

PFPP

Pit Four Post Parking System Series

PROFESSIONAL PARKING SOLUTION PROVIDER!



WE PLAN , DESIGN, MANUFACTURE AND INSTALL...



QINGDAO MUTRADE CO., LTD.

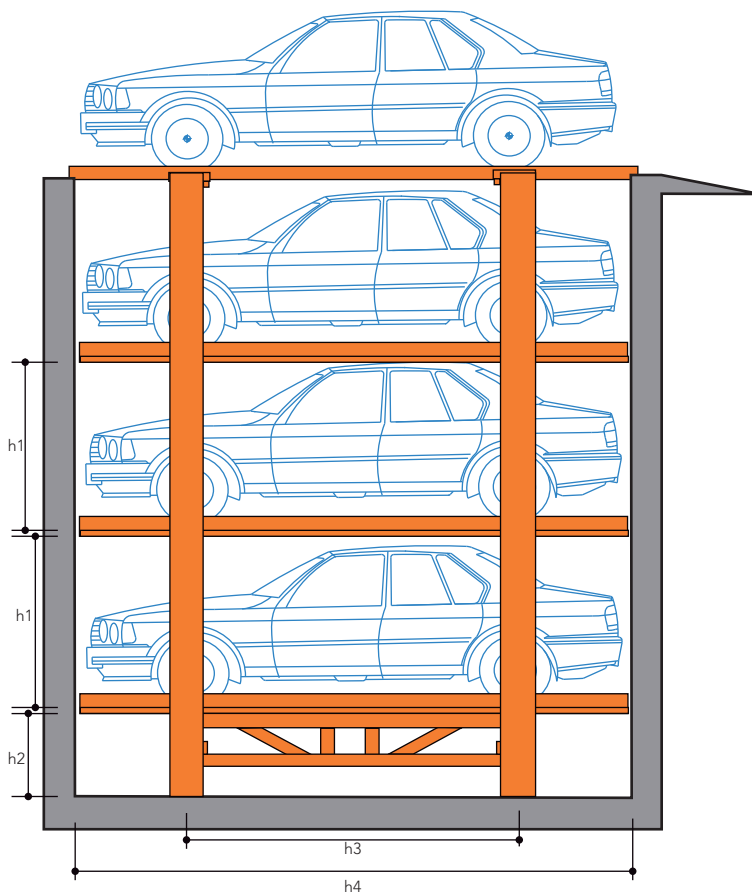
PFPP

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Introduction

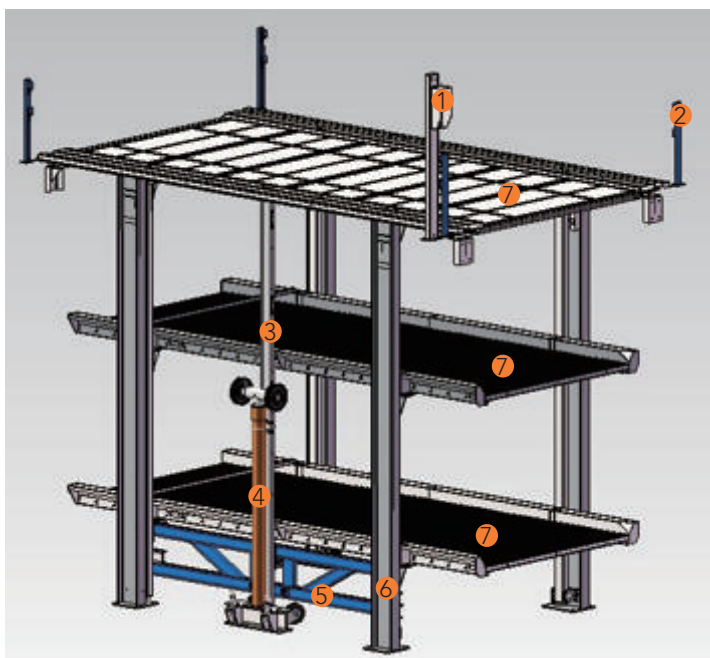
PFPP series are a kind of self parking equipment with simple structure, it moves vertically in the pit so people could park or retrieve any vehicle easily without moving other vehicle out first. It can make full use of limited land with convenient parking & retrieve.

