

LevantaPARK

TECHNICAL SPECIFICATION
SEMI-AUTO BI-DIRECTIONAL
MAX 2



SMART SOLUTIONS FOR VEHICLE PARKING AND CAR STORAGE

Bi Directional systems optimize the height of any car parking space by adding horizontal motion to the car stacker equipment. Platforms at ground level will move left or right to allow upper level platforms to reach ground level.

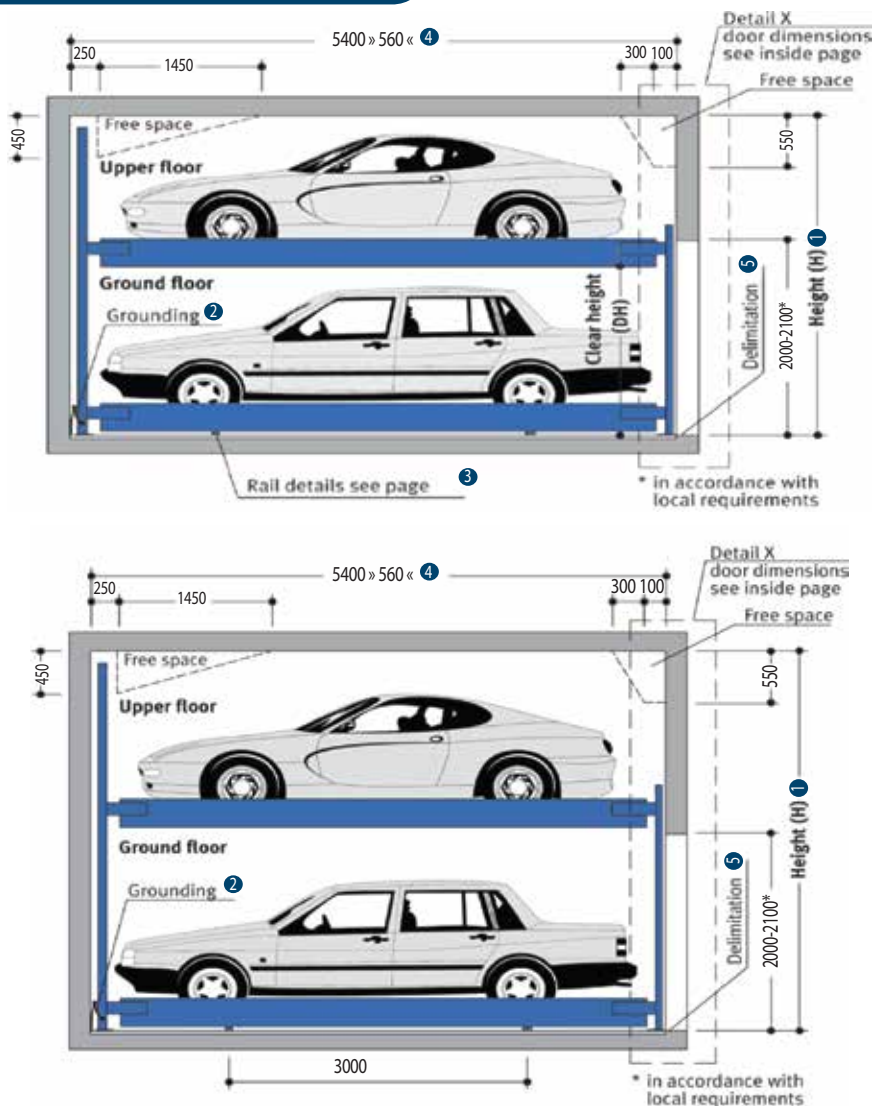
The MAX 2 Bi directional system offers the maximum clearance for extra tall vehicles and the maximum comfort to the users thanks to the availability of infrared control and automatic gates. Max 2 does not require a pit and can operate effectively where carpark heights are greater than 3450mm.

