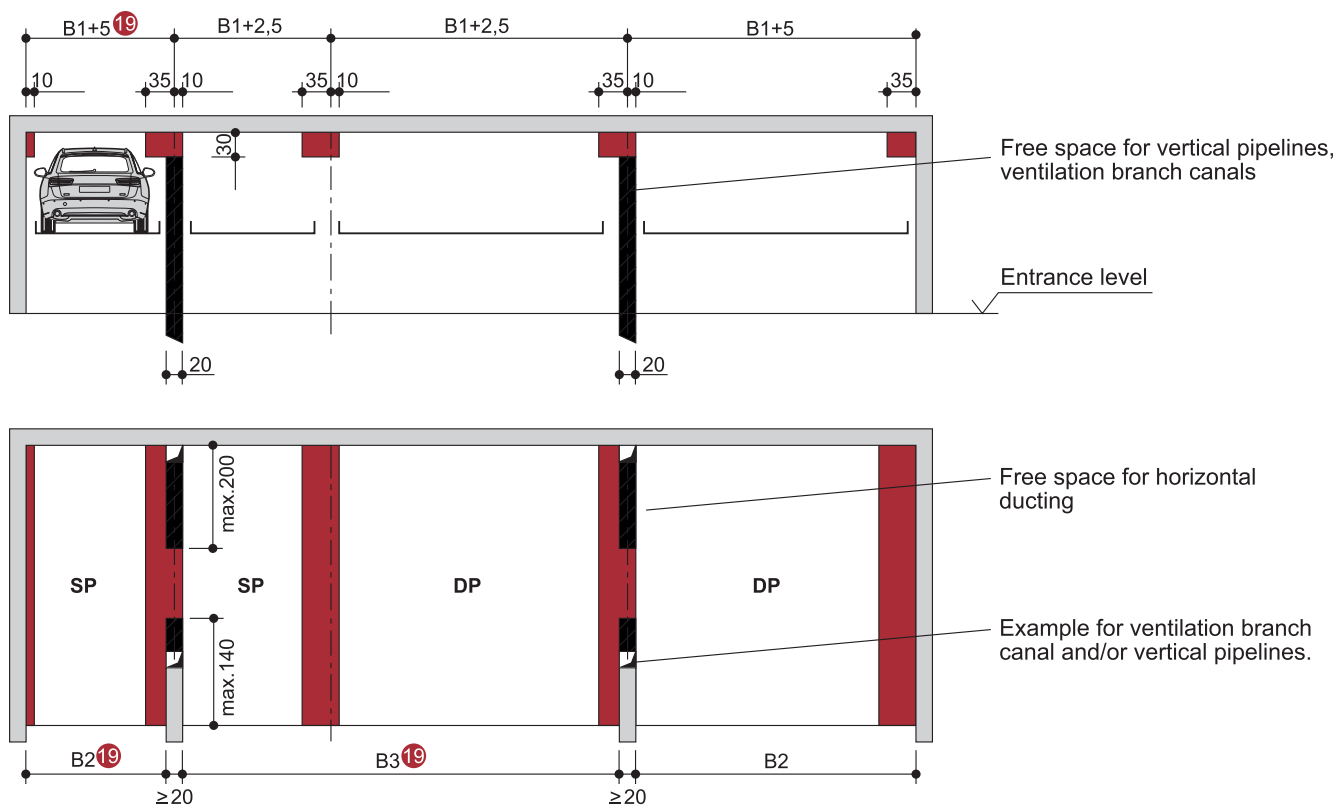
- ! Units are anchored to the floor. Drilling depth: approx. 15 cm.  
Floor and walls below the drive-in level are to be made of concrete (quality minimum C20/25).  
The dimensions for the points of support are rounded values. If the exact position is required, please contact INDAC Parking Systems.

16 Dimension B1 see page 2

17 Colors used in this illustration are representative

18 All forces in kN (Static Loads)

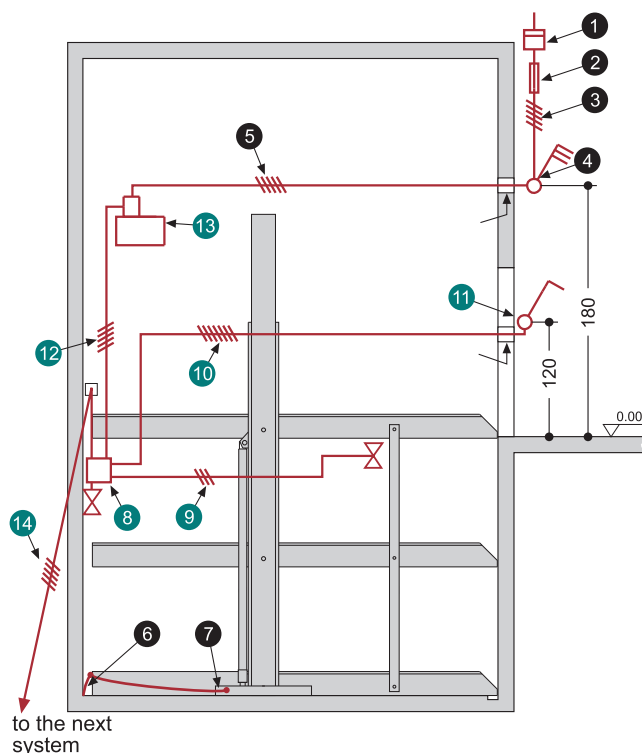
## Installation data - Free space for longitudinal and vertical ducts (e.g. ventilation)



- ! Free space only applicable if vehicle is parked forward = FRONT FIRST and driver's door on the right side.

