

# Tender specification KLAUS Multiparking TrendVario 4300

## Preliminary technical remarks

1. Basis for the design are:
    - 1.1 the garage regulations (GaVo) according to the building regulations in the latest version,
    - 1.2 the EC Machinery Directive 2006/42/EC, Appendix 1, and the DIN EN 14010
    - 1.3 a voluntary conformity testing by TÜV SÜD
    - 1.4 the architect's workshop drawings
  2. The bidder confirms upon submission of the bid that the garage dimensions and the driveway widths comply with the GaVo, the relevant implementation guidelines to be specified by him and the system offered by him.
  3. Required surface loads according to DIN 1055, page 3, per parking space: 2.0 t
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## Specification

### General:

Multiparking system providing independent parking spaces for cars, one on top of the other and side by side. Dimensions are in accordance with the underlying dimensions of parking pit, height and width. The parking bays are accessed horizontally (installation deviation  $\pm 1\%$ ). Along the complete width of the system an approach lane (driving lane in accordance with local regulations) must be available. Parking spaces are arranged on three different levels, one level on top of the other. The platforms of both the lower floor (LF) and upper floor (UF) are moved vertically, the platforms of 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 an upper floor (UF) parking space or lower floor (LF) parking space to be lowered or lifted to approach level. Consequently, a unit of five parking spaces (2 on the upper floor, 1 on the ground floor, 2 on the lower floor) is the smallest unit available for this parking system. The TrendVario 4300 allows parking of passenger cars and station wagons.

For safety reasons the platforms can only be moved behind locked doors.

All necessary safety devices are installed. This consists mainly of a chain monitoring system, locking lever for the upper and lower platforms and locked doors. The doors can only be opened if the selected parking space has reached the park position and all openings are secured.

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## Sliding doors:

### Size:

- Sliding door, dimensions: approx. 2500 mm x 2000 mm (width x height).

### Frame:

- Frame construction with vertical centre stay bar made from extruded aluminium profiles (anodized, layer thickness approx 20 µm).
- To open the doors a recessed grip is integrated in the aluminium profile.
- A rubber lip is used for the finishing of the closing edge to the building

## Standard door panel

### Perforated steel plate

- Thickness 1 mm, RV 5/8 galvanized, layer thickness approx. 20 µm
- Ventilation cross-section of the panel approx. 40%
- Not suitable for outdoor garages

## Alternative door panel

### Perforated aluminium plate

- Thickness 2 mm, RV 5/8 E6/EV1, anodized, layer thickness approx. 20 µm
- Ventilation cross-section of the panel approx. 40%

### Beaded steel plate

- Thickness 1 mm, galvanized, layer thickness approx. 20 µm
- additional power coating, layer thickness: approx. 25 µm on the outside and approx. 12 µm on the inside
- Colour options for the outside (building view): RAL 1015 (light ivory), RAL 3003 (ruby), RAL 5014 (pigeon blue), RAL 6005 (moss green), RAL 7016 (anthracite grey), RAL 7035 (light grey), RAL 7040 (window grey), RAL 8014 (sepia), RAL 9006 (white aluminium), RAL 9016 (traffic white)
- Inside of the gates in light

### Plain aluminium sheet

- Thickness 2 mm, E6/EV1, anodized, layer thickness approx. 20 µm

### Wooden panelling

- Nordic spruce in grade A – vertical tongue and groove boards
- preimpregnated colourless

### Laminated safety glass

- Laminated safety glass made from single pane safety glass ESG 8/4mm

### Wire grating

- Mesh size 12 x 12 mm
- Mesh size 40 x 40 mm (for manual sliding gates only)

### Running rails

- The running gear of each door consists of 2 twin-pair rolling gadgets, adjustable in height
- The running rails of the doors are fixed to brackets or the concrete lintel, or on a building-specific door suspension using ceiling
- The guide consists of 2 plastic rollers mounted to a base plate, which is dowelled to the
- Running rails, ceiling fittings and guide roller base plate are hot-dip

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## Door actuation

Standard:

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

Alternatively:

- Electric drive via electric motor mounted off the rail system at the turning point of the sliding doors. The drive pinion engages into the chain mounted off the door. For safety reasons the movement of the platforms is always made behind locked doors. Position sensing, i.e. „door open“ and „door closed“ is effected by electric signalers.

