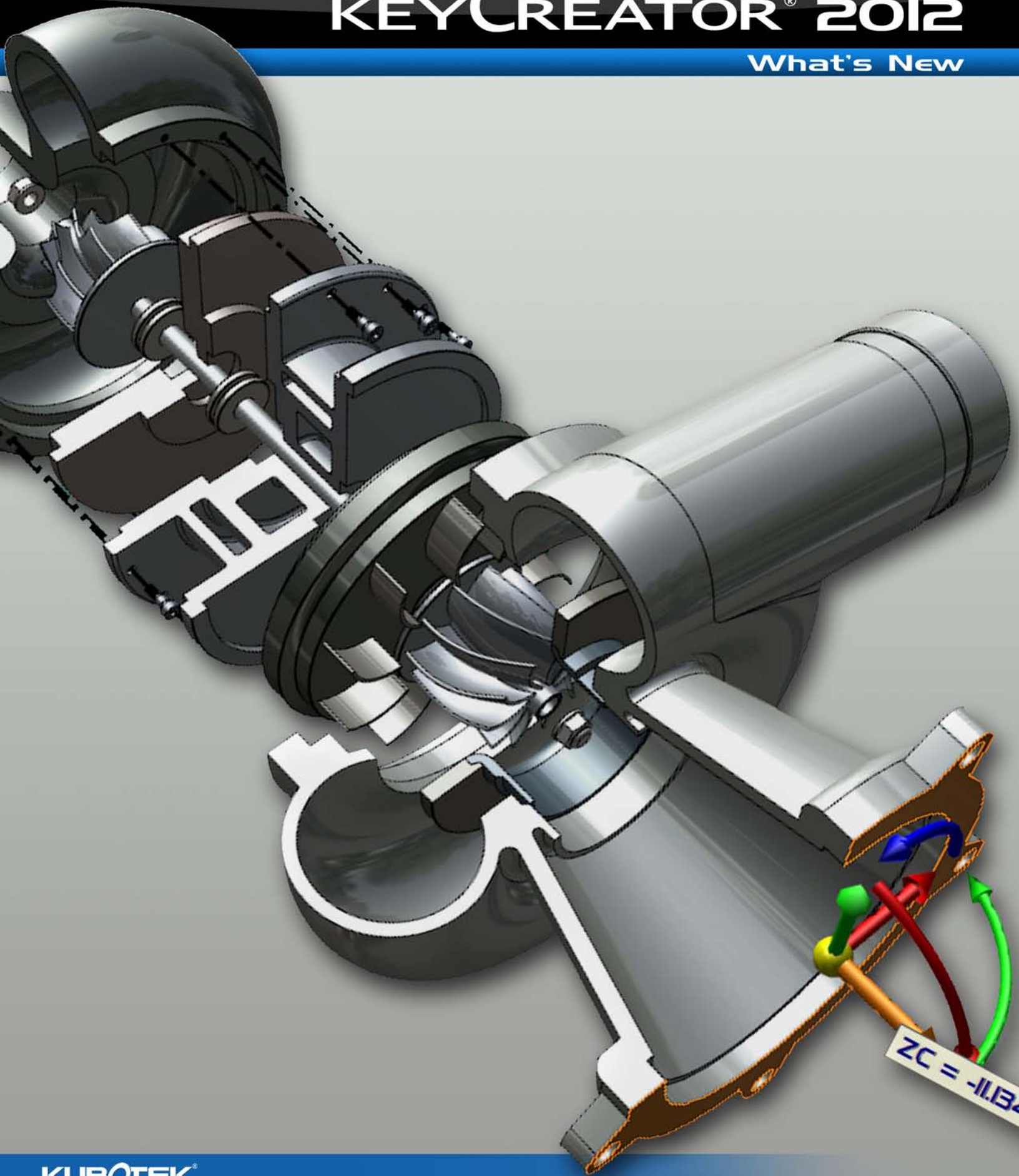


# KEYCREATOR® 2012

What's New



## Benefits

KeyCreator version 2012 adds scores of user-driven improvements which save time on everyday tasks. Enhancements provide benefits in all areas of the program from automating tasks and adding control over function execution and setup options, to enhanced visualization and awareness, improved accuracy and performance, and interoperability with other CAD software.

## Control

Over two dozen of the improvements in KeyCreator 2012 have been targeted at increasing user control over function execution. Greater control supports time savings by allowing users to accomplish their desired results with fewer steps. Most of these upgrades have been driven by specific user feedback.

The control improvements of KeyCreator 2012 can be categorized as dynamic editing, manufacturability, or modeling/drawing enhancements. The dynamic editing enhancements further expand the integration of the DynaHandle control providing quick access to directional and rotational adjustments in a single interface. Manufacturability improvements speed the modeling and review of sheet metal and molded parts by improved handling of real world details. The modeling and drawing control enhancements of 2012 all add new capabilities to commonly used functions, without changing the familiar command flow.

