

MA2467 - Autodesk Inventor to Autodesk Revit: Building Product Manufacturing Workflow

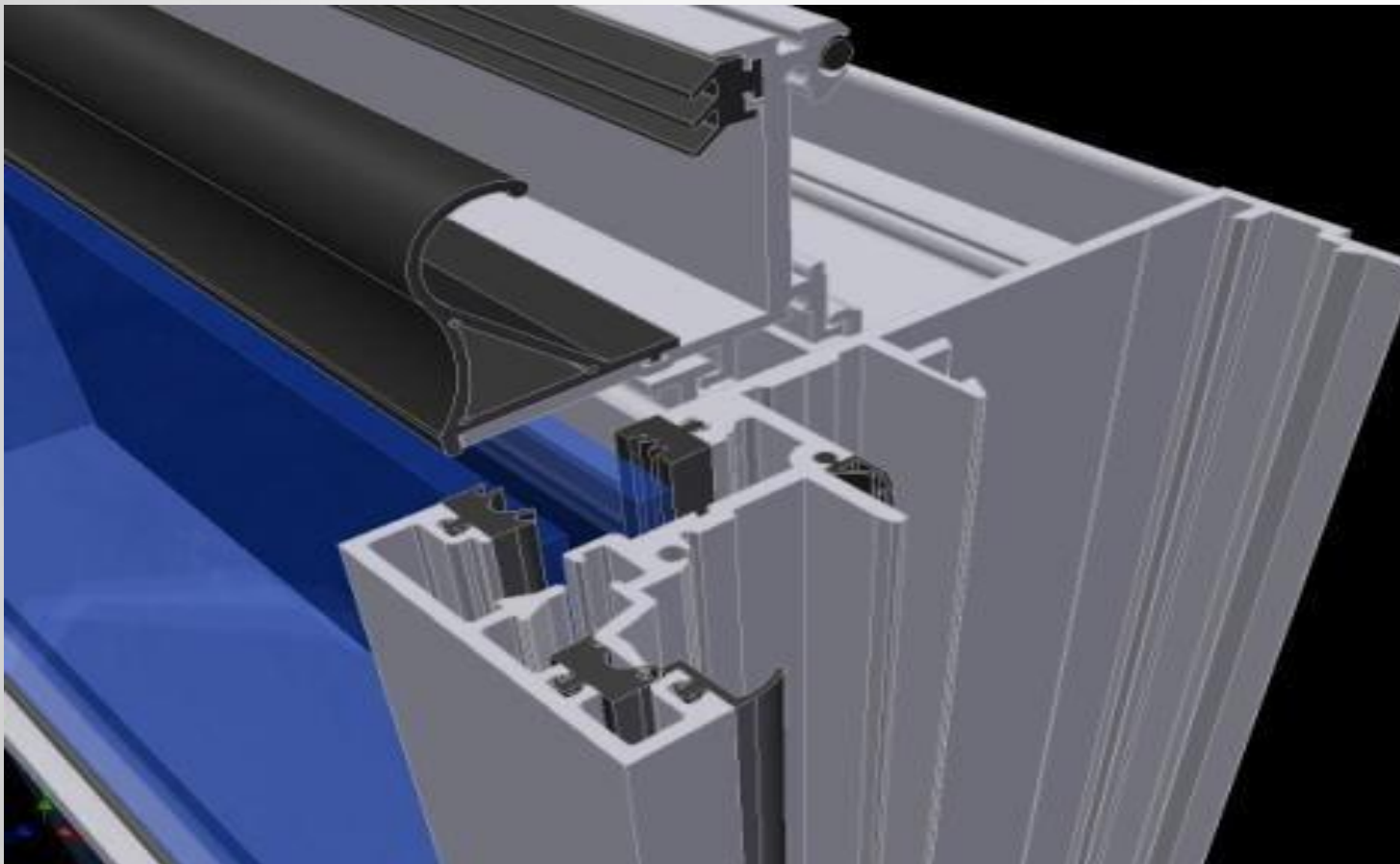
Adam Smith

Product Manager for Inventor

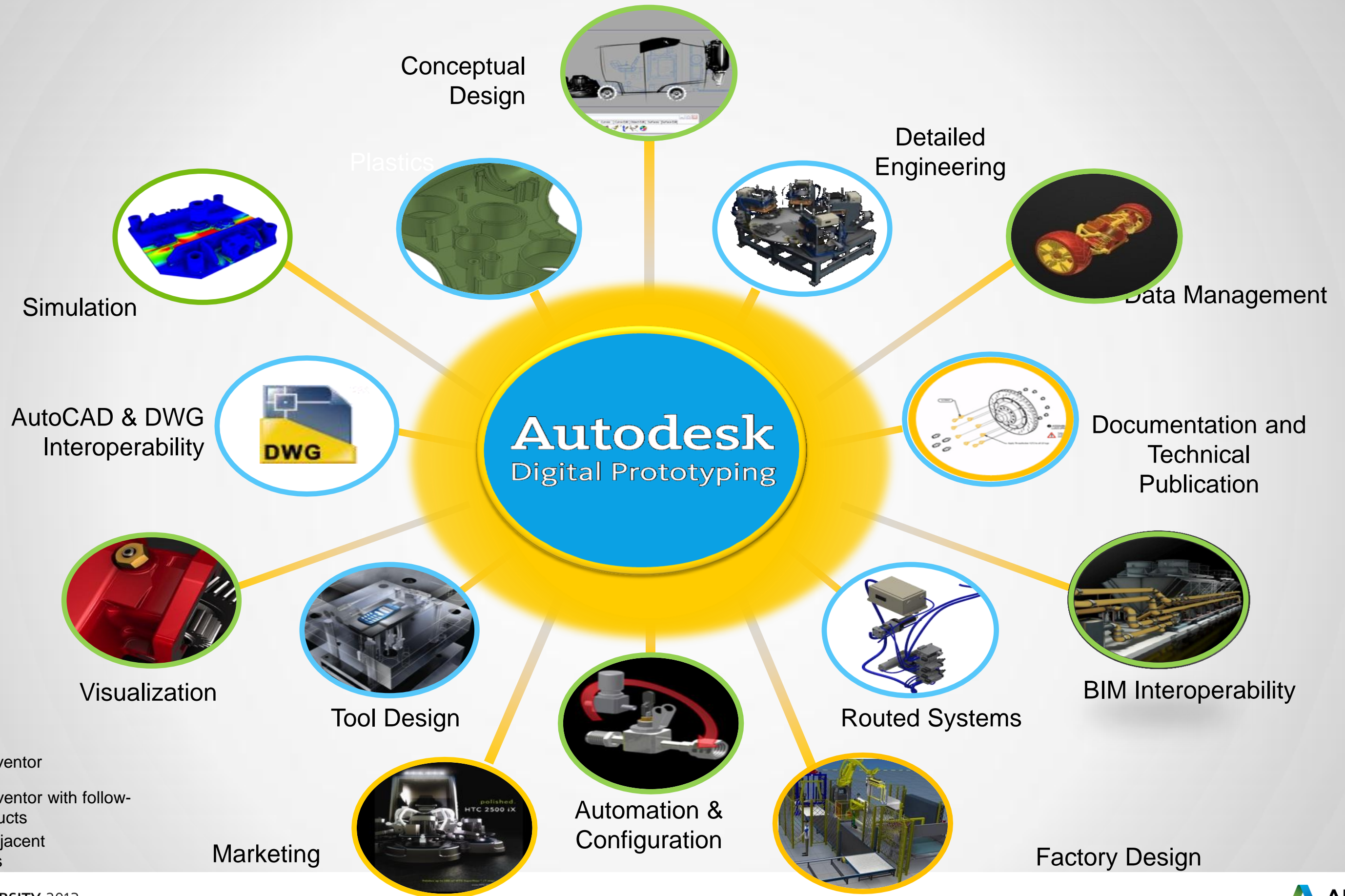
Digital Prototyping enables building products manufacturers to develop, share, and sell a single model before the product is built.

Building Product Manufacturers: Top Challenges

- Leveraging BIM to win new business
- Meeting ever demanding project schedules
- Managing complexity and customization
- Collaborating effectively with stakeholders



**Autodesk has the tools to
help you gain the most value
from your design data.**

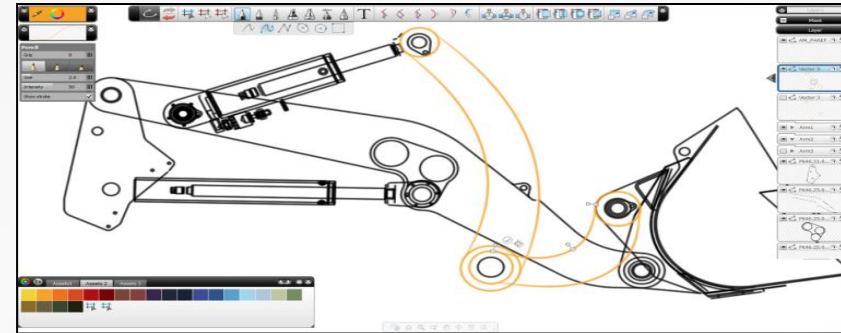


Accelerate new product development

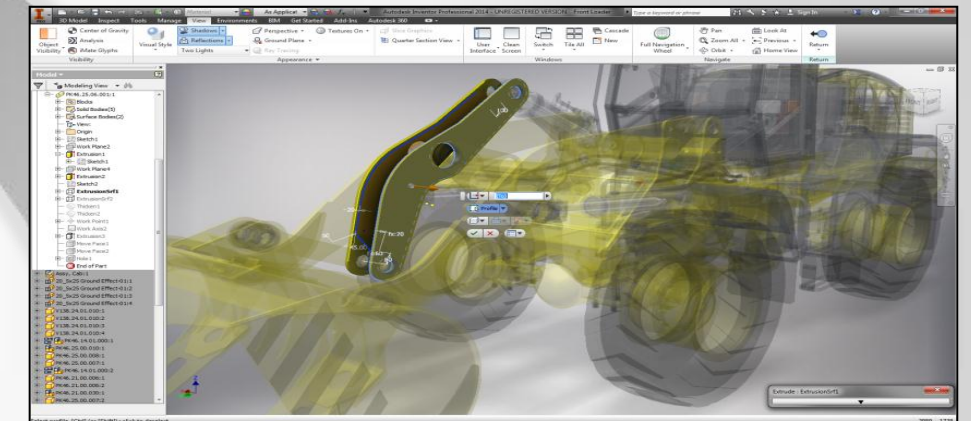
Autodesk Product Design Suite 2014

Concept

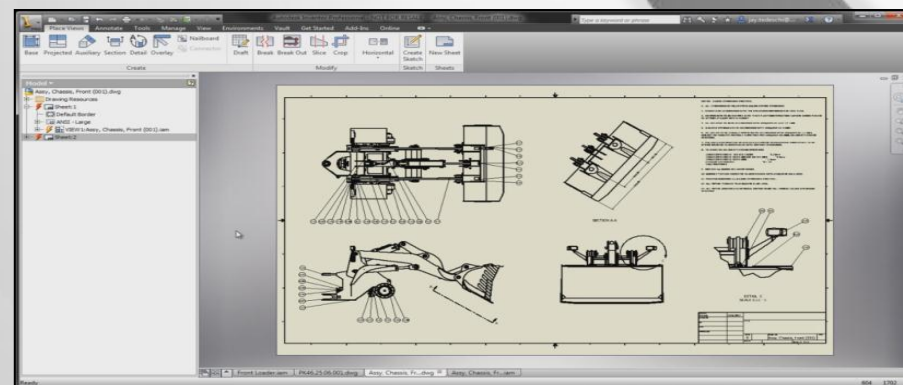
Visualization



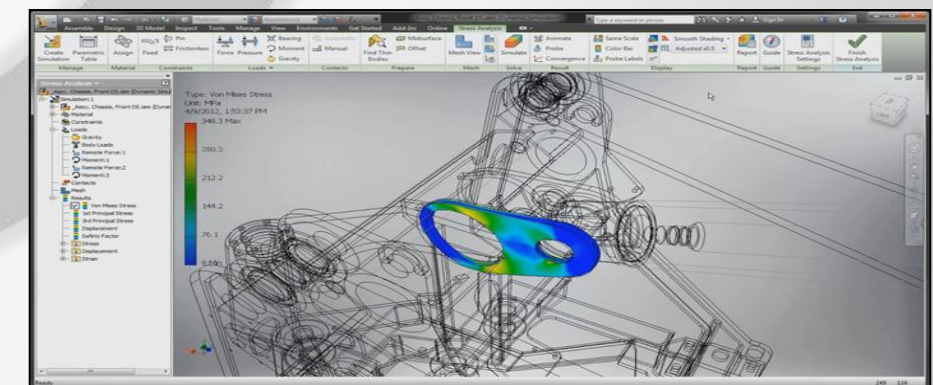
Engineering Design



Engineering Documentation



Simulation



Product Design Suite 2014

Ultimate
Specialist Disciplines
with styling and project
management

- Premium+
- Alias Design
 - Navisworks Manage*

Premium
Digital Prototyping
with integrated controls
systems, simulation, tooling
and visualization

- Standard+
- Inventor Professional*
 - AutoCAD Electrical
 - Navisworks Simulate
 - 3DS MAX

