

1 MAJORTRIO



MAJORTRIO

MAJORTRIO parking system for SUV or Sedan vehicles.

DATASHEET



WE
EXPAND
YOUR PARKING
CAPACITY

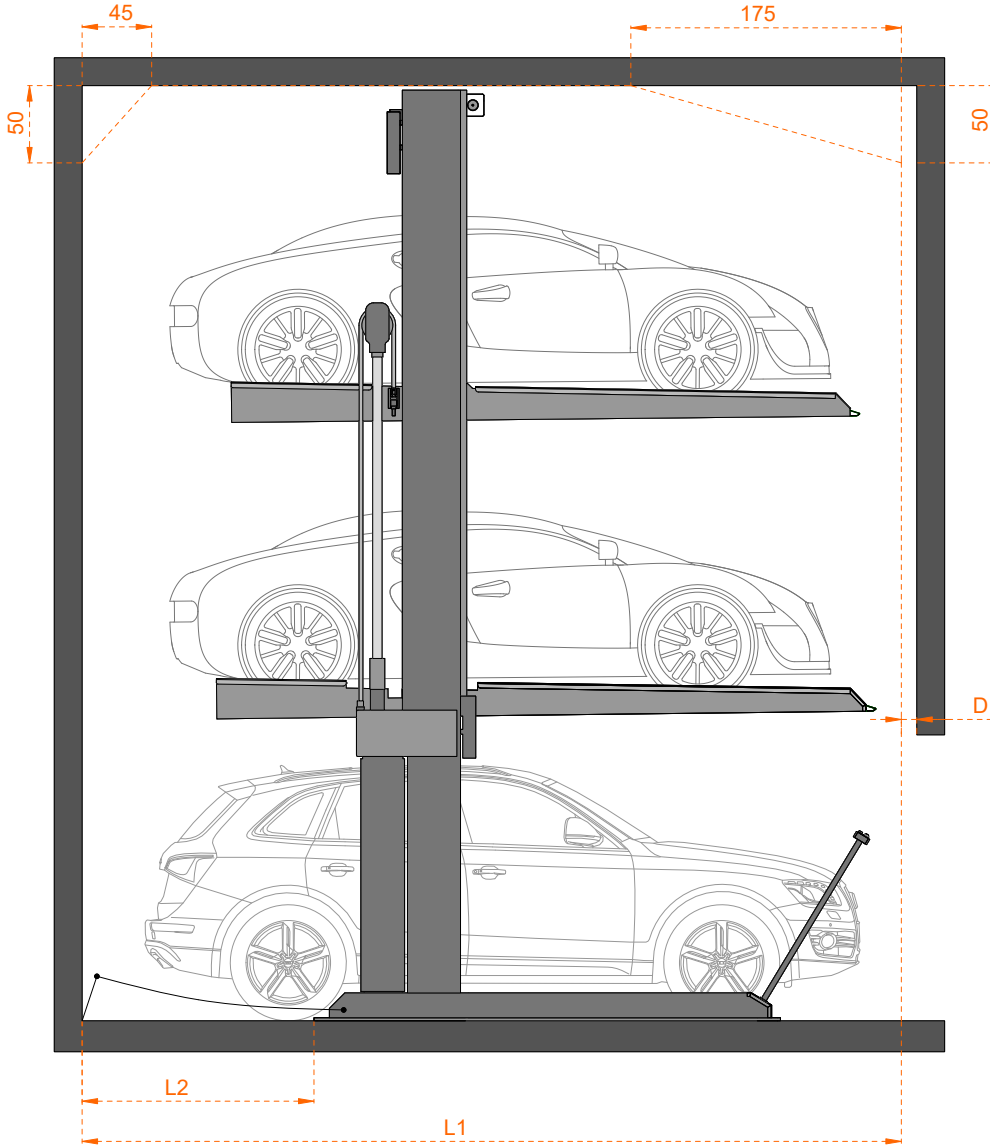
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GENERAL DESCRIPTION

- Majortrio is a dependent parking system for an indoor application and it allows 3 vehicles to be parked on top of each other in a parking space that merely allows 1 vehicle under normal conditions.
- Majortrio has two platforms that moves vertically.
- The height and width of the platform can be customized according to the customer's request. (see "Height Details and Width Details", page 5 and 6).
- The standard lifting capacity of the platforms are 2000 kg.
- Sanpark provides clear instructions at every operating point.
- The operating key is installed in front of the columns or on the outside of the door reveal.
- Hot-dip galvanization is applied to the main construction.
- It is safe and secured with an automatic electromagnetic mechanic position lockers.
- All dimensions are minimum and tolerance for dimensions +3/-0 cm.

INDOOR INSTALLATION DETAILS



- Maximum vehicle length dimensions can be like the following table. In case of shorter and longer versions, please consult Sanpark.

MAJORTRIO LENGTH DIMENSIONS

Maximum Vehicle Length	Required Space (L1)
480 cm	530 cm
500 cm	550 cm
510 cm	560 cm
520 cm	570 cm

**Shorter versions are available upon request.

- In case of a garage door installation, doors (D) shall be coordinated between the customer and the door manufacturer.
- Majortrio's columns shall be at least 150 cm (L2) away from the wall to provide enough clearance for vehicles.

