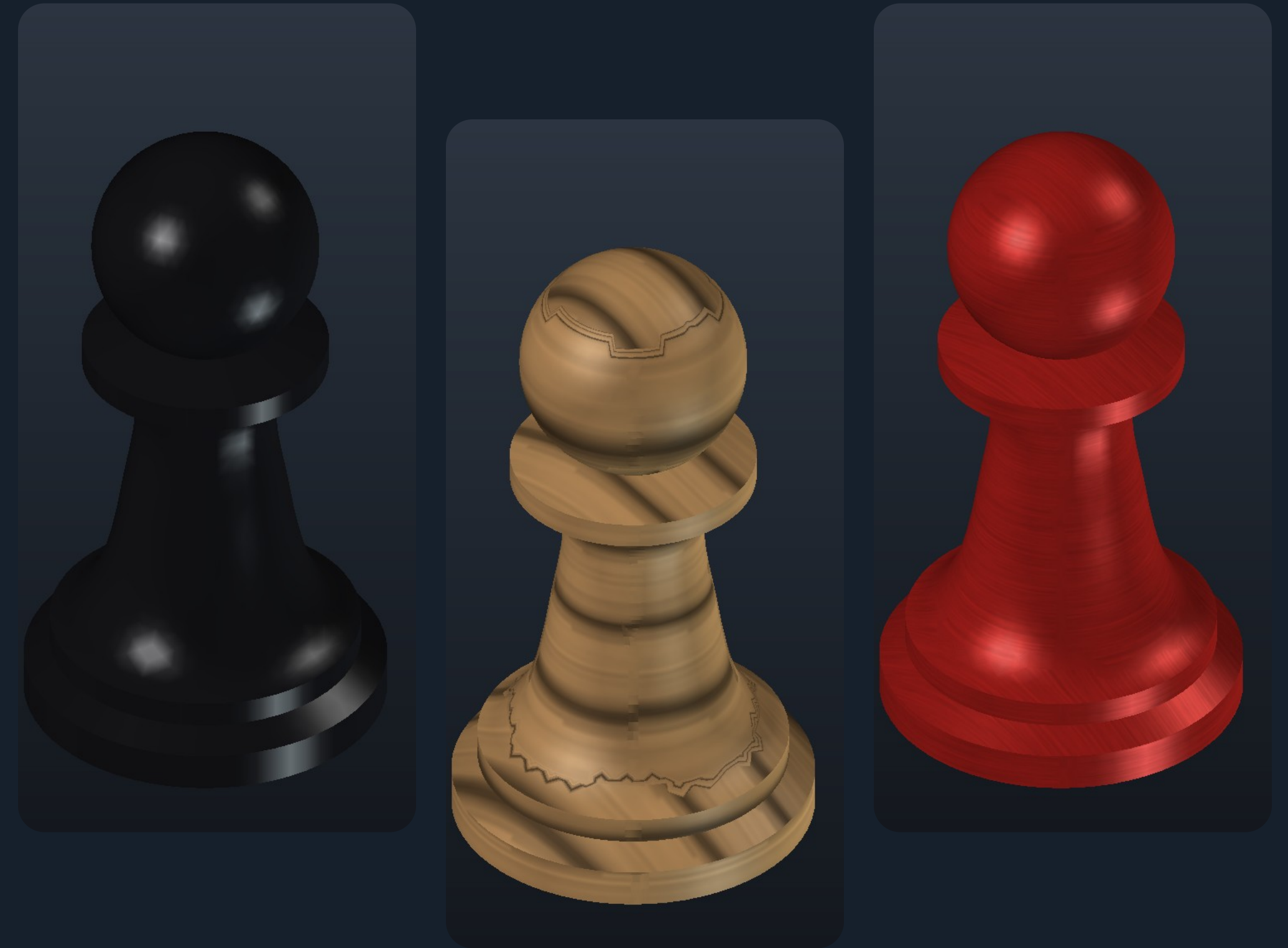


NEW IN THIS BUILD

What's new

Assembly section and interference, color and textures, a scaled photo to sketch over, a 3D line, loft planes — and many small things

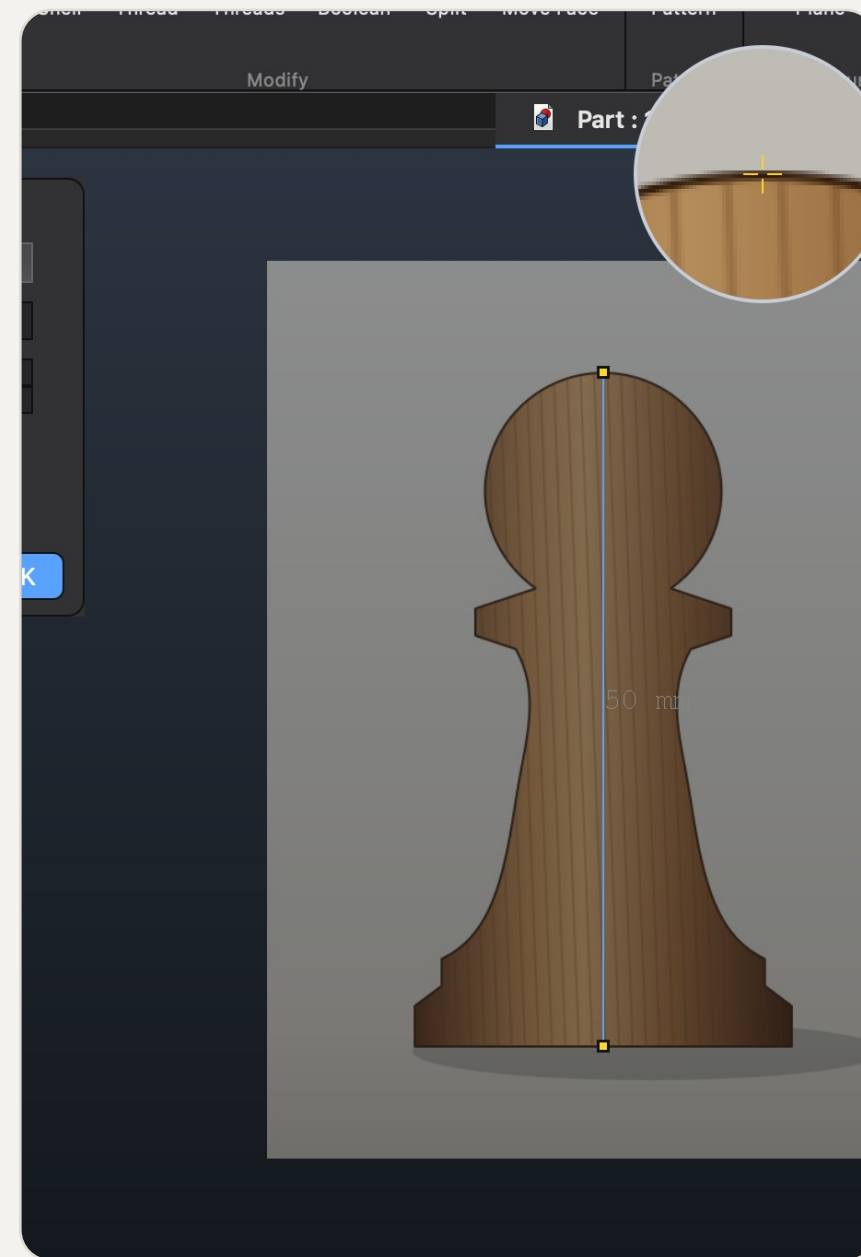


From a photo to a part in five steps



1 A photo of a pawn

Image ► Insert Image, then On XZ — the picture stands upright



2 Scale

Two points — foot and top, Real length 50 mm; a magnifier under the pointer, 35 % transparency



