

USER MANUAL

CabCarveCNC

Design · Cut lists · Optimise · CNC

16 October 2026

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What's in CabCarveCNC

CabCarveCNC takes a kitchen, laundry, vanity or robe job from the first wall to the last CNC program, all in one program on your own PC. You design the room, it builds every cupboard board by board, prices the job, nests the sheets and writes the machine programs. Change anything and everything that depends on it follows: boards, holes, the quote and the programs.

Rooms in seconds

Pick an L, U, galley or closed room, or click the corners and type your site measurements. Add windows, doors, appliances, sinks, plumbing and power points. You can also import a designer's DXF plan and have the walls, openings and tagged cupboards found for you.

Drag-and-drop cupboards

A full library of base, wall, tall and corner units, panels, fillers, appliance housings, vanities and robes. Drag one onto a wall and it snaps in place, fills a smaller gap and finds its own corner. Resize by dragging arrows: drawers stay equal and every board, hole and program follows.

Your construction, your way

A step-by-step setup covers boards, backs, shelf holes, gaps, hinges, drawers, kicks and edging. Save it as named construction methods. Settings work in layers: shop → job → room → one cupboard.

Every board, editable

The cupboard editor lays out doors, drawers, shelves and partitions by dragging. The board editor changes one board on its own: shapes, curves, corner radii, holes, line bore, grooves, pockets and rebates, shown cut in 3D.

Door styles and materials

Build slab, shaker, multi-panel, V-groove, glass-frame or bought-in door styles, with their own CNC toolpaths, profiles and drilling. Boards can have several sheet sizes, grain, matching edge tape, supplier codes and prices. Realistic textures and tile layouts are included.

Hardware that drills itself

Set up your own hinge, runner, drawer, handle, lift-up and sliding-door systems once, and the right holes are drilled automatically. Load your supplier's price list and every coded part is priced.

Benchtops and splashbacks

Benchtops appear as you build. Sink and cooktop cut-outs are checked against stonemason rules. Waterfalls, mitres, one-piece L and U tops, splashback panels and a 1:1 stone template DXF are all included.

3D, lighting and photo renders

Turn the room round in 3D and place real light fittings: downlights, gimbals, pendants, LED strips and wall lights. Set the time of day and aim the beams. Then make a photo-quality render for the client.

Quotes that miss nothing

The quote lists everything in the job, down to the screws counted from the holes, with separate markups for boards, hardware, doors, benchtops and labour. Cut lists, hardware lists, edge banding and sheet totals are made from the same job.

Drawings and print sets

Plans, elevations, 3D views and benchtop plans, with your own drawing styles, layers, dimensions and a title block with your logo. Print at true scale or fit to the page, as PDF, on a printer or as DXF.

Order entry

Doors-only and loose-part orders can be typed in or imported from an Excel or CSV door list. Each piece is cut, drilled and labelled just like a cupboard door.

The optimiser

It nests your sheets the same way every time. Offcuts are kept in one click and used on later jobs. It can batch several jobs, save patterns, and lets you lay out sheets by hand: drag, nudge and bump. It also prints pencil-marking sheets, lays out and numbers the cuts for a panel saw, and has a label designer.

CNC programs, ready to run

Programs are written for your machine's post, toolset and drilling head, including gang drilling. Each comes with an air-cut copy and short program names. Toolpath settings cover ramps, cut direction, small-part hold-down, corner relief and pockets, and there's a test board for checking a machine.

CAD tab

Draw or import any part, then edit nodes, arcs, offsets, fillets and booleans. Add profile, pocket, drill, engrave and V-Bit toolpaths, check them in a 3D preview, and send them to the machine. You can also add the part to a job.

◆ Build helper

Type or say "2588 wall, 400 drawer bank, 900 sink cupboard, 40 stone benchtop" and it builds it. Ask it how to do things in the program. The AI runs entirely on your own PC, and nothing is sent anywhere.

Safe with your work

Every save keeps the job's last 30 versions, and full backups run automatically. Jobs can be shared as one file, rooms can be brought in from old jobs, and floating boxes can go onto a second screen.

How to use this manual

Chapters 1 and 2 get you installed and show you around the screen. Chapters 3 to 5 set the program up for **your** shop: your construction, boards, door styles and hardware. Do these once, before your first real job. Chapters 6 to 9 are everyday design: rooms, lighting, cupboards and benchtops. Chapters 10 to 12 take a job to the workshop: order entry, cut lists, quotes, printing and the optimiser. Chapters 13 to 15 cover the CNC, the CAD tab and the Build helper. Chapter 16 covers saving, sharing and backups.

Tip Names in **bold** are exactly what you see on the screen, so you can look for them. Keys look like **Ctrl** + **S**. Green boxes are tips; red boxes are things to be careful with.

1 Installing and starting

This chapter gets CabCarveCNC onto your computer and running. It also shows where your jobs and shop lists are kept, how backups work, and how to set up the optional AI Build helper.

What you need

- **A Windows 10 or Windows 11 computer.** CabCarveCNC is a Windows desktop program.
- **Microsoft Edge**, which comes with Windows. CabCarveCNC uses it in the background to make PDFs of your drawings, quotes and print sets. You don't have to open it yourself.
- **A mouse with a scroll wheel.** The wheel zooms the plan, elevation and 3D views.
- A big screen helps. A second screen is even better, because the cupboard editor and the floating boxes can each open in a window of their own (see [Floating boxes](#) in the next chapter).
- **Optional, only for the AI part of the Build helper:** a fairly strong PC with a graphics card (8 GB of graphics memory works well), plus about 11 GB of free disk space for the AI models. Everything else in CabCarveCNC works without this.

You don't need an internet connection to design, cut, nest or make CNC programs. Everything runs on your own computer.

Putting the program on your computer

CabCarveCNC has no installer. The program is **one folder** called **CabCarveCNC**. You copy or unzip that folder onto the computer, and that's it.

- 1 Copy the **CabCarveCNC** folder (or unzip the download) to a place you'll remember, for example **C:\Programs\CabCarveCNC** or your Desktop.
- 2 Open the folder and find **CabCarveCNC.exe**.
- 3 Right-click **CabCarveCNC.exe** and choose **Send to > Desktop (create shortcut)**. You'll now have an icon on the desktop to start it.
- 4 Double-click the icon. The CabCarveCNC window opens.

Careful Keep everything inside the **CabCarveCNC** folder together. The .exe needs the other files beside it, so don't move **CabCarveCNC.exe** out on its own. Use a shortcut instead.

Tip The first time you start a new program, Windows may show a blue "Windows protected your PC" box. Click **More info** and then **Run anyway**.

Running from the source folder (for the shop that builds the program)

If you have the full source folder instead of the packaged program, double-click **Start CabCarveCNC.bat**. This needs Python installed on the PC, along with the "pywebview" add-on that gives the program its own window. If pywebview is missing, CabCarveCNC opens in your web browser instead. That works too, but some desktop features (such as pop-out windows) work best in the program's own window.

Most shops will never need this. Use **CabCarveCNC.exe**.

Where your work is kept

The program folder only holds the program. **Everything you make** goes into a separate folder in your Documents:

Documents\Cabinet Studio

Because your work is kept apart from the program, you can update or replace the program without touching your jobs.

In Documents\Cabinet Studio	What is in it
Jobs	Every saved job, one file per job. The cut list CSV files you save also go here.
Jobs\versions	Earlier saves of each job: one folder per job, holding its last 30 saves. See Earlier saves in the Jobs chapter.
CNC	Machine programs, sheet drawings (DXF) and labels, in one folder per job (and room). Programs made on the CAD tab go in CNC\CAD .
CAD	Your drawings from the CAD tab.
Exports	PDFs of print sets and reports, drawings saved as DXF, benchtop DXFs, and job files you export to share (.csjob).
Textures	Your own pictures: board brand swatches, stone and timber photos. Large brand packs go in Textures\Packs .
Models	Your own 3D model files (GLB) for catalogue items.
Renders	Photo renders you have saved.
Themes	Screen colour themes you have exported to share.
Files such as shop.json , materials.json , runners.json , library.json , door_styles.json , hinges.json , toolsets.json ...	Your shop lists : shop settings, boards and materials, hardware, door styles, your own library of cupboards, CNC tools, label designs, title blocks and so on.
prefs.json	This computer's Preferences: units, dimension look, layout, theme, backup timing.
log.txt	The program's diary. If something goes wrong, the person helping you may ask for it.

Tip You don't have to open these folders to use the program, because CabCarveCNC puts everything in the right place. It still helps to know where they are, so you can find a PDF, copy a CNC program to a USB stick, or move to a new computer.

Careful Don't rename or edit the files in **Documents\Cabinet Studio** by hand. Use the program to change them.

The first time you start it

On the very first start, CabCarveCNC shows a box called **Welcome to CabCarveCNC**. It offers to walk you through how your shop builds: boards, backs, tops and bottoms, shelf holes or line bore, door gaps, hinges, drawers, kicks, edges and standard sizes.

You have three choices:

- **Set up how I build** opens the **Construction** page and takes you through it step by step. This is the best choice. It takes a few minutes, and after that every cupboard is built your way.

- **Later** closes the box. It will ask again next time you start the program.
- **Use the standard settings** skips the setup and uses the program's standard shop settings. The box won't ask again.

Whichever you choose, you can change any of it later on the **Construction** page (or **Tools > Construction setup (step by step)**).

After that, the program opens on an **empty room**, with a small box called **Start a room** over the plan. Pick a quick wall plan (Straight wall, L shape, U shape, Galley, Closed room) or click in the plan to draw your own walls. You're ready to design.

Tip Before your first real job, also look at ⚙ **Preferences** (units, look, backups) and the **Shop** tab (your standard sizes and materials). Both are explained in the next chapter.

Your licence and the free trial

CabCarveCNC is **bought once and yours to keep** - no subscription. A new copy runs as a **15-day free trial**: everything works except printing, exporting (PDF, DXF, CSV, stone templates) and making CNC files. The optimiser still shows its sheets, so you can see the yield on your own jobs. The days left show in the top bar.

- 1 Buy a licence on the website (**Help → Licence... → Buy a licence...**). The key comes by email; it starts **CCNC-**.
- 2 Open **Help → Licence...**, paste the whole key into the box and press **Activate**. No internet is needed.
 - **Home workshop edition** - the same tools; prints are marked *Personal use* (no business name or logo) and batch optimising is off.
 - **Shop edition** - everything, including your business name, logo and ABN on prints and quotes, and batch jobs.
 - Updates are free – a new version installs over the old one and keeps your licence and all your work.
 - Moving to a new computer: **Remove from this PC** in the Licence box, then activate the same key on the new one.

If the trial ends before you buy, your jobs are safe and you can still design - a licence turns printing, exporting and CNC files on.

Automatic backups

A computer can die, be stolen, or have a job deleted by mistake. CabCarveCNC protects you in two ways:

1. **Every time you save a job**, the copy it replaces is kept in **Jobs\versions**. The last 30 saves of each job are kept.
2. **A full backup** zips up *everything* in Documents\Cabinet Studio (every job, the shop settings, materials, hardware, your library, title blocks, CNC files and so on) into one dated file, such as **Cabinet Studio backup 2026-10-12 1555.zip**.

Where the backups go

- If the computer has **OneDrive**, backups go to **OneDrive\Cabinet Studio Backups**. OneDrive then copies them to the cloud on its own, so your work is safe even if the computer is lost.
- If there is no OneDrive, they go to **Documents\Cabinet Studio Backups**.
- You can choose your own folder on the **Shop** tab, under **Backups > Backup folder**. A Dropbox or Google Drive folder, or a USB drive that is always plugged in, is a good choice. Type the folder path and then press **Save shop settings**.

Setting how often

- 1 Click  **Preferences** at the right-hand end of the tab row.
- 2 Find **Automatic backup**.
- 3 In **Back up everything**, choose how often: **Never (only when I press Back up)**, **Each time CabCarveCNC starts**, **Every hour**, **Every 4 hours**, **Every day** (the standard) or **Every week**.
- 4 In **Keep the last**, choose how many backups to keep: **10**, **30** (the standard), **60**, **100** or **All of them**. Older ones are deleted so the folder doesn't fill up.

The same section shows the **Backup folder**, when the **Last backup** was made and roughly when the next one is due. It also has two buttons: **Back up now** and **Open the folder**.

Backups run quietly in the background while the program is open (it checks every 5 minutes). You can keep working while one runs.

Tip Big brand texture packs (in **Textures\Packs**) are left out of the backups to keep them small, because you can import those packs again.

Getting your work back from a backup

A backup is an ordinary zip file. To get your work back:

- 1 Close CabCarveCNC.
- 2 Rename the old **Documents\Cabinet Studio** folder (for example to **CabCarveCNC old**), in case you need anything from it.
- 3 Make a new, empty **Documents\Cabinet Studio** folder.
- 4 Open the backup zip and copy everything inside it into the new folder.
- 5 Start CabCarveCNC. Your jobs and shop lists are back as they were on the backup's date.

Tip If you only lost one job, you don't need a full restore. Open the job and use **Earlier saves** on the **Job** tab (see the Jobs chapter), or copy just that job's file out of the zip's **Jobs** folder.

Optional: the local AI for the Build helper

The  **Build helper** lets you type (or say) what to build, for example "2588 wall, 400 drawer bank, 900 sink cupboard, 40 stone benchtop", and it builds it for you.

- **Without any AI installed**, the Build helper still reads lists like that using its built-in reader (the **Read list** button). Nothing extra is needed for that.
- **With the local AI**, it also understands looser wording, a whole kitchen described in a sentence, questions about the program, and (with the picture model) a picture of a plan. Use the  **Ask AI** button for these.

The AI runs **on your own computer**. Nothing is sent over the internet and there's nothing to pay per use. It can't change anything except what the Build helper could build anyway, and you tick what gets built before anything happens.

Step 1: install Ollama

The AI runs in a free program called **Ollama**, which you install once.

- 1 On the computer, go to the Ollama website (ollama.com), download the Windows version and install it.
- 2 When it's installed, Ollama sits quietly in the Windows tray (by the clock) and starts with Windows.
- 3 If it's ever not running, start **Ollama** from the Windows Start menu.

Step 2: download the models from inside CabCarveCNC

- 1 In CabCarveCNC, open the **Cabinets** tab and click **Build helper** on the view bar (or press **Ctrl + K**).
- 2 In the Build helper box, click **AI set-up**.
- 3 The set-up area shows whether the **Local AI** is **running** or **not running**, and which models you already have.
- 4 Click **Download the language model** (about 4.7 GB). This is the one that reads your words.
- 5 If you want to read pictures of plans too, click **Download the picture model** (about 6 GB).
- 6 The download progress shows in the box. You can keep working while it downloads. When it's finished, the box says which model it is **Using ... for words** and **... for pictures**.
- 7 Click **Check again** any time to refresh the status.

Tip The first question after starting the computer takes up to a minute, because the model has to load. After that, answers take a few seconds.

Careful The picture model gives a rough first draft only. It reads labels and overall sizes from a picture well, but it often gets the layout wrong. Always check what it suggests before you click **Build ticked**. A DXF plan (**File > Import a plan (DXF: walls, windows, doors, cupboards)...**) is much more accurate.

Speaking to the Build helper

The  button uses the speech recogniser built into Windows. It also works offline and needs no download. Check that the microphone works in the Windows sound settings first.

Updating to a new version

Because your work lives in **Documents\Cabinet Studio** and not in the program folder, updating is simple:

- 1 Save your job and close CabCarveCNC.
- 2 To be extra safe, make a backup first: **File > Back up everything** (or **Back up now** in Preferences).
- 3 Delete or rename the old **CabCarveCNC** program folder.
- 4 Copy or unzip the new **CabCarveCNC** program folder into the same place.
- 5 Start it from your shortcut. All your jobs, settings and lists are still there.

Careful **Never delete Documents\Cabinet Studio** when updating. That folder holds all your jobs and shop lists. Only the program folder gets replaced.

Tip If your desktop shortcut stops working after an update, make a new one from the new **CabCarveCNC.exe**.

Moving to a new computer

- 1 On the old computer, close CabCarveCNC and make a backup (**File > Back up everything**).
- 2 Put the program folder on the new computer as described in [Putting the program on your computer](#).
- 3 Copy the whole **Documents\Cabinet Studio** folder from the old computer to **Documents** on the new one, or unzip the backup into a new **Documents\Cabinet Studio** folder.
- 4 Start CabCarveCNC on the new computer.

Preferences (units, theme, layout) are saved per computer in **prefs.json**, so they come across too when you copy the whole folder.

2 Finding your way around

This chapter is a tour of the CabCarveCNC window: the menus, the tabs, the library, the drawing view, the editor and the floating boxes. It finishes with the keyboard shortcuts and the Preferences page, where you set it up to suit you.

The main parts of the window

Part	Where	What it's for
Top bar	Very top	The menus, the job name, New , Open... , Save , undo / redo and the status line.
Tab row	Under the top bar	The pages of the program: Cabinets , Room , Cut list , Optimiser , CNC and so on.
Left side bar	Left	The room and wall you're working on, the Library of products, and the list of cupboards in the room.
The view	Middle	Where you draw and look at the room: Plan , Elevation or 3D .
The editor	Under the view, or on the right	The details of the cupboard (or room) you've picked.

The left side bar and the editor only show on the **Cabinets** tab, where you design. The other tabs use the whole window for their page.

The top bar

- **CABINET STUDIO**: the program name.
- **The menus**: **File**, **Edit**, **View**, **Insert**, **Libraries**, **Tools**, **Help** (listed in full below).
- **Job name** box: type the job's name here. A job needs a name before it can be saved.
- **New**: start a new, empty job.
- **Open...**: a drop-down list of your saved jobs. Pick one to open it.
- **Save**: save the job.
- ↶ and ↷: undo and redo.
- **The status line**: the grey text at the right of the bar. It tells you what just happened ("Pedro kitchen saved", "Walls made – drag cupboards from the library onto them") and what to do next. When the job has changes that aren't saved yet, it says so (for example "Pedro kitchen – not saved").

Warnings

When something goes wrong or needs your attention, the status line turns red and a red **⚠ warning banner** pops up over the view. Examples are "Give the job a name first", "Drop it near a wall" and "Make or pick a room first". The banner goes away on its own after a few seconds, or you can click it (or its **✕**) to close it.

Tip Read the status line often. It usually tells you the next step.

The menus

Click a menu name to open it, then click an item. While one menu is open, moving the mouse onto another menu name opens that one. Press **Esc** or click anywhere else to close a menu. Where an item has a keyboard shortcut, it's shown on the right of the item.

File

Item	Shortcut	What it does
New job	Ctrl + N	Starts a new job with one empty room. Asks first if you have unsaved changes.
Open job...	Ctrl + O	Opens a list of your jobs with a Find... box. Click a job to open it.
Save	Ctrl + S	Saves the job.
Save as...	Ctrl + Shift + S	Saves the job under a new name, for example to start a second option for the same client.
Export job file (to share)...		Saves the job as one .csjob file in Documents\Cabinet Studio\Exports , ready to email or copy to another computer.
Import job file...		Opens a .csjob file someone has sent you.
Import rooms from another job...		Copies rooms (with their cupboards) from another saved job into this one.
Import order file (door list / cut list)...		Brings a door list or cut list from a spreadsheet into Order entry .
Import a plan (DXF: walls, windows, doors, cupboards)...		Reads a designer's or architect's DXF plan and builds the room from it.
Import walls from a DXF plan...		Takes only the walls from a DXF plan, on the Room page.
Print set...	Ctrl + P	Goes to the Print tab to print plans, elevations, 3D, cut list and quote with your title block.
Save drawing as DXF		Saves the plan or elevation you're looking at as a DXF in Documents\Cabinet Studio\Exports .
Back up everything		Makes a full backup zip now and opens the backup folder.

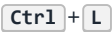
The job items are explained step by step in the chapter [Jobs, saving and backups](#).

Edit

Item	Shortcut	What it does
Undo	Ctrl + Z	Takes back the last change.
Redo	Ctrl + Y	Puts back what you undid.
Open the cupboard editor	Enter	Opens the big editor for the picked cupboard.
Duplicate cupboard	Ctrl + D	Makes a copy of the picked cupboard.
Delete cupboard	Del	Removes the picked cupboard.
Preferences...	Ctrl + ,	Opens  Preferences (see Preferences below).

View

Item	Shortcut	What it does
Plan	F2	The view from above.
Elevation	F3	Looking straight at one wall.
3D	F4	The 3D view.
Fit to the view	F	Zooms so the whole drawing fits.

Style: Screen, Style: Architectural, Style: Shop drawing, Style: Colour presentation (and any styles of your own)		Changes how the plan and elevations look.
Edit drawing styles...		Colours, lines, fonts and dimension rows for each style, plus your own styles.
Layers...		Chooses what shows on the drawing (walls, doors, dimensions, numbers ...).
Show / hide the library		Hides the left side bar to give the view more room.
Show / hide the editor		Closes or opens the editor.
Editor under / on the right		Moves the editor between under the view and the right-hand side.

Insert

Item	Shortcut	What it does
Room		Adds a new room to the job.
Draw walls		Switches to the plan and starts drawing walls.
Window on the chosen wall		Adds a 1200 × 900 window (sill 1050) to the middle of the chosen wall and shows its elevation.
Door on the chosen wall		Adds an 820 × 2040 door to the middle of the chosen wall.
Benchtop editor		Opens the benchtop editor.

Tip "The chosen wall" is the wall picked in **Place on** at the top of the left side bar, or the wall you last clicked.

Libraries

Item	What it does
Products (cupboard library)	Goes to the Cabinets tab and puts the cursor in the library search box.
Boards & materials	Your boards and materials (Materials tab).
Door styles	Your door styles.
Door profiles	The edge and panel profiles used by door styles.
Material templates	Saved sets of materials to apply to a job in one go.
Price lists	Your prices for the quote.
Hardware (runners, hinges, lift systems)	The Hardware tab.
CNC tools	Your router tools and toolsets (CNC tab).

Tools

Item	Shortcut	What it does
Build helper (type or say what to build)		Opens the  Build helper box.
Order entry (doors, parts)		Doors, drawer fronts, panels and parts that aren't in a cupboard.
Cut list		Every board in the job.
Optimiser		Nests the parts onto sheets.
CNC files		Makes the machine programs.

Reports & quote		Reports, hardware lists and the quote.
Materials, door styles, templates		The Materials tab.
Hardware		The Hardware tab.
Construction methods		How you build: boards, backs, tops, shelf holes, fronts, drawers ...
Construction setup (step by step)		The walk-through from the first start, any time you want it again.
Job settings		The Job tab.
Shop settings		The Shop tab.

Help

Item	Shortcut	What it does
Keyboard shortcuts	F1	Shows the list of shortcuts.
About CabCarveCNC		What the program is, and where your data lives.

The tabs (pages)

The tab row holds the program's pages. The tab you're on is lit up.

Tab	What it's for
☰	Not a page: it shows or hides the library on the left.
Cabinets	The main design page: library, plan / elevation / 3D, and the editor. You'll spend most of your time here.
Room	The room's walls, plan and room settings (heights, depths, ceiling, materials for this room).
Order entry	Doors, drawer fronts, panels and parts on their own, and importing a door list.
Cut list	Every board in the job, grouped by material.
Optimiser	Nests the parts onto sheets, and covers offcuts, labels and sheet editing.
CNC	Machine programs for the router, CNC tools and toolsets.
CAD	Draw or import parts (DXF / SVG), edit them, and put your own toolpaths on them.
Reports	Fronts, drawers, hardware, edging, sheets, the quote and cabinet drawings.
Print	Print sets: plans, elevations, 3D, cut list and quote with your title block. Esc takes you back.
Materials	Boards, door styles, templates and price lists.
Hardware	Runners, hinges, lift systems, handles and fittings.
Construction	Construction methods: how you build.
Job	Job details (customer, address ...), job settings and earlier saves.
Shop	Your shop standards, and the backup folder.
⚙ Preferences	(Right-hand end.) How the program looks and works on this computer.
Editor ▶	(Right-hand end, only when the editor is on the right and closed.) Opens the editor again.

Tip Hold the mouse over a tab or button for a second to see a short tip about what it does. Almost every button in the program has one.