SPECIFICATION TABLE

SEMI-AUTO BI-DIRECTIONAL	No. of parking spaces	Dimensions	H	Car Height**	Car Height		Width	Weight	Wheel Load
					Ground Floor	Upper Floor			
MAX 2-345	Min. 3 to max. 29 vehicles	All space requirements are minimum finished dimensions. Tolerances for space requirements + 30. Dimensions in mm.	3450	1700	2000	1500	2300 mm	max. 2000 kg	max. 500 kg
MAX 2-405			4050	2100	2000	1750			

* = standard type ** = without car *** = in accordance to local requirements
 Optional platform width can vary and can be increased through to 2700mm depending on site conditions

Standard Type MAX 2



Notes

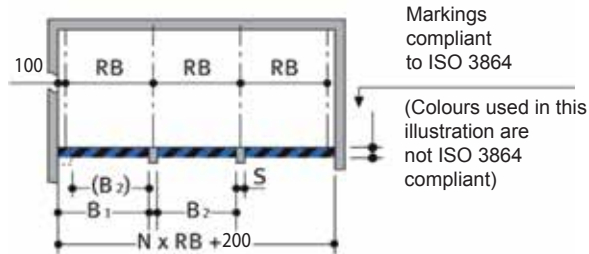
- Changes in height H change the car heights on the upper floor or the corresponding clearances on the ceiling.
- Potential equalization from foundation grounding connection to system.
- Tolerances for the evenness of the carriageway (floor) must be strictly complied with in accordance with AS3600-2100 concrete structures.
- Special model: For cars up to a length of 5.20 m please note: Pit length 5.60m, max. authorized loading 2500 kg (wheel load max. 625 kg), usable platform width 2.50 - 2.70 m.
- On the standard version without door, a 100 mm wide yellow-black markings complaint to ISO 3864 must be applied by the customer to the edge of the platform in the access area to mark the danger zone in compliance with the DIN EN 14 010 (see »Width Dimensions - Standard without Door« page 2 - 3).

MEASUREMENTS/DIMENSIONS ARE IN MILLIMETER (MM)

Widths – Detail X for garages with/without sliding doors

Standard model without door (lowering of the platforms: via hold-to-run-device, lifting and shifting of the platforms: automatically)

Columns per each grid unit ($S = 200$)



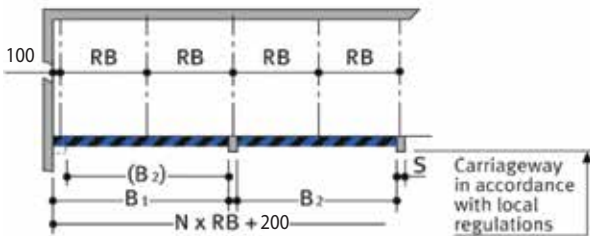
N = number of grid units

usable platform width	Grid unit width RB**	B1
UF: 2300 * GF: 2080	2500	2500
UF: 2400 GF: 2080	2600	2600
UF: 2500 GF: 2080	2700	2700
UF: 2600 GF: 2080	2800	2800
UF: 2700 GF: 2080	2900	2900

* Standard width (parking place width on upper platforms 2.30 m).

** Grid unit width must strictly conform to dimensions quoted!

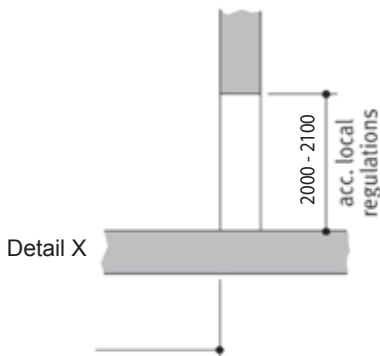
Columns every second grid unit ($S = 200$)



usable platform width	Grid unit width RB**	B1
UF: 2300 * GF: 2080	2500	5000
UF: 2400 GF: 2080	2600	5200
UF: 2500 GF: 2080	2700	5400
UF: 2600 GF: 2080	2800	5600
UF: 2700 GF: 2080	2900	5800

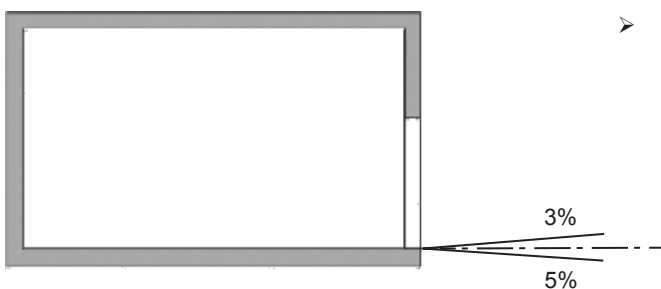
* Standard width (parking place width on upper platforms 2.30 m).

