Page 1
Dimensions
Car data

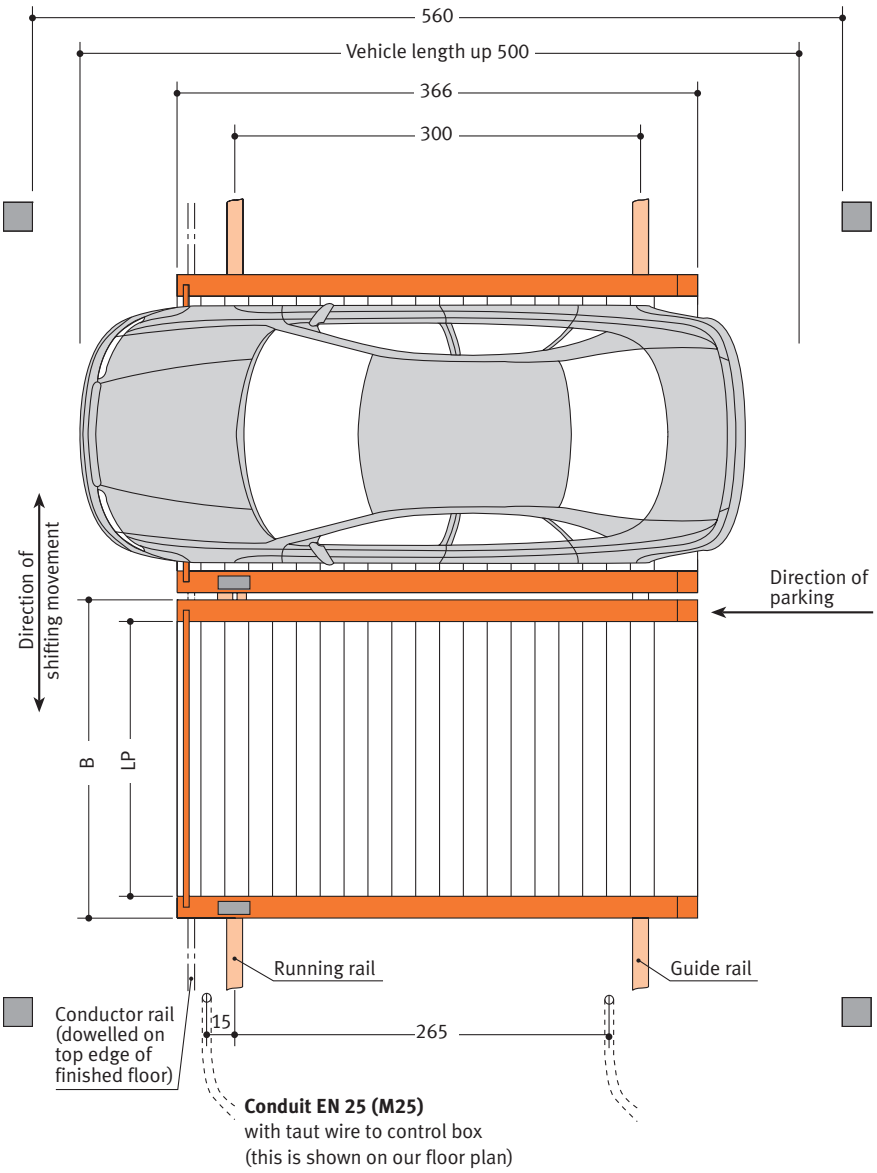
Page 2
Dimensions
Recess/
Rail system

Page 3
Eveness/
Tolerances
Function

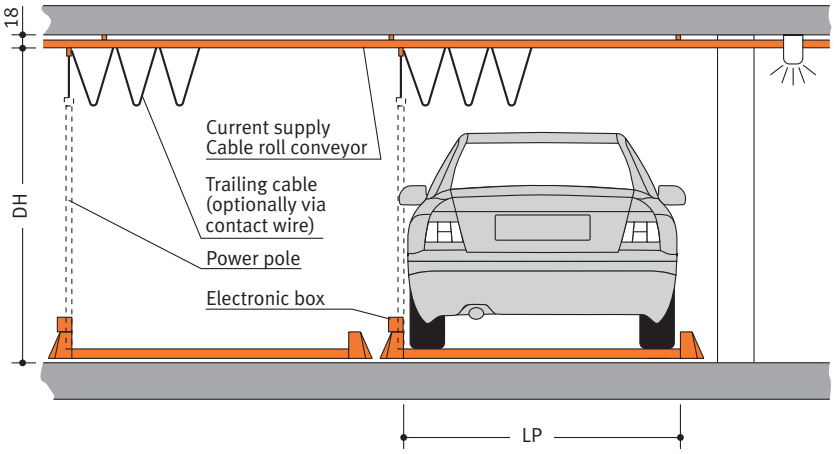
Page 4
Electrical
installation
Technical
data

