

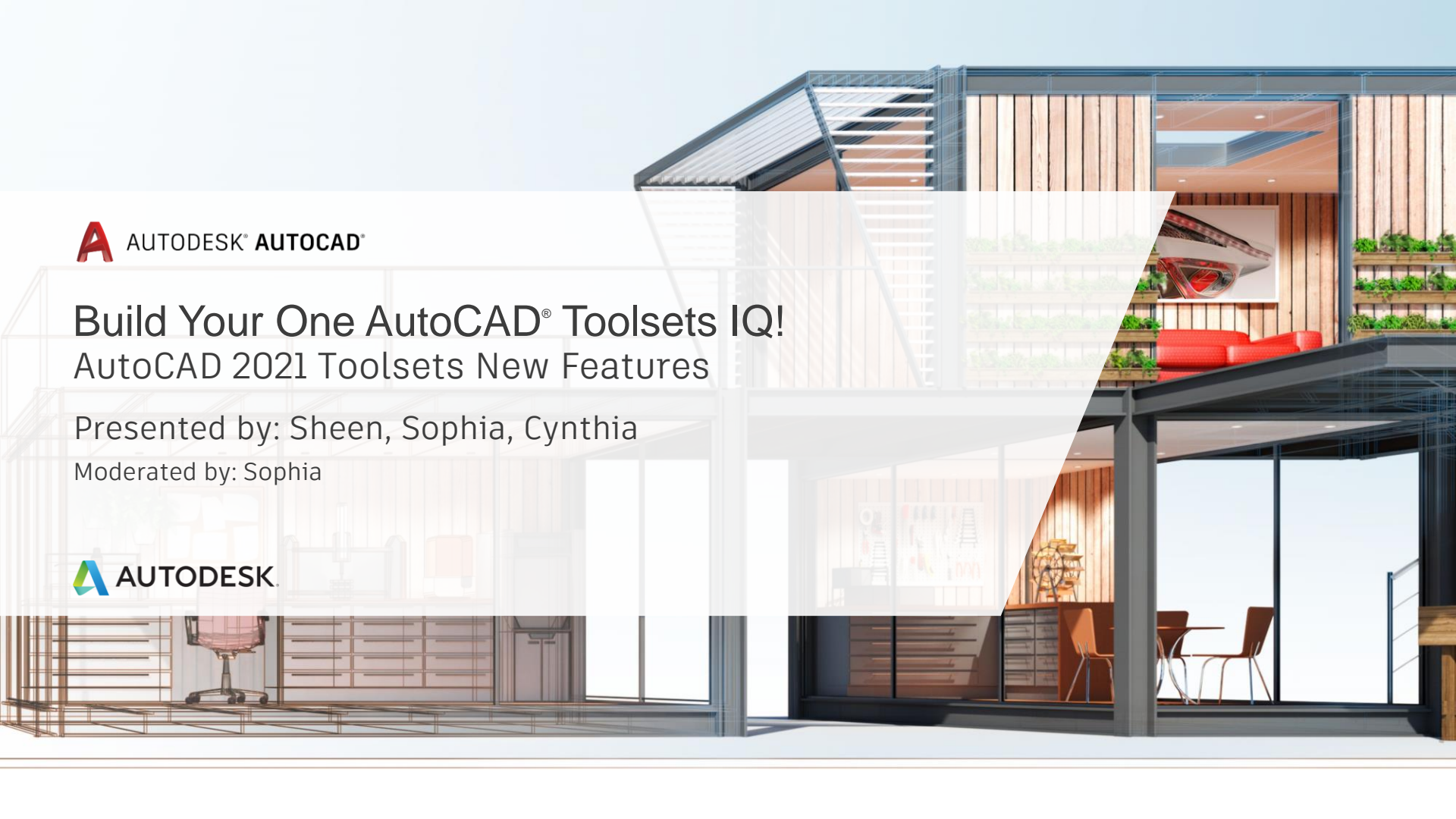


# Build Your One AutoCAD® Toolsets IQ!

## AutoCAD 2021 Toolsets New Features

Presented by: Sheen, Sophia, Cynthia

Moderated by: Sophia



# About Us:

- Sheen In Liew
  - Autodesk Technical Support Specialist
  - Japan, JP
  
- Sophia Lee
  - Autodesk Technical Support Specialist
  - Singapore, SG
  
- Cynthia Claire Tan
  - Autodesk Technical Support Specialist
  - Singapore, SG



# Before We Get Started...

- Feel free to leave questions in the questions window.
  - We'll answer as time allows.
- This session will be recorded.
- Links are available in:
  - Registration reminder
  - Post-Webinar survey

# Welcome to the Autodesk Help Webinar Series!

## Build Your AutoCAD IQ! **Live**

- ✓ Hosted by Autodesk Technical Support
- ✓ 20-40 minute demo
- ✓ Q&A in the chat window as time allows
- ✓ Sessions are recorded
- ✓ Links provided in the post-webinar survey

### Completed Topics

#### 23 April 2020

AutoCAD 2021 and AutoCAD Web & Mobile New Features

#### 23 January 2020

Creating Custom Catalogs in AutoCAD Plant 3D

#### 21 November 2019

Diagnose and Remedy Common Problems in AutoCAD Drawings

#### 19 September 2019

AutoCAD Architecture Project Navigator

#### 18 July 2019

AutoCAD Tips & Tricks

## Build Your AutoCAD IQ! **YouTube**

- **Watch Past Webinars on Autodesk landing page**
- **Download Datasets from same site**
- (Script, PPT, Sample DWGs)

[Build Your AutoCAD IQ! Webinar Playlist](#)

## Build Your AutoCAD IQ! **Beyond**

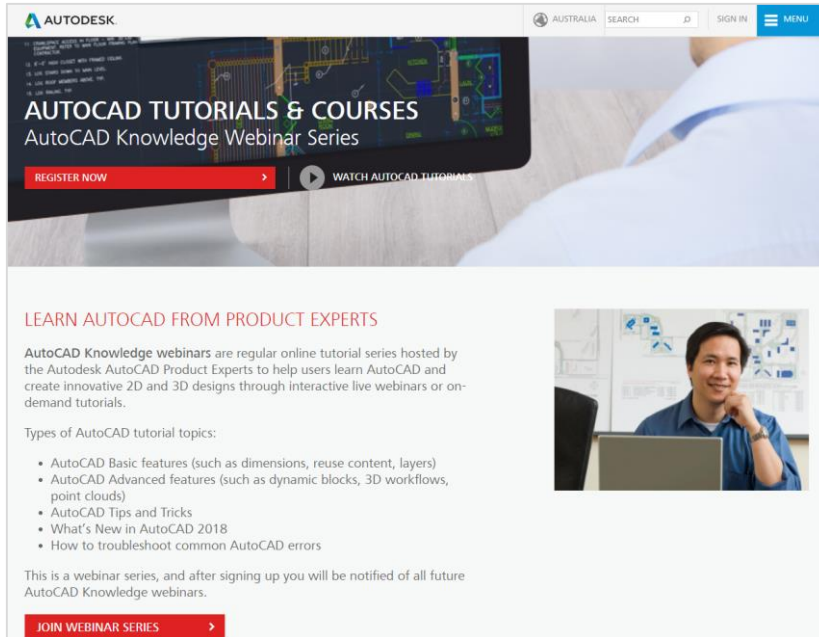
### Sign up & Join the conversation!