The left side bar

Room and wall

- **Room drop-down:** the room you're working in. **(Not in a room)** holds single cupboards that aren't placed in a room.
- **+ Room:** adds a new room.
- **Place on:** the wall that new cupboards go on, and which face of it (**Front** or **Back**). The back face matters for walls with cupboards on both sides, like an island or a wall between two rooms.

The Library

The library holds every product you can add: cupboards, panels, fillers, appliances, sinks, doors and windows, lighting and more, plus your own saved cupboards.

- The headings fold open and shut. Click a heading (▶ / ▼) to open it. The number beside it is how many products are inside.
- **Search the library...:** type part of a name (for example "sink" or "600") to find a product quickly.
- ☆ / ★: hover over a product and click the star to put it in ★ **Favourites** at the top of the library, so the products you use most are always in reach.
- **+ Library:** makes a new library of your own (for example "Laundry" or "Commercial"). Your own libraries have a coloured edge, and ✎ (rename) and ✕ (delete) buttons on their heading. You fill them from the cupboard editor with 💾 **Save to library...**
- ▼ **Viewer:** shows or hides a small 3D picture of the product you point at. Drag in it to turn the product, and use the wheel to zoom. ⌕ shows it full screen.

To add a product, either drag it from the library onto a wall in the view, or double-click it to add it to the chosen wall.

The cupboards in the room

Under the library is the list of cupboards in this room. Its heading shows the room name, for example **In Kitchen**. Each line shows the cupboard's number, name and size (width × height × depth).

- **Click** a line to pick that cupboard. It lights up in the view and the editor shows it.
- **Double-click** a line to open the cupboard editor.
- **Drag** a line onto a wall to add another cupboard the same.
- **Right-click** a line for more: 📄 **Copy it – another one next to it**, ✎ **Open the cupboard editor** and 🗑 **Delete it**.

Making the side bar wider or hiding it

Drag the right-hand edge of the side bar to make it wider or narrower. Double-click the edge to put it back to the standard width. Click ☰ (or press **Ctrl** + **L**) to hide it completely when you want more room for the drawing.

The view: Plan, Elevation and 3D

The big area in the middle is the view. You can look at the room three ways:

- **Plan** (**F2**): from above. Draw walls, drag cupboards in and size them.
- **Elevation** (**F3**): looking straight at one wall. Drag cupboards, windows and doors, and size them. This is where you set heights.
- **3D** (**F4**): to see the job as it will look, and show the client.

Room tabs

Along the top of the view is a tab for each room in the job (for example **Kitchen, Laundry, Ensuite**). Click a tab to change room. + **Room** adds a room. If some cupboards aren't placed in any room, there's also a **Not in a room** tab.

The view bar

Just under the room tabs is a row of buttons for the view:

Button	What it does
Plan / Elevation / 3D	Changes the view.
◀ Wall 2 ▶ and ↔	(Elevation only.) Steps to the wall before or the next wall. ↔ swaps between the front and back face of the wall.
Room	Lets go of the picked cupboard and shows the room's settings in the editor: standard heights, walls, islands, T-walls, windows, appliances, sinks, plumbing and power.
🔪 Walls	(Plan only.) Draws walls: click the corners, then double-click or press Esc to finish.
⚡ Build helper	Opens the Build helper: type or say what to build (Ctrl + K).
💡 Lights	(Plan and 3D.) Puts in downlights, pendants, LED strips and wall lights.
Benchtops (tick box)	Benchtops go on runs of base cupboards automatically. Untick it for no benchtops in this room.
Benchtop editor	Opens the benchtop editor.
Sizes (tick box)	Shows or hides the size chains along the walls.
↗ Fit	Fits the drawing to the view.
Style list	The drawing style: Screen, Architectural, Shop drawing, Colour presentation or your own.
Layers	Chooses what shows: walls, windows and doors, cupboards, fronts, door swings, handles, shelves and inside, kicks, benchtops, appliances, sinks and plumbing, dimensions, cupboard numbers, grid ...
📏 Dim	Adds your own dimension: click two points, then where the line goes.
📝 Note	Adds a note to the drawing.
Print	Prints this plan or elevation as it's drawn.
DXF	Saves this plan or elevation as a DXF in Documents\Cabinet Studio\Exports .

Moving around the drawing

- **Plan and Elevation:** roll the mouse **wheel** to zoom in and out where the mouse is. **Drag the background** (or drag with the wheel pressed) to slide the drawing. Press **F** or click ↗ **Fit** to see it all again.
- **3D:** drag with the left button to turn around the room, use the wheel to zoom, and drag with the right button to slide.
- **Snapping:** cupboards snap to walls and to each other as you drag. Hold **Alt** to drag without snapping, or **Shift** to let a cupboard overlap another.

The 3D tick boxes

In **3D**, a row of tick boxes at the bottom right chooses what shows:

- **Room:** the whole room, or untick it for just the picked cupboard.
- **Fronts:** doors and drawer fronts. Untick it to see inside.

- **Drawer boxes, Edges** (edge banding) and **Drilling** (shelf pin, hinge, runner and screw holes, plus the hinges and plates).
- **Floor**: the room's floor.
- **Realistic**: soft shadows and room lighting. It looks better but is slower. Lights only show lit with this ticked.
-  **Render**: makes a photo-real picture of the 3D view for the client.

An empty room

A new room shows the **Start a room** box over the plan. Pick a quick wall plan (**Straight wall**, **L shape (left)**, **L shape (right)**, **U shape**, **Galley**, **Closed room**), set the **Width** and **Depth**, or just click in the plan to draw the walls yourself.

The editor

The editor shows the details of whatever you've picked. When it's a cupboard, you see its name, size, end panels, parts, hinges, what's next to it and its own settings. When nothing is picked (click **Room** on the view bar), it shows the room's settings.

- **Open the cupboard editor** (the button at the top, , or a double-click on the cupboard) opens the **big editor**, with its tabs: **Cupboard**, **Face**, **Inside**, **Shape** (shaped items only), **Hardware**, **Parts** and **Construction & settings**. Use   to step through the cupboards,  **Save to library...** to keep it in your library, and **Close**  or  to close it.
- Use the **Duplicate** and **Delete** buttons in the editor for the picked cupboard.

Moving, sizing and closing the editor

-  on the editor's bar moves it between **under the view** and **on the right**.
-  (or a double-click on the bar) closes it, and does the same again to open it. When it's on the right and closed, click **Editor**  at the end of the tab row to open it.
- **Drag the editor's bar** (or its edge) to make it taller or wider. Double-click the edge to put it back to the standard size.

The program remembers these choices. You can also set them in [Preferences > Layout](#).

Tip On a wide screen, put the editor **on the right** so the view stays tall. On a smaller laptop screen, **under the view** often works better.

The cupboard editor in its own window

In the desktop program, double-clicking a cupboard can open the big editor **in a window of its own**, which you can drag onto a second screen. Changes you make there show straight away in the main window. You choose which way it works in **Preferences > Layout > Double-click a cupboard**.

Floating boxes

Some tools open in a small box over the view: **Wall** (when you click a wall in the plan), **Lights**, **Layers**, **Start a room** and  **Build helper**. Each one has a title bar with these buttons:

Button	What it does
(drag the title bar)	Moves the box anywhere over the view.
	Floats the box over the view.

	Docks it in the right-hand side bar, in the editor's place.
	Docks it under the view, in the editor's place.
	Puts it back where it started.
	Opens the box in its own window . Drag that window onto a second screen. Closing it brings the box back. (Every box except Start a room .)

Why: some boxes cover the part of the room you're working on. While you're placing lights, for example, you don't need the cupboard editor, so dock the Lights box where the editor goes ( or ) and the whole view is clear. The editor steps aside while a box is docked in its place. To pull a docked box out again, just drag its title bar.

A box in its own window () stays linked to the main window: pick a light on one screen and it shows on the other. The program remembers where you put each box.

Undo and redo

CabCarveCNC remembers your last 200 changes. You can't break a job by trying things.

- **Undo:**  + , the  button, or **Edit > Undo**.
- **Redo:**  +  (or  +  + ) , the  button, or **Edit > Redo**.

Some big steps count as one change. For example, everything the  **Build helper** builds comes back with a single  + .

Careful Undo only covers the current session. Once you open another job or close the program, the undo list starts again. To go back further, use **Earlier saves** on the **Job** tab.

Keyboard shortcuts

Press  any time to see this list in the program.

Keys	What they do
 + 	New job
 + 	Open job
 + 	Save
 +  + 	Save as
 + 	Print set
 +  /  + 	Undo / Redo
	Open the cupboard editor for the picked cupboard
 + 	Duplicate cupboard
	Delete the picked cupboard (or the picked dimension or note)
 + 	Preferences
 /  / 	Plan / Elevation / 3D
	Fit to the view
	Layers
	Draw walls

Ctrl + L	Show / hide the library
Ctrl + E	Show / hide the editor
Ctrl + K	Build helper
F1	Keyboard shortcuts
Esc	Closes a menu or box, finishes drawing walls, stops the lights tool, closes the big cupboard editor, leaves the Print page
Numbers, then Enter	While drawing walls: type the wall length (add <angle for an angle, e.g. 2400<30)
Shift	While drawing walls: any angle (walls normally snap to 15°)
Alt / Shift while dragging	Drag without snapping / let it overlap
Mouse wheel / drag	Zoom / move the drawing

Tip The single-letter keys (**F**, **L**, **W**, **Enter**) only work on the **Cabinets** tab and not while you're typing in a box. That way, typing a name never sets off a shortcut.

The Build helper, the CAD tab, the board editor and the optimiser's sheet editing each have a few keys of their own. Those are covered in their chapters.

Preferences

Click  **Preferences** (or press **Ctrl** + **,**). Preferences belong to **this computer**, so each person in the shop can have their own. They're saved as soon as you change them, with no Save button needed.

Units

Setting	Choices
Show sizes in	Millimetres (mm), Centimetres (cm), Metres (m), Inches – fractions (23 5/8"), Inches – decimals (23.625"), Feet and inches (1' 11 5/8")
Metric rounding	Whole mm, 0.1 mm, 0.01 mm
Inch fractions to	1/8", 1/16", 1/32", 1/64"
Inch decimals	0.01", 0.001", 0.0001"
Angles	Degrees with decimals (22.5°) or Degrees and minutes (22° 30')
Prints in	Same as the screen, or any unit above. For example, you can work in mm but print a client's drawing in metres.

You can **type any unit** in a size box, whatever is shown: 600, 600mm, 60cm, 2.4m, 23 5/8", 23-5/8 or 1' 11 5/8". A number on its own is read in the units you've chosen.

Tip Everything is kept in mm inside the program, so changing the units never changes a cupboard. Machine files (G-code and DXF) always stay in mm.

Dimensions on drawings

- **Line ends:** Ticks, Arrows or Dots.
- **Text size:** Small, Normal, Large, Extra large.

- **Text:** **Above the line** or **In the line**.
- **Colour:** the dimension colour.
-  **Drawing styles...:** colours, lines, fonts, dimension rows and groups for each style, and your own styles.

Automatic backup

Back up everything (how often), **Keep the last** (how many), the **Backup folder**, the **Last backup**, and the **Back up now** and **Open the folder** buttons. See [Automatic backups](#) in the Installing chapter.

Layout

Setting	Choices
Cabinet editor	Under the view or On the right
Editor open	Open or Closed
Changing a width	Ask which side moves , Stretch to the right (left side stays) , Stretch to the left (right side stays) , Both sides (middle stays)
Double-click a cupboard	Opens its own window (can go on another screen) or Opens the big editor in this window
Library	Shown or Hidden

Tip **Changing a width** decides what happens when you type a new width for a cupboard that's already in a run. If you always measure from the left, choose **Stretch to the right** and it will stop asking.

Theme (screen colours)

Choose a ready-made theme: **Dark**, **Light** or **Midnight blue**. You can also change any colour: **Page background**, **Panels**, **Buttons**, **Top bar**, **Tab bar**, **Boxes**, **Hover**, **Lines**, **Text**, **Faint text**, **Highlight**, **Selected**, **Warnings** and **3D background**. **Text size** makes all the writing bigger or smaller, which helps on a big workshop screen.

- **Save as new theme:** type a name in **New theme name** first. This keeps your colours as a theme of your own.
- **Put back the original:** undoes your changes to a ready-made theme. **Delete this theme** removes a theme of your own.
- **Export:** saves the theme as a file in **Documents\Cabinet Studio\Themes** to give to someone else. They use **Import** to load it.

3 Setting up your shop

CabCarveCNC builds every cupboard from your own shop standards: board thicknesses, back style, door gaps, shelf holes, hinge drilling, kicks, edging, prices and more. Spend half an hour setting these up once, and every job after that comes out the way your shop builds.

Tip You do not have to set everything on day one. The program ships with sensible Australian shop defaults (for example a 100 mm kick, 870 mm base height, 2 mm door gaps, 16 mm boards). Change only what is different in your shop, and come back to the rest later.

How settings work: the layers

Every setting in CabCarveCNC can be set at several levels, called **layers**. Think of them as sheets of tracing paper laid on top of each other: a value on a higher sheet covers the one underneath. The layers, from the bottom up, are:

- 1 **Program defaults** – the values CabCarveCNC ships with. You never edit these directly.
- 2 **Shop settings** – your shop's standards, used by every job (the **Shop** page, or the **Shop standard** on the **Construction** page).
- 3 **Construction method** – a named set of settings, such as "Kitchens 16 mm", "Laundry" or "Vanities 18 mm". A method only holds what is *different* from your shop settings.
- 4 **Job settings** – changes for this one job only (the **Job** page).
- 5 **Room settings** – changes for one room of the job, such as a higher ceiling or a different kick in the laundry (the **Room** page).
- 6 **One cupboard** – a change on a single cupboard, such as a taller toe on one base cabinet (the cupboard editor).

The **last layer that sets a value wins**. This matches how a shop really works: you grab a standard cupboard, resize it, change the kick height on that one cupboard; sometimes you change a room setting; sometimes you set the measured board thickness for a job (16.3 instead of 16).

Blank means "use the layer below"

On every settings screen an **empty box** means "use the value from the layer underneath". That value is shown **faded** inside the box so you can always see what will be used. When you type your own value the box changes colour to show it has been set at this level.

- To go back to the value from below, simply **clear the box** (delete what you typed) and press **Tab** or click away.
- In drop-down lists the first choice starts with = (for example = **Plant-on (back covers the ends)**). That first choice means "use the value from below".

An example

Your shop kick is 100 mm (**Shop** page). One job has tiled floors that are not level, so on the **Job** page you set **Toe / kick height** to 110. In that job's laundry you want 150 mm, so you set 150 on the laundry's **Room** page. One island base cupboard sits on a plinth, so in its cupboard editor you set 0. Every other job still gets 100.

Tip Lengths are shown in the units you picked in **Preferences** (millimetres unless you changed it). Inside the program everything is stored in millimetres, so changing units never changes your settings.

The first time you start

The first time CabCarveCNC opens, a **Welcome to CabCarveCNC** box asks how you want to begin:

- **Set up how I build** – opens the step-by-step construction setup (see [below](#)). Recommended.
- **Later** – closes the box; it will ask again next time.
- **Use the standard settings** – starts with the shipped defaults and does not ask again.

Whatever you choose, you can change every setting later on the **Construction** page.

The Construction page

The **Construction** tab (top row of tabs, or **Tools** menu > **Construction methods**) is where you tell the program *how your shop builds*: boards, backs, tops and bottoms, shelf holes or line bore, door gaps, hinges, drawers, kicks, edges and standard sizes. It is the best place to do your setup because every setting is grouped by job, with a short explanation under each one.

Construction methods

A **construction method** is a named set of construction settings. Most shops have one standard way of building, plus a few variations – for example 18 mm carcasses for a laundry, or dado backs for a vanity range. Instead of changing many settings by hand on every job, you make a method once and pick it.

At the top of the page:

- The first drop-down picks what you are editing. **Shop standard (your shop settings)** edits your shop settings themselves. Any other name edits that method.
- **+ New method** – a new, empty method that starts from the shop standard. You are asked for a name (for example *Kitchens 16 mm, Laundry, Vanities*).
- **Copy** – a new method with the same settings as the one you are looking at.
- **Rename** and **Delete** – shown when a method (not the shop standard) is picked. Deleting a method sends any job or room that used it back to the shop standard.
- **Step-by-step setup** – walks through every tab in order (see [below](#)).

The second row chooses which method is used:

- **This job uses** – the method for the job that is open now.
- **New jobs use** – the method every new job starts with.
- A note tells you whether the method you are editing is **✓ in use in this job – changes show straight away**, or **not used by this job**.

When a method is picked, a blank box means "the shop standard" (shown faded). Only what you type into the method is different from the shop standard. When the shop standard is picked, a blank box means "the program default".

Tip A room can use its own method too: on the **Room** page, **Room** tab, the **Boards** group has a **Construction** choice. Handy when the kitchen and the laundry in one job are built differently.

Changes save at once and rebuild the job

On the Construction page there is no Save button. Every change is saved straight away, and every cupboard in the open job is rebuilt to follow it. The status bar says **Construction saved – the job is rebuilt**. Switch to the **Cabinets** page (plan, elevation or 3D) to see the result, then come back and adjust.

Careful Because changes apply immediately, changing the shop standard or a method that is in use also changes the open job. If you only want to change this one job, use the **Job** page instead.

The Construction tabs

The settings are split into ten tabs. Hover over any setting name to see its full description.

Tab	What is in it
General	Boards (carcass, back, door / front, drawer box, panel / filler, kick, glass) and the fronts and hardware this method uses (door styles, handles, drawer runners, lift system, kick type).
Carcass	Back style and dado (groove) sizes; top and bottom (between or over / under the ends, set down or raised); front and back rails.
Shelves & line bore	Shelf pin holes (how many, how many rows, spacing, setbacks, hole size) or a full line bore; adjustable shelf sizes and setbacks.
Doors & fronts	Gaps, top / bottom reveals, side reveals, door styles, shaker frame and recess.
Hinges & handles	Hinge system and cup drilling, mounting plate holes, locks, push-to-open, handle drilling positions.
Drawers & lift-ups	Runner system, runner holes, drawer box style, lift-up / flap-down stays, sliding wardrobe doors, finger-pull rails, sliding cupboard doors, wine rack cell size, glass rebate.
Kicks & legs	Toe / kick height, ladder kick or legs, kick setback, longest kick, leg spacing.
Edges & assembly	Edge banding thicknesses, cutting boards smaller by their banding, narrowest board the machine cuts, assembly screw holes.
Standard sizes	The heights and depths new cupboards come in.
Benchtops	Benchtop type, overhangs, joins, edge profile, look and splashbacks, sink cut-outs.

The most important settings in each area are explained in [Key settings explained](#) further down.

Construction setup (step by step)

The walk-through takes you through all ten tabs in order, so nothing gets missed. It takes a few minutes.

- 1 Open it from **Tools** menu > **Construction setup (step by step)**, from the **Step-by-step setup** button on the Construction page, or from **Set up how I build** on the first-start box.
- 2 A bar at the top shows **Setup – step 1 of 10: General** and what the step is about.
- 3 Look down the settings on that tab. Change only what is different in your shop. Leave the rest blank.
- 4 Click **Next ►** to go to the next tab, or **◀ Back** to go back one.
- 5 On the last step (**Benchtops**) the button reads **Finish ✓**. Click it – the program remembers your setup is done and will not offer the welcome box again.
- 6 Click **Stop** at any time to leave the walk-through. Everything you changed so far is already saved.

Tip Before you start the walk-through, check that the top drop-down says **Shop standard (your shop settings)**, so your answers become the shop standard. If you pick a method first, the walk-through fills in that method instead.

The Shop page

The **Shop** tab (or **Tools** menu > **Shop settings**) shows **every** setting in the program, sorted into tabs, with a description beside each one. It holds your shop standards, used by every job. A blank box means the program default (shown faded).

The settings tabs

The same tabs appear on the **Shop** page, the **Job** page and in the cupboard editor's settings:

Tab	What is in it
How it's built	The everyday construction choices in one place: back style, bottom and top, base top (rails or full top), rail style, back rail, kick type, door style, door gap off the case, overhead doors past the case bottom, shelf holes (yes / no, holes per row, rows, spacing, setbacks), assembly screws, hinge cups, hinge plate holes, dado depth.
Main	Construction method, boards (carcass, door, back, drawer, panel, kick), door styles, handles, drawer runners and drawer box style, kick type, back style, base top.
Sizes	Standard base, wall and tall heights and depths, toe / kick height, ceiling height, wall thickness, top of wall cabinets.
Carcass	Corner unit wall gap, back styles, bottom / top styles, rails, dado sizes, drawer rail width, adjustable shelf sizes and setbacks.
Fronts	Door gap off case, gaps between doors and drawers, all reveals, top drawer height, shaker frame and depth, handle positions.
Kick & benchtop	Kick and ladder settings, legs, and all benchtop settings.
Edges	Edge banding thickness on fronts, carcass and kick; cut boards smaller by their banding.
Machining	Shelf pin holes, hinge cups, mounting plates, assembly screws, lift-up stays, runner holes, drawer fixings, lift system.
CNC & optimiser	Machine, bed size, program type, safe heights, cutting strategy, part spacing, sheet size choice, labels.
Prices	Every price used on the quote, markup and GST.
Other	Everything not in the tabs above (room colours and lighting, appliance clearances, sliding doors, finger-pull rails and so on).

Some settings appear on more than one tab – it is the same setting, so changing it in one place changes it everywhere.

Saving shop settings

Careful Unlike the Construction page, the **Shop** page does **not** save on its own. When you have finished, click **Save shop settings** at the bottom of the page. If you leave without saving, your shop changes may be lost when the program closes.

Measured board thickness

Boards are sold as 16 mm or 18 mm, but the real sheet is often a little different – 16.3 mm, for example. Grooves, dados and the overall size of a carcass depend on the real thickness. On the **Board thickness** tab (Shop or Job page) each board is listed with its nominal size (for example *nominal 16 mm*). Type the measured thickness only for boards that differ.

- Set it on the **Shop** page if your supplier's boards always measure that way.

- Set it on the **Job** page if one delivery of boards for a job measures differently. The job value wins over the shop value.

Tip Measure a few sheets with digital callipers in several places and use the average. Clear the box to go back to the nominal thickness.

Backups

At the bottom of the Shop page is the **Backups** section.

- Every time you save a job, its earlier copy is kept automatically (see [Earlier saves](#)).
- A **full backup** zips all your jobs, settings, materials, runners, your library and CNC files into one dated file in the **Backup folder**.
- If the backup folder is inside a OneDrive (or other cloud-synced) folder, the backup goes to the cloud on its own.

- 1 In **Backup folder**, type the folder you want (or leave the suggested folder that is shown faded).
- 2 Click **Save shop settings**.
- 3 Click **Back up everything now**. The status bar shows how many files were backed up and where.

Careful Picture packs of more than 20 imported pictures are left out of the automatic backups to keep them small. Keep the original picture files somewhere safe so you can import them again. See the Materials chapter, [Importing your own pictures](#).

The Job page

The **Job** tab (or **Tools** menu > **Job settings**) holds the details and settings for the job that is open. These are saved with the job, so save the job (**Ctrl** + **S**) after changing them.

Job details

Fill in **Customer**, **Site address**, **Phone**, **Email**, **Date** and **Notes**. These appear on the quote, the reports and in title blocks on printed drawings.

Job settings

The same tabs as the Shop page. The note reads: *Apply to every cabinet in this job. Blank = the shop value (shown faded). A cabinet can still override any of these.*

Use job settings for things that are true for this job only, for example:

- a different door board or door style for this customer;
- a higher kick because the floor is out of level;
- trade prices instead of retail (or use a price list – see the Materials chapter);
- the measured thickness of the boards delivered for this job.

Tip To change the construction method of a job, use **This job uses** on the **Construction** page, or **Construction method** on the **Main** tab of the Job page.

Earlier saves

Every time a job is saved, the copy it replaced is kept. To go back to one:

- 1 On the Job page, under **Earlier saves**, pick a date and time from the list (**pick an earlier save of this job**).
- 2 Click **Open it** and confirm.
- 3 The earlier version opens. If you want to keep it, save the job – it then becomes the current job.

