

# **Tender specification KLAUS Multiparking MultiBase U2 EB / MultiBase U2 DB**

## **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 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
- 

## **Specification**

### **General:**

Multiparking system providing independent parking for 2 cars (EB), 2 x 2 cars (DB) on top of each other (on special conditions the upper platform may be used as parking space). Dimensions according to product data sheet MultiBase U1 U2 U3 and the pit dimensions, widths and heights taken as basis. The parking bays are accessed horizontally (installation deviation  $\pm 1\%$ ). Operation via operating device with key interlock using master keys.

MultiBase U2 EB - 2 platforms for 2 cars and 1 upper platform (on special conditions the upper platform may be used as parking space)

MultiBase U2 DB - 2 double-width platforms for a total of 4 cars and 1 upper platform (on special conditions the upper platform may be used as parking space)

### **Corrosion protection:**

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

- Platform profiles, cover plates and optional platform extensions hot-dip galvanized according to DIN EN ISO 1461, layer thickness approx. 45  $\mu\text{m}$
- Side members and cross members hot-dip galvanized according to DIN EN ISO 1461, layer thickness approx. 55  $\mu\text{m}$
- Central side members (only DB) and cross members hot-dip galvanized according to DIN EN ISO 1461, layer thickness approx. 55  $\mu\text{m}$ . Central side member, optionally grey powder coating (Epoxy / Polyester base) RAL 7040, dry film thickness approx. 60-80  $\mu\text{m}$
- Access plates, hot-dip galvanized in accordance with DIN EN ISO 1461 film thickness approx. 55  $\mu\text{m}$ , and additional orange powder-coating (Epoxy / Polyester base) RAL 2000, dry film thickness approx. 60-80  $\mu\text{m}$
- Fastening screws for platform profiles, stainless steel V4A
- Hydraulic tubes, screwed joints, bolts, screws, nuts and washers electrogalvanized
- Other steel components, shot-peened (particle cleanliness SA 2,5) and grey powder coating (Epoxy / Polyester base) RAL 7040, dry film thickness approx. 60-80  $\mu\text{m}$

## **Tender specification KLAUS Multiparking MultiBase U2 EB / MultiBase U2 DB**

### **Hydraulic unit:**

The hydraulic unit is used to drive several Multiparkers if they are arranged next or opposite (separated by the driveway only) to each other. The system is controlled with the control unit on for each Multiparker. The Multiparkers can be lifted or lowered together. The hydraulic unit installed is supported rubber-bonded metal. However, we still recommend separating the garage body from the residential house.

---

### **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. Drainage:  
In the middle of the pit a floor drain with connection to the cable network or a pump sump is to be provided. The water is to be drained with a pump to be provided by the customer. From the pit corners/bearing surface of the lifting columns an incline to the floor drain/pump sump is necessary.  
For reasons of environmental protection we recommend to paint the pit floor, and to provide oil and petrol separators in the connections to the public sewage network. To divert large amounts of water from the court area, we recommend that the customer install a water drainage channel around the periphery of the pit.
6. Marking:  
According to DIN EN 14010, a warning that identifies this danger area must be placed in the entrance area that conforms to ISO 3864. This must be done according to EN 92/58/EWG for systems with a pit (platforms within the pit) 10 cm from the edge of the pit.
7. Wall cuttings:  
Any necessary wall cuttings according to product data sheet MultiBase U1 U2 U3.
8. Concrete quality:  
Floor and walls below the drive-in level are to be made of concrete (quality minimum C20/25).
9. Operating device:  
The customer must provide a cable duct (Helfamin-tube DN 40) from pit floor to operating device. The location of the control element must be specified according to the project (control stand, house wall, etc.).

## **Tender specification KLAUS Multiparking MultiBase U2 EB / MultiBase U2 DB**

10. Installing vertical columns:  
In general, a crane must be supplied by the customer for installation of the telescope columns.  
Hook clearance min. 700 cm over access level, crane load approx. 1400 kg.
11. Maintenance manhole:  
A separate maintenance manhole with manhole cover, ladder and a connecting passage to the pit must be installed by the customer. In multiple systems, a shared maintenance manhole may be sufficient, depending on the project.
12. Lighting:  
The customer must comply with DIN 67528 „Artificial lighting of parking areas and parking houses“ for the parking structure lighting. The intensity of illumination in the pit and in the maintenance manhole must be min. 80 Lux.
13. Ventilation:  
To achieve a constant exchange of air, reduce humidity, prevent condensation, and reduce vehicle moisture (due to rain, snow, ice, etc.), it is recommended that the customer consult specialized engineers for heating, ventilation, and climate control and install a ventilation system. This will reduce or prevent the hazard of corrosion and its attendant failures.

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

14. Complete wiring of the single components acc. to circuit diagram
15. Costs for expert acceptance
16. Lockable main switch
17. Control line from main switch to unit

---

Multiparking system for 2 cars  
MultiBase U2-425 EB

Multiparking system for 2 cars with platforms for horizontal accessing and 1 upper platform (on special conditions the upper platform may be used as parking space)

Pit depth: 425 cm

Vehicle height: bottom 165 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 MultiBase U2 EB / MultiBase U2 DB**

---

Multiparking system for 4 cars  
MultiBase U2-425 DB

Multiparking system for 4 cars

Usable platform width: 460 cm

Otherwise as described for Multiparking system for 2 cars

---

Hydraulic unit, low-noise

---

Extra costs for lockable main switch

---

Extra costs for control line from main switch to hydraulic unit

---

Option:  
Extra costs for KLAUS MultiBase U2-495 EB  
(car height at bottom up to 200 cm)

– Dimensions acc. to manufacturer specifications –

---

Option:  
Extra costs for KLAUS MultiBase U2-495 DB  
(car height at bottom up to 200 cm)

– Dimensions acc. to manufacturer specifications –

---

\*Optional position\*  
Extra costs for larger platform width \_\_\_\_\_ cm

---

\* Optional position\*  
Extra costs for increase of platform load to 2.6 t per parking space, EB system

---

\* Optional position\*  
Extra costs for increase of platform load to 2.6 t per parking space, DB system

---

\* Optional position\*  
Platform coating in AluLongLife

---

\* Optional position\*  
Extra costs for additional noise protection measures to protect against structure-borne sound according to DIN 4109, EB system

## **Tender specification KLAUS Multiparking MultiBase U2 EB / MultiBase U2 DB**

---

\* Optional position \*

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

---

\* Optional position\*

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

---

\* Optional position\*

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

---

\* Optional position\*

Extra costs for fixing in waterproof concrete with glue dowel

---

Extra costs for conclusion of a system service contract SSV "PLUS" with cleaning and care, incl. maintenance 1 per year, all spare and wear parts, and cleaning and care of the platform surface.

---