

# Creo™ Interactive Surface Design Extension

## FREE FORM SURFACING FOR RAPID AND EXTREME PRODUCT DESIGN

Creo Interactive Surface Design Extension (ISDX) delivers the ultimate integration of 3D design and engineering. By combining the power of parametric modeling with the flexibility of free-form surfacing, you can now create complex, free-form curves and surfaces directly within a single, intuitive and interactive design environment.

Creo ISDX combines industry-leading free-form surfacing tools within the modeling environment of Creo Parametric. Designers and engineers can create conceptual designs and free-form surfaces while having the ability to model the specific engineered components essential in every successful product.

This unique environment allows designers and engineers to not only utilize the power of free-form surfacing, but also to leverage rich functionality—such as behavioral modeling, drafting, simulation and manufacturing—from within a single application, making Creo the ultimate solution for product design.

### Key Benefits

- Build free-form geometry at any point in the design, using as many or as few constraints as desired, for maximum design flexibility
- Focus on adding value to your design, not on transferring and interpreting data
- Easy to learn and use to quickly define curves and surfaces—resulting in a faster ROI
- Full associativity allows surfaces and curves to instantly adapt to design changes, reducing product development time

### Features and Specifications

#### Curve creation

- Create 3D curves by specifying interpolation or control points in one or more views
- Set up references dynamically by snapping to any object
- Create planar curves referencing a plane or radial to another curve
- Create Curve-on-Surface (COS), or Project-on-Surface
- Create style curve copies of imported or native Creo Parametric curves/edges
- Copy curves proportionally
- Offset COS



With the ability to create free-form surfaces and to optimize curvature, you have the tools to design great-looking products.

### Curve edit

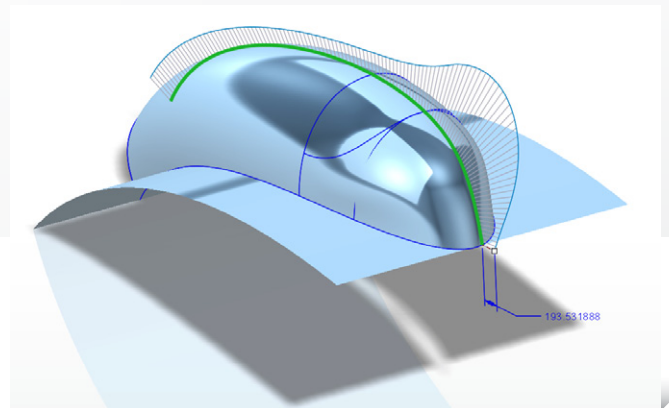
- Move control points dynamically or numerically
- Edit multiple curves simultaneously
- View original curve while editing
- Interactively delete or change references to any object
- Modify tangent constraints dynamically or numerically
- Connect curves and surfaces with positional, tangent and curvature continuity
- Add interpolation or control points interactively
- Extend dynamically, with or without constraints
- Delete individual points or curve segments
- Combine and split curves
- View dynamic curve and surface analysis
- Change curve types from free to planar or COS
- Unlink curves and individual points from references
- Accurately adjust and fine-tune curves
- Partially constrain curves

### Surface creation

- Create surfaces faster and more easily with support for n-sided surfaces and re-parameterization of surfaces
- Regenerate surfaces in real-time
- Make automatic surface connections
- Reshape surfaces by editing the defining curves
- Add or remove multiple internal curves in two directions
- Replace boundary curves/edges to redefine surface shape
- Change surface types between boundary, loft and blend while maintaining all references
- Trim surfaces

### Surface edit

- Manipulate surfaces faster with direct surface editing
- Directly edit and control the surface math with multi-resolution control point editing



Creo ISDX is a highly intuitive and flexible free-form surfacing tool that allows you to develop compelling design variations quickly.

## Connections

View surface connections interactively to define the following:

- G0 Positional
- G1 Tangent
- G2 Curvature continuous
- Establish leader/follower relationships (G1 or G2)

## Modeling environment

- Import images and scale accurately to modeling environment to use as underlays
- Work within a four-view window
- Reference defining geometry, such as points, planes, axes, curves, surfaces and solids
- Create reference geometry asynchronously while modeling
- Work directly off imported geometry, facets and sample data
- Drive model changes through parametric modifications
- Optimize designs using Creo Behavioral Modeling® Extension (available separately)
- Benefit from downstream use for additional geometry creation, engineering, simulation and manufacturing

## Scan tools

Includes entry-level tools for transforming imported surfaces, quilts, triangulation data or raw data into manufacturable models.

- Import, generate and filter raw data
- Import geometry, including curves, surfaces and faceted data
- Create and modify curves
- Heal geometry manually or automatically

## Language support

- English, German, French, Italian, Spanish, Japanese, Chinese (Simplified and Traditional), Russian and Korean

For specific operating system levels, visit:

[PTC.com/partners/hardware/current/support.htm](http://PTC.com/partners/hardware/current/support.htm)

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