



The solution for automatic loading and unloading of welding machines and machine tools

KUKA Cell4_loading modular

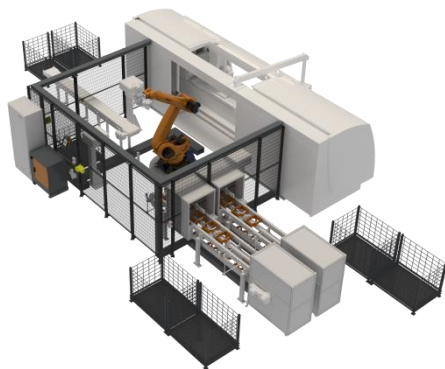


Figure 1: Handling cell with two accumulating conveyors, a hinged chain conveyor and a removal option for reject containers

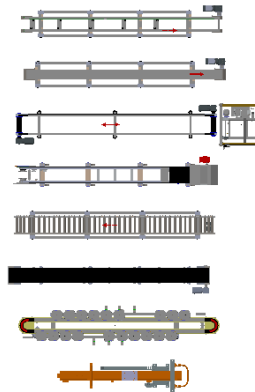


Figure 2: Conveyor equipment variants

KUKA standard cells can be configured with versatile, modular standard packages and automation options to create tailor-made solutions for customers in the area of machine loading and unloading.

The layout can be designed flexibly to allow for access on the left or right, at the center or on both sides, depending on the size and number of conveyor systems.

The automated handling cell consists of a standard package featuring a KUKA robot with triple gripper, two accumulating feed conveyors for component parts, a hinged chain conveyor for finished parts and a reject container that can be removed through a separate safety gate. A protective enclosure secures the cell against unauthorized entry.

Scope of supply

Handling cell, with:

- 1 KUKA KR 120 R3100-2 robot, incl.
 - KUKA KR C4 robot controller
 - KUKA.GripperTech
 - KUKA SafeOperation
 - Triple gripper without gripper jaws
- Choice of conveyor equipment
- Safety fence, mesh size 20 mm, 2 safety gates with guard locking
- KUKA operator panel via smartPAD-2
- Optional:
 - HMI Advanced
 - Reading of DMC code
 - Dot peen marking of DMC code
 - Laser marking of DMC code

Optional modules for DMC reading/writing or an off-loading drawer for SPC components can be configured. Further options include an extensive selection of conveyor systems such as belt, chain, pallet and accumulating roller conveyors, small container transport, etc.

Not included in scope of supply:

Attachments in contact with components such as gripper jaws and component locations.

To ensure all relevant functions, the robot cells are equipped with a perfectly tailored technology and software package from the KUKA product portfolio. This makes for optimal coordination of the robot, machine controller and cell controller.

In order to control the component-specific sensors and any centering units required, gripper and feed conveyors are equipped with a pre-configured terminal for valves and I/O modules.

Specifications regarding the quality and usability of the products do not constitute a warranty of properties. They are intended to serve informative purposes only. The extent of goods delivered and services performed is determined by the subject matter of the specific contract. Some products shown here have optional features that are sold separately. Technical data and illustrations not binding in respect of the equipment supplied. Subject to technical alterations.



Ideally tailored to your functional requirements KUKA Cell4_loading modular

Basic configuration – Technical data:

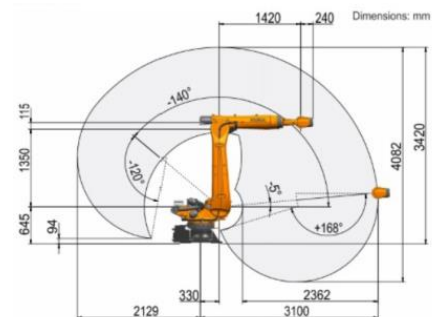
Cell standard	KUKA Cell4_loading modular
Robot	1x KR Quantec-2 KR 120 R3100 optional 1x KR Quantec-2 KR 210 R3100
Controller	KR C4 KSS 8.6
PLC	Siemens TIA Portal series 1500
Gripper	<ul style="list-style-type: none"> - Basic gripper with three 2-finger parallel grippers - Linear stroke unit - Control: Festo valve terminal type MPA-S with CPX terminal
Choice of conveyor equipment, basic length 4000 mm	<ul style="list-style-type: none"> - Accumulating roller conveyor - Hinged chain conveyor - Friction roller conveyor - Belt conveyor - Offloading drawer with pneumatic lock - Shaft hopper - Slat chain conveyor - Control: Festo valve terminal type MPA-S with CPX terminal
Safety fence with two safety gates and guard locking	

Options:

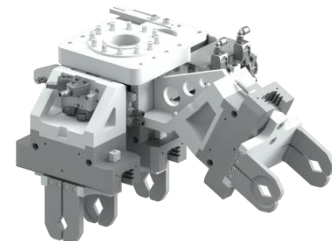
- KUKA HMI Advanced
- DMC reading (camera)
- DMC writing (dot peen marking, scribe marking)
- DMC reading/writing (laser)

For more information, please contact us at info@kuka.com.

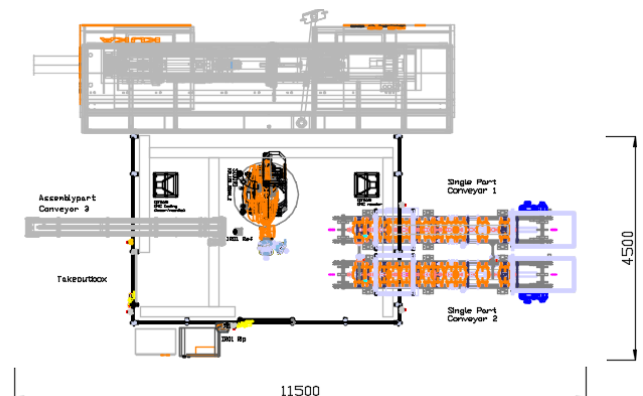
Working envelope, KR 120 R3100-2



Triple gripper with linear stroke



System layout example



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