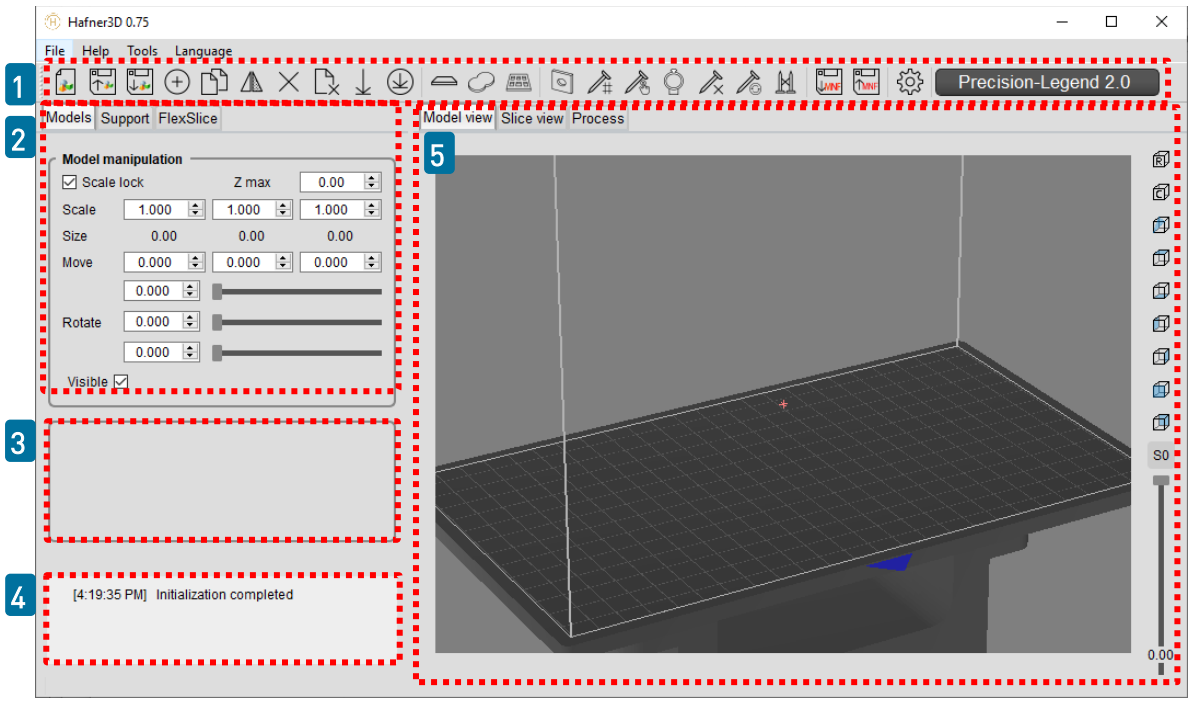
KALMAN HAFNER

Hafner3D Menu Structure

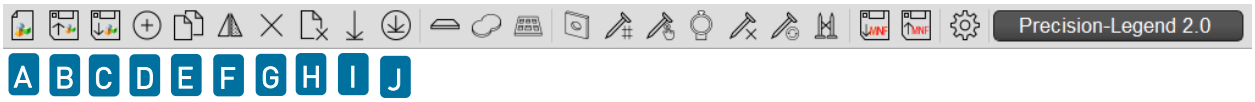
Overall layout



After launching the Hafner3D slicer, you will see an empty build platform as shown above. Each area has following items and purposes.

1. Function buttons
2. Model, support parameters, manipulation panel
3. List of imported models and generated supports
4. Event logs
5. 3D model view, 2D slice view, and network connected printers

1. Function buttons



Scene or model functions

A New scene file

B Load a scene file (H3D)

ⓘ NOTE: If you load a scene file with existing models on the scene, the loaded models and supports will be added onto the existing models.

C Save a scene file (H3D)

ⓘ NOTE: Scene file contains only model file names and support information, therefore you still need original model files (STL or OBJ) saved under original file path.

D Load a model file (STL or OBJ)

Model manipulation

E Copy the selected model(s)

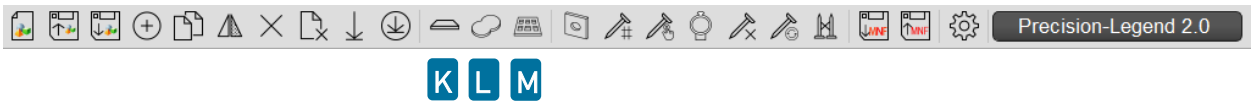
F Mirror the selected model(s)

G Delete the selected model(s)

H Clear all models

I Move the selected models to bottom

J Rotate a model to make the selected surface face the bottom



Base options

- K Create a single rectangular base for selected model(s)
- L Create a global base for all models
- M Create a grid type base

