



### *Intuitive motion simulation for 3D modeling.™*

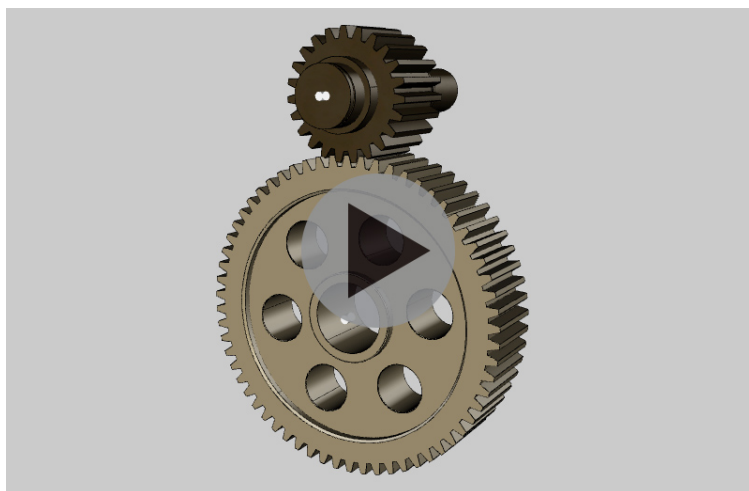
Ashlar-Vellum Kinetics offers an easy-to-use set of precision motion simulation tools at an affordable price point that's independent from any particular CAD or 3D modeling software. Available for both Macintosh and Windows, Kinetics enhances engineering design, optimizes product and assembly performance, and reduces the number of physical prototypes needed.

In its virtual test environment, Kinetics determines the physical movement of a model or assembly, calculates the forces and analyzes components, helping to solve common challenges through time-based motion studies.

Simply load the model, appoint the joints (connections), click the button and watch what happens as it simulates the motion and presents an analysis of your model. Unlike other motion simulation software, Kinetics follows the Ashlar-Vellum Organic Workflow™ that allows you to test parts and assemblies at any time or from any model in your design process.

#### **Kinetics 3D Motion Simulation**

- Optimized product development and reduce costs:
- Intuitive time-based motion studies.
- Use your choice of 3D modeling program on Mac or Windows.
- Unique Organic Workflow allows testing at any point within the design.
- Animate individual components or entire assemblies.
- Simulate properties of motion.
- Photo-realistic rendering in real time.
- Export to a number of 3D formats.



Gear Assembly modeled by Jesse Luis.  
3D motion simulation in Kinetics. (Click to activate.)

**Simulate motions in Kinetics**—define time-based, rigid body studies using kinematics or dynamics. Determine motion optimization by evaluating actuator force and joint loads. Assess product performance through it's cycle of operation. Analyze the design for range of motion, part displacements and overall performance.

**Works with files from all leading modelers**—Kinetics accepts precision (analytical) and approximate (polygonal) models from other leading software including:

- Ashlar-Vellum Cobalt™, Xenon™ or Argon™
- Dassault Systems SolidWorks
- Siemen's Solid Edge
- Trimble Sketchup
- Rhinoceros and more...

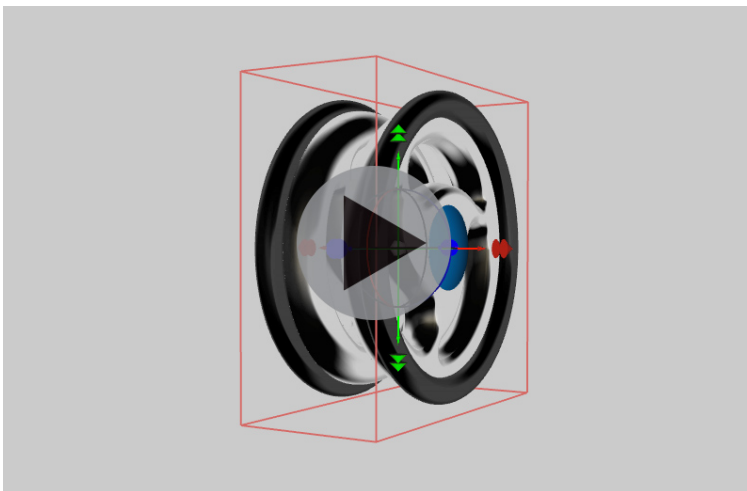
# KINETICS™

**Render with realism**—Apply materials from the extensive library then render in real time for high quality visualization.



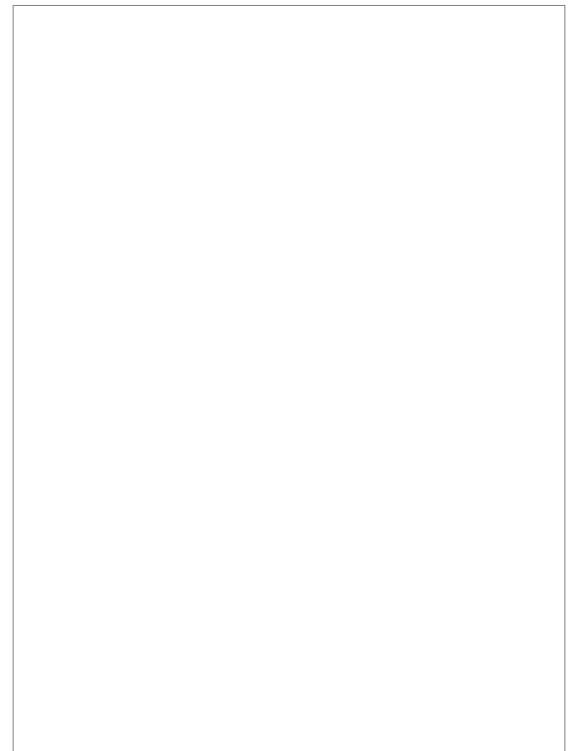
Watchmakers' Tongs designed and modeled in Xenon by John Bicht. Materials set up and rendering in Kinetics.

**Animate components and assemblies**—Show machine motion or walk through an environment.



Yo-yo designed and modeled in Cobalt by Troy Starkey. Assembly exploded in Kinetics. (Click to activate.)

**Export in 3D**—Share your simulation in any number of different ways including 3D PDF, 3D HTML and proprietary file formats that support tablets



Brace drill designed and modeled in Argon by John Economaki. Exported to 3D PDF from Kinetics. (Click to begin interacting\*.)

*\* If graphic does not appear, click the Options button above and choose "Trust this document..."*