19 Dimensions B1, B2 and B3 see page 2.

## Electrical details



### Electrical data (to be provided by the customer)

No.	Quantity	Description	Position	Frequency
1	1	Electricity meter	in the supply line	
2	1	Power Point: 3 x fults 20 A (slow) or circuit breaker 3 x 20 A (trigger characteristic K or C)	in the supply line	1 per unit
3	1	Supply line 5 x 4.0 mm <sup>2</sup> , Copper (3 PH + N + PE) with marked wire and protective conductor	to main switch	1 per unit
4	1	Lockable main switch	defined at the plan evaluation	1 per unit
5	1	Supply line 5 x 4.0 mm <sup>2</sup> , Copper (3 PH + N + PE) with marked wire and protective conductor	from main switch to unit	1 per unit
6	every 10 m	Foundation earth connector	corner pit floor	
7	1	Equipotential bonding from foundation earth connector to the system		1 per system

### Electrical data (included in delivery of INDAC Parking Systems)

No.	Description
8	Terminal box
9	Control line 3 x 0.75 mm <sup>2</sup> (PH + N + PE)
10	Control line 5 x 0.75 mm <sup>2</sup> with marked wire and protective conductor
11	Operating device
12	Control line 5 x 0.75 mm <sup>2</sup> with marked wire and protective conductor
13	Hydraulic unit 5.2 kW, three-phase current, 415 V / 50 Hz
14	Control line 5 x 0.75 mm <sup>2</sup> with marked wire and protective conductor

## Technical details

### Field of application

Generally parking system is suitable for the same car length for which the wheelstop is adjusted, at the time of installation. In case different car is to be parked, wheelstop adjustment confirmation from INDAC Parking Systems shall be required.

### Care

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

### Railings

If the permissible drop opening is exceeded, railings are to be provided. If there are traffic routes next to or behind the installations, railings must be installed by the customer. Railings must also be in place during construction.

### Environmental conditions

Environmental conditions for the area of parking systems: Temperature range 5°C to +40°C. Maximum outside temperature of +45°C.

If the local circumstances differ from the above, please contact INDAC Parking Systems.

## To be provided by the customer

### Safely fences

Any constraints that may be necessary to provide protection for the park pits for pathways directly in front, next to or behind the unit. This is also valid during construction. Railing for the system are included in the series delivery when necessary.

### 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.

### Drainage

For the front area of the pit we recommend a drainage channel, which you connect to a floor drain system or sump (50 x 50 x 20 cm). The drainage channel may be inclined to the side, however not the pit for itself (longitudinal incline is available). For reasons of environmental protection we recommend to paint the pit floor, and to provide oil and petrol separators in the connections to the public sewage systems.

### Strip footings

If due to structural condition strip footings must be effected, the customer shall be provided an accessible platform reaching to the top of the said strip footings to enable and facilitate the mounting work.

### Marking

A warning that identifies this danger area must be placed in the entrance area. This must be done for systems with a pit (platforms within the pit) 10 cm from the edge of the pit.

### Wall cuttings

Any necessary wall cuttings according to page 1.

### Electrical supply to the main switch / foundation earth connector

Suitable electrical supply to the control panel must be provided by the customer. 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 his own expense and risk.

Safety of machinery, electrical equipment, grounding of the steel structure is necessary, provided by the customer (distance between grounding max. 10 m).

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## Description Single platform (SP) and Double platform (DP)

### General description

INDAC Parking Systems providing independent parking spaces for 3 cars (SP), 2 x 3 cars (DP), one on top of the other each.

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

The parking bays are accessed horizontally (installation deviation  $\pm 1\%$ ).

Vehicles are positioned on each parking space using wheel stop on the left side (adjust according to operating instructions).

The user is responsible for positioning the vehicle.

Operation via operating device with hold-to-run-device using master keys.

The operating elements are usually mounted either in front of the column or on the outside of the door frame.

Operating instructions are attached to each operator's stand.

For safety reasons it is recommended to install safety doors at the entrance.

For garages with doors at the front of the parking system the special dimensional requirements have to be taken into account.

### Parking system consists of

- 2 steel pillars with bases that are mounted on the floor
- 2 sliding platforms (mounted to the steel pillars with sliding bearings)
- 3 platform
- 1 mechanic synchronization control system (to ensure synchronous operation on the hydraulic cylinders while lowering and lifting the platform)
- 2 hydraulic cylinders
- 2 rigid supports (connect the platforms)
- Welded hydraulic lines up to installed globe valve
- Anchors, screws, connecting elements, bolts, etc
- The platforms and parking spaces are end-to-end accessible for parking.

### Platforms consists of

- Platform base sections
- Adjustable wheel stops
- Canted access plates
- Side members
- Central side member [only DP]
- Cross members
- Screws, nuts, washers, distance tubes, etc.

### Hydraulic system consists of

- Hydraulic cylinder
- Solenoid valve
- Safety valve
- Hydraulic pipes
- Screwed joints
- high-pressure hoses
- Installation material

### Electric system consists of

- Operating device (Emergency Stop, lock, 1 master key per parking space)
- Terminal box at wall / stand
- Reed switch

### Hydraulic unit consists of

- Hydraulic power unit (low-noise, installed onto a console with a metal mounting)
- Hydraulic oil reservoir
- Oil filling
- Internal geared wheel pump
- Pump holder
- 3-phase-AC-motor
- Contactor (with thermal overcurrent relay and control fuse)
- Pressure gauge
- Pressure relief valve
- Hydraulic hoses (which reduce noise transmission onto the hydraulic pipe)

## We reserve the right to change these specifications without prior notice.

INDAC Parking Systems reserves the right in the course of the technical progress to use newer or other technologies, system, processes, procedures or standards in the fulfillment of their obligations other than those originally offered.

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