Standard
3D Design and Drafting

- Inventor
- AutoCAD Mechanical
- AutoCAD
- Autodesk Vault Basic
- Showcase
- Mudbox
- Sketchbook Designer
- AutoCAD Raster Design*
- Reality Capture*



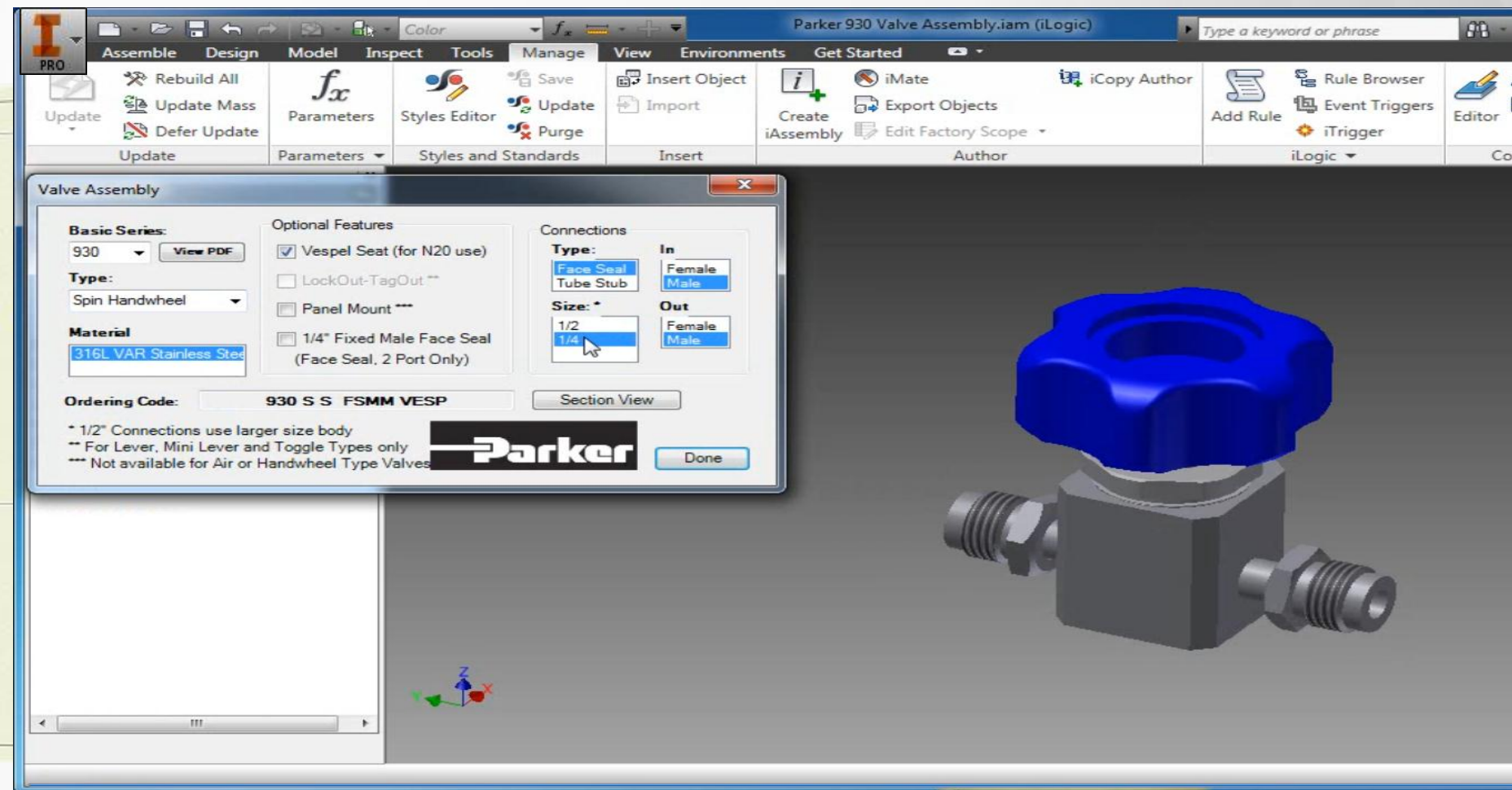
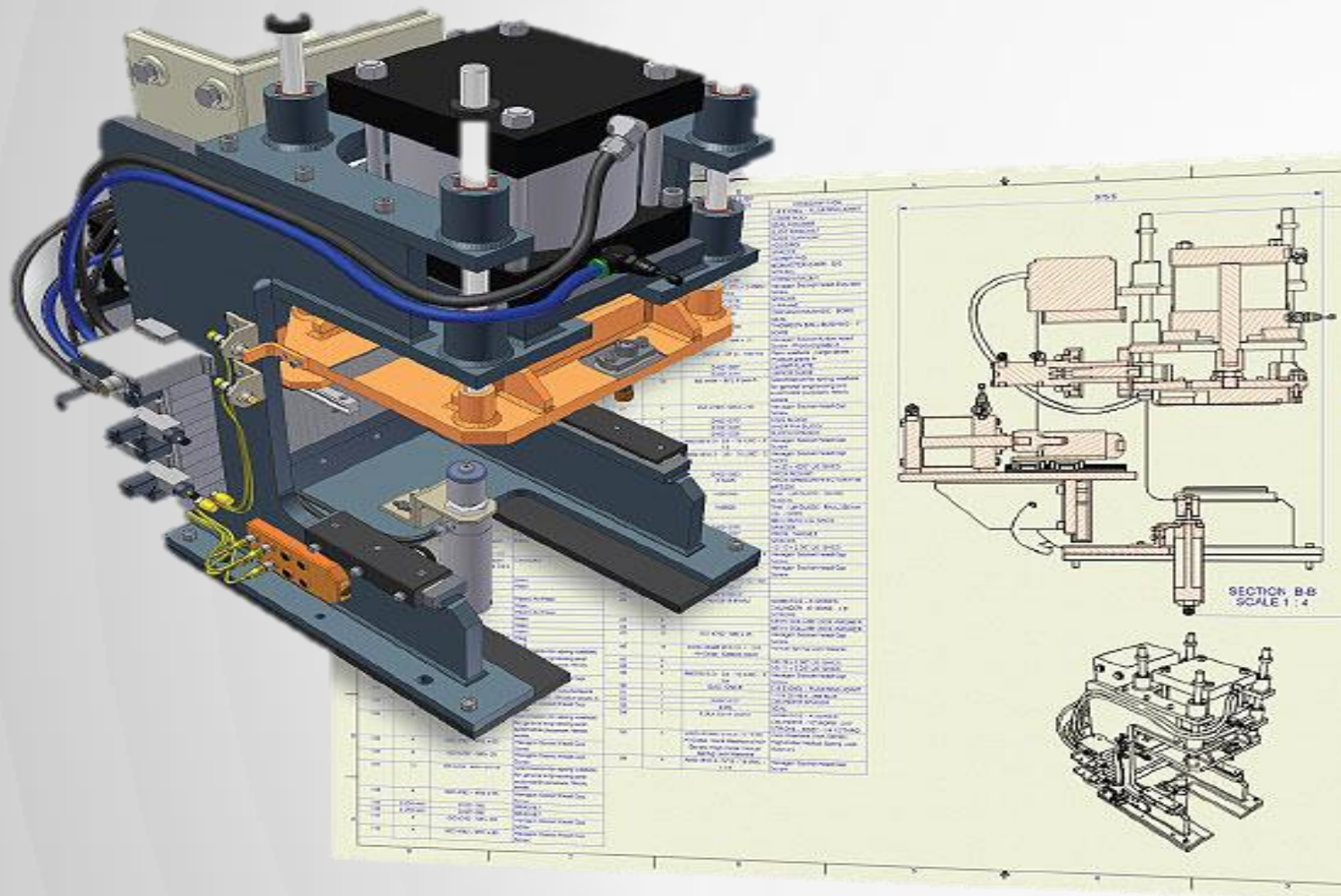
AUTODESK®
PRODUCT DESIGN SUITE
2014



 **AUTODESK**



Faster and More Productive with Inventor



Efficient Design Asset Reuse

Rules Based Design Automation

Growing industry adoption of BIM is driving the migration of architects, engineers, and contractors to 3D CAD platforms where advanced visualization, simulation, and analysis software tools have pushed the product selection process earlier than ever before.



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The best free way to find, preview and download BIM models.

With Autodesk Seek, you’ll find high-quality BIM (building information modeling) models, drawings, and product specifications ready for your active design sessions.



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Product Libraries

Revit MEP
AutoCAD MEP
Revit Structure
Revit Architecture
AutoCAD Architecture

Classifications

CSI MasterFormat 2004
CSI OmniClass 1.0
CSI UniFormat II

Featured Content

- Double Gang Commercial Faceplate
Single, 1 to 12 Port
Optical Cable Corporation
- Single Hung Window Montecito™ Series
Milgard Windows and Doors
- Direct Fired Water Heater 75.26" Height,
28" Width
Aerco

Category: [Mixing Faucets](#)
Manufacturer: [DELTA® Faucet Company](#)



Model Number - 989-SSSD

Category: [Uplights](#)
Manufacturer: [Brizo](#)



