

3DCS MM - Mechanical Modeler Add-on

Model Kinematic and Mechanical Assemblies

Model Simple and Complex Mechanical and Kinematic Assemblies

3DCS Mechanical Modeler is an Add-on Module for the 3DCS Suite of products. 3DCS Mechanical Modeler adds an additional toolbar of Joints, Constraints, Mechanical Moves and the Degree of Freedom Counter (DoF).

Easy to Use for Mechanical Assemblies - The What

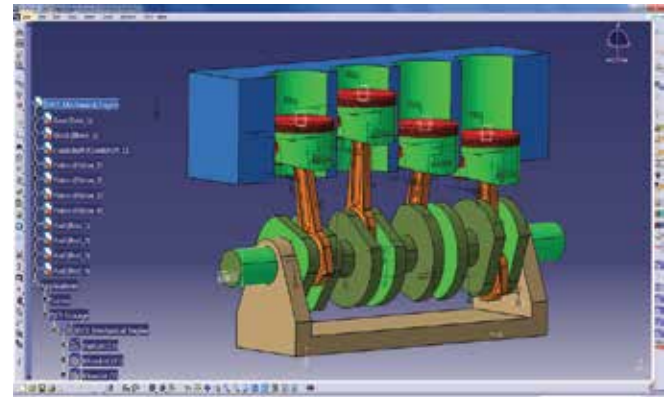
3DCS Mechanical Modeler is an easy to use add-on module that brings with it all the tools you need to perform kinematic moves and handle mechanical assemblies. With a built-in advanced solver, 3DCS Mechanical Modeler is able to analyze assemblies through their range of motion.

Simplified Interface and Library of Joints and Constraints - The How

3DCS Mechanical Modeler has a new simplified kinematic "Move" interface that makes setting up your model easy. With a library of Joints and Constraints to pick from, you can quickly model and run your analysis. 3DCS Mechanical Modeler can also extract Joints and Constraints from your CAD system, converting them into 3DCS moves with the push of a button.

Save Time, Model Kinematics and Watch Your Model Move - The Why

The simplified toolset of 3DCS Mechanical Modeler can help you to get your answers fast. By streamlining the process, you can model quicker and then get your results faster. With the kinematic solver, you can build mechanical assemblies with interlocking parts and see how the part and process variation will affect the function as you move the parts through their range of motion. With analysis done at each step of the way, you can see how your product will perform.



Key Product Highlights:

Kinematic Solvers -

Built-in kinematic solvers compound your variation through complex linkages and mechanical assemblies to give you accurate results.

Use CAD Joints and Constraints -

Use the Joints and Constraints from your CAD platform to instantly create 3DCS Moves, saving modeling time.

Fast and Easy Modeling

With a simplified interface, model faster and more efficiently. Utilize the library of Joints and Constraints to help model complex mechanical components.

Analyze Full Range of Motion-

Move your assemblies through their range of motion, analyzing each step to determine how variation will affect the performance of your product.

Degree of Freedom Counter (DoF) -

The Degree of Freedom Counter is a great tool to check your work as you go, helping you determine if your model is properly constrained. As a checking and validation tool, it can help you quickly analyze models made by colleagues to check for errors.

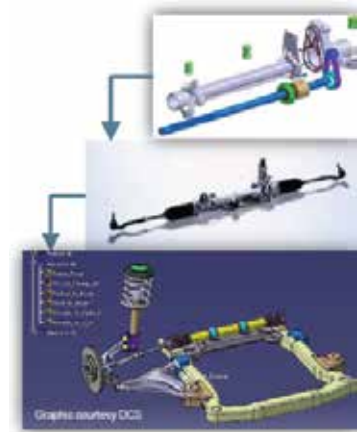
Combine with Traditional Tolerance Analysis -

Combine Rigid Body and Mechanical together to tackle difficult models.

Model Kinematic Assemblies Through Their Full Range of Motion

Model Simple and Complex Mechanical Assemblies

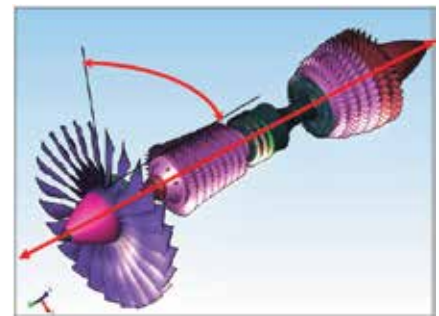
Model Joints and Constraints, and tackle both over- and under-constrained systems. With new solvers, analyze linkages, gears and pistons as well as multiple sub-assemblies working together.



Combine sub-assemblies to create complex mechanical models

Analyze Products Through Their Full Range of Motion

Study the kinematic range of motion by animating to verify your modeling, and then analyze to see how variation will affect your product's function.



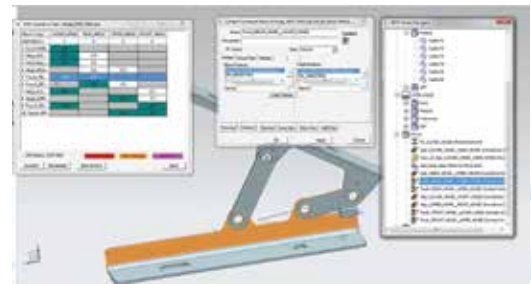
Analyze assemblies through their range of motion and function to see how variation affects them

Model Faster and More Efficiently

Use the simplified interface to model quickly and efficiently to get answers fast. As an Add-on module, all other 3DCS capabilities are supported as well, including tolerances, measures, analysis, reporting. Models can be composed of both static and moving components.

Validate Moves with Degree of Freedom Counter

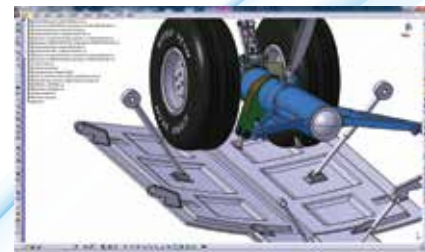
The DoF Counter is a validation tool in 3DCS Mechanical Modeler helpful for checking whether parts are properly constrained. This is good for both checking your moves, as well as validating shared models.



Determine if your model is over- or under-constrained with the Degree of Freedom Counter

Combine with Traditional Tolerance Analysis

Combine mechanical moves with traditional tolerance analysis moves. Incorporate other Add-on modules to handle special scenarios like thermal, gravity and force (3DCS FEA Compliant Modeler) or to test your move setup and locators (3DCS Advanced Analyzer Optimizer). As part of the 3DCS Suite, 3DCS Mechanical Modeler gives you the ability to customize your modeling capabilities as you need to.



Combine both Mechanical and Rigid body moves to create your models

DCS has been supporting quality management in industries including automotive, aerospace, medical device, electronics and industrial machinery for over 20 years. DCS solutions are used daily by companies like Airbus, BMW, GM, LG, Nissan, Phillips, Sony, Textron Aviation and VW. By applying DCS's 3D Model Based environment for Predictive Variation Analysis and Responsive SPC, manufacturers have reduced quality costs related to yield, scrap, rework and warranty issues.