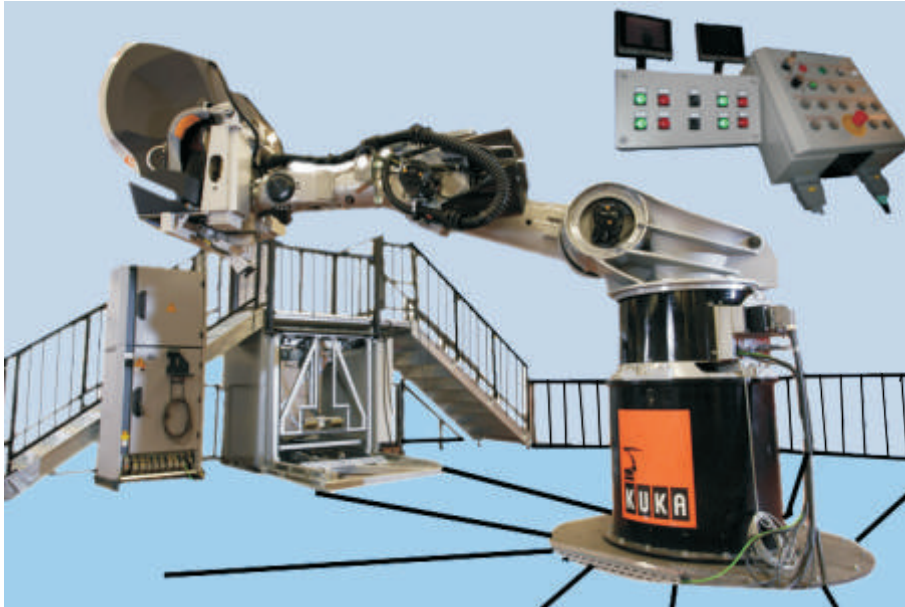


KUKA Robocoaster – Description

Function

The Robocoaster is an amusement ride, based on the KR 500-2 TÜV 6-axis kinematic system, that is approved for the conveyance of passengers in accordance with EN 13814 (formerly DIN 4112). There is a gondola mounted on the flange of the KUKA KR 500-2 TÜV robot allowing the conveyance of one or two passengers.



Overview of Robocoaster with simulator hood

Functional principle

Passengers access the 2-seat gondola via a stairway and extended platform. The gondola is then closed by the operator. The operator is responsible for ensuring that the shoulder bars are closed correctly and that loose objects (e.g. cell phones, keys) are collected from the passengers before they board. There are 5 ride programs to choose from. The programs selected by the passengers are activated by the operator. The ride programs available for selection vary in motions, speed and acceleration. Programs 1 and 2 are suitable for children from 1.2 to 1.4 m in height, as they do not contain inverted motions. Passengers must not exceed 1.95 m in height. The ride intensity of the motion programs increases from program 3 to program 5. Once the operator has selected the program, the platform retracts to a collision-free position beneath the access platform. After approx. 90 seconds, the ride ends back at the home position, i.e. the boarding and leaving position. Once the platform has extended, the shoulder bars open and the passengers leave the Robocoaster attraction via the platform and stairway.

Area of use

Customers for the Robocoaster currently include:

- FECs (Family Entertainment Centers)
- Theme parks and medium-sized leisure parks
- Malls, shopping centers
- Edutainment customers
- Science centers.