** Grid unit width must strictly conform to dimensions quoted!



- End parking spaces are generally more difficult to drive into. Therefore we recommended for end parking spaces utilise wider platforms. Parking on standard width platforms with larger vehicles may make getting into and out of the vehicle difficult. This depends on type of vehicle, approach and above all on the individual driver's skill.

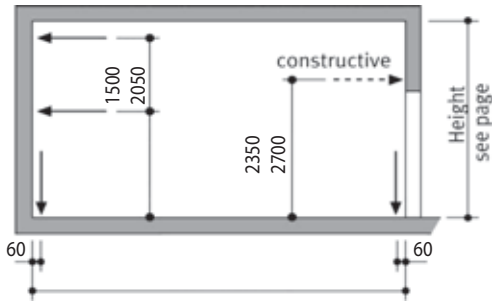
Approach



- The illustrated maximum approach angles must not be exceeded. Incorrect approach angles will cause serious manoeuvring positioning problems on the parking system for which the local of LevantaPARK accepts no responsibility.

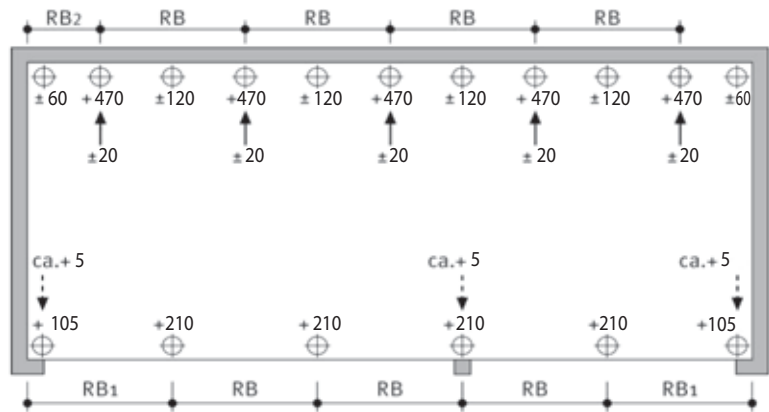
Load plan

Forces in kN



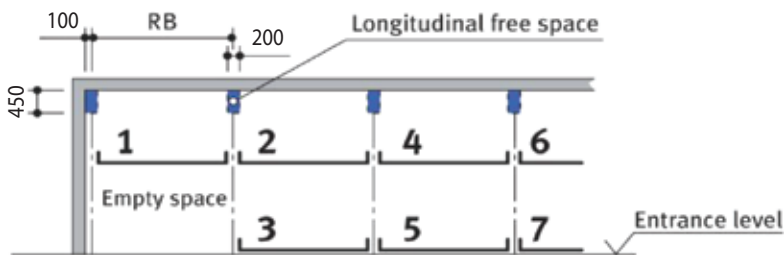
① Dimensions for Max-2

- The system is dowelled to floor and walls. The drilling depth in the floor is approx. 150 mm. The drilling depth in the walls is approx. 120 mm. Floor and walls are to be made of concrete (grade of concrete min. C200/250)!