Room settings

Each room has its own settings on the **Room** page, **Room** tab (also shown under the plan when no cupboard is picked). They are grouped into boxes:

- **Heights** – room walls (ceiling), soffit / bulkhead, base, wall and tall cabinets, over-fridge and rangehood cabinets, vanities, top of wall cabinets, kick.
- **Depths** – base, wall, tall, over-fridge, rangehood and vanity cabinets.
- **Walls & kicks** – wall thickness and longest kick.
- **Side clearances** – gaps kept beside a fridge, window, door or cooker when cupboards snap to them.
- **Boards** – construction method, carcass board and door board for this room.
- **Overhead doors** – overhead doors hanging below the case (flush with an under panel).
- **Floor, Finishes in 3D, Lighting in 3D** – how the room looks in 3D and photo renders.

Click **Every setting for this room...** to see and change any other setting for this room only.

Careful Standard sizes are the sizes **new** cupboards come in. Cupboards already placed keep their size when you change a standard height or depth. Resize them, or delete and re-add them, if needed.

Settings on one cupboard

Any setting can be changed on a single cupboard. Double-click the cupboard to open the cupboard editor and go to the **Construction & settings** tab. Under **This cabinet's settings** (blank = room / job / shop value) the most used settings are listed; click **All settings** to see every setting, sorted into the same tabs as the Shop page. Click **Fewer settings** to go back to the short list.

Typical one-cupboard changes: a different toe height, no shelf holes in a sink cupboard, a different door style on a feature cupboard, or a back in grooves on one open shelf unit.

Key settings explained

There are a few hundred settings. You will only ever touch a handful of them. Here are the ones most shops change, with their shipped default value. All sizes are in mm.

Standard heights and depths

Setting	Default	What it means
Base height	870	Standard base cabinet height, including the kick . With a 20 mm stone top the bench ends up at 890.
Base depth	560	Standard base cabinet depth (carcass, without the doors).
Wall height	730	Standard wall (overhead) cabinet height.
Wall depth	300	Standard wall cabinet depth.
Tall height / Tall depth	2100 / 580	Standard tall (pantry, oven tower) cabinet, height including the kick.

Top of wall cabinets	2100	How high the tops of the wall cabinets sit above the floor – lines them up with the tall cabinets.
Vanity height / depth	720 / 460	Standard vanity, height including the kick.
Fridge cab height / depth	400 / 600	Over-fridge cabinet; its top lines up with the wall cabinets.
Hood cab height / depth	0 / 0	Rangehood cabinet; 0 = the same as the wall cabinets.
Ceiling height	2400	Floor to ceiling – walls are this high unless set on the wall.

Kick (toe)

Setting	Default	What it means
Toe / kick height	100	Height of the kick under base and tall cabinets.
Kick	Ladder frame + kick face	Ladder frame + kick face = a carcass-board ladder frame with a kick face on the front. Adjustable legs + clip-on kick = legs (on the quote as hardware) with only the kick face cut. No kick .
Kick setback	30	How far the kick face sits back from the carcass front.
Longest kick (then a second kick)	2390	The longest single kick board; a longer run gets a second kick next to it. Set to suit your sheet length.
Kick clearance	0	The kick board is this much shorter than the toe height, to clear an uneven floor.
Ladder rung spacing	600	Ladder kick: rungs at each end and no further apart than this.
Leg spacing / Leg setback	600 / 60	Legs: one at each corner, more along the front and back no further apart than the spacing, set in from the edges by the setback.

Carcass: backs, tops, bottoms, rails

Setting	Default	What it means
Back style (and Back style (wall))	Plant-on	Plant-on (back covers the ends) – the ends are the depth less the back; Between the ends – the ends run full depth and the back fits between them; In grooves (dado) – the back sits in grooves cut in the ends, bottom and top.
Dado depth / Dado back setback / Dado clearance	8 / 18 / 0.5	For dado backs: groove depth, distance from the back of the carcass to the back panel, and how much wider the groove is than the board.
Bottom	Between the ends	Or Under the ends (ends stand on it) .
Top (full tops)	Between the ends	Or Over the ends (sits on them) .
Base top	Front rail	Front rail = rails only (the benchtop covers it); Full top = a full top panel.
Top rail width / Back rail	80 / Yes	Width of the front top rail, and whether there is a back rail as well.
Rail style	Flat	Or Vertical (on edge) – the rail stands on edge behind the doors.
Top set down / Bottom raised (base, wall, tall)	0	Sets the top down or the bottom up inside the ends – for example 18 or 30 on wall cabinets to hide a light rail.
Corner wall gap	16	Corner units stand this far off both walls (and are this much shallower), so out-of-square walls still fit.

Gaps and reveals (doors and drawer fronts)

These settings decide the size of every door and drawer front. Getting them right means doors hang straight and evenly spaced without packing.

Setting	Default	What it means
Door gap off case	2	The gap between the carcass front and the back of the doors (negative = inset doors).
Gap between doors	2	Between side-by-side fronts and between the two doors of a pair.
Gap between drawers	2	Between stacked fronts (for example 30 on finger-pull drawer banks).
Top reveal (base)	3	Base cabinets: the top edge of the fronts sits this far below the case top.
Reveal bottom	0	Base cabinets: the bottom edge of the fronts sits this far above the case bottom (negative = lower).
Reveal top wall	0	Wall and tall cabinets: the front top edge below the case top.
Overhead doors past the case bottom	0	Wall cabinets: front bottom edge above the case bottom (negative = lower, e.g. -18 to cover a light rail).
Overhead doors hang below the case (under panel)	Flush	16 or 18 mm below – flush with an under panel. The hinges stay 100 from the door ends.
Side reveals	1–2	How far each front's side edge stays in from the case side, depending on what is next to it: another cabinet, an end panel, a filler, or nothing. Separate values for base, wall and tall.
Top drawer height	180	The top drawer front when a drawer bank is set to "fixed top drawer".

Tip Side reveals work out automatically from the room layout. A door next to another cupboard gets a 1 mm reveal; a door at an open end gets 2 mm, so the gaps across a run look even.

Board thicknesses

Board thickness is **not** a setting on its own. It comes from the board you pick (carcass board, door board and so on), which you set up on the **Materials** page. If the real boards measure differently, set the [Measured board thickness](#).

Setting	What it means
Carcass board	Ends, bottoms, tops, rails, shelves.
Back board	Backs (blank = the carcass board).
Door / front board	Doors and drawer fronts.
Drawer box board / Drawer bottom board	Board drawer boxes.
Panel / filler board	End panels and fillers (blank = the door board).
Kick board	Kick faces (blank = the door board).
Glass	Glass in glass-frame doors.

Edge banding

Setting	Default	What it means
Edge front	1	Banding on doors and drawer fronts all round, and on end panels (front and top edge). 0 = none.
Edge carcass	1	Banding on the front edge of carcass boards.

Edge kick	1	Banding on the top edge of the kick face.
Edge deduct	Yes	Cut boards smaller by their banding, so the finished size is the designed size. Leave this on unless your edgebander trims the board itself.
Min cut width	80	The narrowest board your machine can safely cut. A narrower board (for example a 50 mm rail) is listed at its own size but cut at this width (0 = off).

Each board on the Materials page can also have its own matching edge banding thickness and price – see the next chapter.

Shelf pin holes and line bore

Setting	Default	What it means
Shelf pin holes	Yes	Drill shelf pin holes for adjustable shelves.
Shelf holes	shelves	shelves = a small group of holes around each adjustable shelf; line = a full line bore up the whole space.
Adj. shelf holes per row	5	Holes in each column around each shelf (3, 5, 7 or 9).
Rows of shelf holes	2	1 = front only, 2 = front and back, 3 = front, middle and back.
Shelf hole spacing	32	The 32 mm system.
Front row in from the front / Back row in from the back	37 / 37	Where the columns of holes sit.
Pin dia / Pin depth	5 / 11	Hole size. Keep the depth well under your carcass thickness.
Line bore starts above the bottom / stops below the top	64 / 64	For a line bore: where it starts and stops.
Adj. shelf shorter by	3	Adjustable shelves are this much shorter than the opening (in total), so they drop in easily.
Adj shelf setback (base, wall, tall)	10	Adjustable shelves set back from the front.
Wall shelves auto	Yes	Wall cupboards get shelves by height: none under 400, one up to 600, two above.

Hinge drilling

Setting	Default	What it means
Hinge system	(shipped system)	Which hinge system you use – it knows the cup, the insertion dowels and the block holes. Hinge systems are set up on the Hardware page.
Hinge cups	Yes	Drill hinge cups in the doors on the CNC.
Hinge cup dia / depth	35 / 13	Cup size.
Hinge cup inset	22.5	Door edge to cup centre.
Hinge from end	100	Top / bottom of the door to the first hinge.
Hinge max spacing	600	Hinges no further apart than this – tall doors get more hinges automatically.
Hinge plate holes	Yes	Drill the mounting plate holes in the end or partition.
Plate row / Plate pitch	37 / 32	Plate holes in from the carcass front, and apart.

Plate depth force	0	Drill plate holes this deep whatever the hinge system says (0 = the system's own depth).
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Each door style can also have its own hinge and handle drilling – see the Materials chapter, [Drilling per door style](#).

Handles

Setting	Default	What it means
Handle (and Handle – wall cupboards, Handle – drawers)	blank	A handle model from the Hardware list (sets hole centres and price). Blank = the handle settings below.
Handles	Yes	No = finger pull / push to open.
Handle holes	128	Hole centres (0 = one hole, a knob).
Handle drill	Yes	Drill the handle holes on the CNC.
Handle door from edge / from end	40 / 80	Door handle hole line in from the opening edge; and from the top (base doors) or bottom (wall doors) to the nearest hole.
Handle door tall z	1000	Tall doors: handle centre this high off the floor.
Handle drawer from top	40	Drawer handle hole line down from the top of the front (0 = centred).
Handle on rail	Yes	Routed (shaker) fronts: the handle goes in the middle of the stile or rail.

The **Hinges & handles** tab on the Construction page also has **Locks** (which fronts get a lock) and a **Push to open** group for push-to-open fittings on handleless doors.

Assembly screw holes and other drilling

- **Assembly screw holes** (default Yes) – pilot holes through the ends into bottoms, tops, rails and fixed shelves; **Join dia 3, Join from edge 50, Screws no further apart than 250**.
- **Runner holes** – drill the drawer runner screw holes in the ends (the pattern comes from the runner system).
- **Drawer fixings** – drill the runner system's fixing holes in drawer backs, bottoms and fronts.
- **Stay holes** – lift-up and flap-down stay mounting holes in both ends (row, distance from the edge, pitch, count, size).

Prices and markups

The quote is worked out from the boards used (priced on the Materials page) plus the prices on the **Prices** tab. All prices are before markup and GST.

Setting	Default	What it means
Price hinge	6.00	A hinge with mounting plate.
Price runner	35.00	A drawer runner set (a runner system can carry its own price).
Price handle	12.00	A handle (a handle model can carry its own price).
Price screw / Price shelf pin	0.05 / 0.20	Counted from the holes.
Price banding m	1.20	Edge banding per metre (a board can carry its own banding price).
Price labour cabinet	80.00	Labour per cabinet (cut, band, assemble).
Price labour install	0	Installation per cabinet.
Price bench m	0	Benchtop per metre (0 = the type's built-in price).

Price leg, LED, stays, sliding and pocket door hardware...	various	The other bought-in items.
Markup – general %	30	Markup on cost.
Markup – boards / hardware / doors / benchtops / labour %	-1	A different markup for one kind of item. -1 = use the general markup.
Price tax	10	GST %.

Tip To keep several sets of prices (for example *Trade* and *Retail*) and swap between them, use **Price lists** on the Materials page – see the next chapter.

CNC basics

The CNC settings are covered in full in the CNC chapter. The ones to check on day one are on the **CNC & optimiser** tab:

Setting	Default	What it means
Machine name	My CNC	Shown on the programs.
Bed length (X) / Bed width (Y)	2500 / 1250	Your machine bed. Sheets that do not fit are flagged, and the optimiser only picks sheet sizes that fit.
Program type	Syntec, one program per sheet	Pick Woodtron (Syntec) – drilling head + tool changer for a Woodtron router with a Syntec control, or one of the Syntec / generic G-code choices.
Stops / fence corner (X0 Y0)	stops	The corner of the bed where the stops are – where a sheet corner goes.
Z zero	Table / spoilboard	Or top of the board.
Cut into spoilboard	0.3	How far through cuts go into the spoilboard.
Part spacing	12	Gap between parts on the sheet – at least your cutter diameter.
Sheet size	Cheapest size that fits the CNC	When a board comes in more than one sheet size: the cheapest that fits, the main size, or the largest that fits.
Turn parts	Yes	Parts may turn 90° on boards without a grain.
Cnc send folder	blank	Where Send to CNC copies the programs: the shared folder on the machine PC or a USB stick.
Label layout	A4, 3 × 8	The label sheet or label printer roll for part labels.

Careful Always run a new machine or a changed setting as an air cut first. The program can write dry-run programs with every Z lifted (setting **Also make air-cut (dry run) programs**).

Company details, logo and title blocks

Your company name, address and logo are printed in the **title block** – the box along the top or bottom of printed drawings, print sets and optimiser sheet prints.

Entering your company details

- 1 Open the **Print** tab.
- 2 Under **Your company** (for the title block), fill in **Name, Address, Phone, Email, Website** and **Licence / ABN**.

- 3 Next to **Logo**, click **Pick a picture** and choose your logo file (PNG or JPG). A small copy of it appears. Use **Change** to swap it, or **Remove** to take it off.

The details are saved for the whole shop, so you only enter them once.

Title block templates

You can design your own title blocks. Open the editor with **Templates...** (next to **Title block** on the **Print** page) or **Title block...** on the **Optimiser** page. Two templates are supplied: **Drawings (company · job · page)** and **Optimiser sheets**.

- 1 Pick a template from the list, or click **+ New** (or **Copy** to start from an existing one).
- 2 Give it a **Name**, choose **On the page** (**Top** or **Bottom**) and the **Logo height (mm)**.
- 3 A title block is made of **rows of boxes**. For each box choose what it **Shows** – for example Logo, Company name, Company address, Licence / ABN, Website, Job name, Customer, Site address, Page title, Material, Sheet size, Today's date, Page x of y, Your own text, or an Empty box (for a signature).
- 4 Type a small **Label** above the box if you want one (such as "Job" or "Page"), set its **Width** (its share of the row), the text **Size pt** and **Bold**.
- 5 Use **+ Box** and **+ Row** to add more; **←** moves a box left, **↑** moves a row up, **×** removes.
- 6 Under **Use for**, tick **print sets (plans, elevations, cut list, quote)** and / or **optimiser sheet prints**.
- 7 Watch the **Preview**, then click **Save**.

Tip Keep one template for customer drawings (logo, company, job, customer, page) and one for workshop sheets (job, material, sheet size, parts and yield, date). The workshop one only needs a small logo, or none.

Setup checklist

A suggested order for a new shop:

- 1 Run **Construction setup (step by step)** with **Shop standard** picked.
- 2 Set up your boards, edging and prices on the **Materials** page (next chapter).
- 3 Set up your door styles on **Materials > Door styles**.
- 4 Check your hinge system, runners and handles on the **Hardware** page.
- 5 On the **Shop** page, check the **CNC & optimiser** and **Prices** tabs, enter any measured board thicknesses, set the backup folder, and click **Save shop settings**.
- 6 Enter your company details and logo on the **Print** page.
- 7 Make a small test job (one base, one wall cupboard), check the cut list and run an air cut on the CNC.
- 8 Make extra construction methods for the variations you build often.

4 Materials, door styles and templates

The **Materials** page holds everything your cupboards are made of: the boards you buy (sizes, thickness, grain, look, price, edging), your door styles and how the CNC cuts them, material templates, and price lists. Set these up once and every cut list, nest, CNC program and quote uses them.

Open it with the **Materials** tab in the top row, or from the **Libraries** menu: **Boards & materials**, **Door styles**, **Door profiles**, **Material templates** or **Price lists**. The page has four tabs across the top:

- **Boards** – the sheet materials you use.
- **Door styles** – slab, shaker, routed, glass frame and bought-in doors.
- **Material templates** – named sets of boards, door style and benchtop you can apply in one click.
- **Price lists** – named sets of prices and markups, such as Trade and Retail.

Boards

Every board you cut – carcass board, coloured and woodgrain door boards, veneers, painted MDF, backs, glass – is a **board** on this tab. CabCarveCNC ships with a starter list under plain, generic names (for example *White HMR (carcass)*, *White Satin*, *Colour board*, *Woodgrain board*, *Veneer (real timber)*, *Painted - Satin MDF (machine grade)*, *Backs*, *Glass & mirror*, and US sheet sizes). Rename them, change them and add your supplier's boards to make the list your own.

Tip Your changes are saved straight away in **Documents\Cabinet Studio\materials.json**. Program updates keep them. The shipped boards keep their original version too, so you can always go back.

The list view

On the left is the list of boards, grouped by **range** (carcass boards first). A small swatch shows each board's colour, and the right side shows *painted* or *grain* where that applies.

- Type in **Find a board...** to search by name, supplier or order code.
- Click a board to open its details on the right. The heading says **your changes** if you have changed it, or **as shipped**.
-  **List** and  **Table** switch between this view and the [table view](#).

A board's details

Every change saves as soon as you leave the box.

Field	What it is for
Name	The name shown everywhere – cut lists, quotes, CNC program names. Include the thickness, e.g. <i>Black Oak 18mm</i> .
Range	The product range it is listed under (pick an existing range or type a new one). Boards in the same range are grouped together.
Thickness	The nominal thickness. The carcass, grooves and door sizes are all worked out from it. If the real sheets measure differently, set the Measured board thickness on the Shop or Job page (see the Shop setup chapter).
Painted	Tick for boards painted after machining (such as machine-grade satin MDF). Painted boards are never edge-banded and are cut to the finished size.

Colour / look	The colour used in drawings and 3D, plus the look: Plain, Woodgrain (drawn), Photo / scan of the board , or any picture from the texture library. See Giving a board its look .
Grain	Tick if the grain runs along the length. The optimiser will then never turn parts on the sheet, so grain on doors and ends always runs the right way.
Sheet sizes	The main sheet Length and Width , plus any other sizes the board comes in (see More than one sheet size).
Trim	How much is trimmed off the ends and sides of each sheet before parts are nested – for chipped or out-of-square factory edges.
Price	The price per sheet or per m² , and the waste % to add (for example on veneers where you lose more to matching).
Matching edge banding	The thickness of this board's own banding, its price per metre (\$ / m) and its order code . Leave thickness blank to use the edging settings; leave \$ / m blank to use the general banding price.
Supplier	Your supplier's name and their order code for this board – handy for ordering sheets straight from the cut list.

At the bottom:

- **Back to as shipped** – (shown on a shipped board you have changed) throws away your changes to it.
- **Remove this board** – takes it off the list. Cupboards that still use it keep its id but show no material, so change those cupboards first.

Adding a board

- 1 Click **+ New board**.
- 2 Type the name, including the thickness – for example *Black Oak 18mm*. The program reads the thickness from the name (16 mm if there is none).
- 3 The new board starts as a 2410 × 1210 sheet with 5 mm trim. Fill in the range, colour / look, grain, sheet size, price, edging and supplier.

To make a board like an existing one, pick that board and click **Copy this board** (in the table view: **Copy picked board**), then give the copy a new name.

Adding a whole range at once

Suppliers sell a colour in several thicknesses, each with matching edging. **+ New range...** makes them all in one go.

- 1 Click **+ New range...**
- 2 Type the **Range name** (for example *Classic White Matt*).
- 3 Choose the **Type**. This sets the edging, grain and the usual thicknesses:
 - **Colour board – 1 mm matching edge** (16, 18, 25, 33)
 - **Woodgrain board – 1 mm matching edge** (with grain; 16, 18, 25, 33)
 - **Timber veneer – 0.5 mm veneer edge** (with grain; 17, 25)
 - **Painted MDF (machine grade) – no edging** (16, 18, 25)
 - **Carcass board – 1 mm edge** (16, 18, 25, 32)
- 4 Tick or untick the **Thicknesses** you buy. Type any others in the **other** box, separated by commas (e.g. 19, 22).
- 5 Pick the **Colour**, the **Sheet** length and width, the **Price per sheet** (for 16–18 mm; thicker boards are priced up in proportion – adjust them afterwards) and the **Supplier**.
- 6 Click **Make the boards**. One board is made for each thickness, named like *Classic White Matt 18mm*. Boards under 12 mm get no edging.

More than one sheet size

Many boards come in more than one sheet size (for example 2400 × 1200 and 3600 × 1800). CabCarveCNC can nest onto whichever size is best.

- 1 Open the board. The first row of **Sheet sizes** is the main size.
- 2 Click **+ Another sheet size**. A new row appears (starting at 3610 × 1810) – change the **Length** and **Width** to suit.
- 3 Type its **Price / sheet**. If you leave it blank, the price is worked out from the main sheet's price by area (shown faded).
- 4 Use **✕** to remove a size.

The optimiser then follows the **Sheet size** setting (Shop or Job page, **CNC & optimiser** tab): **Cheapest size that fits the CNC** (the default), **The main size**, or **The largest that fits the CNC**. Sizes bigger than your CNC bed are never used.

The table view

Click **Table** to see every board as one spreadsheet – the fastest way to update prices or codes across your whole list.

- Columns: swatch, **Name**, **Range**, **Length**, **Width**, **Thick**, **Price**, **Per** (sheet or m²), **Waste %**, **Edge**, **Edge \$/m**, **Grain**, **Painted**, **CNC feed %**, **Trim ends**, **Trim sides**, **Supplier**, **Code**.
- Click in any cell and type. Edits save straight away.
- Click a column heading to sort by it (click again to reverse, a third time to go back). The **by range** link returns to the normal grouping.
- Click ... at the end of a row to open that board in the list view with all its details. A  marks boards you have changed.
- **+ New range...**, **+ New board** and **Copy picked board** work as in the list view (click a row first to pick it).

Tip CNC feed % (table view only) slows or speeds the CNC feed rate for this board. Blank = 100 %. For example, type 80 for a hard or brittle board so the cutter runs at 80 % of its normal feed.

Giving a board its look (textures)

A board's **look** is what you see in 3D, photo renders and the colour presentation drawings. It does not change the cut list, so choose whatever helps the customer see the finished job.

- **Plain** – the board's colour only. Best for solid colours.
- **Woodgrain (drawn)** – a woodgrain drawn by the program from the board's colour. No picture needed.
- **Photo / scan of the board** – your own photo of the actual board. Click **Pick a picture** (later **Change picture**) and choose a JPG, PNG or WEBP file.
- Any picture from the **texture library** – pick it from the list, or click  to browse.

The small swatch beside the look shows the result. When you pick a library picture, the board's colour is set to the picture's average colour so 2D drawings match.

The picker

The  button appears beside every "look" in the program: boards, benchtops, splashbacks and floors. It opens the **Pick a look** window.

- 1 Click .

- 2 **Suggested** shows the pictures that suit what you are choosing (for example stone and laminate for benchtops). Click a group button (such as Stone, Timber, Tiles, Boards, Paint, Metal, Concrete, Floor) to see that group, or choose a brand from the **All brands** list (shown when you have imported brand pictures).
- 3 Type in **Search...** to find a name.
- 4 Hover over a swatch to see its full name, group and the real size one picture covers. Tile layouts are shown at their real scale.
- 5 Click a swatch to use it. The window closes and the look is applied.

The pictures that come with CabCarveCNC (marble, granite, terrazzo, concrete, timbers, metals, tiles and more) are free-to-use photos with bump and shine detail for realistic renders.

Importing your own pictures

Most suppliers offer swatch pictures of their boards, laminates and stone. Import them so customers see the exact colour they are buying.

- 1 Open any  picker and click + **Import pictures....**
- 2 **Brand** – the maker's name (leave blank for your own photos).
- 3 **Range** – the product range. If you pick a whole folder, each sub-folder becomes a range on its own.
- 4 **Kind** – which group the pictures belong in (Boards, Stone, Timber, Tiles, Floor and so on).
- 5 **One picture covers** – the real size in mm (along × across) that one picture shows, for example 2400x600 for a stone slab photo. This sets the size of the pattern in 3D. A sensible size is filled in for each kind.
- 6 **Names** come from the file names. A brand name at the start of a file name is left off.
- 7 Tick **Also make boards** and enter a thickness (for example 16 mm) to make a new board on the Boards tab for every picture, ready to use – woodgrain-looking names get the grain tick automatically.
- 8 Click **Pick pictures...** to choose files, or **Pick a folder...** to bring in a whole folder.
- 9 The message line shows progress, then how many pictures were added. Click **Close**.