KUKA Robocoaster – Order Data

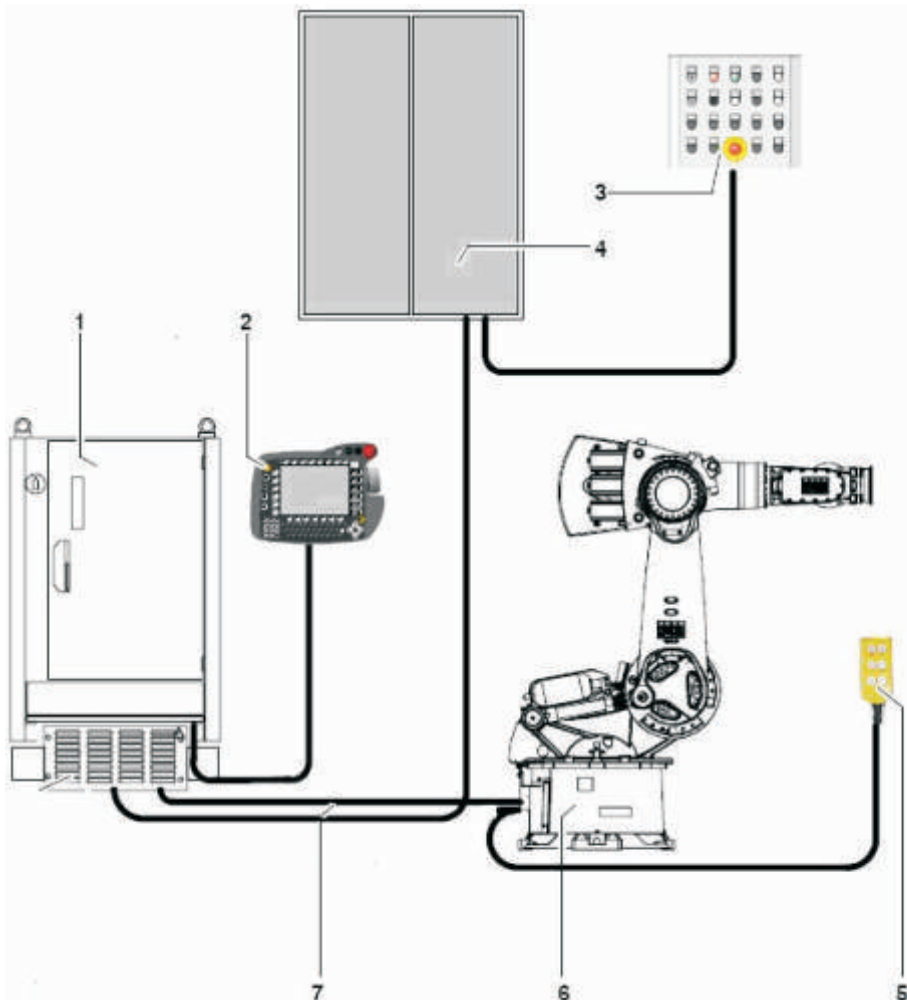
System components – scope of supply

All components of the basic system or components available for selection within the basic system are required for the robot system.

The basic system comprises the following elements:

- Hardware components: robot arms, controllers, equipment and accessories
- Software
- Specific services (installation, commissioning and training) and maintenance agreements

Additional optional equipment and accessories are available.



Symbolic representation, system overview

1 KR C2 edition2005 robot controller

2 KUKA Control Panel (KCP)

3 Robocoaster control panel and accessories

4 System control cabinet

5 Brake release device (part of the emergency equipment kit)

6 KR 500-2 TÜV robot

7 Connecting cables between KR C2 and robot

KUKA Robocoaster – Order Data

Ordering data – basic system

The scope of supply of a basic system includes:

- one KR 500-2 TÜV robot on a booster frame assembly (consisting of drum, bedplate and fastening material) with KTL mastering kit accessory
- one 15 m Robocoaster connecting cable set, for connecting the robot to the KR C2 edition2005 controller, and additional Robocoaster connecting cables including ground conductors
- one KR C2 edition2005 robot controller with KCP and one system control cabinet
- one retractable platform consisting of access platform, stairway, platform, safety fence, safety equipment and installation material
- one gondola, color: gray-black, and accessory kit (gauge and test device)
- one evacuation kit (robot release device with brake release device, shoulder bar release device)
- one control panel with holder
- TÜV acceptance at KUKA in accordance with EN 13814

- System software
- KUKA.Robocoaster software with 5 ride programs, setup.

- Services: installation, commissioning and training; total duration approx. 8 days
- Maintenance agreement between end customer and KUKA Service Germany

It is essential that all components of the basic system are ordered and that a purchase contract is concluded between KUKA Germany and the end customer.