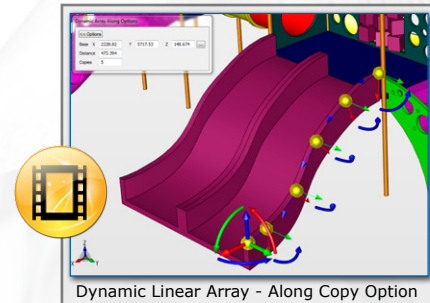
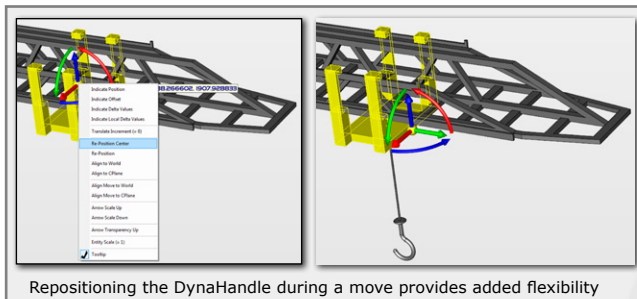
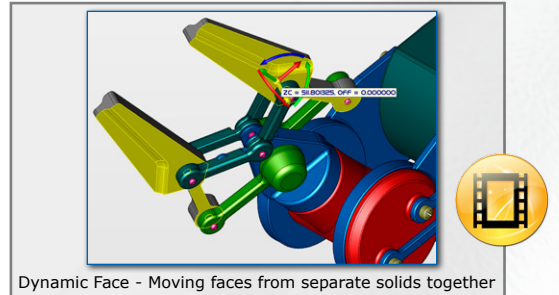
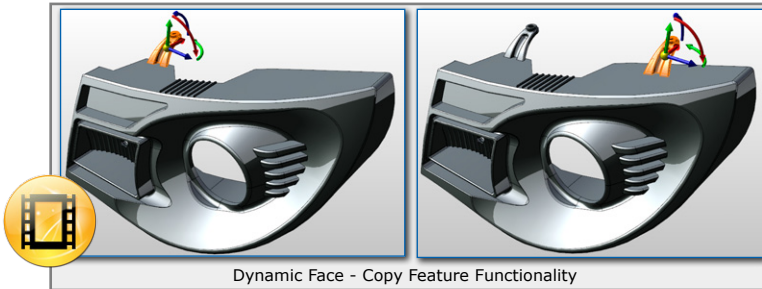
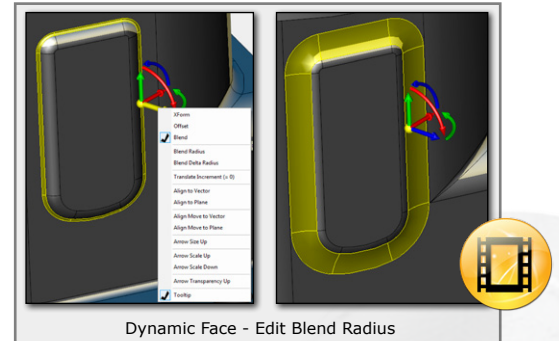
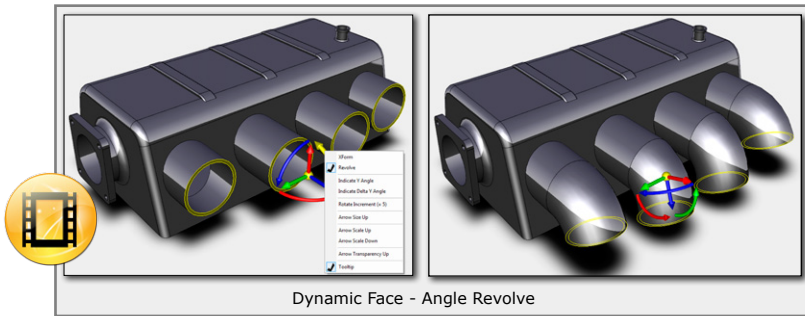
## Dynamic Editing

- Dynamic Transform enhanced to support relocating the DynaHandle without re-starting
- Dynamic Transform enhanced to optionally default the DynaHandle location to the center of mass of the selected entities.
- New C-Plane DynaHandle option delivers new capabilities for visual re-positioning, sliding, and rotating construction planes.
- New C-Plane DynaHandle popup menus support new capabilities for moving the C-Plane along an axis by an offset value, delta amounts, to a position, plane, or vector, or around an axis by an angle.
- Dynamic Face has been enhanced with the following new control capabilities:
  - Moving faces from separate solids together
  - Normal extrusion of planar faces with optional draft angle
  - Dynamic adjustment of the radius of blend faces
  - Revolve of planar faces
  - New options create copies of selected faces as sheet bodies or selected features as features
- Dynamic Array enhancements include:
  - Dynamic Linear Array function and Dynamic Free Array function combined into a single powerful Dynamic Array function with added capabilities for angular, circular, and along curve type arrays
  - Dialog reorganized to move advanced capabilities to the extended version of the dialog to keep the interface simple for basic uses
  - Supports moving the base and axis positions
  - Option added to create intermediate copies
  - Dialogs support updating during DynaHandle operations



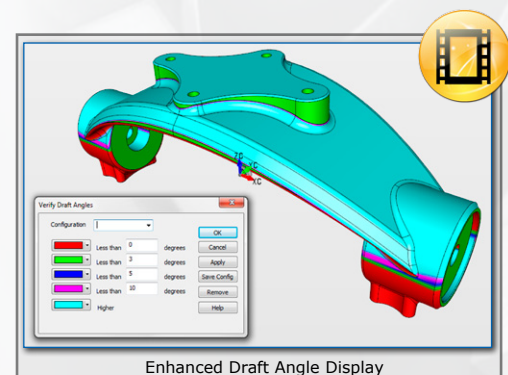
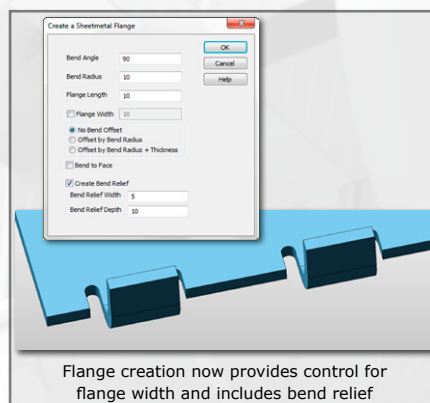
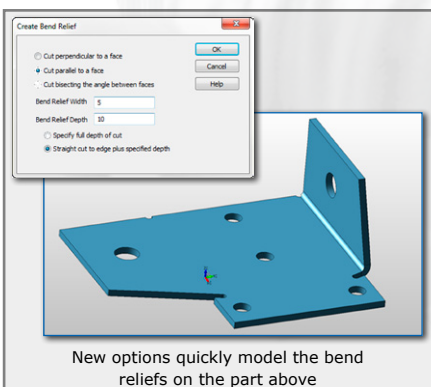
**Video Icon** - Images with this icon have a video have an online video. Select icon to view.



