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, freeform 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

Capabilities and specifications

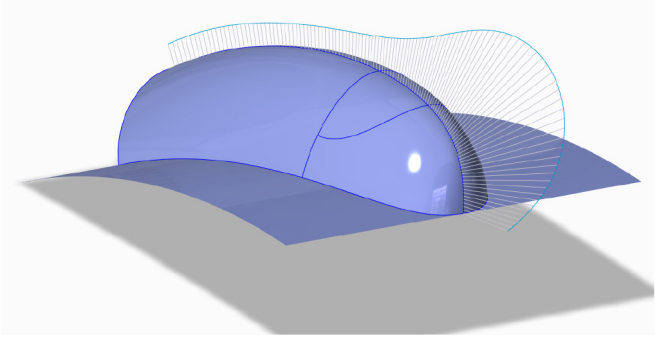
Curve creation

- Define curve connections - Tangent (G1), Curvature G2) or Acceleration (G3)
- Reuse curves from Creo Sketch in Style
- 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 curves directly on surfaces (COS), or projected
- Create style curve copies of imported or native Creo Parametric curves/edges
- Create isoline curves
- Offset COS

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

Curve edit

- Full control over the degree of the curve
- 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, draft and curvature continuity
- Add interpolation or control points interactively
- Delete individual points or curve segments
- Combine and split curves
- View dynamic curve and surface analysis
- Change curve types between Free, Planar or COS
- Unlink curves and individual points from references
- Accurately adjust and fine-tune curves
- Partially constrain curves



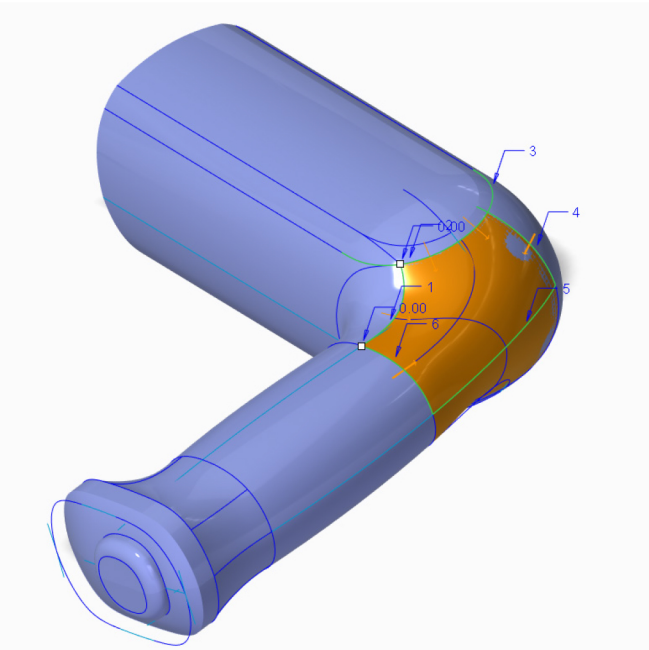
With the ability to create free-form surfaces and to optimize curvature, you have the tools to design great looking products.

Surface creation

- Make automatic surface connection and easily modify the connection type – Tangent (G1), Curvature (G2) or Acceleration (G3)
- Create surfaces faster and easier with support for n-sided surfaces and re-parameterization of surfaces
- Degree of surface defined by degree of curves
- Regenerate surfaces in real-time
- Make automatic surface connections
- Reshape surfaces by editing the defining curves
- Add or remove multiple internal curves
- Replace boundary curves/edges to redefine surface shape
- Change surface types between boundary, loft, and blend while maintaining all references
- Trim surfaces

Surface edit

- Full control over the degree and multiplicity of the surface
- Manipulate surfaces faster with direct surface editing
- Directly edit and control the surface math with multi resolution control point editing



Advanced surfacing tools inside Creo ISDX allow for the creation of high quality surfaces when more than 4 boundaries exist.

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

- 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 or facet data
- Drive model changes through parametric modifications
- Benefits from downstream use of additional geometry creation, engineering, simulation, optimization and manufacturing

Language support

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

Platform support and system requirements

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