The articles of the basic system are listed below.

Continued on next page

KUKA Robocoaster – Order Data

Article	Art. No.	
KR 500-2 TÜV (RAL 9006)	10-005-504	✓
Booster frame assembly	00-115-379	✓
Robocoaster connecting cable set, 15 m	00-117-511	✓
KTL mastering kit	00-109-835	✓
KR C2 edition2005 robot controller	00-156-530	✓
Robocoaster connecting cables	00-155-657	✓
KUKA Control Panel (KCP)	00-110-185	✓
RC Vision system control cabinet	00-164-840	✓
Retractable platform assembly	00-152-919	✓
Retractable platform installation material	00-158-498	✓
Gondola (color: gray-black)	00-142-314	✓
Gondola accessory kit (incl. gauge and test device)	00-157-789	✓

Evacuation kit. The following articles must be ordered for the evacuation kit. Please select the appropriate language version of the shoulder bar release device.

Article	Art. No.	
Release device (tool and brake release device)	00-142-306	✓
Shoulder bar release device, German	00-158-477	●
Shoulder bar release device, English	00-158-468	●
Shoulder bar release device, French	00-158-480	●

Control panel. The following articles must be ordered for the control panel. Please select the appropriate language version of the control panel.

Article	Art. No.	
Robocoaster control panel, German	00-163-333	●
Robocoaster control panel, English	00-158-029	●
Robocoaster control panel, French	00-164-848	●
Control panel holder	00-162-030	✓

Article	Art. no.	
System software KSS 5.2	Please specify	✓
KUKA.RoboCoaster 2.0, CD-ROM	00-130-575	✓

Article	Art. no.	
Installation, commissioning and training (total duration approx. 8 days)	Please specify	✓
Maintenance agreement between end customer and KUKA Service Germany	Please specify	✓

KUKA Robocoaster – Order Data

Ordering data – additional equipment / accessories

Installation of the robot

The booster frame including bedplate contained in the basic system (i.e. booster frame assembly 00-115-379 for KR 500-2 TUV) is used for installation of the Robocoaster.

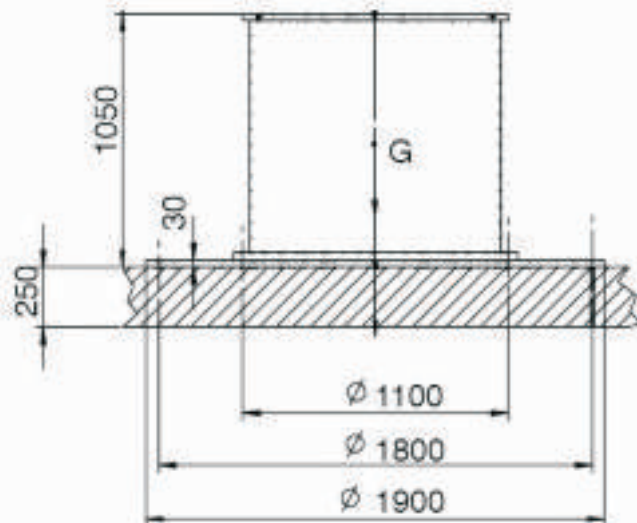
Installation on concrete foundation

The bedplate with booster frame and robot is screwed directly to the concrete foundation using chemical anchors. In accordance with the specification, the concrete quality of the foundation must be at least B25 or correspond to C20/25; the thickness of the concrete must be at least 250 mm.

Installation on load spreader

The bedplate with booster frame and robot (booster frame assembly) can be installed on a load spreader (spider) with eight spreader arms.

The load spreader (spider) variant is used for temporary installations, on floors that must not be damaged by anchors, or if the concrete thickness is only between 200 mm and 250 mm.



Bedplate on concrete foundation



Robocoaster with load spreader (spider)

Article

Art. No.

