

# Kawasaki Robot

Kawasaki Robot Solutions

## K-ROSET Offline programming tool



### Kawasaki Heavy Industries, Ltd.

#### ROBOT DIVISION

**Tokyo Head Office/Robot Division**  
1-14-5, Kaigan, Minato-ku, Tokyo 105-8315, Japan  
Phone: +81-3-3435-2501 Fax: +81-3-3437-9880

**Akashi Works/Robot Division**  
1-1, Kawasaki-cho, Akashi, Hyogo 673-8666, Japan  
Phone: +81-78-921-2946 Fax: +81-78-923-6548

#### Global Network

**Kawasaki Robotics (USA), Inc.**  
28140 Lakeview Drive, Wixom, MI 48393, U.S.A.  
Phone: +1-248-446-4100 Fax: +1-248-446-4200

**Kawasaki Robotics (UK) Ltd.**  
Unit 4 Easter Court, Europa Boulevard, Westbrook Warrington  
Cheshire, WA5 7ZB, United Kingdom  
Phone: +44-1925-71-3000 Fax: +44-1925-71-3001

**Kawasaki Robotics GmbH**  
29 Sperberweg, 41468 Neuss, Germany  
Phone: +49-2131-34260 Fax: +49-2131-3426-22

**Kawasaki Robotics Korea, Ltd.**  
43, Namdong-daero 215beon-gil, Namdong-gu, Incheon, 21633,  
Korea  
Phone: +82-32-821-6941 Fax: +82-32-821-6947

**Kawasaki Robotics (Tianjin) Co., Ltd.**  
1-2/F, Building 6, No.19 Xinhuan Road, TEDA, China  
Phone: +86-22-5983-1888 Fax: +86-22-5983-1889

**Kawasaki Motors Enterprise (Thailand) Co., Ltd.**  
(Rayong Robot Center)  
119/10 Moo 4 T.Pluak Daeng, A.Pluak Daeng, Rayong 21140  
Thailand  
Phone: +66-38-955-040-58 Fax: +66-38-955-145

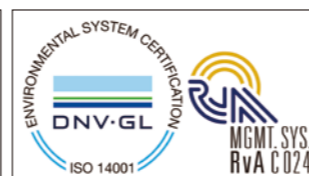
<https://robotics.kawasaki.com/>

\* Materials and specifications are subject to change without notice.

## Kawasaki Robot

### CAUTIONS TO BE TAKEN TO ENSURE SAFETY

- For those persons involved with the operation / service of your system, including Kawasaki Robot, they must strictly observe all safety regulations at all times. They should carefully read the Manuals and other related safety documents.
- Products described in this catalogue are general industrial robots. Therefore, if a customer wishes to use the Robot for special purposes, which might endanger operators or if the Robot has any problems, please contact us. We will be pleased to help you.
- Be careful as Photographs illustrated in this catalogue are frequently taken after removing safety fences and other safety devices stipulated in the safety regulations from the Robot operation system.



ISO certified in Akashi Works.

# Any problems starting up your robot system?

K-ROSET solves your problems and supports all the phases from startup to commercial production.

- Need to pre-check for robot interference with peripheral equipment.
- Need to know in advance if the robot can reach the workpiece.
- Need to confirm in advance the robot cycle time.
- Need to prepare an operation manual for the system.
- Need to minimize the downtime of the production line.
- Need to monitor the real robot posture and signal conditions.



**K-ROSET makes installation efficient and shortens the startup time.**

**Drastic reduction of overall costs!**



# Features of K-ROSET

The Kawasaki offline programming software tool, K-ROSET, allows you to display and examine 3D models of your products and equipment on a computer.

K-ROSET also lets you use your computer to program robots and perform accurate simulations. You can minimize project risks associated with the actual robot system by employing K-ROSET in the planning phase.

In addition, K-ROSET can verify pre-programming and thus help reduce the startup time to production.

K-ROSET also lets you pre-test robots in various production processes and thus optimize your assets.

## Virtual robot simulation technology

K-ROSET makes full use of the virtual robot controller technology we have developed through decades of experience. K-ROSET operates almost exactly like a real robot working in production.

