SigmundWorks
Tolerance Analysis Software for SOLIDWORKS

Product Overview:
SigmundWorks is the only automated 3D design and process tolerance analysis and optimization solution that enables the design to meet six sigma quality criteria and incorporates Varatech’s (patent pending) tolerance optimization and cost minimization technology. SigmundWorks has been specially created keeping the design engineer in mind and has been rigorously tested and validated in the real world environment with huge, complex assemblies. SigmundWorks enables engineers to evaluate, optimize and validate design and assembly build quality digitally, relative to piece part tolerance and assembly process variation. Fully integrated within SOLIDWORKS, this value-added software can be used early in development phase before design solidification and hard tooling procurement. SigmundWorks can be used to prevent costly tweaking delays at ramp-up as well as to eliminate defects that cause scrap, rework, and long-term variation problems before hard tooling, warranty, and recall expenses are incurred. It may also be used to perform quick evaluation of alternative design concepts to achieve robust design, reduce product development and prototyping time, shorten time-to-market and increase profits.

SigmundWorks can predict the quality of SOLIDWORKS design based upon predetermined tolerance values or determine the component tolerances required to meet a given assembly build objective. SigmundWorks’ powerful utilities and easy to use menu-driven modeling capabilities greatly reduce modeling time and effort, and its succinct, reporting module provides all relevant information in easy-to-interpret reports. SigmundWorks optimizes design and assembly process, adds precision where needed, and eliminates overly costly and conservative designs.

Key Product Features:
• Five analysis types including: Worst Case, RSS, MRSS, PCRSS, and Monte Carlo Simulations.
• Wide range of statistical distributions
• Built-in GD&T Syntax-checker flags and does not allow incorrect GD&T syntax according to ASME Y14.5M-1994 and 2009 GD&T Standards.
• Optimize design with unique tolerance optimization and cost minimization capabilities (Patent pending)
• Ability to perform 3D tolerance analysis studies
• Tolerance allocation errors are highlighted in red
• Auto Update all stack-up studies
• Uni-Lateral Build Objective Optimization
• Optimize design for Six Sigma tolerancing
• Single source documentation for all tolerance stacks
• Extensive Report generation capabilities
• Identify cost saving opportunities with Cost Savings Report. Automatic Statistical, Sensitivity, Tolerance Summary, and SPC report generation
• Email & Export model results and reports directly

SOLIDWORKS Integration:
• Single window integration- no need for geometry transfer
• Associative to SOLIDWORKS geometry and tolerances
• Supports dimensional and geometric tolerances
• Use powerful Automated Tolerance Analysis/Intelliloop capability or drag and drop the tolerances to build studies
• Single mouse click to Update Optimized Tolerances directly back to SOLIDWORKS
• Unique automated Pattern Matching Capability
• Intelligent Nominal and Tolerance-based Interference visualization at Worst Case, Min, Med, Max conditions.
• Works with Part, Assembly, and Drawing modes in SOLIDWORKS.
• Tested and Certified Gold Product
• Unrivalled Ease of use/quick to learn – Designed for the non-specialist. Unrivalled speed/quick modeling.

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