



KOMPAS-3D v25

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



KOMPAS-3D v23-v25 Comparison

Group	Features	KOMPAS-3D		
		v23	v24	v25
3D modeling	New groove types (Groove, Arc Groove commands)	✓	✓	✓
	Direct modeling: Face replacement, resizing cylindrical and spherical faces, fillets	✓	✓	✓
	Removal of selected bodies and/or surfaces from the model (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 files of assembly components while maintaining links between the old and new components (Replace Components 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 version	✓	✓	✓
	User-defined axial and centrifugal moments of inertia	✓	✓	✓
	Assembly-level 3D modeling operations using sketches of the assembly components	✓	✓	✓
	The Layer Tree to manage model layers	✓	✓	✓
	Cross-section shape control as it moves along the path (Sweep 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	✓	✓	✓
	Sheet modeling: Corner reliefs on flattened sheet parts with simplified contours	✓	✓	✓
	Sequential numbers of operations in the design tree		✓	✓
	Parametric patterns in sketches (Rectangular Pattern, Polar Pattern commands)		✓	✓
	Right circular cone body creation (Cone from Two Arcs and other commands)		✓	✓
	Selecting multiple objects as a cross-section in the Rotation Element command		✓	✓
	New body (or cutout) creation by sweeping a circular cross-section along a path (Tubular Element command)		✓	✓
	Variable path lengths in the Sweep and Tubular Element commands		✓	✓
	Model family table template (Model Family command)		✓	✓
	Converting a standard model into a stock model (Convert to Blank command)		✓	✓
	Model section by body, surface, or faces (Section command)		✓	✓
	Calculating the area of all faces of solids and surfaces (Area command)		✓	✓
	Object copy management: Phantom representation of copied objects; copying the original object properties (e.g. color, optical properties, mass) to its copies; opening the source file from a copy		✓	✓
	Reading/writing the Calc format (*.ods) without LibreOffice installed (for operations with versions, surfaces, patterns)		✓	✓
	Rearranging the order of model versions and sub-versions		✓	✓
	Body diagnostics for consistency (Check Geometry command)		✓	✓
	Variable range checks (Check Values command)		✓	✓
	Direct modeling: shifting and rotating faces (Change Face Position command)		✓	✓
	Direct modeling: replacing a group of faces with another one (Replace Faces command)		✓	✓
	Reverse engineering: auto-determination of surface type based on selected polygons (Fit Surface command)		✓	✓
	Reverse engineering: fitting a polygonal object to a body or surface (Fit command)		✓	✓
	Reverse engineering: Measurement of deviations between two bodies/surfaces/polygonal objects (Deviation Analysis command)		✓	✓
	Copying and pasting components with CTRL+C and CTRL+V		✓	✓
	Copy operations manager (Copy Management command)		✓	✓
	Layers: Object arrangement across layers; creating multiple layers in one go; placing subassembly components on the assembly layer		✓	✓
	Selecting the component load option before adding it into the assembly		✓	✓
	Editing in the local parts window (for example, to change the optical properties of an object)		✓	✓
	Changing shapes of assembly components without modifying the source files (Deformation command)		✓	✓
	Objects selected in the single-line selection field on the Parameters pane are now highlighted in the graphics area			✓
	Reference objects selected in the design tree are now highlighted in the graphics area			✓
	Sketch pattern: trim or split instances, define grid axis directions using existing geometry, remove instances, and specify pattern parameters using expressions			✓
	Zero-length segments in sketches			✓
	The driven dimension dialog box in the sketch mode is removed			✓
	Editable reference plane and axis definition options			✓
	Navigation to the source document in copying commands			✓
	Dimensions (Distance and angle, Edge length, Area) are stored in the design tree			✓
	A new category of diagnostic messages: warnings Non-critical errors when the model still can be created			✓
	Conditional selection of curve/face groups, such as all faces created by a specific operation, or all edges in the chain			✓
	Dedicated filters for each command that requires object selection			✓
	Selecting objects by their properties, e.g. "all holes smaller than 10 mm in dia" (Select → By properties... menu item)			✓
	Embossment command to create embossed images or texts			✓
	Adding multiple holes (Simple hole, Tapered hole, Hole with countersink and counterbore, and other commands)			✓
	Lightweight model versions to improve performance with large assemblies and create assembly drawings			✓
	Part/assembly positioning using coordinates, constraints, distance, or angle, and Motion simulation (Change Component Position command)			✓
	Reverse engineering: auto segmentation of a mesh into regions approximated by analytic surfaces (plane, cylinder, sphere, cone, and torus) (Mesh Segmentation command)			✓
	Convert to mesh: adjustable conversion accuracy and associative link between the generated mesh and the source solids/surfaces			✓
	Migrating selected features to the latest KOMPAS-3D feature implementation (Migrate Selected Features command)			✓
	Adding new columns to model family tables (Model Family command)			✓
	Normal reversal for reference planes			✓
	Copying cosmetic thread representations along with geometry (Copy Objects command)			✓
	Default layer for standard components			✓
	Model layers are accessible from sketches			✓
	No default material for new assemblies			✓