## Same operability as the real robot

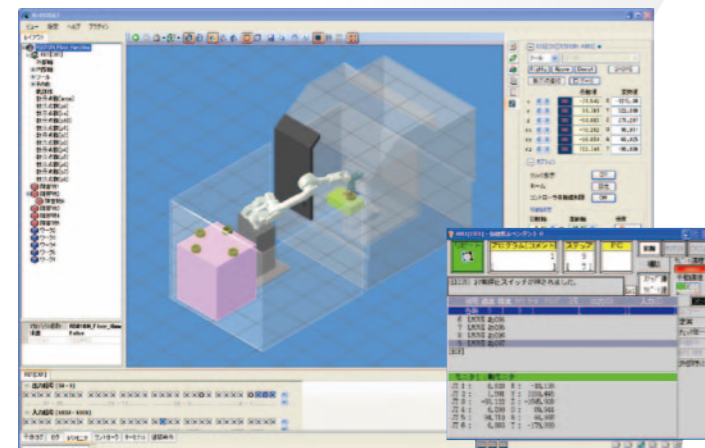
A virtual teaching pendant can be displayed and used on the PC. Training and programming can be made without interrupting your production.

## Enhanced productivity of the robot system

K-ROSET lets you display and operate a virtual teaching pendant on your computer. It optimizes the production system during training and programming, without interrupting the production.

## Accurate operation trajectory and cycle time

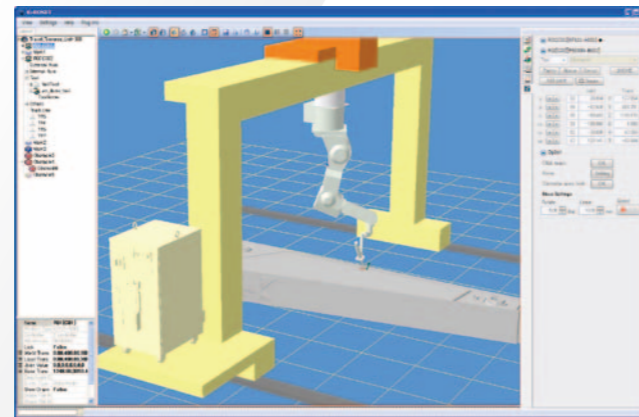
Since K-ROSET runs on the virtual robot controller, it can reproduce highly accurate trajectories and cycle times.



Handling

## Support for external axes

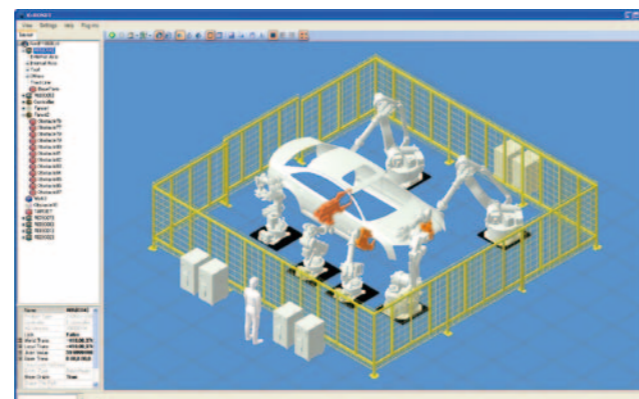
K-ROSET can freely customize and simulate the extended external axes that are controlled by the robot controller.



Arc welding

## Operation of multiple robots

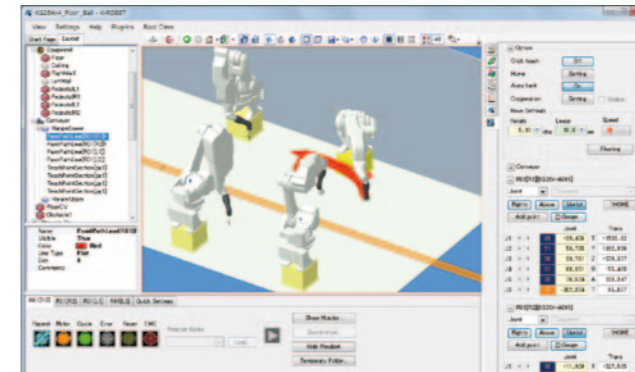
K-ROSET can simultaneously simulate the operations of multiple robots that use different controllers.



Spot welding

## Display of processing trajectories

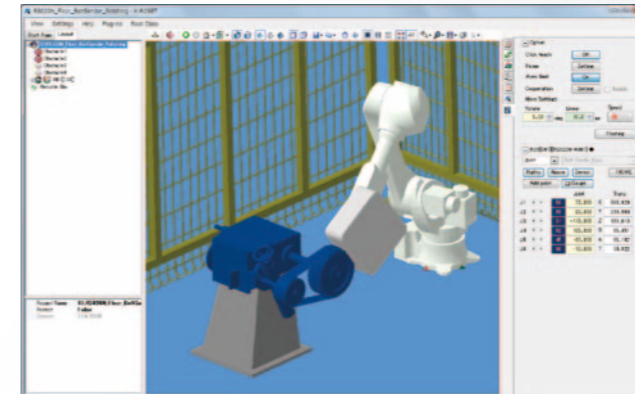
K-ROSET can display the processing trajectories resulting from welding and painting instructions executed. They can be displayed separately from air-cut trajectories.



