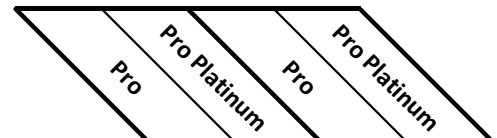
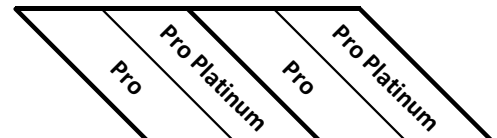


# What's New Since You Last Upgraded



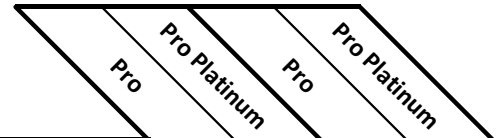
Feature	Description	16		17	
<b>DRAFTING/DETAILING</b>					
Blocks and Groups	In-place editing of blocks and groups.			●	●
Drafting Palette Object Caching	Ability to lock/unlock section, elevation, and detailed views so that they are not updated with each model change speeding up overall modeling performance.			●	●
Index Color Support	Index Colors added. Includes proper round-tripping of .DWG files.			●	●
Layer Filters	Layer filters help organize layers by a defined set of parameters.			●	●
Layer Management	Addition of Line Style, Pen Width, and Print Style parameters to Design Director and Drawing Setup.			●	●
Line Width Scaling	New value "Device width" for TC pen property "Line Width Scale System" was added.			●	●
Meet 2 Lines tool	Bezier and spline curves are now supported.			●	●
Multilanguage support	Input, edit, and visualize objects name (Layers, blocks, styles, etc.) independent of the current local OS system settings.			●	●
Multi-Leader	New leader type with multiple arms.			●	●
Section Detail tool	Enables closed 2D entities (circles, polygons, polylines) to act as a cutting contour with other intersecting 2D objects.			●	●
Surface Measurement	New option to perform measurements of surface areas and volumes of 3D Surface Objects.			●	●
XClip	Added Xclip functionality comparable to AutoCAD® Xclip command.			●	●
Xref Binding	Xrefs can be bound to the main drawing. Bound Xrefs may be exploded. Xref layer properties can be changed in the main drawing.	○	○	●	●
Multi-Text, Text	Double-click Text or M-Text to enter edit mode.	○	○	●	●
Paper Space Templates	Insert and extract specific Paper Spaces from other .TCT (TurboCAD templates), .TCW, and .DWG files. Ability to define different printers and printer settings for each Paper Space.	○	○	●	●
Pick-Point Hatching	Redesigned tool that streamlines the pick point hatch process.	○	○	●	●
Shrink/Extend tool	Bezier and spline curves are now supported.	○	○	●	●
Viewport Explode	Viewports may be exploded to create flat 2D geometry, supports hidden line or wireframe views.	○	○	●	●
Templates	Improved Architectural and Metric templates.	○	○	●	●
<b>3D MODELING</b>					
Quick Pull Tool	Select any enclosed geometry on a 3D face and press it into or pull it out of the design. Specify draft angle and add a chamfer or fillet. Works with solids or surfaces.	○	○	●	●
Helix	Quickly draw 2D and 3D spirals.	●	●	●	●
Rail Sweep	Optionally use a compound path including vertical profile orientation relative to path.	○	○	●	●
Revolve Tool	Optionally use a compound profile that contains holes.	○	○	●	●
3D ACIS® modeler	Added to v17 - Updated Solid Modeling engine - improved performance, improved performance with InterOp filters (STEP and IGES), improve projection functionality.	○	○	●	●
3D Booleans	Added to v16 - Ability to select multiple entities for addition or subtraction.	○	○	●	●
Lofting	Lofting guidelines enhanced by adding 3D splines and polylines.	●	●	●	●
Parametric Parts	Added in v17 - Additional functions supported in scripts. Beta capability to optionally import Dynamic Components from SketchUp drawings and have them converted to a Parametric Parts.	○	○	●	●