Page 5
To be perfor-
med by the
customer
Description

Parking Pallet PQ-DC
(with current supply from rail)



Parking Pallet PQ-AC
(with current supply over trailing cable/optionally via contact wire)



Notes

A safety clearance of 30 cm must be maintained between the front or rear bumpers of vehicles on parking pallets and any fixed parts of the surroundings or other vehicles in accordance with DIN EN 14 010. At a max. vehicle length of 500 cm, this means a length dimension of 560 cm between the columns. The length dimension of 560 cm can only then be shortened if the max. vehicle or parking place length is reduced or light barriers are used.

The operating console must be mounted in such a way that the operator can see the entire system during operation and the motion sequences can be observed and monitored.

Product Data
Parking Pallet
PQ-DC/PQ-AC
crosswise shifting

CE CONFORMITY

Parking pallet PQ-DC
with current supply from rail

Parking pallet PQ-AC
with current supply over trailing cable

Dimensions:
All space requirements are minimum finished dimensions. Tolerances for space requirements $^{+3}_{0}$. Dimensions in cm.

Top edge finished floor:
Tolerances for the evenness of the carriageway must be strictly complied with in accordance with DIN (= German Industrial Standard) No. 18202, chart 3, line 3.

Type	LP	L	B
PQ-210	182	366	210
PQ-220	192	366	220
PQ-236*	208	366	236

* = Standard Type

We generally recommend to use type PQ-DC-236 where possible.

Suitable for:
Standard passenger car and station wagon.

Car dimensions	
length	max. 5.00 m
width	max. 1.80 (PQ-210)
	max. 1.90 (PQ-220)
	max. 2.08 (PQ-236)
weight	max. 2000 kg
wheel load	max. 500 kg

Standard passenger cars are vehicles without any sports options such as spoilers, low-profile tyres etc.

KLAUS multiparking
Klaus Multiparking GmbH
Hermann-Krum-Straße 2
D-88319 Aitrach
Phone **+49-7565-508-0**
Fax **+49-7565-508-88**
E-Mail **info@multiparking.com**
Internet **www.multiparking.com**