- **Build Your AutoCAD IQ! Webinar Landing Page**
  - *Register for the series, or send to your colleagues*
- **Autodesk AutoCAD Community Forums**
  - *Ask your peers and share your knowledge*
- **AutoCAD Customer Council**
  - *Join the Beta to influence the future of AutoCAD!*
  - *For AutoCAD:*  
[Autocad.beta@autodesk.com](mailto:Autocad.beta@autodesk.com)
  - *For AutoCAD LT:*  
[Autocad.lt.council@autodesk.com](mailto:Autocad.lt.council@autodesk.com)
- **Autodesk Help Webinars**



# Autodesk Help Webinars Landing Pages

- Our Help Webinars are available here, even if you had to miss any of the sessions.. You can watch them any time !



The screenshot shows the Autodesk website's landing page for AutoCAD Knowledge Webinars. At the top, there is a navigation bar with the Autodesk logo, the location 'AUSTRALIA', a search bar, a 'SIGN IN' button, and a 'MENU' icon. Below the navigation bar is a large hero section with a background image of a person in a white shirt looking at a computer screen displaying AutoCAD software. The text in the hero section reads 'AUTOCAD TUTORIALS & COURSES' and 'AutoCAD Knowledge Webinar Series'. There are two buttons: a red 'REGISTER NOW' button and a 'WATCH AUTOCAD TUTORIALS' button with a play icon.

LEARN AUTOCAD FROM PRODUCT EXPERTS

AutoCAD Knowledge webinars are regular online tutorial series hosted by the Autodesk AutoCAD Product Experts to help users learn AutoCAD and create innovative 2D and 3D designs through interactive live webinars or on-demand tutorials.

Types of AutoCAD tutorial topics:

- AutoCAD Basic features (such as dimensions, reuse content, layers)
- AutoCAD Advanced features (such as dynamic blocks, 3D workflows, point clouds)
- AutoCAD Tips and Tricks
- What's New in AutoCAD 2018
- How to troubleshoot common AutoCAD errors

This is a webinar series, and after signing up you will be notified of all future AutoCAD Knowledge webinars.

JOIN WEBINAR SERIES

## AutoCAD Landing Pages by Country :

[www.autodesk.com.au/campaigns/autocad-tutorials](http://www.autodesk.com.au/campaigns/autocad-tutorials)

[www.autodesk.com.sg/campaigns/autocad-tutorials](http://www.autodesk.com.sg/campaigns/autocad-tutorials)

[www.autodesk.in/campaigns/autocad-tutorials](http://www.autodesk.in/campaigns/autocad-tutorials)

# Autodesk Knowledge Network

knowledge.autodesk.com

## AutoCAD LT

- Getting Started
- Learn & Explore
- Downloads (Hotfixes, Licensing fixes etc.)
- Troubleshooting
- System Requirements

## Customer Service

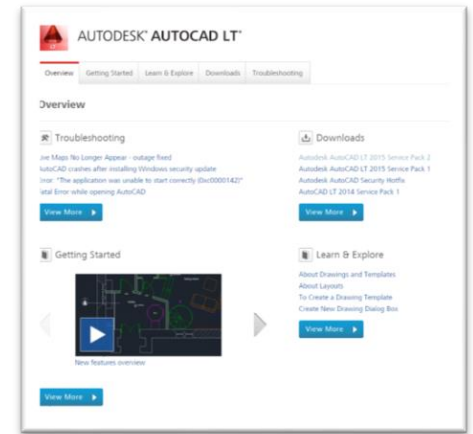
## Installation, Activation, & Licensing

## Account Management

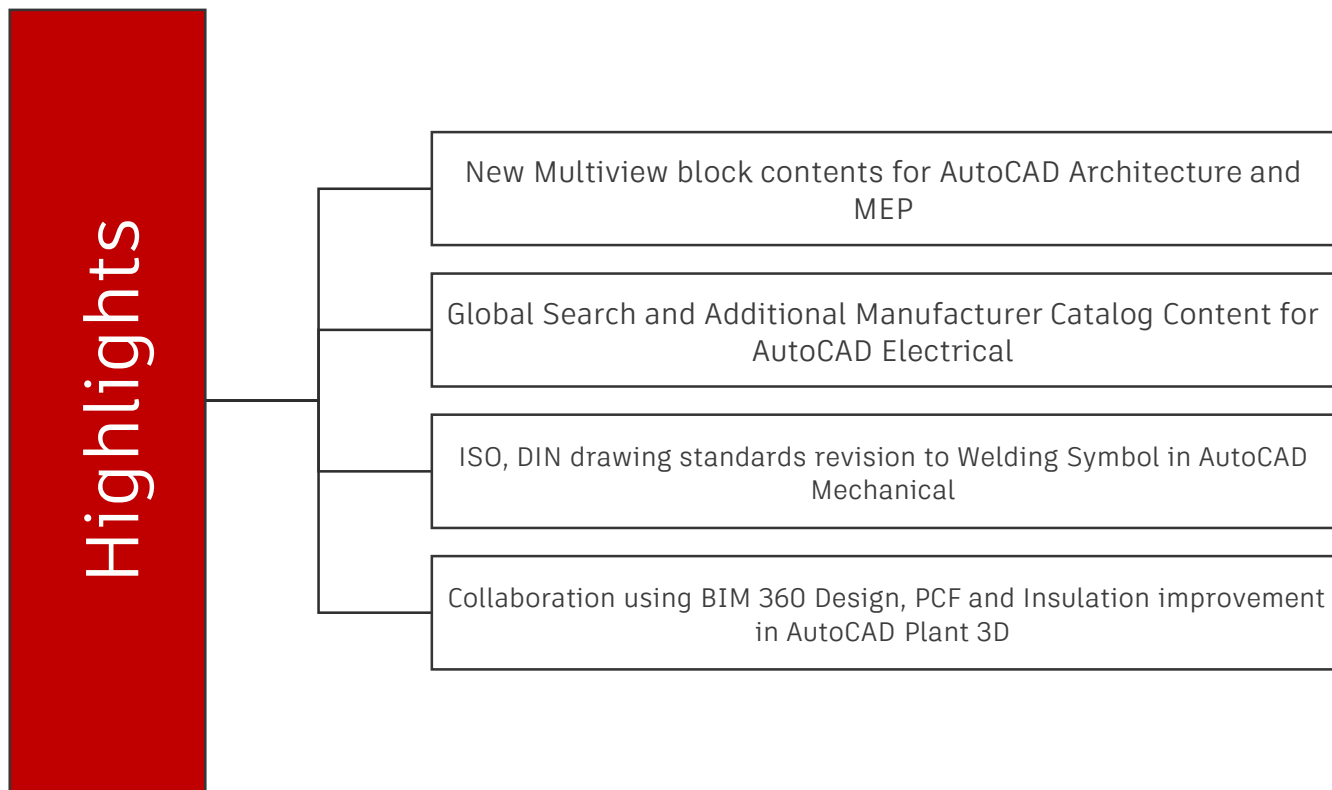
## AutoCAD

- Getting Started
- Learn & Explore
- Downloads (Hotfixes, Licensing fixes, etc.)
- Troubleshooting
- System Requirements

## Community (Forums, Blogs, Ideas, Articles, Screencast.)



# This Webinar's Agenda



# AutoCAD including specialized toolsets

## Key Benefits



### Intelligent

Access libraries of symbols, parts and detail components.