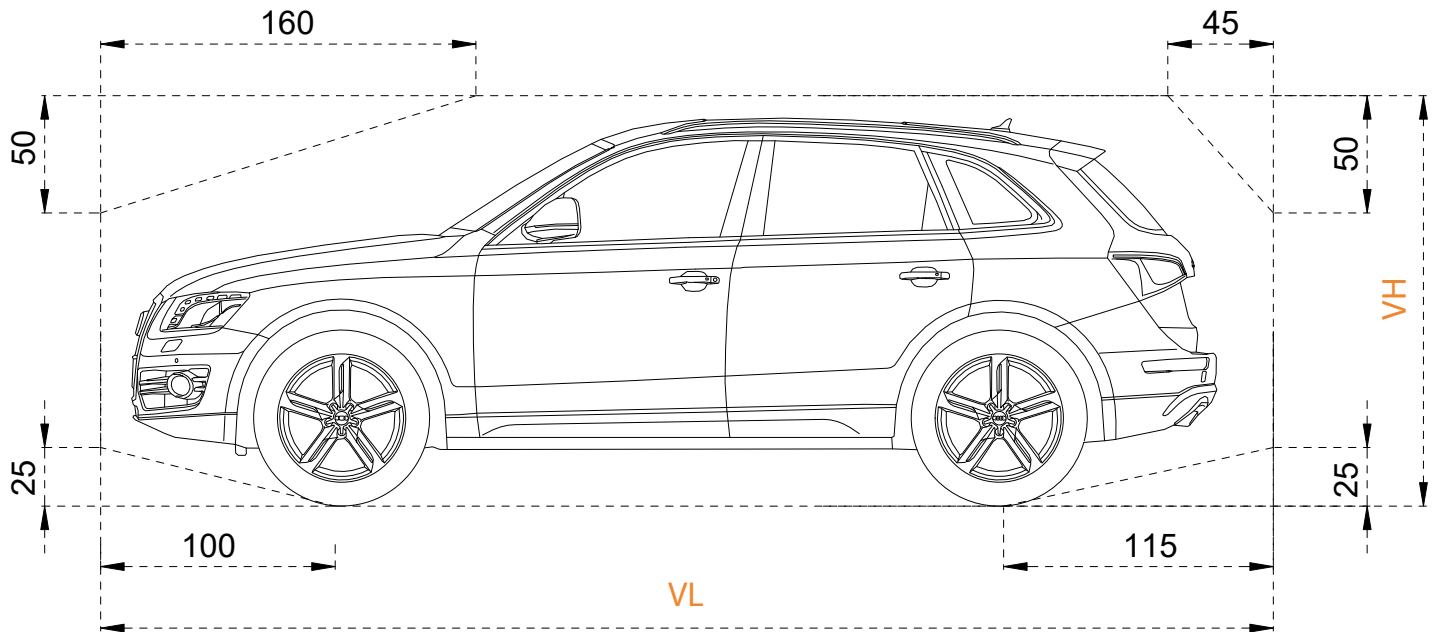
Operation

With the help of "Hold-to-Run" device which automatically returns to the "off" position after release, Majortrio's users securely operate the system.

Dependent Parking

To be able to park in or out the vehicle at the upper level, the vehicle at the ground floor must be parked out first.

VEHICLE DETAILS, CLEARANCE & DIMENSIONS



Vehicle Length (VL)	see "Length Details", page 3
Vehicle Height (VH)	see "Height Details", page 5
Vehicle Width	see "Width Details", page 6
Vehicle Weight	2000 KG
Wheel Load	500 KG
Vehicle Types	Saloon, Estate, SUV, Van

The overall vehicle height including roof luggage rails and antenna mounts must not exceed the max. vehicle height dimensions specified

■ The following car heights shared as a guide to help you to select the platform distance and construction dimensions;