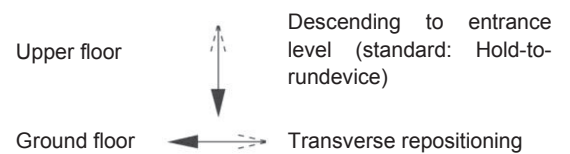


usable platform width	RB	RB1	RB2
UF: 2300 *	2500	2600	1350
UF: 2400	2600	2700	1400
UF: 2500	2700	2800	1450
UF: 2600	2800	2900	1500
UF: 2700	2900	3000	1550

Longitudinal free space; Standard parking space numbers; Denomination

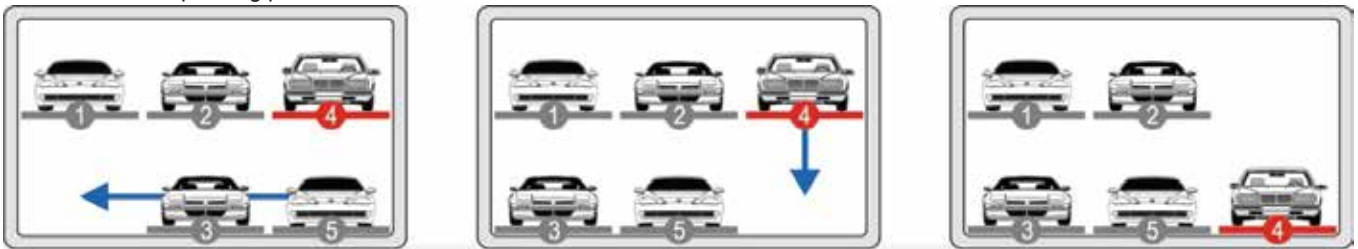


Moving direction

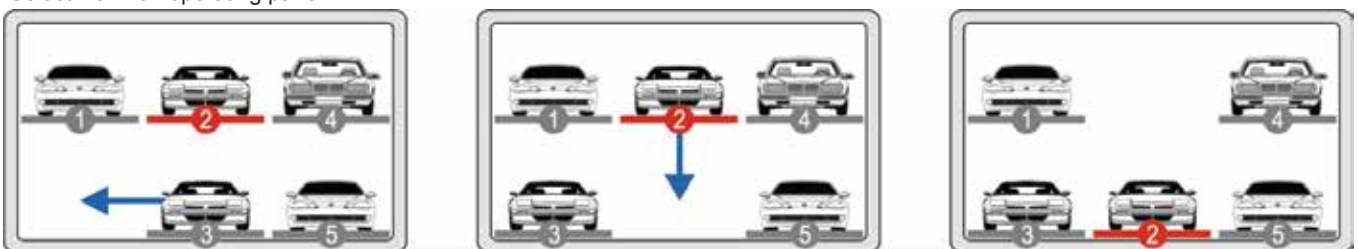


Function of the Max-2

Select No. 4 on operating panel.



Select No. 2 on operating panel.



MEASUREMENTS/DIMENSIONS ARE IN MILLIMETER (MM)

Recesses rail system

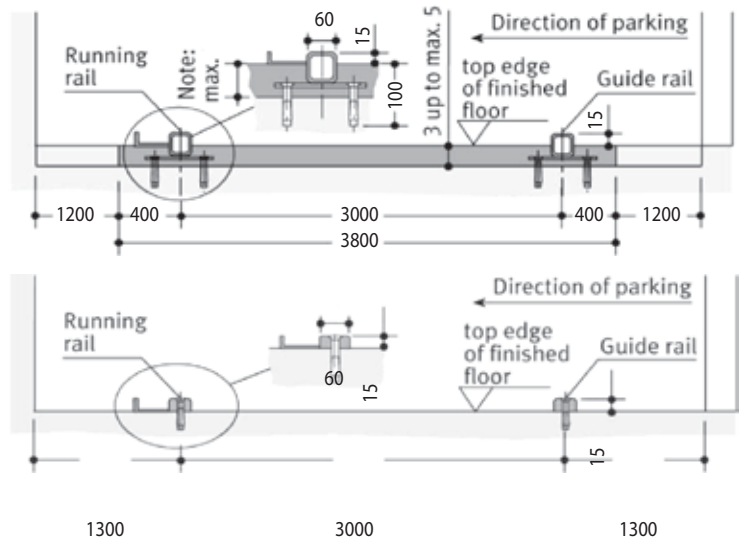
Dependent upon the structural conditions of the garage, basement or carpark,

