

The image features a white background with a blue diagonal graphic element that splits into two triangles meeting at a point. The top-right triangle is a bright cyan color, while the bottom-left triangle is a darker blue. In the top-left corner, the word "materialise" is written in a bold, lowercase, sans-serif font. Below it, the tagline "innovators you can count on" is written in a smaller, lowercase, sans-serif font.

materialise
innovators you can count on

Materialise e-Stage 7.0 What's New

Overview

- ▶ Gusset preferences
- ▶ Small UI changes
- ▶ Smarter point distribution algorithm
- ▶ DLP features

Overview



- ▶ **Gusset preferences**
- ▶ Small UI changes
- ▶ Smarter point distribution algorithm
- ▶ DLP features

Gusset preferences

➤ Gussets?

- Part-to-part connections
- Green and yellow connections in Materialise Magics RP

➤ Parameters were added in the parameter file to be more flexible in creating gussets

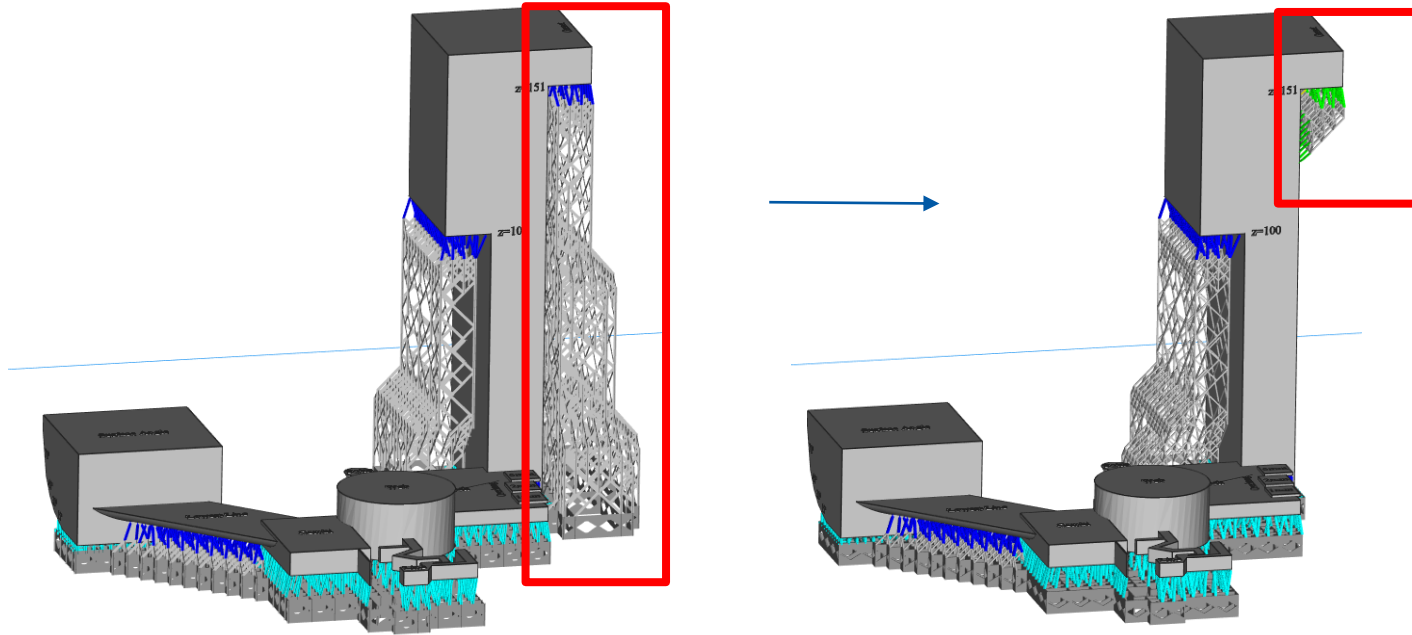
➤ Previous versions created only gussets when no other solution was possible