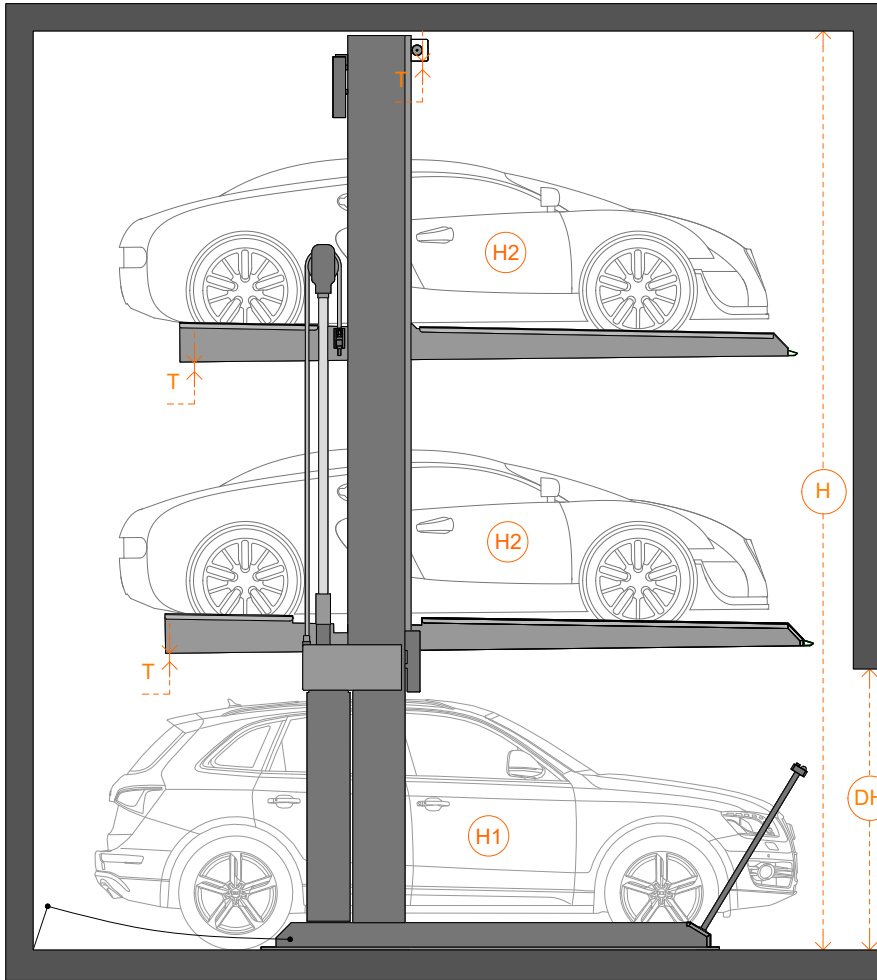
Volkswagen Golf	149 cm
Volkswagen Tiguan	167 cm
Volkswagen T-Roc	160 cm
Volkswagen T-Cross	159 cm
Volkswagen Passat	152 cm
Dacia Sandero	150 cm
Dacia Duster	170 cm
Renault Clio	145 cm
Renault Captur	158 cm
Fiat/Abarth 500	150 cm
Fiat Panda	156 cm

Tesla Model 3	145 cm
Tesla Model X	169 cm
Ford Kuga	169 cm
Ford Puma	156 cm
Mercedes A-Class	146 cm
Mercedes G-Class	198 cm
Mini Hatch	145 cm
Hyundai Kona	156 cm
Opel/Vauxhall Corsa	149 cm
Volvo XC40	166 cm
Skoda Octavia	147 cm
Hyundai Tucson	167 cm

Peugeot 208	146 cm
Peugeot 2008	155 cm
Peugeot 3008	163 cm
Toyota Corolla	144 cm
Toyota Yaris	151 cm
Toyota RAV4	169 cm
Toyota Camry	145 cm
Citroen C3	161 cm
Porsche Macan	163 cm
Porsche Cayenne	168 cm
BMW 3-Series	143 cm
BMW iX	170 cm
BMW X5	175 cm
Volvo XC 90	178 cm
Land Rover Discovery	189 cm
Land Rover Range Sport	180 cm

All vehicle heights may vary due to the wide range of models and manufacturing year.