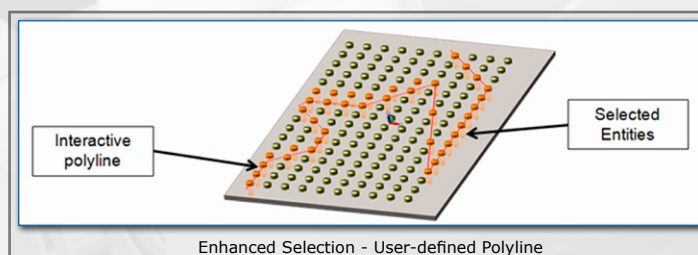
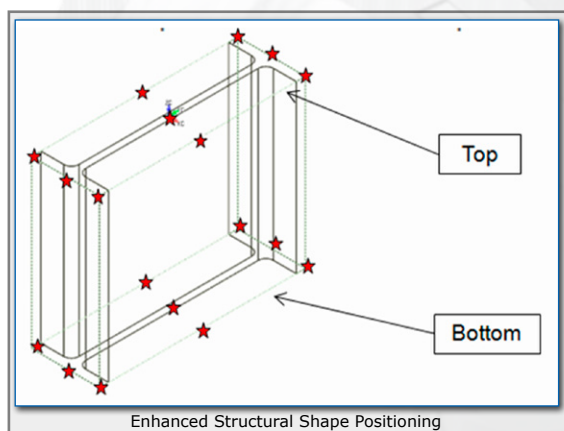
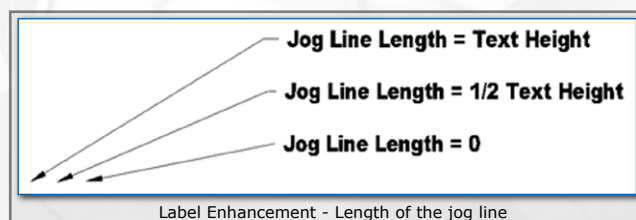
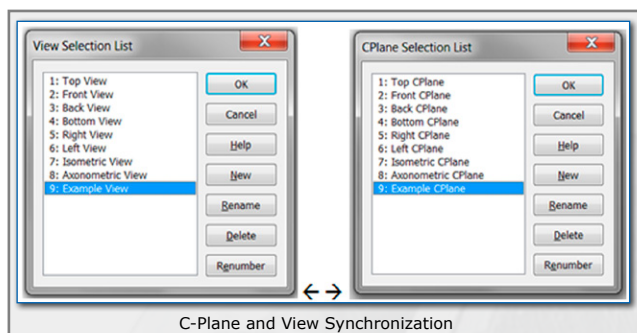
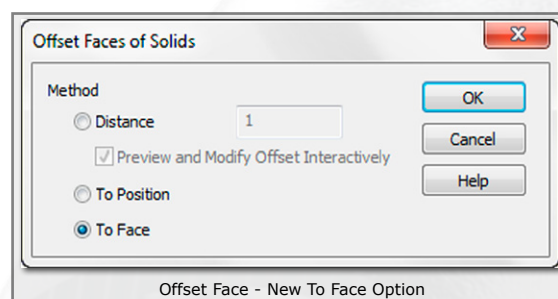
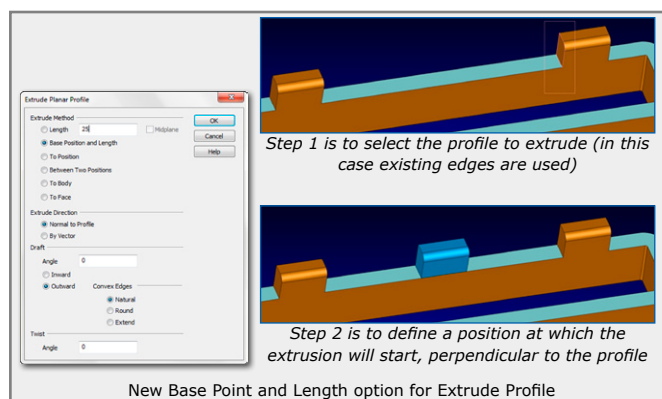


## Manufacturability

- Sheet Metal Bend Relief provides new capabilities to:
  - Cut the relief parallel to a face for handling non-square corners
  - Optionally control depth from the theoretical sharp corner
  - Create simple round reliefs
- New options for Sheet Metal Flange to control tab width and include relief
- Verify Draft Angle expanded to five user-defined angle ranges, user-storable range definitions, support for imported STL models (shells), and display of color gradients across faces