➤ The new parameters can be used to force gussets

➤ **Benefits**

- **Reduce build time**
- **Reduce resin consumption**

Gusset preferences



Old version

New version

Gusset preferences

Edit Parameter File

Load Save as Save Reset

Machine

Accuracy	0,2	mm
Recoater Load	5	N/m
Platform Shape	Rectangular	
Build Envelope Minimum X	0	mm
Build Envelope Minimum Y	0	mm
Build Envelope Minimum Z	0	mm
Build Envelope Maximum X	2100	mm
Build Envelope Maximum Y	710	mm
Build Envelope Maximum Z	800	mm

Material

Material Type	Resin	
Liquid Phase Density	1,12	kg/dm³
Solid Phase Density	1,3	kg/dm³
Young's Modulus	1200	MPa
Maximal Tensile Strain	1	%

Point Distribution

Interior Point Influence Region	3	mm
Border Point Influence Region	1,5	mm
No Support Offset	2	mm
XY Offset	0,3	mm
Minimum Self Support Angle	30	°

Top Connection

Penetration Length	0,5	mm
Contact Width		
Interior Point	0,15	mm
Border Point	0,25	mm
Anchor Point	0,5	mm
Contact Margin	0,2	mm
Horizontal Connection Height	0,2	mm
Connection Width	1	mm
Close To Part Width	0,5	mm

Bottom Connection

Penetration Length	0,5	mm
Contact Width	0,3	mm
Contact Margin	0,2	mm
Connection Width	1	mm

Gusset Preferences

Gusset Preference Factor	0	
Height Threshold	0	mm
Maximum Gusset Offset	0	n.w

Grid

Diamond Width	8	mm
Edge Width	1	mm
Diamond Angle	45	°
Column Height To Width Ratio	7	
Hull reduction level		
Outer Hull	1	2 ⁿ -w
Inner Hull	2	2 ⁿ -w
Margin To Part	1,5	mm
Maximum Offset Around Part	-1	n.w/2
Rotation Around Z	0	°
Minimize Perforations	<input type="checkbox"/>	
Platform Connection	Foundation	
Maximum Height	8	mm
Maximum Notch Height	4	mm
Rigid Foundation Start	<input type="checkbox"/>	

Slicing

Layer Thickness	0,125	mm
Slice Position	Top	
SI Resolution	0	units/mm
CI Unit Size	0	mm
SK Force SUPPORT Type	<input type="checkbox"/>	

Gusset Preferences

Gusset Preference Factor	0		
Height Threshold	0	mm	
Maximum Gusset Offset	0	n.w	

Gusset preferences

▶ Gusset preference factor

- ▶ A factor which reflects the amount of gussets versus the amount of connections to the platform
- ▶ The higher this value, the more gussets will be created

▶ Height threshold

- ▶ A defined threshold z-height
- ▶ Above this z-height, gussets are preferred
Below this z-height, gussets are not preferred

▶ Maximum gusset offset





- ▶ The maximum overhang distance, expressed in number of diamonds, for which gussets are preferred

Overview











- ▶ Gusset preferences
- ▶ **Small UI changes**
- ▶ Smarter point distribution algorithm
- ▶ DLP features

Small UI changes

➤ 'Recoater Load' → 'Horizontal Top Load'

Machine			
Accuracy	<input type="text" value="0,1"/>	mm	 
Horizontal Top Load	<input type="text" value="5"/>	N/m	 

➤ 'STL input' & 'Slice output' → 'Slicing' parameters

Slicing			
Layer Thickness	<input type="text" value="0,125"/>	mm	 
Slice Position	<input type="text" value="Top"/>		 
Sli Resolution	<input type="text" value="0"/>	units/mm	 
Cl Unit Size	<input type="text" value="0"/>	mm	 
Slic Force SUPPORT Type	<input type="checkbox"/>		 