Pictures are made smaller (1024 pixels) and kept in **Documents\Cabinet Studio\Textures** on this PC.

Careful Use a maker's pictures only with their permission. A brand pack of more than 20 pictures is kept in its own folder and left out of the automatic backups – keep the original files so you can import them again on a new PC.

Renaming or removing your pictures

In the picker, click  **Your pictures**. Your own (imported) pictures then show two small buttons:

-  – change the name, the brand, and the size one picture covers (for example 600 x 600).
-  – remove the picture from your library.

The pictures that come with the program cannot be removed.

Tiles (the tile maker)

For splashbacks and floors you can choose a **tile layout** instead of a photo. Over 30 ready layouts are included – subway (white, black, sage, navy), finger / kit-kat, herringbone, zellige, square, hexagon, mosaic, large format, and floor tiles (600 × 600, 1200 × 600, terracotta, herringbone oak). They are listed as **Tiles – ...** in the splashback and floor look lists, and under **Tiles** in the picker.

To make your own tile, open the benchtop editor's **Look & splashback** tab, set the splashback **Look** to **Tiles (own size / colour)**, and then set:

- **Tile layout** – Brick (half offset), Third offset, Stack (grid), Vertical stack, Herringbone, Hexagon or Mosaic.
- **Tile size (wide × high)** – in mm, e.g. 300x75 or 600x300 (hexagon: the size across).
- **Colour** and **Grout** colour.

The tiles are drawn at their true size with real grout lines, so the customer sees exactly how many courses fit between the bench and the wall cupboards.

Door styles

The **Door styles** tab is the door builder. A door style says what a door or drawer front looks like and how the CNC cuts it: the frame widths, how many panels, the recess, any grooves or edge profiles, which cutters to use, and how it is drilled.

The four kinds of door style

Kind	What it is
Routed (shaker, grooves, profiles)	A door with panels routed into the face on the CNC – shaker recesses, V-grooves, borders, multi-panel doors, edge profiles.
Slab (flat)	A flat front – nothing routed. Only the hinge cups and handle holes are drilled.
Glass frame (centre cut out)	A frame with the centre cut out for glass. The glass is listed from the Glass board setting, sized to the cut-out plus the Glass rebate each side (8 mm by default).
Bought in (not cut)	Doors made by a supplier. They are left off the cut list and put on the order list instead, priced per door or per m ² .

The shipped styles include *Slab (flat)*, *Shaker (frame + depth from the settings)*, *Shaker 45 (narrow frame)*, *Shaker 60*, *Shaker 60 - 2 panels down*, *Shaker 60 with V-groove*, *V-groove border (flat panel)*, *Glass frame (centre cut out)* and *Bought-in doors*.

The door style list

On the left, styles are grouped by kind. A  marks styles you have changed. Below the list:

- **+ New** – a new routed style with a 60 mm frame and a 6 mm recess. You are asked for a name.
- **Copy** – a copy of the picked style, with all its toolpaths.
- **Delete** – removes the picked style.
- **Profile library...** – opens the [profile library](#).

Tip When you change a shipped style, CabCarveCNC saves your own copy and leaves the original untouched. To try something new without losing your standard style, use **Copy** first.

Building a new door style

Example: a two-panel shaker with a 70 mm frame and an 8 mm recess.

- 1 Click **+ New** and type a name, e.g. *Shaker 70 two panel*.
- 2 Check the kind (top row) is **Routed (shaker, grooves, profiles)**. Add a **comment** if you like.
- 3 Fill in the frame sizes on the left:
 - **Top margin** and **Bottom margin** – the top and bottom rails (70).

- **Stiles** – the side frame width (70).
- **Centre stile** and **Centre rail** – the frame between panels (blank = the same as the stiles / top).
- **Panels across** (1) and **Panels down** (2).
- **Panel recess** – how deep the panel is routed (8).

4 Look at the drawing in the middle. It shows the test door with its panels and every toolpath in colour.

5 Use the **Stretch test** sliders (**Width** and **Height**) or type a size to see how the style looks on a narrow drawer front or a tall pantry door. The frame stays the same width; the panels stretch.

6 Set the **Options** and **Drilling** (below), then check the **Toolpaths**.

Every change saves straight away and the open job is rebuilt, so any cupboard using the style updates at once.

Options

Option	What it does
Drawer fronts	What drawer fronts get with this style: the shop setting, the same as the doors, flat (slab) , or another door style (for example a single-panel shaker for drawers under two-panel doors).
Smallest (W, H)	The smallest front this style is made on. Below this the frame would leave too little panel.
Smaller than that	What smaller fronts get instead: flat (slab) , or another routed style with a narrower frame.
Price	\$ each or \$ per m² – an extra charge for this style (or the full price for bought-in doors).
Supplier	Who makes bought-in doors.

Drilling per door style

Some styles need different drilling from your shop standard – for example push-to-open doors with no handle, or bought-in doors that arrive pre-drilled. The **Drilling** box overrides the shop settings for this style only:

- **Hinge cups** – **shop setting, drill** (shows the cup size), or **don't drill**.
- **Handle** – **shop setting, handle, drilled, handle, not drilled**, or **no handle (push to open / finger pull)**.
- **Hole centres** – the handle hole centres for this style (0 = a knob). Blank = the shop value.

The preview shows the hinge cups (dashed circles, on the left edge) and the handle holes (on the right). A setting made on one cupboard still wins over the door style.

Toolpaths: how the CNC cuts the door

Routed styles have a **Toolpaths** table. Each row is one cut, run on every panel (or round the door edge), in order from top to bottom. Click a row to highlight it in the drawing.

Column	Meaning
Where	each panel or door edge .
Cut	pocket (clear the panel) – clears the whole recess; or follow the outline (groove / profile) – runs a groove or profile along the panel line.
Tool group	A router pattern from the CNC page (Panel tool groups or Edge tool groups). Its tools run one after the other – for example a spiral cutter for the recess and then a V-bit for the 45° edge. When a group is picked, the cut, tool, depth and width on this row are not used. Favourites (★) are listed first.
Profile	A shape from the profile library . Picking one fills in its own tool, depth and width.
Tool	The cutter (T number and name) from your tool list. standard = the shop's standard pocket / groove tool.

Depth	How deep the cut goes.
Width	Groove or profile width (6 if blank).
Offset	Panel paths: how far outside the panel line (a V-groove on the line = 0). Edge paths: the path's centre line in from the door edge.
Corner R	Round the panel corners to this radius.
▲ / ✕	Move the cut earlier / remove it.

Add cuts with **+ Pocket**, **+ Groove round the panel** and **+ Edge profile**.

Tip A classic shaker is one **pocket** on each panel. A shaker with a bevelled inside edge is a pocket plus a V-groove **following the outline** – or one **Tool group** that holds both cutters. A slab door with a V-groove border is a routed style with a groove and no pocket.

Careful Check the tool numbers match the cutters loaded in your machine (CNC page > **ATC toolsets**). Run a test door as an air cut, then on an offcut, before cutting a whole job.

Changing an existing door style

- 1 Pick the style in the list (use **Copy** first if you want to keep the original).
- 2 Change the frame widths, the panel count or the recess on the left.
- 3 Change, add, re-order or remove rows in the **Toolpaths** table.
- 4 Change the **Options** and **Drilling** as needed.
- 5 Stretch-test the result, then look at a cupboard in 3D – routed fronts are drawn cut to shape.

Choosing which door style a job uses

The door style is a setting, so it follows the layers (shop → construction method → job → room → cupboard):

- **Door style** – doors and drawer fronts.
- **Door style – wall cupboards** – a different style on the overheads (blank = the same as the doors).
- **Door style – drawer fronts** – a different style on drawer fronts (blank = what the door style says), or **Flat (slab)**.

Set them on the **Construction** page (**General** or **Doors & fronts**), the **Main** tab of the Job page, or on one cupboard. In the cupboard editor's **Face** tab you can also make a single door or panel a **Plain panel**.

For one job you can also swap the cutters without making a new style. The settings **Door tool edge**, **Door tool groove** and **Door tool pocket** (on the **Other** tab of the Job page) replace the door style's edge profile, panel groove, or recess tool; blank = the style's own, *none* = leave it out.

The older **Shaker** settings (**Shaker frame** 60, **Shaker depth** 6, **Shaker drawers**) are used by the shipped style *Shaker* (*frame + depth from the settings*).

The door profile library

A **profile** is the shape a cutter takes away, seen end-on – a round-over, a chamfer, a V-groove, a cove. Profiles are used on door style toolpaths and are drawn in 3D so routed doors look real.

Open it with **Profile library...** on the Door styles tab, or **Libraries** menu > **Door profiles**.

- Two tabs: **Outside edge** (profiles run round the door edge) and **Inside frame / panel** (grooves and recesses on the panels).
- Shipped profiles: *Square edge, Round-over 3 mm, Chamfer 3 mm, Square recess (flat bottom), V-groove 90°, V-groove 60°, Cove 6 mm.*
- Pick a profile from the list, then use **Add, Copy, Rename** or **Delete**.
- **Tool** – the cutter that makes this shape.
- **Cut** (inside profiles) – **follow the outline** or **pocket**.

Drawing a profile

- 1 Click **Add** and name the profile. It starts as a 10 × 6 rectangle.
- 2 In the drawing, across = width, up = depth into the door. The door face is the top line.
- 3 Drag points and lines to shape it. Double-click a line to add a point. Give a corner a radius for round shapes.
- 4 Use the tools down the left side, and ↗ to fit the drawing to the window.
- 5 The width and depth are worked out from your drawing and shown under it. Click **Close** when done – changes are already saved.

Material templates

A **material template** is a named set of boards, door style and benchtop – for example *White carcass + Woodgrain doors*. Applying it fills in all of those settings in one click, instead of changing each one by hand.

Each template holds: Carcass board, Door / front board, Back board, Drawer box board, Panel / filler board, Kick board, Door style, Handles, Bench type, Benchtop colour, Edge front and Edge carcass.

Making a template

- 1 Set up a job the way you like it (boards, door style, benchtop).
- 2 On **Materials > Material templates**, click **+ New template from this job's settings** and type a name.
- 3 The template is filled from the job. Change any value in its table – changes save straight away. Blank = not set by the template.
- 4 Click on the name to rename it; **Delete** removes it.

Applying a template

- **Apply to the job** – sets the job's settings.
- **Apply to room name** – sets the open room's settings only (shown when a room is open).
- **Apply to cupboard N** – sets the picked cupboard only (shown when a cupboard is picked).

The job is rebuilt straight away. The status bar confirms where the template was applied.

Tip Applying a template copies its values into that layer. Changing the template later does not change jobs it was applied to before – apply it again if you want the new values.

Price lists

A **price list** is a saved set of every price and markup – for example *Trade* for builders and *Retail* for home owners. It holds every **Price** setting (hinges, runners, handles, banding, labour, benchtops, legs, LEDs and so on) and every markup (general, boards, hardware, doors, benchtops, labour).

- 1 On **Materials > Price lists**, click + **New price list from this job's prices** and type a name.
- 2 Change any price in the list. Changes save straight away.
- 3 To use it:
 - **Use for this job** – puts these prices on the open job only.
 - **Make it the shop's prices** – makes them your shop standard for every job.
- 4 **Delete** removes a price list.

Board prices are not in price lists – they live with each board on the Boards tab. Use the markups (**Markup – boards %** and so on) to charge trade and retail customers differently for boards.

Tip Markups set to **-1** use the general markup. Set a different value only where you want a different margin, for example a lower markup on bought-in benchtops.

5 Hardware

The **Hardware** page is your shop's list of everything that is bought in rather than cut from a sheet: drawer runners, hinges, handles, locks, bins and pull-outs, appliances, sinks, lights and more. Set it up once with your supplier's range, codes and prices, and every job after that drills the right holes, sizes the drawer boxes correctly and puts the right parts on the hardware list and the quote.

Why the hardware list matters

In CabCarveCNC, hardware is more than a line on a quote. Each piece of hardware also tells the program how to **build and machine** the cupboard:

- The **drawer runner system** decides how big each drawer box is, how much room it needs above, below and behind, which holes go in the cupboard ends, and which holes go in the drawer back, bottom and front.
- The **hinge system** decides where the hinge cups are bored in the door, how deep they are, and where the mounting block (plate) holes go in the cupboard end.
- The **handle** decides the hole centres drilled through each door and drawer front, or whether nothing is drilled at all.
- Bins, pull-outs and inserts check that they fit inside the cupboard you put them in.

So if your hardware list matches what you really buy, the CNC programs, the cut list and the quote all come out right without extra checking.

Tip The program comes with a **generic** starter list (for example "Runner A – slim metal side", "Hinge A – clip-on 110"). These are safe, typical sizes so you can start drawing straight away. Before you cut a real job, change them (or copy them) to match your own supplier's hardware – see [Setting up your own hardware list](#) at the end of this chapter.

Opening the Hardware page

- 1 Click **Hardware** in the row of page buttons along the top of the window.
Or use the menu: **Libraries > Hardware (runners, hinges, lift systems)**, or **Tools > Hardware**.
- 2 Along the top of the page you will see the tabs: **Drawer runners, Drawer boxes, Hinges, Handles, Locks, Inserts (bins, spice racks ...), Appliances, Sinks & plumbing, Doors & windows, Posts & special** and **Lighting & power**.
- 3 Click a tab to see that part of the list.

The first three tabs (runners, drawer boxes, hinges) are **systems** – each one is a set of sizes and drilling rules, edited in a form with a **Save** button. The other tabs are **item catalogues** – a card for each item, and changes save straight away.

Tip Everything you change is kept in your own shop files in **Documents\Cabinet Studio** (for example **runners.json, hinges.json, items.json**). The program's shipped list is never overwritten, so you can always go back to the standard one. Include this folder in your backups.

Drawer runners

A **runner system** is one kind of drawer slide from your supplier, with all the sizes it comes in. CabCarveCNC uses it to work out the drawer box for every drawer: **the tallest and deepest size on offer that fits the opening**.

The three types of runner

Choose the **Type** of each system so the program knows what to cut:

Type (as shown on screen)	What it means	What gets cut
Metal sides (you cut the back and bottom)	A drawer system that comes with its own metal drawer sides.	Only the drawer back and bottom are cut from board. The sides are bought in.
Side-mount – board box (Drawer boxes tab)	Ball-bearing runners screwed to the side of a board drawer box.	A full board box (sides, front, back, bottom), made the way the Drawer boxes tab says.
Undermount – board box (Drawer boxes tab)	Concealed runners that sit under a board drawer box.	A full board box, plus the runner notch in each bottom corner of the back.

Choosing and changing a runner system

- 1 Open the **Drawer runners** tab.
- 2 Pick the system in the drop-down list at the top.
- 3 Change the boxes in the table (each one is explained below).
- 4 Click **Save runner system** at the bottom of the page. The bottom of the screen says **Runner system changed – press Save runner system** until you do.

Setting	What to put in it
Name, Supplier, Description	Your name for the system and your supplier – shown in the lists and on reports.
Space under the box / Space over the box	How much room the runner needs between the box and the bottom / top of the drawer opening. Your supplier's fitting sheet gives these.
Space behind the box	The gap needed between the back of the box and the cupboard back.
Drawer back = opening width less / Drawer bottom = opening width less	The cutting deductions for the back and bottom (from the supplier's cutting chart).
Runner side in from the opening side	Where the runner sits, for drilling the cupboard ends.
Box front past the case front	How far the front of the drawer box sits forward of the cupboard front.
Board boxes: box narrower than the opening, each side	Side-mount and undermount only: the runner gap on each side of a board box.
Board boxes: bottom at least this far up	Undermount runners need the bottom set up a minimum amount so the runner fits underneath.
Bottom fits into the back	Tick if the bottom stops against the back (the back is full height) rather than running under it.
Type	One of the three types above.
Runner notch in each bottom corner of the back	Undermount only: the notch width and height cut out of the back so the runner can pass.

Box sizes on offer

This table lists every size the system comes in. Each row has **Use**, **Code**, **Side height**, **Length**, **Supplier code** and **Price**.

- **Untick Use** for sizes you don't stock. The program will then never pick that size – it uses the next one down that you do stock.

- **Supplier code** is the part number you order by. It goes on the hardware list, and it is how a supplier price list finds the price (see [Supplier price lists](#)).
- **Price** is the price of that one size. Leave it blank to use the supplier price list (by the size's code), else the shop's **Price: drawer runner set** (shown faintly in the box).
- For side-mount and undermount runners the sizes are just runner **lengths** – the box height comes from the drawer box style.
- Click **+** **Size** to add a row, or **X** to remove one.

Drawer types

Some box systems come in several **drawer types** – for example a low drawer, a medium drawer, a high-fronted drawer with a gallery rail or glass sides, an inner drawer, or a sink drawer. When a system has them, a **Drawer types** table shows each type with its **Side** and **Back** height, the smallest opening it needs (**Opening at least**), the **Lengths** it comes in, the **Front bores up** (front fixing heights) and the **Parts listed** on the hardware list.

You choose a type with the **Drawer type (box systems)** setting (for the shop, a job or a construction method), or per drawer in the cupboard editor. Left blank, the program uses **the tallest plain drawer that fits** each opening.

Drawer box fixings

Many metal-sided systems need small fixing holes in the drawer back, the drawer bottom and the back of the drawer front. Put them here and the CNC drills them for you, so the drawers go together quickly and square.

- 1 Under **Drawer box fixings**, set **Bottom cut short at the back corners by** if the bottom needs a notch at the back corners (leave blank for a square bottom).
- 2 Click **+** **Hole** for each hole. For each row choose the **Board** (**Back**, **Bottom** or **Drawer front**), then fill in **X**, **Y**, **Dia** and **Depth**.
- 3 Choose the **Face**: **Inside the box** or **Outside**.
- 4 Tick **Mirror** to put the same hole at the other end (or other side) too.
- 5 Use **Only if** for holes that only some sizes have – for example **H>=100** (only on boxes 100 high or more) or **D>=440** (only on boxes 440 long or more).
- 6 Check the drawing under the table. Pick a size in **Preview** and an opening width to see the holes on that size. Holes on the inside face and the outside face are drawn differently (see the key).
- 7 Click **Save runner system**.

Where the holes are measured from:

- **Back**: X along the back from its left end, Y up from its bottom edge.
- **Bottom**: X back from its front edge, Y in from its side.
- **Drawer front**: X in from the side of the opening, Y up from the bottom of the drawer opening.

In X, Y and **Only if** you can use the letters **L** and **W** (the board's length and width), **H** (box side height) and **D** (box length) – for example **L-8** (8 from the far end) or **W/2** (in the middle). Leave **Depth** blank for a hole right through.

Tip You can turn all of these holes off with the **Drawer box fixing holes** setting (Construction > **Drawers & lift-ups**) if you prefer to fix drawers by hand.

Careful If a runner system shows a ⚠ note under its picture, its fixing holes have not been checked against the maker's sheet yet. Check them on a test drawer before running a full job.

New and removed systems

- **Copy as a new system** – makes a copy under a new name. This is the best way to add your supplier's runner: copy the generic system that is closest, then change the sizes and codes.
- **Remove** – takes a system off your list. Cupboards that used it fall back to the shop's runner.

Drawer boxes (board boxes)

When you use side-mount or undermount runners, the whole drawer box is cut from board. The **Drawer boxes** tab says **how** your shop makes those boxes. (Metal-sided systems ignore this tab.)

The program comes with several styles, such as **Board box – bottom in a groove**, **Board box – slip-in bottom**, **Board box – dowelled**, **Board box – housed corners**, **Dovetail box**, **Board box – bottom screwed under**, **Board box – bottom inside the walls** and **Tray – scoop front**.

- 1 Open the **Drawer boxes** tab and pick a style from the list.
- 2 Set **Corners: Butt – screwed through the sides**, **Dowelled**, **Housed – front and back in grooves in the sides** or **Dovetail (cut on the jig)**.
- 3 Set **Bottom: In a groove all round**, **Slip-in – the back sits on it**, **Screwed up under the box** or **Inside the sides, front and back – screwed through them** (no grooves: the bottom fits between all four walls, with screw marks round the outside of the walls into its edges).
- 4 Fill in the sizes: **Bottom up from the bottom edge**, **Groove depth**, **Groove wider than the board by**, **Bottom smaller than the grooves by**, **Box front lower by** and **Box back lower by** (use these for a scoop-front tray).
- 5 Tick **No box front** if the drawer front itself is the front of the box.
- 6 In **Standard heights**, type the box heights you make, separated by commas (for example 90, 140, 200). The tallest that fits is used. Leave it blank to make every box as tall as fits.
- 7 Choose a **Bottom board** if this style always uses a particular board for the bottom.
- 8 If you buy these boxes in, put an **Extra price per box**; also set **Minutes to make**.
- 9 Watch the sketch on the right – it shows the corners from above and the bottom across the box.
- 10 Click **Save drawer box style**.

Pick the style for the shop, a job, a construction method or one cupboard with the **Drawer box style (board boxes)** setting. Use **Copy as a new style** to make your own, **Back to the standard one** to undo your changes, and **Remove** to take a style away (cupboards using it fall back to the standard style).

Tip The CNC cuts the bottom grooves and housings, and drills dowel holes and screw marks to suit the style you pick. Dovetails are left for your jig.

Hinges

A **hinge system** is your supplier's hinge range: the different hinge kinds (standard, blind corner, wide opening and so on) and the drilling each one needs. The program uses it to bore the cup in the door and drill the mounting block (plate) holes in the cupboard end.

The hinge table

Each row is one hinge kind in the system:

Column	What it means
Use	Untick a kind you don't use – it is then not offered when you pick a hinge for a cupboard.
Kind	What sort of hinge it is, for example Standard (full overlay) , Blind corner , Corner 90 , Bi-fold (door to door) , Thick doors (95°) or Wide opening (155° +) .
Name	Your name for it (for example "110 Degree").
Cup in from the door edge	The boring distance: door edge to the centre of the cup (often 22.5).
Cup ø × deep	Cup diameter and depth (often 35 × 13). A diameter of 0 means no cup.
Other door holes	Extra holes in the door beside the cup, such as press-in dowel or screw holes. Type them as <code>in/along ødia×depth</code> , separated by commas – for example <code>9.5/22.5 d8x11, 9.5/-22.5 d8x11</code> .
Block row from the front	How far back from the front of the cupboard end the mounting block holes are (often 37).
Block holes	The block's screw holes, measured along the hinge line, typed the same way, for example <code>ø/16 d5x12, ø/-16 d5x12</code> .
Price	The price of this hinge kind.

- 1 Pick the system in the list at the top.
- 2 Change the boxes you need.
- 3 Click **Save hinge system**.

To add your supplier's range, pick the closest system and click **Copy as a new system**, give it a name, then change the sizes.

Tip The generic hinge system uses the hinge sizes in your shop settings (**Construction > Hinges & handles: Hinge cups**, cup diameter, depth and inset, top/bottom of the door to the first hinge, and the largest spacing between hinges). Tall doors automatically get more hinges so they are never further apart than that spacing.

Blind corner hinges

A blind corner cupboard has a fixed (false) panel and a door beside it. The door hangs on the false panel side, so the hinge block has to sit **closer to the front edge** than on a normal end. That is why the blind corner kind has its own **Block row from the front** (for example 21.5 instead of 37). Blind corner cupboards from the library use the system's blind corner hinge automatically, and the block holes are drilled into the back face of the false panel.

Angled cupboards

A door hung at an angle needs an angled hinge (+45°, +30°, -45° ...). When the system lists its own angled hinges you pick them as usual; when it lists none, the cupboard's **Hinge** choice still offers **Angled +45°**, +30°, +15°, -15°, -30°, -45° and **170° (zero protrusion)**, drilled the same as the system's standard hinge (only the arm differs) and named right on the hardware list. A **45° corner** cupboard takes a +45° hinge by itself.