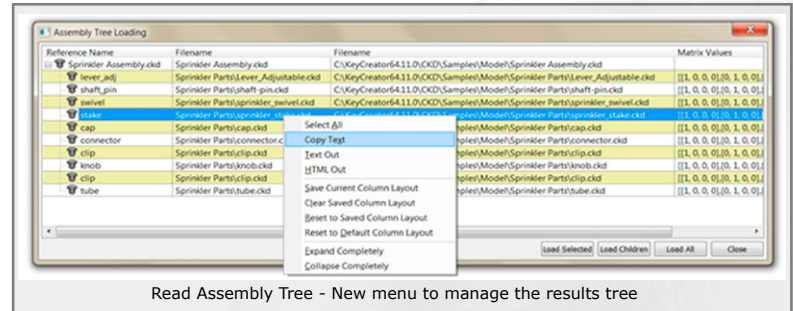
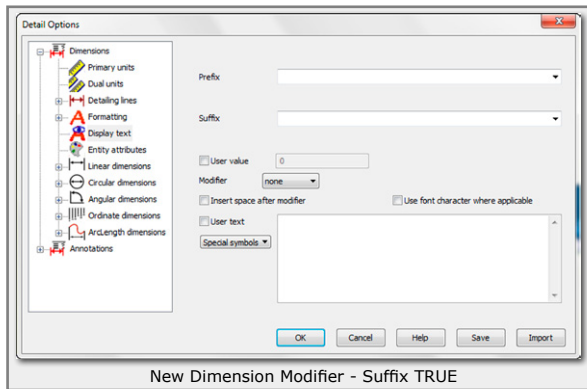
- New Base Point and Length option for Extrude Profile supports extruding a solid of known length starting at a position off the plane of the profile, which saves users the step of defining a C-Plane or an end position
- New To Position and To Face options for Offset Face
- C-Plane and View Synchronization expanded to maintain synchronization during delete, rename, and renumbering of Views and C-Planes
- Labels have been enhanced to allow user control of length of the jog line between the elbow and text
- Structural Shape positioning enhanced to toggle between 18 anchor positions on the beam to save time in positioning
- Selection has been enhanced to allow selection of all objects that are crossed by a user-defined polyline





## Miscellaneous

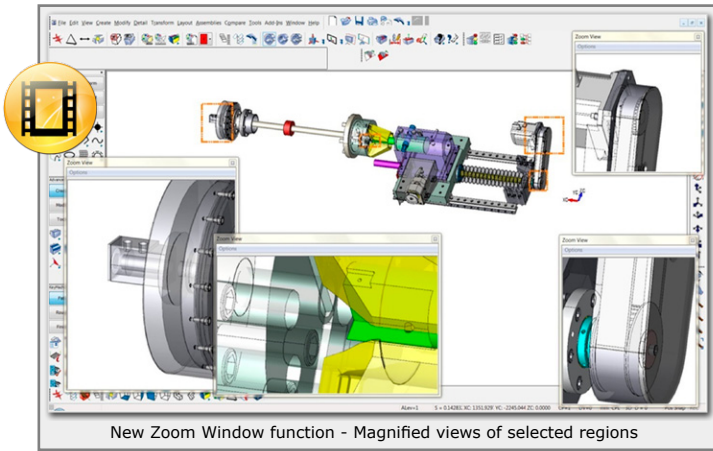
- Levels List supports drag and drop copying of levels by holding the Ctrl key
- The suffix TRUE has been added as a new dimension modifier
- The Read Assembly Tree function has a new pop-up menu providing options to manage the results tree.
- Entity Mate labels now have the option to automatically move relative to the movement of the target entity to which they are attached
- Entity Mate Generic Edit



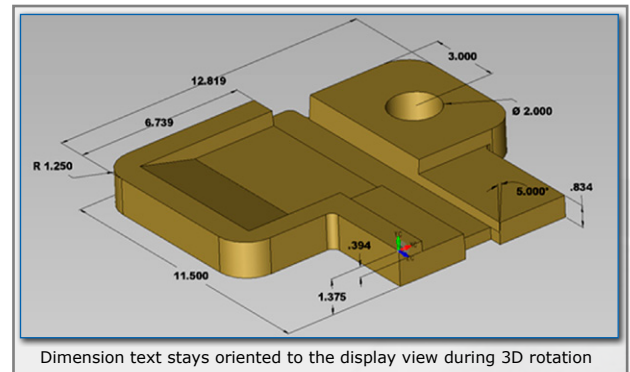
## Visualization

Being able to immediately and clearly see details in graphical design information from various views and configurations is one of the major overall benefits of CAD and 3D modeling. Kubotek continues to strengthen KeyCreator in this important area by handling the minutiae, which add up to serious productivity advantages.

- New Zoom Window function allows users to easily maintain magnified views of selected regions of the model to make selection of positions and entities in those views clearer
- New Clip Window function provides a more flexible alternative to multiple viewports allowing quick capture of an area and view orientation in a resizable window which can be manipulated like any viewport
- Dimension Text stays aligned to the display view for easier reading in 3D due to a new default detail setting
- Import CKD options now supports displaying the imported part during animation in wireframe render mode so that the placement location can be easily seen.
- Lists of levels, part references, etc. now shade alternating rows for easier reading
- Creating an Angular Dimension by three positions now supports real-time updating of the dimension angle value during selection of the third position
- Entity Properties of bodies have been expanded to include optional rendering properties, which override system render mode settings and are maintained in the design file
- New Set and Unset Entity Rendering functions provide the ability to easily set up sets of bodies in the same part with multiple different rendering modes
- Composite List and Group List enhanced to highlight entities in the viewport when selected in the dialog list
- Entity Mates provides a new option to highlight a mate's target entity to aid in managing mates
- Background color gradients can now be setup to transition diagonally and horizontally to enhance the display of models



