creo®

ptc

ADDITIVE MANUFACTURING IN CREO

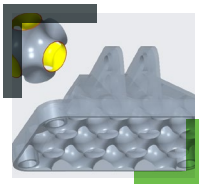
WHAT YOU SEE IS WHAT YOU PRINT. GO FROM INITIAL CONCEPT TO HITTING PRINT ALL IN CREO.

A TRULY COMPREHENSIVE SUITE OF ADDITIVE MANUFACTURING CAPABILITIES. **WITH CREO** YOU CAN DESIGN, OPTIMIZE, VALIDATE, AND PRINT-CHECK THE HIGHLY-COMPLEX GEOMETRY THAT CAN ONLY BE PRODUCED THROUGH ADDITIVE MANUFACTURING. NOW WITH BROADER CAPABILITIES IN STOCHASTIC LATTICES.

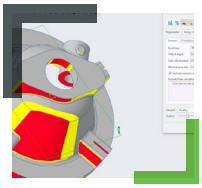
LATTICE CREATION

It's no secret that lattices can help resolve issues with weight, strength, and efficiency.

These include: Self-supporting cells to minimize support structures, random cells for shock and sound absorption applications, or custom cells for user-specific applications. When you combine this capability with simulation, you can optimize the geometries to solve multiple design requirements simultaneously. And because this is true parametric geometry, you are designing parts for additive manufacturing with accurate mass properties.



Example of a custom cell



Define and compute optimal build direction

CONNECTIVITY WITH PRINTERS

Whether you're printing with polymers or metal, Creo has you covered.

For polymers, you can directly connect to several printing manufacturers' platforms such as 3D Sprint of 3D Systems, and Materialise-enabled printers to understand build time, material usage, and materials/color assignment. Print directly to from Creo.

For metal printing, you can do all of the above, as well as generate and customize the support structures that metal printing requires.

Also available is the ability to export to one of these standard file formats and send to 3D printers: CLI, AMF, 3MF, and legacy STL file formats, as well the ability to use the Windows 10 3D printer driver.

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REQUEST A DEMO >>

Creo Versions	3.0	4.0	5.0	6.0	7.0
Creo Parametric					
Create Print Trays		•	•	•	•
Print Check	•	•	•	•	•
Direct Connect to 3D Systems Plastic Printers (understand material usage and Print Times)		•	•	•	•
Direct Connect to i.materialise Print Bureau		•	•	•	•
Direct Connect to Plastic Printers in the Materialise Library (Manage print drivers and profiles)			•	•	•
Direct Connect to 3D Systems ODM Print Bureau			•	•	•

Creo Versions	3.0	4.0	5.0	6.0	7.0
Creo Additive Manufacturing Extension					
Lattice Modeling (2 ½ D and 3D Beam lattices)		•	•	•	•
Formula-based lattices (Gyroids, Primitive, and Diamond)				•	•
Advanced beam lattices (Stochastic – conformal and foam, transitions)				•	•
Homogenized lattice representation for fast simulation and light weight files storage				•	•
Custom defined cells (based on Creo .prt files)				•	•
Modify, Manage, and Save Print Tray Assemblies		•	•	•	•
Automatic Positioning and Nesting in Print Tray Assemblies		•	•	•	•
Global Interference Check		•	•	•	•
Define the Print Build Direction in Part Mode and direct placement in the Print Tray				•	•
3MF Core specification export			•	•	•
3MF Materials and colors extension support				•	•
3MF beam lattice extension support				•	•
Windows 10 driver support for 3D printing				•	•
Stochastic lattices with Delaunay algorithm and edges recognition					•
Custom cell improvements.					•

Creo Versions	3.0	4.0	5.0	6.0	7.0
Creo Additive Manufacturing Plus Extension for Materialise					
Direct Connect to Metal Printers in the Materialise Library (Manage print drivers & profiles)			•	•	•
Generate and Customize Metal Support Structures			•	•	•
Optimization of the Print Build Direction in Part Mode and direct placement in the Print Tray				•	•
Support of Multibody on the Tray Assembly (Materialise BPI)					•

Creo Versions	3.0	4.0	5.0	6.0	7.0
Creo Generative Topology Optimization Extension (GTO)					
Set constraints and requirements, including materials and manufacturing processes					•
Work with both additive manufacturing and more traditional processes					•
Output is rich, B-rep geometry.					•

>>> THE CREO ADVANTAGE:

Creo is a 3D CAD solution that helps you build better products faster by accelerating product innovation, reusing the best of your design and replacing assumptions with facts. Go from the earliest phases of product design to a smart, connected product with Creo. And with augmented reality in each seat of Creo, everyone can easily visualize your designs. In the fast-changing world of the Industrial IoT, no other company can get you to substantial value as quickly and effectively as PTC.

Please visit the PTC support page for the most up-to-date platform support and system requirements.