KOMPAS-3D V24 New Addons

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.

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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KOMPAS-3D v24

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

KOMPAS-3D v22-v24 Comparison

Group	Features	KOMPAS-3D v22	KOMPAS-3D v23	KOMPAS-3D v24
3D modeling	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., lightweight, in various orientations, or with some features removed (Create Option command)	✓	✓	✓
	Color-coded geometry features with 0 DoF, reference dimensions, failed objects, and constraints. The sketch icon now shows whether the sketch is correct	✓	✓	✓
	Stock parts 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; viewing and editing object variables at the tree bottom	✓	✓	✓
	Object-to-object angular (At Angle) constraint	✓	✓	✓
	Primary axis in local coordinate systems	✓	✓	✓
	Reverse engineering: polygonal object to a plane/polygonal object intersection lines	✓	✓	✓
	Reverse engineering: creating surfaces (flat, cylindrical, conical, spherical) from a polygonal object (Fit Surface command)	✓	✓	✓
	Face/plane curve as a section for the Sweep command	✓	✓	✓
	Sheet modeling: Hole edge options for die cut parts: perpendicular to the sheet surface or along the punching surface (Body as Stamp command)	✓	✓	✓
	Sheet metal modeling: Sheet part representation options (e.g., lightweight, folded, or unfolded) (Create Option command)	✓	✓	✓
	New groove types (Groove, Arc Groove commands)		✓	✓
	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: Direction along an object, editable numerical properties of new surfaces created from polygonal objects (Fit Surface command)		✓	✓
	Auto creation of new model files from templates and spreadsheets		✓	✓
	Deviation analysis for two objects (Deviation Analysis command)		✓	✓
	Replacing source files of assembly components while maintaining links between the old and new components (Replace Components command)		✓	✓
	View thread properties (Object Info command)		✓	✓
	Enhanced cross-section management (Section Management command)		✓	✓
	Displaying the distance and angle between objects in the Properties panel and model view		✓	✓
	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		✓	✓
	Face matching when replacing the source in the Copy operation		✓	✓
	Sheet modeling: Corner reliefs on flattened sheet parts with simplified contours		✓	✓
	Displaying sequential numbers of operations in the design tree			✓
	Parametric arrays of sketch objects (Rectangular Array, Polar Array 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			✓
	Arrays of faces (also for history-free models)			✓
	Model family table template (Model Family command)			✓
	Converting a standard model into a stock model (Convert to Blank command)			✓
	Roughness symbols are now applicable for multiple faces			✓
	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, arrays)			✓
	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 faces in a specified direction or rotating them around an axis (Change Faces Position command)			✓
	Direct modeling: Replacing a group of faces with another group (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 comman)			✓
	Copying and pasting components with CTRL+C and CTRL+V			✓
	Copy operations manager (Copy Management command)			✓
	Layers: Object arrangement on layers; creating multiple layers; 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)			✓
	Mass and moments of inertia analysis for an assembly component from its source file			✓