- Both commercial use and home use suitable
- Three levels underground maximum
- Galvanized platform with wave plate for better parking
- Both Hydraulic drive and motor drive available
- Central hydraulic power pack and control panel, with PLC control system inside
- Code, IC Card and manual operation available
- 2000kg capacity for sedan only
- Middle post sharing feature save cost and space
- Anti-falling ladder protection
- Hydraulic overloading protection



	PFPP-2	PFPP-3	PFPP-4
h1	1718(mm)	1600(mm)	1617(mm)
h2	820(mm)	820(mm)	820(mm)
h3	3250(mm)	3250(mm)	3250(mm)
h4	5300(mm)	5300(mm)	5300(mm)

General Parts



- 1 Control panel
- 2 Photocell sensor:
Overlength detection
Accidental entrance detection
- 3 Anti-falling ladder
- 4 Hydraulic cylinder
- 5 Cabin reinforce frame
- 6 Post
- 7 Platform



Advantages



Top quality processing

We adopt first class production line: Plasma cutting/robotic welding /CNC drilling

High lifting speed

Thanks to hydraulic driving mode, lifting speed is about 2-3 times faster than electric mode.

Zinc coating finishing

Total three steps for finishing: Sand blasting to delete rust, Zinc coating and 2 times paint spray. Zinc coating is a kind of water-proof treatment, so PFPP series could be used for both indoor and outdoor.

Sharing posts feature

When several units are installed side by side, the middle posts could be shared by each other to save land space.

Sharing hydraulic pump pack

One hydraulic pump will support several units to supply more power for each unit, so the lifting speed is higher.

Low electricity consumption

When the platform moves down, there is no power consumption, as the hydraulic oil will be driven back to tank automatically because of force of gravity.

Specifications

Model	PFPP-2	PFPP-3	PFPP-4
Parking vehicle	2	3	4
Power pack	7.5kw	7.5kw	11kw
Usable Vehicle Size (mm, LxWxH)	5000x1850x1550		
Electrical required	380V, 50Hz, 3P/ customized		
Finishing	Zinc coating		
Safety feature	Anti-falling lock device/photocell sensor		
Lock release	Auto		
Operation	Button / IC card / Manual		
Lifting capacity	2000kg/space		
Container Load	17 spaces/40ft OT Container		

Safety feature



1. Limited switch 2. Photocell sensor 3. Warning light 4. 24V Safety operation 5. Emergency stop button
6. Anti-falling lock device 7. Anti-skidding platform 8. Overweight detection 9. Car stopper 10. Warning sign

Operation and control

There are two ways to operate the lift:

Manual by button: enter the Num. of parking space and "RUN"

IC card: Per space is equipped with a specific IC card. Swipe the card on the control panel to park or retrieve your own car.

