Magics Essentials 25 feature highlights

Magics Essentials is the data preparation software component that helps you 3D print in a profitable way. This release focuses on strengthening usability, speed, and control.

**Usability**
- *Updated fixing pages* enhance your access to various tools
- Customize Magics in new ways thanks to *new toolpages*

**Speed**
- *Perform operations* like Hollow, Honeycomb Structures or ShrinkWrap *faster*
- *Fix your part faster* with the improved AutoFix

**Control**
- Mark faster and more precisely with *updated marking tools*
- Add *honeycomb structures* how and where you need them with new parameters
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General enhancements

**Selected parts on the Part List page**
Visualize, at once, the number of selected parts compared to the total number of parts present in the scene.

**View cube**
Quickly recognize the current scene view and easily select the desired 2D or ISO view.

**Batch rename**
Assign the same prefix or suffix to all the selected parts at once via the Rename Part command.
General enhancements

3D view manipulation
Hold the Alt key and right mouse button inside the rotation circle and drag the mouse horizontally or vertically to rotate the view respectively along the vertical or horizontal direction.

Zoom in and out more accurately with respect to the cursor position.

Save folder options
Choose between saving all selected parts to their original folder or to the folder of the last part loaded. Change the preferred method in “Application working folder” page in Settings.

Parts sorting
Benefit from an alphanumeric order when sorting parts by their names (e.g., in Part List toolpage).
Renewed toolpages

Toolpages can now be added to a special toolbar, always keeping the most important pages visible.

You have full freedom over the positioning of your toolpages: on the side, in a toolbar, or anywhere else on the screen. With the default profile, you keep focus on the information pages.

Each toolpage has a small menu at the top right for pinning, closing, or collapsing the toolpage.

In the Customize UI window you have full control over the position and visibility of the pages.
Fixing toolpages

The Fix Wizard has been fully integrated into the toolpages. This gives you faster access to any fixing functionality.

In the Part Fixing Info page, the advice is now shown with a more convenient Follow option, which fixes your parts using fewer clicks. Additionally, you have the automatic fixing options per error type.
Fixing improvements

- The **AutoFix** function has become on average **40% faster**.

- The **Create Bridge** function has now been **incorporated into** the **Create Triangle** function, allowing both edges to be selected as well as points.

- The new **Invert Normals** function in the Fixing ribbon **inverts any marked triangles** if there is anything marked or **the entire part** if nothing is marked.
Marking improvements

- The marking functions have been improved to allow users to work **faster** and have **more control** while marking.

- **Marking functions** like Mark Selection or Rectangle Selection have been **extended beyond marking single triangles** to mark entire shells, surfaces or planes.

- A specific marking toolbar pops up when a marking function has been activated, allowing you to choose **what** and how you mark. It also provides additional control over brush size as well as remesh options.
Annotations page

- Text and drawing annotations are now combined in one page.
- Improved the flow for creating and editing your annotations faster.
- Annotations can now be hidden separate from the measurements.
Link to i.materialise

Have access to your favorite online 3D printing order platform straight from Magics Essentials.
Features
Performance improvements

up to 3x  Faster results in Boolean operation

This also affects other operations including:

- Hollow
- Perforator
- Cut
- Honeycomb Structures
Improved algorithms

**Hollow**
- Improved accuracy
- Faster operation
- Better results on sharp edges

**ShrinkWrap**
- Improved wrapping of small elements which are now retained
- Increased accuracy in preserving part edges
- Faster operation
Editing enhancements

Fillet
Select edges from different contours and round them at once.

Lap joint cut
Preview the lap joint cut and adjust the parameters before applying the final cut.
Chamfer

Create a bevel on fragile sharp edges of your parts to optimize their design for additive manufacturing (AM).

- Select multiple edges or entire contours to create a bevel at once.
- Choose between 3 different methods: equal distances, two distances, or a distance and an angle.
Honeycomb structures

- Get **more control** over your honeycomb structures by creating them **locally** on a marked region.

- Create a honeycomb structure only for a desired depth with a new “Infill depth” parameter.

- Get better results thanks to the integration of the improved hollow operation.

  - **Smother corners**

  - Improved mesh and **reduced number of triangles** on flat surfaces.
Translate Part Points

Get better control of geometry and vertex manual editing by translating part points along a custom direction or plane.

- Select the option “Translate along line”
- Select a point to translate and a line to orient the coordinate system to
- Interactively translate the point along an axis or on a plane by using respectively the axis or the squares of the coordinate system
Other improvements

Label: Data Matrix

Get more control on both pixel height and engraving label depth to customize the Data Matrix label to your needs.

Mass label

Use negative distances between parts to arrange them closer together and create a higher density on the platform.
Import changes

Focus on mesh file formats

To bring Magics Essentials closer to users' needs, the focus for the import file formats has shifted to mesh file formats as well as a few CAD formats, like Sketchup and 3DM.
For more information, contact your local Materialise office.

materialise.com/contact-locations