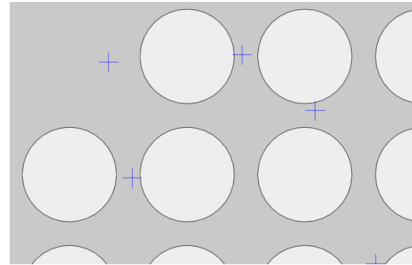
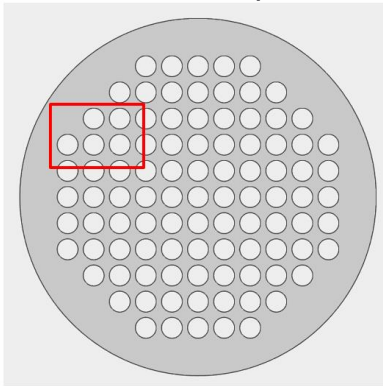
Overview

- ▶ Gusset preferences
- ▶ Small UI changes
- ▶ **Smarter point distribution algorithm**
- ▶ DLP features

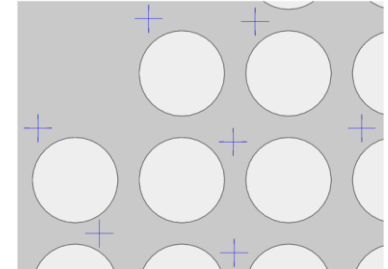
Smarter point distribution

- Fixed bug 'points in holes'

Bottom view of a part



Old version



New version

- Loop implemented: points-grid-points

Overview

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- ▶ **DLP features**

More platform connections possible (only with DLP license)

▶ Platform connection dropdown menu:

- ▶ Foundation: same as current feature for SLA

Platform Connection	Foundation		↶	i
Maximum Height	8	mm	↶	i
Maximum Notch Height	4	mm	↶	i
Rigid Foundation Start	<input type="checkbox"/>		↶	i

- ▶ Baseplate: to cope with the increased forces on the platform, a baseplate was added in the parameter file

Platform Connection	Baseplate		↶	i
Baseplate Height	0,5	mm	↶	i
Baseplate Offset	0	mm	↶	i
Baseplate Margin	1,5	mm	↶	i

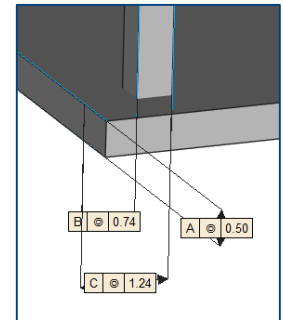
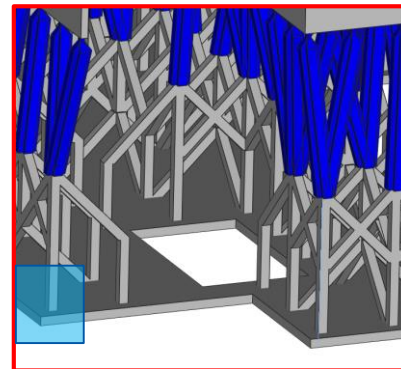
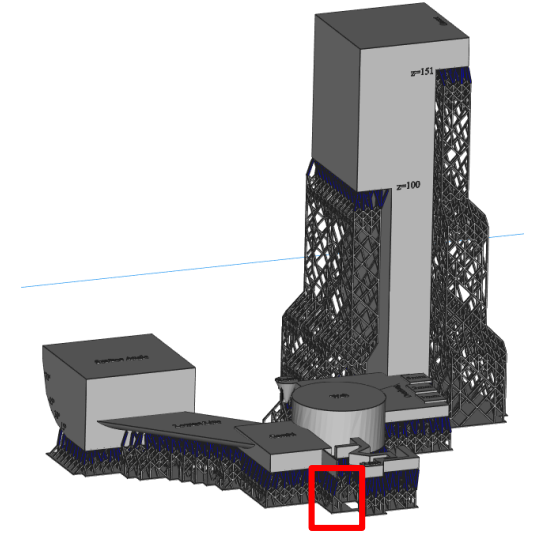
- ▶ None: no additional platform connection will be generated