Page 1
Dimensions
Car data

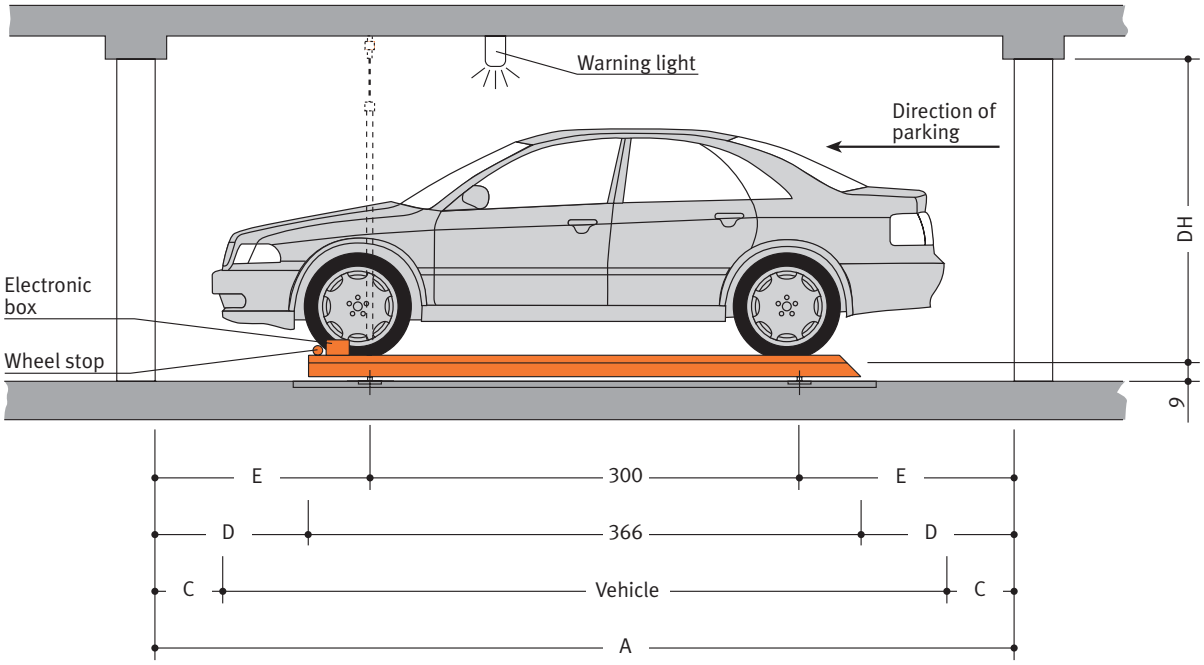
Page 2
Dimensions
Recess/
Rail system

Page 3
Eveness/
Tolerances
Function

Page 4
Electrical
installation
Technical
data

Page 5
To be perfor-
med by the
customer
Description

Dimensions



A	Vehicle	C	D	E	Please note the following on parking space	DH
560	**500**	**30**	**97**	**130**	**Parking space and pallet conform to German regulations and DIN EN 14010**	**acc. to local requirements**
530	500	15	82	115	Where the unit is equipped with ligth barriers, parking space and pallet also conform to the avove	**acc. to local requirements**
‹530	‹500	15	‹82	‹115	Light barrier is essential. Parking space does not conform to German regulations. **Note that length of vehicle is restricted!**	**acc. to local requirements**

Recess/Rail system

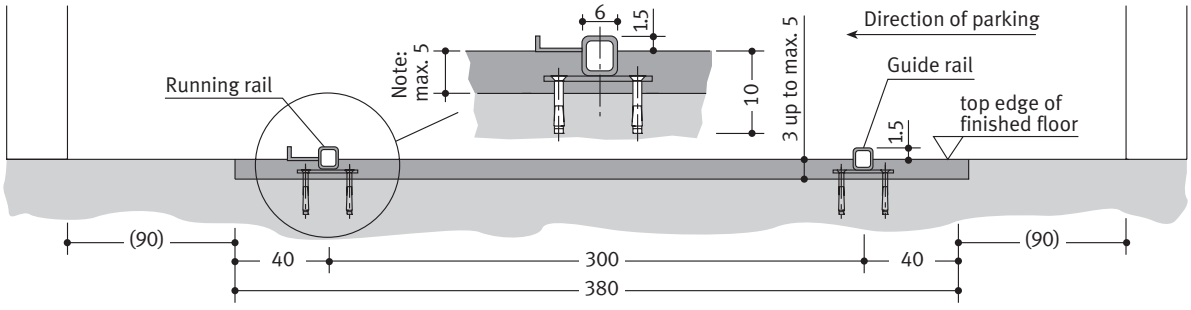
Dependent upon the structural conditions of the garage, several different options are available for installation of the rails.

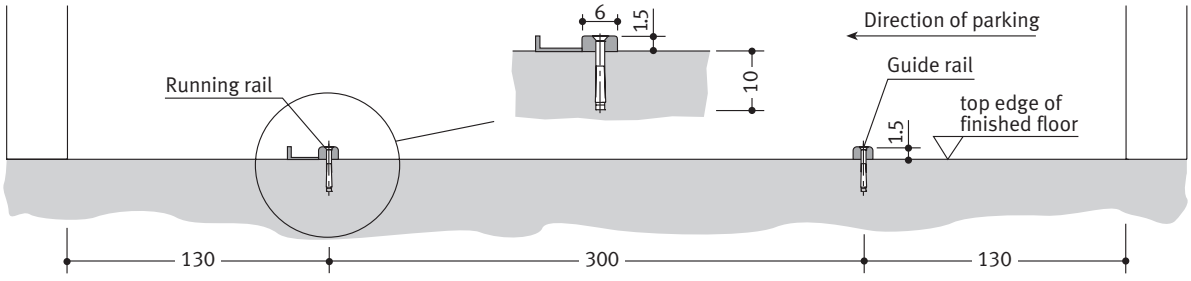
When executing the carriageway, according to the raw bottom floor combined with a cement screed, attention must be paid to the regulation that the thickness of the floor materials is determined by the structurally admissible tolerances. The set-up of the rails amounts to 3 cm (height of floor screed 4 cm).