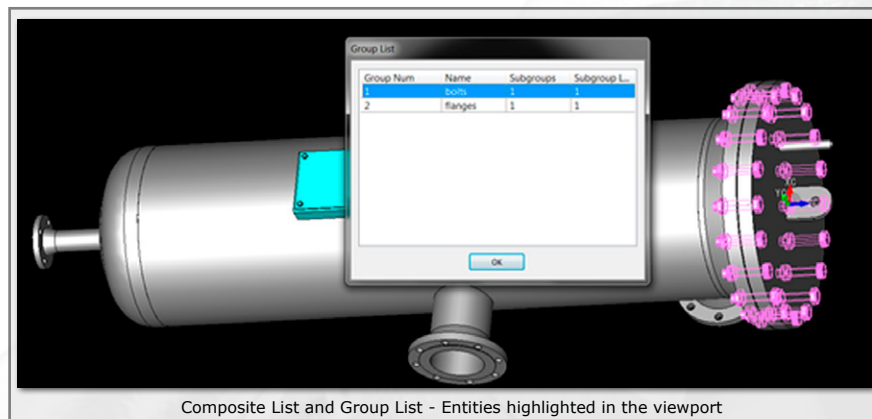
New Zoom Window function - Magnified views of selected regions



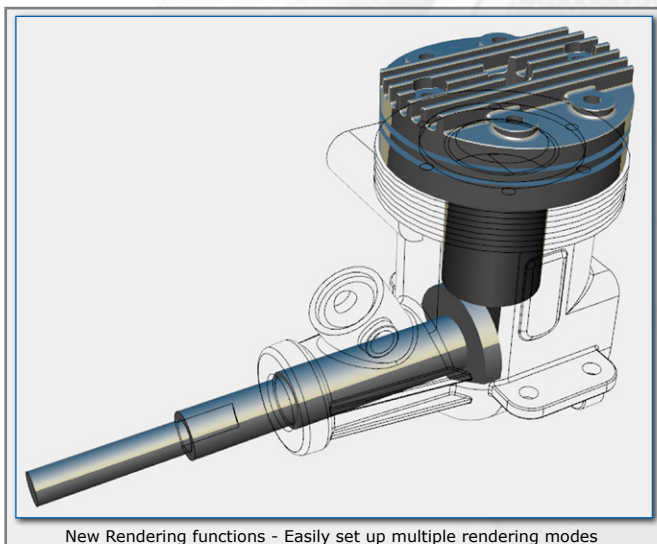
Dimension text stays oriented to the display view during 3D rotation

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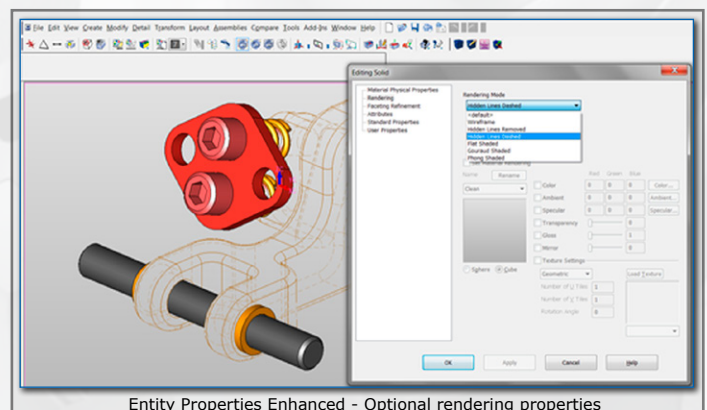
Enhanced Level List display



Composite List and Group List - Entities highlighted in the viewport



New Rendering functions - Easily set up multiple rendering modes



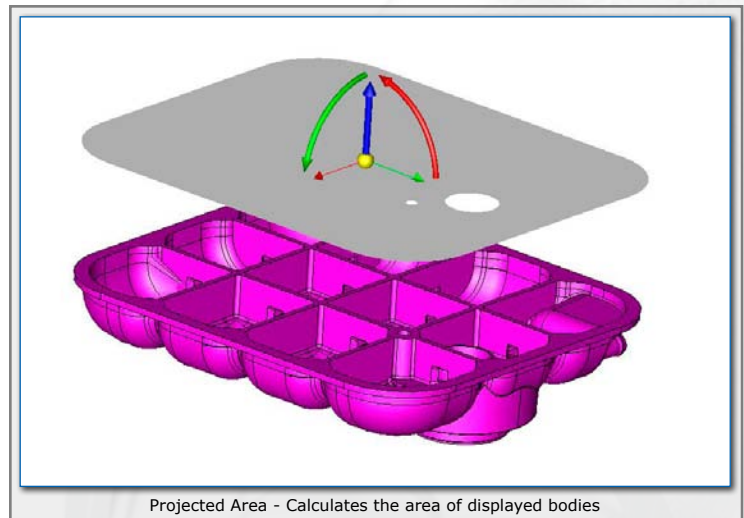
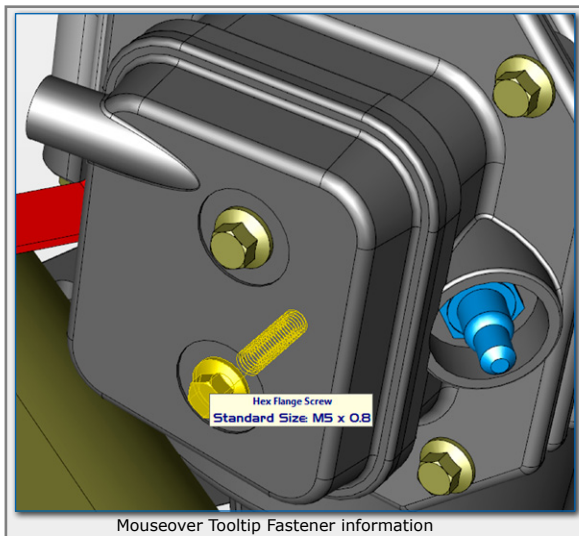
Entity Properties Enhanced - Optional rendering properties



## Awareness

Like a pilot needs quick access to precise information about his craft, the ability to quickly find detailed information contained in a design can be critical to CAD productivity. This group of enhancements saves the user time by providing quick ways to query helpful information.