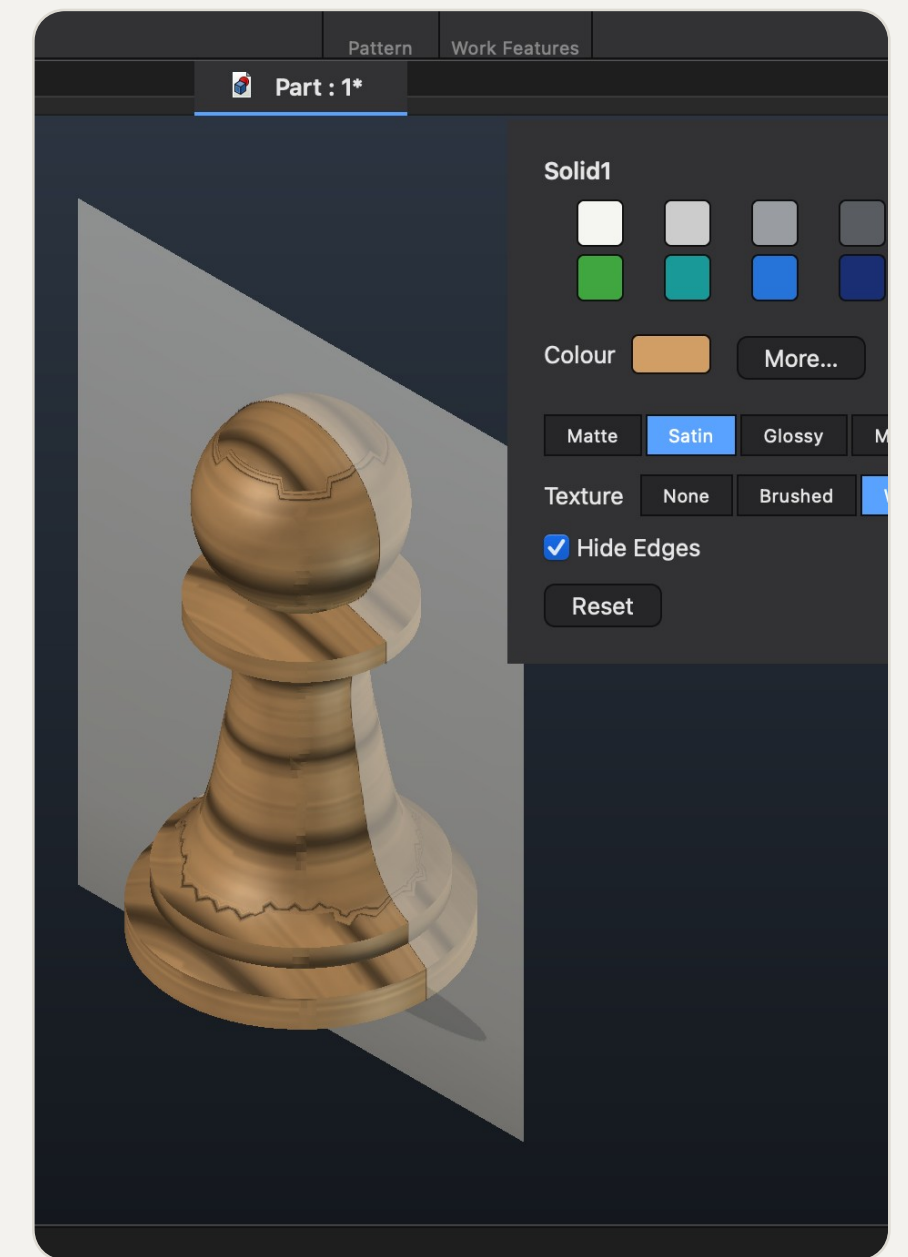
3 Sketch the outline

Half the silhouette over the photo on the XZ plane



4 Revolve

About the Z axis — the pawn is done, exactly 50 mm



5 Appearance

Wood, Satin, Hide Edges — shown on the part at once

APPEARANCE

One part, three characters



Wood · Satin

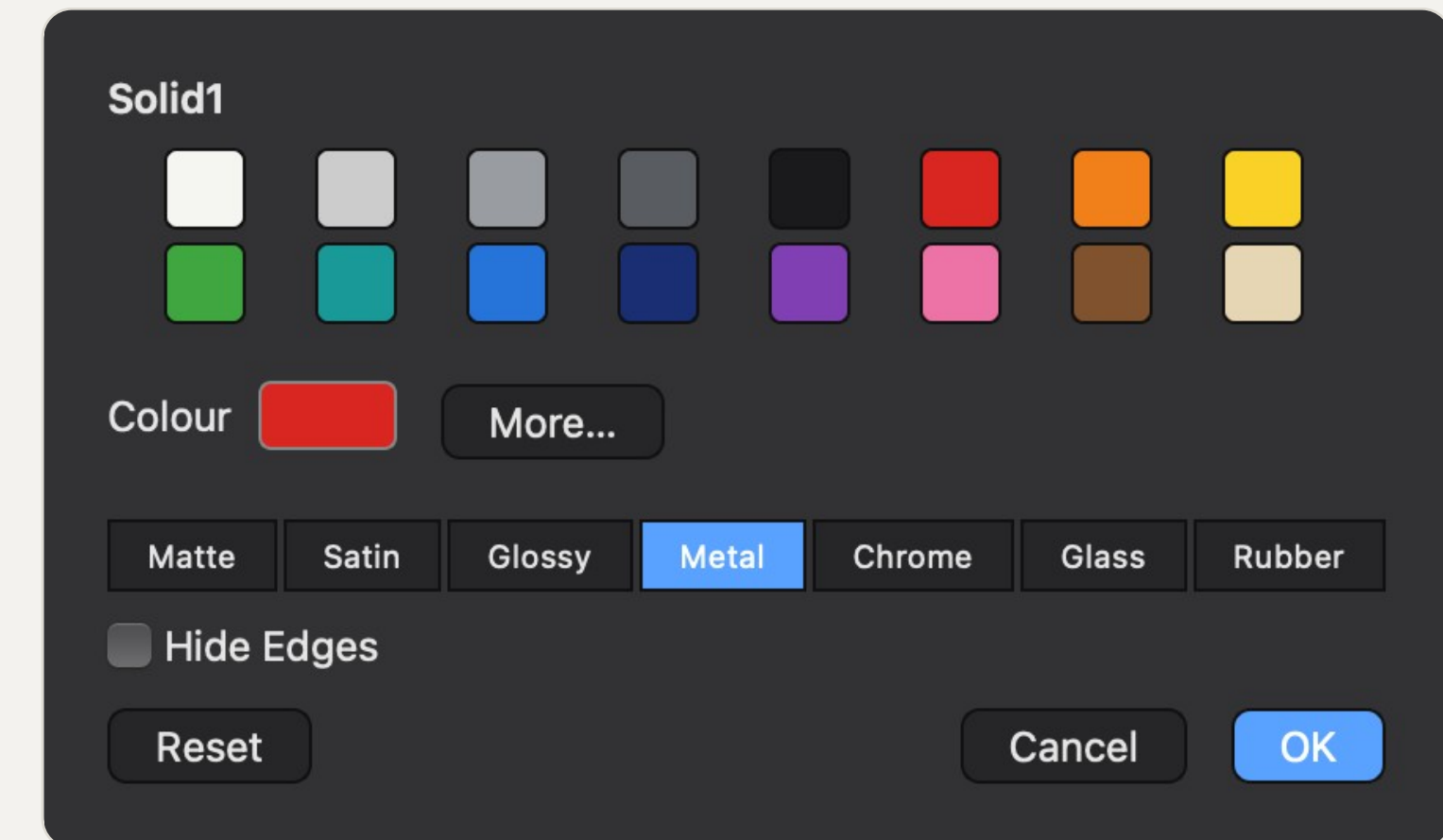
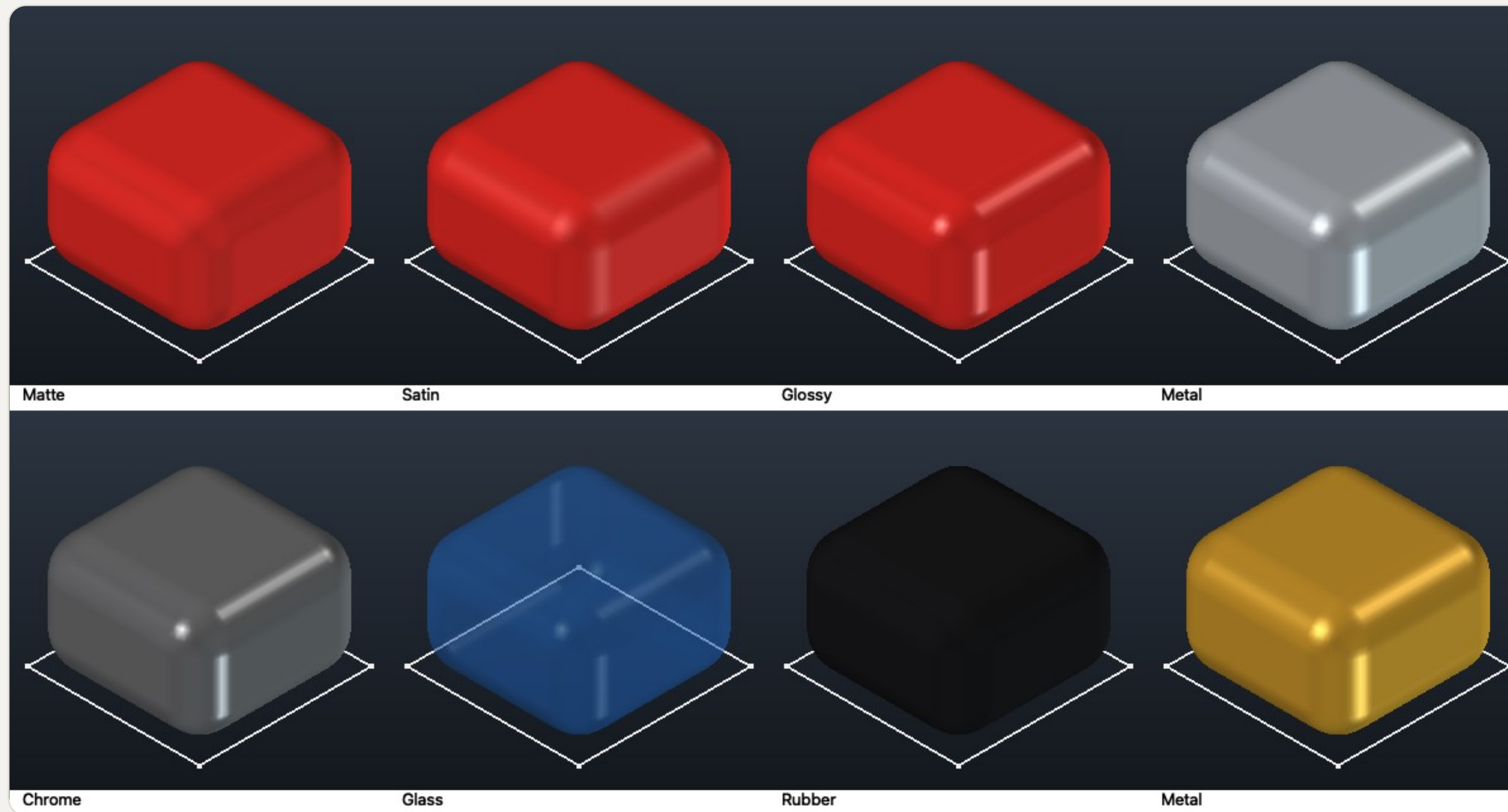