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Wireframe and Surface Modeling	Removal of selected bodies and/or surfaces from the model (Delete Body/Surface command)	✓	✓	✓
	Cylindrical and conical spiral tools: new positioning options, axis creation, selectable coordinate systems, variable-controlled orientation	✓	✓	✓
	Customizable representation of smooth transition surfaces (surfaces touch each other along the tangent)	✓	✓	✓
	Point mapping from a plane to a surface (Map Curve command)	✓	✓	✓
	Point mapping from a surface to a he plane (Unmap Curve command)	✓	✓	✓
	Body-to-other objects line of intersection (Curve of Intersection command)	✓	✓	✓
	Blending two surfaces (Fillet Surface command)	✓	✓	✓
	Guide curves (splines by points) for the lofting operation	✓	✓	✓
	Splines associated with their source objects (Spline from Object command)	✓	✓	✓
	Entire curve or curve fragment selection (Select Curve Fragments button on the Quick Access Toolbar)		✓	✓
	Curve and point wrapping onto extruded and ruled surfaces (Wrap Curve command)		✓	✓
	Curve and point unwrapping from extruded and ruled surfaces (Unwrap Curve command)		✓	✓
	Contour editing with smooth transition between original and new segments		✓	✓
	Curvature analysis (Curvature Map command)		✓	✓
	Selecting multiple objects as a cross-section in the Revolution Surface and Extrusion Surface commands		✓	✓
	Variable path length in the Surface Sweep command		✓	✓
	Midsurfaces equidistant from two surfaces (Midsurface command)		✓	✓
	Multiple surface extension (Extend Surface command)		✓	✓
	Improved surface extension capabilities for complex edges (Surface Extend command)		✓	✓
	Rolling ball fillets (Fillet Surface command)		✓	✓
	Surface diagnostics for consistency (Check Geometry command)		✓	✓
	Curves midway between two planar curves (Midline command)			✓
	Offset curves across multiple reference faces (Curve Offset command)			✓
	Projection of point and curve groups onto a surface (Projected Curve command)			✓
	Fillet surface tangent to three surfaces (Fillet Surface command, Tangent to Surface option)			✓
	Fillet surfaces defined by boundary curves on adjacent surfaces (Fillet Surface command, Boundary Curves option)			✓
	Composite trimming object from multiple curves or surfaces (Surface Trim command)			✓
	Preservation of tangent surface directions without V-direction curves (Curve Network Surface command)			✓
Data exchange with other CAD systems	NX and SolidWorks file import with C3D kernel tools	✓	✓	✓
	Selection of model objects for export	✓	✓	✓
	Thread export to C3D, STEP, and VRML formats	✓	✓	✓
	Table export to C3D, JT, and STEP formats	✓	✓	✓
	Import of 3D objects from exchange and proprietary formats into the current model (Import into Current Model command)		✓	✓
	BOM Section property transfer in JT model import and export		✓	✓
	Default component file names when importing assemblies in STEP and JT formats		✓	✓
	Coordinate system and object name import from STEP files		✓	✓
	Creo, Inventor, CATIA, and Solid Edge model import with C3D kernel tools		✓	✓
	AutoCAD DXF/DWG data exchange with a proprietary component			✓
	Configurable text import from proprietary formats: text-to-geometry conversion, system font substitution, special character mapping			✓
	STEP assembly import with component data source selection			✓
Drafting	New groove types (Groove, Arc Groove commands)	✓	✓	✓
	Improved geometric constraint engine for parametric editing	✓	✓	✓
	New Customer Representative field in design documents	✓	✓	✓
	Parametric patterns (Rectangular Pattern and Polar Pattern commands)		✓	✓
	Title block fields populated from model and custom properties		✓	✓
	New drawing sheet creation from an existing sheet		✓	✓
	Dynamic object highlighting with no active command and during object snapping			✓
	Symmetric constraint for sketch geometry (Object Symmetry command)			✓
	Linear dimensions with extension lines tangent to circles and arcs (Linear Dimension and Linear Dimension from Line to Point commands)			✓
	Patterns: trim or split instances, define grid axis directions using existing geometry, remove instances, and specify pattern parameters using expressions			✓
	Zero-length segments			✓
	Dimension variable display toggle with F11			✓
	The driven dimension dialog box mode is removed			✓
	Global/local coordinate system as a mirror axis for geometry mirroring (Mirror command)			✓
	Projection depth control in associative drawing views (Projection Depth option in view parameters)			✓
	Drawing tree filter for objects present in the view			✓
	Vertical text in title block fields			✓
	Surface roughness symbol options: parentheses and asterisk			✓
	Macro element operations: object removal, clipboard paste with macro element creation			✓
	References to assembly component properties in associative drawings			✓
	Export to *.svg			✓
Product Structure panel	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; non-visual component creation	✓	✓	✓
	Auto position numbering (Generate Positions command)	✓	✓	✓
	Deleting objects with the Delete key		✓	✓
	Modification of properties of multiple Tier 1 components		✓	✓
	Product variant management: add/remove variants, change designation			✓
BOM Management	Link components to a BOM item number, or drawing geometry			✓
	A Customer Representative field on drawings	✓	✓	✓
	Grouping/ungrouping all BOM objects (Group All, Ungroup All commands)	✓	✓	✓
	Auto text hyphenation in BOMs		✓	✓
	BOM export to Excel 2007-365 (*.xlsx) and Calc (*.ods) formats		✓	✓
	Manual editing of additional and nested section titles		✓	✓
	BOM fields linked to system and library properties			✓
	BOM export to Excel 2007-365 (*.xlsx), Excel 97-2003 (*.xls), Calc (*.ods) formats			✓