### Faster

Automate creation of annotations, layers, and properties.

### Familiar

Work in the familiar AutoCAD interface while using industry-specific functionality.

### Efficient

Extend workflows across disciplines more effectively.



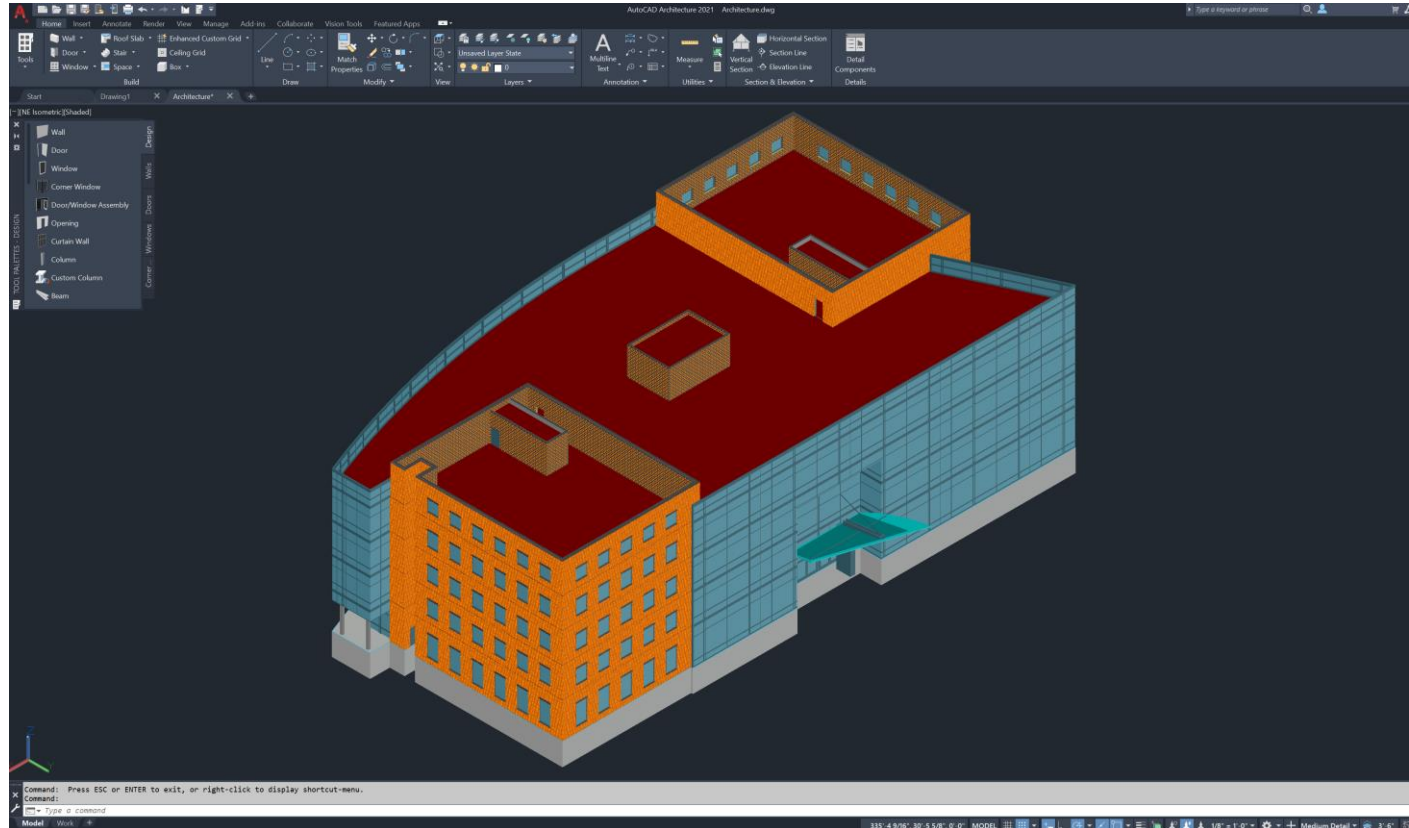
# AutoCAD including specialized toolsets

## Architecture Toolset

- Access 8,000+ intelligent architectural objects and styles.
- Automate floorplans, sections, and elevations.



