



KOMPAS-3D v23

ascon.net/products/kompas/kompas-3d



KOMPAS-3D v21-v23 Comparison

Group	Features	KOMPAS-3D		
		v21	v22	v23
General / User Interface	Document templates instead of the settings dialog box	✓	✓	✓
	Compact dashboard view	✓	✓	✓
	Selectable decimal separator in dimensions and properties	✓	✓	✓
	Application theme auto matches the Windows theme	✓	✓	✓
	Browser-based Help system	✓	✓	✓
	Start page: you can now remove items from the list of recent documents, and clear it		✓	✓
	The Expressions dialog box: search for available elements to be inserted into the expression; history of expressions, list of variables in the current document		✓	✓
	Online Help (local Help is also available)		✓	✓
	Switch to Guardant, a Russian software licensing technology		✓	✓
	List of installed modules and their versions (Help – About – Details)			✓
Manual sorting of favorite templates			✓	
References to properties of hidden components			✓	
3D Modeling	Sketch geometry auto-fit to the first associative dimension	✓	✓	✓
	Interactive parametric constraint icons	✓	✓	✓
	Scaling in 3D with different factors for each axis	✓	✓	✓
	Subassembly motion control (Make Movable command)	✓	✓	✓
	Texts and tables as 3D model annotations	✓	✓	✓
	Product specifications as 3D model annotations	✓	✓	✓
	Subassembly BOM options: as an assembly or as a list of its parts	✓	✓	✓
	Boolean operations can preserve the original bodies	✓	✓	✓
	The At Distance parametric constraint applies two objects	✓	✓	✓
	Managed links between drawings and model configurations	✓	✓	✓
	Chamfer stops at specified points	✓	✓	✓
	Highlighting annotated model features	✓	✓	✓
	Fractional Quantity property	✓	✓	✓
	Face tapering with respect to edge/ chain of edges (Slope From Baseline command)		✓	✓
	Selecting nearest objects (Select Nearest command)		✓	✓
	Points and lines of intersection of the sketch plane with other objects (Intersection Objects command)		✓	✓
	Multiple model representation options (e.g., simplified, in different orientations, or with some features removed) (Create Variant command)		✓	✓
	Object-to-object distance measurement along a given direction (Distance and Angle command)		✓	✓
	Color-coded geometry features with 0 DoF, reference dimensions, failed objects and constraints. The sketch icon now shows whether the sketch is correct		✓	✓
	Workpiece models are auto added to BOMs and drawings		✓	✓
	Managed component-to-assembly relationships for in-place assembly component editing (Context Relationships design tree item)		✓	✓
	Design tree management: sorting components and bodies by name; moving groups of tree items (operations, components) with their number indicated; view and edit object variables at the tree bottom; customized tree root		✓	✓
	Object-to-object angular (At Angle) constraint		✓	✓
	Primary axis in local coordinate systems		✓	✓
	Reverse engineering: polygonal object to a plane/polygonal object intersection lines (Curve of Intersection command)		✓	✓
	Reverse engineering: create a surface (planar, cylindrical, conical, spherical) from a polygonal object (Surface Adjustment command)		✓	✓
	Face/plane curve as a section for the Element by Path command		✓	✓
	References to thread annotations		✓	✓
	New groove commands (Groove, Arc Groove)			✓
	Improved restraints engine for parametric editing			✓
	Direct editing: Replace a face of a body or closed surface with another face (Replace Faces command)			✓
	Direct editing: Edit fillet radius (Change Fillet Size command)			✓
	Direct editing: Resize the diameter of a cylindrical or spherical face (Modify Face Size command)			✓
	Remove selected bodies and/or surfaces (Delete Body/Surface command)			✓
	Reverse engineering: Polygonal object deviation from body/surface/edge (Deviation Analysis command)			✓
	Reverse engineering: Specifying the direction along an object, editable numerical properties of new surfaces fitted to a polygonal object (Surface Adjustment command)			✓
	Auto creation of new model files from templates and spreadsheets (Model Family command)			✓
	Deviation analysis for two objects (Deviation Analysis command): absolute minimum deviation, object swapping, saving the analysis results to the design tree			✓
	Replacing source file of assembly components while maintaining link between the old and new files (Replace Components command)			✓
	Display thread parameters (Object Info command)			✓
	Enhanced cross section management (Section Management command)			✓
	The Parameters panel and the model window show measured distances and angles between objects (Distance and Angle command)			✓
	Preconfigured elementary bodies (parallelepiped, cylinder, sphere): no sketches or other source objects required			✓
	Arranging assembly components along layers			✓
	Sketch orientation in a plane perpendicular to the specified curve at the specified point (Sketch Placement command)			✓
	Mass and moments of inertia for the primary model configuration			✓
	User-defined axial and centrifugal moments of inertia			✓
Assembly-level 3D modeling operations based on sketches within the assembly components			✓	
The Layer Tree to manage model layers			✓	
Cross section shape control as it moves along the path (Loft command)			✓	
Model orientation parallel to the screen with horizontal/vertical alignment of the selected object (Normal and Align command)			✓	
Face matching when replacing the source in the Copy operation			✓	