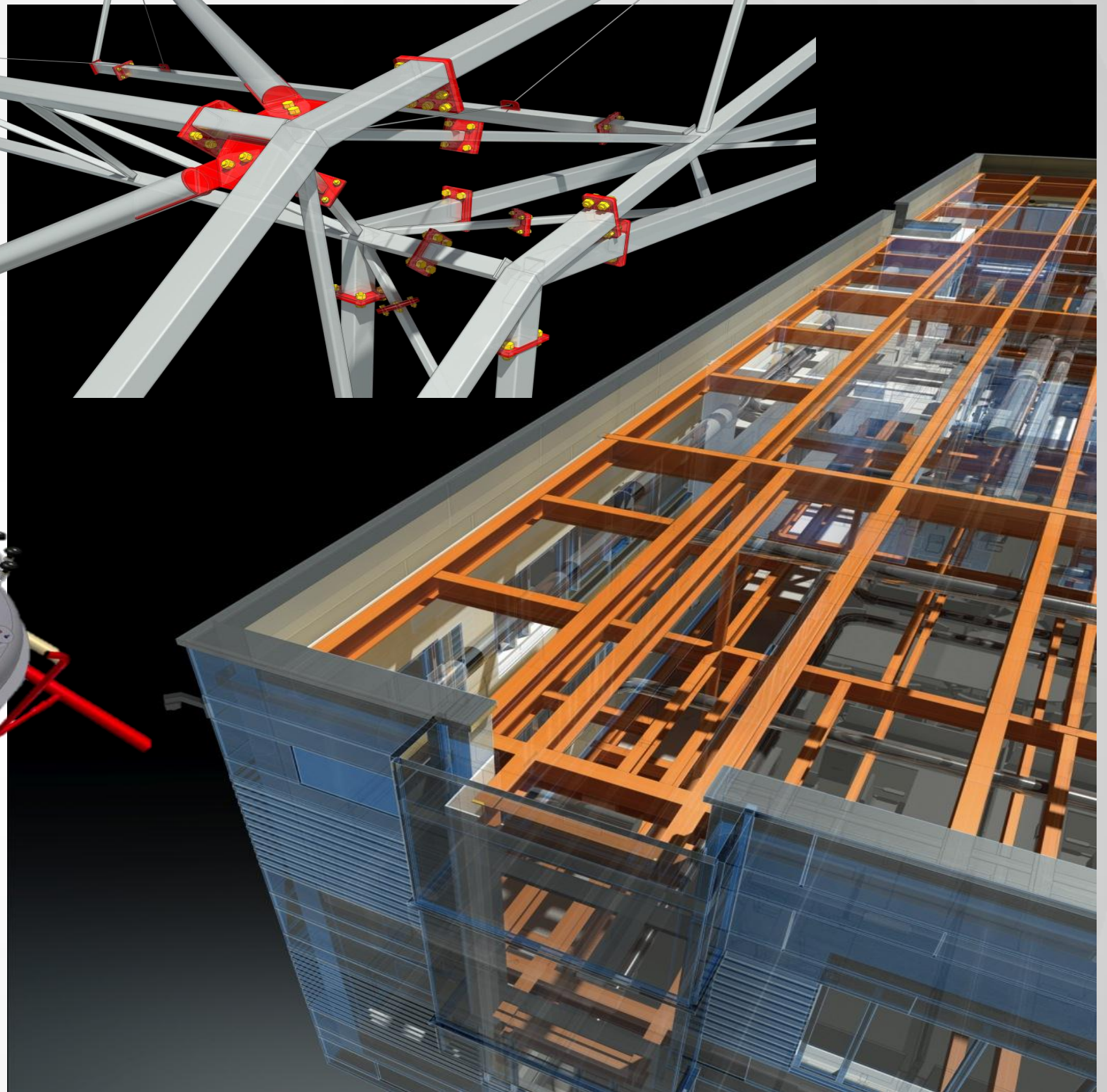
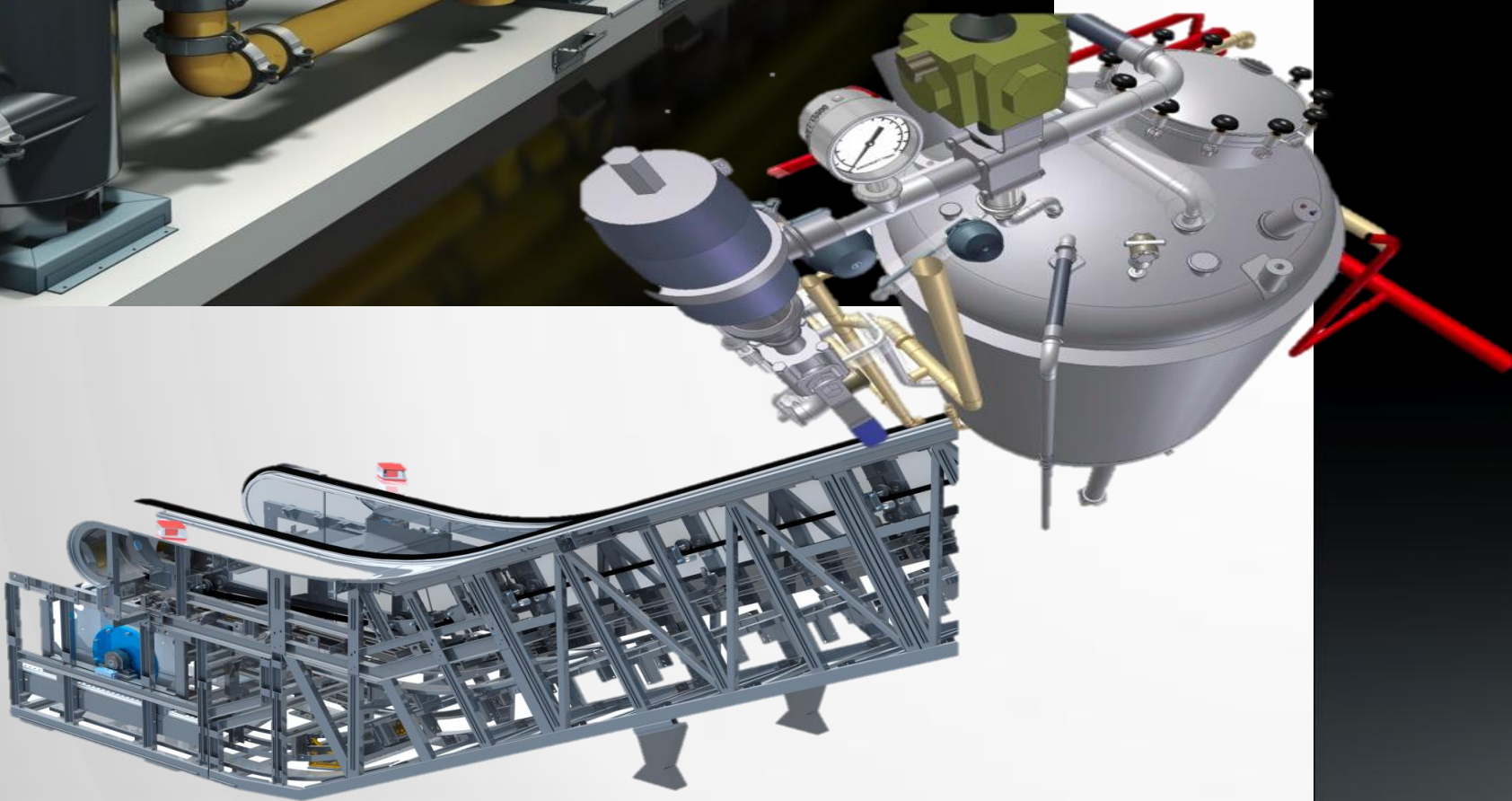
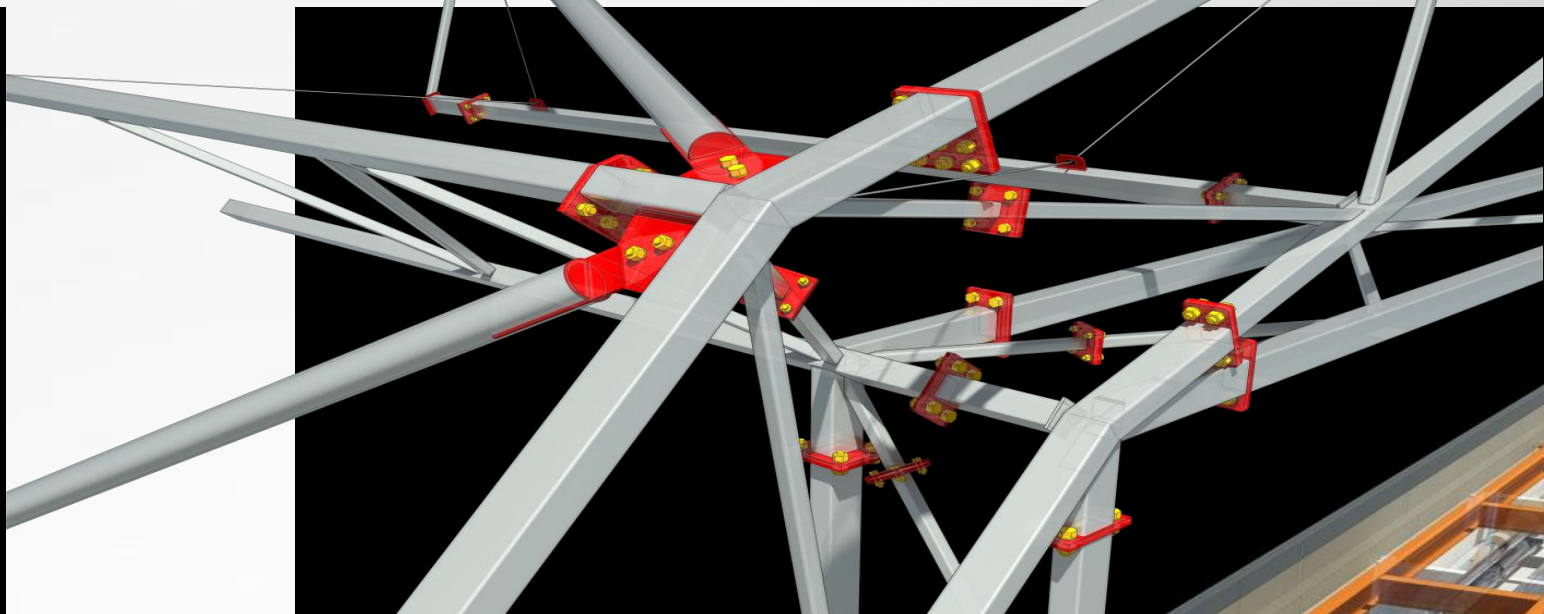
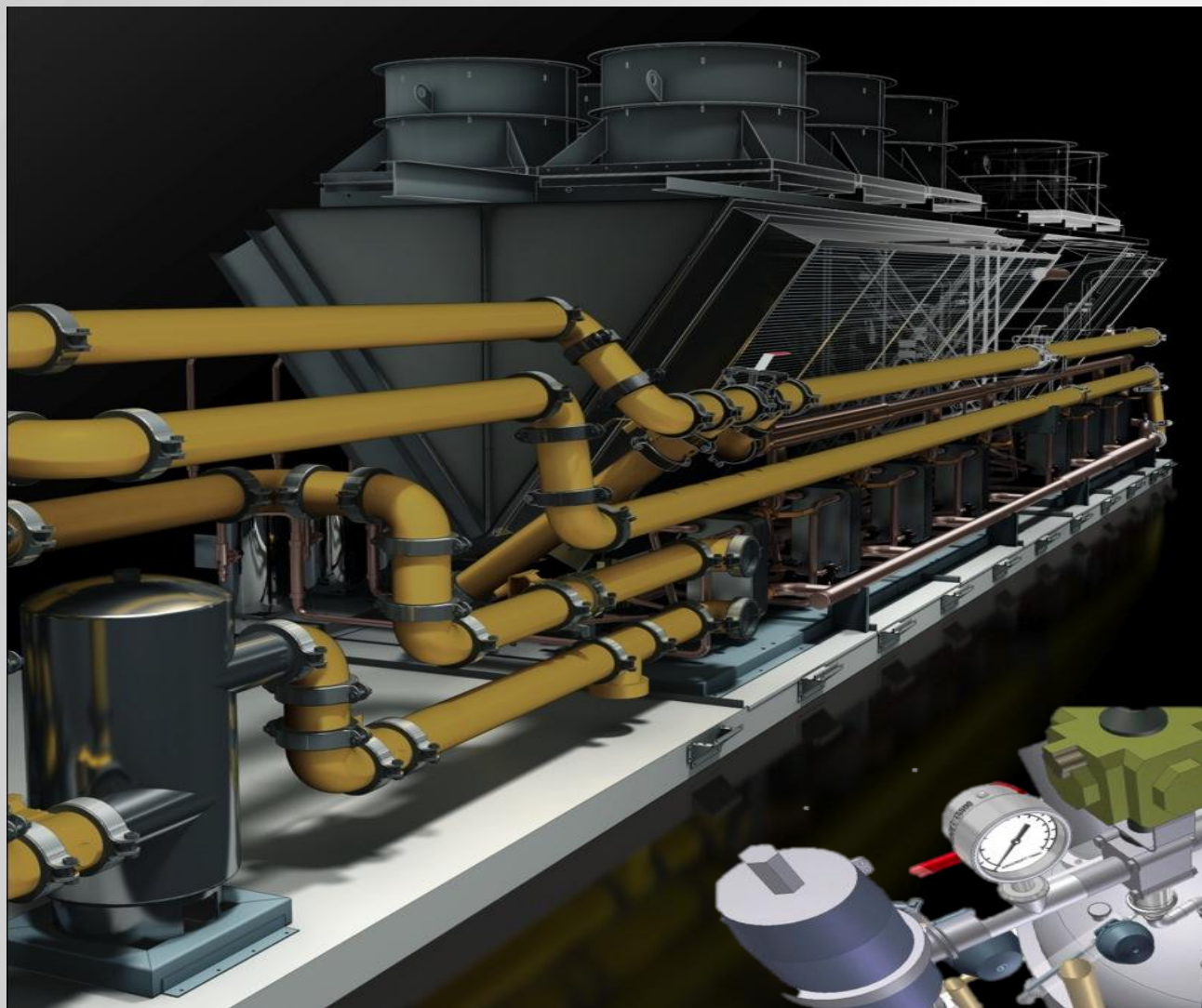
Model Number - 697030-BN



[Contact Me](#)

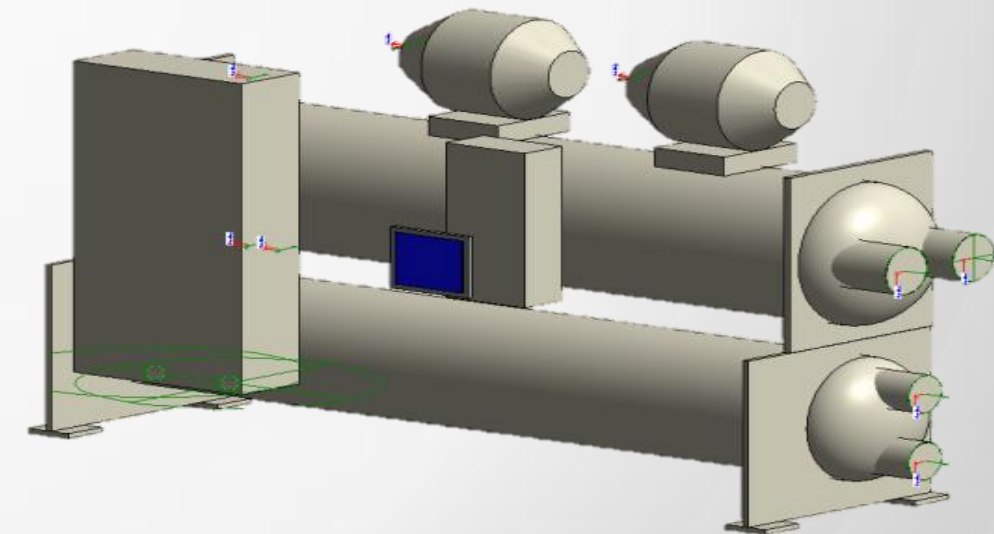
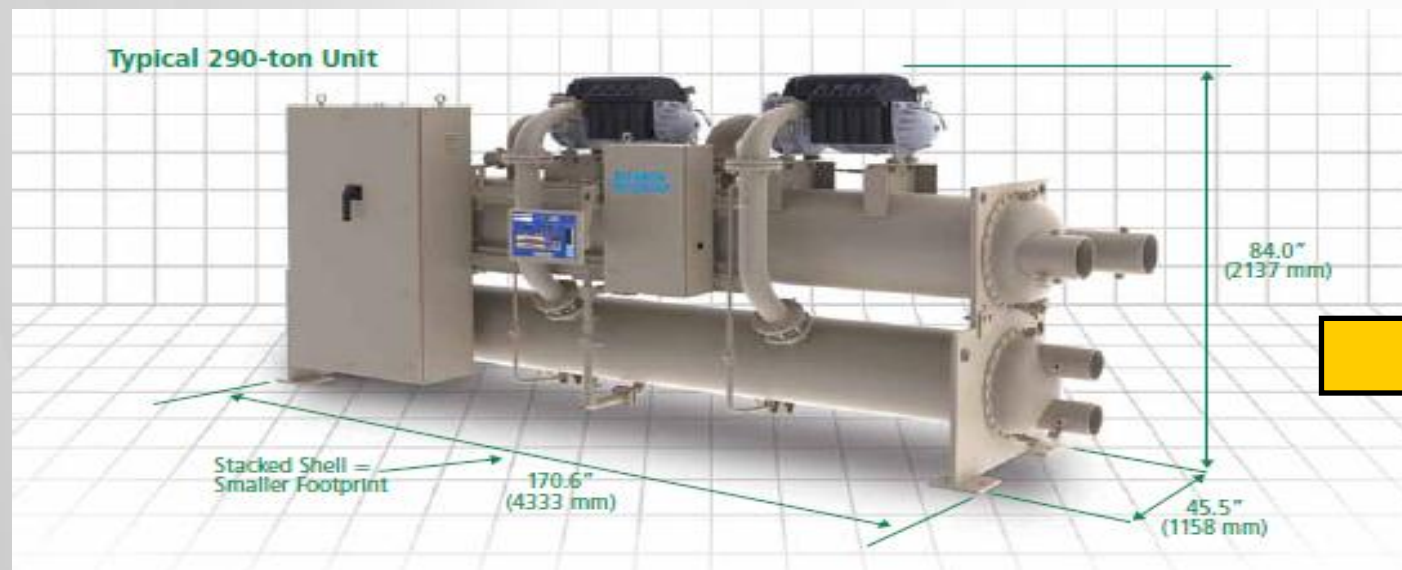
BRIZO®

[Contact Me](#)



Leverage Engineering Data to Create BIM

- Inventor 2014 can now...
 - Easily simplify engineering models.
 - Export a Native Revit Model (.rfa) Format with parametrics.
- Benefits
 - Engineering data modeled in Inventor does not need to be remodeled in Revit.
 - Customers don't need to form new departments and train Revit users to create BIM manually.