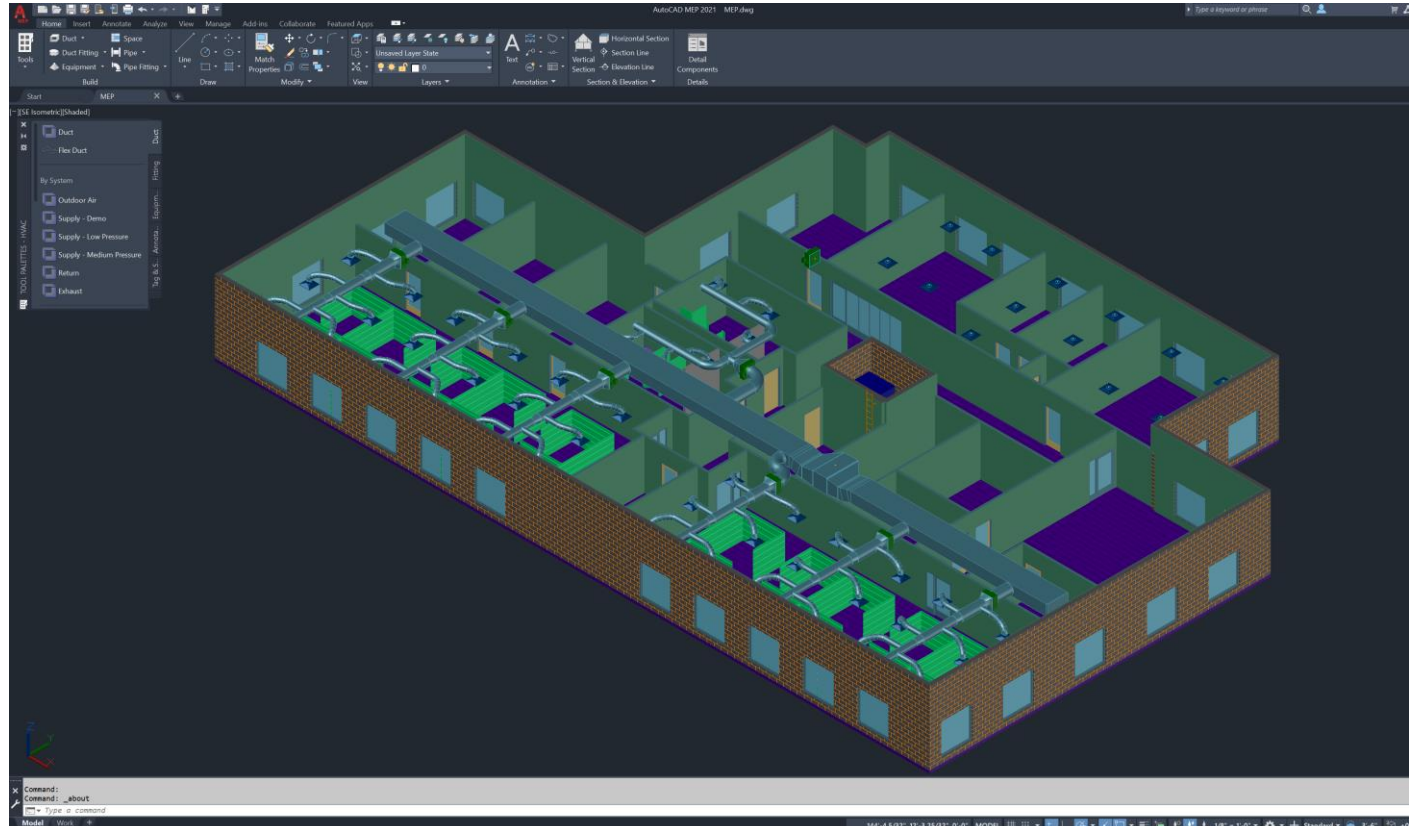
ARCHITECTURE  
TOOLSET



# AutoCAD including specialized toolsets

## MEP Toolset

- Access 10,500+ mechanical, electrical, and plumbing objects.
- Design ductwork, electrical conduit, and circuiting for HVAC, plumbing, and electrical.



MEP TOOLSET

# New Features in Architecture 2021 and MEP 2021

## Content (AutoCAD Architecture)

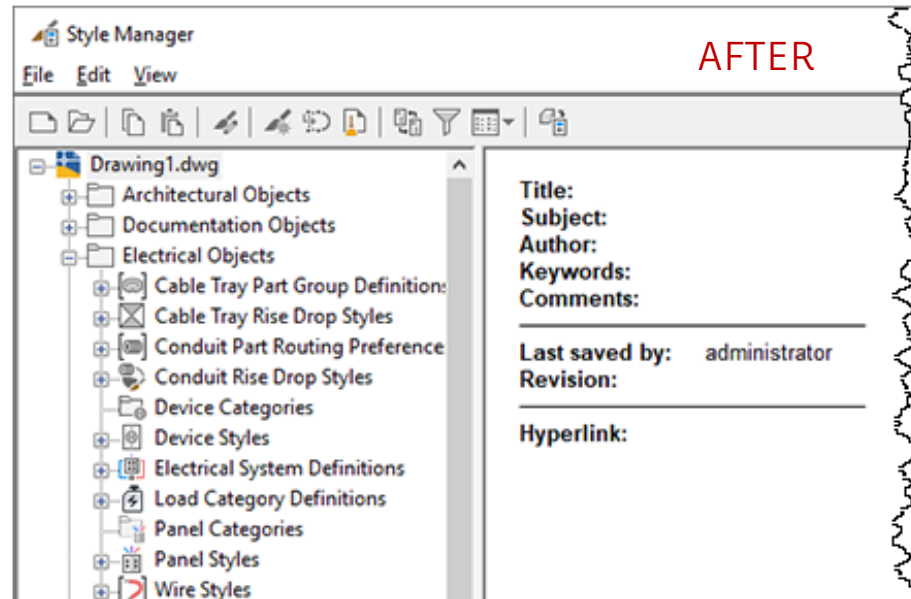
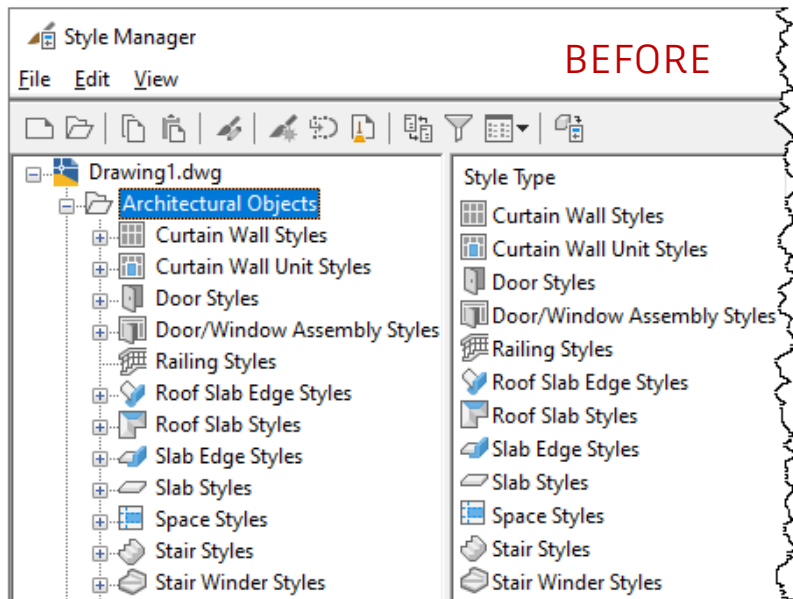
- 175 new Multi View Blocks and block references were added to the AutoCAD Architecture (Imperial and Metric) content packs for Design Center.
- Localization is supported for these Multi View Blocks from Metric profile through Design Center.



# New Features in Architecture 2021 and MEP 2021

## Icon Refresh

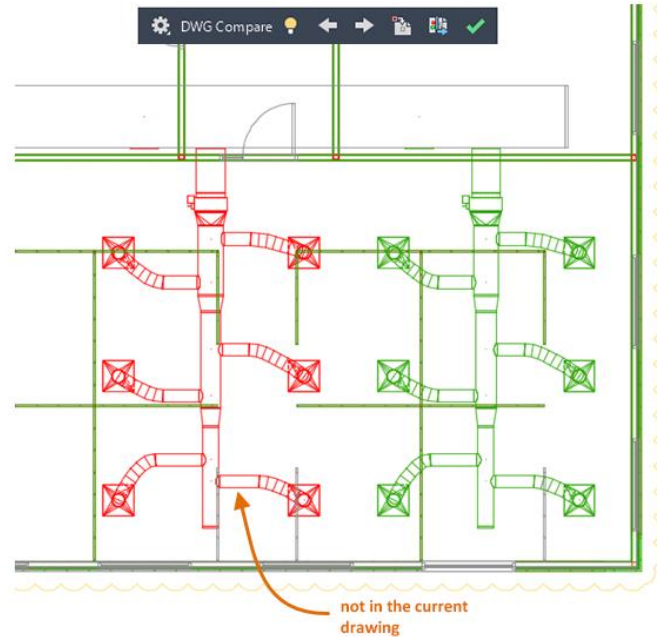
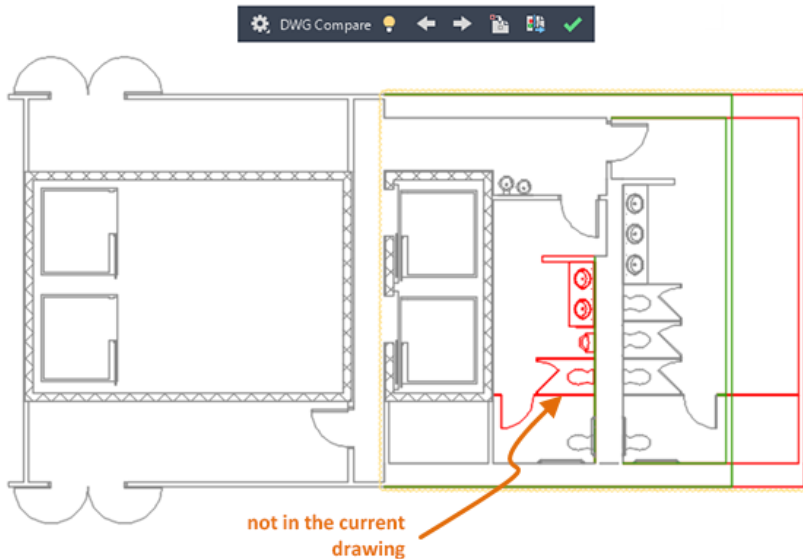
- Icon refresh on dialog boxes and palettes to provide the optimum contrast.
- This avoids distraction from drawing area, to keep user focus retained.