Booster frame assembly

See *Basic system* ✓

Load spreader (spider) for concrete thicknesses of 200 - 250 mm

00-146-231 ✓



Option

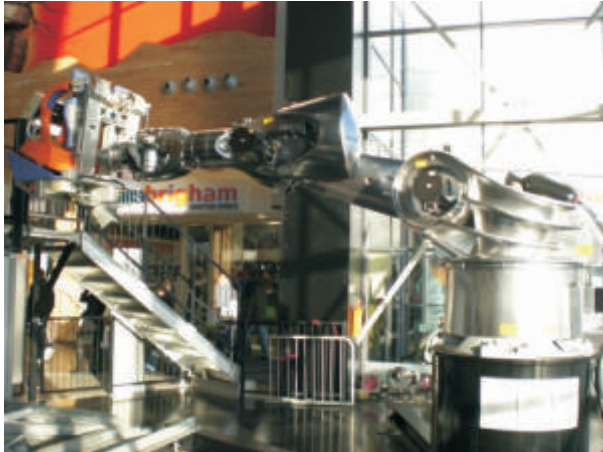


Required

KUKA Robocoaster – Order Data

Chrome paintwork

The chrome paintwork gives the robot a gleaming appearance and ensures brilliant light effects by reflecting the lighting. The standard color is usually RAL 9006. If chrome paintwork is not selected, a different color can be selected on request (for an additional charge).



Robocoaster with chrome paintwork

Article

Art. No.

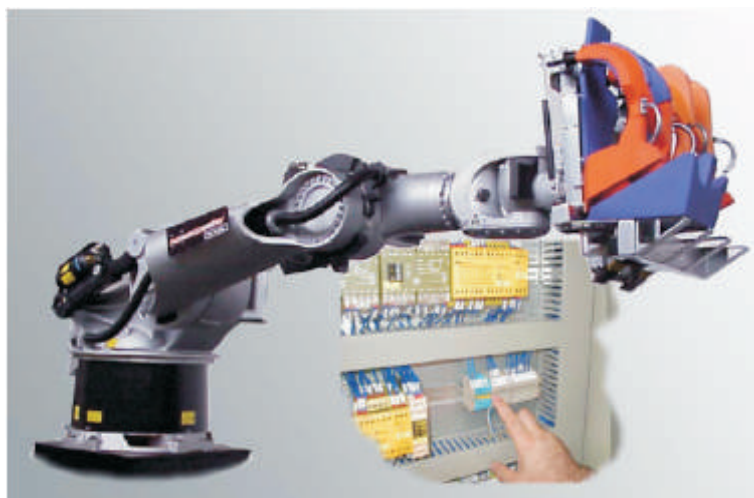
Chrome paintwork

Please specify

Option

Photo interface

The photo interface is an interface in the system control cabinet that allows the connection of photographic equipment. The use of photographic equipment is only possible if a standard gondola is being used. An additional program that briefly stops the ride makes it possible to photograph the passengers seated in the gondola. This offer gives the customer the option of increasing revenue by selling merchandizing products with photographs.



Robocoaster with photo interface

Article

Art. No.

Photo interface

Please specify

Option

KUKA Robocoaster – Order Data

4D Simulator

The 4D Simulator is designed for visual and animated representation of motion sequences in different themes, worlds and presentations. The 4D Simulator adds a fourth dimension of experience to 3D simulation: wind. This head wind effect makes the experience of simulations even more intense. Beneath the spherical carbon-fiber hood lies a range of equipment that offers all the possibilities of a modern simulator: stereo loudspeakers, 20-inch flat screen and fan.

The option includes all components required for the 4D Simulator (simulator hoods, electrical components for the gondola, RC Vision technology cabinet, RC Vision control panel, RC Vision terminal box, connecting cables, energy supply system, software).

The equipment does not include films or ride programs with synchronized motions (synchronization of robot motion with film). Film creation and ride programs with (robot-film) motion synchronization are available from external partners.



4D Simulator, exterior view



4D Simulator, interior view

Article	Art. No.
4D Simulator	00-165-431 <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Option	

Maintenance tools

The maintenance tools are used for daily maintenance work.

Article	Art. No.
Maintenance tools	00-142-327 <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Option	