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Sheet Metal	Hole/cutout with perpendicular edges	✓	✓	✓
	Dimensions, annotations, centerlines, threads move accordingly as the model is folded/unfolded	✓	✓	✓
	Hole edge options for die cut parts: perpendicular to the sheet surface or along the punching surface (Body as Stamp command)		✓	✓
	Sheet part representation options (e.g., simplified, folded or unfolded) (Create Option command)		✓	✓
	Corner reliefs on flattened sheet parts with simplified contours			✓
Wireframe and Surface Modeling	Scaling surfaces and 3D curves with axis-specific factors	✓	✓	✓
	New linear surfaces construction options: by curve and direction, by curve and surface, by curve tangent to surface, and by two surfaces	✓	✓	✓
	New section alignment options for linear surfaces based on two curves: along the guides, parallel to itself, along the centerline, on vertices	✓	✓	✓
	Construction of spatial conic section curves	✓	✓	✓
	Metasplines: high order of smoothness, smooth curvature variations	✓	✓	✓
	Auto generation of minimum tension conic sections	✓	✓	✓
	Facet surface extension (Surface Extension command)	✓	✓	✓
	Surface-to-surface junction curve continuity type analysis (Continuity Check command)	✓	✓	✓
	Curvature heatmap	✓	✓	✓
	Smooth: A new transition method in the surface by Grid of Curves command (an equal curvature transition between the new and adjacent surfaces)	✓	✓	✓
	Variable radius fillet along a border curve	✓	✓	✓
	Various options for curve extension beyond its endpoints: along the same curve, along a tangent, by an arc of a circle (Curve Extension command)		✓	✓
	Plane curve transfer to a cylindrical/conical surface (Collapsed Curve command)		✓	✓
	Curve transfer from a cylindrical/conical surface to a plane (Unfolded Curve command)		✓	✓
	Point between two vertices (Between the Vertices command)		✓	✓
	Options for the distribution of connected points over grid curves: along the directrix parameter or along the directrix length (Surface by Grid of Curves command)		✓	✓
	The Spline by Vertices command now offers editable curve order (up to 10)		✓	✓
	Spline by Vertices and Metaspline curves are smoothed for more continuous better curvature changes		✓	✓
	Clipping body groups, surfaces/faces of different objects, clipping object removal (Surface Trimming command)		✓	✓
	A face or plane curve can be used as cross-sections in the Surface by Path command		✓	✓
	Deleting selected bodies and/or surfaces (Delete Body/Surface command)			✓
	Cylindrical and conical spiral construction tools: new placement methods, creating the axis, selectable coordinate systems, variable-controlled orientation			✓
	Customizable representation of smooth transition surfaces (surfaces touch each other along the tangent)			✓
	Point transfer from a plane to a surface (Collapsed Curve command)			✓
	Point transfer from a surface to a he plane (Unfolded Curve command)			✓
Body-to-other objects line of intersection (Curve of Intersection command)			✓	
Transition surface between two surfaces (Fillet Surface command)			✓	
Directrix curves (splines by points) for the lofting operation			✓	
Splines associated with their source objects (Spline by Object command)			✓	
Data Exchange with Other CAD Systems	A polygonal object is specially designed for quick representation of triangulations/tessellations (e.g. 3D scans in STL or JT format)	✓	✓	✓
	Reading attributes from JT files	✓	✓	✓
	Saving the mass and moment of inertia to the JT format	✓	✓	✓
	Permanent settings for export (to STL, JT, STEP) and import (from JT and STEP)	✓	✓	✓
	Import from the OBJ format	✓	✓	✓
	Import from 3D XML		✓	✓
	Reading NX and SolidWorks files with the C3D kernel tools			✓
	Selecting the model objects to be exported			✓
	Saving threads to C3D, STEP, VRML formats			✓
Saving tables to C3D, JT, STEP formats			✓	
Drafting	More convenient constraint handling: visualization, on-screen selection and deletion of constraints	✓	✓	✓
	Flipping equidistant lines	✓	✓	✓
	Free annotation placement above/below the leader	✓	✓	✓
	Auto reference to the workpiece model in the associative part drawing		✓	✓
	Selecting objects by a closed polyline (Select a Closed Polyline command)		✓	✓
	A context bar for quick constraint management (Object Constraints command)		✓	✓
	Parametrized conical curve coefficient (Conical Curve command)		✓	✓
	Templates for associative drawings of the model with customizable paper size, tiling, and page orientation (Create a Drawing From a Template command)		✓	✓
	Auto application of the Parallel constraint to two parallel segments when dimensioning from segment to point in the parametric mode		✓	✓
	Marks for centers of circle arrays in associative views		✓	✓
	Selectable options for circle/arc-to-circle/arc dimensions added with the Smart Dimension or Linear Dimension command		✓	✓
	Conditional intersections between straight and arc centerlines (Conditional Intersection command)		✓	✓
	New groove commands (Groove, Arc Groove)			✓
	Improved geometric constraint engine for parametric editing			✓
	New Customer Representative field in design documents			✓