HEIGHT DETAILS

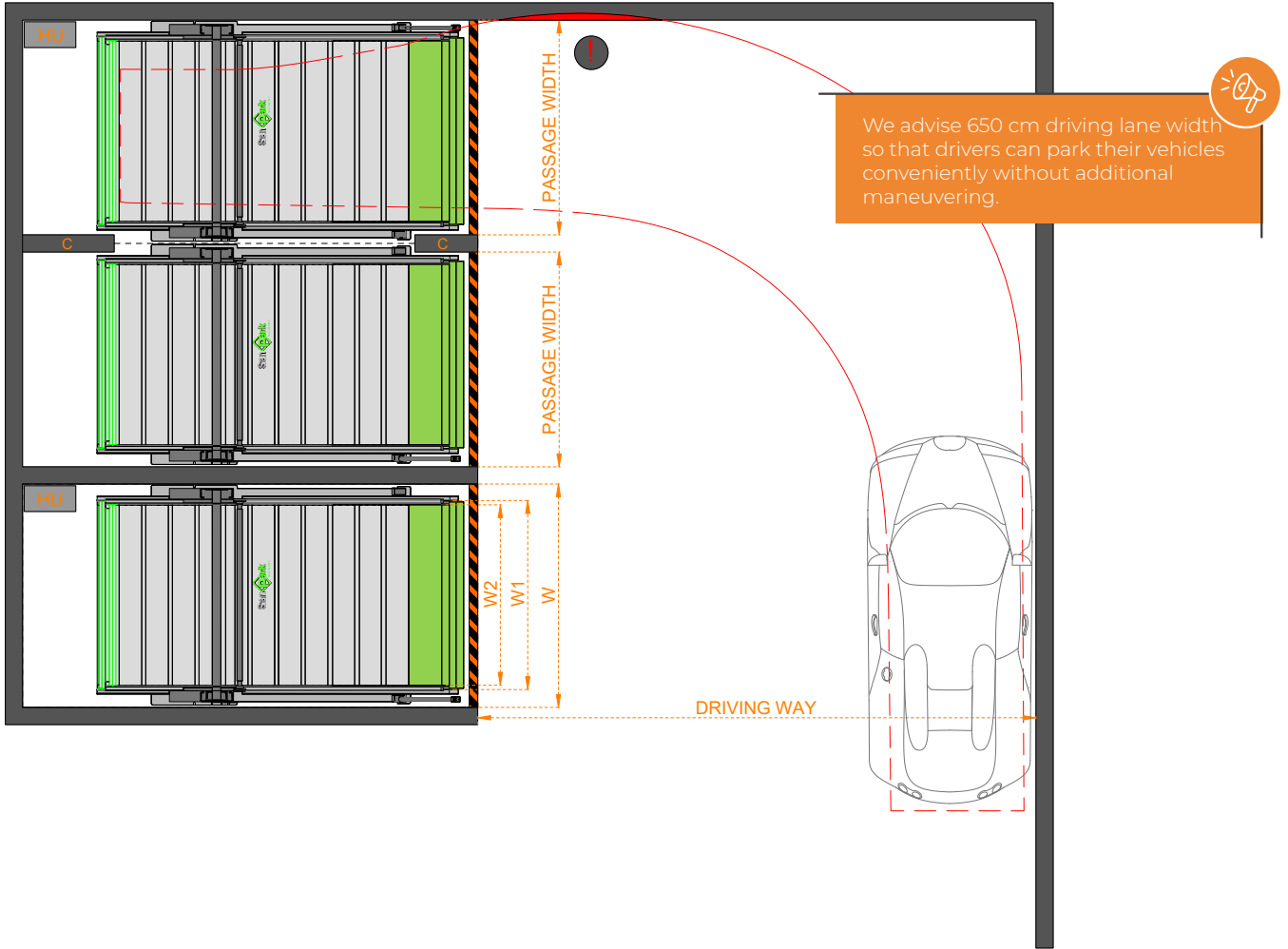


- The Left and top parts of the table below indicate a vehicle height at the lower level and upper levels. Various combinations of these dimensions determine the total clear height. Various versions are available upon request so please contact to have technical support if it is necessary.
- Door clear height (**DH**) should be at least 10 cm more than your car height because of clear height in accordance with local regulations.
- It is recommended that Ground Level Vehicle Height (**H1**) should be higher than an average human height for drivers to conveniently get out of the vehicle.
- Clearance height (**T**) between vehicle and ceiling shall be minimum 5 cm. The clearance height is included to the following table.

		Upper-Level Vehicle Heights (H2)											Required Clearance Height (H)	
		150	155	160	165	170	175	180	185	190	195	200		205
Ground Level Vehicle Height (H1)	160	520	530	540	550	560	570	580	590	600	610	620	630	
	165	525	535	545	555	565	575	585	595	605	615	625	635	
	170	530	540	550	560	570	580	590	600	610	620	630	640	
	175	535	545	555	565	575	585	595	605	615	625	635	645	
	180	540	550	560	570	580	590	600	610	620	630	640	650	
	185	545	555	565	575	585	595	605	615	625	635	645	655	
	190	550	560	570	580	590	600	610	620	630	640	650	660	
	195	555	565	575	585	595	605	615	625	635	645	655	665	
	200	560	570	580	590	600	610	620	630	640	650	660	670	
	205	565	575	585	595	605	615	625	635	645	655	665	675	

All dimensions are given in cm.

WIDTH DIMENSIONS



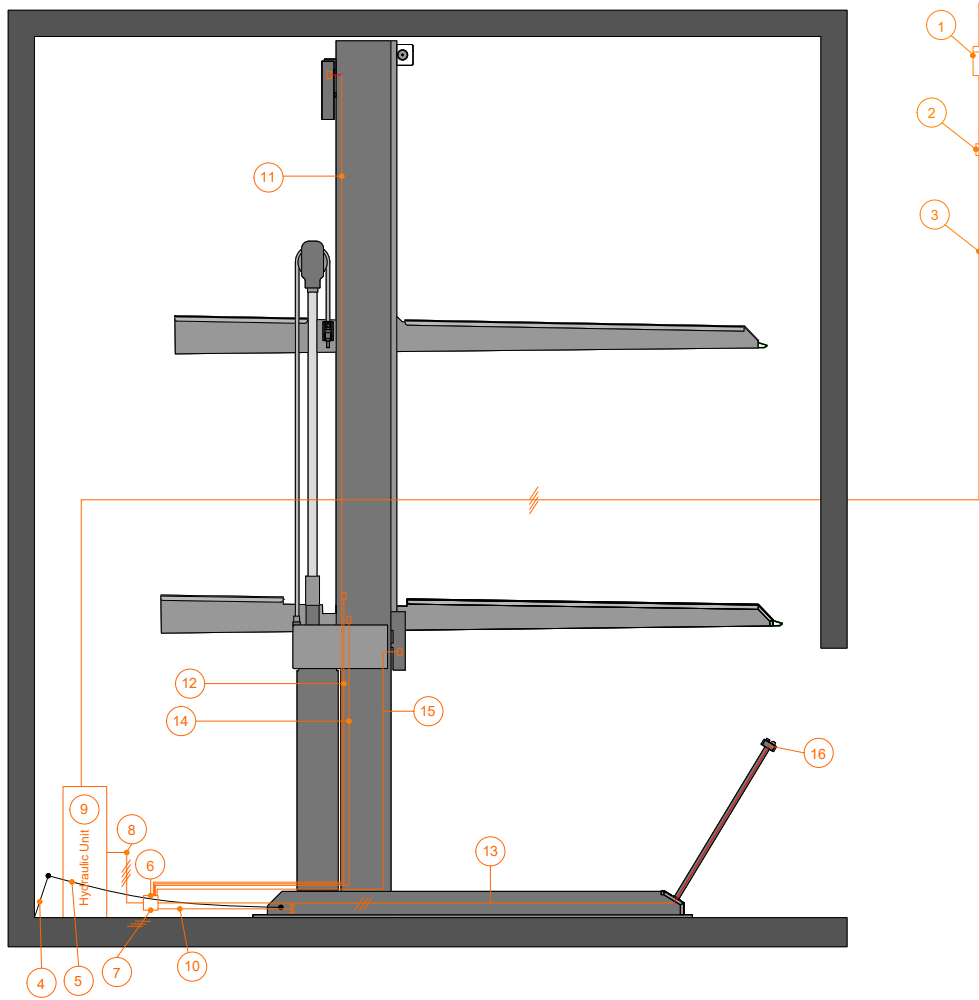
- The following figures demonstrate the required width for parking areas and their correspondence to clear platform width.