Another variant consists in that recesses in the finished carriageway for the rails are provided by customer. After the rails have eventually been laid, the area under the rails, as well as the recesses must be topped up with concrete by the customer. When exact evenness of the carriageway has successfully been accomplished, the rails may subsequently also be dowelled onto it.

Detailed plans for correct recessing of rails are available from the local agency of Klaus.

Note: Tolerances for the evenness of the carriageway must be strictly complied with in accordance with DIN (= German Industrial Standard) No. 18202, chart 3, line 3.





Page 1
Dimensions
Car data

Page 2
Dimensions
Recess/
Rail system

Page 3
Eveness/
Tolerances
Function

Page 4
Electrical
installation
Technical
data

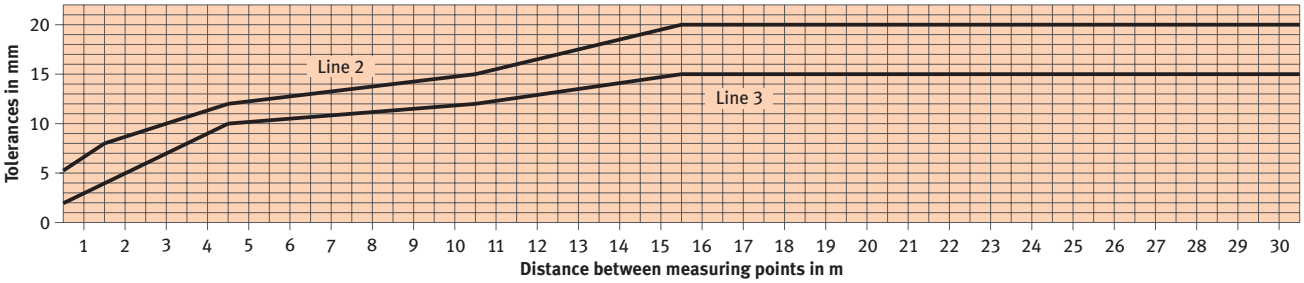
Page 5
To be perfor-
med by the
customer
Description

Evenness and Tolerances (abstract from DIN 18 202, table 3)

The distance between the lower flange of the platforms and the garage ground must therefore not exceed 2 cm. To adhere to the safety regulations and DIN EN 14 010 recommendations and to get the necessary even ground, the tolerances of evenness to DIN 18202, table 3, line 3, must not be exceeded. Therefore exact levelling of the ground by the client is essential.

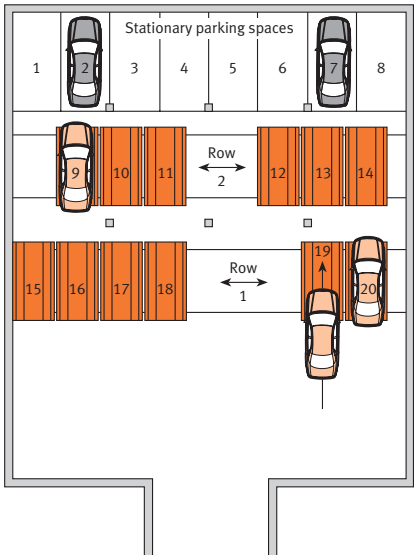
Column	1	2	3	4	5	6
		Vertical measurement as limits in mm with measuring points distances in m to*				
Line	Reference	0.1	1	4	10	15
2	Unfinished to surface of covers, subconcrete and subsoils for higher demands, e.g. as foundation for cast plaster floor, industrial soils, paving tiles and slabstone paving, compund floor paving. Finished surfaces for minor purposes, e.g. warehouses, cellar.	5	8	12	15	20
3	Finished grounds, e.g. floor pavement serving as foundation for coverings. Coverings, tile coverings, PVC flooring and glued coverings.	2	4	10	12	15

* = Intermediate values are to be taken out the diagram and must be rounded-off to mm



