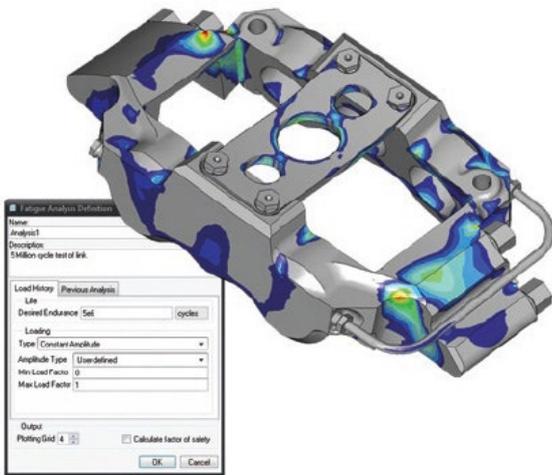


PTC® Creo® Fatigue Advisor Extension

PTC Creo Fatigue Advisor Extension expands the capabilities of PTC Creo Simulate and allows the evaluation of product design for durability. Using PTC Creo Fatigue Advisor Extension, you can predict the life of metal structures that are prone to fatigue failure under cyclic loading and investigate the impact that design changes have on their endurance.

PTC® Creo® Simulate™ and PTC Creo Fatigue Advisor Extension have the same user interface, workflow and productivity tools that are standard throughout the PTC Creo family. The combination of PTC Creo Simulate and PTC Creo Fatigue Advisor can be used as a standalone application or as an extension of PTC® Creo® Parametric™.



With PTC Creo Fatigue Advisor Extension, you can easily estimate the number of load cycles your model can sustain before failure.

Features and Specifications

Includes all the features of PTC Creo Simulate, plus the following:

Formulation

- Focus on Crack Initiation
- Strain – Life Analysis (EN)
- Effective for low and high cycle fatigue regions
- Consideration of plasticity
 - Neuber
- Mean Stress correction
 - Smith-Watson-Topper
 - Morrow
- Surface treatment and Finish correction
- Bi-axiality correction
 - Klann-Tipton-Cordes
 - Hoffman-Seeger

Material Library

- Unified Material Law for Unalloyed steels, Low Alloy Steels, Titanium Alloys, Aluminum Alloys
- Surface Finish: Polished, Machined, Hot Rolled, Cold Rolled, Forged, Cast, Water Corroded, Sea Water Corroded, Nitrided, Shot Peened

Load History

- Constant Amplitude
 - Peak-Peak
 - Zero-Peak
 - User Defined
- Variable Amplitude
 - Load Factor Table
 - 2nd Order Rainflow Counting

Results

- Number of cycles to failure (Life)
- Factor of Safety
- Confidence of Life based on specified desired number of cycles
- Results display on model
 - Use of the full PTC Creo Simulate post-processing environment
- Results recorded as Measures

Design Studies

- Fatigue Measures as dependent variables of PTC Creo Simulate Design Studies
 - Local Sensitivity
 - Global Sensitivity
 - Optimization



With the confidence of life plot, you can quickly examine the ratio between the calculated life and the target design life.

The Creo Advantage

Creo is the 3D CAD solution that helps you accelerate product innovation to build better products faster. Easy-to-learn Creo uses a model-based approach to seamlessly take you from the earliest phases of product design to manufacturing and beyond. Combining powerful, proven functionality with new technologies including generative design, real-time simulation, advanced manufacturing, IIoT and augmented reality, Creo helps you iterate faster, reduce costs and improve product quality. Creo is also available as a SaaS product, providing innovative cloud-based tools for real-time collaboration and streamlined license management and deployment. The world of product development moves quickly, and only Creo delivers the transformative tools you need to build competitive advantage and gain market share.

Language Support English, German, French, Japanese, Russian, and Simplified Chinese.

Platform Support and System Requirements

Visit the PTC support page for platform support and system requirements.

To learn more visit: [PTC.com/product/creo](https://ptc.com/product/creo)

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