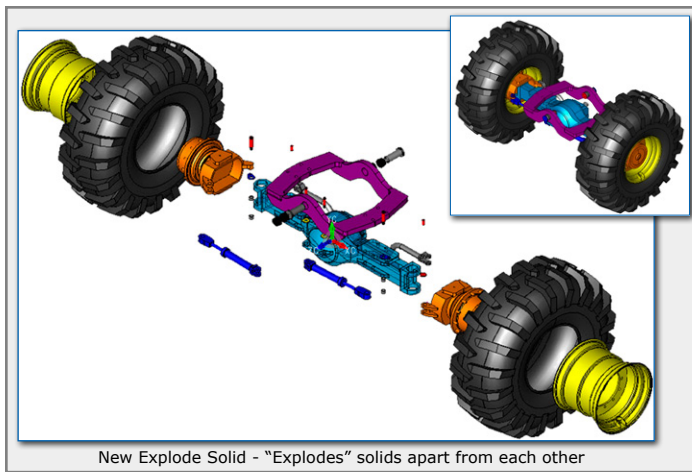
- New Projected Area function calculates the area of displayed bodies as projected onto a user specified plane
- ToolTip information on fastener, standard feature hole, and structural shape objects now includes size information
- ToolTip information on sheet metal Bend Lines (Start, Center, and End) now includes bend allowance and deduction
- The Drawing Instances List now includes a read-only column to display the Comment property of each level, making it easier for users to select the correct levels for display in each Drawing Instance (view)



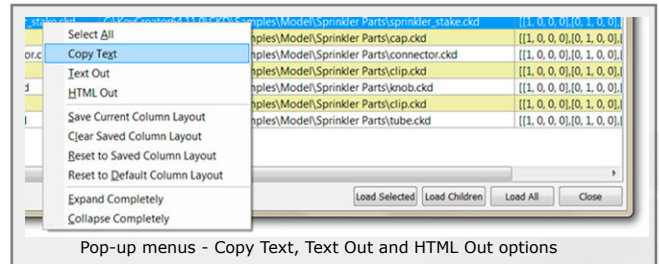
## Automation

The most obvious productivity enhancements are the ones that take a manual process that traditionally requires minutes or hours of user time and instead generates the same results in seconds. KeyCreator 2012 delivers several such new capabilities which shave minutes and potential user errors off specific tasks.

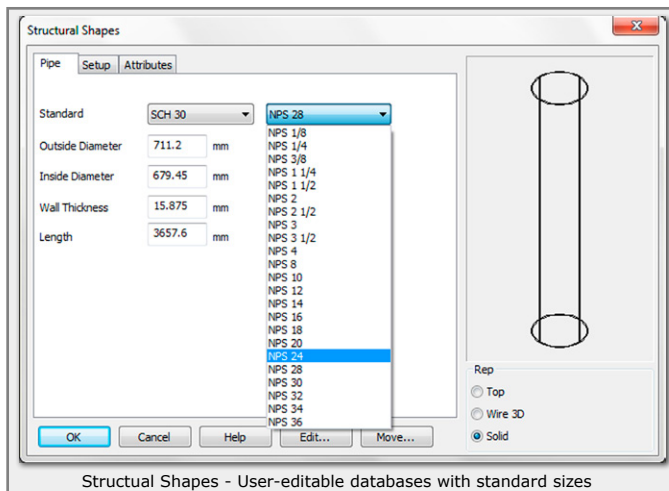
- New Explode Solid function automates the process of separating a simple assembly of solids along a single axis.
- The Swept Solid Pipe function and the Structural Shapes Pipe, Tube, and Bar functions now include user-editable databases with standard sizes to save users the time of searching reference manuals, catalogs, or the Internet for the correct size data
- Section Views have a new option for drawing hidden lines for situations in which they add clarity to a section
- Quick Dimension has a new option to create a true (non-projected) linear dimension between two selected positions without first defining a plane for the dimension
- New options to output the text from lists/trees for levels, instances, level sets, assemblies, and verify to the Windows clipboard, an ASCII text file, or an HTML file
- The Find Root Files function has a set of new options to output results to the Windows clipboard or an ASCII text file



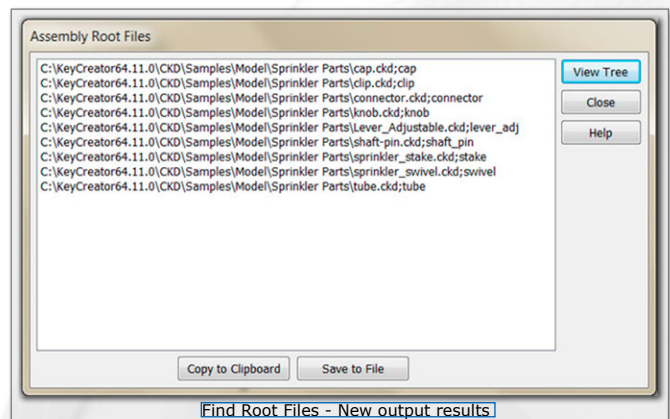
New Explode Solid - "Explodes" solids apart from each other