Screw-on hinges and aluminium doors

- **Hinge fixing** (Shop / Job / cupboard settings, Machining): **screw-on hinges** = the press-in dowel holes beside the cup become screw marks, 3 × 1 deep.
- **Hinge cups: no** on a cupboard (its own settings) = nothing drilled in the door, e.g. aluminium frame doors; the block holes in the end are still drilled.

Which system the job uses

Pick the hinge system with the **Hinge system** setting – in **Shop** settings for your standard, in **Job** settings for one job, on the **Room** tab (**Hardware** group) for one room, or in a construction method (**Construction** > **Hinges & handles**). One cupboard can still use another in its **Override build**....

Full, half and inset

Most hinges come in three versions. You don't pick them – each door gets the right one by itself:

Door	Hinge	Plate holes
Overlay door on its own end or partition	Full overlay (the standard)	On the 37 line from the front
Two doors hung on one single partition , one each side	Half overlay	The same 37 line. Holes that line up on both faces are drilled right through once.
Inset door (door mounting set to inset)	Inset	Moved back by the door's thickness plus Inset doors: set back from the case front (0 = flush)

If the hinge system has no half or inset version of a hinge, the door keeps the normal one. With **double partitions** (the standard) every door has its own board, so you only get half overlay hinges when you choose single partitions.

Blum and Hettich hinge ranges

The hinge list can hold the full ranges of your suppliers, each with its own drilling:

- **Blum CLIP top BLUMOTION** – every Blum hinge in the 2024/25 catalogue (110°, 107°, 100°, 155°, 170°, thick and thin doors, profile, aluminium frame, glass, mini, blind corner, bi-fold, angled +45° to –45°, MODUL ...), each in full, half and inset where Blum makes it.
- **Hettich Sensys, Hettich Intermat** and **Hettich special hinges** – from the Sensys / Intermat brochure, with Hettich's own boring: cup 4.5 from the edge (22 to the cup centre), press-in dowels 52 apart, 5.5 further in than the cup, plates on the 37 line.

Careful Hettich and Blum bore differently. Pick the system that matches the hinges you will fit, or the dowel holes won't line up.

Push to open (unsprung hinges)

Doors without handles usually open with a push-to-open unit, and they need the **unsprung** version of the hinge (a sprung hinge would fight the push unit). The program handles this for you:

- The **Push to open (doors)** setting (Construction > **Hinges & handles** > **Push to open**) decides which doors get one: **handleless** (doors without a handle – the normal choice), **all** hinged doors, or **no**.
- Doors that get a push unit automatically get the unsprung code of their hinge on the hardware list.
- **Push-to-open fixing: drill** = a Ø10 hole into the front edge of the board under the door (drilled by hand – the program shows it and lists it as "to drill by hand"), or **adapter** = a screw-on adapter plate on the end (its screw holes are drilled on the CNC).
- **Push-to-open unit in from the opening edge** sets how far in from the opening edge the unit sits.

Handles

The **Handles** tab holds every handle you sell: bar handles, D handles, square D handles, knobs, cup pulls, edge pulls, and **Finger pull / push to open (no handle)**. Each card shows the picture, the name, the hole centres, the price and

the code.

Hole centres – what gets drilled

The most important box in a handle's form is **Hole centres (0 = one hole, blank = no drilling)**:

What you type	What the CNC does	Use it for
A number, e.g. 128	Drills two holes that far apart.	Bar, D and cup handles.
0	Drills one hole.	Knobs.
Blank	Drills nothing.	Edge pulls that screw on the top edge, stick-on handles, or anything you fit by hand.

Also fill in **Length overall** and **Stands out** so the handle looks right in 3D and on drawings.

The **Finger pull / push to open (no handle)** item turns handles off for whatever uses it: no holes, no handle on the quote, and the doors become "handleless" for push-to-open.

Choosing the handle for a job

Handles are picked with settings, so you can set them once for the whole shop and change them for one job, one construction method or one cupboard:

- **Handle** – the handle used on everything.
- **Handle – wall cupboards** – a different handle on overhead doors (blank = the same handle).
- **Handle – drawers** – a different handle on drawer fronts (blank = the same handle).

Find them in **Construction > Hinges & handles > Handles** (or **General > Fronts & hardware**), on the **Job** and **Shop** pages, and in a cupboard's own settings.

Where the holes go on the front (in from the opening edge, down from the top, on the rail of a shaker door, and so on) is set by the other **Handles** settings in the same group, such as **Handle door from edge** and **Handle drawer from top**.

Tip A cupboard or room set to finger pull stays finger pull even if the job's handle is a bar handle – the program won't switch handles back on by itself.

Locks

The **Locks** tab holds the locks you fit (for example a barrel lock with a square or round face), with their drilling, code and price.

- 1 Set the **Lock** setting to the lock you want (blank = no locks).
- 2 Set **Locks on: top_drawer, drawers, doors** or **all**.

Both settings are in **Construction > Hinges & handles > Locks**. The lock holes are drilled on the CNC and each lock goes on the hardware list and the quote.

Inserts: bins, pull-outs and inner drawers

The **Inserts (bins, spice racks ...)** tab holds the bought-in fittings that go inside a cupboard: waste bins, pantry and larder frames, spice and bottle pull-outs, corner fittings, baskets, cutlery trays, robe fittings, laundry hampers and inner

drawers.

Inserts are sorted by **kind** and by the **cupboard width** they fit (for example "Bins – 450 cupboards"). Click a kind chip, then a size chip, to narrow the list.

One cupboard for each style, any brand. Like drawer boxes, you don't need a cupboard for every brand of insert – each insert has a **style** (the kind of cupboard it goes in) and every brand of that style goes in the same cupboard. A Peka, Krome or Hafele magic corner all go in the **Base Blind Corner**, so a brand can be swapped without changing the cupboard.

Style	Cupboard
Blind corner (magic corner, LeMans, swing-out trays)	Base / Tall Blind Corner
L corner (carousel, lazy susan)	Base Corner Bifold
L corner drawers (corner drawer sets)	Base Corner L Drawers
Base pull-out (bins, hampers, cargo, narrow pull-outs)	Base Pull-Out, Base Bin Pull-Out, Base Laundry Hamper
Tilt-out hamper (flip-down / drop-down)	Base Tilt-Out Hamper (the hamper kit brings its own hinges)
Tall larder pull-out	Tall Larder Pull-Out
Drawer (cutlery, plate inserts) · behind a door (inner drawers, swing-outs) · wardrobe	Any drawer / door / robe cupboard

In the cupboard editor the insert list shows **Made for this cupboard** first (every brand of its style that fits its size), then inserts that suit any cupboard, then **Needs a different cupboard** with the cupboard named. The style is worked out from the insert; to change it, open the insert on the Hardware page and pick **Goes in**.

Each insert knows what it fits, so the cupboard editor can tell you whether it will go in:

- **Fits cupboards from (wide) ... up to** – the cupboard widths it suits.
- **Needs inside height at least** and **Needs inside depth at least**.

Inner drawers

Inner drawers (drawers behind a door) are also kept on the **Inserts** tab. When you add one to a cupboard, the program stacks the drawer boxes from the bottom behind the door, set back clear of the hinges, and cuts and drills their real parts. Their metal front pieces are listed as lengths to buy and cut, with their clips.

Two settings control the spacing: **Inner drawer setback** (how far back from the front the boxes sit, clear of the hinges) and **Inner drawer gap** (space between them).

Putting an insert in a cupboard

- 1 Double-click the cupboard to open the cupboard editor.
- 2 On the **Inside** tab find the **Inserts** card (under the Inside drawing).
- 3 Open the list. Inserts that fit this cupboard are at the top under **Fits (... wide)**; the rest are under **Other sizes**.
- 4 Pick one and click **+ Add insert**. Click **×** to take it out again.

The insert goes on the hardware list and the quote, and shows in the Inside drawing and in 3D. Lists show a short name (e.g. *Hideaway Compact 2x40L bin door pull (cinder)*); point at it for the supplier's full name.

How a bin is held

Bins and hampers from the supplier's catalogue carry how they mount, and the bin cupboard is built to suit (see [Bin cupboards](#) in the Cupboards chapter):

- **Drawer mount** – the bin sits on a drawer runner. Krome bins: Krome runners, no bottom, the runner back holds the bin. Concelo entro and Blum box bins: a drawer on that Blum runner.
- **Frame mount** – Concelo, Hideaway and the like bring their own runner frame. No drawer box; the cupboard gets a full top.

An item's own **mount** and **runner** win, so you can set up any bin you buy.

Lift-up and flap-down doors

Lift-up doors (hinged at the top) and flap-down doors (hinged at the bottom) need a lift mechanism or stay in each cupboard end. The program drills the hinge cups along the top or bottom edge, the plate holes, and the stay holes in both ends.

- 1 Use a lift-up cupboard from the library, or in the cupboard editor's **Hinges** card set a door to **Lift-up (top)** or **Flap-down (bottom)**.
- 2 Choose the mechanism with the **Lift system** setting (Construction > **Drawers & lift-ups** > **Lift-up / flap-down**). The list has a generic stay plus bi-fold lifts, stay lifts, parallel lifts and up-and-over lifts.
- 3 For the **generic** stay, set the stay hole pattern to suit your hardware: **Stay holes**, **Stay row**, **Stay from edge**, **Stay pitch**, **Stay hole count**, **Stay hole dia**, **Stay hole depth**.

For the named lift systems, the program picks the mechanism strength from the door's size and weight and puts its part number on the hardware list. Shelf pin holes too close to a stay hole are left out automatically.

Sliding doors (robe and cupboard)

There are two kinds of sliding door, and the **Sliding door kind** setting decides which one is used (**auto**: robe cupboards get wardrobe doors in front, everything else gets cupboard doors; or force **cupboard** or **robe**).

Sliding wardrobe (robe) doors

Big doors running on top and bottom tracks in front of the robe. Settings are in **Construction** > **Drawers & lift-ups** > **Sliding wardrobe doors**:

- **Sliding door system** – your track system, or generic (uses the overlap and gap below).
- **Track / profile finish** and **Handle profiles on the door edges** (the board is cut narrower to suit the profiles).
- Slide overlap (how much each door overlaps the next) and slide track gap (how far the outer track is in front of the inner one).

The hardware list shows the top and bottom tracks (cut to the opening), a roller set per door, and the profiles with their lengths.

Sliding cupboard doors

Smaller doors set inside the cupboard opening, running in grooves in the top and bottom boards. Settings are in **Construction** > **Drawers & lift-ups** > **Sliding cupboard doors**: **Fitting system**, **Board**, **Plain panels**, **Doors overlap**, **Gap above / below the doors**, **Doors apart (centres)**, **Groove width**, **Groove depth**, **Groove behind the door** and the fitting hole sizes. The CNC cuts the track grooves and drills the fitting holes.

To give a cupboard sliding doors, use a sliding-door cupboard from the library or set its front to sliding in the **Face** tab of the cupboard editor.

Pocket and roller doors

In the cupboard editor's **Cupboard** tab, the **Door hardware** list can be set to **Pocket – the doors open, then slide back into pockets in the sides**. Pocket door sets and roller door kits are priced with the shop settings **Price pocket set** and **Price roller door**.

The item catalogue: appliances, sinks, lights and more

The other tabs hold the things you draw into a room so the plan, elevations, 3D and photo renders look right:

- **Appliances** – fridges, wine fridges, dishwashers, ovens and cookers, cooktops, microwaves, rangehoods, laundry appliances.
- **Sinks & plumbing** – kitchen sinks, bathroom basins, toilets, baths, showers, plumbing points. Sinks and basins have a **Tap** (gooseneck mixer, pull-down spray, square spout, short lever mixer, mixer + filter tap, wall spout or no tap) and a **Tap finish**.
- **Doors & windows** – room doors, windows and openings, with how far **Off the floor** they sit.
- **Posts & special** – posts, bulkheads and beams, walls and piers.
- **Lighting & power** – downlights, pendants, strip lights, wall lights, power points and switches.

Items on these tabs appear in the library on the left of the **Cabinets** page – drag them onto a wall.

Finding items

- Type in **Search...** to find an item by name, kind, code or supplier.
- Click a **kind** chip (and a size chip under it) to see one group at a time. Big lists open one kind at a time; **All (slow)** shows everything.
- Large supplier ranges show a good selection only. Tick **Show the full catalogue** to see every model (the number of hidden items is shown beside it). Anything a job already uses is always shown.
- Items you have changed or added are marked **yours** on their card.

Changing an item

- 1 Click the item's card. Its form opens on the right.
- 2 Change **Name**, **Kind**, **Supplier**, **Supplier code**, **Price** and the sizes (**Width**, **Height**, **Depth**).
- 3 Change the look under **Model**: the model type plus things like **Colour**, **Finish**, **Doors**, **Bowls**, **Drainer**, **Undermount**, **Burners**, **Gas**, **Panes** – only the ones that suit that item are shown.
- 4 Changes save as soon as you leave each box (the bottom of the screen says **Items saved**).

Under the form:

- **Copy as a new item** – make a new item from this one.
- **Back to the standard one** – undo your changes to a shipped item.
- **Hide** (shipped items) or **Delete** (your own items) – take it off your list.

If an item shows **⚠ Check:** or a **Supplier page** ↗ link, use them to confirm sizes against the maker's sheet.

Adding a new item (+ New item)

- 1 Open the tab the item belongs to (for example **Inserts** for a new bin).

- 2 Click **+ New item**.
- 3 Type the **Name** (for example "Twin bin 2 x 20 L").
- 4 Pick the **Kind** (for example Bins, Laundry, Narrow & spice). Choose **New kind...** to start a new group and type its name.
- 5 For inserts, fill in **Fits cupboards from** – the cupboard width it suits. This files it under the right size.
- 6 Fill in **Supplier**, **Supplier code** and **Price**.
- 7 Optional:  **Choose a picture...** – a photo or the supplier's picture for the card. Without one, the card shows the 3D model.
- 8 Click **Add item**. The new item starts as a copy of an item of that kind (its 3D model and sizes). Change the rest in its form.

Pictures and 3D models (GLB)

Every item has a simple built-in 3D model. To make it look like the real product:

-  **Your own picture** – a photo for the card (**Use the model picture** puts the model picture back).
-  **Load a GLB model...** – load the maker's 3D model saved as a **.glb** file (binary glTF). It is kept in **Documents\Cabinet Studio\Models**. Keep files under 40 MB.
- Then choose **Stretch to the size above** (the model is stretched to the item's width, height and depth) or **Keep its proportions** (best for handles).
- **Use the built-in model** goes back to the simple model.

Tip Many appliance and sink makers offer free 3D models. If yours come in another format, convert them to **.glb** first.

Supplier price lists

Instead of typing hundreds of prices, load your supplier's price list. Prices are kept **by part code**, so any runner size, hinge, insert or other item with a matching code picks up its price.

- 1 Get your supplier's price list as a **CSV** or **Excel (.xlsx)** file. It needs a column of part codes and a column of prices.
- 2 On the Hardware page (any item tab) click **Price list....**
- 3 Click  **Choose the price list...** and pick the file.
- 4 The program finds the columns by their headings (for example **Code / Item / Part** and **Price / Cost / Trade**) and shows how many prices it found, how many **match codes you have**, and a sample (codes you already use are marked **✓ yours**).
- 5 If it looks right, click **Use these prices**.

How the prices are used:

- A price typed into an item or a runner size **always wins**. The price list fills in anything that has **no price of its own**.
- Drawer runners are priced by each size's **Supplier code**.
- Hinges whose part code is on the price list get their own quote line at that price (and come off the general "Hinges with plates" count).
- Loading a newer list later updates the codes in it and keeps the others.

Tip Codes match however they are written: spaces, dots, dashes and upper / lower case don't matter – 9 071 208 on a Hettich hinge matches 9071208 on the price list, and 71b3590 matches 71B3590.

Most supplier trade accounts let you download your price list as Excel or CSV – log in, download it, and load it here.

Tip Codes are only as good as what you type in. Spend the time once to put your supplier's codes on your runner sizes, hinges and handles – after that, a new price list each year updates the whole quote in a minute.

How hardware gets onto the quote and hardware list

You never type hardware into a quote. The program counts it from the cupboards:

- **Hinges** – counted per door (more on tall doors). Priced by part code from the price list, otherwise as **Hinges with plates** at the shop's **Price hinge**.
- **Drawer runners** – one set per drawer. Priced in this order: the size's own **Price**, then the price list (by the size's supplier code), then the shop's **Price: drawer runner set**.
- **Drawer boxes** – board box styles with an **Extra price per box** add a **Drawer boxes (box style prices)** line.
- **Handles** – one line per handle model, at that handle's price (or the shop's **Price handle**).
- **Inserts, locks, inner drawer fronts, push-to-open units, lift mechanisms** – their own lines, by name and code.
- **Stays, sliding door tracks and rollers, pocket and roller door kits** – priced from the shop's price settings.
- **Screws** – counted from the holes (carcass, hinge plate, runner, drawer, handle screws) at **Price screw**.

Unpriced lines are still shown at \$0, so nothing is forgotten on the order. The **Markup – hardware %** setting lets you put a different markup on hardware (–1 = use the general markup).

See the full list on the **Reports** page, under **Hardware** (item and quantity) and in the **Quote**. The flat prices (**Price hinge**, **Price runner**, **Price handle**, **Price stay** ...) are on the **Shop** and **Job** pages under **Prices**, and can be saved as named price lists on **Materials > Price lists** (for example Trade and Retail).

How a cupboard picks its hardware

Hardware follows the same "layers" as every other setting: **Shop** → construction **method** → **Job** → **room** → **cupboard**. A blank box means "use the layer above". So you set your standard runner, hinge system and handle once in **Shop** settings, and only change them where a job or a cupboard is different.

The cupboard editor's Hardware tab

- 1 Double-click a cupboard to open the cupboard editor window.
- 2 Click the **Hardware** tab.
- 3 The drawer table lists every drawer, top first, with its **Runner system**, **Type**, **Length** and **Box** size.
 - **Runner system** – change the runner for this one drawer. The first choice (in brackets) means "the cupboard's setting".
 - **Type** – for systems with drawer types, pick one; the first choice is **tallest that fits**.
 - **Length** – pick a shorter runner or box if something is behind the cupboard; the first choice is **longest that fits**.
- 4 Inner drawers are listed too but can't be changed here – change them under **Inserts** on the **Cupboard** tab.
- 5 Under **Doors**, **Push to open** can be set for this cupboard: as the job, **Yes – these doors (unsprung hinges)**, or **No**. Each door's hinge code is shown below it.

- 6 At the bottom is this cupboard's own hardware list (item and quantity) – handy for checking or ordering one cupboard.

On the Cupboard tab

- **Hinges** card – each door's hinge side: **Left, Right, Lift-up (top)** or **Flap-down (bottom)**.
- **Hinge – Automatic** (standard, or blind corner for blind corner cupboards) or any hinge kind your hinge system has ticked to **Use**.
- **Door hardware – Hinged (standard)** or **Pocket**.
- **Inserts** card – bins, pull-outs and inner drawers (see [Inserts](#)).

The cupboard's handle, runner, drawer type, drawer box style, lock and lift system are in **Construction & settings (This cabinet's settings)** – blank = room / job / shop value).

Setting up your own hardware list

Do this once when you start using CabCarveCNC, with your supplier's catalogue and fitting sheets beside you. Work in this order, because each step builds on the one before.

- 1 **Drawer runners.** For each runner you use, pick the closest generic system on the **Drawer runners** tab and click **Copy as a new system**. Name it, set its **Type**, the clearances and deductions from the fitting sheet, then fill in **Box sizes on offer** with your supplier's sizes and **Supplier codes**. Untick sizes you don't stock. Add the **Drawer box fixings** if you want them drilled. **Save runner system**.
- 2 **Drawer boxes.** If you use side-mount or undermount runners, set up the board box style you actually make on the **Drawer boxes** tab, including your **Standard heights**.
- 3 **Hinges.** Copy the hinge system, enter your supplier's names, boring distance, cup size, block row and block holes for each kind, and untick kinds you don't use. Make sure the **Blind corner** kind has the right block row. **Save hinge system**.
- 4 **Handles.** Hide handles you don't sell. Change or add your own with the right **Hole centres**, codes and prices. Add pictures so customers can see them.
- 5 **Locks, inserts, appliances, sinks, lights.** Add the bins and pull-outs you fit, with the cupboard widths they suit. Add or adjust appliances and sinks you see often.
- 6 **Prices.** Load your supplier's price list with **Price list...**. Then set the flat prices (**Price hinge, Price runner, Price handle ...**) on the **Shop** page for anything without a code.
- 7 **Make them your standard.** On the **Shop** page (or in your construction method) set **Drawer runners, Drawer type (box systems), Drawer box style (board boxes), Hinge system, Handle, Lift system** and **Push to open (doors)**.
- 8 **Test.** Draw a drawer bank, a door cupboard and a blind corner. Check the drawer box sizes on the **Reports** page, check the holes in 3D and on the **CNC** page, then cut one cupboard and fit the hardware before running a full job.

Careful The sizes in the shipped list are typical, not your supplier's. Always check a new runner or hinge system against the maker's fitting sheet and a test cupboard before cutting a customer's job.

Tip If you go wrong, nothing is lost: **Back to the standard one** restores a shipped item or box style, and your own copies can simply be removed.

6 Rooms and walls

Every job is built inside one or more rooms. A room has its own walls, windows, doors, standard cupboard sizes and finishes. Get the walls right first and everything after – placing cupboards, benchtops, size chains, the cut list – falls into place.

Why the room comes first

Cupboards in CabCarveCNC always sit on a **wall** (or an island). The program uses the wall to know:

- where the cupboard is and which way it faces,
- how far it can go before it hits a corner, a window or a door,
- which cupboards are side by side, so benchtops, kicks and size chains can be made for the whole run.

Each wall has a **front** (the room side, where cupboards go) and a **back**. If you walk along a wall from its start to its end, the front is on your right. You rarely need to think about this – the program turns walls so the fronts face into the room – but it helps if a cupboard ever turns up on the wrong side.

Starting a room

When you start a new job (or open the program with nothing loaded) you get an empty room in the **Plan** view with a box over it called **Start a room**. It offers two ways to make the walls: pick a ready-made plan, or draw them yourself.

Using a quick plan

The quick plans cover most kitchens, laundries and bathrooms. They are the fastest way to get going.

- 1 In the **Start a room** box, type the room's **Width** and **Depth** (they start at 3600 and 3000).
- 2 Click one of the pictures: **Straight wall**, **L shape (left)**, **L shape (right)**, **U shape**, **Galley** or **Closed room**.
- 3 The walls appear in the plan straight away. Drag cupboards from the library onto them.

Tip For a **Galley**, the **Depth** is the distance between the two walls, not the depth of a cupboard.

Don't worry if the sizes aren't exact yet – you can change any wall afterwards (see [Changing a wall](#)).

Starting again with a different shape

You can swap a room's walls for a quick plan at any time from the Room panel:

- 1 Click **Room** on the bar over the drawing (this shows the Room panel – see [The Room panel](#)).
- 2 On the **Room** tab, find the **Walls** group. Type the **width** and **depth**.
- 3 Click one of the **Quick room** buttons.

Careful This replaces the room's walls. If cupboards are already placed, the program asks first. Cupboards on walls that disappear come out of the room – they stay in the job under **Not in a room**, so nothing is lost. Islands are kept.

Drawing walls

Draw the walls yourself when the room is an odd shape – angled walls, a nib, a wall that steps back. You draw along the room side of the walls, corner to corner, like tracing the room with a tape measure.

To draw walls

- 1 Make sure you are in the **Plan** view. Click  **Walls** on the bar over the drawing (or press **W**, or use **Insert > Draw walls**). On a brand new room you can simply start clicking in the plan.
- 2 Click where the first corner goes. It snaps to a 100 mm grid, or onto the end of a wall that is already there.
- 3 Move the mouse towards the next corner. A line follows the mouse showing the wall's length.
- 4 Click the next corner. Keep clicking for each corner.
- 5 To finish, do any of these: click back on the first corner (this closes the room and finishes), double-click, right-click, or press **Esc**.

Snapping – why the line jumps

- **Angles** snap to every 15° (0°, 15°, 30°, 45°, 90° ...), so square rooms come out square.
- **Lengths** snap to 50 mm while you move the mouse.
- Hold **Shift** for any angle and any length (no snapping).