Glossy, black



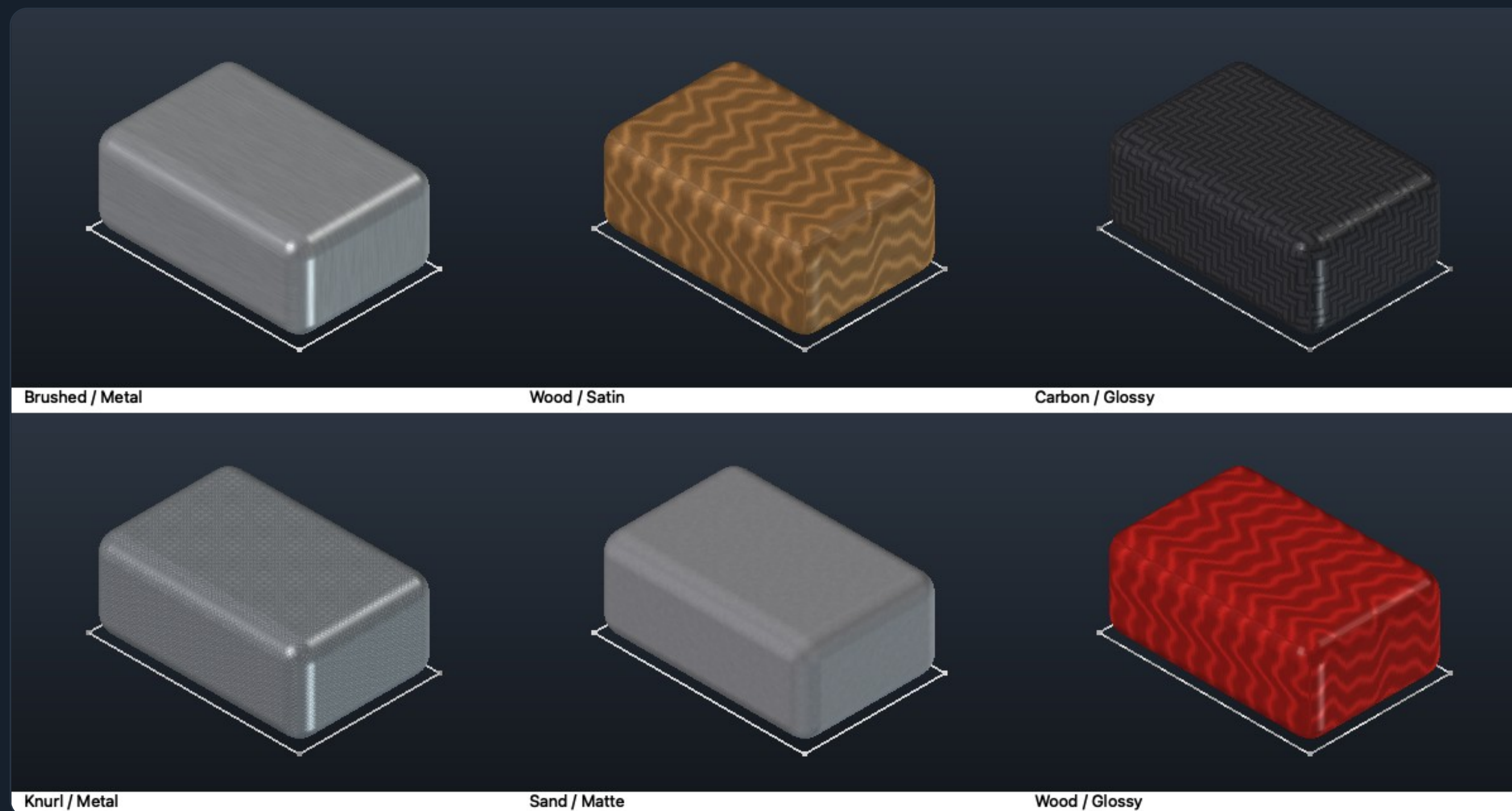
Metal + Brushed

Color and finish



- Any color: the palette or **More...**
- Finish: **Matte, Satin, Glossy, Metal, Chrome, Glass, Rubber**
- Colors the picked faces, Solids or the whole part; **Hide Edges** takes the edge lines off
- Shown at once, OK is one Undo step; a face keeps its color when a feature moves it