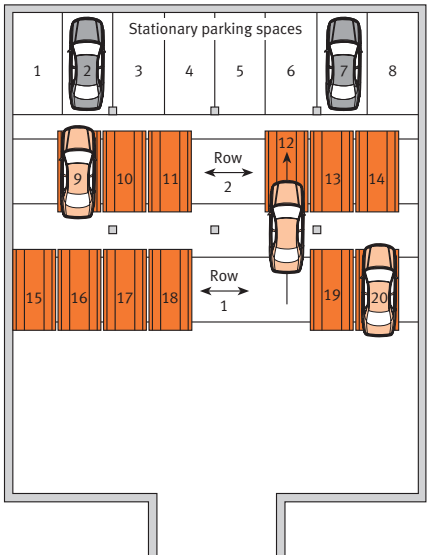
Function

Dependent upon the size of the parking system, the desired parking space is selected either via operating panel or push buttons. The carriageway will then automatically be opened towards the selected parking space. During the shifting process flashing warning lights will come up. The control system is set in such a way that a selected mechanical parking space may always be driven onto so that the driver's door may readily be opened into the carriageway made available (see parking process No. 1 and 2, above).



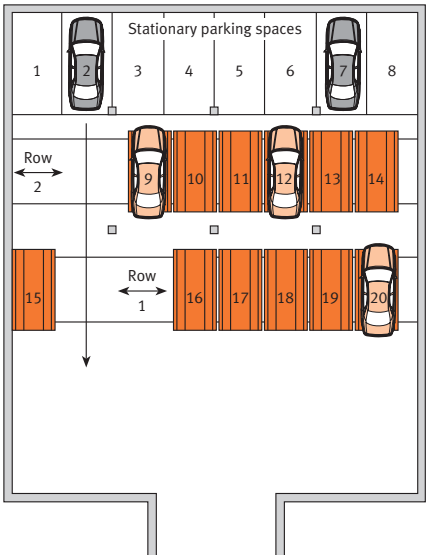
Parking Process No. 1

For entering parking space No. 19, row 1, driver selects parking space No. 19. Row 1 shifts in such a way that the pallet can comfortably be parked on and the driver may get out of the vehicle.



Parking Process No. 2

In order to park on parking space 12, row 2, driver selects space No. 12 on operating panel. Rows 1 and 2 will shift in such a way that the pallet may comfortably be parked on.



Parking Process No. 3

For parking on stationary parking space No. 2, driver selects parking space No. 2. Rows 1 and 2 will then open carriageway to space 2 so that moving into and out of the garage can readily be effected.

Page 1
Dimensions
Car data

Page 2
Dimensions
Recess/
Rail system

Page 3
Eveness/
Tolerances
Function

Page 4
Electrical installation
Technical data

Page 5
To be performed by the customer
Description

Electrical installation

Electrical supply/Control system

The customer must provide a supply line 5 x 2.5 mm² (3 PH+N+PE) to the main cabinet.

The location of the main cabinet and control panel are specified in the layout plans provided by Klaus Multiparking.

Provide conduits EN 25 (M 25) with taut wire to the contact line at the floor (only PQ-DC).

After selecting the individual parking spaces on the control panel they are provided automatically.

For smaller systems with up to 4 pallets in a row selection is made via one control unit per palett in jog mode (deadman).
Warning: Only possible with trailing cable or contact line from above.

Warning signals are installed within the shifting area of the parking pallets. They start flashing as soon as the system starts.

Drive/Safety

Safety bars on the side are installed as safeguard to avoid crushing injuries when shifting the parking pallet.

PQ-DC:
A 40 V low-voltage d.c. motor permitted for open circuit is used as drive. The paletts get powered via two contact lines mounted at the floor and sliding contact at the palett.

PQ-AC:
A 0.25 kW 3 phase motor is used as drive. The paletts get powered via trailing cable or contact line from above.

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 KLAUS agency for further assistance.

Available documents

– maintenance offer/contract
– declaration of conformity

Corrosion protection

See separate sheet regarding corrosion protection.

Environmental conditions

Environmental conditions for the area of multiparking systems: Temperature range –10 to +40° C. Relative humidity 50 % at a maximum outside temperature of +40° C.

Pallet design

The shifting speed of the parking pallet is 0.2 m/s (12 m/min), according to DIN EN 14 010.

The parking pallets are designed for standard vehicles up to a length of 5 m and a maximum weight of 2000 kg.

The overall standard platform width is 208 cm. Feed pallets with an overall width of 228 cm are available as optional design.

