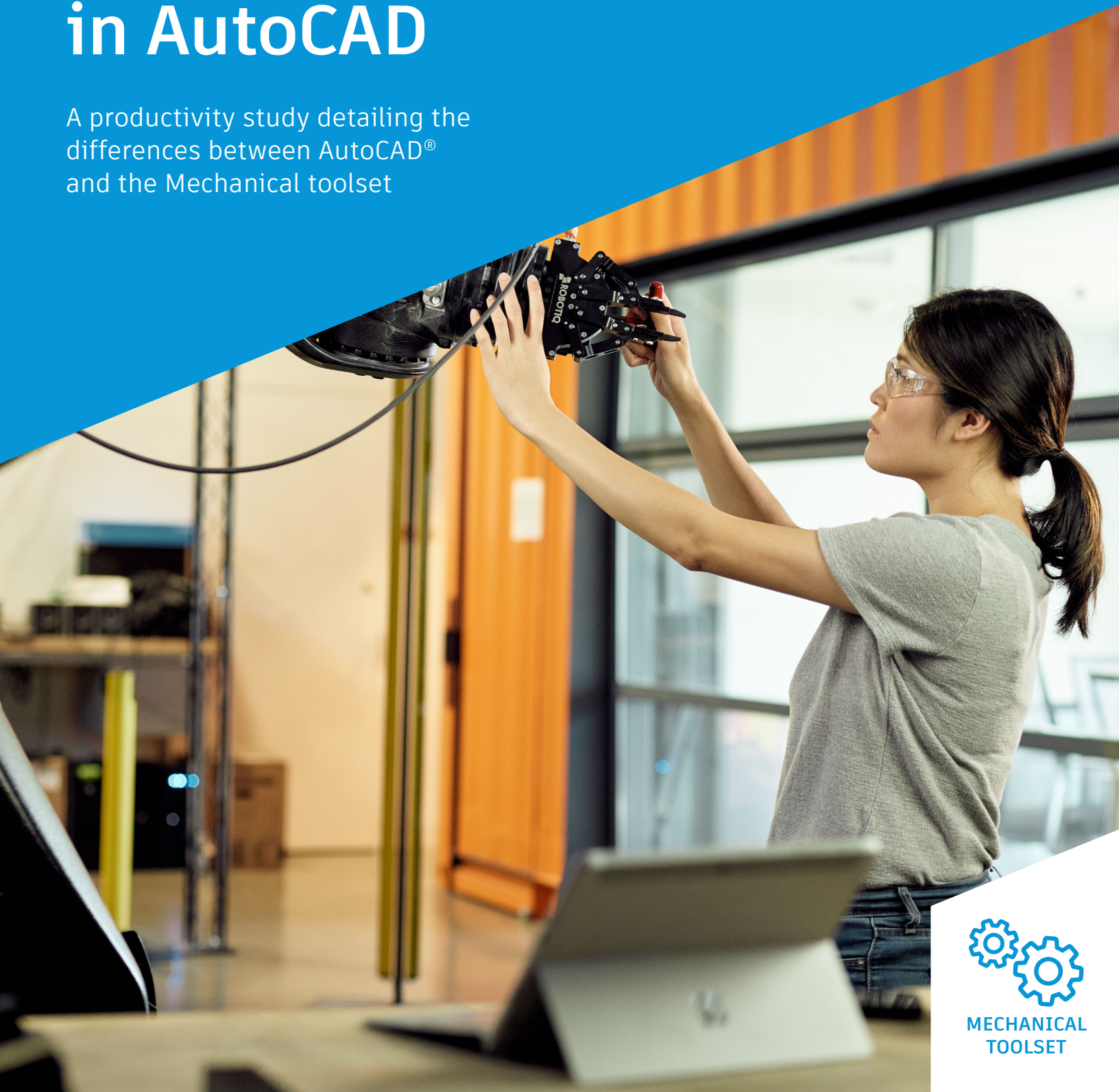


The Benefits of Using the Mechanical Toolset in AutoCAD

A productivity study detailing the differences between AutoCAD® and the Mechanical toolset



The Mechanical toolset (previously referred to as AutoCAD Mechanical), now included as part of the AutoCAD including specialized toolsets offering, can help save many hours of design and rework by automating many common tasks. This productivity study details the productivity gains that users may experience when using AutoCAD with the Mechanical toolset rather than just basic AutoCAD.*



PRODUCTIVITY STUDY HIGHLIGHTS

Benefits of the Mechanical Toolset

The Mechanical toolset brings dramatically increased productivity and significant time savings to common AutoCAD® mechanical design tasks



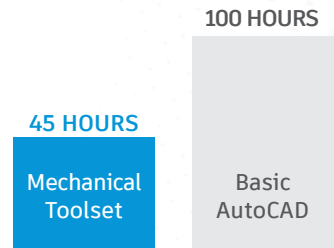
MECHANICAL
TOOLSET

STUDY SUMMARY

Autodesk commissioned a study that compared basic AutoCAD to the Mechanical toolset when performing tasks commonly used by mechanical engineers.

Results showed that the Mechanical toolset provided up to **55% overall productivity gain*** compared with basic AutoCAD, when these tasks were performed by an experienced AutoCAD user.