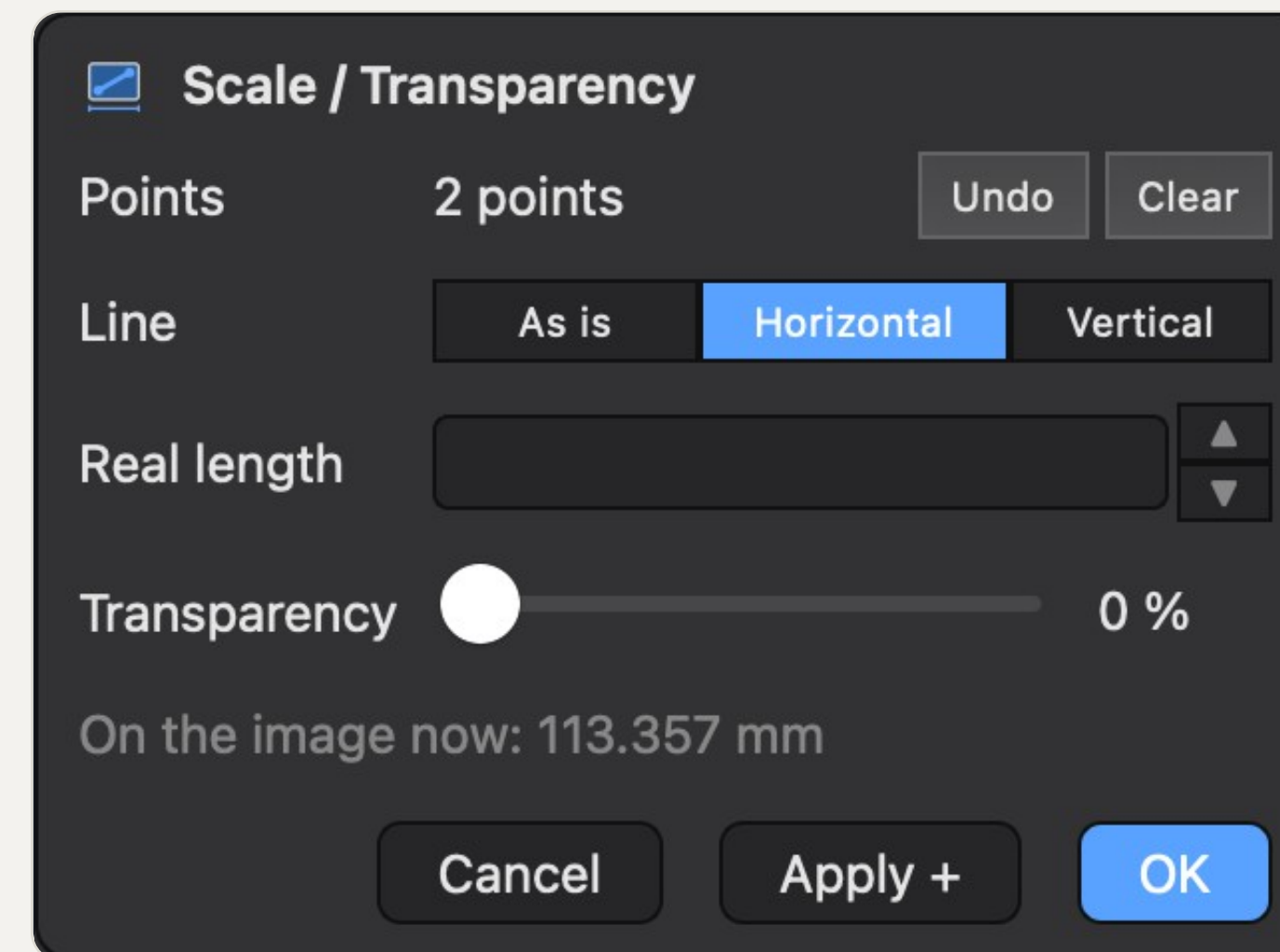
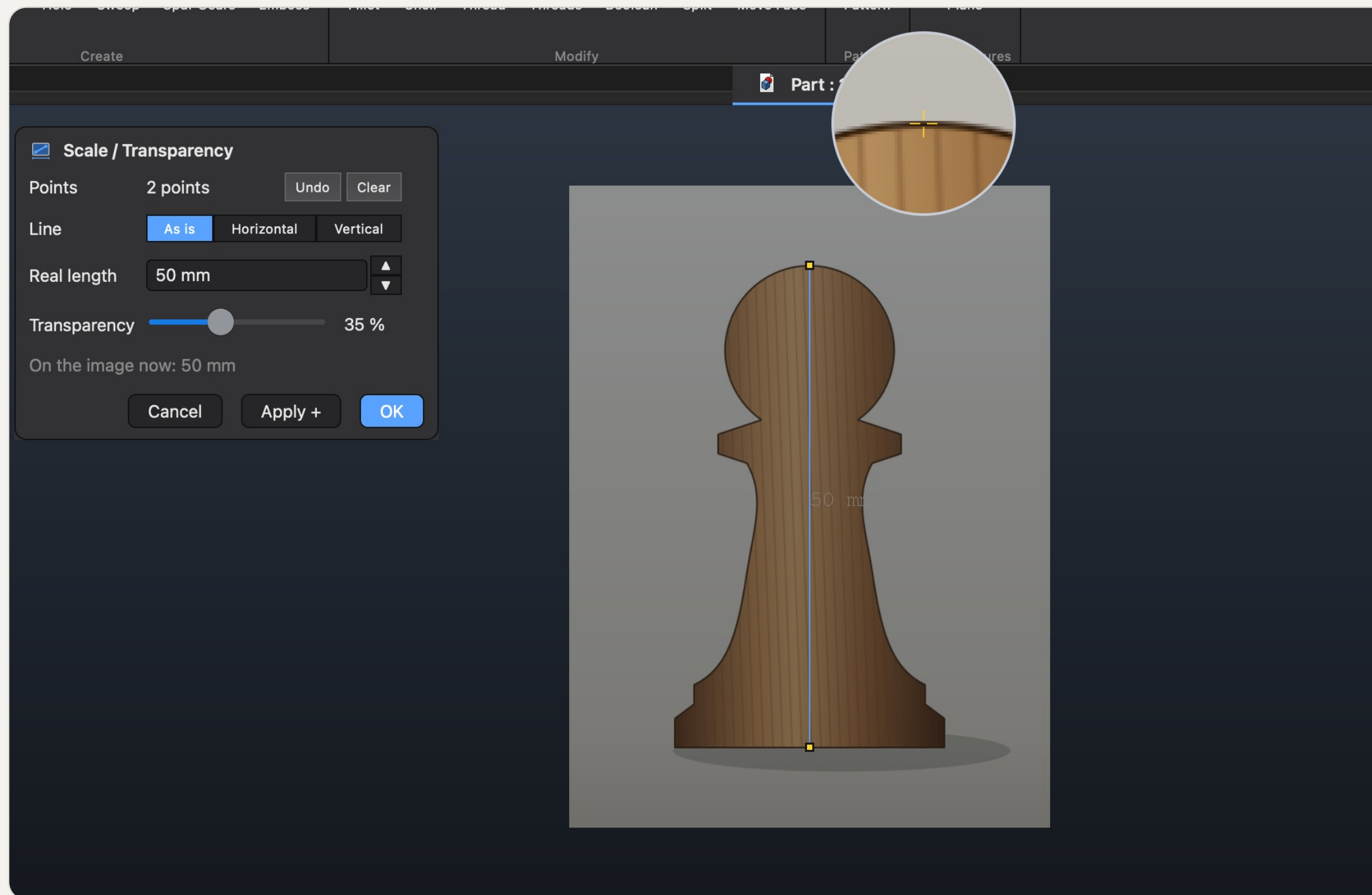
Textures over the color



- Brushed, Wood, Carbon, Knurl, Sand
- The color shows through: a red part gets red wood
- The pattern keeps its real size on any part
- Saved in the file, shown in assemblies too
- Photo rendering through Blender — some day; color and textures for now