# What's New Since You Last Upgraded



Feature	Description	16		17	
<b>ARCHITECTURAL</b>					
Walls	Added to v17 - New top and bottom wall profile modifiers. New Link Wall Segments option added; new property, Autocleanup added.	○	○	●	●
Multi-Component Walls	Walls were added to the style manager, allowing the user to define every part of a wall (sheet rock, insulation, wire mech, stucco, etc.) Properties can be added to each component. Store together and if you extend the wall, the foundation and everything associated with it will extend.		●		●
Doors and Windows	Added to v17 - New Muntins tool that allows for definition of type and style of window pane holder/separator in doors and windows; Added to v16 - "Right/Left" and "Inside/Outside" flip options added to Node Editing making precise placement easier.	○	○	●	●
Stairs (Parametric)	Added to v16 - Create stairs in 3 clicks specifying style, materials, dimensions and more, and ability to edit parameters.	●	●	●	●
Railings	Added to v17 - Separate materials can be defined for each Rail element. Added to v16 - More extensive parameters for styles, location, extensions, and more. Attach railings or banisters to both sides of stairs at once.		○		●
Slabs	New in v15, define and add multiple slabs and slab styles; and cut holes. Added to v16 - improved offset capabilities and definitions.		●		●
Style Manager	Define and reuse custom style guides for architectural object types. This was expanded with v16 to include schedules, text, and dimensions (both AEC and non-AEC). Added to v16 were pre-configured styles for Component Walls, Windows, Doors, Stairs, Slabs, Rails, Tables, and text.		○		●
Terrain Tool	Added to v15 - Create terrain objects from selected points, with v17 terrains may be imported from XYZ or CSV files.	○	○	●	●
Section/Elevation Tools	Create sections and elevations including rendered modes.		●		●
Schedule Table	Enhanced with version 15 to include support for walls and slabs.	●	●	●	●
1st Pricing Plug-in	A BIM-oriented plug-in for pricing Windows, Doors, and Skylights.			●	●
<b>MECHANICAL</b>					
Geometric Tolerance	New tool for mechanical designers that allows them to tell a machine shop/manufacturer how to machine a part.				●
Pattern Tools	5 pattern copy tools which allow the user to very simply apply repeating geometries on ACIS objects. Patterns are parametric and can interact with entities through Boolean operations.				●
Twisted Extrude	Simple Extrude with added parameters: Twist angle, Distance type, Normal, Full height, Twist to top, Twist start distance, Twist end distance, Twist continuity.		●		●
Thread Tool	Easily create threaded 3D objects. The pitch and height of threading are parametrically defined and editable... plus 3 modes of display.		●		●
Extrude to Face	Similar to the Quick Pull tool, Extrude to Face allows you to pull a face to another surface. Then TurboCAD will create a Boolean addition or subtraction in the shape of the secondary face.		●		●
Imprint Tool	Added to v16 - New dimple featured added; Added to v15 - Enhanced 3D modeling with the ability to add fillet and chamfers to top and bottom imprint contours.		●		●
Mid-point Constraint	Constrain a point to the mid-point of another line.		●		●
Symmetrical Constraints	Create symmetrical constraints for end points of arcs and lines.	○	○	●	●

# What's New Since You Last Upgraded



Feature	Description	16		17	
<b>RENDERING/VISUALIZATION</b>					
Drawing Performance	Huge speed improvement in panning, zooming, and rotating objects with addition of Redway engine.			●	●
Render Styles	Easily render using pre-defined styles that optimize dozens of settings for specific effects, photorealistic or non-photorealistic.	●	●	●	●
Render Style Editor	Allows for unlimited new styles to be created for one-click access.	●	●	●	●
Materials to Facet	Drag and drop materials from the Material Palette onto a 3D object's face.	●	●	●	●
LightWorks® Rendering Engine	Added to v16 - A major upgrade of the render engine provides global illumination, final gather, tone mapping, gamma correction, new material shaders, and advanced shader descriptions.	●	●	●	●
Material Scaling	Accurately scale materials and preview changes on the fly.	●	●	●	●
<b>INTEROPERABILITY &amp; PROGRAMMABILITY</b>					
Software Developers' Kit (SDK)	New example code, additional function, updated documentation, and object definitions.	○	○	●	●
.DWG/.DXF	Added to v17 - 2010 format support. Index color support. Define line weight for import. Import Multi-Leader objects and styles. Support Layer Filters. Added to v16 - Support Xrefs.	○	○	●	●
Color Table (CTB) Print Style Support	AutoCAD® Color Table (.CTB) file support.			●	●
.SKP (Google SketchUp)	Added to v17 - Improved export filter. Added to v16 - Export added while .SKP import (v5, v6, v7) creates a paper space with a viewport set to proper visibility for each scene.	○	○	●	●
COLLADA (.DAE) Export	Added to v17 - Major update includes layer and instances. New in v15, COLLADA offers works well with Google™ SketchUp™, Google Earth, and a growing number of other platforms.	○	○	●	●
Proxy Object support (.TCW)	Save proxy object option allows for faster file opening; TC Deluxe and Designer will be able to display (Pro specific) proxy objects.			●	●
.EPS	Updated and improved file import capabilities.	○	○	●	●
.3DM (Rhinoceros®)	Import and export to Rhinoceros.	●	●	●	●
.STEP and .IGES	Improved file filter performance.	○	○	●	●
.3DS File Import Export	Improved interoperability with Autodesk® 3ds Max®.	●	●	●	●
<b>DATA MANAGEMENT</b>					
Database Connect Palette	Integration of objects and blocks with external ODBC (Object Database Connectivity) data on either your local machine or any remote data sources.	●	●	●	●

○ Good - Feature introduced, but improved with later versions

● Best - The latest, fully up-to-date technology