Why simplify Inventor models?

Inventor models give you more than you may need

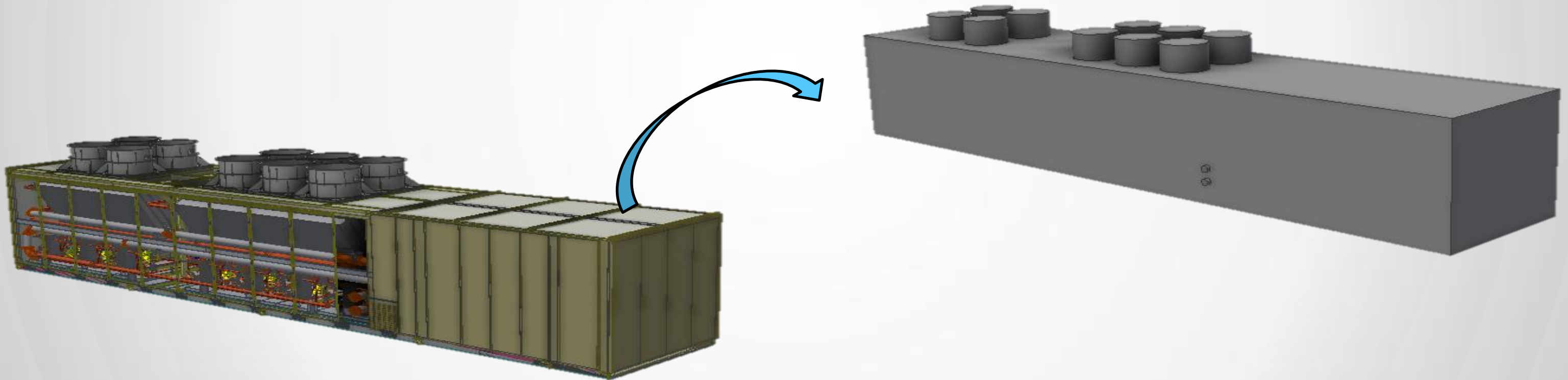


Simplified models are less detailed and easier to consume



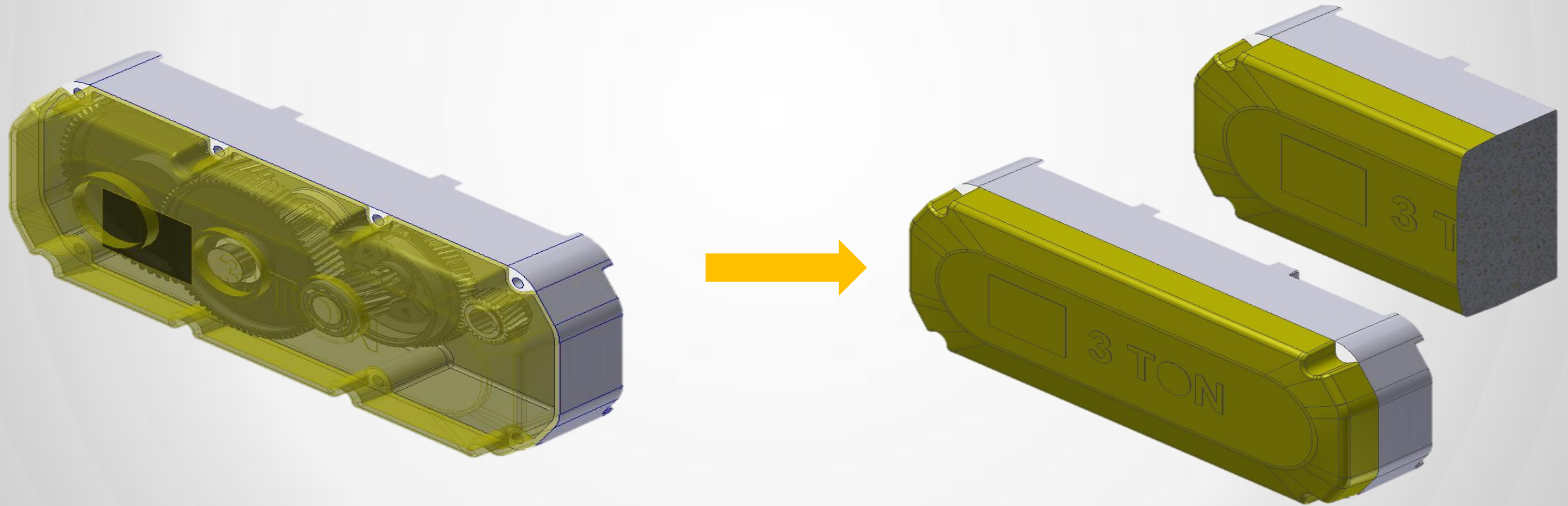
Simplify

With the Inventor Simplify tools, Inventor users can easily transform their MFG models to simpler representations for use where complete product definition isn't required or desired.



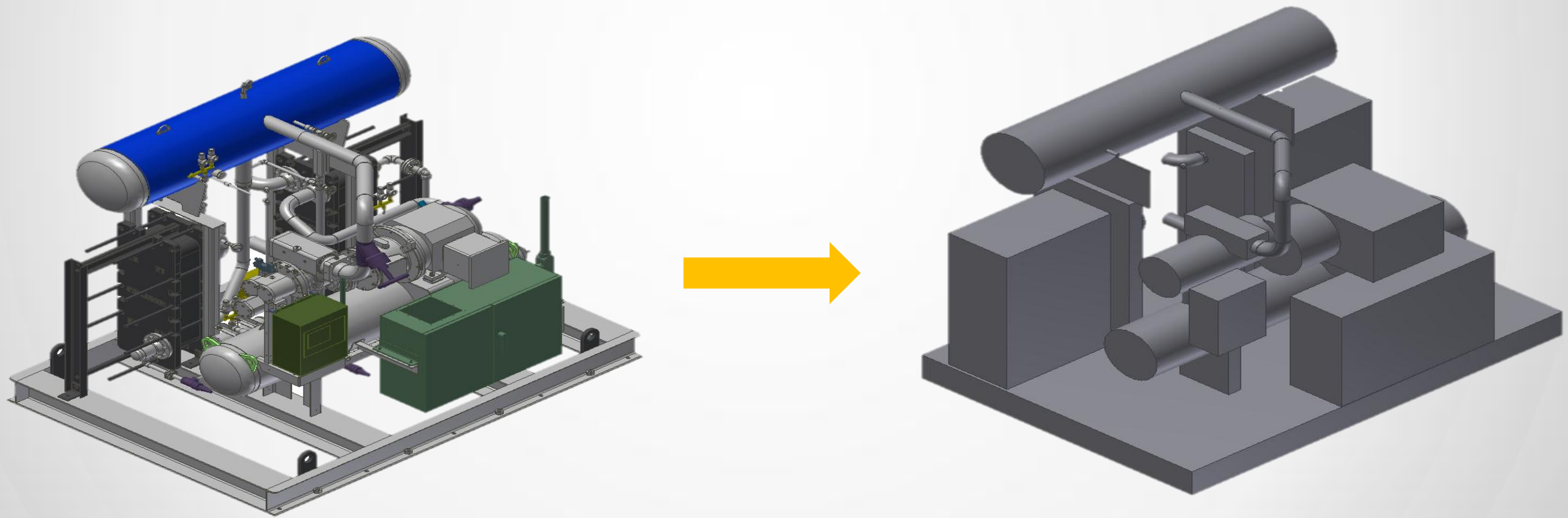
Simplify for IP Protection

Manufacturing customers have a need to remove IP (intellectual property) from their catalog models before making them accessible to their customers.