When installing the carriageway, according to raw bottom floor combined with a cement screed or When installing the carriageway with recesses for the rails:

- The set-up of the rails amounts to 30mm (height of floor screed 40 mm)
- After the rails have eventually been laid, the area under the rails must be topped up with concrete by the customer

Exact evenness of the carriageway:

- When exact evenness of the carriageway has successfully been accomplished, the rails may be dowelled onto it



Technical data

Range of application

Generally, this parking system is not suited for short-time parkers (temporary parkers). Please do not hesitate to contact your local LevantaPARK agency for further assistance.

Available documents

- wall recess plans
- maintenance offer/contract
- declaration of conformity
- test sheet on airborne and slid-borne sound

Corrosion protection

See separate sheet regarding corrosion protection.

Environmental conditions

Environmental conditions for the area of LevantaPARK Systems: Temperature range -10 to +40° C. Relative humidity 50% at a maximum outside temperature of +40° C. If lifting or lowering times are specified, they refer to an environmental temperature of +10° C and with the system set up directly next to the hydraulic unit. At lower temperatures or with longer hydraulic lines, these times increase.

Electrically driven doors

Commercially or residential used motorised gates and roller doors should be subjected to annual inspections. We recommend concluding a maintenance agreement that includes this service for the entire system.

Numbering

The standard numbering of the parking spaces is to be taken from page . Different numbering is only possible at extra cost. Please take note of the following specifications: In general, the empty space must be arranged to the left. The numbers must be provided 8 - 10 weeks before the delivery date.

Sound insulation

According to AS 1217.1, LevantaPark are part of the building services (garage systems).

Normal sound insulation: AS 1217.1, Sound insulation against noises from building services.

The standard contains permissible sound level values emitted from building services for personal living and working areas. Noises created by users are not subject to the requirements. The following measures are to be taken to comply with this value.

- Sound protection package according to offer/order
- Minimum sound insulation of building $R'w = 57$ dB (to be provided by customer)

Note: User noises are noises created by individual users in our LevantaPARK Systems. These can be noises from accessing the platforms, slamming of vehicle doors, motor and brake noises.

MEASUREMENTS/DIMENSIONS ARE IN MILLIMETER (MM)

To be performed by the customer

Safety fences

Any barriers or screening to be installed directly beside, in front or behind parking pits are to meet Australian standards and will be the direct responsibility of the client unless specified in the offer.

Numbering of parking spaces

Consecutive numbering of parking spaces.

Building services

Lighting, ventilation, fire extinguishing and fire alarm systems.

Marking

Marking and identification according to Australian standards must be provided by the client in the environment of the installation. LevantaPARK will provide all marking relevant to the requirements on the system itself.

Wall cuttings

Any necessary wall cuttings and penetrations.

Electrical supply to the control box

Suitable electrical supply to the control box must be provided by the customer during installation. 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 their own expense and risk.

Door shields

Door shields may be necessary. If desired, they can be ordered from LevantaPARK for an additional charge.

Rails

A bed should be installed and concrete should be poured around the rails installed by the manufacturer throughout their entire length.

Tolerances

The tolerances for levelness of the driving surface must conform to AS 3600-2100.

If the following are not included in the quotation, they will also have to be provided / paid for by the customer:

- Costs for final technical approval by an authorized body

Description

General description

LevantaPARK Systems provides independent parking spaces for cars, one on top of the other and side by side. Dimensions are in accordance with the underlying dimensions of height and width. The parking bays are accessed horizontally (installation deviation $\pm 1\%$). Along the complete width of the bi-directional system an approach lane must be available. Parking spaces are arranged on two different levels, one level on top of the other. The platforms of the upper floor (UF) are moved vertically, the platforms on the ground floor (GF) horizontally. At approach level (GF) there is always one parking space less available. This vacant space is used for shifting the ground floor (GF) parking spaces sideways, thus enabling the upper platform (UF) parking space located above to be lowered to approach/ground level. Consequently, a unit of three parking spaces (1 on the ground floor, 2 on the upper floor).

