3DCS Variation Analyst for PTC Creo



Tolerance Analysis fully integrated into Creo Parametric



3DCS Variation Analyst is used by the world's leading manufacturing OEM's to reduce their costs of quality. By controlling variation and optimizing designs to account for inherent process and part variation, engineers reduce non-conformance, scrap, rework and warranty costs.

The Leading Variation Analysis Solution - The What

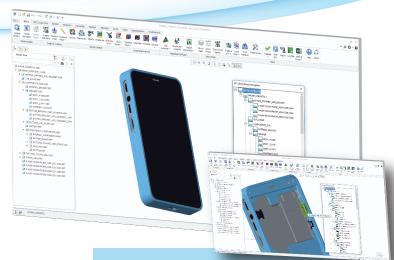
3DCS Variation Analyst for Creo is an integrated solution for PTC Creo. This gives users the ability to activate 3DCS workbenches from within Creo, as well as use many of Creo's innate functionality to support their modeling.

Model Part and Process Variation - The How

Using three methods of simulation, the software highlights the sources of variation, as well as the potential build issues of the product. By accurately modeling the build process, the user can accurately simulate the product in a virtual environment, essentially creating digital prototypes to test and validate design objectives.

Gain New Insight Into Your Design - The Why

By simulating products in a digital environment, engineers are able to account for variation in key areas, reducing rework, non-conformance and scrap at final assembly. In addition to this, specifications deemed less critical can be relaxed, increasing tolerances and allowing the use of less expensive manufacturing processes and thus reducing costs without affecting overall quality. 3DCS software has automatic report generation for fast, effective communication of analysis results, and easy collaboration with peers and managers.



Key Product Highlights:

Three Analysis Methods -

Monte Carlo Analysis, High-Low-Mean (Sensitivity Analysis) and GeoFactor Analysis (Equation Based)

What-If Studies -

Test design changes using simulation to reduce the need for prototypes.

Identify the Source of Variation -

Find the true source of your problem to root cause build issues and non-conformance.

Apply Plant and Measurement Data -

Incorporate physical or actual measurements to validate products and trouble shoot production.

Account for Processes and Tooling -

Model assembly process, tooling, fixtures, clamping, Datums, Locators and account for their added variation.

Customize Your Setup –

Use Add-on modules to quickly upgrade your system to utilize FEA Finite Element Analysis, Mechanical Kinematic Assemblies and more.

Validate and Optimize PMI & GD&T -

Move from general tolerances to more specific tolerances that reflect your processes and manufacturing capability.











Optimize GD&T and analyze your assembly in PTC Creo

Control Variation Through Simulation with the Digital Twin

Simulate Manufacturing Processes and Part Tolerances in Creo

Turn your Creo CAD models into Digital Twins by using 3DCS to add part tolerances, assembly sequences, and manufacturing processes to make your model a true digital prototype. Simulate true to life measurements and run Monte Carlo simulations to find problem areas, determine risk of failure, and test design configurations.

Incorporate PMI and Model Based Definition in Creo

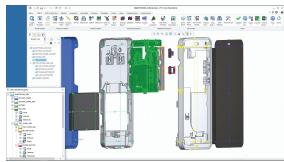
With fully integrated Tolerance Analysis, users can pull Product Manufacturing Information, PMI, straight from their model and validate, optimize, and test it for the most optimal outcomes. Hone in on over-engineered tolerances that can be loosened to save money, while testing different options to sensitive tolerances as alternatives to tightening them.

Assembly Your Product Digitally Before Manufacturing It

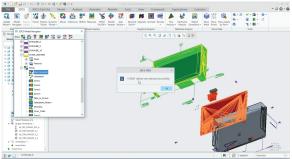
See how your parts locate and index while validating your assembly sequence. Determine the amount of variation in your assembly from manufacturing processes and assembly processes before including part tolerances. Change and modify your manufacturing process to reduce the risk of bad parts while it is still inexpensive in the digitial phase, before parts are manufactured at the plant.

Create Reports and Collaborate Across the Organization in Windchill and PLM Systems

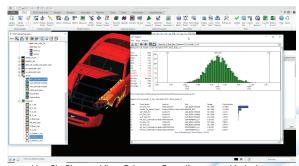
With push-button reporting, instantly create html and Excel reports from your analysis results to share with colleagues and present to managers. Collaborate with teams in different regions while effectively communicating your results. Store the tolerance analysis data in your model files to easily manage with PLM systems like Windchill, Teamcenter, 3DEXPERIENCE and SOLIDWORKS Enterprise PDM.



Simulate Assembly Processes - Pins, Holes, Attachments



Utilize PMI and GD&T to Tolerance Your Model



Use Six Sigma - View Primary Contributors to Variation



Use Reports to Quickly Share and Collaborate

DCS is a software developer providing tolerance analysis and quality inspection solutions to the automotive, aerospace, medical device, electronics and energy industries. With more than 20 years' experience, DCS has grown to include clients from every region of the globe including companies like Airbus, BMW, GM, LG, Jaguar Land Rover, Phillips, Sony, Textron Aviation and Volkswagen. As a quality solution provider, DCS prides itself on providing clients not just software, but services, staffing and dedicated support to guarantee the success of their quality initiatives.