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Product Structure	Viewing and adding documents linked to the product and its constituent parts	✓	✓	✓
	Outdated product/component mass warning	✓	✓	✓
	Decimal or common fraction Quantity values	✓	✓	✓
	Linking components to a position number, component, or body		✓	✓
	Support for assemblies with multiple versions		✓	✓
	Multiple BOM styles		✓	✓
	References as BOM property values (Designation, Name, Note, Quantity, etc.)		✓	✓
	Editable variable-based property values		✓	✓
	Auto propagation of the BOM style to the product or its components			✓
	The Name property can combine plain text and references to other properties (e.g. to other components)			✓
	Propagation of the Designation, Name, and Note properties from the product structure the product components (Send to Source command)			✓
	Drawing toolbar: viewing and editing document properties, macroelements, views, model components; creating non-visual components			✓
	Auto position numbering (Set Ref. Nos. command)			✓
BOM Management	Selecting any document to borrow its paper size to the Format property	✓	✓	✓
	Hide/show objects from the BOM (Hide/Show items in the context menu)	✓	✓	✓
	Manual and auto (from the model) workpiece creation		✓	✓
	Common name for groups of standard products or materials (Add a Common Name command)		✓	✓
	More convenient BOM editing: the Materials and Stock Products sections are populated from a template		✓	✓
	A Customer Representative field on drawings			✓
	Grouping/ungrouping all BOM objects (Group All, Ungroup All commands)			✓

KOMPAS-3D Applications: What's New




Shafts and Mechanical Transmissions
Generating a 3D model from a 2D diagram stored in the model
Analysis and modeling of link belt chain sprockets
Profile construction and parameter tables for spur gears and involute splines
Selectable relief groove for round slotted nuts and multi-tang lockwashers
Tooth profile generation for worm mills used to manufacture cycloid spur gears
Mechanical Engineering: Springs
New hooks for extension springs
Other applications
Equipment: Flattened Models: new types of tees, bends, and conical spigots
ECAD-KOMPAS Converter: selecting 3D models of electronic components when importing a PCB model from POLYNOM:MDM into KOMPAS-3D

RECOMMENDED SYSTEM REQUIREMENTS FOR HANDLING LARGE ASSEMBLIES

CPU ≥4 GHz (6+ cores) | RAM ≥32 Gb | GPU ≥4 Gb OpenGL 4.5 140 Gb/s | + SSD, FullHD/4K monitor

OS [X64]:

MS Windows 11, 10, 8.1

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