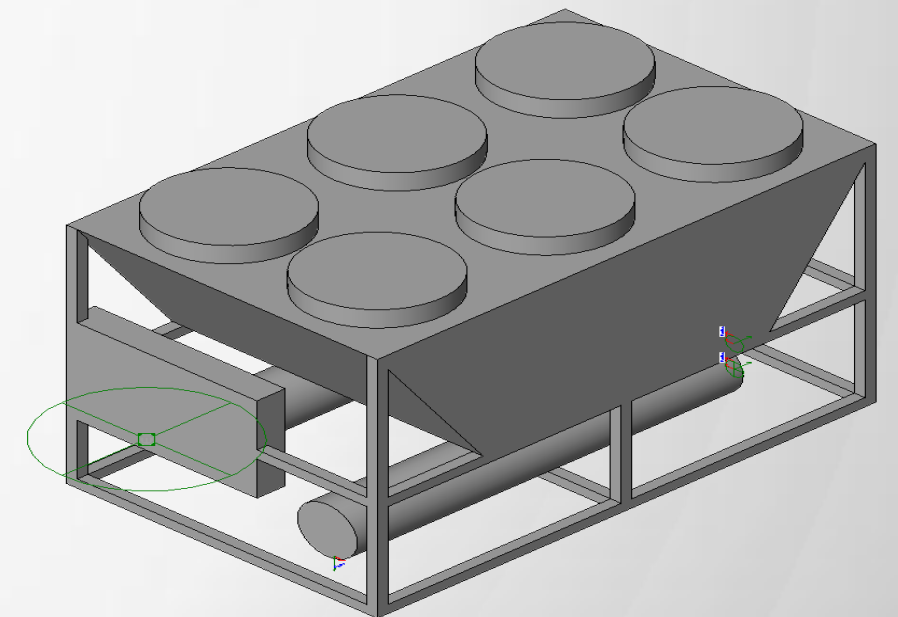
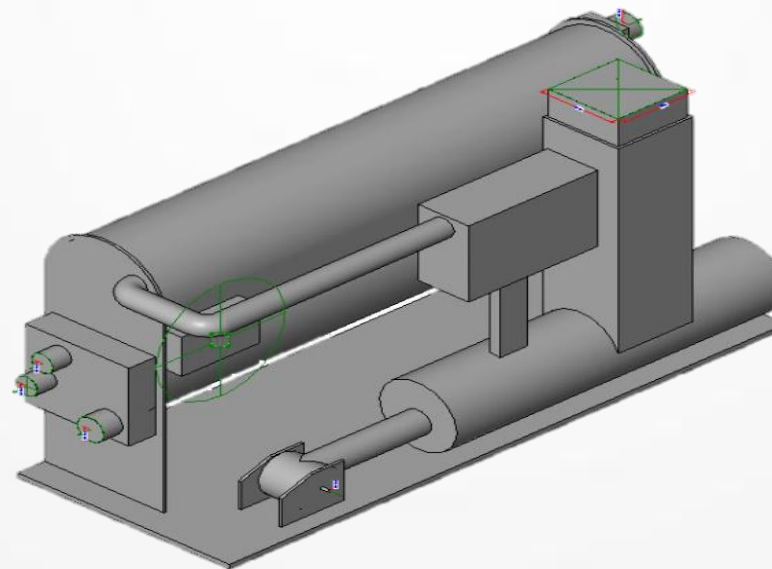
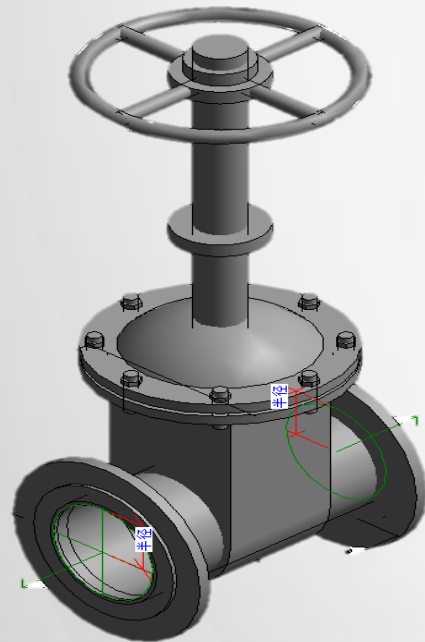
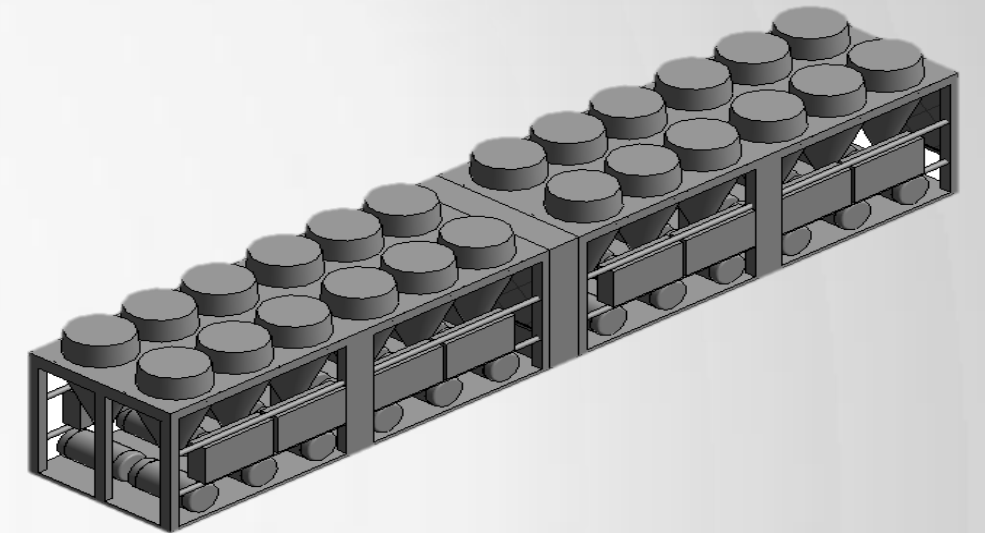
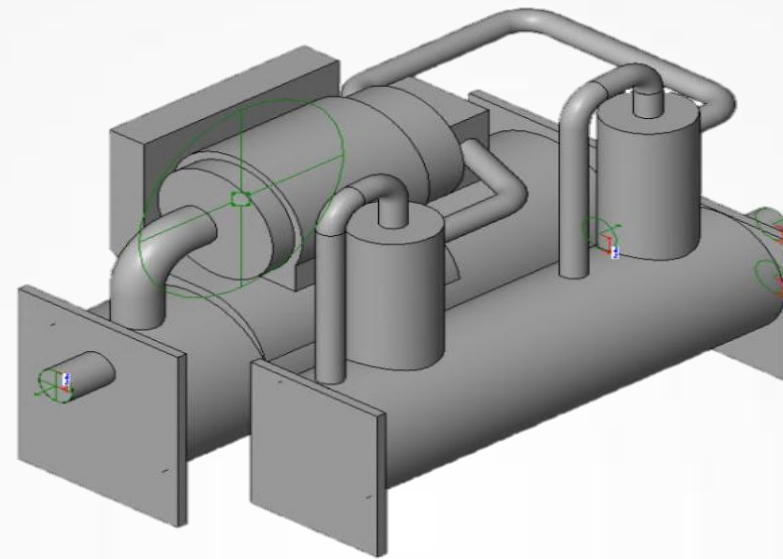
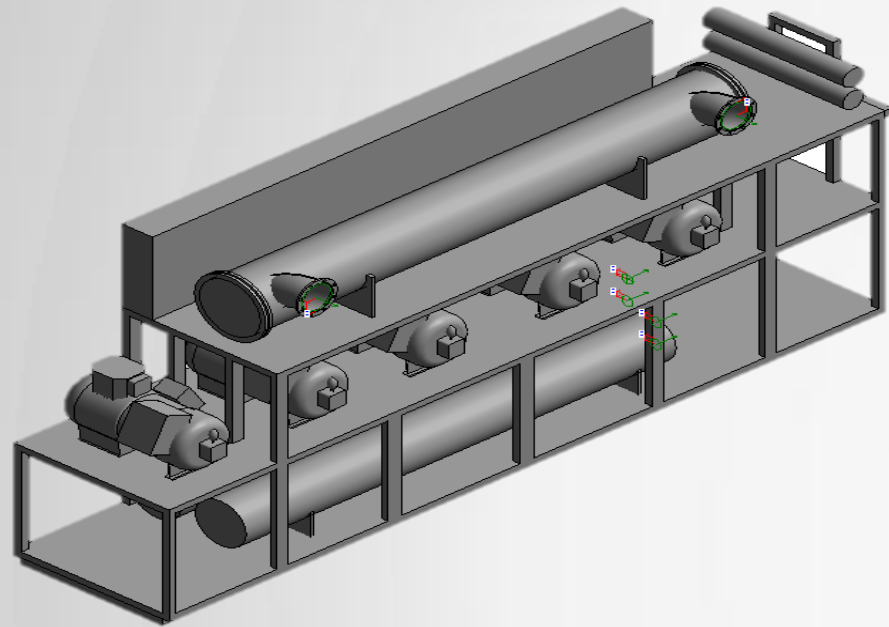


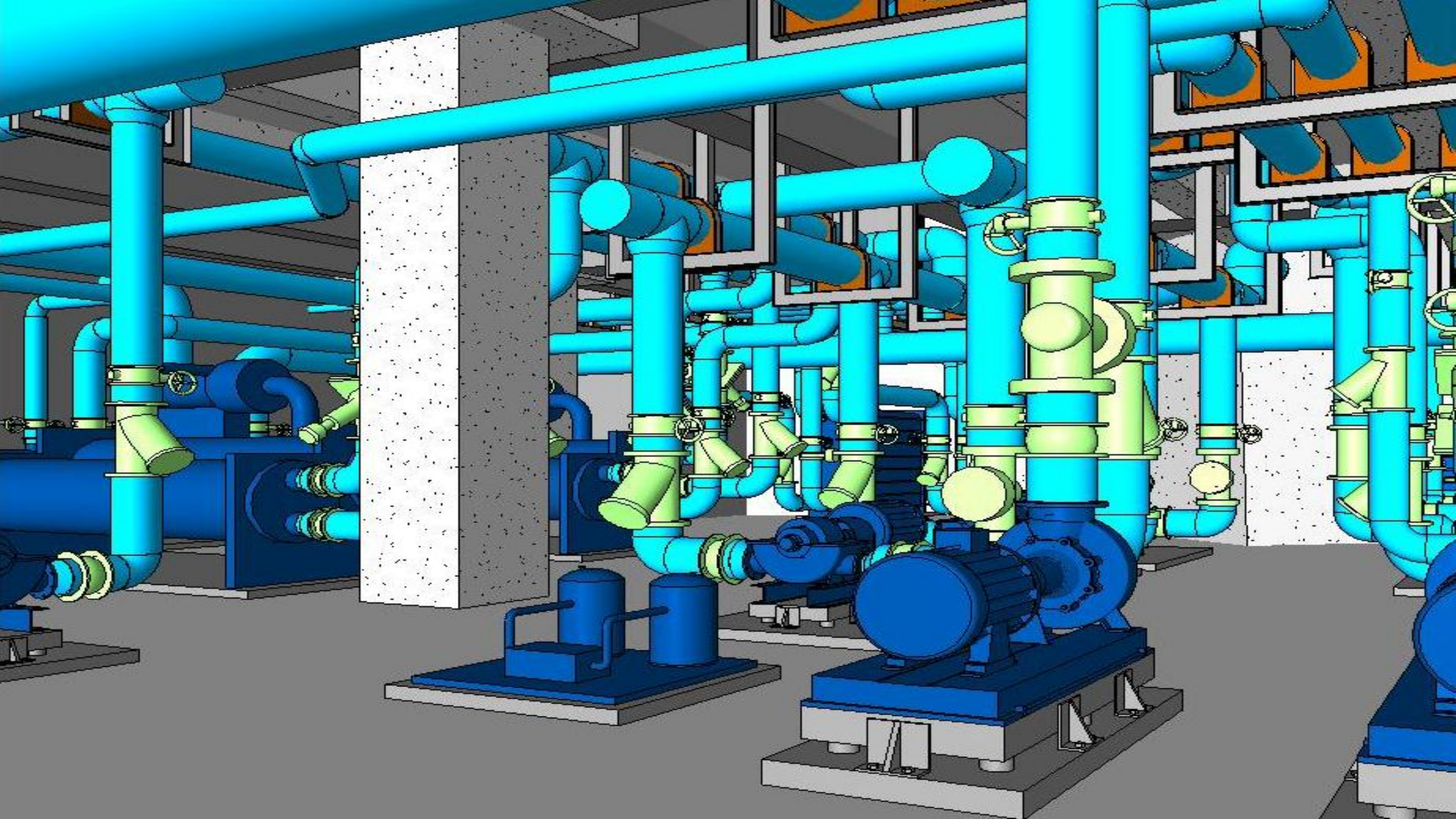
Simplify for BIM

Based on the requirements of BIM (Building Information Modeling), Inventor customers have a desire to lighten models such as HVAC systems to be consumed in Revit as well as make them accessible through email and on the web.