	Installation Width (W)	Middle Level Clear Platform Width (W1)	Upper Level Clear Platform Width (W2)
MAJORTRIO	260	220	210
	270	230	220
	280	240	230
	290	250	240

Reducing parking width lowers parking comfort according to the vehicle width, vehicle type, and individual driving style.

- HU** indicates a hydraulic power pack and its minimum length is 40 cm and its min width is 30 cm. In case of using one hydraulic pack for more than one Majortrio, its length increases to 60 cm. Its overall height does not change and it is 90 cm.
- The minimum clear platform width is 210 centimeters for a limited space. We recommend 230 centimeters for convenient parking.
- Majortrio's columns can be aligned with several types of building columns (**C**) and in all situations, the passage width between two columns of the building cannot be less than the clear platform width.
- While planning Majortrio next to a wall, it is significant to take into consideration that turning the vehicle in one maneuver may cause a crash so please take advice from Sanpark in a such situation, shown in the illustration above.
- While setting driving lane width, please check local regulations. It can be a minimum of 500 cm, but we advise 650 cm driving lane width so that drivers can park their vehicles conveniently without additional maneuvering.

ELECTRICITY INSTALLATION DIAGRAM



- During installation, it is required to appropriately connect electrical components with the wiring diagram supplied by the manufacturer in accordance with local regulations.

ELECTRICAL DETAILS (In the customer responsibility)

NUMBER	QUANTITY	DEFINITION	FREQUENCY
1	1	Electricity meter	
2	1	3x Safety fuse 16A circuit breaker 3x 32A	1x per unit
3	1	Supply line 5x4 mm ² with marked wire and protective conductor	1 x per hydraulic unit
4	1	Foundation Earth Connection (distance between grounding max. 10m)	
5	1	Equipotential bonding in accordance with DIN EN 60204 grounding of the steel structure is necessary, provided by the customer	1 x per system

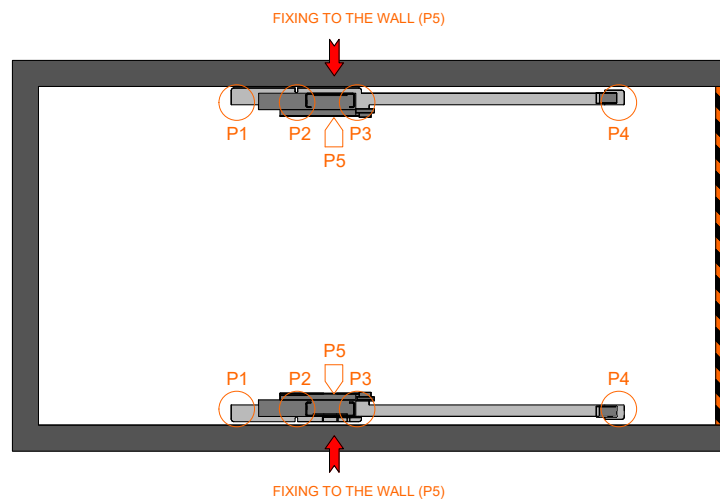
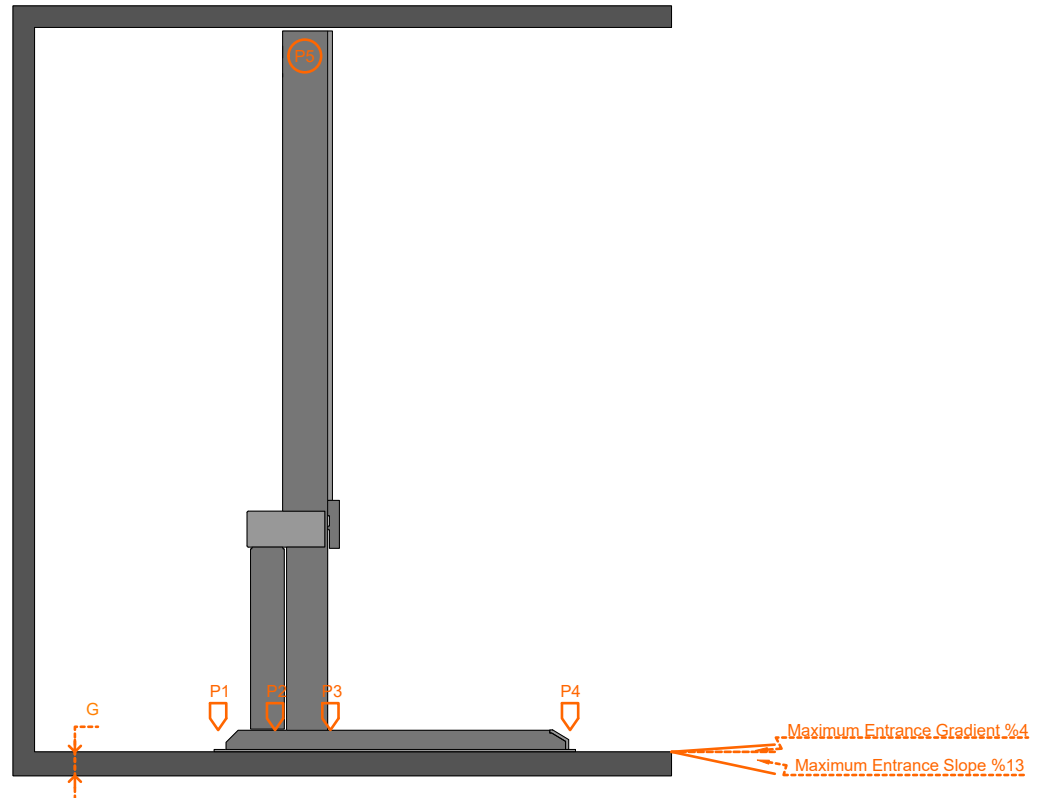
ELECTRICAL DETAILS (In Sanpark responsibility)