Emergency operation/Power failure

By locking the motor brake the pallets can be shifted manually.

Noise emission

Ball bearing of the rollers provide a low sound level.

Page 1
Dimensions
Car data

Page 2
Dimensions
Recess/
Rail system

Page 3
Eveness/
Tolerances
Function

Page 4
Electrical
installation
Technical
data

Page 5
To be perfor-
med by the
customer
Description

To be performed by the customer

Numbering of parking spaces

Consecutive numbering of stationary parking spaces and crosswise shifting parking pallets.

Building services

Lighting, ventilation, fire extinguishing and fire alarm systems.

Electrical supply to the control box

Power supply: three phase 400 V/50 Hz with neutral and ground wire (other voltage network, voltage or frequency are possible after the technical checking by us).

Main fuse:
3 x fuse 16 A (slow) or circuit breaker 3 x 16 A (trigger characteristic K or C).

Supply line 5 x 2.5 mm^2 to the main cabinet, depending on line layout, line length or system size a larger cross sections may be required. DIN VDE 0100, part 430, and other relevant local standards must be observed.

The supply line to the main cabinet 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.

Main switch

One lockable main switch coresponding to EN 60204-1, 5.3.2 a), b) or c) and 10.7.4 mounted in the supply line per main cabinet. The main switch is to be mounted directly next to the main cabinet.

Floor/Rails

Flooring structure in accordance with our instructions, please see page 2 and 3 (recesses, rail systems).

Recesses, tolerances for the evenness of the driving lane must adhere to DIN 18202, sheet 3, line 3.

Stuffing of rail system with cement floor for the whole length. Bringing in of floor pavement.

Cable duct M 25 with taut wire from electric cabinet to rails (only PQ-DC).

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
- Main switch

Description

General description

Multiparking system for parking one vehicle.

Dimensions are in accordance with the respective underlying height and width dimensions.

Transversely movable parking pallets are normally installed in front of a row of stationary parking spaces.

They can be shifted sideways in a way that the parking spaces located behind them can always be easily accessed.

For parking on the pallets, the pallets must also be moved sideways. This creates sufficient space for opening driver's door, facilitating convenient getting in and out of the vehicle.

Parking pallets, type PQ-DC, can be arranged in several rows, one behind the other.

Parking pallets, type PQ-AC, can be arranged in a one row arrangement up to 4 pallets.

A wheel stop for positioning the vehicle is provided.

Pallet dimensions

- See page 1 to 3
- Height in the driving area is approximately 8 cm above finished floor
- Height of the side members is approximately 15 cm

Parking pallet consisting of:

- Side members,
- Platform base sections (cover plates)
- Low-noise running and guide rollers running on ball bearings
- Access plate
- Wheel stop
- Various small parts, etc.

Drive consisting of:

PQ-DC:
- Drive pin driven by 40 V DC motor via taut chain using a pinion

PQ-AC:
- Friction gear drive with gear motor 0.25 KW via taut chain using a pinion

Rail system consisting of:

- Two rail sections mounted to the floor, which have to be set in concrete by the customer in accordance with our instructions.
- The guide rails protrude 15 mm above finished floor, thus ensuring safe guiding when shifting the pallets.

Electrical equipment consisting of:

General:
- Control box
- Operating device
- Limit switches for positioning
- Flashing warning lights

Electrical wiring PQ-DC:
- Contact wire dowelled to the concrete floor

Electrical wiring PQ-AC:
- Flat-/trailing cables
- Running rails fixed under the ceiling
- Cable trailers
- Optionally at additional charge: contact wire fixed under the ceiling

Control system:

General:
- While shifting the parking pallets, a warning signal flashes
- Safety bars on the side are installed as safeguard to avoid crushing injuries when shifting the parking pallet
- Electric wiring is made from the electric cabinet by the manufacturer

Operation PQ-DC:
- The parking pallets are operated via centrally located control panel
- Once the desired parking space has been selected, the pallet system is shifted automatically.

Operation PQ-AC:
- The parking pallets are operated via push-buttons (dead man's principle)

We reserve the right to change this specification without further notice

The Klaus company reserves the right in the course of technical progress to use newer or other technologies, systems, processes, procedures or standards in the fulfillment of their obligations other than those originally offered provided the customer derives no disadvantage from their so doing.