

**KUKA Sim**

**KUKA Sim Viewer**

**KUKA Sim Layout**

**KUKA Sim Pro**

**Plan future operations quickly and reliably.  
KUKA Sim – simulation and offline programming tool for KUKA robots.**



## KUKA SIM FAMILY OF PRODUCTS: DESIGNED FOR YOUR NEEDS.

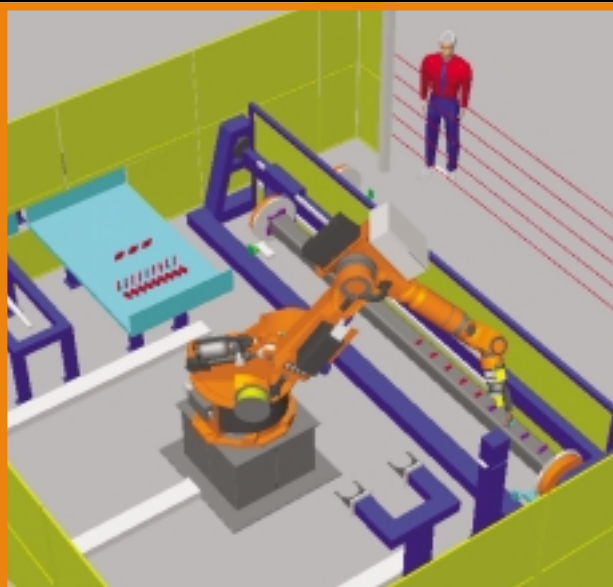
- KUKA Sim Viewer** For optimal presentation of your simulations.
- KUKA Sim Layout** For building and verifying 3D layouts and creating simple robot simulations.
- KUKA Sim Pro** For cycle time analysis, program optimization and true offline programming.

**The ultimate in rationalization and cost-effectiveness.** KUKA Sim lets you implement your projects faster, more easily and more reliably. This begins even at the marketing stage. With KUKA Sim, you can create dynamic sales presentations that convince your customers your solution is the right one. When it comes to the planning phase, KUKA Sim helps you determine which of the different variants is the best, thus making your planning more reliable. KUKA Sim is also useful during design. You can find the optimal layout for your manufacturing cell allowing for verification of drafts and designs at an early stage. KUKA Sim's greatest advantage, however, lies in programming and program optimization: you can significantly reduce programming times, create extremely high-quality programs, and optimize them without interrupting production. Last but not least, KUKA Sim is an ideal training tool. You can use it to train your employees safely and cost-effectively – right up to the expert programming.

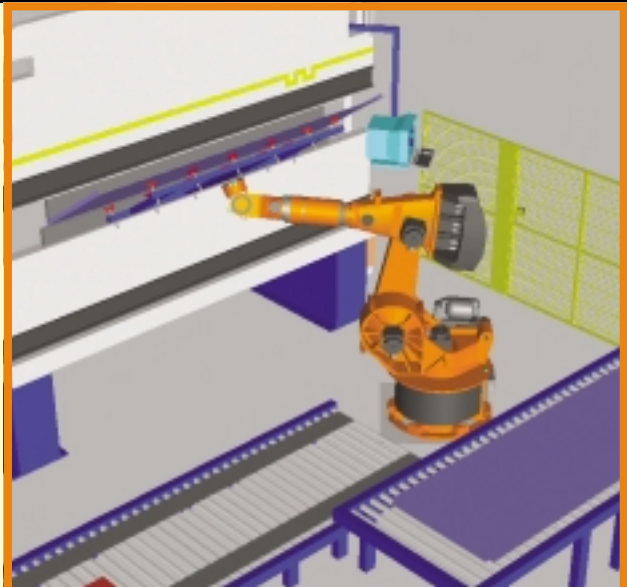


## KUKA SIM VIEWER

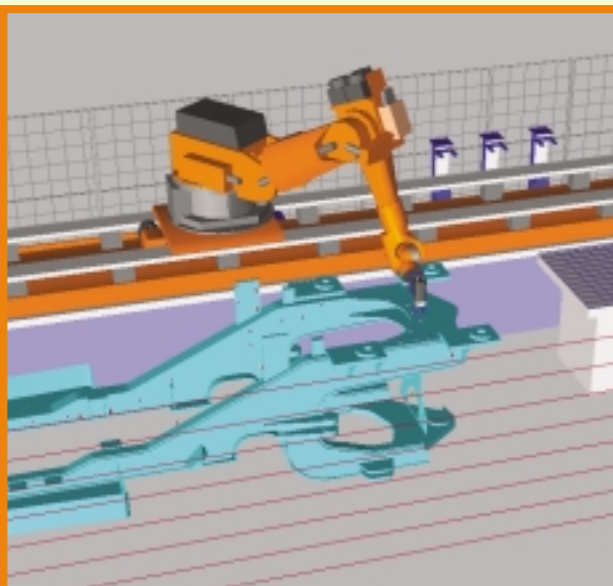
KUKA Sim Viewer is the software tool which enables you to view and study simulations created in KUKA Sim Layout or KUKA Sim Pro. Orbit, zoom and pan in real 3D with superlative graphics. You can download the viewer free of charge from our website.