# New Features in Architecture 2021 and MEP 2021

## DWG Compare Import and XREF Compare

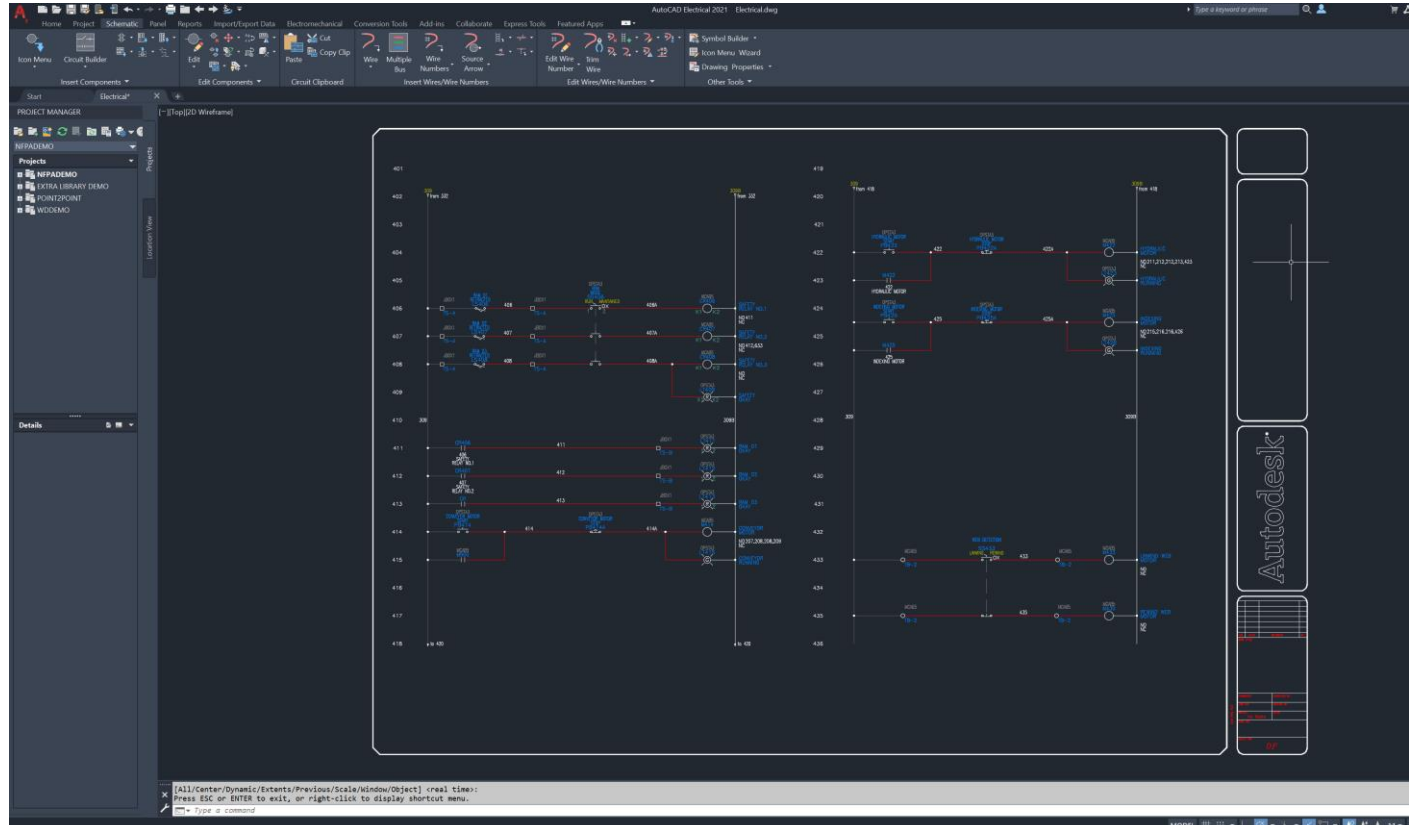
- Import of Architecture or MEP objects is supported on drawing compare.
- Below picture shows differences in AEC objects in the drawing.
- XREF Compare also supports AEC objects



# AutoCAD including specialized toolsets

## Electrical Toolset

- Access 65,000+ intelligent electrical symbols for electrical controls systems.
- Design panel layouts and schematic diagrams.



# New Features in Electrical 2021

## Global Search

- Introduction of Global Search functionality, allows users to search catalog data across tables through Catalog Browser.
- Top voted idea in the [AutoCAD Electrical Idea Station](#).

**Catalog Global Search**

COUNT	TABLE	CATALOG	MANUFACTURER	DESCRIPTION	RATING	TYPE	ASSEM
255	AM	031865	MOELLER	2500/5A AMMETER 96X96, VERT. CONN.	2500AMPS	ANALOG	
1132	AN	032972	MOELLER	50/5A AMMETER HORI 96X96, CLASS 1.5	50AMPS	ANALOG	
38063	CO	032973	MOELLER	100/5A AMMETER VERT 96X96, CLASS 1.5	100AMPS	ANALOG	
2113	CA	032974	MOELLER	200/5A AMMETER VERT 96X96, CLASS 1.5	200AMPS	ANALOG	
143935	CB	032975	MOELLER	250/5A AMMETER VERT 96X96, CLASS 1.5	250AMPS	ANALOG	
47763	CR	032976	MOELLER	400/5A AMMETER VERT 96X96, CLASS 1.5	400AMPS	ANALOG	
20	DI	032977	MOELLER	600/5A AMMETER VERT 96X96, CLASS 1.5	600AMPS	ANALOG	
784	DN	032978	MOELLER	800/5A AMMETER VERT 96X96, CLASS 1.5	800AMPS	ANALOG	
7088	DR	032979	MOELLER	1000/5A AMMET. VERT 96X96, CLASS 1.5	1000AMPS	ANALOG	
47302	DS	032980	MOELLER	1250/5A AMMET. VERT 96X96, CLASS 1.5	1250AMPS	ANALOG	
5426	EN	032981	MOELLER	1600/5A AMMET. VERT 96X96, CLASS 1.5	1600AMPS	ANALOG	
4	FM						

