



# Materialise Magics Technical Details

# Magics Features Overview

Magics is the industry-leading data preparation software for 3D Printing. It's the missing link between your idea and a great 3D-printed model. The 3D printing industry is buzzing and a wide range of technologies drive new applications. Whatever technology the future will favor, this all-round software package is ready to support your business, small or large!

Please note that the list of features below is not exhaustive.

## Import

With Magics, you can import an impressive number of file formats, including color and texture information, and stay in control of your original data.

The following import formats are included in Magics RP:

VRML (\*.wrl, \*.vrm, \*.x3dv), Rhino (\*.3dm), Sketchup (\*.skp), OBJ (\*.obj), 3DS (\*.3ds, \*.prj), PLY (\*.ply, \*.zcp), ZPR (\*.zpr), FBX (\*.fbx), COLLADA (\*.dae), X3D (.x3d), 3MF (\*.3mf), DXF (\*.dxf), STL (\*.stl)

## Repair

For a good print, you need high-quality 3D designs. To achieve this, Magics includes the best repair tools:

- Solve the most common problems in one click with Autofix
- Let the Fix Wizard guide you through the fixing process step-by-step when facing complex errors
- Maintain full control with manual tools
- Repair architectural models and add thickness with ShrinkWrap (i.e. a thin layer is wrapped around the original model and shrinks afterwards, repairing all errors)

## Enhance Mesh

To create a watertight mesh (i.e. network of triangles representing your model) that is easy to edit, you can rely on mesh enhancement tools:

- Remove unnecessary triangles with Triangle Reduction
- Smooth your mesh without losing details you want to preserve

## Edit

Magics offers a wide range of easy-to-use editing features, targeted towards 3D Printing. With our toolset you can:

- Hollow and perforate your parts
- Cut with advanced cutting lines
- Perform powerful Boolean operations (Unite, Subtract, Intersect)
- Apply text and image labels
- Turn surfaces into printable solids
- Modify the geometry of your parts with the extrude and offset tools
- Mark triangles, surfaces or entire shells fast and accurately

## Color & Textures

Easily apply textures or colors on marked areas, and edit them to suit your needs. Our algorithms are optimized to preserve textures and colors while working with the data.

## Build Preparation

Prepare platforms in a fast and efficient way thanks to our advanced positioning tools and machine management.

- Visualize your 3D printers within Magics, so you can see how many parts will fit
- Easily achieve the exact position, rotation and size that is required with user-friendly yet powerful Translate, Rotate, Rescale and Mirroring tools
- Use automatic placement to save time when preparing a build with many parts

## Analyze & Report

Magics contains measurement and analysis tools to ensure the quality of your printed parts. Reports and 3D PDFs are also among the possibilities.

- Make sure all features of the part are thick enough to print
- Check whether parts are not colliding or out of the printer's platform
- Measure any feature of your part
- Generate 3D PDFs and reports to efficiently communicate with your clients. Easily embed parameters of parts in your reports by linking it to your Word or Excel files.

## Visualization

Visualization tools are important to work fluently with any 3D application. Magics has everything you would expect, including:

- Different shading modes (Shade, Triangle, Wireframe, Transparency) which can be applied to parts individually
- Highlighting of errors in the parts
- The possibility to make advanced sections of your parts

## Customization

Magics user interface is extremely customizable, so you can tweak it exactly to your needs.

- Hide functions and tabs you don't use
- Make your own ribbons, toolbars and context menus
- Assign shortcuts to your frequently used functions
- Change colors to your preferences

# Recommended System Requirements

## Hardware

### CPU

- Intel® Core i7/AMD Athlon™ (Phenom II X4 / X6) multi-core processors
- 3.0 GHz or higher with SSE2 technology

## Memory

16 GB RAM or higher

### Free Disk Space

Win 32-bit system:

- 1 GB of free disk space for Magics; 850 MB of free disk space for Windows

## Win 64-bit system:

- 2GB of free disk space for Windows 64-bit (.NET Framework 4.5)

### Display

- 1280 x 1024 resolution or higher
- 32-bit color depth (True color)

### Video Card

- 'NVIDIA GeForce400' or 'ATI/AMD Radeon HD 5000' or higher
- DirectX 10 compatible video card
- At least 1 GB of memory
- At least a memory interface width of 256-bit

'NVIDIA Quadro', 'ATI/AMD FireGL' or any 'Intel' gpu chipset are not recommended

## Operating Systems

Magics<sup>20</sup> runs only on:

- Windows Vista SP2 (32bit/ 64 bit)
- Windows 7 (32bit/ 64bit)
- Windows 8 / 8.1 (32bit/ 64bit)
- Windows 10 (32bit/ 64bit)

Magics<sup>20</sup> is not supported on following systems:

- Windows 98
- Windows 2000
- Windows XP Home
- Windows XP Pro SP3 (32bit/ 64bit)
- Windows Server Editions

Magics does not run natively on Mac OS X, Linux, or any other operating system not listed above.

Virtualization systems such as VMWare are not recommended.