Typing exact lengths and angles

Clicking is quick, but typing gives you the exact size off your site measure. While you are drawing (after the first click), just start typing – you don't need to click in a box:

- 1 Point the mouse roughly in the direction the wall goes.
- 2 Type the length, for example **2400**, and press **Enter**. The wall is made exactly 2400 long in the direction you pointed.
- 3 For a set angle, add **<** and the angle: **2400<30** then **Enter** makes a 2400 wall at 30°. (You can use **@** instead of **<**.)
- 4 Made a typing mistake? Press **Backspace**.

Angles work like this: **0** = to the right across the screen, **90** = up the screen (away from you), **-90** = down the screen (towards you), **180** = to the left.

Tip You can draw the room either way round. When you finish, the program checks the direction and turns the walls so their fronts face into the room.

Changing a wall

Moving a wall

- **Round handles** at each end – drag to move that end. The angle clicks to 15° (Shift: any angle).
- **◆ in the middle** – drag to slide the whole wall straight forward or back (Shift: any way). Walls joined to it stretch to follow. Cupboards on the wall slide with it and **stop** when they meet cupboards on another wall (hold **Alt** to go through) – handy for an invisible wall or island pushed up to a run.
- **Right-click an end handle:**

- **Lock to the face of** another wall, or **Lock to the back of** it. The end sits on that face line and stays there, even when the other wall moves later. A locked end shows green.
- **Unlock** it again.
- On a wall's start: **Free this end** (it no longer joins the wall before) or **Join to the end of the wall before**.

The wall box

In the **Plan** view, click on a wall. It turns orange and the **Wall** box opens with that wall's details:

- **Name** – e.g. "Sink wall". Names show in the wall lists and on drawings.
- **Length** – type a new length and press **Enter** or **Tab**.
- **Angle** – the wall's direction (see the angle rules above).
- **Height** and **Thickness** – leave blank to use the room's standard (shown faded). Fill in only for a wall that differs, such as a half-height wall or a thick brick wall.
- **+ Window** and **+ Door** – put a standard window or door in the middle of this wall.
- **Delete wall** – removes the wall.

Close the box with its **X**, or click an empty part of the plan.

Careful If cupboards sit on a wall you delete, the program asks first. Those cupboards come out of the room (they stay in the job under **Not in a room**).

Dragging wall ends

A picked wall shows a round handle at each end. Drag a handle to move that end. The angle snaps to 15° and the length to 5 mm; hold **Shift** to turn snapping off. When walls are joined, dragging the corner moves both walls that meet there, so the room stays closed.

The status line at the bottom of the window shows the length and angle as you drag.

Moving the wall box out of the way

The **Wall** box (like the other floating boxes) has a title bar with small buttons:

-  float it over the drawing – drag the title bar to move it anywhere,
-  dock it in the right-hand side bar,
-  dock it under the drawing,
-  put it back where it started,
-  open it in its own window, which you can drag onto a second screen. Close that window to bring the box back.

The program remembers where you put each box.

Plan, elevation and 3D

The bar over the drawing has three buttons to change how you look at the room. Each one is good for different jobs.

View	Key	Use it for
Plan	F2	Looking down from above. Draw and change walls, drag cupboards onto walls and size them, place sinks, power points and lights.
Elevation	F3	Looking straight at one wall. Drag cupboards along and up/down the wall, move and size windows and doors, check heights.

3D	F4	Seeing the finished job, checking it looks right, showing the client, photo renders. See the chapter 3D, lighting and photo renders.
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In the **Elevation** view, use ◀ and ▶ to step to the wall before or after, and ⇌ to look at the back of the wall (for islands, or cupboards on the far side of a wall). The name of the wall you are looking at shows between the arrows.

Zoom, move and fit

- **Zoom:** roll the mouse wheel. It zooms in towards wherever the mouse is pointing.
- **Move around:** drag an empty part of the drawing (or drag with the middle mouse button).
- **Fit:** click ↗ **Fit** (or press **F**) to fit the whole room back in the view.

Each view remembers its own zoom, so you can zoom into a corner of the plan, look at an elevation, and come back to the same spot.

Size chains (dimensions)

Tick **Sizes** on the bar to show size chains along the walls – the wall length, the cupboard widths and the windows and doors. They update by themselves when anything moves. In the elevation the rows sit outside the room: wall cupboards and windows above the wall, base cupboards and the overall length under the floor, heights up the right. When you open or fit an elevation, room is left at the top so the rows over the wall are never hidden under the view's bar.

- Drag a row of sizes to move it closer to or further from the wall.
- Click a row and press **Delete** to hide it on this drawing.
-  **Dim** adds your own dimension: click the first point, the second point, then where the line goes. It snaps to corners; hold **Alt** for no snapping. **Esc** when done.
-  **Note** adds a note to the drawing.

Drawing styles, layers, printing and saving drawings as DXF are covered in the chapter on drawings and printing.

Room setup: the first thing to do on a job

The **Room setup** tab (first tab on the Room panel) holds the choices you make before the first cupboard goes in, in the order you make them, with a picture of each:

1. **Doors & drawer fronts** – the door style on base doors, on wall doors and on drawer fronts, the door board, the edge profile run round the fronts, and how wall doors hang.
2. **Handles** – the base handle, the wall handle and the drawer handle. Pick **No handle – touch catch / push to open** for any of them: for example handles on the base cupboards only, and touch catches on the wall cupboards. Those doors get no handle holes and a push-to-open unit instead.
3. **Hinges & drawers** – the hinge system, the drawer system (runners or box system), the drawer type, the board drawer box style, the drawer board and the lift-up system.
4. **Boards** – carcass, backs, end panels and kicks, and the construction method.
5. **Benchtop** – the benchtop type, front edge, look in 3D and the splashback.
6. **Textures & finishes** – floor, wall paint, the **wall look** (brick, VJ and other panels, tiles, stone, rusted metal ...), **panelling on the bottom of the walls** with its height and paint colour, the ceiling and the time of day in 3D.
7. **Library** – the library for this room. Pick one of your own (imported) libraries and the Library panel shows it first, open, while you work in this room. **The standard library only** hides your own libraries.

A faded choice is the job's or shop's. Set it here and every new cupboard in the room comes in with it; one cupboard can still be changed in its editor.

Wall looks and panelling

The walls in 3D can be painted (the wall colour) or take a look from the pictures: **Brick** (red, brown blend, cream, recycled, whitewashed, painted, charcoal, linear grey, white stack bond, sandstone blocks), **Panels** (VJ 75 / 100 / 150, VJ oak, shiplap, board & batten, shadowline, fluted, shaker wainscot, rustic timber slats up or across, weathered boards, timber battens, spotted gum cladding), tiles, stone, concrete and **Metal** (rusted steel, heavy rust, rusted sheets, corrugated iron galvanised or rusty). The **Pick...** button beside each look shows a picture of the one chosen and opens the picture picker.

- **Wall look** covers the whole wall; **Panelling on the bottom of the walls** covers it up to the **Panelling height** (1200 to start), standing a little proud of the wall, with windows and doors cut out.
- Painted looks (painted brick, VJ, shiplap, battens, shadowline, fluted, wainscot) take the **wall paint** or the **Panelling paint** colour.
- One wall can be different: click it in the plan, and in its box set its own **Look, Panelling** (or *No panelling*) and **Panelling height**. Blank = the room's.
- Put a **Panelling cap** on top of the panelling from the library (Cappings & cornice) – it starts at the panelling height.
- The new brick, panel and metal looks can also be used on splashbacks and on boards (end panels, for example).

The Room panel

The Room panel holds everything about the room that isn't a cupboard. You can open it two ways:

- Click **Room** on the bar over the drawing. The panel shows under the drawing (in the editor's place) whenever no cupboard is picked.
- Click the **Room** tab along the top of the window to see the same panel as a full page.

Along the top of the panel are its tabs, and on the right a box with the room's name – click it and type to rename the room.

Room tab – standard sizes, finishes and lighting

This tab holds the room's standards, in groups:

- **Heights – Room walls** (floor to ceiling), **Soffit / bulkhead** (how far a bulkhead comes down from the ceiling over the wall cupboards; 0 = none), **Bulkhead boards** (over the cupboards, the full wall length, or none – see *Bulkheads and kicks* in the Cupboards chapter), **Base cabs, Wall cabs, Tall cabs, Over-fridge cabs from the floor** (1850 – the over-fridge cupboard's bottom; it goes up to the top of the wall cupboards), **Over-fridge cabs, Rangehood cabs, Vanity cabs, Top of wall cabs** and **Kick**.
- **Depths** – the same kinds of cupboard, their standard depths, plus **Fridge panels** (600). A blank over-fridge depth = as deep as the fridge panels, so its front is flush with them.
- **Walls & kicks** – **Wall thickness** and **Longest kick**.
- **Side clearances** – the gap left beside a **Fridge, Window, Door** and **Cooker** when cupboards snap up to them.
- **Boards** – the **Construction** method, **Carcass** board and **Doors** board for this room.
- **Hardware** – the **Hinges** (hinge system), **Drawers (runner system), Drawer type, Board drawer box style, Handle, Drawer handle** and **Lift-up doors** for every cupboard in this room – e.g. Blum and LEGRABOX in the kitchen, something else in the laundry. One cupboard can still be different in its **Override build...**
- **Overhead doors** – **Hang below the case** (doors that drop below the wall cupboards).
- **Floor** – whether the floor shows in 3D and its **Finish**.
- **Finishes in 3D** – colours for the **Walls, Ceiling / bulkhead, Doors & windows, Appliances** and **Sinks & plumbing**.
- **Lighting in 3D** – **Time of day, Sun, Light colour, Brightness** and **Ceiling grid for lights** (see the chapter *3D, lighting and photo renders*).

A blank box means "use the job or shop value", which shows faded in the box. Only fill in what is different for this room – for example a 2700 ceiling in one room of a house.

Tip Standard sizes are what **new** cupboards come in. Cupboards already placed keep their size, so changing the base height here won't suddenly change cupboards you've already sized by hand.

The **Room** group on this tab has **Copy room**, **Delete room** and **Every setting for this room...** (which lists every setting, for the rare case where one room must be built differently from the rest of the job).

Walls tab

A table of every wall, for when you have exact measurements and would rather type than drag. The columns are:

- **#** and **Name**.
- **Length** and **Angle**.
- **Height** and **Thick** – blank = the room's standard.
- **Connected** – ticked means this wall starts where the wall before it ends. Untick it for a wall that stands on its own.
- **Start X** and **Start Y** – where a wall that isn't connected starts.
- ☉ picks the wall (in the plan and elevation), ⇄ turns the wall round, ✕ removes it.

Walls are built in order, so the order of the rows matters. Under the table are buttons to add the next wall: **+ Wall (turn right)**, **+ Wall (straight on)**, **+ Wall (turn left)** and **+ Wall (not connected)**, plus  **Draw walls**.

Tip Cupboards on the wrong side of a wall? The wall was drawn the wrong way round. Click its ⇄. The front swaps to the other side, and the cupboards, windows and power points stay where they are. All the walls joined to it turn round with it.

Islands tab

An island is a line on the floor with no wall. Cupboards go on its **front** and its **back**. Use it for an island bench (base cupboards back to back) or for a peninsula or breakfast bar (cupboards on one side only).

- 1 Type the island's **length** (it starts at 2400).
- 2 Click **+ Island**. It appears in the middle of the room as a dashed line.
- 3 Change its **Length**, **Angle**, **Start X** and **Start Y** in the table, or drag its ends in the plan.
- 4 Drag base cupboards onto its front. To put cupboards on the back, use ⇄ in the elevation, or pick **Back** beside **Place on** above the library.

T-walls tab

A T-wall is a short wall standing out square from another wall's front – a pier, a wall between the fridge and the cupboards, or a robe divider.

- 1 Pick the wall it comes off after **from**.
- 2 Type **at** (how far along that wall its centre is) and **length** (how far it sticks out).
- 3 Click **+ T-wall**. You can change **From wall**, **At**, **Length**, **Height** and **Thick** in the table later.

Invisible walls

Sometimes you need a wall to place cupboards against where there is no real wall – a T-wall to build an island or peninsula off, a servery, a half-height divider you make yourself. Tick **Invisible** on the wall's row (Walls or T-walls tab), or in the wall box when you click the wall in the plan.

- The wall becomes a dashed line in the plan, marked (*invisible*). It is not drawn in 3D or on the elevations, and has no thickness.
- Cupboards still go on it – on its front and, with $\ncong$ / **Place on ... Back**, on its back.
- No splashback panel goes on it (the upstand on the benchtop still can).
- Untick it to have the real wall back – its own height and thickness come back too.

Windows & doors tab

Pick the wall in the **Wall** list, then click + **Window**, + **Door** or + **Opening** (a gap with no door). Each new one goes in the middle of the wall at a standard size:

- Window: 1200 wide × 900 high, 1050 off the floor.
- Door: 820 wide × 2040 high.
- Opening: 900 wide × 2100 high.

Set the exact size in the table: **Kind**, **From start** (from the wall's start, along its front, to the edge of the window), **Width**, **Height** and **Off floor** (the sill height). ✕ removes it.

You can also add a window or door from the **Wall** box, or with **Insert > Window on the chosen wall / Door on the chosen wall**.

Moving and sizing windows and doors in the elevation

Often it is easier to see it than to type it:

- 1 Switch to the **Elevation** view and use ◀ ▶ to get to the wall.
- 2 Drag a window or door sideways to move it. Windows also move up and down (this changes the sill height). It snaps to the wall ends.
- 3 Click it once to pick it – arrows appear on its sides. Drag the left or right arrow to change the width, the top arrow for the height, and (on a window) the bottom arrow for the sill.

Why bother getting windows right? Cupboards snap up to windows and doors, leaving the side clearance from the Room tab. The size chains and the splashback also work around them.

The Window / Door box

In the elevation, windows and doors are drawn as they look: a window with its frame and glass panes, a door with its frame, leaf, handle and any glass. Click one and the **Window / door** box opens:

- **Kind** – Window, Door or Opening (no door).
- **From the wall start**, **Width**, **Height** and **Sill off the floor** (or **Off the floor** for a door).
- **Frame width** (60 unless you change it) and **Colour** – its own colour, also in 3D. **Room colour** puts it back to the room's colour for doors and windows.
- Windows: **Panes** – automatic (by width) or 1 to 4. Doors: **Glass** – none, top half, full or panelled – and **Hinged** left or right.
- **Delete** takes it out of the wall.

The box is a floating box like the Lights box: drag its bar to move it, or dock it at the side. It closes when you leave the elevation.

Appliances tab

Pick the wall after **Add to** and whether it goes on the **front** or **back**, then click one of: **+ Fridge space**, **+ Over-fridge cabinet**, **+ Dishwasher**, **+ Cooker 600**, **+ Cooker 900**, **+ Rangehood**, **+ Rangehood cabinet**, **+ Washing machine**, **+ Bath**. It goes after whatever is already on the wall – drag it into place. (You can also drag appliances in from the library's Appliances.)

The table lists the appliances in the room with their wall and size. **Pick** selects one so you can change it in the editor.

Sinks & cooktops tab

Pick the wall and face, then click **+ Sink** (800 × 450), **+ Double sink** (1100 × 450) or **+ Cooktop** (600 × 510). Change the **x (centre)**, **Width** and **Depth** in the table.

Sinks and cooktops show on the plan over the benchtop and in the elevation, and they make the **benchtop cut-outs** for the stone or laminate maker. In the plan you can drag a sink or cooktop to a new spot – the cut-out follows when you let go. Right-click one to take it out.

Plumbing & outlets tab

Mark where the services are, so you can plan around them and so the plumber and electrician know what you need. Pick the wall and face, then add:

Button	Mark	Starts at (centre off floor)
+ Water (hot + cold)	W	500
+ Waste	X	400
+ Gas	G	600
+ Power point	P	1100
+ Power point (under bench)	P	300
+ Data / TV	D	300
+ Light switch	S	1100
+ Rangehood duct	V	2200

Set the **x (centre)** along the wall and the **Height** in the table. They show in the plan and the elevation on their own layer (so you can turn them off for the client's drawings). In the plan you can drag a mark along its wall, and right-click it to take it out.

Lighting tab

Lists the lights on the picked wall (downlights, pendants, gimbals, spotlights, up-lights, LED strips and wall lights) with their position and height, and has buttons to add them. Most people find the  **Lights** tool much easier – you just click where each light goes. Both are explained in the chapter *3D, lighting and photo renders*.

Décor & furniture tab

Dress the room for the client: books, vases, plants, kettles and toasters, stools, tables, rugs, art and mirrors – from the library headings **Display & décor**, **Furniture & room** and **Appliances > Small appliances**. Double-click one (or drag it onto a wall) and it lands where it belongs:

- **Benchtop items** stand on the benchtop over that spot, towards the back. Drag one in the plan onto the island and it sits on the island top.
- **Floor items** (stools, tables, rugs, lamps) land in front of the benches.
- **Wall items** (art, mirrors, clocks, TVs, air-conditioners) hang on the wall at their height.
- **Shelf items** go onto a floating or timber shelf from the library if there is one under them.

In the plan they show as a dashed outline – drag them anywhere, right-click to take one out. The **Décor & furniture** tab lists them all with **Along, Out, Height, Turn °** and the size, to place them exactly or turn a stool to face the bench.

Tip Display items are for the look only: they never go on the quote, the hardware list or the cut list.

Shelves, legs & accessories (floating and timber shelves, bench and island legs, corbels and brackets, pilasters, cornices, wine racks, rails) go on the walls like cupboards and take their heights from the room – bench legs are the base height, crowns sit on top of the wall cupboards, light rails under them. A bench-height leg touching a run becomes part of it: the benchtop runs over it.

Shop-made shelves on the cut list. The shelves you make yourself put their boards on the cut list, in the panel board (white ones in the carcass board): floating shelves (one board when that thickness exists, e.g. 32 or 33 mm; thicker ones are made up as a box – top, bottom, a front strip and two end strips), the board on bracket and corbel shelves, the quarter-round corner shelves (shaped, curve banded), the spice ledge and its lip, the bridge shelf (top, bottom, ends, back) and the plate rack (ends, top, back rail). Glass shelves, live-edge slabs, legs and the rest are bought in and stay off. Bought one in? Untick **Cut list – we make it** on its Placement card. Change a board's material or edging in the board editor like any other part.

Several rooms in one job

A house job might have a kitchen, a laundry, two bathrooms and a robe. Make a room for each – they all go on the one quote and cut list.

Room tabs

Once a job has rooms, a tab for each room shows along the top of the drawing. Click a tab to go to that room. The left panel above the library also has a room list and a **+ Room** button.

If any cupboards aren't placed in a room (for example loose cupboards, or cupboards from a wall you deleted), a **Not in a room** tab shows too.

Adding a room

- 1 Click the **+ Room** tab (or **+ Room** on the left, or **Insert > Room**).
- 2 A new room opens in the plan with three joined walls (left, back and right, 3600 wide × 3000 deep) to start from.
- 3 Change the walls to suit: click a wall to size it, or use a **Quick room** shape on the Room panel.
- 4 Rename it in the name box at the top right of the Room panel – e.g. "Laundry".

Copying a room

Copy room (Room panel, Room tab) makes a new room with the same walls, settings and cupboards. It is handy for a second bathroom that is nearly the same, or for showing a client two options for the same kitchen.

Deleting a room

Delete room asks first. Its cupboards stay in the job (under **Not in a room**) – delete them too if you don't want them on the cut list.

Bringing rooms in from another job

Handy when a builder repeats the same laundry across several houses.

- 1 Use **File > Import rooms from another job...**
- 2 Find the job in the list (type in **Find...** to narrow it down) and click it.
- 3 A list of that job's rooms shows, each with how many cupboards it has. Untick any you don't want.
- 4 Click **Import into this job**. The rooms come in with their cupboards. If a room has the same name as one already in this job, the other job's name is added to it.

Where the next cupboard goes

Above the library on the left, **Place on** shows the wall that new cupboards go on (when you double-click a library item) and whether they go on the **Front** or **Back** of it. Dragging a cupboard from the library straight onto a wall in the plan or elevation puts it there instead.

Importing a plan from a DXF

If a kitchen designer or architect has sent you a plan as a **DXF** file, CabCarveCNC can read it and build the room for you: the walls (both faces, so it gets the thickness), the windows and doors, and the cupboards drawn on it with their tags (SB900, 3DR600, W800 and so on). You check everything it found before anything is built.

Careful The plan import reads **DXF** files only. It cannot read a picture, a photo or a PDF of a plan. Ask the designer for the DXF (most drawing programs can save one).

To import a plan

- 1 Make or pick the room it goes into.
- 2 Use **File > Import a plan (DXF: walls, windows, doors, cupboards)...**, or on the Room panel's **Walls** tab click **Import a plan...**
- 3 Pick the DXF file. The **Import a plan** box opens, showing the drawing with what was found coloured in over it.
- 4 Check the picture and the lists (see below). Change anything that is wrong.
- 5 Click **Build the room**.

The room is built, the view switches to the plan, and the status line says how many walls and cupboards were made and lists any problems. One **Ctrl+Z** undoes the whole import.

What the review box shows

In the picture:

- The original drawing in light grey.
- Walls found – dark, with their thickness, and their name in green behind them. Islands are a green dashed line.
- Windows in blue, doors in green, openings in orange.

- Cupboards coloured by kind – floor cupboards yellow, overhead cupboards purple (dashed), tall cupboards red, appliances blue – each with a number and a short tick showing which way its front faces.

Beside the picture:

- A summary – how many walls, islands, windows / doors / openings and cupboards were found, and the ceiling height if the plan says one.
- **Drawing units** – normally **from the file**. If everything comes out ten times too big or small, set it to mm, cm, m, inches or feet.
- Any warnings, in a list.
- **Cupboards** – a row for each one: a tick box (untick to leave it out), its **Tag**, **Wall**, **From** (along the wall), **Width** and the **Library item** it will be made from. Change the library item if the guess is wrong. The **all** and **none** buttons tick or untick every row. A $\triangle$ beside a tag means the program wasn't sure – point at it to see why.
- **Windows, doors and openings** – change the **Kind**, **Height** and **Off floor** if the plan didn't say.
- **Layers** (click to open) – each layer in the drawing, how many things are on it, and what the program thinks it **Holds**.

Click a numbered cupboard in the picture to find its row in the list, or click a row to light it up in the picture.

At the bottom:

- **Take out the cupboards already in this room** – shows only if the room already has cupboards. Ticked, they are replaced by the imported ones.
- **Use the drawn depths** – unticked (normal), cupboards come in your standard depths. Tick it to use the depths as drawn on the plan.
- **Cancel** and **Build the room**.

How it reads the plan

It reads the drawing the way a person would, not by one drawing program's rules:

- **Layers** – it guesses what each layer holds from its name (for example a layer with "wall", "glazing", "door", "overhead", "base", "bench" or "dim" in it). If a guess is wrong, change it in the **Layers** list: **Walls**, **Doors**, **Windows**, **Floor cupboards**, **Overhead cupboards**, **Tall cupboards**, **Appliances**, **Benchtops**, **Sinks / cooktops**, **Tags / notes**, **Dimensions**, **Ignore** or **Other**. The plan is read again straight away.
- **Walls** – two parallel lines 40 to 700 apart are the two faces of one wall; the gap is its thickness. Walls can meet at any angle. Plans drawn with single lines work too (they get the standard wall thickness).
- **Windows and doors** – gaps in a wall. A door swing arc (or anything on a door layer) makes it a door; glass lines across the gap (or a window layer) make it a window; otherwise it is an opening. A note near it like *1500x900 SILL 1050* sets its height and sill. A note like *CEILING 2400* sets the room height.
- **Cupboards** – closed outlines on cupboard or appliance layers. Dashed outlines are overhead cupboards. The text inside is the tag, which picks the library item (SB900, 3DR600, DW, W800, RH600, BC1000 R, T600 PANTRY and the like). Cupboards standing free of the walls become an island.

Tip If nothing (or rubbish) is found, open **Layers** first. Most problems are a layer the program didn't recognise – set it to **Walls** or **Floor cupboards** and the plan is read again.

Importing walls only

For a simple floor plan with no cupboards, you can bring in just the walls:

- 1 Use **File > Import walls from a DXF plan...** (or on the Room panel's **Walls** tab, open **Walls only (simple)**).
- 2 Click the file button and pick the DXF.