Category: AM (Ammeters) | Search: MOELLER 2500AMPS ANALOG | Global Search | Search Database: Primary

# New Features in Electrical 2021

## Additional Manufacturer Catalog Content

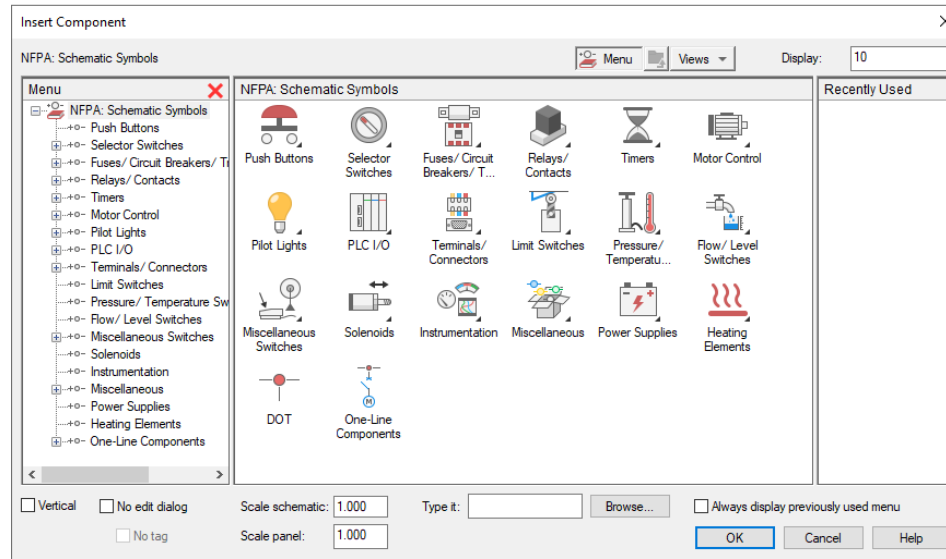
- Recently released Manufacturer Catalog content for previous versions are now included in AutoCAD Electrical.
- List of new content can be found in this article '[AutoCAD Electrical Content Packs](#)'
- New manufacturer contents included in AutoCAD Electrical 2021:
  - Eaton
  - Siemens (PLC) - S7-1500 PLC Series included



# New Features in Electrical 2021

## Icon Refresh

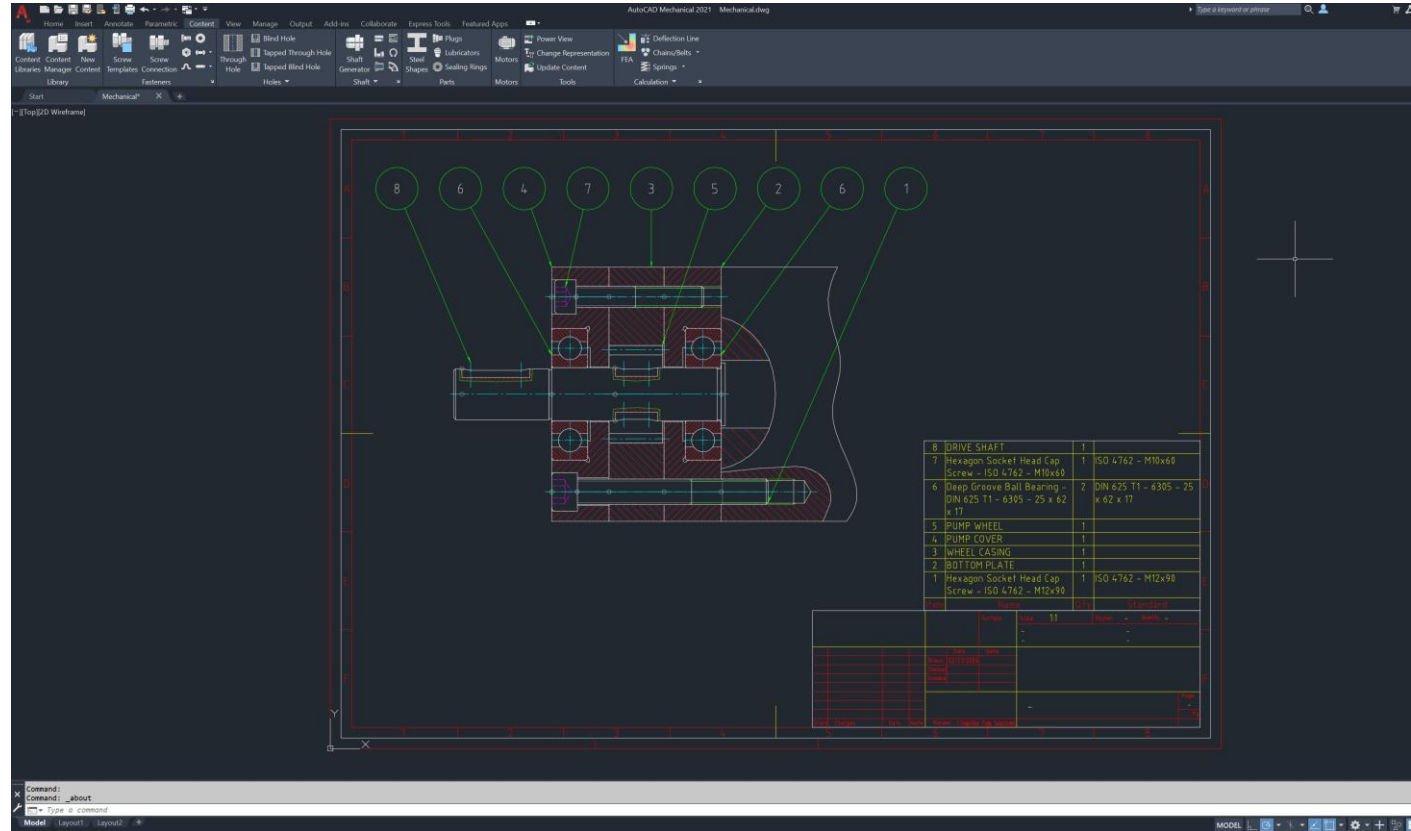
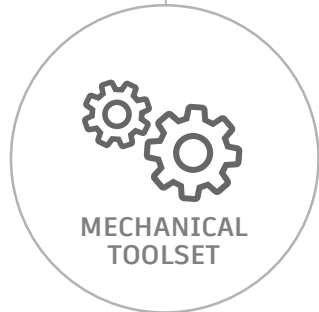
- Icons enhanced for sharper definition on 4k & UHD Monitors.
- Icon refresh includes : Project properties, Terminal strip editor, Project Manager, Catalog browser, Icon menu.