## Separation (if necessary):

- Upon request  
Please note: Door panels (on the side, cover for running rails, etc.) and door suspension are not included in the standard version but can be delivered against surcharge as special equipment.

## Roller doors:

### Size

- Dimensions modified based on width and height measurements.

### Shutter box

- 2-piece, roll formed aluminium box 45° consisting of upper and lower part
- lacquered type

### Guide rails

- extruded aluminium guide rails with brush insert
- lacquered type

### Gate type

- aluminium gate type, roll formed
- end rod with electronic safety strip
- lacquered type

### Colour options

Shutter box, guide rails and gate type are available with the following colour options:

- RAL 9016 (traffic white)
- RAL 9006 (white aluminium)
- RAL 7016 (anthracite grey)

## Door actuation

Powered electrically by means of tube motor in the shaft. For safety reasons the movement of the platforms is always made behind locked doors. Position sensing, i.e. “door open” and “door closed” is effected by electric signalers.

# **Tender specification KLAUS Multiparking TrendVario 4300**

## **Controll system**

- Central control system (operating device) used to select the desired parking space
- With series installation, the doors are opened manually. If desired, this can also be done using electric motors
- Electric wiring is made from the electric cabinet by the manufacturer

## **Corrosion protection:**

Corrosion protection according to DIN EN ISO12944-2, corrosive category C3 moderate

- Platform profiles hot-dip galvanized in accordance with DIN EN ISO 1461, film thickness approx. 45 µm
- Side member hot-dip galvanized in accordance with DIN EN ISO 1461, film thickness approx. 55 µm
- Cross members hot-dip galvanized in accordance with DIN EN ISO 1461, film thickness approx. 55 µm
- Access plate hot-dip galvanized in accordance with DIN EN ISO 1461, film thickness approx. 55 µm and additional orange powder-coating (Epoxy / Polyester base) RAL 2000, dry film thickness approx. 60 – 80 µm.
- Fastening screws for platform profiles Stainless steel V4A
- Hydraulic tubes, screwed joints, bolts, screws, nuts, washers electrogalvanized
- Other steel components for example, steel construction, roller seating, drive mount, bearing plates and other small components hot-dip galvanized in accordance with DIN EN ISO 1461, film thickness approx. 55 µm. Exception: Steel pillar / sliding piece (rear area) shot-peened (particle clean- liness SA 2.5) and grey powder coating (Epoxy / Polyester base) RAL 7040, dry film thickness approx. 60-80 µm

## **Electrical supply:**

Control box:

- The control box must be accessible at all times from outside.
- Dimensions approx. 100 x 100 x 30 cm.
- Parking system must be fully visible from control box.

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## To be performed by the customer:

1. Electrical supply to the main switch / Foundation earth connector:  
Suitable electrical supply to the main switch and the control wire line 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.  
In accordance with DIN EN 60204 (Safety of Machinery. Electrical Equipment), grounding of the steel structure is necessary, provided by the customer (distance between grounding max. 10 m).
2. Safety fences:  
Any constraints that may be necessary according to DIN EN ISO 13857 in order to provide protection for the park pits for pathways directly in front, next to or behind the unit. This is also valid during construction. Railings for the system are included in the series delivery when necessary.
3. Numbering of parking spaces:  
Consecutive numbering of parking spaces.
4. Building services:  
Any required lighting, ventilation, fire extinguishing and fire alarm systems as well as clarification and compliance with the relevant regulatory requirements.
5. Strip footings:  
If due to structural conditions strip footings must be effected, the customer shall provide an accessible platform reaching to the top of the said strip footings to enable and facilitate the mounting work.
6. Drainage:  
For the middle 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 floor itself (longitudinal incline is available). In the interests of environmental protection we recommend painting the pit floor. Oil and petrol separators must be provided according to the statutory provisions when connecting to the public sewage system!
7. Door suspension:  
The lintel height H2 (see product data sheet TrendVario 4300) is absolutely necessary. With differing heights, additional fixings are required for extra charge.
8. Door shields:  
Door shields that may be necessary. If desired, they can be ordered from KLAUS Multiparking for an additional charge.
9. Wall cuttings:  
Any necessary wall cuttings according to product data sheet TrendVario 4300.
10. Concrete quality:  
Floor and walls are to be made of concrete (quality minimum C20/25).

## If the following positions are not listed in the bid, the following services are also to be provided by the customer:

11. Costs for expert acceptance

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Multiparking system for \_\_\_ cars  
TrendVario 4300/GT175/DH155/L550

Multiparking system for \_\_\_ cars  
LF: \_\_\_ parking places  
GF: \_\_\_ parking places + 1 empty space  
UF: \_\_\_ parking places

Pit depth: 175 cm  
Clearance up to lower edge of the ceiling: 325 cm

Vehicle height:  
LF: 150 cm  
GF: 150 cm  
UF: 150 cm

Vehicle length: 500 cm

Usable platform width: 230 cm

Platform load: 2,0 t

incl. freight, unloading, installation  
incl. electrical wiring from hydraulic unit  
incl. expert acceptance

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Extra costs for electrically driven sliding doors

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Extra costs for infrared remote control

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Extra costs for additional hand-held transmitter (1 per parking place)

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Extra costs for door panel made of perforated aluminium plate

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Extra costs for door panel made of beaded steel plate

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Extra costs for door panel made of plain aluminium sheet

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Extra costs for door panel made of wood

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Extra costs for door panel made of laminated safety glass

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Extra costs for door panel made of wire grating 12 x 12 mm

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Extra costs for door panel made of wire grating 40 x 40 mm (for manual sliding gates only)

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## Tender specification KLAUS Multiparking TrendVario 4300

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Option:

Extra costs for KLAUS TrendVario 4300/GT175/DH175/L550

Multiparking system for \_\_\_ cars

LF: \_\_\_ parking places

GF: \_\_\_ parking places + 1 empty space

UF: \_\_\_ parking places

Pit depth: 175 cm

Clearance up to lower edge of the ceiling: 345 cm

Vehicle height:

LF: 150 cm

GF: 170 cm

UF: 150 cm

If the clearance to the lower edge of the ceiling is deviant:

Height 365: car height UF 170 cm

Vehicle length: 500 cm

Usable platform width: 230 cm

Platform load: 2,0 t

incl. freight, unloading, installation

incl. electrical wiring from hydraulic unit

incl. expert acceptance

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Option:

Extra costs for KLAUS TrendVario 4300/GT175/DH195/L550

Multiparking system for \_\_\_ cars

LF: \_\_\_ parking places

GF: \_\_\_ parking places + 1 empty space

UF: \_\_\_ parking places

Pit depth: 175 cm

Clearance up to lower edge of the ceiling: 365 cm

Vehicle height:

LF: 150 cm

GF: 190 cm

UF: 150 cm

If the clearance to the lower edge of the ceiling is deviant:

Height 405: car height UF 190 cm

Vehicle length: 500 cm

Usable platform width: 230 cm

Platform load: 2,0 t

incl. freight, unloading, installation

incl. electrical wiring from hydraulic unit

incl. expert acceptance

## Tender specification KLAUS Multiparking TrendVario 4300

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Option:

Extra costs for KLAUS TrendVario 4300/GT175/DH210/L550

Multiparking system for \_\_ cars

LF: \_\_ parking places

GF: \_\_ parking places + 1 empty space

UF: \_\_ parking places

Pit depth: 175 cm

Clearance up to lower edge of the ceiling: 380 cm

Vehicle height:

LF: 150 cm

GF: 205 cm

UF: 150 cm

If the clearance to the lower edge of the ceiling is deviant:

Height 435: car height UF 205 cm

Vehicle length: 500 cm

Usable platform width: 230 cm

Platform load: 2,0 t

incl. freight, unloading, installation

incl. electrical wiring from hydraulic unit

incl. expert acceptance



## Tender specification KLAUS Multiparking TrendVario 4300

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Option:

Extra costs for KLAUS TrendVario 4300/GT200/DH180/L550

Multiparking system for \_\_ cars

LF: \_\_ parking places

GF: \_\_ parking places + 1 empty space

UF: \_\_ parking places

Pit depth: 200 cm

Clearance up to lower edge of the ceiling: 350 cm

Vehicle height:

LF: 175 cm

GF: 175 cm

UF: 150 cm

If the clearance to the lower edge of the ceiling is deviant:

Height 375: car height UF 175 cm

Vehicle length: 500 cm

Usable platform width: 230 cm

Platform load: 2,0 t

incl. freight, unloading, installation

incl. electrical wiring from hydraulic unit

incl. expert acceptance

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Option:

Extra costs for KLAUS TrendVario 4300/GT200/DH210/L550

Multiparking system for \_\_ cars

LF: \_\_ parking places

GF: \_\_ parking places + 1 empty space

UF: \_\_ parking places

Pit depth: 200 cm

Clearance up to lower edge of the ceiling: 380 cm

Vehicle height:

LF: 175 cm

GF: 205 cm

UF: 150 cm

If the clearance to the lower edge of the ceiling is deviant:

Height 405: car height UF 175 cm

Height 435: car height UF 205 cm

Vehicle length: 500 cm

Usable platform width: 230 cm

Platform load: 2,0 t

incl. freight, unloading, installation

incl. electrical wiring from hydraulic unit

incl. expert acceptance

## Tender specification KLAUS Multiparking TrendVario 4300

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Option:

Extra costs for KLAUS TrendVario 4300/GT230/DH210/L550

Multiparking system for \_\_\_ cars

LF: \_\_\_ parking places

GF: \_\_\_ parking places + 1 empty space

UF: \_\_\_ parking places

Pit depth: 230 cm

Clearance up to lower edge of the ceiling: 380 cm

Vehicle height:

LF: 205 cm

GF: 205 cm

UF: 150 cm

If the clearance to the lower edge of the ceiling is deviant:

Height 405: car height UF 175 cm

Height 420: car height UF 190 cm

Height 435: car height UF 205 cm

Vehicle length: 500 cm

Usable platform width: 230 cm

Platform load: 2,0 t

incl. freight, unloading, installation

incl. electrical wiring from hydraulic unit

incl. expert acceptance

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\*Optional position\*

Extra costs for larger platform width \_\_\_\_\_ cm

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\* Optional position\*

Extra costs for increase of platform load to 2.6 t per parking space

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\*Optional position\*

Extra costs for parking place extensions for car length up to 5.20 m

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\*Optional position\*

Platform coating in AluLongLife

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\*Optional position\*

Platform coating in EasyWalk

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## **Tender specification KLAUS Multiparking TrendVario 4300**

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\*Optional position\*

Extra costs for additional noise protection measures to protect against structure-borne sound according to DIN 4109

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\*Optional position\*

Extra costs for additional increased noise protection measures to protect against structure-borne sound according to DIN 4109-10

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\*Optional position\*

Extra costs for fixing in waterproof concrete with glue dowel

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Extra costs for conclusion of a system service contract SSVP "PLUS" with cleaning and care, incl. maintenance 2 per year, all spare and wear parts, and cleaning and care of the platform surface.

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