Painting

## Collision check and layout verification

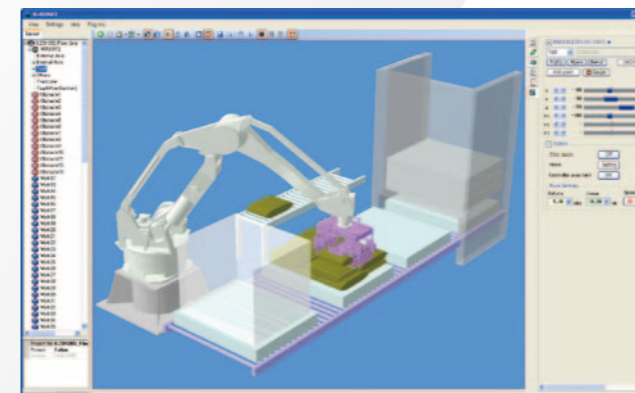
K-ROSET can perform a preliminary check on your computer to determine whether or not the robot would collide with peripheral equipment during operation. Verification of layout is also possible in advance, preventing damage to the equipment due to collision.



Polishing

## Useful options

Using the simplified palletizing software K-SPARC (optional), you can register workpieces, pallets, and palletizing patterns. After registering such data, you can easily create robot programs. For details, please contact our local sales representative.



Palletizing

## Video creation

K-ROSET can save data from the model display area as a video file while running programs. This data can then be used to prepare documents for presentations.

## Use of tablets

K-ROSET operations can be viewed on a Windows tablet. It can also be connected to an Android tablet for programming. In addition, a tablet can be used for business meetings/discussions on the robot system.



Handling (duAro)

## Simulation of vision systems

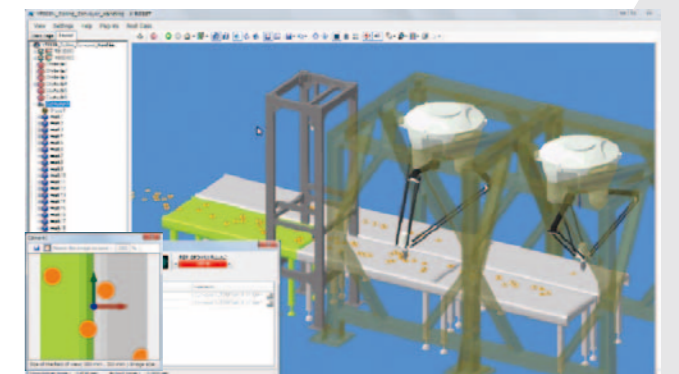
The vision field of the camera used in a vision system can be monitored by using the virtual camera of K-ROSET. Pick-and-place works can be simulated by detecting the location of the workpiece using a camera.

## Linkage with other Kawasaki robot software packages

Linkage with Kawasaki robot software packages, such as K-VFinder and K-VAssist, is possible. Offline programming of duAro (dual-arm SCARA robot) is also possible in collaboration with RobotTeacher2.

## Layout of multiple workpieces

Multiple workpieces can be placed efficiently, e.g. single- or multi-layers.

