



RoboDK

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The RoboDK add-in for Autodesk® Fusion® allows you to combine Fusion 3D CAD/CAM modeling features with RoboDK for robot simulation, robot machining and offline programming.

Win64, English

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General Usage Instructions

The RoboDK Add-In for Fusion should be visible in the Toolbar which includes 7 commands for CAD and CAM purposes.

The Fusion Add-In will change RoboDK's default settings to match the 3D mouse navigation and window style of Fusion. This behavior can be changed in the Plugin settings window or by setting the default RoboDK settings.

Basic settings:

- **Object Name:** Set the name of the curve/points object that will be loaded in RoboDK. If this case is left blank, the name of the part of the assembly file will be used.
 - **Override:** Override the object loaded previously in RoboDK if there is a name match.
 - **Project Name:** Set the name/path of the RoboDK project/station (.RDK file) to use. If the file is already loaded it will use the existing project. If the open project in RoboDK does not match with the file name it will open the project if the full path is specified.
 - **Robot Name:** Set the name of the robot that will be used in RoboDK (if you have more than 1 robot in your project). The robot name must match the name visible in the RoboDK station tree. Leave this value empty (default) to use the first or only robot available.
 - **Reference Name:** Set the name of the reference frame to place the path with respect to the robot. The name should match the visible name in the RoboDK station tree. If a name is not provided, the active Reference Frame will be used.
 - **Tool Name:** Set the name of the tool (TCP) to use with the robot to follow the path. The name should match the visible name in the RoboDK station tree. If a name is not provided, the active Tool Frame will be used.
 - **Program Name:** Set the name of the program file that will be generated.
- Note: Make sure you select the option to generate the program and code to see the program.
- **Always Update Part:** Check this option to always update the 3D model from Fusion to RoboDK. This will update the part when you select curves or points.
 - **Load Path as Points:** Check this option to convert a curve into points, so a Point follows project will be created in RoboDK. This is useful for manufacturing operations such as drilling. Uncheck this option to load the path as a Curve follow the project.
 - **Alternate Curve Directions:** Check this option to alternate the direction of movement with each pass (Zig-Zag pattern).
 - **Invert Normals:** Check this option to invert the calculated surface normals. This will flip the robot's tool orientation.

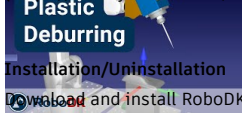
Advanced Settings:

- **Use Fusion 360 Theme in RoboDK:** Start RoboDK with Autodesk Fusion 360 theme. This includes changing the behavior of the mouse for 3D navigation and the background color. These settings can be changed in the RoboDK menu: Tools-Options.
- **Communication Port:** Set the communication port to communicate with RoboDK. Multiple instances of RoboDK can be running at the same time and use different setups if a different port is used. When this value is set to -1 (default), the default port is used (20500).
- **Startup Options:** Set the arguments to pass to RoboDK the first time it starts. For example, to start RoboDK quietly you can set '/NOSPLASH /NOSHOW /HIDDEN'. Programs can still be generated even if RoboDK is not displayed. More information in the Command Line section of the RoboDK API.
- **Linear Tolerance (mm):** Set the linear accuracy to split curves as a set of points.
- **Mix Normals Tolerance (mm):** Set the distance tolerance used to mix normal calculations among multiple surfaces.
- **Export Format:** Select the export format to load the part in RoboDK.
- **Display all object curves:** Display the curves loaded in RoboDK even if they are not selected. You can change this setting in RoboDK (Tools-Options-Display Curves).

Screenshots

(https://autodesk-exchange-apps-v1-5-staging.s3.amazonaws.com/data/cctaging.s3.amazonaws.com/data/3e474ec0-9d69dc563f2290fb.png?AWSAccessKeyId=AKIAWQAA5ADROJ5X5E5&Expires=1476672280000&Signature=75wyrnH5Z629F7sod45tPn0sLz40B00C910jhNd73rYiRxZA%3D) (https://autodesk-exchange-apps-v1-5-staging.s3.amazonaws.com/data/cctaging.s3.amazonaws.com/data/3e474ec0-9d69dc563f2290fb.png?AWSAccessKeyId=AKIAWQAA5ADROJ5X5E5&Expires=1476672280000&Signature=75wyrnH5Z629F7sod45tPn0sLz40B00C910jhNd73rYiRxZA%3D) (https://www.youtube.com/embed/9v1L8Fusion 360 Plugin 35&re

<https://www.youtube.com/embed/https://www.youtube.com/embed/MZcPXktvT8s>



Installation/Uninstallation

Download and install RoboDK (<https://robodk.com/download>).

Install:

The installer that ran when you downloaded this app/plugin from Autodesk App Store has already installed the app/plugin.

OR, simply double-click the MSI to install the app.

You should then see a toolbar called RoboDK in the **MODEL** workspace.

Furthermore, all CAD-related commands under the **CREATE** toolbar (from the **MODEL** workspace) and all **CAM-related** commands under the **ACTIONS** toolbar (from the **MANUFACTURE** workspace).

Uninstall:

You can unload the add-in without uninstalling it by clicking the "Stop" button when the add-in is selected in the list box on the "Add-Ins" tab of the "Scripts and Add-Ins" dialog.

Unchecking "Run on Startup" causes the add-in not to be loaded in future sessions of Fusion.

To uninstall this plug-in, exit the Autodesk product if you are currently running it, simply rerun the installer, and select the "Uninstall" button.

OR, you can uninstall it from 'Control Panel\Programs\Programs and Features' (Windows 10/11), just as you would uninstall any other application from your system.

Additional Information

Follow this guide to get started with industrial robots:
<https://robodk.com/doc/en/Getting-Started.html#Station> (<https://robodk.com/doc/en/Getting-Started.html#Station>)

RoboDK video tutorials with Autodesk Fusion 360:
https://youtube.com/watch?v=gxob-94fNLo&list=PLjiA6TvRACQe_1Upnu8nRulsPZjSy4p7a (https://youtube.com/watch?v=gxob-94fNLo&list=PLjiA6TvRACQe_1Upnu8nRulsPZjSy4p7a)

Visit our RoboDK blog for more information and success stories:
<https://robodk.com/blog/category/robodk-projects/> (<https://robodk.com/blog/category/robodk-projects/>)

Contact

Company Name: RoboDK
Company URL: <https://robodk.com/> (<https://robodk.com/>)
Support Contact: info@robodk.com (<mailto:info@robodk.com>)

Author/Company Information
RoboDK

Support Information

Contact us for requests, licenses or dedicated support:
<https://robodk.com/contact> (<https://robodk.com/contact>)

RoboDK Forum:
<https://robodk.com/forum> (<https://robodk.com/forum>)

Version History

Version Number	Version Description
5.8.0	Fixed bugs: https://robodk.com/whatsnew
4.2.3	Initial release.