BIM Content





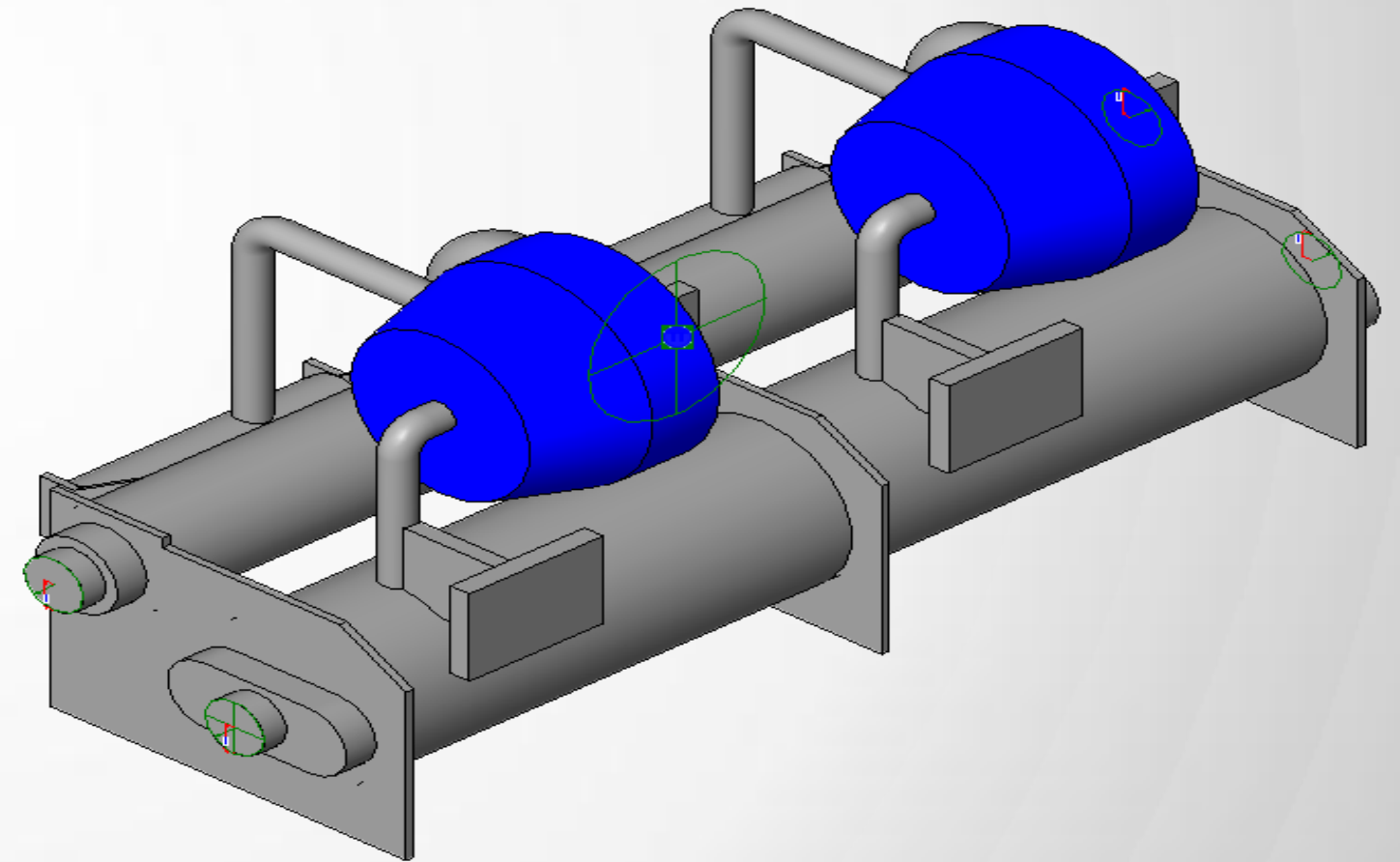
BIM Content Basic Requests

- Simple and Fast

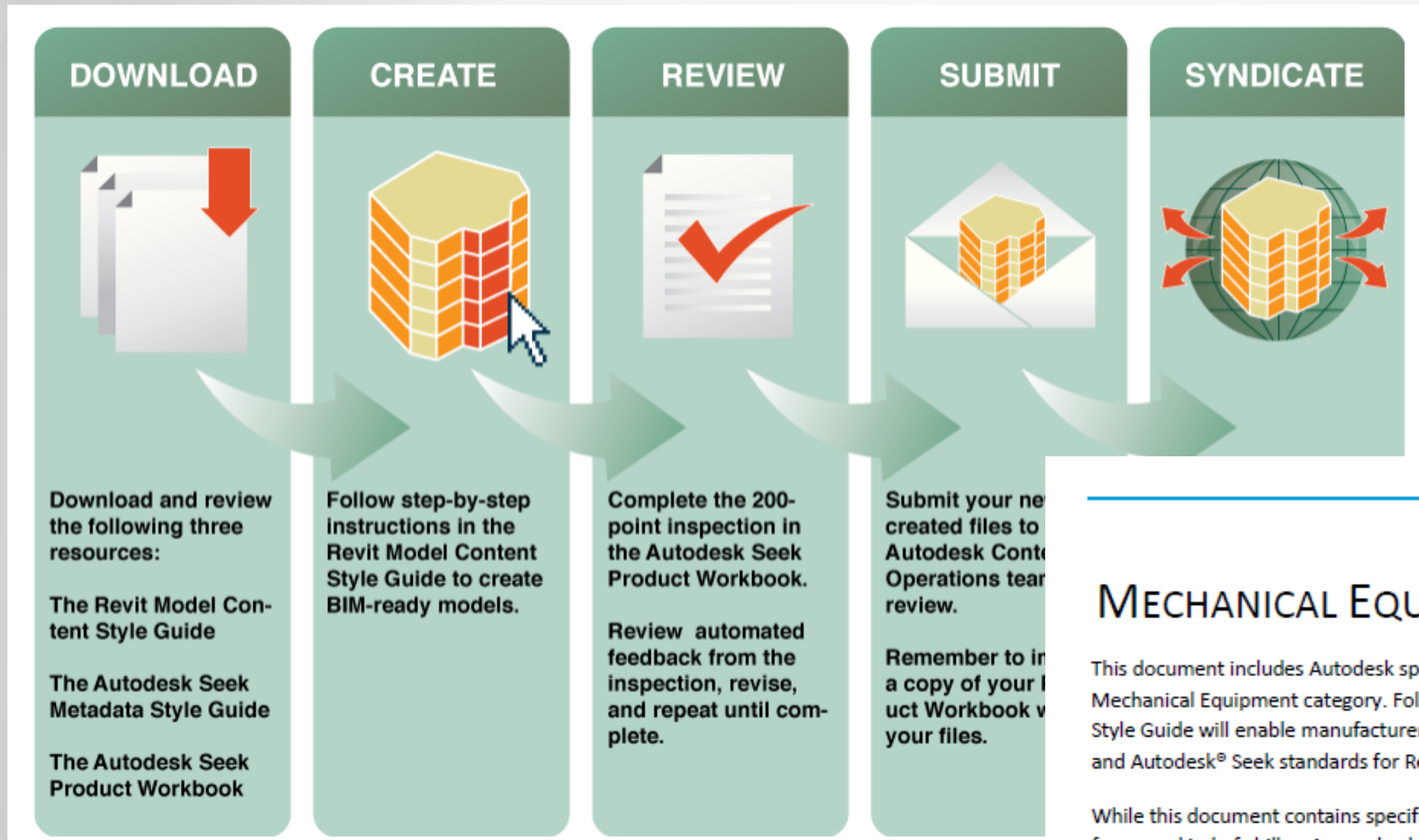
- File Size
- Shape
- Parameters

- Intelligent

- Schedulable (model type, manufacturer, etc.)
- Metadata/Properties
- Orientation/Insertion
- Multiple Types
- Connectable
- Material/Appearance
- Detail Level
- 2D Symbolic



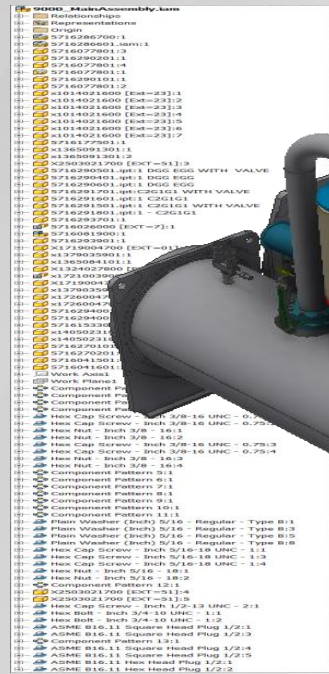
BIM Content Detailed Requests



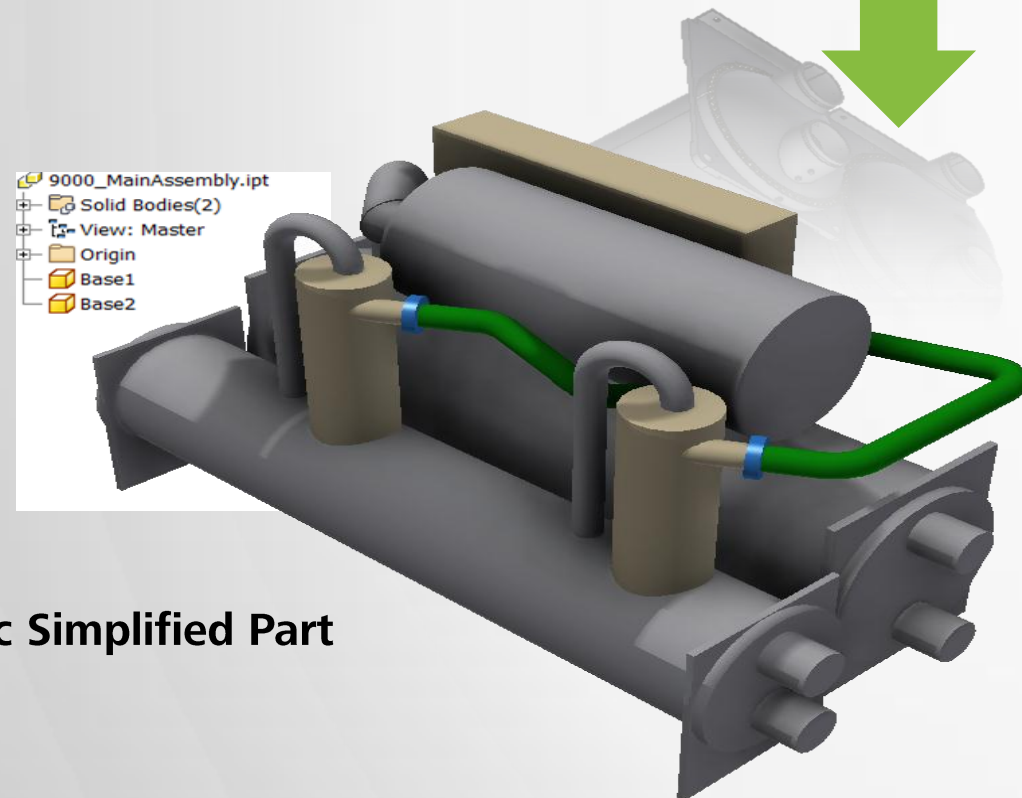
REVIT CATEGORY-SPECIFIC GUIDELINES: MECHANICAL EQUIPMENT CATEGORY – CHILLER FAMILIES

This document includes Autodesk specifications for the creation of Revit chiller families within the Revit Mechanical Equipment category. Following the criteria suggested by both this guide and the Revit Model Content Style Guide will enable manufacturers and other content creators to create chiller families that adhere to Autodesk and Autodesk® Seek standards for Revit Mechanical Equipment families.

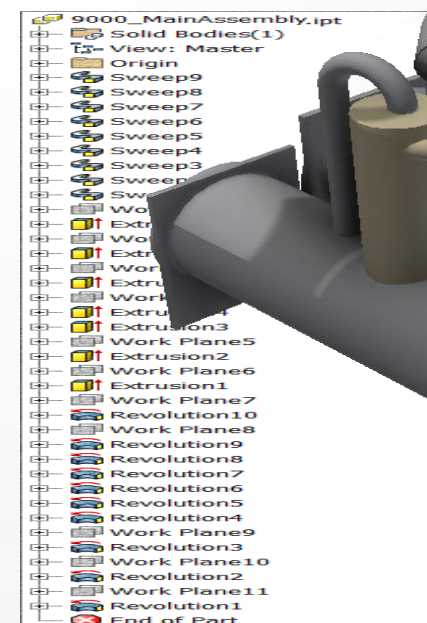
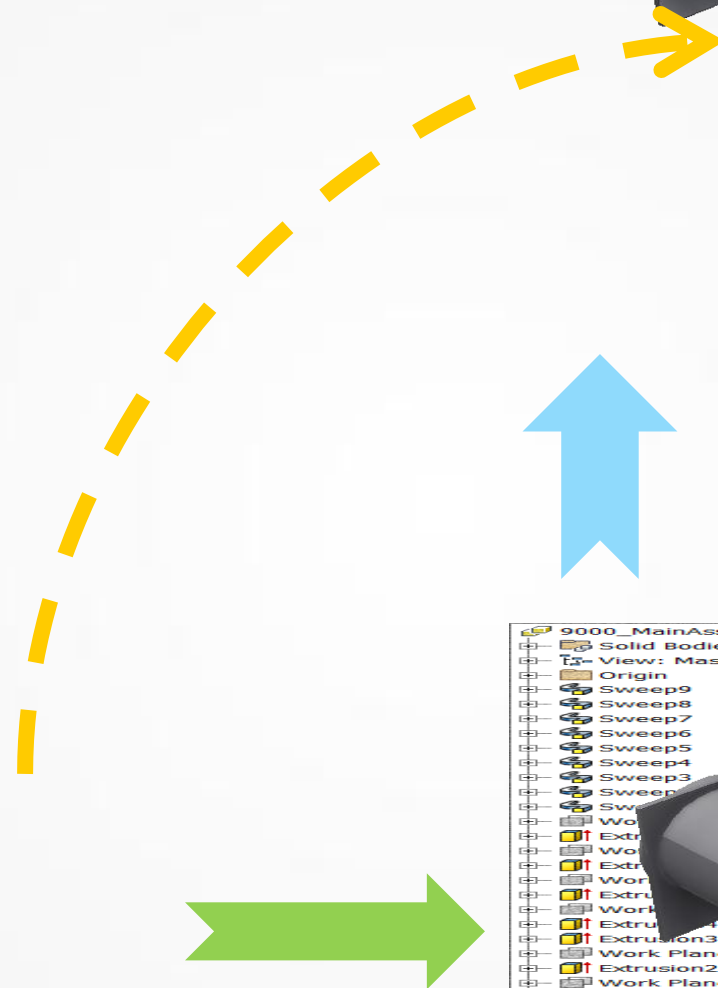
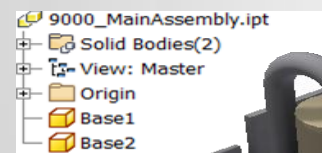
While this document contains specific chiller family creation guidelines, it is not intended to provide specifications for every kind of chiller. A sample chiller family is provided as an example to convey the standards outlined within this document, but many other chiller types may be created using these resources as a reference.