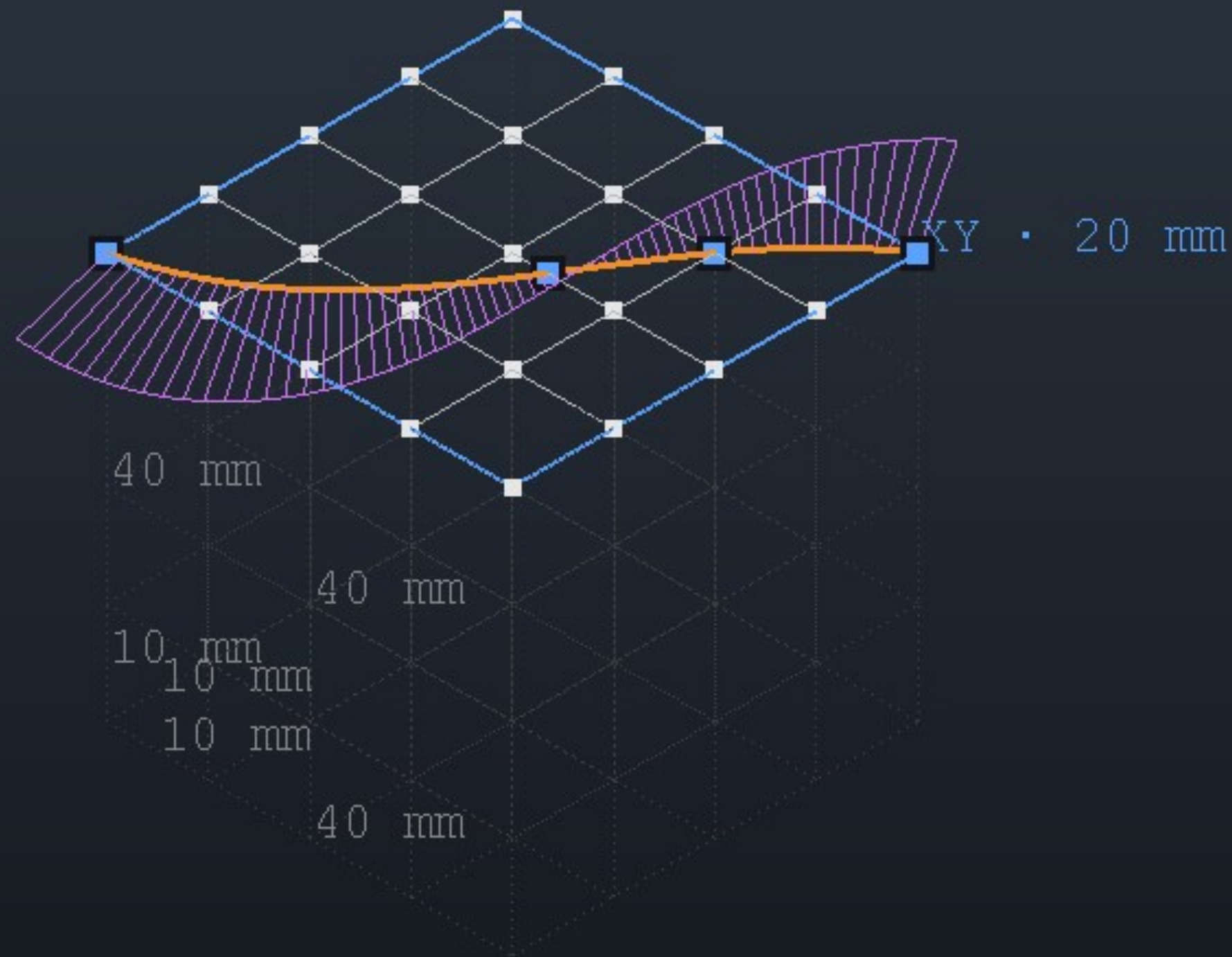
IMAGE TAB

A photo to sketch over, at its true scale



- **Insert Image:** JPG, PNG, BMP; On XY / XZ / YZ, Turn 90°, Mirror, Show / Hide
- **Scale:** two points and the real length — the whole picture scales
- Line ► **Horizontal / Vertical** turns the picture to level that line
- A magnifier under the pointer, small cross points; a transparency slider

A line in space on a virtual cube



 **3D Line**

Line

Lines

Spline

Through points

Curvature ☒

Cube

40 mm

▲

▼

Step

10 mm

Layer

XY

XZ

YZ

Cube

At

20 mm

▲

▼

Points

4 points

Undo

Clear

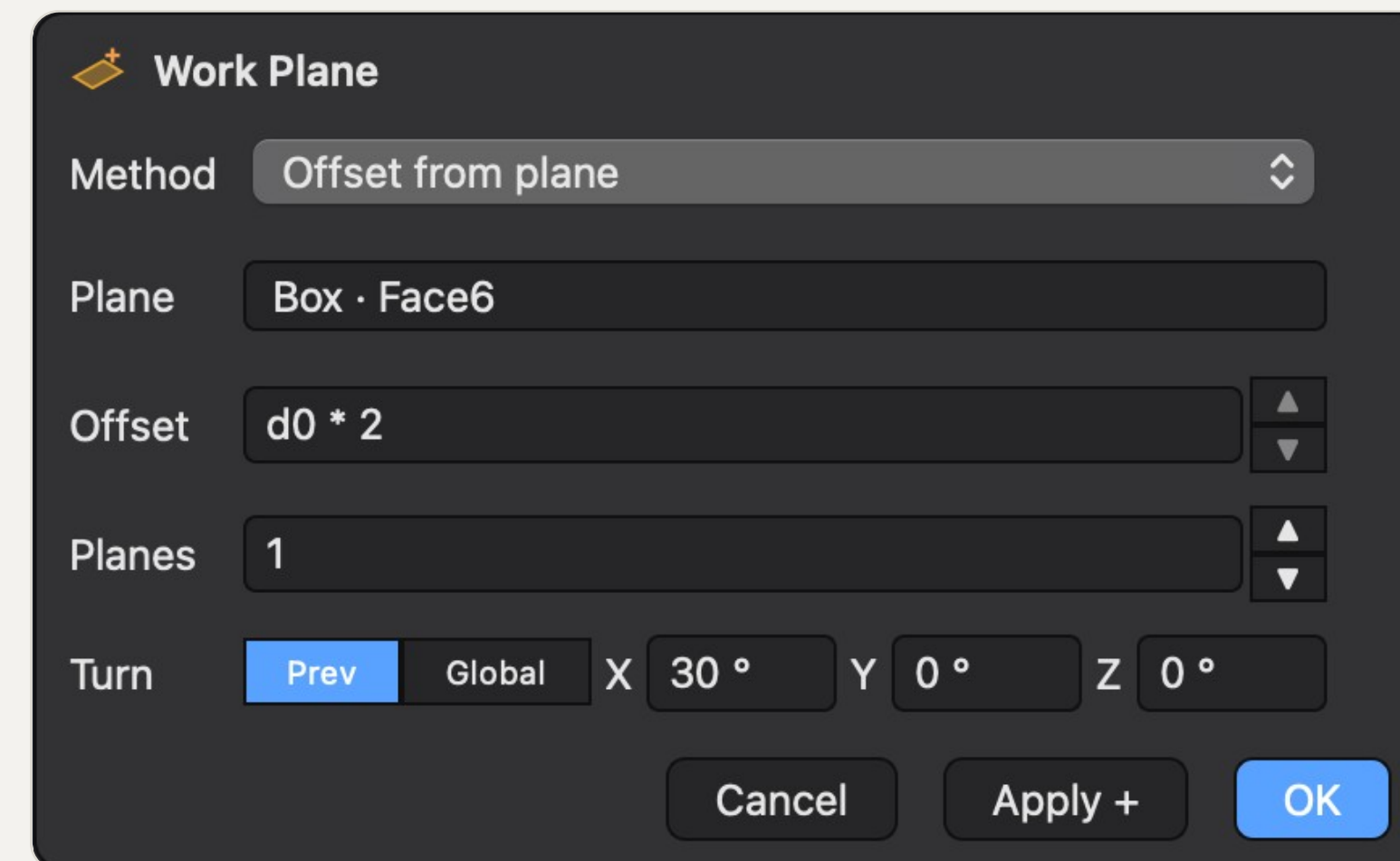
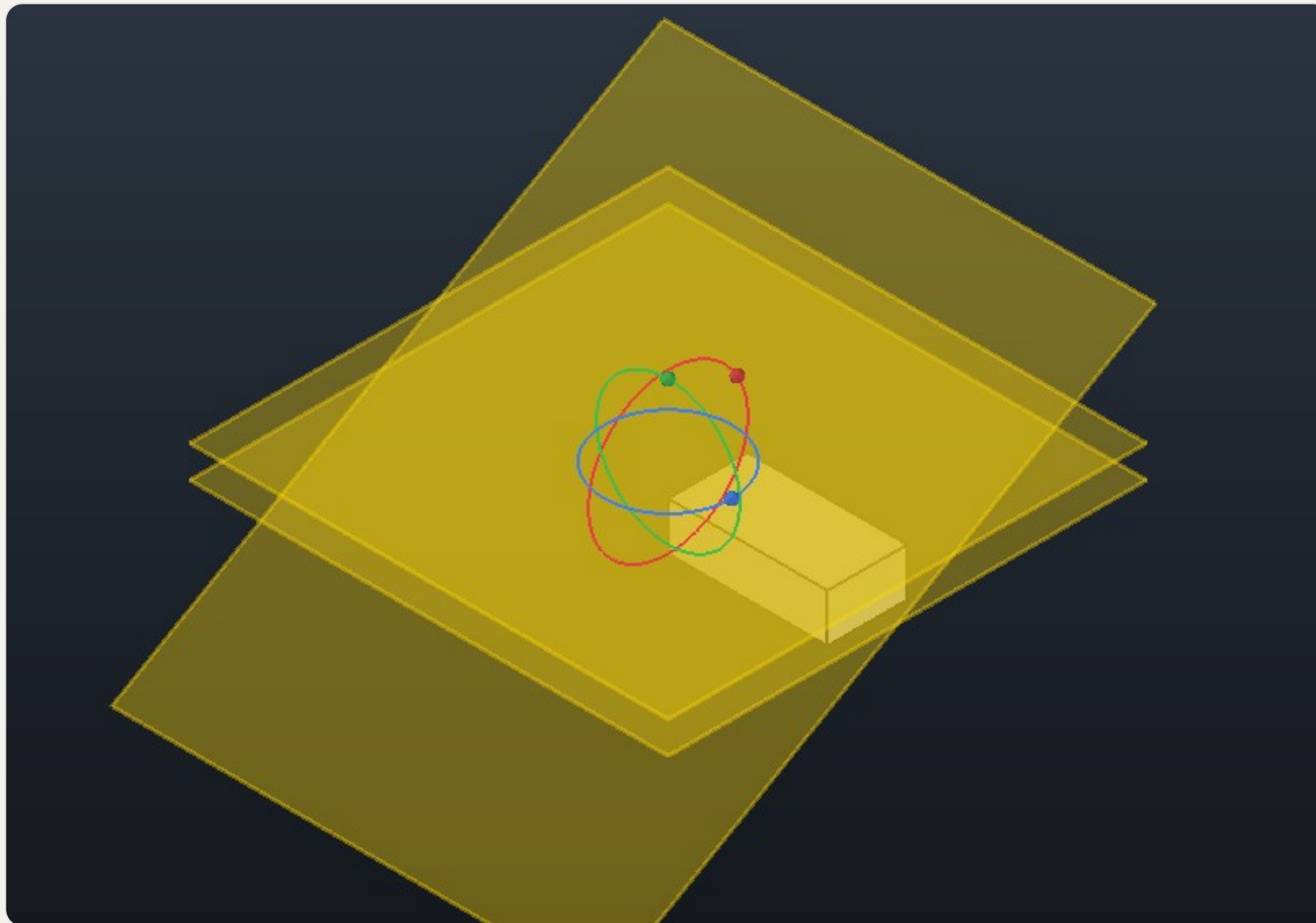
Tab / Shift+Tab: the layer a step up / down (or At's arrows)