NUMBER	DEFINITION
6	Terminal Box
7	Supply line 5x4 mm ² with marked wire and protective conductor
8	Control line 16x1 mm ² + 3x1.5 mm ² with marked wire and protective conductor
9	Hydraulic Unit 5.5 Kw, 3 Phase current, 380V 50HZ with lockable main switch
10	Control line 2x0.75 mm ² with marked wire and protective conductor
11	Control line 2x1.5 mm ² with marked wire and protective conductor
12	Control line 2x0.75 mm ² with marked wire and protective conductor
13	Control line 4x0.75 mm ² with marked wire and protective conductor
14	Supply line 3x0,75 with marked wire and protective conductor
15	Supply line 2x1.5 mm ² with marked wire and protective conductor
16	Operating Device

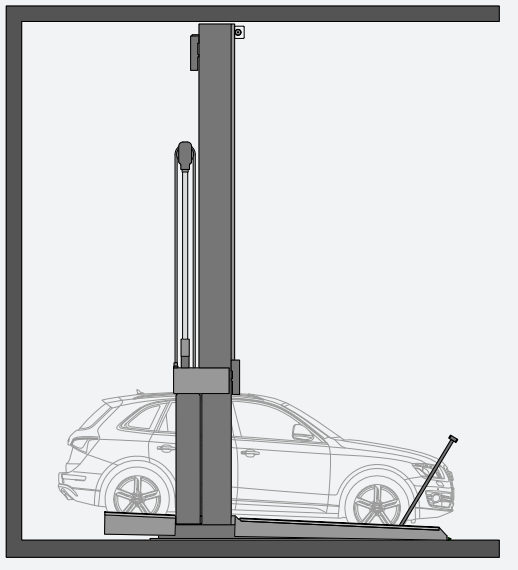
LOADS AND CONSTRUCTION DETAILS

- ▣ The systems are anchored into the ground. The drill hole depth in the floor plate is approx. 12 cm, in the walls approx. 8 cm.
- ▣ Concrete quality according to the static requirements of the building. However, we require a slab thickness (G) minimum of 20 cm and a concrete quality of min. C20/25 to anchor the system. A special foundation is required with asphalt floors or paving stones.
- ▣ The system must be supported on both sides. An additional support may be installed if there are no walls at the sides. Please consult Sanpark its specification.
- ▣ According to DIN EN 14010, the floor has to be marked with 10 cm wide yellow-black stripes (M) at a distance of 30 cm from the platform edge by the purchaser to point out the dangerous area. The marking must comply with ISO 3864.
- ▣ Maximum entrance gradient and slope details are specified in the illustrations below. Improper layout causes extreme difficulties and Sanpark does not accept any responsibilities.

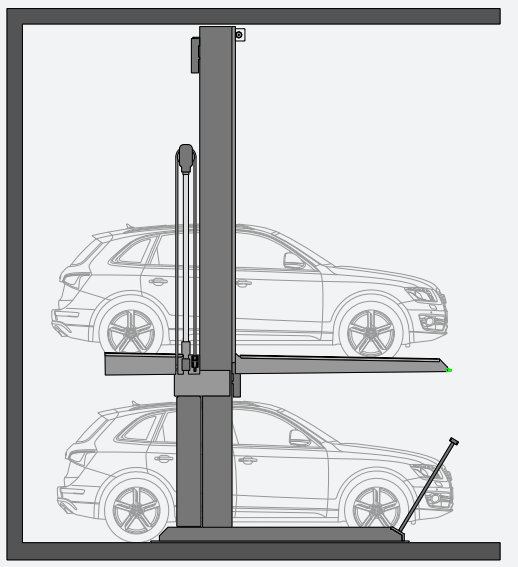
		STRUCTURAL FORCES (kN)				
		P1	P2	P3	P4	P5
CAR WEIGHT	2000 KG	± 20.8	± 23.5	± 20.4	± 14.3	± 6.2
	2500 KG	± 23.1	± 25.8	± 22.5	± 16.5	± 6.2