Inventor Assembly



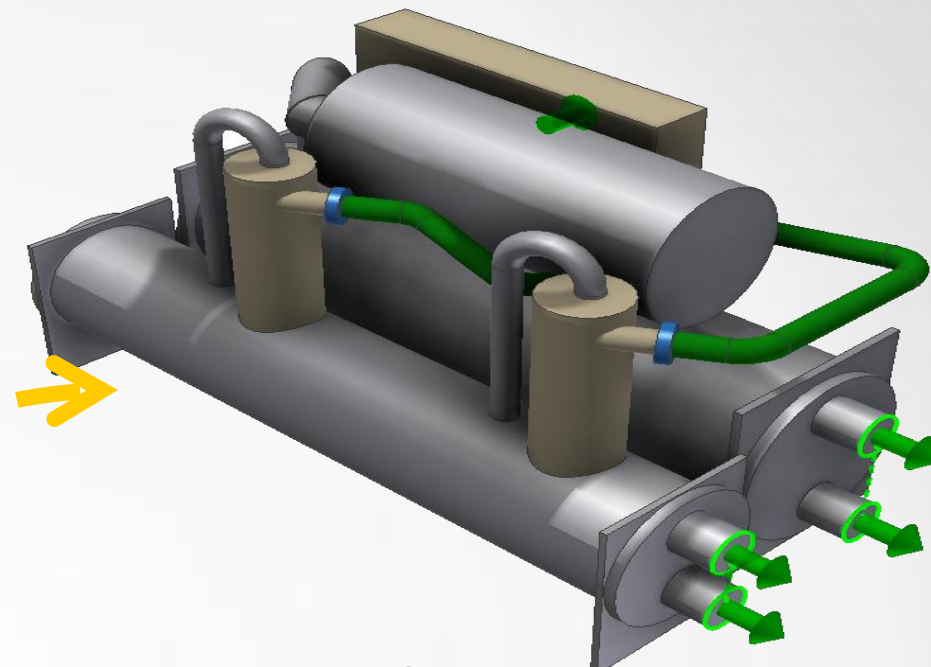
Static Simplified Part



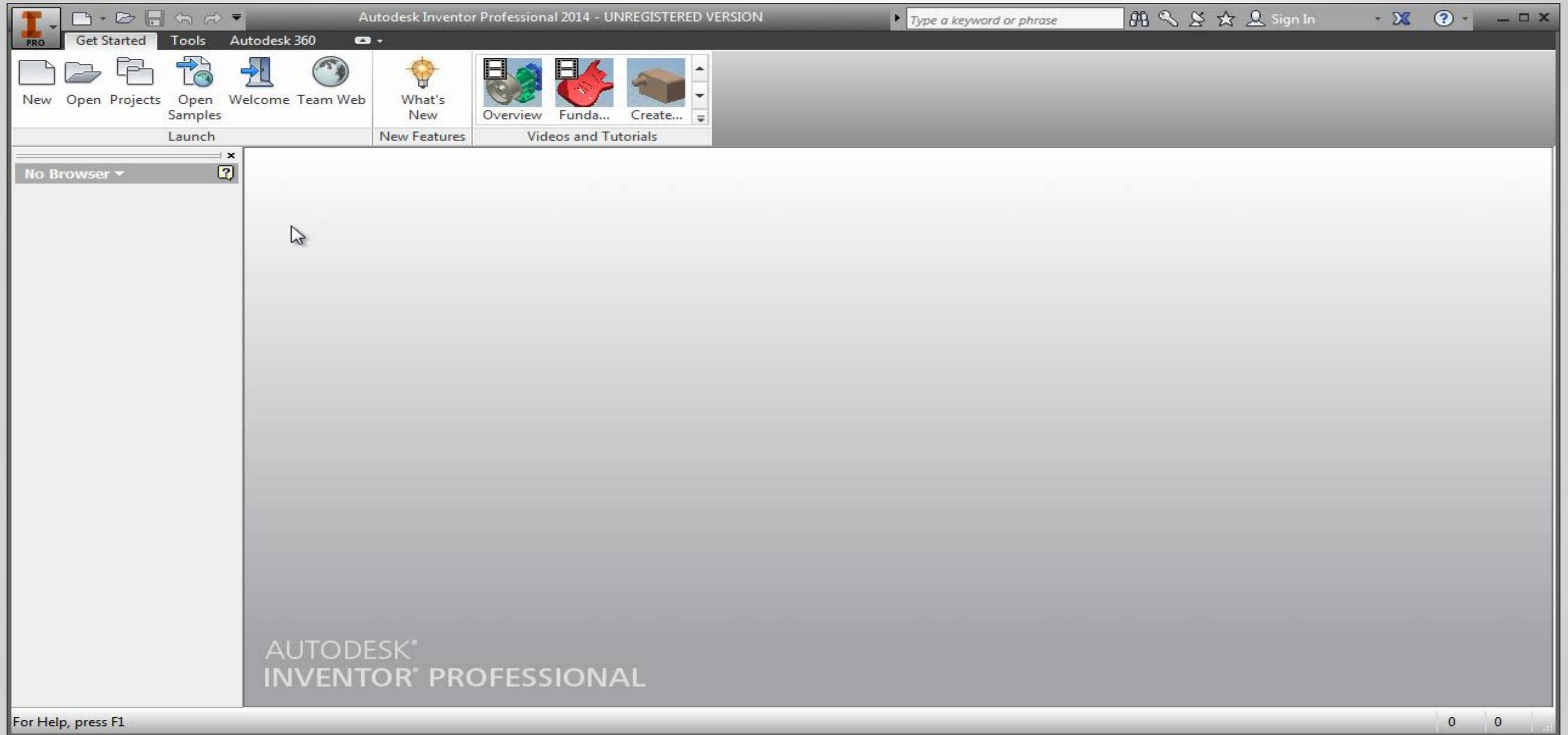
Parametric Simplified Part

***.rfa (Revit Family File)**

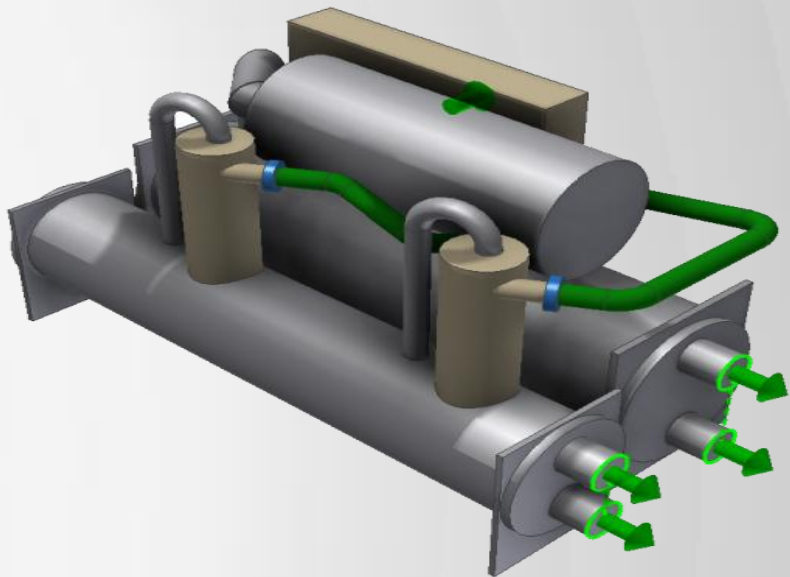
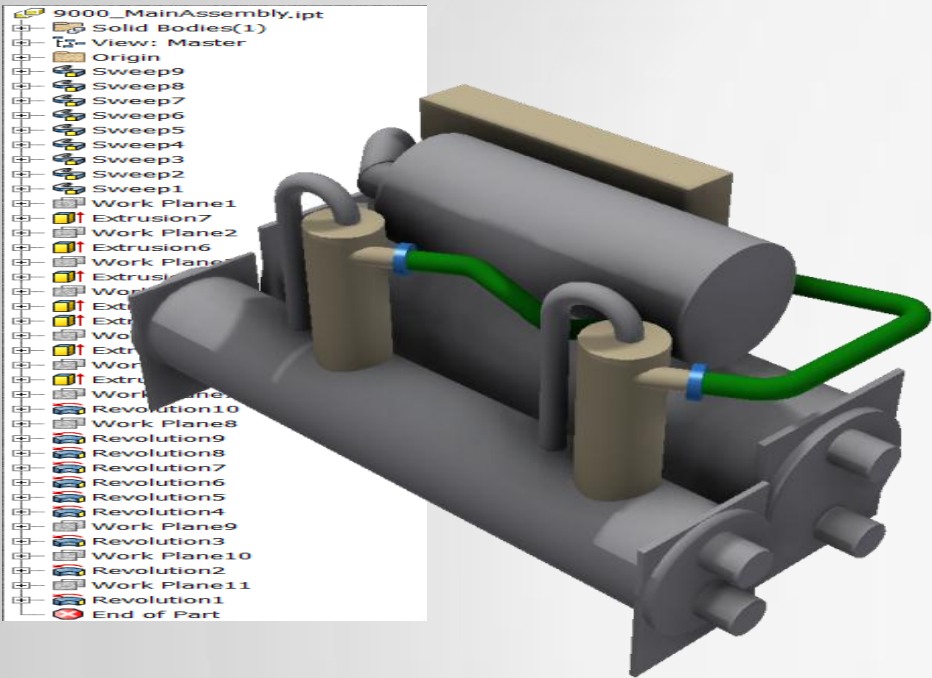
***.adsk (Autodesk Exchange File)**



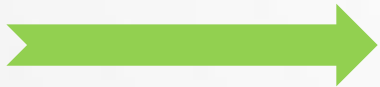
BIM Exchange Demo



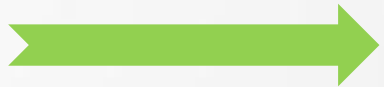
Automated Revit Families from Inventor



**Parametric
Inventor Part or
Assembly**



**Change to desired
configuration**



.RFA (Revit Family)

**Publish to
web**

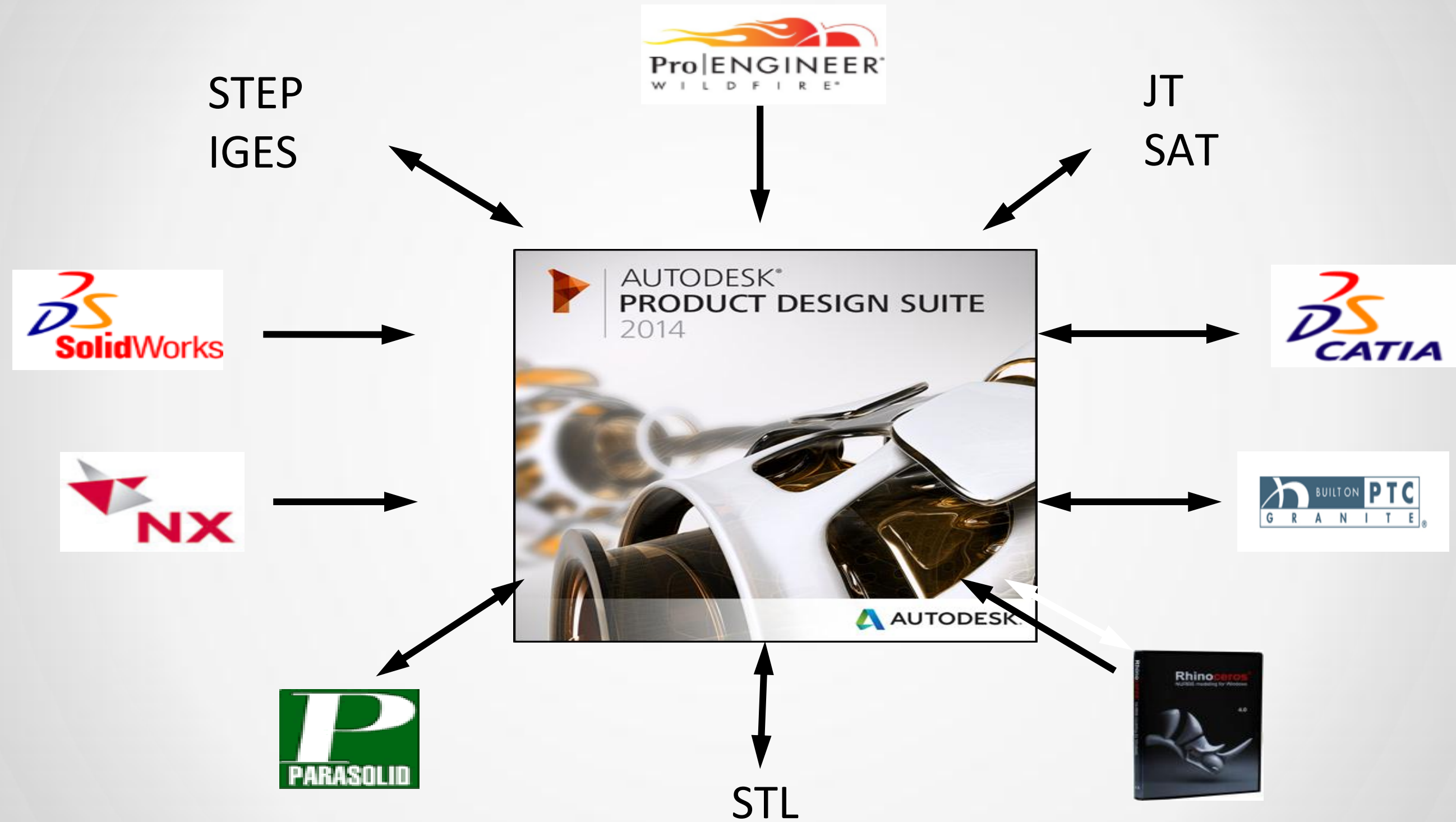
**Download from
web**

Inventor user

Revit user



Heterogeneous



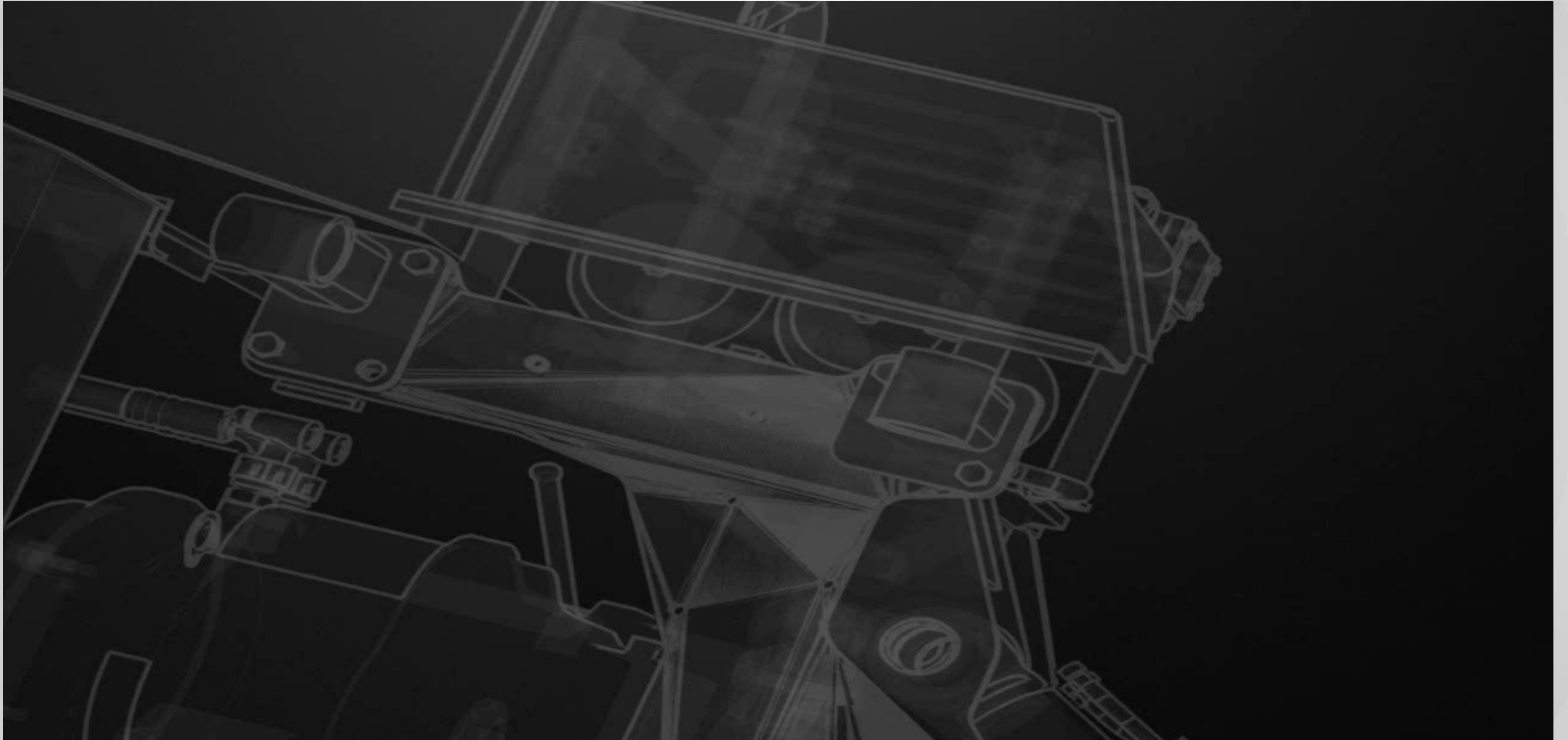
'I can get CAD files in all kinds of formats from partners & suppliers, and save out BIM ready Revit models! That's huge!'