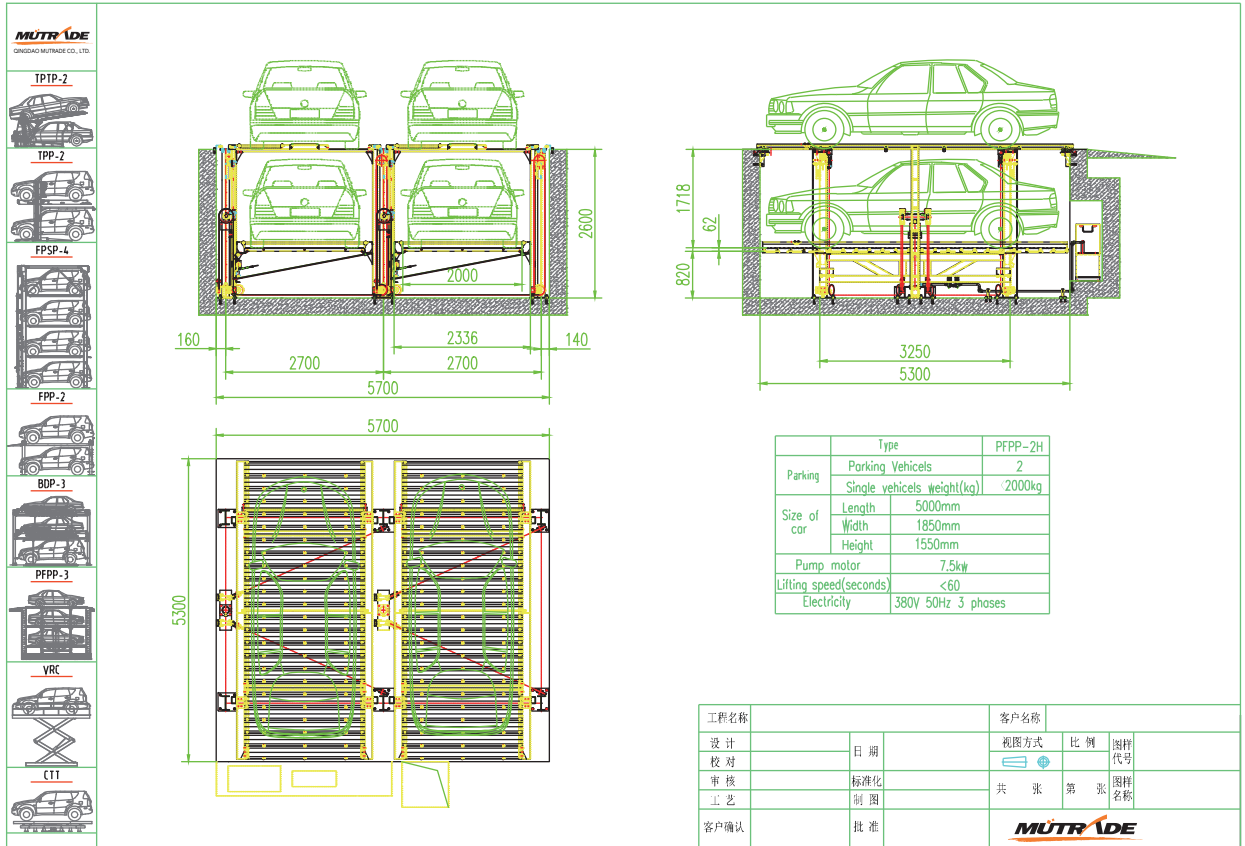


The system is controlled by PLC system. Component is mainly from OMRON or Schneider. It can control several units and park or retrieve cars automatically.