The bi-directional system MAX 2 allows parking of passenger cars, wagons, SUV and other vehicles that fit within the size position of the parking system. All necessary safety devices are installed. Safety devices mainly consist of chain monitoring system and locking levers for the upper platforms. Standard delivery is made without doors. The approach/entrance area to the bi-directional system is monitored via light barriers. If the light barrier is interrupted, the parking system stops.

A steel framework mounted to the floor consisting of:

- Serrated supports
- Steel pillars with sliding platform supports
- Cross and longitudinal members
- running rails for the transversely movable ground floor (GF) platforms

Platforms consisting of:

- Side members
- Cross members
- 1 wheel stop (on the right per parking space)
- Platform base sections
- Screws, small parts, etc.

Lifting device for upper floor (UF) platforms:

- Hydraulic cylinder with solenoid valve
- Chain wheels
- Chains
- Limit switches
- The platforms are suspended on four points and guided along the supports using plastic sliding bearings

Drive unit of transversely movable platforms on the ground floor (GF):

- Gear motor with chain wheel
- Running and guide rollers (low-noise)
- power supply via cable mast

Hydraulic unit consisting of:

- Hydraulic power unit (low-noise, installed onto a console with a rubber-bonded-to-metal mounting)
- Hydraulic oil reservoir
- Oil filling
- Cover with integrated internal geared wheel pump
- Pump holder
- Clutch
- 3-phase-AC-motor (3.0 kW, 230/400 V, 50 Hz)
- Motor circuit breaker
- Test manometer
- Pressure relief valve
- Hydraulic hoses (which reduce noise transmission onto the hydraulic pipe)

Dead man's control safety mechanism (standard):

- Operation on a central control panel (operating device)
- All movements are latched automatically, except for downward movement of an OG parking space, for which the start button must be continually pressed
- Electric wiring is made from the electric cabinet by the manufacturer

MEASUREMENTS/DIMENSIONS ARE IN MILLIMETER (MM)

Automatic control system (special design):

- Central control panel (operating device) used to select the desired parking space
- Here, it is necessary that a door system is installed in the entrance area. The doors are operated manually for a series system. If desired, this can also be done using electric motors.
- Electric wiring is made from the electric cabinet by the manufacturer

Note: LevantaPARK newly adapted phone call system can be provided with any MAX system. Contact LevantaPARK agents for further details.

Manually operating sliding doors, which are opened sideways:

Box sliding doors, approx 2500mm x 2000 mm.

Door actuation**Standard:**

- Manual, i.e., the door is opened and closed by hand

Alternative:

- Electric drive via electromotor that is mounted to the turning point of the sliding doors. The drive pinion engages into a chain mounted to the door.
- For safety reasons the platforms are only moved when the doors are locked. The "Door open" and "Door closed" positions are monitored via electric sensors.

Framework

- Welded framework with one vertical center bar with stop profiles.
- The recessed grip is integrated in a vertical profile.

Fill**Standard:**

- Wire grating, mesh size: 12mm
- Not suitable for outdoor installations

Alternative:

- Trapezoidal sheet metal fill, thickness: 1 mm. Profile of sheet metal is adjusted to door width
- Non-Climbable Fence Mesh - Perforated - 10mm holes
- Wood with vertical profile, Norway spruce, composite slab, thickness: 16 mm, untreated for glazing by customer. Door framework without center bar.
- Fill provided by customer, max. weight: 10 kg/m², max. thickness: 25mm. Fill must contribute to stabilizing the framework. Door framework without center bar.