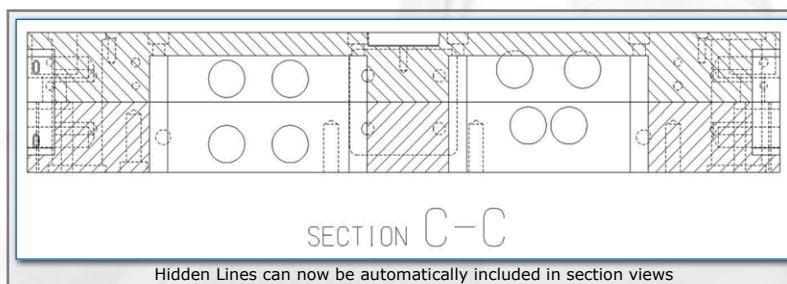
Pop-up menus - Copy Text, Text Out and HTML Out options



Structural Shapes - User-editable databases with standard sizes



Find Root Files - New output results



Hidden Lines can now be automatically included in section views

## Interoperability

The leading direct modeling capabilities of KeyCreator support dramatic time savings when working with models created by others. To facilitate the re-use of models created in other CAD software; Kubotek is constantly updating the extensive import capabilities of KeyCreator. The 2012 release of KeyCreator features several significant interoperability improvements.

- Support for importing multiple configurations from SolidWorks part files
- SolidWorks part and assembly import support extended to SolidWorks 2012 version files
- IGES and STEP Import enhanced to generate smaller CKD files
- STEP translation improved to support previously unreadable files and difficult data types
- Siemens PLM NX part and assembly import support extended to NX8 version files\*
- CATIA V5 import and export support extended to R22 files\*

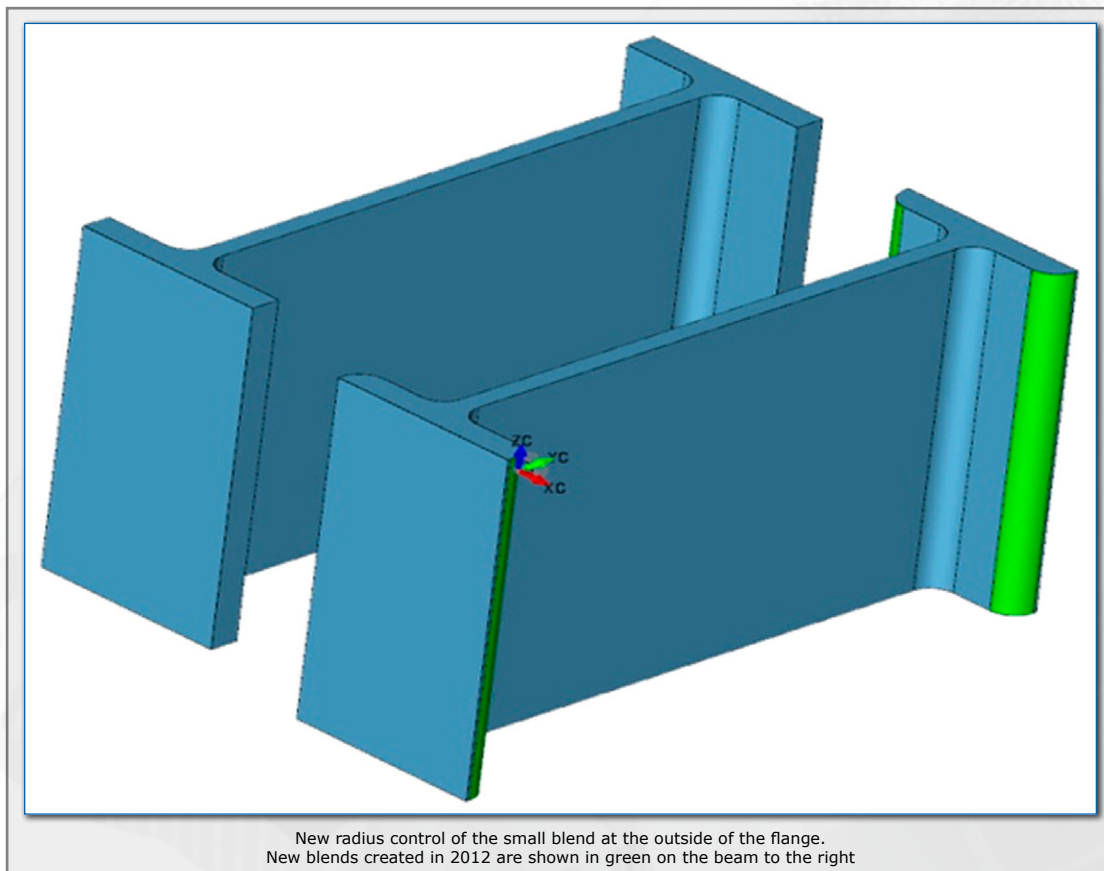
\*Requires Extended Translators Add-on for KeyCreator



## Accuracy

Kubotek is committed to long-term continuous improvement and establishing a leadership position in the technology on which KeyCreator is based. Many of the accuracy improvements in KeyCreator 2012 are based upon proprietary new software created by Kubotek.