Platform Connection	None		↶	i
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Baseplate (only with DLP license)

Platform Connection	Baseplate	↶	i	
Baseplate Height	0,5	mm	↶	i
Baseplate Offset	1	mm	↶	i
Baseplate Margin	1,5	mm	↶	i

- Height: the height of the baseplate
- Offset: by default the baseplate will reflect the hull of the grid. An extra offset can be applied to widen the baseplate
- Margin: a margin to keep between the baseplate and the part, when the latter is close to the platform



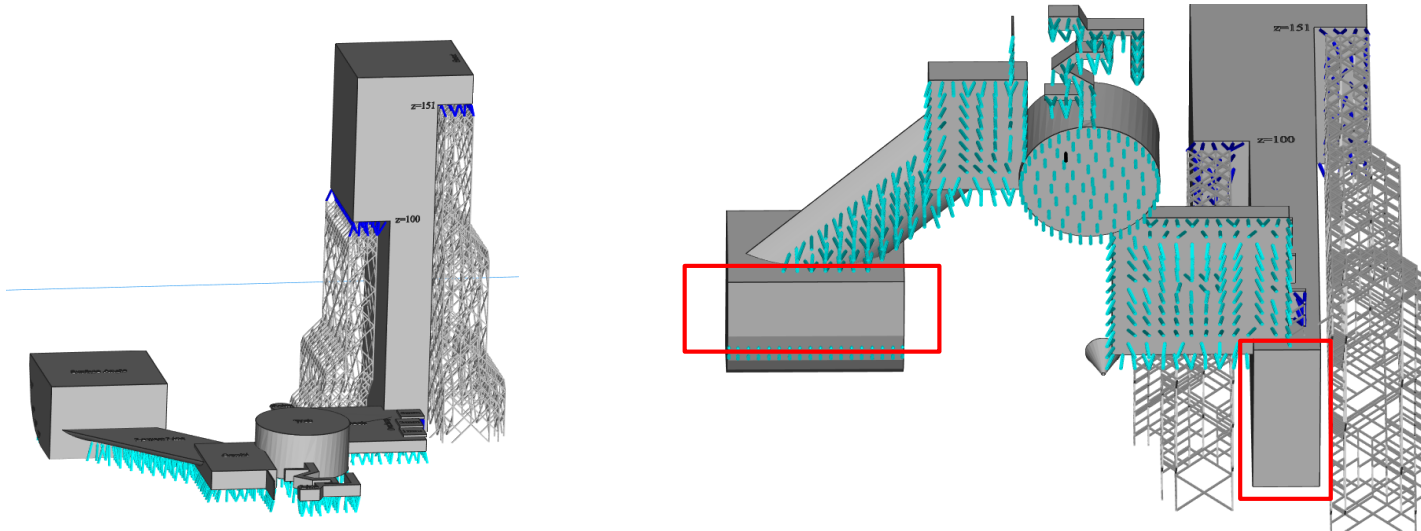
How to create a baseplate?

Workflow:

1. Prepare platform in Materialise Magics
2. Export parts as STL (don't generate e-Stage supports!)
3. Open Materialise e-Stage standalone and browse to the folder where the STL parts are stored
4. Adapt parameter file in order to create base plate
5. Click 'GO' in order to generate e-Stage and baseplate
6. Load e-Stage and baseplate STL files in Materialise Magics to check the result

Parts can start straight from platform

- ▶ Previous versions didn't allow placing parts straight on the platform. This is now possible, since it's being used frequently in the DLP technology
- ▶ Only applicable if the chosen platform connection is 'baseplate' or '(none)'





For more information,
contact your local Materialise office.

[materialise.com/contact-locations](https://www.materialise.com/contact-locations)