55% Overall Productivity Gain*



HOW THE MECHANICAL TOOLSET SAVES TIME:

- Design a new robot clamp**
(Time savings with the Mechanical toolset up to **45%**)
Intelligent layer management system places items on the correct layer, color, and linetype as the drawing is created.
- Detail and optimize new tray clamp**
(Time savings with the Mechanical toolset up to **46%**)
More commands than the basic AutoCAD commands, including more than 30 options for rectangle, arc, and circle creation.
- Prepare assembly with details**
(Time savings with the Mechanical toolset up to **86%**)
Recognizes identical parts in 2D, even when they're hidden.
- Calculate forces in mechanism**
(Time savings with the Mechanical toolset up to **80%**)
More calculation functions, even for analyzing 2D geometries subject to static loads.
- Connect clamp with shaft**
(Time savings with the Mechanical toolset up to **70%**)
Creates parts with all project information, assisting in creating complete machine parts.
- Complete assembly**
(Time savings with the Mechanical toolset up to **7%**)
Delivers additional value for drafting functions to basic AutoCAD's already highly sophisticated functionality.
- Add pulleys and belt**
(Time savings with the Mechanical toolset up to **69%**)
Parts are created to specs along with reports and calculations needed to analyze the design.
- Mount clamp fixture with screws**
(Time savings with the Mechanical toolset up to **78%**)
Over 700,000 standard parts, 100,000 pre-drawn standard features, and over 8,000 pre-drawn holes available.
- Prepare production drawings for assembly**
(Time savings with the Mechanical toolset up to **68%**)
Create parts lists and bill of materials (BOM) that update as the design changes.
- Prepare production drawings for clamp and shaft**
(Time savings with the Mechanical toolset up to **62%**)
Intelligent drafting tools help users edit features without having to remove and recreate the original.
- Modify shaft in part and assembly drawing**
(Time savings with the Mechanical toolset up to **45%**)
Power Commands use object information to accelerate user operations.

*As with all performance tests, results may vary based on machine, operating system, filters, and even source material. While every effort has been made to make the tests as fair and objective as possible, your results may differ. Product information and specifications are subject to change without notice. Autodesk provides this information "as is", without warranty of any kind, either express or implied.

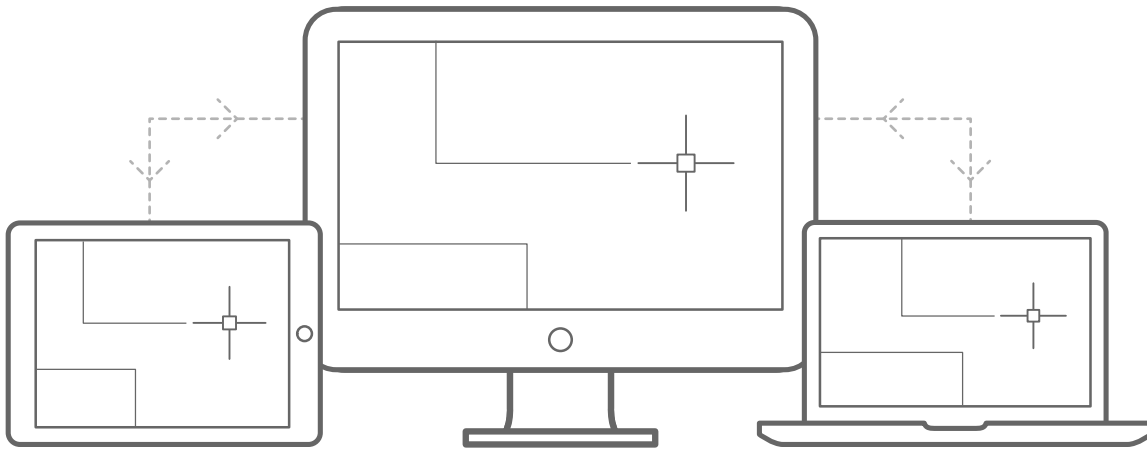
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AutoCAD includes access to all AutoCAD vertical industry functionality as specialized toolsets. Take your work with you with the AutoCAD mobile app and the AutoCAD web app.

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CAD software to design anything – with time-saving specialized toolsets and AutoCAD web and mobile apps



AutoCAD mobile app

View and edit your latest drawings in the field and on the go with a smartphone or tablet.

AutoCAD

Design in 2D and 3D across AutoCAD and seven specialized toolsets.

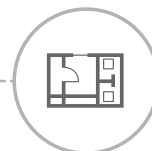
AutoCAD web app

View and edit drawings in a web browser on virtually any computer. No install required.



Mechanical

700,000+ intelligent manufacturing parts. Automate creation of bills of material.



Architecture

8,000+ intelligent architectural objects. Automate floor plans and elevations.



Electrical

65,000+ intelligent electrical symbols for electrical controls systems.



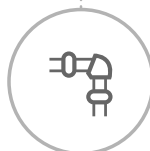
Map 3D

Incorporate GIS and CAD data to support planning, design, and data management.



MEP

10,500+ intelligent mechanical, electrical, and plumbing objects.



Plant 3D

Produce P&IDs and integrate into a 3D plant design model.



Raster Design

Edit scanned drawings and convert raster images into DWG objects.