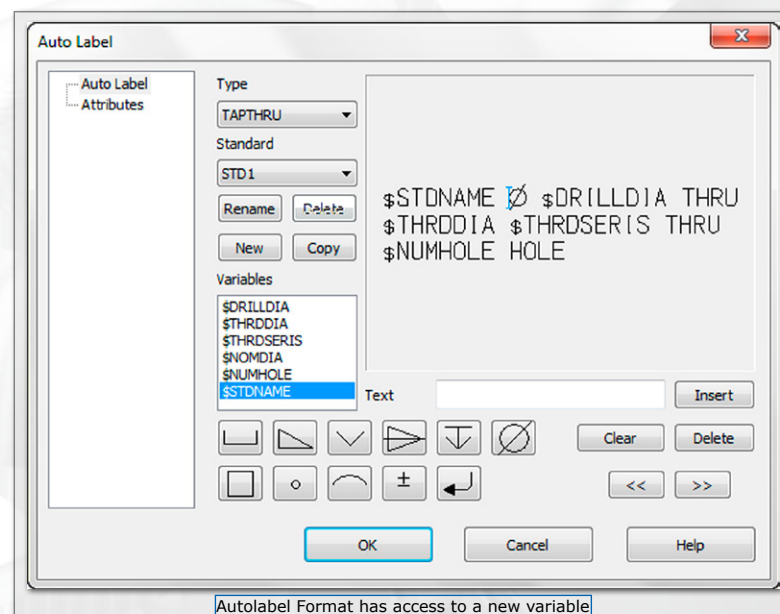
- Calculation of precise hidden line removal and dashing has been dramatically improved to correctly handle challenging models. This change affects results of various options in functions such as instance rendering, section and detail views, bursting, printing, DWG export, extract HLD, and extract HLR.
- Mass Properties and Area/Centroid use a new, more accurate set of math algorithms for calculations
- Mass Properties reports calculations to a practical number of significant digits which consistently fit into the display fields (ie. reporting 0 instead of  $-6.53793825511e-017$ )
- Structural Shapes Beams and Channels provide an additional radius field to control the size of the small blend at the outside of the flange



## Setup

Added settings options allow users to configure function output to match their styles and preferences. Additionally licensing improvements save users time installing updates and managing licenses.

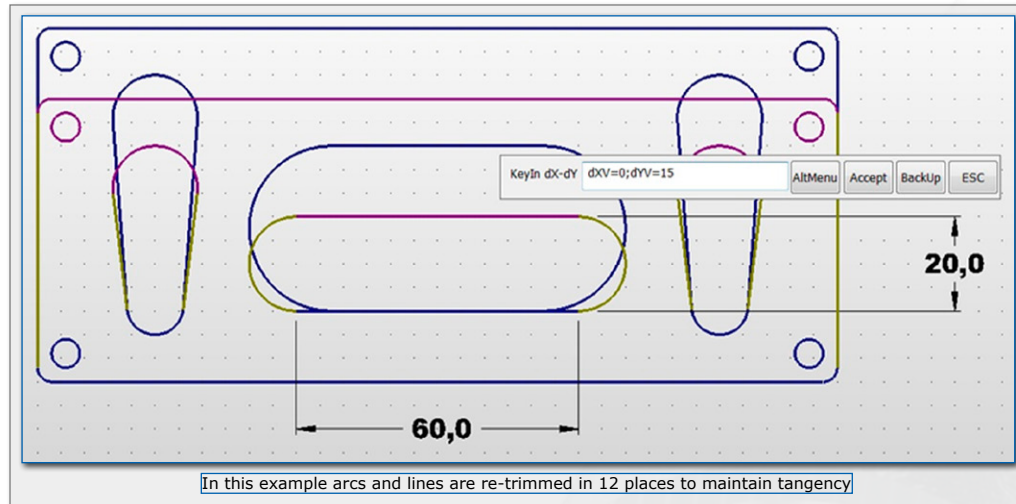
- Cutting Plane settings options allow putting trimmed geometry onto either the active level or the level of the cut solid for easier management of the trimmed geometry
- Mating setup option now allows specification of a level on which to put all Entity Mate labels for improved organization and ease of quickly hiding them
- Structural Shapes Setup page has a new default option for edit fields to use the same units as the part to make entering length values more intuitive
- Autolabel Format has access to a new variable for standard fastener size names (ie. 1/4-20, M10, etc.) allowing users that prefer labeling holes in that style to create standard formats including that data.
- The widths of the user-adjustable columns in the Read Assembly Tree function can now be saved for user convenience
- The license wizard has been enhanced to support activation (trusted storage) licensing. Activation licensing features these benefits:
  - Fully-automated internet-based licensing process is fast and simple
  - No down-time due to forgotten or lost hardware
  - No struggles inquiring and matching hardware ID numbers to licenses
  - Works on any PC, no special hardware needed
  - No drivers are needed which eliminates potential conflicts with operating system
  - Licenses for separate installs are managed automatically which simplifies the process of setting up new versions on a previously licensed PC
  - Moving a license to a new PC is a simple 5-minute, check-in/check-out, self-serve process available online 24/7
  - For larger sites, the option to set up a local license server provides additional flexibility
- Software downloads are now hosted on the same high-speed connection and reliable servers as the new activation license system.





## Bonus Tools

- New Box Move-style Deform Wires capabilities can save users significant time editing wireframe profiles by providing:
  - Rotational box move
  - Maintenance of tangency
  - Dynamic preview
  - Ability to move along a defined direction to an intersection or tangent point
  - Pop-up, repositionable input box
  - Pop-up options menu



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MASTER YOUR GEOMETRY

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