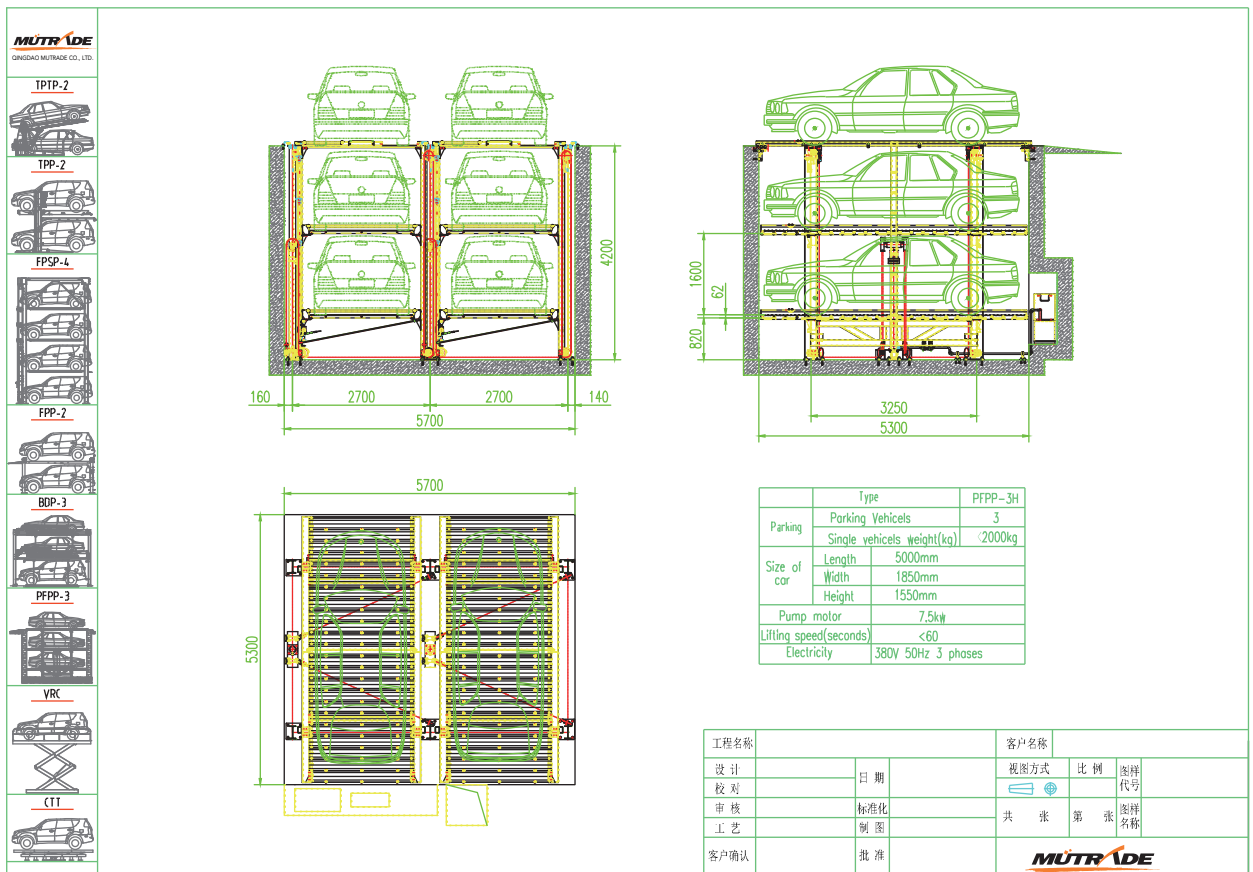
Container Loading

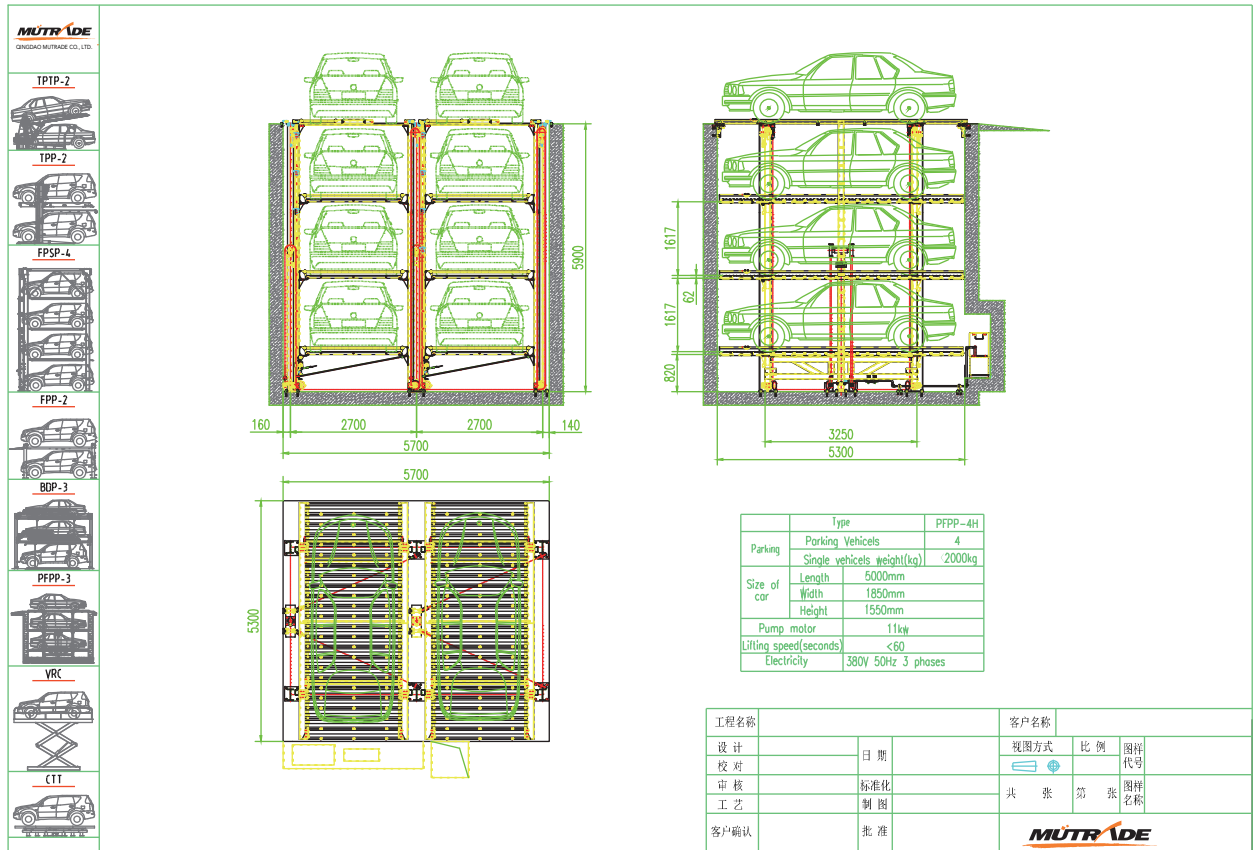
Model	Container Load/40ft
PFPP-2	6 sets
PFPP-3	4 sets
PFPP-4	3 sets