Materials and Assortments

Materials library is a database of information about materials that are used to manufacture products. Materials Library applies physical and mechanical material properties to 3D models designed in KOMPAS-3D.

Standard Parts Catalogue

Standard Parts library contains standard parts according to DIN and ISO standards. The catalogue contains 3D models and 2D drawings of standard parts and structural elements for KOMPAS-3D.

3D shafts & mechanical gears

This application automates the design and construction of 3D models of shafts, bushings, and mechanical transmission elements in the KOMPAS-3D environment. It enables fast construction of multistage shafts, including structural elements such as holes, splines, and keyways.

Equipment: Pipelines 3D

A specialized application for the automation of pipeline design routine works. This add-on allows you to create piping layouts, arrange pipeline elements, use different insets and couplings, and edit pipe diameters and thicknesses.

Equipment: Steel Structures 3D

The application is intended to automate the design process of metal constructions from metal rolling profiles. It allows you to create frameworks based on the trajectories and the selected profiles.

Unwrap Application

The application is intended to automate the design of dust, gas and air flues, pipelines and similar parts of sheet material. This add-on automates labour-consuming calculations and constructions and considerably accelerates the speed of creation of working drawing for blanks of such parts.

eCAD— KOMPAS Converter

A specialized module used to import a 3D circuit board model, designed in systems like P-CAD and Altium Designer. The converter can read the standardized data exchange IDF format in KOMPAS-3D. Once imported into KOMPAS-3D, the 3D models of printed circuit boards are then used to arrange other devices, blocks, equipment modules, and so on.

Nesting

Nesting add-on arranges 2D shapes within a rectangular sheet area, either manually or automatically. It covers the full nesting workflow — from creating and optimizing layouts to calculating efficiency, generating nesting maps in KOMPAS-3D and DXF formats, producing reports, and editing the final layout as needed.

Cables and Harnesses

The system is intended to design 3D models of electric cables and harnesses, calculate cable and harness lengths and mass parameters, and create assembly drawings and specifications.

RECOMMENDED SYSTEM REQUIREMENTS FOR HANDLING LARGE ASSEMBLIES

CPU 4 GHz (6+ cores) | RAM 64 Gb | VRAM 8 Gb OpenGL 4.5 250 Gb/s | + SSD, FullHD/4K monitor

OS [X64]:

MS Windows 11, 10

-  youtube.com/@CAD.Insights
-  linkedin.com/company/ascongroup/
-  ascon.net



Technical Support
ascon.net/support/



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