- 3 If you only want one layer, type its name in **Layer** (leave it blank for all layers).
- 4 Leave **Scale to mm** blank to use the file's own units, or type the number that turns the drawing's units into mm (e.g. 1000 for a drawing in metres).
- 5 Click **Import (replaces the walls)**. It tells you how many walls it found and asks before replacing the room's walls.

Lines that meet are joined, and closed outlines are turned so the fronts face in.

Careful A plan drawn with both faces of each wall gives you **two** walls for each real wall here. Either type the layer that holds just one face, delete the extra walls afterwards, or use **Import a plan...** instead, which understands double-line walls.

7 3D, lighting and photo renders

The 3D view shows the job the way it will be built – every board, edge, hole and hinge – and it can also show it the way the client will see it, with real light fittings, painted walls, a proper floor and a photo-quality picture to send them.

The 3D view

Click **3D** on the bar over the drawing (or press **F4**).

Moving around

To do this	Do this
Turn the room round (orbit)	Drag with the left mouse button
Zoom in and out	Roll the mouse wheel
Slide the view sideways or up and down	Drag with the right mouse button
See the whole room again	Click ↗ Fit (or press F)

Tip To look from **inside** the room (the way the client will stand in it), keep zooming in until you pass through the wall. That is the best starting point for a photo render.

Tip Small rooms: pick **Wide lens** or **Extra wide lens** on the bar under the 3D view to see more of the room at once. Or stand back **outside** the room: the walls you are behind are left out, so you look in as if the near wall were gone. The photo render uses the same lens.

Working in 3D

3D is mostly for looking, but you can do some work here too:

- **Click** a cupboard to pick it (it shows in the editor). Click a wall to make it the chosen wall.
- **Drag** a picked cupboard to slide it along its wall. It snaps to the wall ends and the cupboards beside it; hold **Alt** to drag it without snapping.
- **Double-click** a cupboard to open it in the cupboard editor.
- **Right-click** a cupboard for its menu (copy, open, delete).

The tick boxes

Along the bottom of the 3D view are tick boxes to choose what shows. Turning things off makes the view quicker and lets you see inside.

Tick box	What it does	Why you'd use it
Room	Ticked: the whole room. Unticked: just the picked cupboard on its own.	Check one cupboard closely without the rest in the way.
Fronts	Doors, drawer fronts and handles (and benchtops).	Untick to see the shelves, drawers and fittings inside.
Drawer boxes	The drawer boxes and runners.	Untick for a clearer look at the carcass.
Edges	Draws a dark outline round every board.	Makes each board easy to tell apart. Untick for a softer, more photo-like look.

Drilling	Shelf pin, hinge, runner and screw holes, plus the hinges and mounting plates.	Check the machining before you send it to the CNC.
Floor	The room's floor, in its finish.	Untick to see under the kicks.
Realistic	Soft shadows, painted walls, room lighting and the light fittings lit up.	Show the client how it will look. (Slower on older computers.)

Next to them is  **Render**, for a photo-quality picture (see [Photo renders](#)).

Normal view and Realistic view

In the normal view the walls are see-through (the chosen wall a little stronger), so you can always see the cupboards no matter where you look from. It is the view for checking how things are built.

Tick **Realistic** and the walls become solid and painted, the floor shows in its finish, shadows fall softly, and the room's lights switch on. Windows and doors are real openings in the solid walls, so you can see through them. It is the view for showing the client. The program remembers whether you had Realistic on.

Room finishes and floors

The walls, ceiling, floor, appliances and sinks in 3D get their look from the Room panel. Click **Room** on the bar over the drawing, then the **Room** tab.

Floor

- **Floor in 3D** – show the floor or not (the same as the **Floor** tick box in 3D).
- **Finish** – oak boards, dark or grey timber boards, white, grey or black 600 tiles, polished concrete, vinyl, carpet, terrazzo, a range of tile layouts (for example 600 × 600, 1200 × 600, terracotta, herringbone oak, hexagon), or a picture from the library.

Click the  button beside **Finish** to choose from pictures instead of a list.

Picking from pictures ()

The **Pick a look** box shows every finish as a swatch at its real size.

- **Suggested** shows the ones that suit what you are choosing (for a floor: floors, tiles, timber, stone, concrete). The other buttons show one group.
- Choose a brand from the brand list, or type in **Search...**
- Click a swatch to use it.
- **+ Import pictures...** adds your own – brand swatches, tile photos, photos of a real job. They stay on this computer (in Documents\Cabinet Studio\Textures).
-  **Your pictures** lets you rename, resize or remove pictures you've imported.

The photos that come with CabCarveCNC are free to use.

Finishes in 3D

- **Walls** – the paint colour: warm white, white, antique white, light grey, warm grey, blue-grey, sage, sandstone, charcoal or black.
- **Ceiling / bulkhead** – ceiling white, white, warm white or light grey.
- **Doors & windows** – white, off-white, timber, dark timber, black or grey (or each model's own).
- **Appliances** – brushed stainless steel, black, graphite / black stainless, white, champagne and more (or each model's own).

- **Sinks & plumbing** – brushed or polished stainless, matt black, black granite composite and more (or each model's own).

The first choice in each list (starting with =) means "use the job or shop setting".

Tip Matching the client's real wall colour and floor makes a big difference to how they react to the 3D. It takes a minute and it sells the job.

Benchtop and splashback looks are set on the benchtops themselves – see the chapter on benchtops and splashbacks.

If you have a maker's 3D model of a real appliance, sink or handle (a **.glb** file), you can load it onto that item with  **Load a GLB model...** in the item's form, and it will show in 3D in place of the built-in model.

Lights – the Lights tool

You can put the actual light fittings into the room – downlights, pendants, LED strips under the wall cupboards and more – and see them lit up in 3D and in photo renders. It shows the client how the kitchen will look at night, and it shows you where the light will (and won't) fall on the bench.

Opening the Lights box

- 1 Go to the **Plan** or **3D** view.
- 2 Click  **Lights** on the bar over the drawing. The **Lights** box opens, and in the plan a grid shows over the ceiling.
- 3 When you've finished, click **X** in the box or press **Esc**.

Putting lights in

- 1 Make sure **Click the plan to put a** is ticked (in 3D it says **Click the floor to put a**).
- 2 Choose the kind of light in the list under it.
- 3 Click in the room where the light goes. Ceiling lights snap to the ceiling grid.
- 4 Keep clicking to add more of the same kind.

Once a light is in:

- **Drag** it to move it.
- **Click** it to set it up (see [Setting up one light](#)).
- **Right-click** it to take it out.

In a closed room, lights must go inside the walls. In a room that only has walls behind the cupboards, they can go anywhere.

The kinds of light

Kind	What it is	Starts as
Downlight (fixed)	A recessed ceiling light shining straight down.	60° beam, 600 lm
Gimbal downlight (tilts)	A ceiling downlight that can be tilted up to 35° – to wash a wall or light a bench.	36° beam, 600 lm
Spotlight (turns + tilts, ceiling or floor)	A spot that can hang from the ceiling shining down, or stand on the floor or a shelf shining up. Tilts up to 90°.	24° beam, 500 lm

In-floor up-light	A light set in the floor shining up (tilts up to 30°).	24° beam, 300 lm
Pendant	A hanging light, e.g. over an island.	90° beam, 800 lm
LED strip (under wall cupboards)	Strip lighting under the wall cupboards, lighting the bench.	120°, 500 lm
Wall light	A light fixed to the wall (starts 1800 off the floor).	120°, 400 lm

Tip LED strips find their own length. Click under a run of wall cupboards (or under an under panel) and the strip runs the length of it, stopping 10 mm short of each end. Under panels from the library "With LED Strip" get their strip automatically.

Ceiling grid and laying out downlights

- **Ceiling grid** – **No grid, 300 grid, 600 grid (ceiling tiles) or 1200 grid**. Ceiling lights snap to it. The grid lines up with the room's corner. Use the 600 grid for a tiled ceiling so lights land in the middle of the tiles.
- **Downlights apart** – the spacing for the button below (starts at 1200).
- **Lay out downlights** – fills the room with downlights in an even grid at that spacing, keeping them back from the walls. It replaces any downlights already in the room (other kinds of light are kept).
- **Take all lights out** – removes every light in the room (it asks first).

Time of day and the room's light

These settings are for the whole room. They are also on the Room panel's **Room** tab under **Lighting in 3D**.

- **Time of day** – **Day (daylight + lights), Evening (lights + a little daylight) or Night (room lights only)**.
- **Sun** – **On**, or **Off (only the room lights)** for no hard sun shadows.
- **Light colour** – **Warm (2700 K), Warm white (3000 K), Neutral white (4000 K) or Cool daylight (5000 K)**. This is the colour of every light unless a light has its own.
- **Brightness** – **Dim, Normal or Bright**, for all the room's lights together.

Tip Can't see your lights? In **Day** the daylight drowns most of the light pools on the floor – just like a real kitchen at midday. Switch to **Evening** or **Night** to judge the lighting. Also make sure **Realistic** is ticked in 3D (opening the Lights box in 3D ticks it for you).

Setting up one light

Click a light to pick it. A **This light** section opens in the Lights box:

- **Kind** – change it to another kind of ceiling light (downlight, gimbal, spotlight, up-light or pendant). LED strips and wall lights stay as they are.
- **Beam** – how wide the light spreads, from 10° (a narrow spot) to 120° (a wide flood).
- **Brightness** – from 200 to 2000 lumens (lm). Use the figure off the fitting's box.
- **Colour** – **As the room**, or a colour of its own.
- **Height** – how high it is. **Ceiling** puts it back on the ceiling. (Not for up-lights – they are in the floor.)
- **Shines** (spotlights only) – **Down (hung from the ceiling) or Up (stands on the floor / a shelf)**.
- **Tilt** and **Turn** (gimbals, spotlights and up-lights) – tilt is degrees off straight down (or up); turn is the direction it points in the plan.
- For an LED strip: **Length**, and the **Quote** ticks **Aluminium channel** and **Light kit (driver + leads)** (see [Which lights go on the quote](#)).

Take it out removes the light. **Done with this light** closes the section.

Aiming a light with the ♦ handle

While the Lights box is open, the plan shows where each light's beam lands on the floor as a pale yellow patch (a blue patch for lights shining up). Lights that tilt also have an orange ♦ handle on a dashed line.

- 1 Drag the ♦ towards where you want the light to point – a feature wall, the island bench, a pantry door.
- 2 The farther you drag it from the light, the more it tilts (up to as far as that kind of fitting goes). The status line shows the tilt and turn.
- 3 Look in 3D (Realistic, Evening or Night) to see the result.

Moving the Lights box out of the way

The Lights box can cover the part of the plan you are working on. Use the buttons on its title bar:

-  float over the drawing (drag the title bar to move it),
-  dock it in the right-hand side bar, or  dock it under the drawing – the cupboard editor steps aside while you do the lights,
-  put it back where it started,
-  open it in its own window and drag it onto a second screen. Close that window to bring the box back.

The Lighting tab

The Room panel's **Lighting** tab lists the lights on one wall in a table (**Kind, Face, x (centre), Height**) and has buttons to add them by number. Lights belong to the nearest wall, so the x is measured along that wall. The  Lights tool is usually quicker; the tab is there when you want to type exact positions.

Changing many lights at once

Pick a group of lights of the same kind (say all 9 downlights) and every change in the Lights box goes to all of them:

- **Shift + click** a light to add it to the group, or take it off. Only lights of the same kind as the first one join – the program tells you if you click a different kind.
- **Shift + drag** on an empty spot in the plan to draw a box. Every light of one kind inside it is picked (the kind you already have picked, or the kind there is most of). Lights of another kind are left out.

The box heading says how many are picked. Change the beam, brightness, colour, height and so on once – all of them follow. **Take out** removes the whole group.

Tip If another box is over the Lights box, clicking  **Lights** brings it to the top. Click again to close it. Any floating box comes to the front when you click on it.

Which lights go on the quote

Only **LED strips** are priced on the quote, because they are the lights a cabinet maker normally supplies and fits. For each strip the quote adds:

- the **LED strip** in metres, worked out from 5 m rolls,
- **aluminium channel** in 3 m lengths (untick **Aluminium channel** on the strip if there is none),
- one **light kit** (driver and leads) per strip (untick **Light kit (driver + leads)** if the electrician supplies it).

Downlights, gimbals, spotlights, up-lights, pendants and wall lights are for the look only. They show in the plan, the elevation, 3D and renders, but they are **not** quoted – the electrician supplies those.

Set your LED prices in **Shop** settings on the **Prices** tab (the LED strip per metre, one 3 m length of channel, and one light kit).

Photo renders

A photo render makes a photo-quality picture of the 3D view. It works out how the light bounces round the room – off the walls, the benchtop and the floor – so shadows, reflections and the glow of the lights look real. It is the picture you put in the quote or send the client.

To make a photo render

- 1 Go to the **3D** view and set up the view the way you want the picture – turn and zoom until it looks right. For a view from inside the room, zoom in until you are inside.
- 2 Set up the lights and the room's finishes first (see above).
- 3 Click  **Render**. The  **Photo render** box opens.
- 4 Choose the **Size**, **Quality** and **Time of day** (see below).
- 5 Click **Start**. The picture starts grainy and gets cleaner with every pass. The line beside the buttons shows the size, the pass number and the time so far.
- 6 When it says **Done** (or whenever it looks good enough), click **Save picture**.

The settings

- **Size** – Same as the 3D view, **1600 × 900**, **1920 × 1080 (HD)**, **2560 × 1440** or **3840 × 2160 (4K)**. HD is plenty for email and quotes. Bigger takes longer.
- **Quality** – **Quick look (80 passes)** to check the view, **Good (300 passes)** for most pictures, **Best (1000 passes, slow)** for the final one.
- **Time of day** – Day, Evening or Night, for this picture only (the room's own setting doesn't change).
- **Ceiling when inside** – puts a ceiling over the room when the camera is inside it, so the light bounces off it like a real room.
- **Smooth grain** – cleans up the speckled grain while keeping edges and joints sharp. You can tick and untick it while it renders to compare. Leave it on unless you see the doors looking soft.

The program remembers your choices for next time.

Good to know

- Walls between the camera and the room are left out automatically, so they don't block the picture.
- The orange "picked" highlight is left out of the picture.
- **Stop** stops adding passes but keeps the picture, so you can still save it. **Close** ends the render.
- **Save picture** saves a PNG in **Documents\Cabinet Studio\Renders**, named after the job and room with the date and time, and opens it for you.
- Renders work the computer's graphics card hard. A 4K **Best** render can take a long time on an older computer – start with **Quick look** to check the view.

Tip For an evening shot that sells: **Night** or **Evening**, warm white (3000 K) lights, LED strips under the wall cupboards, a couple of pendants over the island, and the camera inside the room at about eye height.

8 Cupboards: placing, sizing and editing

Cupboards are the heart of every job. This chapter shows you how to find a cupboard in the library, put it on a wall, size it, and then change anything about it – right down to one hole in one board – and how to save your own cupboards so you never have to set them up twice.

Tip The big idea. Every cupboard is *built* by the program from your shop's construction settings. You never draw boards by hand. Change a size or a setting and every board, hole, edge and CNC program follows. Only change single boards when you really need something special.

The library

The library is the list down the left side of the **Cabinets** page. It holds every cupboard, panel, filler and product you can put in a room.

Parts of the library panel

- **Room bar** (top) – the room you are working in, + **Room**, and **Place on** with the wall and **Front / Back**. New cupboards go on this wall.
- **Viewer** – a small 3D picture of the product you point at. Drag in it to turn it, use the mouse wheel to zoom. Click ▾ **Viewer** to hide it (more room for the list) and ▶ **Viewer** to show it again.
- ⌂ (top corner of the viewer) – shows the product big, full screen. From there **Add to the chosen wall** puts it straight on the wall picked in **Place on**.
- **Search the library...** – type any part of a name, e.g. *sink, lift, 900, robe*. Every heading opens to show what matches.
- + **Library** – make a new library of your own (see [My library](#)).
- **The list** – headings you click to open and close (▶ closed, ▾ open). The small number beside a heading is how many items are inside.
- **In room name** (bottom) – the cupboards already in this room. See [The In Room list](#).

Tip Click the **Library** button at the far left of the page tabs to hide the whole library when you want the biggest possible view. Click it again to bring it back.

Favourites ★

At the top of the list is ★ **Favourites** – the cupboards you use every day, so you do not have to dig for them. It starts with common ones (Base 1 Door, Base 2 Doors, Base 2 and 3 Drawers, sink and corner units, wall 1 and 2 doors, tall 2 doors and end panels).

- 1 Point at any item in the list. A small star ★ shows on the right of its row.
- 2 Click the ★. It turns into ★ and the item now also shows under ★ **Favourites**.
- 3 To take it out again, click its ★.

What is under each heading

Inside each heading the items are sorted into folders. The cupboard headings all use the same folders, so they are easy to find: **Standard cupboards**, **Drawer cupboards**, **Doors & drawers**, **Sink cupboards**, **Corner cupboards**, **Pull-outs, bins & laundry**, **Pantry & broom**, **Appliance cupboards**, **Lift-up & flap-down**, **Glass doors**, **Open & wine racks**, **Open ends**, and the **Finger-pull**, **L-shape finger-pull** and **C-channel** sets.

Heading	What you will find there
Base Cabinets	Door and pair cupboards, drawer cupboards (1 to 5 drawers, equal or with a small top drawer), door + drawer over, partitioned cupboards, sink cupboards, corner cupboards (blind, bi-fold L, 45° and 45° drawers), bin, pull-out and laundry hamper pull-outs (by width), oven housings and microwave cupboards, open and wine rack cupboards, open angled / quarter-round ends, bench cupboards with pocket, roller or folding doors, shaped units (angled ends, curved counter, one you draw yourself) and the finger-pull sets.
Wall Cabinets	1, 2 and 3 door cupboards, partitioned, bridge (short) cupboard, glass doors, lift-up doors (several stay and bi-fold types) and flap-down, corner cupboards, rangehood, over-fridge and microwave cupboards, open, wine rack and sliding-door cupboards, open ends, finger-pull doors.
Tall Cabinets	1 and 2 door tall, doors over drawers, 4 doors split at bench height, pantries, broom and linen cupboards, larder pull-outs, oven towers (oven only, or oven + microwave), tall corner pantries and blind corners, open, wine rack and sliding-door tall, open ends, finger-pull tall.
Wardrobes	Built-in robes (hanging rail, double hanging, shelves, drawers + rail, shoe shelves, sliding 2 and 3 door robes) and open robe sections that go behind sliding doors.
Vanities	Vanities (made to the vanity standard height and depth – 720 high including the kick and 460 deep unless you change it) with doors, drawer banks and drawers + doors.
Panels & fillers	End panels (to the kick, to the floor, end only, left / right, 16, 18 and 25 mm), Door panels , Under panels (plain, with a rangehood cut-out, with an LED strip, or both), Bar backs (1 to 5 equal panels), Fillers (edge, face – flush with the cupboard or the doors – corner and L-shape), Loose panels (finished and unfinished, with set edging).
Kicks	Kicks you put in yourself where the automatic kicks don't go: a Kick Ladder (front, back, rungs and the kick face) straight, with a mitred return on the left, the right or both ends, and a Kickboard Face Only . See Bulkheads and kicks .
Bulkheads	Bulkheads as you make them – a face in the door board with a flat behind it – straight, with a mitred return on the left, the right or both ends, and with a vent cut-out; and shadowlines. See Bulkheads and kicks .
Sinks & basins	Kitchen sinks (single, 1¾, double, undermount, butler), laundry tubs and vanity basins. Drop one on a sink cupboard (or double-click it: it goes on the sink cupboard on the wall you have picked) – the benchtop gets its cut-out.
Appliances	Fridges, wine fridges, dishwashers, ovens, freestanding cookers, cooktops, microwaves, rangehoods and laundry appliances – drag them into the room – plus Spaces (plain box) for a dishwasher, fridge, rangehood, cooker, washing machine and bath (the benchtop stops at them).
Plumbing & bathroom, Doors & windows, Posts & special, Lighting & power	Things that are not cupboards: water, waste and gas points, toilets, baths and showers, room doors and windows, posts and beams, lights and power points. They are dropped on a wall the same way. They are covered in the Room and Lighting chapters.
<i>Your own libraries</i>	Shown after the built-in headings, with ✎ (rename) and ✕ (delete) beside the name.

Tip An appliance *space* has no boards – it just holds the gap in the run so the kick and benchtop know what to do. A *housing* (e.g. Base Oven Housing) is a real cupboard with boards that the appliance slides into.

Tip Oven housing (600 / 900): 600 clear between the panel under and the panel over the oven; both panels are the full cupboard width – edged all round, or no edge when the door board is painted. The oven sits on a fixed shelf 50 clear above the bottom (Shop settings – Sizes – *Oven shelf gap*; move the shelf job by job in the editor). Open back: the ends are cut away at the top back with a 100 rail across under the cut-out, and a 60 front rail on edge (no edging) at the top (*Oven rail*).

Bulkheads and kicks

A bulkhead is made the way most shops make one: a **face** in the door board, as high as the room's bulkhead, set **10 back** from the front of the cupboards under it. Behind the face is an **L frame** of two boards – an upright 80 high against the back of the face and a flat on top of the cupboards, **80 × 80** overall – in the carcass board (white HMR offcuts are fine). Where it ends in the open it gets a **return** back to the wall, mitred to the face, with its own L.

- **No machining.** The bulkhead is screwed on site from inside the cupboards, and the face is screwed from the back of the L. Nothing is drilled.
- **Cut long for the saw.** Mitred faces and returns go on the cut list **50 longer** than they finish, so you can cut the mitres on the panel saw.
- The face, returns and L boards are on the cut list and the optimiser.

Every size is a setting (Construction page, **Kicks, legs & bulkheads**, or **Override build...** for one bulkhead): **Bulkhead face back from the carcass front** (10), **Bulkhead L frame depth** (80), **Bulkhead L frame height** (80), **Bulkhead L frame board** (blank = the carcass board) and **Bulkhead face cut longer by** (50).

Automatic bulkheads

When a room has a bulkhead (**Bulkhead above the overheads** in *Heights from the benchtop...*, or **Soffit / bulkhead** on the Room tab), the room puts one over every run of overheads – and tall cupboards whose tops line up with them – but nowhere else. The ends look after themselves:

- Against a wall or a cupboard that goes up to the ceiling – no return.
- Open – a mitred return back to the wall.
- Beside a deeper run (say overheads into an over-fridge cupboard) – a short return on the deeper one, as long as the step.

Click a bulkhead in the elevation or 3D for its box: **Change it by hand** swaps it for a library bulkhead of the same size you can then stretch and change, **Leave it off these cupboards** takes it off that run, and **No automatic bulkheads in this room** turns them off for the room. One cupboard can be left out with **Bulkhead over it** in its editor. **Bulkhead boards** on the Room tab (or the shop's **Kicks, legs & bulkheads** page) chooses *Over the cupboards, Full length of every wall* (a plaster bulkhead, drawn only) or *None*.

Bulkheads from the library

Drop a bulkhead from the **Bulkheads** heading onto the overheads (or double-click it: it goes on the cupboard you have picked) and it sits on top of them, as long as their run. In its editor: **Width** is its length, **Height** the face height, **Depth** the cupboard depth (the face stays flush with the doors); **Returns** (straight, left, right or both – mitred), **Return length** (blank = to the wall), **Flat behind the face** (blank = the shop's 100) and **Face board**. The automatic bulkhead stays off cupboards that have one put on by hand.

Kicks

Kicks go under every run of base and tall cupboards on their own: one **ladder** – a front and back as high as the kick, rungs between them, and the kick face on the front. Set on the shop's **Kicks, legs & bulkheads** page (Construction):

- **Ladder kick: rung height** – e.g. 80 under a 130 kick: the rungs sit up against the cupboards, clear of the floor, so only the front and back need packing or planing (0 = as high as the kick).
- **Kick returns at open ends** – No when your end panels run to the floor; Yes for a mitred kick return where a run ends in the open (the end panel then stops at the cupboard height).
- Kick height, kick type (ladder, legs or none), set-back from the front, floor clearance, rung spacing and the longest kick.