# AutoCAD including specialized toolsets

## Mechanical Toolset

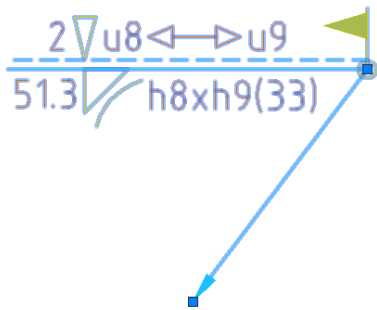
- Access 700,000+ intelligent manufacturing parts, features and symbols.
- Automate generating machine components and bills of material.



# New Features in Mechanical 2021

## Welding Symbol Revision Update

**Welding Symbol:** ISO (ISO 2553:2013)  
and DIN (DIN EN ISO 2553:2014) new  
standard revision



Welding Properties dialog box showing the Symbol and Requirements sections.

**Symbol**

- Drafting standard: ISO
- Standard revision: ISO 2553:2013, ISO 4063:2009
- Operation: 1
- All around: Yes
- Field weld: Yes
- Identification line: Other Side
- Notes: None
- Stagger: No
- Spacer: No
- Flip symbol: Left aligned

**Requirements - Arrow Side**

- Process: 1st Process
- Weld type: Fillet
- Penetration depth: 5
- Size: 1.3
- Distance: Intermittent
- Number: h8
- Length: xh9
- Spacing: (33)
- Contour: Concave

**Requirements - Other Side**

- Process: 1st Process
- Weld type: Stake
- Penetration depth: Z
- Distance: Between two points
- Start Point: u8
- End point: u9
- Contour: None

**Leader**

- Arrowhead: By Standard

Weld Symbol ISO dialog box showing the Leader and Text section.

Revision: ISO 2553:2013, ISO 4063:2009

Symbol: Leader and Text

Options

- Flip sides
- Stagger
- Spacer
- Flip symbol

Requirements

2 12 a (2)

5 1.3 2a 3a

Add process...

Clear

Settings...

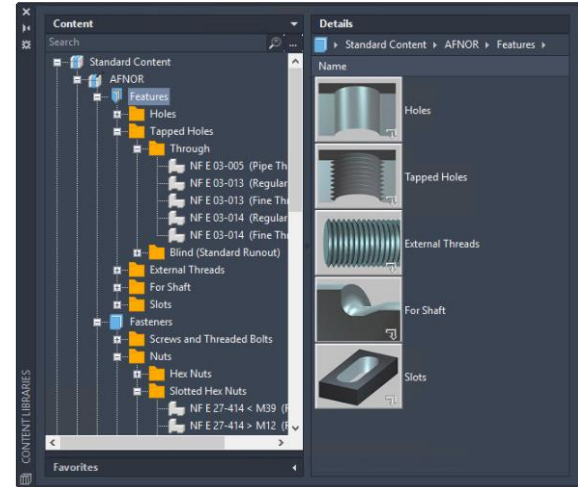
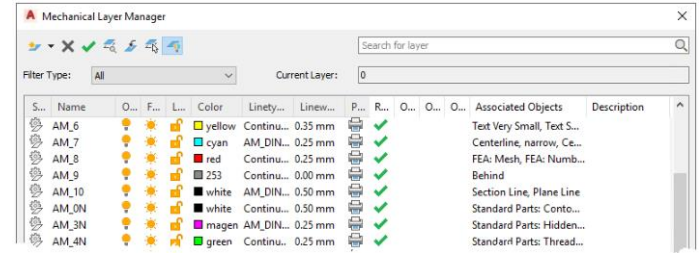
OK Cancel Help



# New Features in Mechanical 2021

## Icon Refresh

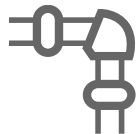
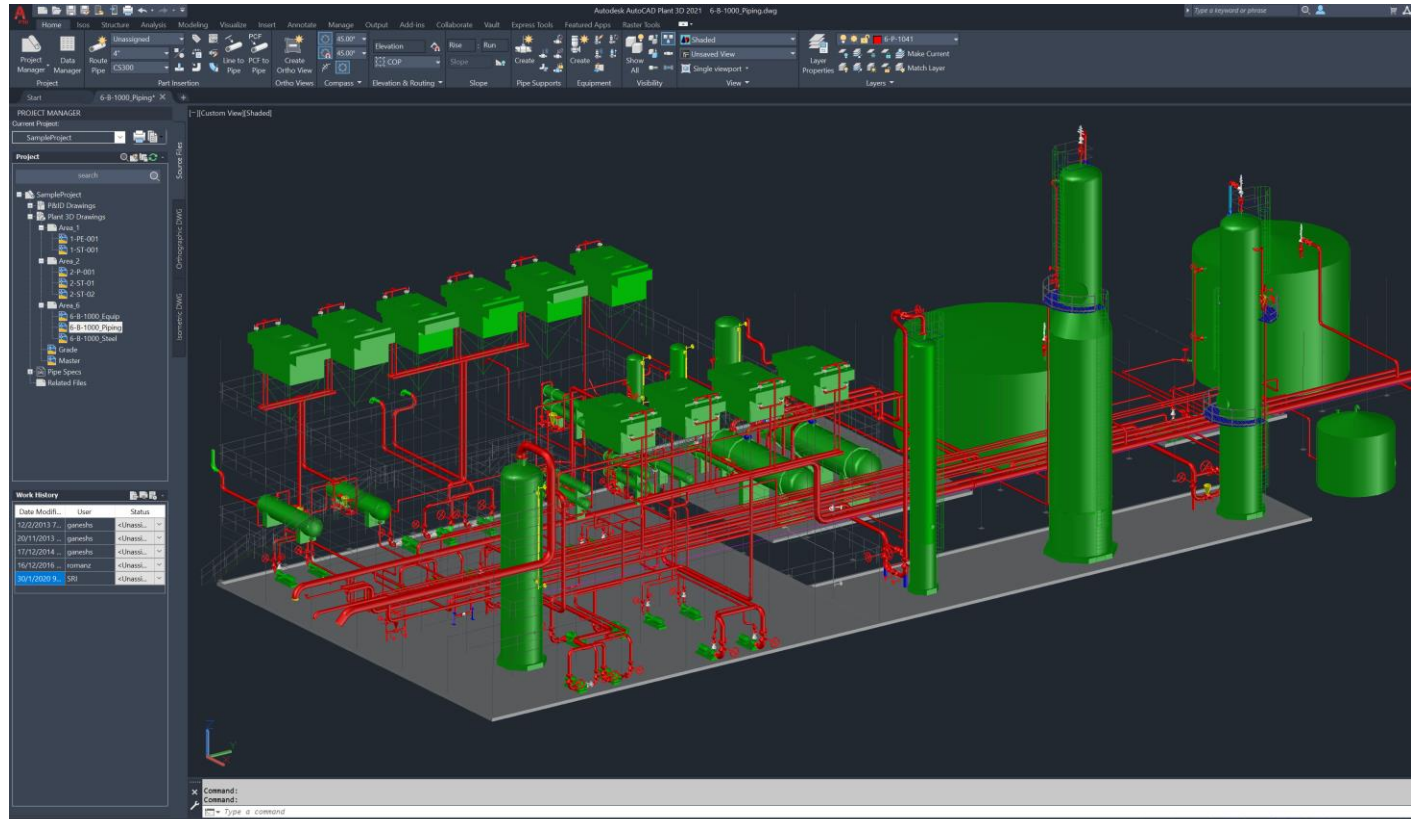
- Icons refresh included frequently used dialogs (BOM, Part list).
- Palettes (Family table) have been refreshed to support 4K Resolution and show optimum contrast.