KOMPAS-3D v22-v24 Comparison

Group	Features	KOMPAS-3D v22	KOMPAS-3D v23	KOMPAS-3D v24
General / User Interface	Expressions dialog box: search for available expression members; expression history; list of variables in the current document	✓	✓	✓
	Online Help (local Help is also available)	✓	✓	✓
	Guardant: a new Russian software licensing technology	✓	✓	✓
	Manual sorting of favorite document templates		✓	✓
	References to properties of hidden components		✓	✓
	Preservation of KOMPAS-3D window size and position between session			✓
	Updated system/current document settings window: Total list of settings, search			✓
	References: Rounding property values to a specified decimal place; warnings about lost reference sources			✓
	Deleting objects in lists and tables on the Properties panel with the Delete key			✓
Wireframe and Surface Modeling	Various options for curve	✓	✓	✓
	Plane curve mapping onto a cylindrical/conical surface (Map Curve command)	✓	✓	✓
	Curve mapping from a cylindrical/conical surface to a plane (Unmap Curve command)	✓	✓	✓
	Point between two vertices (Point Between Vertices command)	✓	✓	✓
	Parameter-based or equal-length spacing of nodes on mesh curves	✓	✓	✓
	The Spline by Vertices command now offers editable curve order (up to 10)	✓	✓	✓
	Spline by Vertices and Metaspline curves are smoothed for more continuous curvature changes	✓	✓	✓
	Clipping body groups, surfaces/faces of different objects, and clipping object removal	✓	✓	✓
	A face or plane curve can be used as a cross-section in the Sweep Surface command	✓	✓	✓
	Removal of selected bodies and/or surfaces from the model (Delete Body/Surface command)		✓	✓
	Cylindrical and conical spirals		✓	✓
	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)		✓	✓
	Selecting entire curves of curve fragments (Select Curve Fragments button on the Quick Access Toolbar)			✓
	Mapping curves and points onto extruded and ruled surfaces (Map Curve command)			✓
	Mapping curves and points from extruded and ruled surfaces (Unmap Curve command)			✓
	Contour editing with original/new segment matching			✓
	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)			✓
	Extending multiple surfaces (Extend Surface command)			✓
	Extending surface by surface edge simplification (Extend Surface command)			✓
	Rolling ball fillets (Fillet Surface command)			✓
	Surface diagnostics for consistency (Check Geometry command)			✓
Data exchange with other CAD systems	Reading NX and SolidWorks files with the C3D kernel tools	✓	✓	✓
	Selecting the model objects to be exported		✓	✓
	Saving tables to C3D, JT, STEP formats		✓	✓
	Importing 3D objects from exchange and proprietary format files into the current model (Import to Current Model command)			✓
	JT export/import of the BOM Section property			✓
	Default component file names when importing assemblies in STEP and JT formats			✓
	Reading coordinate systems and object names from STEP files			✓
	Reading Creo, Inventor, Catia, and SolidEdge models using the C3D kernel tools			✓
Drafting	Auto reference to the product model in the associative part drawing	✓	✓	✓
	Selecting objects by a closed polyline (Select by a Closed Polyline command)	✓	✓	✓
	Context toolbar to quickly apply/remove constraints (Object Constraints command)	✓	✓	✓
	Selectable templates for creating an associative drawing of the current model, configurable paper size, orientation, and tiling (Create Drawing from 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 in Smart Dimension or Linear Dimension commands	✓	✓	✓
	Theoretical intersections between straight and arc centerlines (Theoretical Intersection command)	✓	✓	✓
	New groove types (Groove, Arc Groove commands)		✓	✓
	Improved geometric constraint engine for parametric editing		✓	✓
	New Customer Representative field in design documents		✓	✓
	Parametric arrays of objects (Rectangular Array and Polar Array commands)			✓
	Linking title block text to any properties (including user-defined)			✓
	Adding a new page to the drawing based on an existing template page			✓
Control panel	Linking Tier 1 components to a position number, component, or body	✓	✓	✓
	Support for assemblies with multiple versions	✓	✓	✓
	Multiple BOM and product structure styles	✓	✓	✓
	References as BOM property values (Part ID, Name, Remark, Quantity, etc.)	✓	✓	✓
	Editable variable-based property values	✓	✓	✓
	Auto propagation of the BOM style to the product or its Tier 1 components		✓	✓
	The Name property can combine plain text and references to other properties (e.g., to other components)		✓	✓
	Propagation of the Part ID, Name, and Remark properties from the product structure to the components		✓	✓
	Drawings: View and edit document properties, macroelements, views, Tier 1 components		✓	✓
	Auto position numbering (Generate Positions command)		✓	✓
	Deleting objects with the Delete key			✓
	Modification of properties of multiple Tier 1 components			✓
Product Structure	Manual and automatic (from a model) creation of a blank product model	✓	✓	✓
	Common names for groups of standard products/materials (Add 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		✓	✓
	Auto creation of the Documentation section in associative BOMs			✓
	Auto text hyphenation in BOMs			✓
	BOM export to Excel 2007-365 (*.xlsx) and Calc (*.ods) formats			✓
	Manual editing of main and nested section titles			✓