Cancel

Apply +

OK

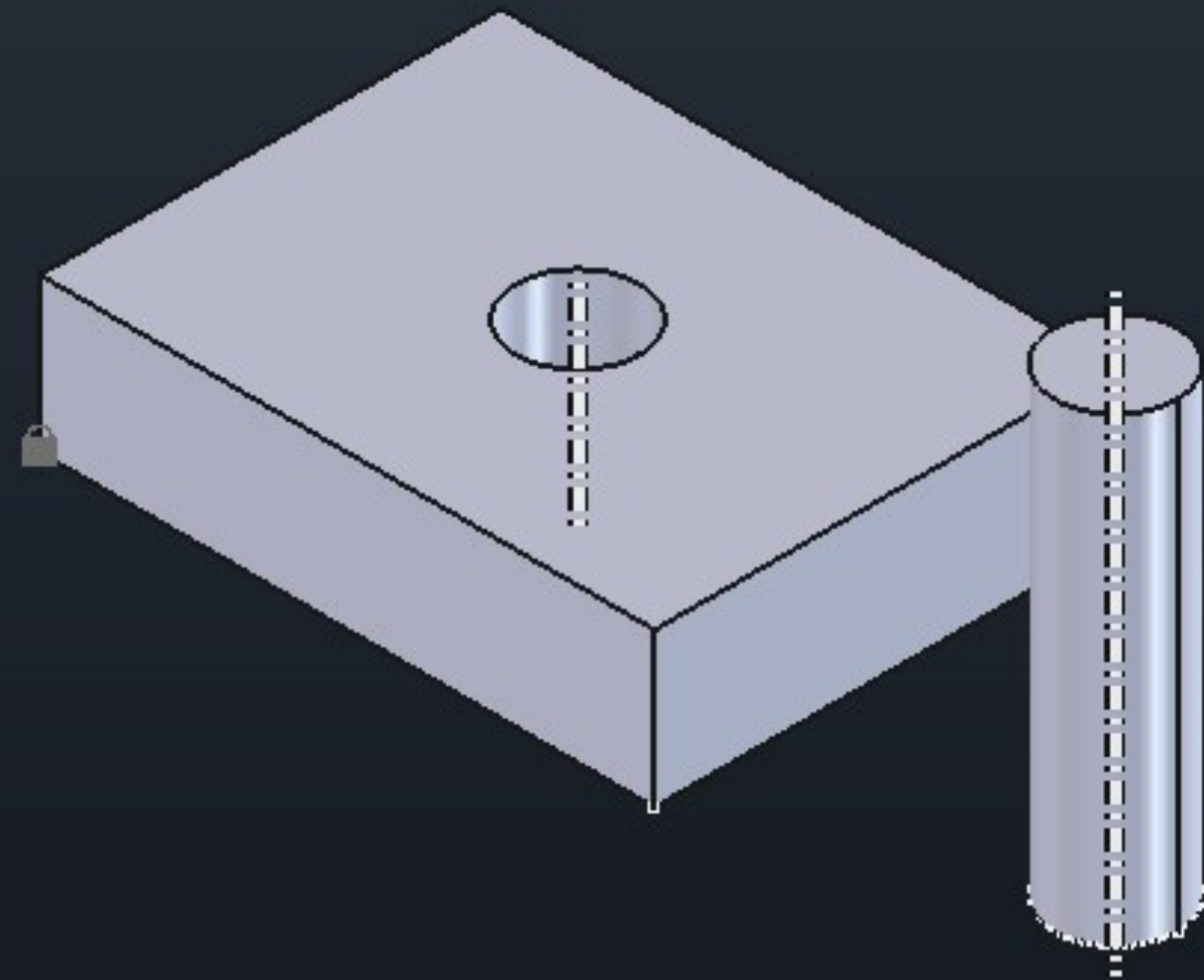
Loft planes – several at once, and turned



- Offset ► **Planes:** 2×, 3×... the offset in one go
- **Turn:** X, Y, Z about the previous plane or the global axes
- Typed or dragged on rings; the next plane stays as it was