2a. Model or support parameters

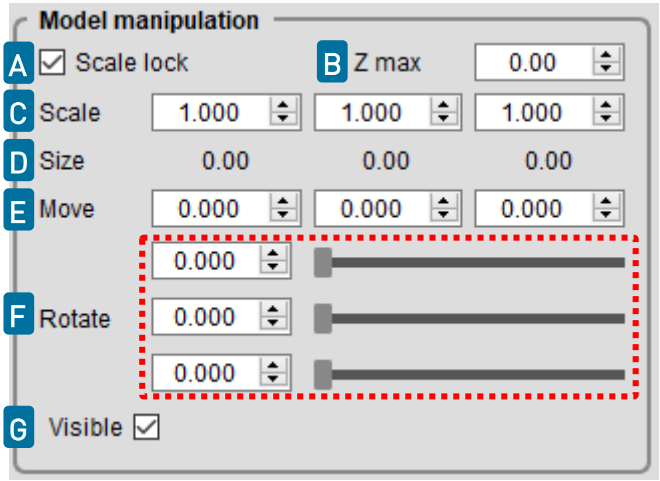
Support functions

- **N** Create a drain hole
- **O** Create a support array based on the specified support pitch.
- **P** Create a manual support (toggle on/off)
- **Q** Create a ring base
- **R** Clear all supports from the selected model(s)
- **S** Apply support parameters to selected model(s)
- **T** Create (or recreate) support links

Print files and ETC

- **U** Slice and save as print file format (*.mnf)
- **V** Load a print file (*.mnf) for slice validity check
- **W** Hafner3D settings
- **X** Printer model

2b. Model manipulation



A Toggle "lock scale" equal to XYZ of [C]

B Maximum height of a scene

ⓘ NOTE: This is automatically calculated from all models, but can be slightly adjusted before slicing.

C Model scales

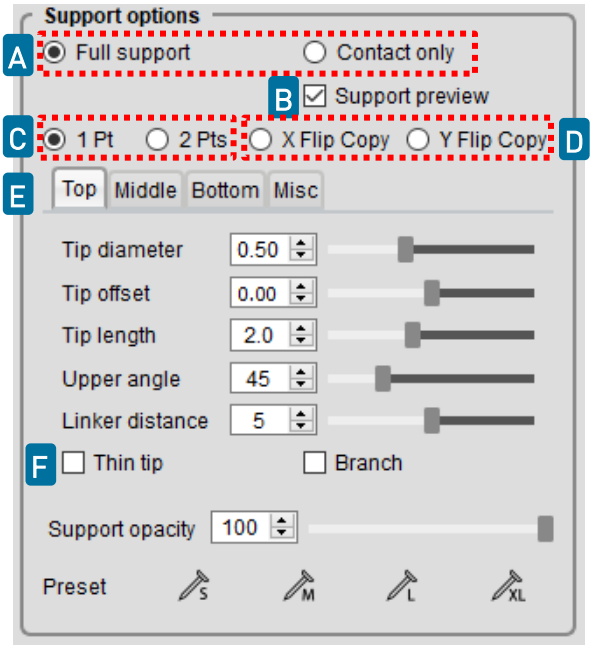
D Selected models size in millimeter

E Relative position from initially imported coordinates

F Rotation value along x, y, and z-axis

G Toggle show/hide of the selected model

2c. Support options



A Support preview option: full support vs. contact point only

B Toggle support preview

C Toggle support mode: 1 Point support or 2 Point support.

ⓘ NOTE: In 2 Point support. Support is placed by clicking the desired end and start point of the support.

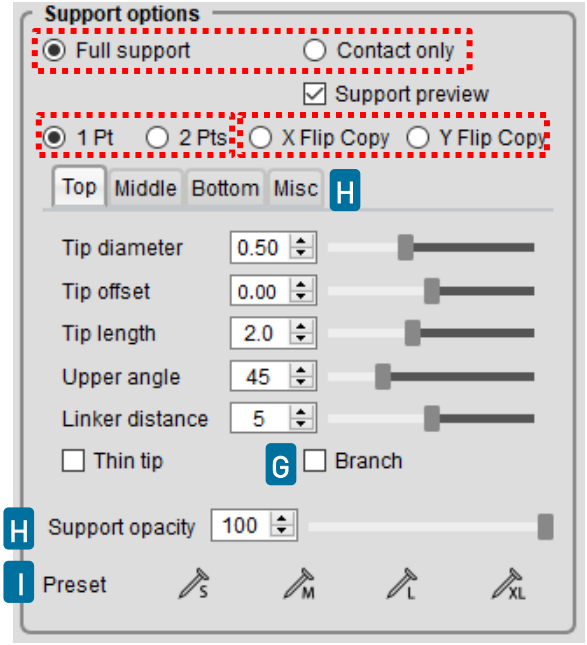
D Enable X-axis and/or Y-axis flip copied supports.

E Detailed support parameters.

ⓘ NOTE: Each support consists of a Top, Mid, and Bottom part.

F Toggle the use of narrow tips

ⓘ NOTE: A thin tip support has a narrower top shape, which is helpful for fragile models. BUT please notice, that it is just for additional support and NOT suitable to replace the normal support.