PFPP-2



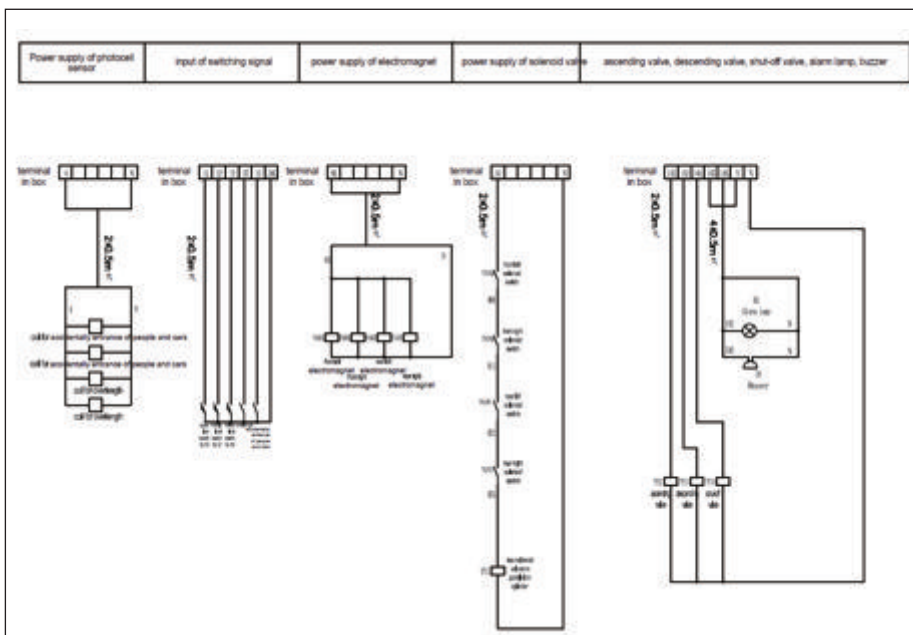
PFPP-3



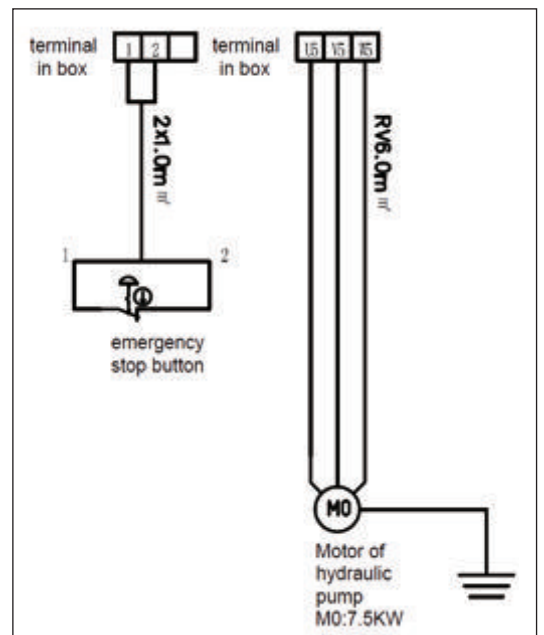


Electric & hydraulic diagram

Main circuit electrical wiring diagram



Control loop wiring diagram



BDP-1+2



BDP-3+5



Maintenance

Maintenance should be according to the working frequency of the parking equipment.

- 1) Daily maintenance and check: The user or operator should responses the daily maintenance and check.
The platform and parking ground should be kept clean and clear;
Clear the surface of the moving parts;
If there is any abnormal noise, please inform the maintainer;
- 2) Regular maintenance and check: Professional maintainer should do regular maintenance and check, and details as per the table below.