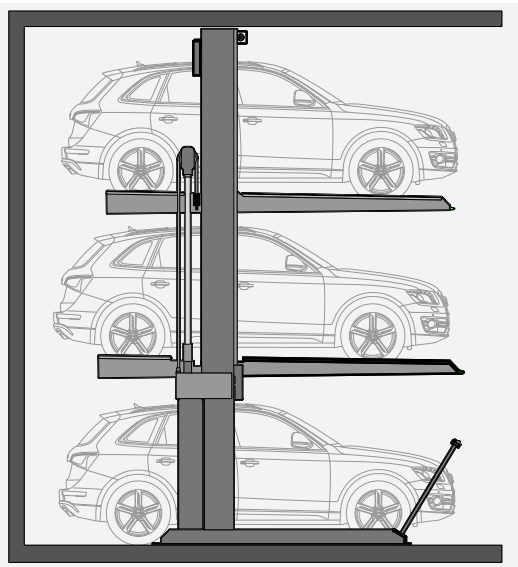
FUNCTION



- Lower all platforms to the ground level and park the first vehicle.



- Raise the first platform to the middle level and park the second vehicle.



- Raise the first and middle platform and park the third vehicle.

TECHNICAL INFORMATION



Usage Area

In order to park in or out of the vehicle at the upper level, the vehicle on the ground floor must be parked out first, which is why this system is advised to be used by permanent users. In case of short-time users (e.g. hotel, office, commercial building) we recommend the appointment of a valet for operation conveniently. Please request a consultation if required.



Hydraulic Unit

Up to 6 Majortrio can be grouped as one so they can share the common hydraulic unit to reduce the overall price. In such a case, each group of systems cannot be operated separately. A separate power unit is recommended to reduce dependency. Please request a consultation for planning the project.



Temperature

Majortrio is designed to operate between -15° and +40°C at atmospheric humidity of 50 percent. If the local temperature is different from the above, please consult Sanpark.



Conformity Test

All our systems comply with EC machinery directive 2006/42/EC and TS/EN 14010:2009 +A1:2009.



Building application documents

All our systems generally require local approval. Please observe local regulations.



Maintenance

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



Care and Corrosion Protection

Due to the corrosion danger, apart from regular maintenance, all our galvanized equipment and platforms must be regularly cleaned up salt water, dirt, leak, any chemical substance, and sand. The garage and pits must be always ventilated well.



Railings

If passageways are directly next to the systems, railings have to be provided according to TS EN ISO 13857 by the client according to local requirements, height min. 200 cm.



Fire Safety

All fire safety requirement(s) and all possible mandatory item(s) and equipment(s) must comply with local regulations and must be provided by the customer.



Noise Protection

In compliance with DIN 4109-1 Noise protection: Maximum sound pressure level in living and sleeping areas 30 dB (A).

User noise like accessing the platform, the slamming of vehicle doors, the vehicle's engine, and brake noise are not subject to the requirements.

In order to provide 30 dB (A) in rooms the following conditions are required;

Additional Sanpark noise protection package according to quote.

Insulation figure of the construction of min $R'w = 57$ dB (in the customer's responsibility)

Walls that are close to the parking systems must be done as a single wall and deflection resistant with min. $m' = 300$ kg/m² (in the customer's responsibility)

The solid ceiling above the parking systems with min. $m' = 400$ kg/m² (in the customer's responsibility)

At differing constructional conditions, additional sound-absorbing methods are in the customer's responsibility.

COMPONENTS

MAJORTRIO COMPONENTS

2 Steel columns with base plates.
 2 Mechanical Locking devices
 2 Platforms
 1 Hydraulic cylinder
 Anchors, screws, connectors, bolts, etc.
 1 Mechanical synchronization system.

Platform Components

Platform profiles
 Side beams
 Adjustable positioning aid
 Platform base sections
 Chamfered ramp
 Screws, nuts, washers, spacers, etc.

Electrical System Components

Emergency stop
 Electrohydraulic lock
 Electro mechanic lock
 Distributor board
 Terminal box
 1 Master key for each Majortrio.

Hydraulic System Components

Hydraulic cylinders
 Solenoid valve
 Safety valve
 Screwed joints
 High-pressure hoses
 Attachments

Hydraulic Unit Component

Hydraulic power unit
 Hydraulic oil reservoir
 Oil filling
 Internal gear Pump
 Pump holder
 Coupling
 3 phase AC motor (5.5 kW, 380 V, 50 Hz)
 Contactor
 Pressure relief valve
 Hydraulic hoses

Sanpark's engineering department is constantly challenging itself to improve its systems. In the event of technological advancement, Sanpark can adopt newer or different technologies, systems, or standards to improve overall quality.

SERVICES TO BE PROVIDED BY THE CUSTOMER



Warning Marking

According to DIN EN 14010, the floor has to be marked with 10 cm wide yellow-black stripes to indicate the operation area by the purchaser to point out the dangerous area.



Conduits and Wall Openings

Any conduit and wall opening work belongs to the customer, yet Sanpark can assist during the planning phase in such cases. Please consult Sanpark if necessary.