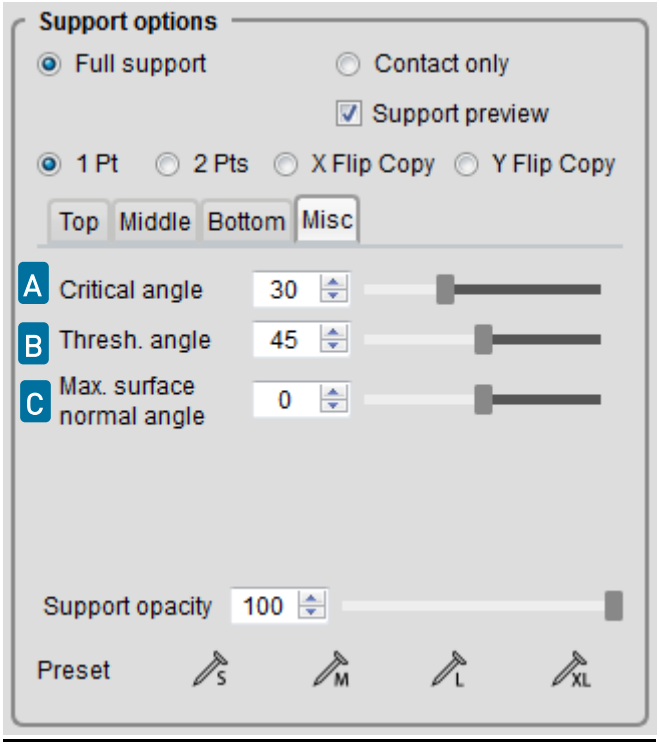
G Toggle the use of branch supports

NOTE: Branch supports connects a model to the nearest existing support

H Change the opacity of supports

I Preset support parameters

H MISC see the following information



A The "critical angle" value highlights the surface overhangs which need to be supported, to achieve a successful print result. Highlight color is red.

B The "thresh. angle" value highlights the border of the threshold and it's a suggestion value to place additional support. Highlight color is orange.

C Max. Surface Normal Angle:
This value, is the border angle where supports can be created or not.

NOTE: When you change the angle settings, these changes will be saved in the settings. These are the default settings:
Critical angle = 30
Thresh. angle = 45
Max. surface = 0
normal angle

5a. 3D view options

R - reset to default view

C- make a current model as the center of view

Oblique view

Top view

Bottom view

Left view

Right view

Front view

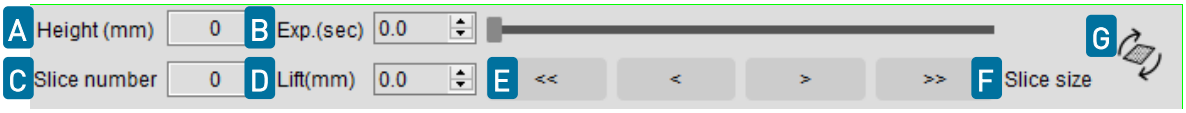
Rear view

Toggle between slice preview modes; none(S0), slice+bottom (S1), and slice+top (S2)

Slider for changing a slice height
This slider function is for visualisation purpose only. It helps you to analyse an object if the amount of support is correct and sufficient. It enables you to fade out undercuts and gives you a better view for placing support. Using the slider allows you as well to previes an object fot it's airborne overhangs, so called « islands »

Current slice height [mm]

5b. 2D slice view options



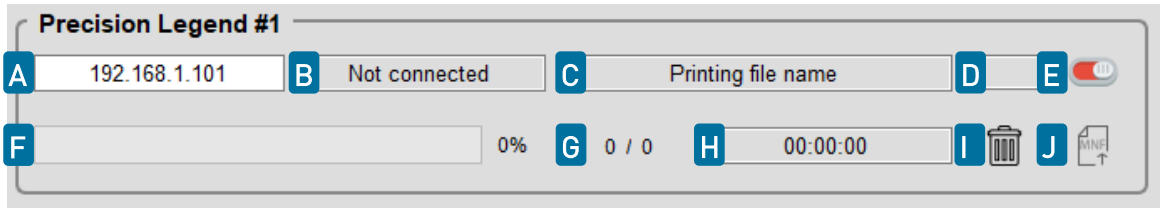
- **A** Current slice height
- **B** Exposure time of the shown slice layer
- **C** Current slice number. First slice starts from 0.
- **D** Lift distance after this slice
- **E** Slice move buttons; first, prev, next, and end.
- **F** The pixel resolution (number of pixels)

ⓘ NOTE: Precision Legend 2.0 has 2560 x 1440.

- **G** For advanced users only. For deleting single slices before starting the print. This can be used to delete a single defective slice.

ⓘ NOTE: The print will be shorter with every layer that is deleted.

5c. Printer process options



- **A** IP address of the printer
- **B** Current status of the printer
- **C** Print file name
- **D** Pixel size of the connected printer
- ⓘ NOTE: 47 microns for Precision Legend 2.0
- **E** Toggle connection / disconnection to the printer
- **F** Progress of an active print
- **G** Current slice number / total slice number
- **H** Estimated remaining time to completion
- **I** Remove this printer process
- **J** Upload a print file (*.mnf) to the connected printer