Check List of maintenance

No.	Check list
1	Running condition
2	Foundation of main column
3	Fixation of bolt
4	Check if the steel frame and platform deforms.
5	Lifting device
6	Hoisting arm of platform
7	If there is any leakage about cylinder
8	If there is any abnormal noise about transmission device
9	Pulley running condition
10	If there is deformation about pulley
11	If the location of the limit switch is right
12	Adjust the balance of platform
13	If the hydraulic oil in power unit is enough
14	If there is any abnormal noise about power unit
15	If the oil hose is worn
16	If brake steel cable is worn
17	If anti-drop look runs normally
18	If wire insulation bush or pipe is worn
19	If each indicator light is normal

Trouble Shooting

Failure	Reason	Method
	Outage	
No power	Power switch trip	Switch on
	Key switch is on OFF	Turn key switch to ON and powerlight will be on
Lights are not work	Power light,button light and warning light are all burned	Change the lights
Mechanical part does not work	Knob of control box fails	Change the knob
	Limit switch fails	Repair or change limit switch
Platform cannot be in place	Limit switch displaces.	Adjust the position of limit switch
	Platform is blocked	Clear the block
Platform cannot stop when it is in place	Limit switch displaces	Adjust the position of limit switch
	Limit switch fails	Repair or change limit switch

Warranty policy

MUTRADE's parking equipment has a 5 years warranty on structure, and first year warranty on the whole machine. Within the warranty period, Mutrade is responsible for the parts and structure, not including labor nor any other cost unless pre-agreed.

Power units, hydraulic cylinders, and all other assembly components such as slip plates, cables, chains, valves, switches etc, are warranted for one year against defects in material or workmanship under normal use. MUTRADE shall repair or replace at their option for the warranty period those parts returned to the factory freight prepaid which prove upon inspection to be defective. MUTRADE will not be responsible on any labor costs unless pre-agreed. Mutrade will not responsible for the modification or upgrade of the product from the client unless pre-agreed.

These warranties do not extend to...

- defects caused by ordinary wear, abuse, misuse, shipping damage, un-proper installation, voltage or lack of required maintenance;
- damages resulting from purchaser's neglect or failure to operate products in accordance with instructions provided in the owner's manual(s) and/or other accompanying instructions supplied;
- normal wear items or service normally required to maintain the product in a safe operating condition;
- any component damaged in shipment;
- other items not listed but may be considered general wear parts;
- damage caused by rain, excessive humidity, corrosive environments or other contaminants;
- any change or modification made to the equipment without pre-agreed;

These warranties do not extend to any cosmetic defect not interfering with equipment functionality or any incidental, indirect, or consequential loss, damage, or expense that may result from any defect, failure, or malfunction of a MUTRADE product or the breach or delay in performance of the warranty.

This warranty is exclusive and in lieu of all other warranties expressed or implied.

MUTRADE makes no warranty on components and/or accessories furnished to MUTRADE by third parties. These are warranted only to the extent of the original manufacturer's warranty to MUTRADE. Other items not listed but may be considered general wear parts.

MUTRADE reserves the right to make design changes or add improvements to its product line without incurring any obligation to make such changes on product sold previously.

Warranty adjustments within the above stated policies are based on the model and serial number of the equipment. This data must be furnished with all warranty claims.

Q&A

1. Could PFPP be used outdoor?
Yes. Firstly, the finishing of structure is Zinc coating with a better water-proof. Secondly, the top platform is tight with pit edge, no water dropping into pit.
2. Could PFPP series be used for parking SUV?
This product is designed for sedan only, the lifting capacity and level height can be available for sedan.
3. What's the voltage requirement?
The standard voltage should be 380v, 3P. Some local voltages could be customized according to clients' request.
4. Can this product still operate if electricity failure happens?
No, if electricity failure happens often in your place, you have to have a back-up generator to supply power.

Notice

Protection :

Beside the foundation, a separate maintenance manhole must be installed by the customer (with cover, ladder and passage to the pit). The hydraulic power unit and control box are also positioned in the pit. After parking, the system must always be kept to the lowest final position. If any side of the parking is opened to the ground, the safety fence around the pit parking is applied.

About the customized size:

If the size of the platform need to be customized based on customer require, difficulties might arise when entering or exiting the cars on the parking units. This depends on car type, the access and the individual driving behavior.

Operating device:

The position of the operating device depends on the project (switch post, house wall). From bottom of the shaft to the operating device an empty pipe DN40 with taut wire is necessary.

Temperature:

The installation is designed to operate between -30° and $+40^{\circ}$ C. Atmospheric Humidity: 50% at $+40^{\circ}$ C. If the local circumstances differ from the above please contact MuTrade.

Illumination:

Illumination has to be considered acc. to local requirements by client. Illumination in the shaft for maintenance is required to be minimum 80 Lux.

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 MuTrade 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 well.

Project Reference

