

Shape Design & Styling

# CATIA ICEM Shape Design Center (ICM)

# CATIA V5R20





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Providing advanced Surface modeling and analysis tools to help create aesthetic and ergonomic shapes to the highest levels of surface quality (Class A).

### Product overview

CATIA ICEM Shape Design Center (ICM) the foundation of the ISD product portfolio offers advanced surface and curve functionality to create, modify and analysis aesthetic and ergonomic shapes to the highest quality. Supporting a hybrid environment of both explicit and feature-based surface modeling. With traditional direct surface modeling techniques as the base, accompanied by strong associative and feature-based modeling methodology, ICM dramatically improves the productivity within the Class A design process delivering new levels of integration within the product development lifecycle.

### Product Highlights

- ❑ Delivers advanced Class-A Surface generation, modification and analysis tools
- ❑ Supports explicit and associative modeling techniques
- ❑ Intuitive and dynamic surface modeling techniques
- ❑ User quality control through Feature-based approximation
- ❑ Simultaneous real-time analysis
- ❑ Supports advanced ergonomic workflow through Parallel commands
- ❑ Propagates surface modifications to related topology
- ❑ Integrates Class-A and engineering surface design

### Product Key Customer Benefits

**Full product Integration...** CATIA ICEM Design Center is fully integrated into the CATIA V5 PLM environment. For the first time a Class A-surfacing tool takes advantage of the proven stability of the CATIA platform and its associative and history driven engines.

**Leveraging knowledge and experience of proven Technologies....** Using Bezier mathematics at its core for curve and Surface creation, ICEM Shape Design Center are using proven technologies used and proven from over 25years experience. The technology is simple in its philosophy yet delivers high quality results expected within the Class A surfacing domain.

**No Data Conversion...** CATIA ICEM Shape Design Center offers a consistent approach to Class A shape design and production surface design. Industries requiring industrial design will save design cycle time by avoiding data conversion between several systems.

**Direct modeling techniques...** ISD Center supports explicit modeling methods, managed by 3D interactive tools providing comprehensive dynamic performance and direct shape control. Fully integrated in the global product definition process, ISD Center permits direct access to concurrently active commands, such as control point manipulation and matching. This modeling technique, using collaborative commands, greatly reduces the number of interactions required to obtain the desired shape.

**Associative and feature based modeling...**

combining parametric and feature based modeling techniques surfaces can be interactively modeled, preserving the design characteristics of those features. ISD Center uses standard V5 associative techniques to manage related Class A constraints, such as matching, fillets, flanges, and profiles. With this unique combination of proven concepts, the product updates Class A-features automatically in real time, keeping them current throughout the design process. This approach allows the user to immediately understand the extended impact of each shape modification as it is made.

**High Quality surface generation...**

creation and manipulation of high quality surfaces using Class A dedicated tools, such as matching across surface and curve boundaries using G3 continuity. Strong and consistent feature-based approximation capabilities are available across the creation capabilities within ISD Center to support quality of output.

**Fast design changes by automatically adapting parts and products to new contexts...**

Improve design iterations and productivity thanks to design templates and rule-based corporate standards.

**Real time visual analysis...**

at any time the surface creation or modeling process an extensive suite of real time analysis tools can be used to assess visible quality and ensure design intent. Dynamic reflection lines, highlight diagnostic and deviation analysis enables rapid convergence on production quality surfaces.

**Ease Of Use...**

In addition to the unique ease of use of CATIA V5, ICEM Shape Design Center offers a fast, keyboard free, surface creation and manipulation allowing designers to unleash their creativity and advanced surfacing skills while producing the Class-A surface quality of shapes required.

## ABOUT CATIA V5R20

CATIA is Dassault Systemes' PLM solution for digital product definition and simulation.

**[www.3ds.com/products/catia](http://www.3ds.com/products/catia)**