# AutoCAD including specialized toolsets

## Plant 3D Toolset

- Produce P&IDs and integrate into a 3D plant design model.
- Create schematic diagrams and plant layouts.



PLANT 3D  
TOOLSET

# New Features in Plant 3D 2021

## Collaboration Projects with BIM 360 Design

- Based on the latest BIM 360 Design (Docs) technology
  - IMPORTANT NOTE: Need BIM 360 Design entitlement
- Two levels of administration: Account Admin and Project Admin.
- Team Member Permission Management
- Markups in BIM 360 for P&ID drawings
- Audit Database for Collaboration Project

# New Features in Plant 3D 2021

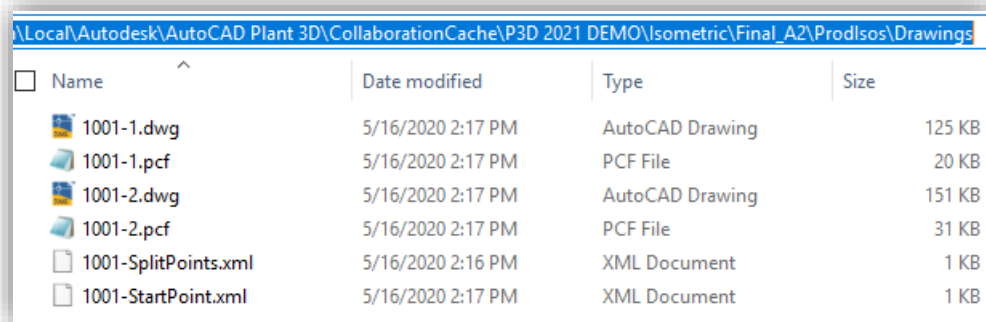
## Useful Links

- [Autodesk Collaboration for Plant 3D FAQ](#)
- [Account Administration](#)
- [Project Administration](#)
- [Folder Permissions](#)
- [Video: Manage Account Profile](#)
- [Video: Create a project and Activate Services](#)
- [Video: Manage Members](#)
- [Video : Manage Member Roles](#)

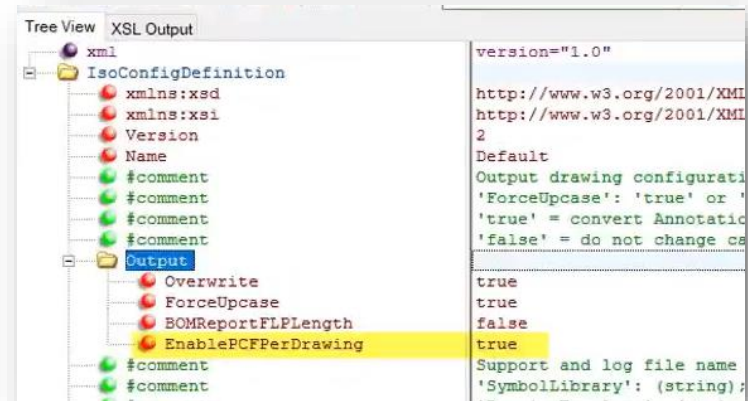
# New Features in Plant 3D 2021

## PCF per Drawing

- One line number can have multiple PCF files
- Each PCF represents one sheet
- Setting is controlled from Output section in IsoConfig.xml
  - EnablePCFPerDrawing="true"
  - EnablePCFPerDrawing="false"



Name	Date modified	Type	Size
1001-1.dwg	5/16/2020 2:17 PM	AutoCAD Drawing	125 KB
1001-1.pcf	5/16/2020 2:17 PM	PCF File	20 KB
1001-2.dwg	5/16/2020 2:17 PM	AutoCAD Drawing	151 KB
1001-2.pcf	5/16/2020 2:17 PM	PCF File	31 KB
1001-SplitPoints.xml	5/16/2020 2:16 PM	XML Document	1 KB
1001-StartPoint.xml	5/16/2020 2:17 PM	XML Document	1 KB



Tree View XSL Output

```
xml
  IsoConfigDefinition
    xmlns:xsd
    xmlns:xsi
    Version
    Name
    #comment
    #comment
    #comment
    #comment
    Output
      Overwrite true
      ForceUppcase true
      BOMReportFLPLength false
      EnablePCFPerDrawing true
    #comment
    #comment
```

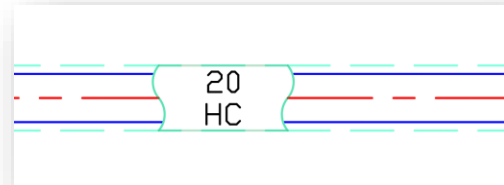
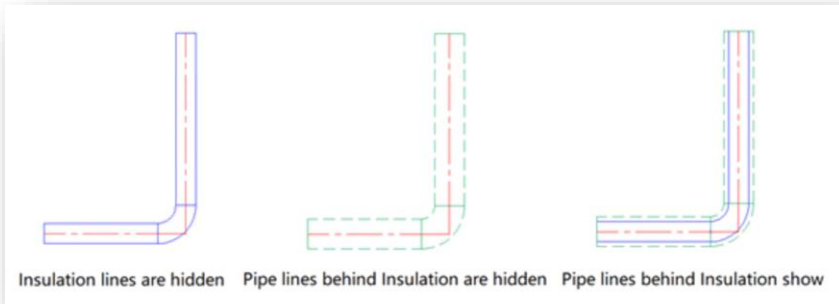
version="1.0"  
http://www.w3.org/2001/XMLSchema-1  
http://www.w3.org/2001/XMLSchema-2  
Default  
Output drawing configuration  
'ForceUppcase': 'true' or 'false'  
'true' = convert Annotation to uppercase  
'false' = do not change case



# New Features in Plant 3D 2021

## Insulation

- Transparent Insulation in 3D model
- Insulation can be displayed with pipe objects in orthographic drawings.
  - No insulation
  - Solid Line Insulation
  - Hidden Line Insulation
- Existing Ortho drawing: Use Insulation Tool to place insulation symbol



# Known Issues

## Updates to known issues

- Unable to use certain features in AutoCAD Electrical due to Microsoft Office updates from February 2020
- Saving an AutoCAD Mechanical drawing to a lower version file format having new symbol Revisions. (e.g. Welding Symbols for ISO & DIN Standards)
- New Weld symbols from DIN EN ISO 2553:2014 missing in AutoCAD Mechanical
- Microsoft Office 2016 issues after installing AutoCAD Mechanical or Inventor 2021
- Unable to export BOM & Parts list in AutoCAD Mechanical 2021
- Cannot use the Enter key to select current value while using AMPOWEREDIT command in AutoCAD Mechanical
- ACAD PROXY ENTITIES are not loaded and shown in AutoCAD Mechanical



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## Make anything™

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