On a global average, designers spend 30%-50% of the time in getting the final assembly right. Tolerance stackup analysis is essential to avoid detecting unexpected system interactions during the validation and verification phases of the product development process.

Geometric Stackup™ provides a simple solution for tolerance stackup analysis on complex parts and assemblies with unprecedented ease, speed and accuracy.

Perform tolerance stackup analysis with ease and confidence on major CAD files like CATIA®, Creo Parametric™, SOLIDWORKS®, NX™, Inventor®, Solid Edge®, 2D file formats like DWG & DXF and neutrals like STEP/STP, IGES/IGS, and Parasolid.

**Never Worry About Tolerance Stackup Analysis**

- Supports Major 2D (DWG & DXF) and 3D CAD file formats
- Automated Dimension Capture
- Easy to Use & Shorter Learning Curve
- Support for Model Based Definition (MBD)
- Integrated with SolidWorks
- Facilitates Tolerance Stackup Analysis for both Worst Case Scenario & RSS Method
Simple and Easy Solution to Reduce Assembly Variation

- Covers widely used tolerance stackup methods for 1-D analysis
- Captures industry best practices and provides standard tolerance values
- Works directly with CAD geometry, eliminating the process of tedious and error-prone manual entries of nominal values from CAD models to spreadsheet
- Automatic report generation that can be easily shared with internal teams and vendors
- Designed for the non-specialist, no special training required
- Interactive dimension loop guides user for accurate analysis
- Dynamic result updates to compare individual part tolerance trade-offs

With Geometric Stackup you can experience just how easy it is to perform tolerance stackup analysis on complex parts and assemblies and achieve maximum part interchangeability and improved manufacturability of designs - reducing tolerance analysis time from hours to minute.

**Confidently Release Designs for Manufacturing**
Verify manufacturing tolerances for consistent fit and maximum part interchangeability during early design stage and ensure that your designs can be manufactured easily with minimum rework and errors

**Simplify Complex Tasks**
Interactive graphic interface provides 3D visualization of tolerance loops, eliminating the ubiquity of frustration with error-prone excel spreadsheets and manual methods for performing tolerance stackup analysis

**Fast, Easy-to-Use, on any Format, by Anyone**
Designed for non-specialist, Geometric Stackup has an intuitive and simple interface so it is exceptionally easy for anyone to perform tolerance stackup analysis on almost any CAD file format, without the knowledge of numerous rules and complex calculations

## Features

### View
- Standard view functionality with 7 present view modes
- Standard & wireframe rendering for part models
- Isolate/Hide/Zoom selected components from an assembly

### Interactive Loop
- Captures key dimensions in interactive 3D manner
- Rubber-band effect helps user in the process of dimension selection without losing focus of the bigger picture
Support for MBD and GD&T

- Easy way to handle geometric dimensions and tolerances during variation analysis
- Interactive user interface for adding GD&T
- Supports major GD&T types used in 1D analysis like positional, straightness and flatness etc.
- Support for Model Based Definition (MBD) based tolerance information (i.e. PMI) from dimensions in part files

Supports Assembly Shift

- Handles the variations due to hole and fastener
- Supports standard fasteners as well as custom fastener values
- Handles the variations on two parallel parts
- Interactive user interface for adding assembly shift

Multiple Analysis on Single Assembly

- Multiple analysis on a single assembly in the same session
- Easy to switch between the analysis
- Helps user to cover all possible tolerance stackup on an assembly in the same session

Be Confident of Results

- Geometric Stackup follows the global ISO 2768-1 linear dimension standard for assigning tolerance values
- Covers widely used tolerance stackup methods for 1-D analysis
- Automatically assesses minimum and maximum tolerances on complex assemblies using Worst Case Scenario & RSS (Statistical Variation) methods

Comprehensive Reports

- Easily generate, share, and communicate your tolerance stackup analysis results with internal teams and external suppliers
- Geometric Stackup publish reports in XML and spreadsheet
Hello, I'm from HCL's Engineering and R&D Services. We enable technology led organizations to go to market with innovative products and solutions. We partner with our customers in building world class products and creating associated solution delivery ecosystems to help bring market leadership. We develop engineering products, solutions and platforms across Aerospace and Defense, Automotive, Consumer Electronics, Software, Online, Industrial Manufacturing, Medical Devices, Networking & Telecom, Office Automation, Semiconductor and Servers & Storage for our customers.

For more details contact: gs.mkrg@hcl.com
Visit our website: http://www.tolerancestackup.com

Contact us
America  +1.480.367.0132  Asia-Pacific  +91.20.4028.4613

Geometric Stackup™ Reduces Tolerance Stackup Analysis Time by up to 80%

Perform Tolerance Stackup Analysis in just 5 Easy Steps

1. Open an Assembly
2. Define Target Gap
3. Define Dimension Loop
4. Results & Analysis
5. Get Report

Benefits

- Low cost application
- Self learning, no training required
- Interactive dimension loop to guide user for accurate analysis
- Rubber-band selection helps user in continuity
- No more mathematical calculations & manual entries of dimensions
- Automatic reports
- Less manual intervention leads to ZERO error in analysis
- Zero rework
- Supports all major CAD files and performs tolerance stackup analysis with ease and confidence
- Clear communication through reports within departments and vendors
- Availability of global best practices and standard tolerance values
- Worst case & RSS method helps user to take decisions at a faster rate