Running rails

- The running construction consists of one door with twin-pair rollers, adjustable in height
- The running rails for the doors are fixed to the either consoles, concrete lintels or a door suspension provided by the customer by using brackets
- Guiding is enabled by 2 plastic rollers on a base plate that is dowelled to the floor

Corrosion protection**Door framework:**

- Shot-blasted (purity: SA 2.5), powder-coated (Epoxy/Polyester base) RAL 7040, dry film thickness approx. 60-80 µm Fill (wire grating, trapezoidal plate):
- Shot-blasted (purity: SA 2.5), powder-coated (Epoxy/Polyester base) RAL 7040, dry film thickness approx. 60-80 µm Grating separation, if necessary:
- Framework with wire grating, mesh size: 12 mm, shot-blasted (purity: SA 2.5), powder-coated (Epoxy/Polyester base) RAL 7040, dry film thickness approx. 60-80 µm. Running rails, brackets, base plate for guiding rollers:
- Electrogalvanized

Please note:

Door covers (on the sides to cover the running rails, etc.) and door suspensions are not part of the standard delivery. They can be ordered as special equipment against additional charge.

Important! Doors in outside areas (not an underground garage):

- If doors are not installed and the system can be freely accessed, this presents a danger, for example for children playing, for which we will not be held liable. If the MAX 2 is ordered without doors, the customer expressly accepts full liability without limitations and frees the supplier from all claims. In individual cases,
- Additionally, wetness, cold, ice and snow can cause problems when driving into and out of parking spaces. The weather conditions listed previously can cause long lasting damage. Therefore, we recommend closed doors (not doors with wire mesh filling).

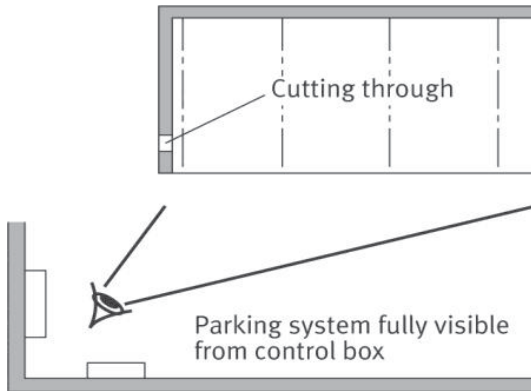
We reserve the right to change this specification without further notice

The LevantaPARK company reserves the right in the course of technical progress to use newer or other technologies, systems, derives no disadvantage from their so doing.

ELECTRICAL DATA

Control box

The control box must be accessible at all times from outside! Dimensions approx. 1000 x 1000 x 300 mm. Cutting through of wall from control box to parking system (contact the local agency of LevantaPARK for clarification).



Electrical supply

Suitable electrical supply 5 x 2.5 mm² (3 PH+N+PE) to control box with mains fuse 3 x 16 A slow or over-current cut-out 3 x 16 A trigger characteristic K, G or C. Suitable electrical supply to the control box must be provided by the customer during installation. 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 their own expense and risk.

Foundation earth connector

All connection of the equipment must be in accordance with relevant Australian standards including the requirements of AS 3000 on electrical earthing.

Operating device

Easy-to-survey positioning (e.g. on column). Protection against unauthorized use. May also be recessed in wall if required.

STANDARDS

SEMI-AUTO BI-DIRECTIONAL MAX 2 SYSTEMS CONFORM TO

- AS 3000 - All electrical wiring is installed to conform to Australian standards.
- AS Part 1601 - The design of all controls, interlocks and guards conform to AS Part 1601.
- ISO 9001 - Manufacturing procedures of all platforms, lifts and parking systems are certified to ISO 9001
- AS 60204 - All electrical equipment on product supplied

- by LevantaPARK conform to AS60204.
- AS1217.1 - Acoustic requirement on products supplied by LevantaPARK conform to AS1217-1.
- EN14010 - All LevantaPARK products conform to the European standards of equipment for power driven parking of motor vehicles. This also covers the design, manufacturing and installation procedures.



Designed for Australian site conditions



Engineered & Manufactured in Europe



Smart Solutions for Vehicle Parking and Car Storage

QLD	- 17 Canberra Street	Hemmant	QLD	4174
NSW	- 89 Gascoigne Street	Kingswood	NSW	2747
WA	- 67 Tacoma Circuit	Canning Vale	WA	6155
VIC	- 51 Assembly Drive	Tullamarine	VIC	3043
SA	- 6 Sheffield Street	Woodville North	SA	5012

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