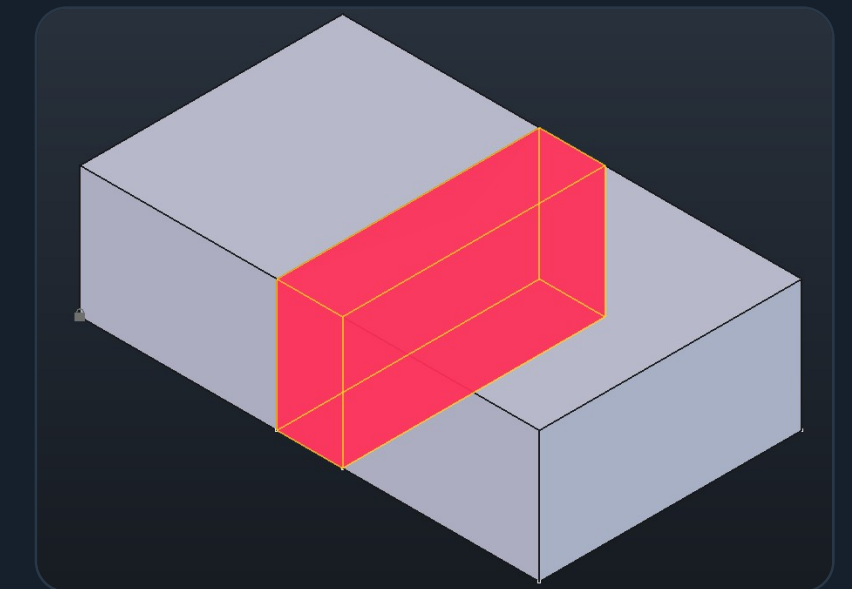
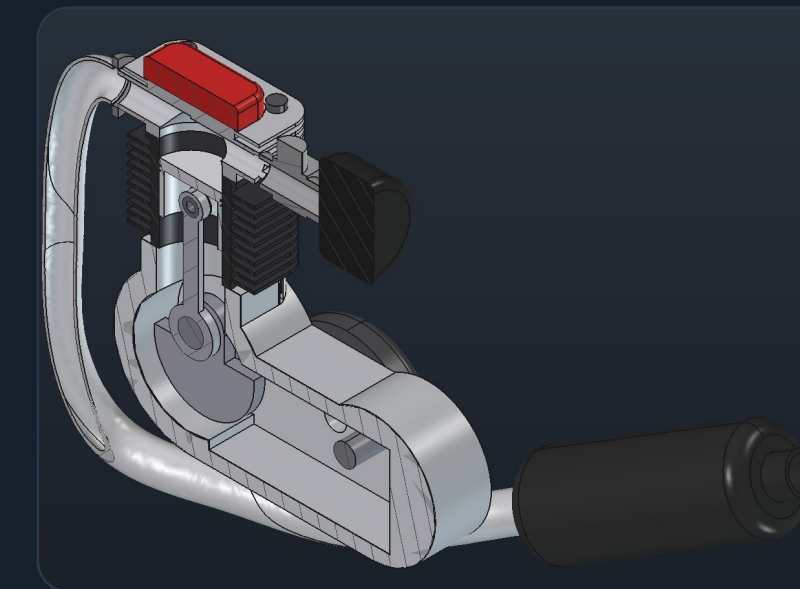
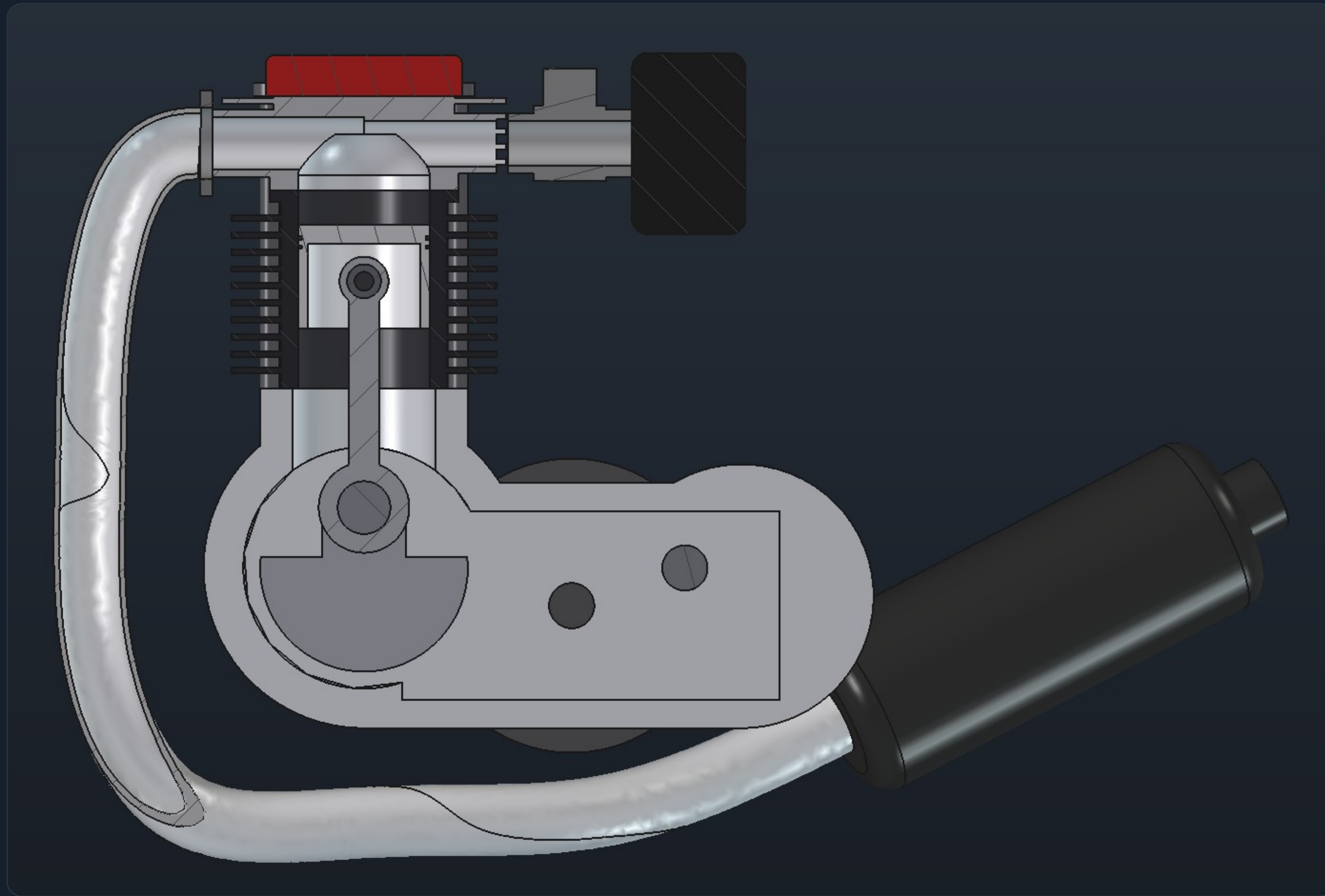
ASSEMBLY

Axes to constrain to



- Every turned body and hole shows its **axis** as a light center line
- Mate, Flush, Insert, Cylindrical, Parallel... take an axis with a click
- The gizmo stays about 3 s after a drag — easy to grab again
- The grabbed handle **changes color**; smaller arrows
- Make Assembly keeps the parts' names; the assembly is **name_assy**

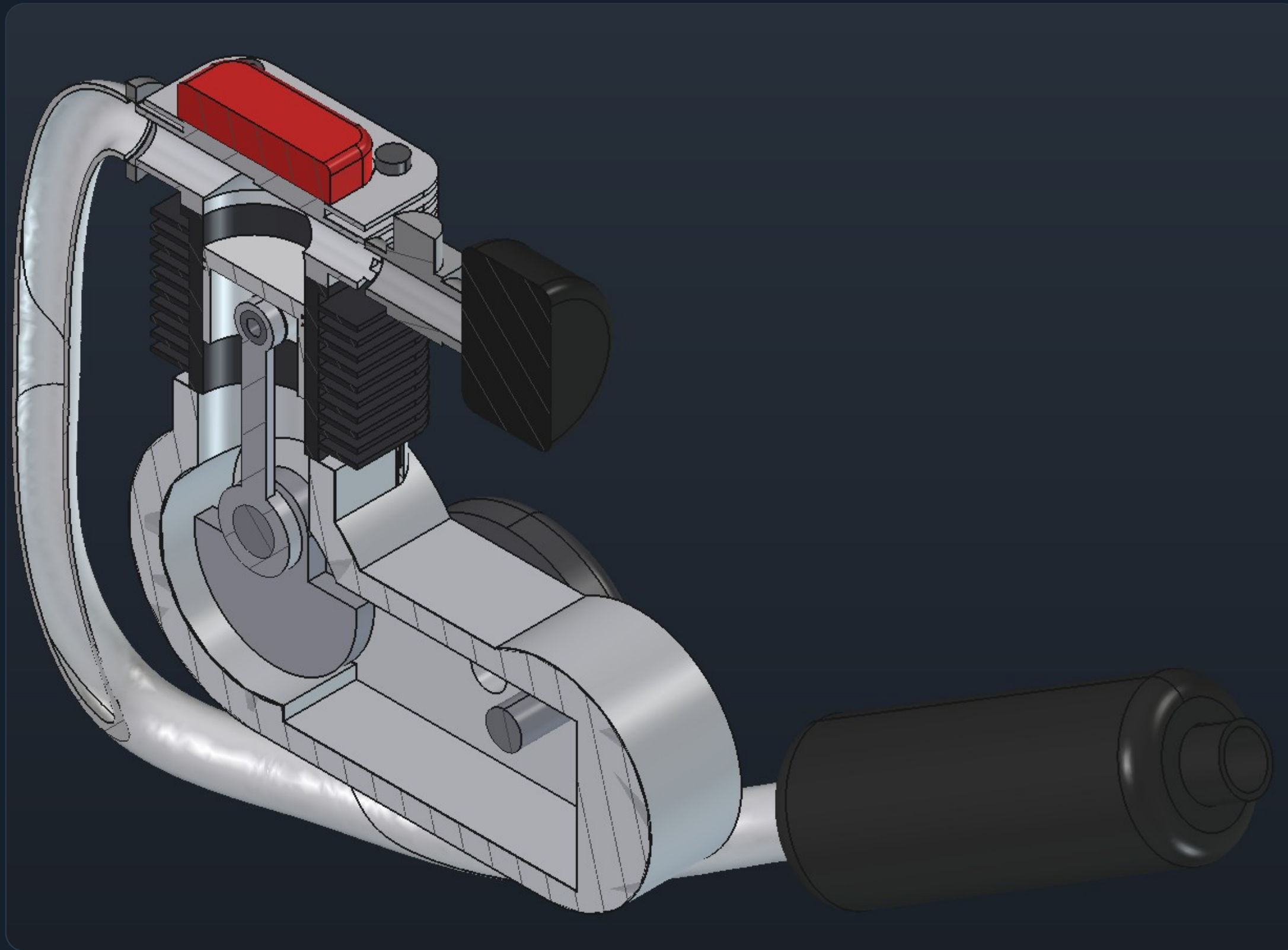
The whole assembly cut – every part in its color NEW IN 0.9