**9-axis workcell for a combined handling and arc welding process**



**Handling at a bending machine**



**Stud welding on bulldozer frames with a robot mounted on a linear unit**



**Robot unloading an injection molding machine**

## KUKA SIM LAYOUT

KUKA Sim Layout is a unique program for creating 3D layouts of production systems with KUKA robots. You can quickly create and compare different layouts, equipment selections and robot tasks, both on site and off site with your suppliers and customers. KUKA Sim Layout is thus the ideal simulation tool for project engineers and the sales team of your company.



**Designing layouts.** Quickly design layouts by dragging & dropping components from the electronic catalog. Validate alternatives and verify your designs with a minimal effort. Use KUKA Sim Layout to find the optimal layouts for your production systems at an early stage in your projects.



**Parametric modeling.** Most components from the “eCatalog” are parametric in design. This means that you can load, e.g., a fence and resize it to the height and width you require. This parametric approach eliminates the need for CAD remodeling and saves you valuable time.



**Visualize the robot motions.** Program robot motion sequences and make your simulated robot move. Next add statements, e.g. to make your robot grip objects, and then visualize the robot task. For accurate cycle times and robot trajectories, KUKA Sim Pro is recommended.



**Take advantage of the electronic catalog.** Use components from our comprehensive library supplied with KUKA Sim Layout. This library includes all the KUKA robots of the controller series KR C1, KR C2 and KR C3, as well as a range of grippers, conveyors and fences. Visit our website for the latest models.



**Collision detection, annotations and more.** Use the collision detection features to optimize your layouts. Next add dimensions and annotations to your layouts and finally export your simulations to KUKA Sim Viewer to enable your customers to take a look at your projects. The simulations are small in size, so that you can also e-mail them to your customers.

## KUKA SIM PRO

KUKA Sim Pro is designed for offline programming of KUKA robots. It allows cycle time analysis and robot program generation and is connected in real time to KUKA OfficeLite, KUKA's virtual robot controller.



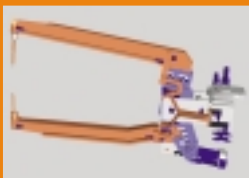
**Designing layouts.** KUKA Sim Pro offers the same features as KUKA Sim Layout and more. Quickly design layouts by dragging & dropping components from the electronic catalog. Validate alternatives and verify your concepts with a minimal effort. Use KUKA Sim Pro to find the optimal layouts for your production systems at an early stage in your projects.



**The electronic catalog and parametric modeling.** Most components from the "eCatalog" are parametric in design. This means that you can load, e.g., a fence and resize it to the height and width you require. This parametric approach eliminates the need for CAD remodeling and saves you valuable time. The catalog includes a range of grippers, conveyors and fences.



**Reachability check and collision detection.** Are all the desired points actually within reach of your selected robot? With the reachability check and collision detection features, you can ensure the viability of your robot programs and cell layouts.



**Building complex kinematics and components.** KUKA Sim Pro allows you to build and simulate grippers, weld guns and other kinematic structures. KUKA Sim Pro is also used to build the library of kinematic components used in KUKA Sim Layout.



**Make your robot move with KRL programs.** KUKA Sim Pro includes KUKA OfficeLite, KUKA's virtual KR C controller. This controller is connected in real time to the simulation program using the industry standard RRS2. The robot is programmed directly in KRL on the virtual controller and the motions are visualized in the simulation system.



**Cycle time analysis.** You can use KUKA Sim Pro to predict cycle times in a virtual environment without having to build the real workcell, thereby saving testing time. Since the virtual controller program is identical in every way to the software running on your real robot, the cycle times predicted in KUKA Sim Pro are very accurate indeed.

**Offline programming.** Write your robot programs directly in KRL with KUKA OfficeLite and avoid the need for postprocessors. Tools for workpiece calibration assist you in your offline programming tasks. In addition, programs made in the field can be loaded one-to-one into KUKA OfficeLite, allowing you to review programs made by your robot programmers.

Product features	KUKA Sim Viewer	KUKA Sim Layout	KUKA Sim Pro
3D orbit, zoom, pan	•	•	•
Replay 3D simulation	•	•	•
Basic CAD operations		•	•
CAD import filters		•	•
Drag&Drop from eCatalog		•	•
Parametric modeling		•	•
Reachability checks		•	•
Notes and comments		•	•
Part collision detection		•	•
Path creation		•	•
Simple kinematics		•	•
Simple robot sequences		•	•
Export 3D simulation		•	•
Material editor			•
Geometry optimizer			•
Component interface definition			•
Building advanced kinematics			•
Assigning digital I/Os			•
Publishing components			•
Cycle time estimation			•
Geometry export			•
Offline programming			•
Controller interface functions			•
RRS2 functionalities			•
KUKA OfficeLite included			•
License required		yes	yes

KUKA Sim Viewer, Layout and Pro run on Win2000, WinXP.

Minimum configuration for Viewer/Layout: Pentium III, 750 MHz, 128 MB, 1024 x 768 px, 16-bit color resolution.

Minimum configuration for Pro: Pentium III, 1 GHz, 256 MB, 1024 x 768 px, 16-bit color resolution.

An OpenGL-capable graphics card is recommended for all KUKA Sim products.

KUKA Sim – powered by Visual Components

[www.kuka.com](http://www.kuka.com)

An IWKA Group company



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Hungary, Italy, Korea,  
Malaysia, Mexico, Portugal,  
Spain, Sweden, Switzerland,  
Taiwan, Thailand, UK, USA