BIM Content Files

- Revit (RFA)
- Inventor (3D DWG/ADSK)
- Others (DWG, SAT, SKP, DXF, DGN)
- **Inventor (RFA)**

BIM Exchange Demo: Non-Native Data



Remember these?

What Inventor users want to show their BIM customers.

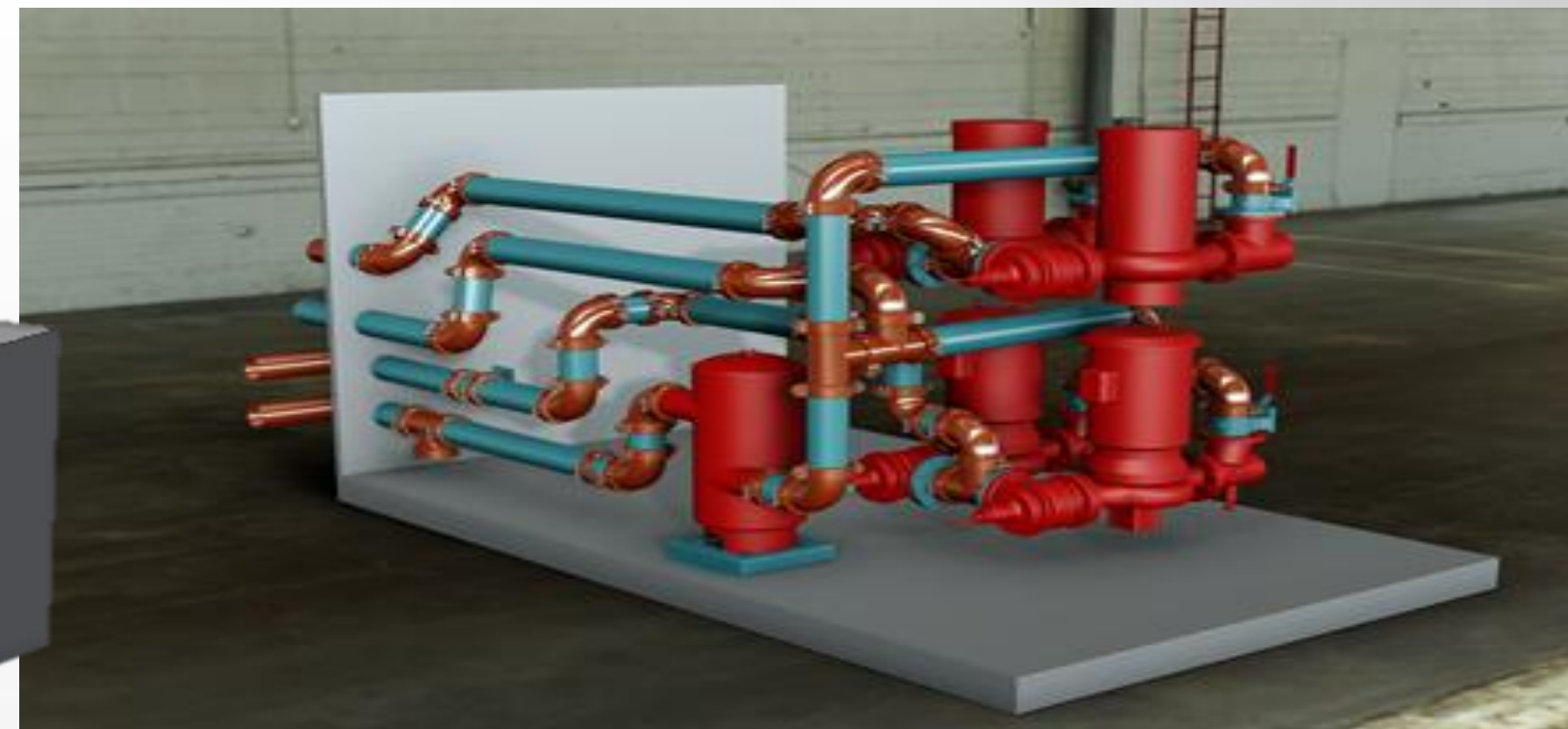
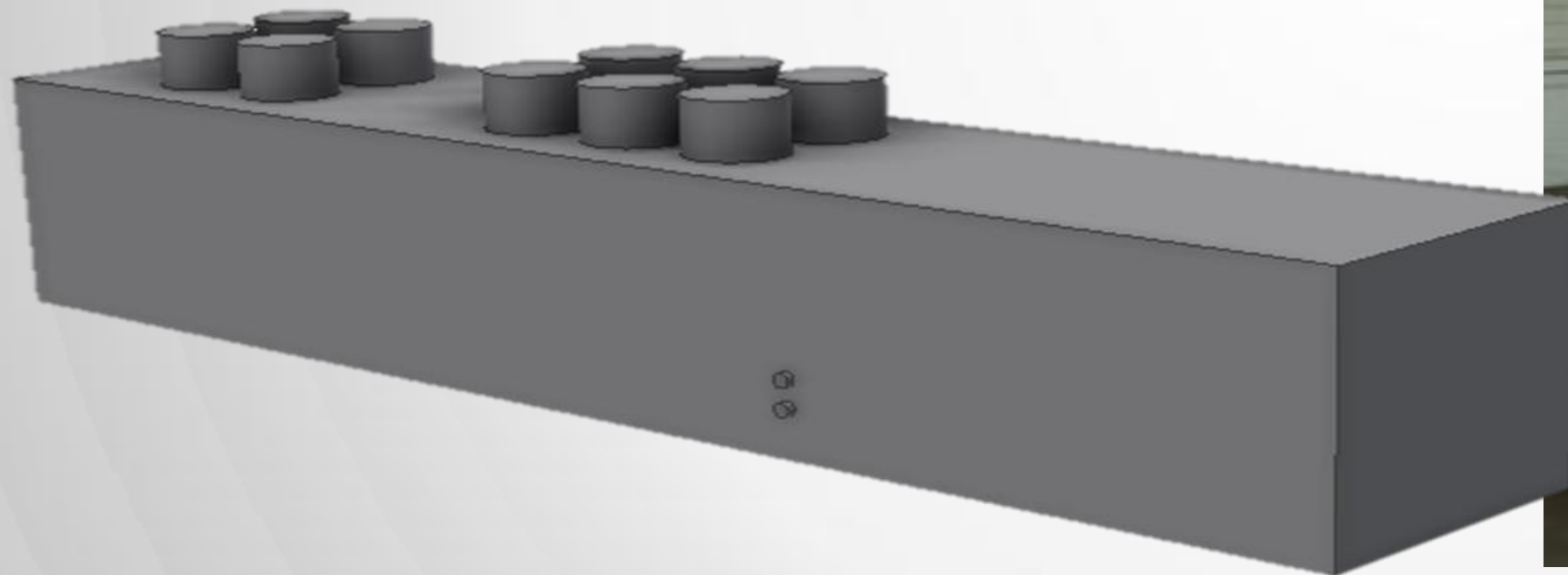


What BIM customers want to receive from Inventor users.

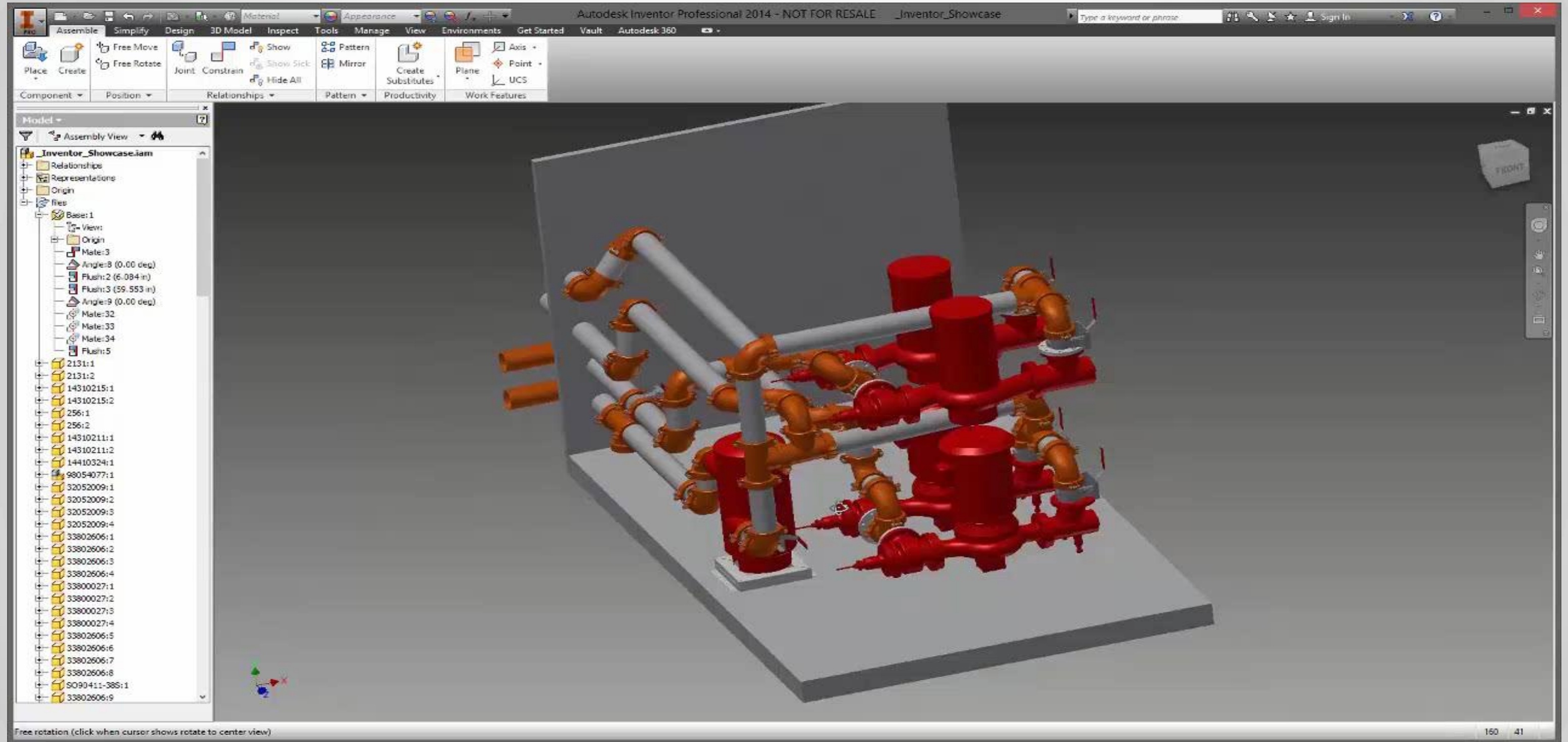


Visualization tools add value to BIM models:

Showcase and 3ds Max give Inventor users the ability to show all the details, in various environments, while still meeting BIM consumers needs for lightweight, simple models



Visualization Demo



Connected with Autodesk 360

Save, open, and share files directly through Autodesk 360

Autodesk 360

- Storage and anywhere access
- Viewing capabilities outside of
- Available anywhere
- Efficient sharing between Inventor and Revit designers



A Recap: What we showed you today

- Accelerate product development with Autodesk design suites
- Faster and more productive with Inventor
- Benefits of model simplification
- Leveraging Inventor and non-Inventor data to produce BIM ready models
- Added value of visualization to BIM Exchange
- Collaboration with Autodesk 360 Pro