- The plane cuts every part it meets, each with its own hatching
- Any shape: InnCad and FreeCAD assemblies, STEP, other programs' files
- **Interference:** where parts go into each other, in bright red, with the volume
- Hide / Show for axes, sketches, origin; **Open** a part in its own window

NEW IN 0.10

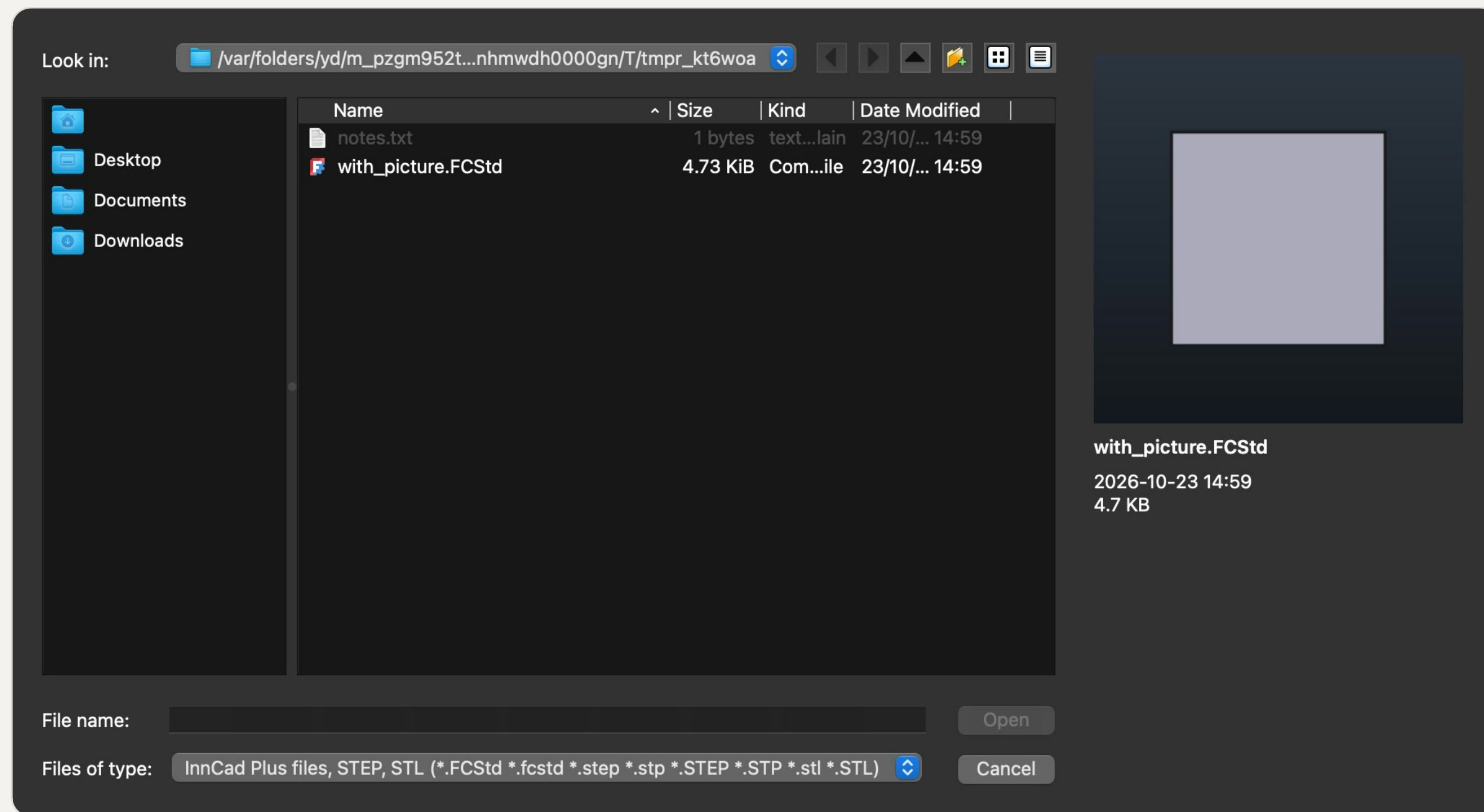
Order in the assembly



- **Hide, Show** and **Show All** said outright — in the ribbon and every right-click menu
- In an assembly a part hides and shows **in the assembly's tree**: its row stays, Show brings it back
- Files not made in InnCad — a script's, FreeCAD's, a STEP — open **with every tool**
- **Save** of an assembly: a folder of its name holding it and all its parts
- A smaller gizmo, shown on a click for a couple of seconds; scroll arrows on the file tabs

AND MORE

Small things that save time



- **Open** with previews: FCStd, STEP, STL — picture, date, size; only what opens is listed
- Import: **IGES**, **OBJ** (Plus), JPG / PNG to sketch over
- **Screenshot**: the 3D view or the whole window, PNG (transparent too), JPEG, BMP
- Extrude ⇌ 2: the second side has its own Distance / To Next / Through All / To
- Extrude ▶ To: a face, an edge, a point, an axis
- Fillet ▶ **Full**: a full round between two edges
- Tips in blue, errors in red

One button, and your AI is in InnCad PLUS ONLY

InnCad Plus has its MCP server built in **(AI Link)**: nothing to download for it. What you need is an AI program that speaks MCP, signed in with your own account.

1. An AI in the Terminal — Connect AI sets it up

Claude Code [website](#)

installed ✓

Connect

Codex (OpenAI) [website](#)

not installed

Connect

npm install -g @openai/codex

Copy

then run codex once to sign in: a ChatGPT account or an OpenAI API key

Gemini CLI (Google) [website](#)

not installed

Connect

npm install -g @google/gemini-cli

Copy

then run gemini once to sign in: a Google account (free) or a Gemini API key

Paste the command into a Terminal. npm comes with Node.js ([nodejs.org](#), the LTS installer). Then Connect here, or Tools ▸ AI ▸ Connect AI.

2. Any other MCP program

[Claude Desktop](#) · [Cursor](#) · [VS Code \(Copilot agent mode\)](#) · [Windsurf](#) · [LM Studio \(local models\)](#). In its MCP settings add a local (stdio) server named inncad:

Command

/private/tmp/claude-501/-Volumes-Docs-Clauc

Copy

Argument

/private/tmp/claude-501/-Volumes-Docs-Clauc

Copy

Or this entry in its settings file:

Copy

```
{  "mcpServers": {    "inncad": {      "command": "/private/tmp/claude-501/-Volumes-Docs-Claude-projec      "args": [        "/private/tmp/claude-501/-Volumes-Docs-Claude-projects-InCad/"      ]    }  }}
```

Claude Desktop: Settings ▸ Developer ▸ Edit Config
Cursor: Cursor Settings ▸ MCP
VS Code: Command Palette ▸ MCP: Add Server ▸ stdio
Windsurf: Windsurf Settings ▸ MCP servers
LM Studio: Program ▸ Install ▸ Edit mcp.json
VS Code names the list servers. Restart the program after changing its settings.

AI Link is on: an AI can connect now.

Close

- Claude Code installed? **Connect AI** opens a Terminal with it in the part's folder, no questions
- The MCP server is built into InnCad Plus — nothing to download
- Nothing installed? The window on the left: where to get Claude Code, Codex or Gemini CLI, and the install command
- Claude Desktop, Cursor, VS Code, Windsurf, LM Studio: ready paths and JSON with Copy

Try it!

Start with the pawn: photo → Scale → sketch → Revolve → Appearance. If something goes wrong, send the log (chapter 11 of the manual).