Barriers

In accordance with DIN EN 13857, barriers may be required in case of passageways in front of, behind, or next to the systems.



Supply Cable to Master Switch

The customer must run the supply cable to the master switch during assembly.



Parking Space Numbering

Numbering the parking spaces.



Earth Foundation

The customer must earth the steel structure with a foundation earth connection and lay equipotential bonding according to local regulations.



Lighting

It is in the customer's responsibility to check local regulations regarding the illumination of parking spaces.

CERTIFICATES

ZERTIFIKAT | CERTIFICATE | CERTIFICAT | CERTIFICADO | CERTIFICAZIONE | 証明書 | 인증서



EG-BAUMUSTERPRÜFBESCHEINIGUNG

TUV AUSTRIA TÜRK ist benannte Stelle
nach der Maschinenrichtlinie 2006/42/EG unter der Nummer 2737

Bescheinigung Nr.: 21-MD-TEC-063-TAT-2021-033

Antragsteller : SANMAK MAKİNE SANAYİ VE TİC. A.Ş.
Çalı Sanayi Bölgesi Çalı Mh 6. Sk. N:8 Nilüfer / Bursa

Hersteller : SANMAK MAKİNE SANAYİ VE TİC. A.Ş.
Çalı Sanayi Bölgesi Çalı Mh 6. Sk. N:8 Nilüfer / Bursa

Design des Produkts : Mehrschichtiger, elektrohydraulischer mechanischer Parklift

Typ/Modell : # IDEALIFT H2W1, IDEALIFT H2W2, IDEALIFT H3W1, IDEALIFT H3W2 #
IDEALOW H2W1, IDEALOW H2W2, IDEALOW H3W1, IDEALOW H3W2 #
MAJORLIFT, MAJORTRIO, OPTILIFT, ROBUST-SLIMO #
SUBLIFT H1W1, SUBLIFT H1W1, SUBLIFT H1W2, SUBLIFT H2W1,
SUBLIFT H2W2, SUBLIFT H3W1, SUBLIFT H3W2

Warenzeichen / Marke : SANPARK

**Norm(en)/
Angewandte Regelwerke:** : 2006/42/EG Maschinenrichtlinie
EN ISO 12100:2010
EN 14010:2003+A1:2009

Diese Konformitätsbewertung wird auf Kundenwunsch gemäß Maschinenrichtlinie 2006/42/EG Artikel 12 3.b
ausgestellt. Die in Anhang IV aufgeführten Geräte entsprechen der harmonisierten Norm und Anhang I den
grundlegenden Gesundheits- und Sicherheitsanforderungen der Richtlinie. Sie bezieht sich nur auf das jeweilige
Muster und dessen technische Unterlagen, die zur Einschichtnahme vorgelegt werden.

Technische Datei Nr : 21-MD-TEC-063/TF-01
MIT* Dokument Nr : MD-2737-2100004
Assessor-ID-Nr. : TU-MD-001
Datum/Ort der Begutachtung : 01.10.2021
Ausstellungsdatum : 09.11.2021
Ablaufdatum : 08.11.2026

CE 2737 Nach Erstellung der notwendigen technischen Dokumentation sowie der
Konformitätserklärung kann die erforderliche CE-Kennzeichnung auf dem Produkt
angebracht werden. Weitere relevante Richtlinien sind zu berücksichtigen.

Diese Konformitätserklärung wurde dem Antragsteller auf Grundlage der Ergebnisse der Prüfungen durch
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Genehmigt von
Ali Osman ÖZVEREN

Ministerium für Industrie und Technologie

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BAUMUSTERPRÜFBESCH
EINZELNDG
Revisoren: 02 Datum: 09.03.2020
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Alle Prüf- und Überwachungsleistungen wurden nach dem QM-System des TÜV
AUSTRIA TÜRK durchgeführt. Cemra Mah. İsmail Güle
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CERTIFICATE

Sanmak
Makine Sanayi ve Ticaret A.Ş.

ŞANMAK MAKİNA SAN. VE TİC. A.Ş.

ÇALI SANAYİ BÖLGESİ 6. SOK. NO:8
NİLÜFER / BURSA / TÜRKİYE

*Has been assessed and found to Comply with the Requirements of:
Denetlenmiş ve aşağıdaki standardın gerekliliklerine uygunluğu görülmüştür:*

ISO 9001:2015

*The Quality Management System is applicable to:
Kalite Yönetim Sistemi:*

**DESIGN, PRODUCTION AND SERVICE SERVICES OF MACHINES
FOR VEHICLE, LOAD LIFTING AND TRANSPORT**

**TAŞIT, YÜK KALDIRMA VE TAŞIMA AMAÇLI MAKİNALARIN
TASARIMI, ÜRETİMİ VE SERVİS HİZMETLERİ**

Certificate Number: QMS-05807 Initial Certification Date: 15.12.2021
Belge Numarası: QMS-05807 İlk Belgeleme Tarihi: 15.12.2021

Certification Period: 3 Years Certificate Validity Date: 14.12.2022
Belgeleme Periyodu: 3 Yıl Belge Geçerlilik Tarihi: 14.12.2022

**INTERNATIONAL
CERTIFICATION FORUM** **IAS** **IQR**

ACCREDITED
Management Systems
Certification Body
MSCB-135

IQR Sertifikasyon Onayı

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