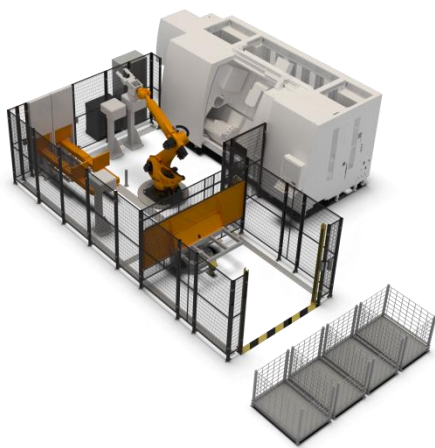
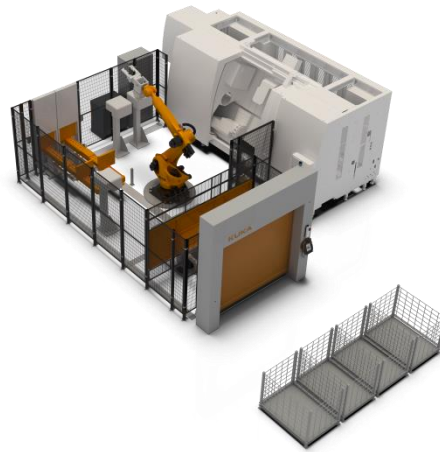


The solution for loading and unloading of machine tools

KUKA cell4_loading modular with 1-axis positioner KP1A



Illus. 1: Version 1 Loading area with light curtain



Illus. 2: Version 2 Loading area with rolling door

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 automated handling cell consists of a standard package featuring a KUKA robot, a KUKA 1-axis positioner, two drawers, optional modules for Read/Write DMC, and a suitable protection housing against unauthorized access. A modern cell control with signal interface to the corresponding machine control secures all relevant functions.

In addition, the robot cells are equipped with a perfectly matched technology and software package from the KUKA product portfolio. Thus, an optimal coordination of robot, positioner, and cell control can be guaranteed. The applied KUKA KP1-V2T is prepared for fastening of workpiece fixtures (tool plate, etc.) on both sides. The mounting height is 800 mm, so that an ergonomic loading height incl. fixture is possible.

The lock drawers are coupled with the KUKA SafeOperation in order to safely guarantee the removal of test parts or NOK parts during automatic operation. The signal interface to the component-specific fixture system is prepared with a bus module with 16/8 inputs/outputs per drawer.

The loading area is equipped with a light curtain, so that bigger loads can be loaded and unloaded easily with a lifting tool. An optional rolling door can be configured for optimal space-saving design of the loading area. Both versions are optimally secured with a protection against stepping behind via laser scanner.

Scope of supply

Handling cell, with:

- 1 pcs. KUKA Robot KR210R3100-2, incl.
 - KUKA Robot control KR C4
 - KUKA.GripperTech
 - KUKA SafeOperation
 - Double gripper without gripper jaws
- 1-axis positioner KUKA KP1-V2T
- Safety fence grid raster 20 mm with loading area, secured by light barrier/rolling door and protection against stepping behind with laser scanner
- KUKA operating panel via SmartPad2
- 2 pcs. drawers for SPC parts/NOK parts
- Optional:
 - HMI Advanced
 - DMC Code reading
 - DMC Code needling
 - DMC Code lasering

Not included in the scope of supply:

- Component-touching assemblies like clamping devices, grippers, and component fixtures.

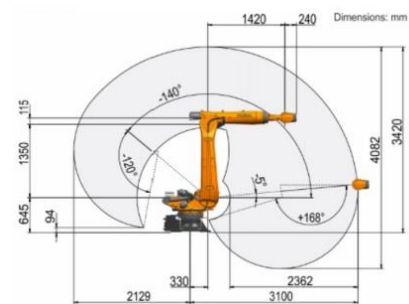


Ideally matched for your function requirements KUKA cell4_loading modular with 1-axis positioner KP1A

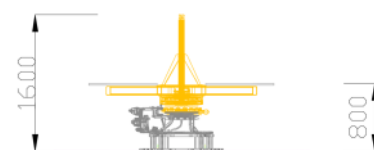
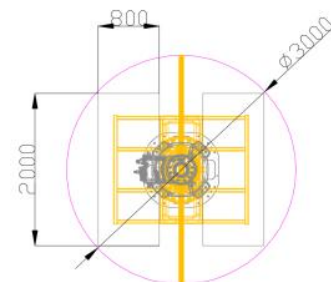
Basic Configuration - Technical Data:

Cell standard	KUKA cell4_loading modular V2T with a maintenance door
Robot	1x KR Quantec 2 KR210 R3100-2
Control	KR C4 KSS 8.6
PLC	Siemens TIA Portal series 1500
Positioner	KP1-V2T
- Payload per rotary table side	750 kg
- Diameter	3000 mm
- Useful area per rotary table side	2000 x 800 mm
- Media supply	(2x air, 2x field bus)
Loading area	light barrier Rolling door w x h 2300 mm x 2200 mm (optional)
Protection against stepping behind	laser scanner
Drawers with locking and safe sensing	
- Payload 200 kg, useful area 1400 mm x 500 mm	
- Bus module with 16 inputs / 8 outputs 24VDC/2A	

Working envelope, KR210 R3100-2

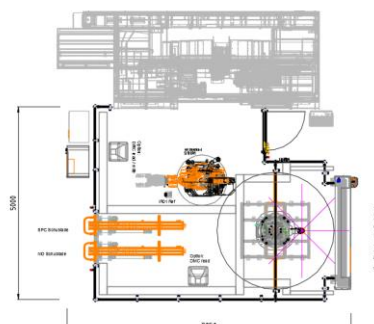
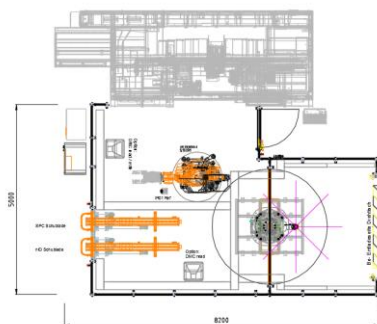


1-axis positioner KP1-V2T



Options:

- KUKA HMI Advanced
- Read DMC (camera)
- Write DMC (needling, scoring)
- Read/Write DMC (laser)



For further information please contact us under info@kuka.com

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