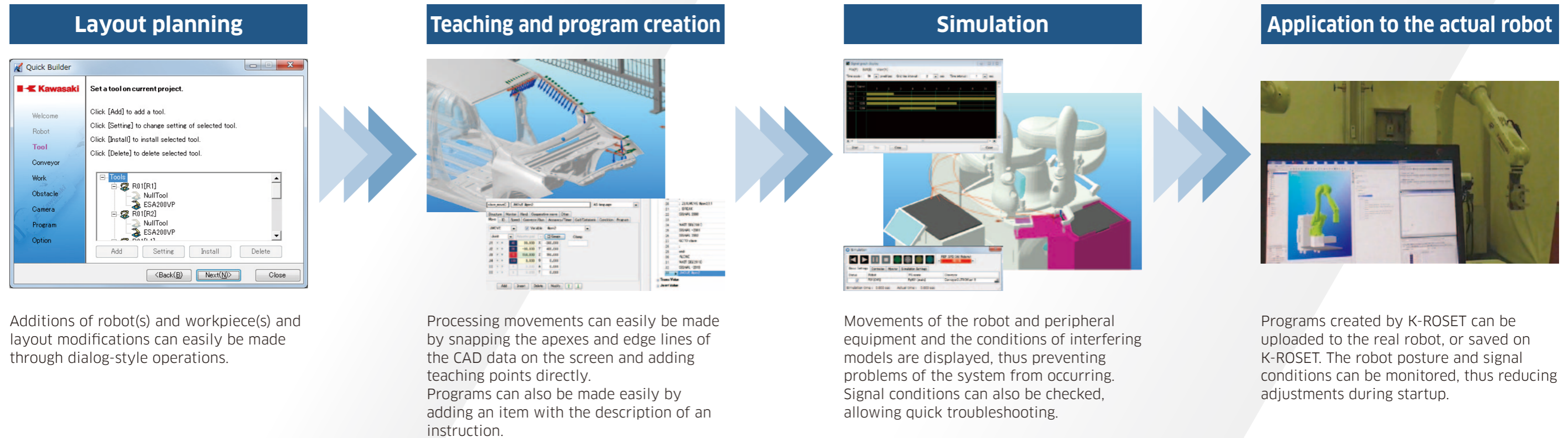


Picking and place



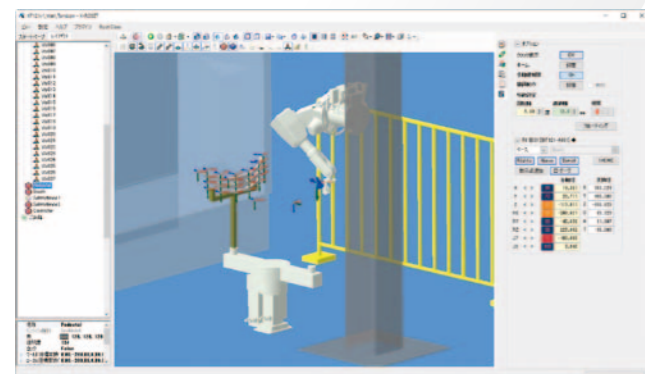
# System flow

K-ROSET ensures maximum efficiency by simple operations



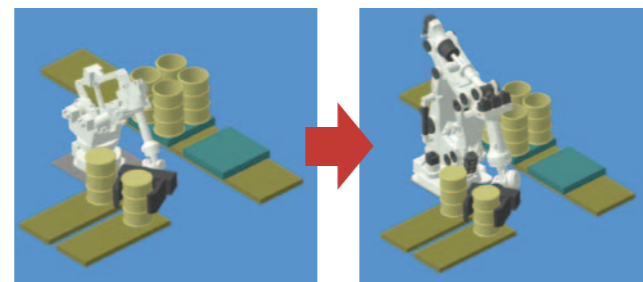
## Visualization of the system at the job site

By uploading the backup data of the real robot controller's program, K-ROSET can duplicate the operations at the job site. It is possible to confirm the robot coordinates and teaching points that cannot be seen otherwise.



## Many conversion functions

Teaching points can be converted by the shift or copy functions, thus reducing program modification works during startup at the job site. The robot-model changing function makes it easy to replace an obsolete robot with a new one.



## Support functions for actual robot

Robot posture, conveyor location and many other items can be monitored, including:

- I/O signals
- Operation panel of the controller
- Information of the program that is being executed
- Acquisition of the robot posture data from the controller (not available in some robot models)

## License options

Many license options are available to best suit the user. Please contact our local sales representative for details.

## Importing CAD data

K-ROSET supports data in STL format. You can import STL format data from your CAD tool. An optional converting function from IGES data to STL format is also available.

## Operating environment

OS	Windows 7 x86, x64*1 Windows 10 x86, x64*2 Japanese/English/Chinese/German (*runs on a 64-bit computer in compatible mode)
CPU	Intel processor recommended
Memory	4GB or larger recommended
Resolution	1024x768 dots or larger recommended
Video card	Open GL compatible On-board is possible. NVIDIA is recommended.
Disk free space	2GB or larger
Media	DVD drive (used for installation)
Application	Adobe Reader 7 or higher
CAD format	STL (*.stl) (Optional IGES converting function is available.)

\*1: Only Windows 7 Professional, Ultimate and Enterprise editions are supported.

\*2: Only Windows 10 Professional and Enterprise editions are supported.