Where you want a kick the room doesn't put in, drop a **Kick Ladder** from the **Kicks** heading (straight or with mitred returns) and size it like a cupboard.

Tip Oven housings and oven towers show an oven (and a microwave in a tower's microwave space) in 3D and renders, so a design looks finished. It is a picture only – not on the quote. Untick **Show the oven in it** in the cupboard editor to leave the space empty, or put your own appliance in from the library (it takes the place of the picture).

Cornice, capping, light rail and picture rail

You put a **profile** on the room, and the room runs it wherever it suits:

- **Cornice** (Cove 55, Cove 75, Cove 90 – square coves with a 10 mm step each side) goes at the **ceiling**, round the room: along each wall, and along the face of the bulkheads over the cupboards. It meets in inside mitres in the corners and where it turns onto a bulkhead, mitres round an outside corner, and stops square against a cupboard that goes up to the ceiling.
- **Capping** sits on the cupboard tops: Flat capping 18, Ogee capping 25 (25 mm board laid flat, the ogee routed underneath), Shadow line capping 80 (25 mm board on edge, 80 high, with a 10 × 10 rebate at the bottom for the shadow line) and Bullnose capping 32.
- **Light rail** goes under the overheads.
- **Picture rail** and the **panelling cap** (the timber strip on top of VJ panelling) run along the walls at a height – square against windows, doors and tall cupboards, mitred into the corners.

Capping and light rail run like this:

- Along the door faces of cupboards that touch and whose tops (light rail: bottoms) line up.
- Open end – a **mitred return** back to the wall.
- Against a wall or a taller cupboard – stops **square**.
- Beside a deeper cupboard (overheads into a pantry) – the deeper one gets a short return as long as the step, and the two meet in an **inside mitre**.

Putting one on

- 1 Open the **Cappings & cornice** heading in the library (Cornice, Capping, Light rail, Picture rail & panelling cap). The picture shows each one in place – a cornice in the corner of a room under the ceiling, a capping on a cupboard top.
- 2 Double-click a profile, or drag it onto the room. A cornice goes round the room at the ceiling, a capping on the overhead and tall cupboard tops, light rail under the overheads, a picture rail along the walls – and its box opens.
- 3 In the box: **Goes** (round the room at the ceiling, along the bulkheads only, wall + tall tops, wall tops only, tall tops only, under the wall cupboards, along the walls at a height), **Finish** (door board, panel board, carcass board, any board, or painted in a colour) and **Set out** (more forward, or back, from the face it fixes to).
- 4 For a picture rail or panelling cap: its **Height** (floor to the bottom of the rail – a panelling cap starts at the room's panelling height), and for walls-and-ceiling profiles the **Walls** it goes on (untick a wall, or click a run and **Leave it off this wall**).

Every profile on the room is listed on the **Room** page, **Cornice & capping** tab, where you can change, add or take them off. Click a run in the plan, the elevation or 3D for its box: **Leave it off cupboards ...** takes that run off, and one cupboard can be left out with **Cornice / capping on it** in its editor.

On the cut list and the quote

- **Bought** profiles are quoted by the metre in whole lengths (the profile's **Length bought**, 5.4 m to start), under **Cornice & capping** on the quote. Set the price per metre when you save the profile.
- Profiles **cut from the board** (the flat, ogee and shadow line cappings) go on the cut list as strips, the front edge banded, and onto the optimiser's sheets. A capping on edge is as wide as it is high (80 for the shadow line). The ones that need 25 mm board say so in their name on the cut list – set their **Finish** to your 25 mm board.
- **Reports** lists every run with the pieces to cut (long point, mitres included), how many mitres, and the lengths to buy. A piece longer than a length is cut in two equal pieces.

Your own profiles

Draw them in the **CAD** tab, **Cornice** side tab (see the CAD chapter): start from a standard profile, drag its points, and **Save to library**.

Putting a cupboard in the room

You need a room with walls first (see the Rooms chapter). Most people work in **Plan** view and check in **Elevation**; **3D** is for looking.

Drag it onto a wall

- 1 Find the cupboard in the library.
 - 2 Hold the left mouse button on it and drag it over the plan, the elevation or the 3D view.
 - 3 Let go near the wall where it goes. It jumps onto the wall face nearest the mouse, at the spot you dropped it, and snaps against the cupboards and wall ends beside it.
- **It never overlaps.** If you drop it on top of another cupboard, it slides to the nearest free spot.
 - **It fills a small gap.** If you drop it into a gap that is narrower than the cupboard (but at least 100 wide), it is made exactly as wide as the gap. The message line tells you, e.g. *"made 532 wide to fit the gap"*.
 - **Corners find their corner.** Drop a corner unit near either end of a wall and it goes right into that corner, and the program picks the left or right hand version to suit.
 - In 3D, if the mouse is over a wall, the wall wins over the floor behind it.

Tip Hold **Alt** while dragging to stop the snapping and the "fill the gap" sizing – useful when you want a cupboard in an exact odd spot.

Double-click it in the library

- 1 In the room bar, pick the wall in **Place on**, and **Front** or **Back**.
- 2 Double-click the item in the library. It goes on that wall, after the cupboards already there.

This is the fastest way to put a run of cupboards along one wall: double-click, double-click, double-click.

Front or back of a wall

Every wall has two faces. **Front** is the normal room side. **Back** is the other side – used for islands (cupboards both sides), peninsulas and the far side of a T-wall. Change it in the room bar before you add, or later in the cupboard's **Placement** (see below). In Elevation, the  button flips between the front and back of the wall you are looking at.

No room yet?

If you drop or double-click a cupboard when no room is open, it is still added to the job and shown on its own. You can place it on a wall later with **Placement**.

Picking, moving and copying

- **Click** a cupboard (plan, elevation, 3D or the list) to pick it. It is outlined and its details show in the editor panel under the view.
- **Drag** it to move it along the wall, or onto another wall. It snaps to its neighbours, wall ends and openings.
- In **Elevation** you can also drag wall cupboards up and down.
- **Double-click** it to open the full cupboard editor.
- **Delete** key deletes the picked cupboard (it asks first). **Ctrl+Z** undoes, **Ctrl+Y** redoes.

Careful Corner and shaped units stay on their own wall while you drag them, so they cannot jump round a corner by accident. To move one to another wall, use **Placement > Wall**.

Turning a cupboard

A picked cupboard in Plan shows a round turn handle. Drag it to turn the cupboard (it snaps every 15°; hold **Alt** for any angle). A turned or pulled-out cupboard "stands on its own": it gets its own kick, is not part of a run and can be dragged freely. **Back square on the wall** in **Placement** puts it back.

The In Room list

Under the library is the list of cupboards in this room, titled **In room name**. Each row shows the cupboard's number, name and size (width × height × depth).

- **Click** a row to pick that cupboard. **Double-click** to open its editor.
- **Drag a row onto a wall** to make another one exactly the same – same size, same settings, same changes. This is the quickest way to repeat a cupboard you have already set up.
- **Right-click** a row (or a cupboard in the plan or elevation) for the menu:
 -  **Copy it – another one next to it**
 -  **Open the cupboard editor**
 -  **Delete it**

Sizing a cupboard

Drag the arrows

When a cupboard is picked it shows small arrow handles.

- **Plan:** an arrow at each end changes the width, the arrow at the front changes the depth.
- **Elevation:** arrows change the width and the height.

- 1 Pick the cupboard.
- 2 Drag an arrow. The message line shows the new size as you go.
- 3 Let go. The cupboard is rebuilt at the new size.

Width drags stop at the next cupboard or the wall end so nothing overlaps (hold **Alt** to go past). The arrows are hidden while a cupboard is turned.

Tip Why the inside stays right: when a cupboard is resized, its layout follows your rules – equal drawers stay equal, a fixed top drawer stays its height, a microwave or oven space keeps its size. You do not have to redo the doors and shelves after resizing.

Type the size

- 1 Pick the cupboard. In the editor panel, find **Size (mm)**.
- 2 Type a new **Width, Height** or **Depth** and press **Enter** or **Tab**.
- 3 If the cupboard is on a wall and the width changed, you are asked **Which side moves?**
 - ◀ **Grow to the left** – the right side stays put.
 - ◀ **Both sides** ▶ – the middle stays put.
 - **Grow to the right** ▶ – the left side stays put.(The words say **Shrink** when it is getting smaller.)
- 4 Tick **Always do this** if you always want the same answer. You can change it later in ⚙ **Preferences > Changing a width**.

The **Height** of base and tall cupboards includes the kick (toe). Wall cupboards have no kick.

Fill a gap, butt up

In the editor panel's **Placement** card:

- ↔ **Fill the gap** – makes the cupboard exactly as wide as the space it is in (between its neighbours or the wall ends).
- ◀ **Butt left** / **Butt right** ▶ – slides it until it touches the next cupboard or the wall end.

Standard sizes

New cupboards come in at your shop's standard heights and depths – base, wall, tall, vanity, over-fridge and rangehood cupboards each have their own. Set them once on the **Construction** page, tab **Standard sizes**. A room can have its own heights too (Room panel). The library gives each item a sensible starting width (e.g. 450 for a 1-door, 800 for a pair, 600 for drawers); change it after placing.

The editor panel under the view

When you click a cupboard, its main details show in the **Editor** panel under the view. It is made of cards that sit side by side.

- Drag the **Editor** bar up or down to make the panel taller or shorter. Double-click the bar to close or open it.
- ⇌ moves the panel from under the view to the right side, and back.
- ▼ closes it. **Editor** ▶ (top right of the page tabs) opens it again.

The cards are:

- **Open the cupboard editor** – the button at the top. Opens the full editor (same as double-clicking).
- **Cabinet** – the **Name**. Change it to whatever suits the job ("Sink", "Pots & pans").
- **Size** – width, height, depth. Any warnings show under it in orange, e.g. an appliance space that is too small.
- **Parts, Ends, Hinges, Next to it** – described under [the Cupboard tab](#).
- **Placement** – where it is in the room (below).
- **Inserts** – bought-in bins, cutlery trays and so on.
- **This cabinet's settings** – the settings you change most (see below), with **All settings**, **Duplicate**, **Delete** and **Save to library....**

- **Face** and **Inside** drawings, the **Cut list** of its boards.

Placement

Box	What it does
Room	Which room it is in. (Not in a room) takes it off the walls.
Wall / Side of the wall	Which wall, and Front or Back of it.
Gap on the left / Gap on the right	The space between this cupboard and the next thing (named beside the box). Type a number to move it so the gap is exactly that.
Move	Type a distance, then ◀ or ▶ to nudge it that far.
From the left end	Its distance from the start of the wall.
Off the floor	Height of its bottom above the floor. Blank = standard (wall cupboards sit at your top-of-wall-cupboards height). Use it for a raised dishwasher cupboard, a wall cupboard over a bench, and so on.
Turned	↻ 90° , ↺ 90° , or type any angle.
Out from the wall	Pulls it away from the wall (0 = against it).
Benchtop	Base cupboards only. Untick on this cupboard and the run's benchtop stops at this cupboard.

This cabinet's settings

Every cupboard follows the shop's settings, then the job's, then the room's. Here you can change one setting for *this cupboard only*. A blank box means "use the room / job / shop value", which is shown faded in the box.

The short list holds the ones you change most: **Toe / kick height**, **Carcass board**, **Door / front board**, **Drawer runners**, **Top reveal (base)**, **Gap between drawers**, **Back style**, **Base top**, **Rail style**, **Top rail width** and **Back rail**. **All settings** shows every setting, sorted into tabs.

Tip Toe height per cupboard: to raise one cupboard on a higher kick (e.g. a laundry cupboard over a step), type the new height in **Toe / kick height** for that cupboard only. The rest of the room is not touched.

- **Duplicate** – another one the same, right beside it.
- **Delete** – removes it (asks first).
- **Save to library...** – see [My library](#).

The cupboard editor window

Double-click a cupboard anywhere (plan, elevation, 3D or the In Room list), or press **Open the cupboard editor**. You get the full editor: a big 3D view of the cupboard and every setting in tabs.

In the desktop program it opens in **its own window**, which you can drag anywhere – even onto a second screen. Changes show in the main window as you make them. If you would rather have it open over the main screen, set ⚙ **Preferences > Double-click a cupboard to Opens the big editor in this window**.

Along the top bar:

- The cupboard's number, name and size.
- ◀ / ▶ – step to the cupboard before / after in this room without closing.
- 📁 **Save to library...**
- **Close** ✕ (or press **Esc**).

The tick boxes on the 3D view (**Fronts, Drawer boxes, Edges, Drilling**) let you hide the doors to see inside, show the drawer boxes, the edge banding and every hole and hinge.

The tabs are **Cupboard, Face, Inside, Shape** (shaped cupboards only), **Hardware, Parts** and **Construction & settings**. Panels, fillers and appliance spaces show fewer tabs, because they have no doors or inside.

Cupboard tab

The name, size, placement and inserts (as in the editor panel), plus:

Parts – tick boxes for **Top, Bottom, Left end, Right end, Back** and **Fronts**. Untick one to leave that part out, e.g. no back on a cupboard going against a finished wall, or no left end where it shares an end with the next cupboard.

Ends – for each end:

- **Carcass board (white HMR) or Door colour (finished end)**. A finished end is made from the door board, so an exposed end matches the doors.
- **Left / Right** buttons – each adds a separate end panel right beside the cupboard, in one click (it shows in the **Parts** tab as an attached panel):
 - **+ Panel** – cupboard height (sits on the kick, flush with the doors)
 - **+ Panel to floor** – down to the floor, covering the kick
 - **+ End only** – carcass size
 - **+ Door panel** – looks like a door, with the same routing.

Once added, you can change its style from the same row, or take it away with **✕ Remove**. The panel is a cupboard of its own in the list (so it gets its own cut list line) but it shows with this cupboard in the editor.

Tip Finished end or end panel? A finished end changes the cupboard's own end board to the door colour – cheap and quick. An end panel is an extra board standing outside the end – thicker look, can go to the floor, and hides the kick. The run grows by the panel thickness.

Hinges – for each door: **Left, Right, Lift-up (top) or Flap-down (bottom)**. **Door hardware: Hinged (standard) or Pocket** (the doors open, then slide back into pockets in the sides). **Hinge: Automatic** picks a standard or blind-corner hinge; or choose a hinge type from your hinge system.

You never pick full, half or inset hinges by hand – each door gets the right version of its hinge by itself: **inset** doors get the inset hinge, and two doors hung on the **same (single) partition** get the half overlay hinge. See [Full, half and inset](#) in the Hardware chapter.

Careful Pocket doors wider than the cupboard is deep will not slide all the way in. The editor warns you.

Next to it – what is on each side: **Nothing, Cabinet, End panel** or **Filler**. This sets how far the doors stay in from the edge (side reveals). Leave **From the room layout** ticked and the program works it out from the room. Untick it to set it yourself.

Layer – if your job has its own layers, put the cupboard on one.

Inserts – bins, spice racks, cutlery trays and inner drawers are on the **Inside** tab (see below).

Face tab – doors, drawers and panels

The Face tab is a drawing of the front of the cupboard. Each area is a *section*, numbered from the top left. Sizes on the drawing are front sizes, line to line.

The palette on the left: **Door, Pair, Sliding, Drawer, Panel, Open, Split across, Split up**.

- **Drag** a piece onto a section – it goes exactly where you drop it. Dropping **Split across** two-thirds up a door makes the line two-thirds up.
- Or **click** a section to pick it, then click a piece.
- **Drag a line** between two sections to move it.
- **Click a size** on the drawing and type the size you want.

The **side panel** (right) shows what you picked.

For a **section**:

- **Front** – **Door, Pair of doors, Sliding doors, Roller door, Drawer, Fixed panel (false front), Open, Nothing.**
- **Hinge** (doors) – Left, Right, Lift-up (top), Flap-down (bottom).
- **Face** – **Standard, Door style (shaker / routed)** or **Plain panel**. Use Plain panel for a fixed panel that must not be routed, e.g. the blind part of a corner unit (that is the standard there).
- **Doors** (sliding) – **2 doors, 3 doors** or **4 doors**.
- **Height / Width** – type the section size.
- Split it: choose a number (2 to 6), **fronts one above the other** or **fronts side by side**, then **Make**. Three fronts one above the other = three equal drawers in one step.
- **Join with its neighbour** – takes the line away and makes the two sections one.

For a **line**: **Space below** (or **Space left**), **When resized** and **Take this line out**.

At the bottom: **One front** (start again with one front) and **Equal door widths** (all doors side by side the same width).

Doors side by side set to **Equal** really are equal: a 1200 cupboard with three doors gives three doors of about 397, the outer two reaching over the ends to the side reveals. Older jobs fix themselves when you open them.

Drawer heights: equal, or a fixed top drawer

How sections share out the height when the cupboard is resized is set on each line with **When resized**:

- **Equal** – all the fronts stay the same size. Use this for equal drawer banks.
- **In proportion** – each keeps its share.
- **Keep below / left** – the lower (or left) section keeps its size; the other takes the change.
- **Keep above / right** – the upper (or right) section keeps its size. Use this to hold a top drawer at a fixed height.

The library's (**Small Top**) drawer cupboards already have a fixed top drawer with equal drawers under it. The top drawer height comes from the **Top drawer height** setting (180 unless you change it) – change it for one cupboard on the **Construction & settings > Fronts** tab, or for the whole shop on the **Construction** page.

Tip When you drag a line by hand, it locks to the side you set, so your size is kept when the cupboard is resized later.

Sliding doors, lift-ups, roller doors and finger-pull

- **Sliding doors** – put **Sliding** on a section and choose 2, 3 or 4 doors. Whether they run inset in grooves (cupboards) or in front on a track (robes) is set by the sliding door settings (**Construction** page, **Drawers & lift-ups** tab: **Sliding wardrobe doors** and **Sliding cupboard doors**).
- **Lift-up / flap-down** – set a door's hinge to **Lift-up (top)** or **Flap-down (bottom)**. The stay holes are drilled in both ends. The stay type comes from the lift system setting; the library has ready-made lift-up cupboards for the common stay types.
- **Roller door** – a bought roller door with a head panel and track grooves cut up each end.

- **Finger-pull** – handle-less fronts with a deeper reveal or rails to grip. Easiest is to start from a **Finger-pull, C-channel** or **L-shape finger-pull** cupboard in the library. The rail and bevel settings are under **Finger-pull rails** (Construction page, **Drawers & lift-ups**).

Inside tab – shelves and dividers

The Inside tab is the same kind of drawing, for the inside of the case. Sizes are the clear spaces inside. The fronts show faintly behind so you can line shelves up with them, and drawer boxes show as boxes.

Palette: **Adj. shelf, Fixed shelf, Partition, Drawer rail, Hanging rail, Wine rack**. Drag onto a space, or pick a space and click.

- **Adjustable shelf** – sits on shelf pins; the pin holes are drilled in the ends.
- **Fixed shelf** – screwed in, a real part of the case.
- **Partition** – an upright divider.
- **Drawer rail** – a rail between drawers.

Pick a line to change its **Board** (**Adjustable shelf, Fixed shelf, Partition, Drawer rail, No board**), tick **no holes for this shelf** (no pin holes for that one shelf), set its **Space below** and how it moves **When resized**. Pick a space to set its size, add a **Hanging rail**, or split it into 2 to 6 spaces with the board you choose between them.

- **Empty the inside** – takes everything out.
- **Inside from the fronts** – fills the inside to match the face: shelves behind doors, nothing behind drawers, partitions between drawers side by side. A great start after you have changed the face.

Tip Wall cupboards get their number of shelves automatically by height until you change the inside yourself.

Shape tab

Only for shaped cupboards (corners, angled ends, curved counters). See [Shaped cupboards](#).

Hardware tab

Everything bought for this cupboard, and the place to change drawer runners one drawer at a time.

- **Drawer table** – one row per drawer: **Runner system** (blank = the cupboard's setting), **Type** (blank = the tallest that fits), **Length** (blank = the longest that fits) and the **Box** size it makes. Inner drawers come from inserts and are changed on the Cupboard tab.
- **Doors** – the hinge for each door and the push to open choice for this cupboard: as the job, **Yes – these doors (unsprung hinges)**, or **No**.
- **The hardware list** – hinges with plates, lift-up stay sets, drawer runner sets, handles by type, inserts, shelf pins and adjustable legs, with quantities.

Parts tab

The **Cut list** of this cupboard – every board with its material, length, width and thickness. Boards you have changed have a coloured dot.

- **Change one board's material** – use the drop-down in the **Material** column. Example: the carcass is white, but the right end shows, so pick the right end and choose 18 mm woodgrain. Only that board changes.
- **Click a row** to show that board in the 3D view and open its card underneath: **Material, Length, Width, Move across (X), Move back (Y), Move up (Z), Shape** and **Edge banding** (L1, L2 = long sides, W1, W2 = ends; mm of banding, 0 = none). Blank always means "worked out from the cupboard".
- **Remove this board** leaves it out altogether. It is listed under **Removed boards** with **Put back**.

- **Back to standard** throws away the changes on that board.
- **Double-click** a row, or press , to open the [board editor](#).

Tip A length or width you type stays when the cupboard is resized. If you want the board to follow the cupboard again, clear the box.

Single or double partitions

A partition with a door on either side, or with drawers on both sides, can be one board or **two boards back to back**:

- **Partitions between doors – Double** (the standard): each door hangs on its own board, so every door takes a normal full overlay hinge. **Single**: both doors hang on one board with half overlay hinges, and their plate holes that line up are drilled right through once.
- **Partitions between drawers – Double** (the standard): each drawer gets its own runner boards, so side-by-side drawers work like separate drawer boxes. **Single**: both drawers' runners go on one board.

A partition behind a joint between two fronts is always **centred on the joint** (single or double), unless you have locked it where it is. Both settings are in **Override build...** (tab **Rails & joints**) for one cupboard, or on the Construction page for the shop. Side-by-side drawers with no partition behind them get dividers the same way (**Divider between side-by-side drawers**).

Inserts on the Inside tab

Under the Inside drawing is the **Inserts** card – bought-in fittings such as bins, spice racks, cutlery trays, pantry frames and inner drawers.

- 1 Open the list. The ones that suit this cupboard's width, height and depth are at the top under **Fits**; the rest are under **Other sizes**.
- 2 Pick one and press **+ Add insert**. **X** takes it out.
- 3 The insert is drawn in the Inside drawing (bins show their buckets) and in 3D, and goes on the hardware list and the quote.

Inserts show a short name – for example *Concelo 2x13L bin door pull (white)* – with the supplier and code beside it. Point at it for the supplier's full name.

Bin cupboards: how each bin is held

A bin pull-out has one big front. How the cupboard is built depends on the bin you pick on the Inside tab:

Bin	How it is held	What the program builds
Krome bins (and a bin cupboard with no bin picked)	The bin's plastic top sits on Krome drawer runners; the buckets drop through it. Its tabs are screwed to the drawer back and front on site.	Krome runners, the lowest box, a Bin Runner Back, no bottom . Runner holes in the ends. No holes for the bin's tabs.
Concelo, Hideaway and other bins on their own frame	The bin comes with its own runner frame, screwed into the cupboard.	No drawer box. A full top for the frame (setting Bins on their own frame: full top).
Concelo entro , bins for LEGRABOX / MERIVOBX / Antaro	Sits in a Blum drawer.	A drawer on that Blum runner.

Each bin from the supplier's catalogue knows the smallest cupboard it fits, so the **Fits** list is right.

Construction & settings tab

Every setting for this cupboard, sorted into tabs: **How it's built**, **Main**, **Sizes**, **Carcass**, **Fronts**, **Kick & benchtop**, **Edges**, **Machining**, **CNC & optimiser**, **Prices** and **Other**. Point at a setting's name to see what it does. Blank = the room / job / shop value (shown faded). Anything you type here applies to this cupboard only, and the layout is refitted straight away.

Use it for things like a different back style, no shelf holes, a different door style, a different kick type, or a different **Top drawer height** on one cupboard.

Override build... – change how one cupboard is built

The cupboard's settings card shows only the main settings for its kind. Everything else about how it is built is behind the **Override build...** button. The button shows how many settings you have changed on this cupboard, e.g. **Override build... (3 changed)**.

- 1 Click **Override build...**. A window opens with every way the cupboard is built, sorted into tabs.
- 2 Pick a tab, or type in **Find** (for example *kick*, *dado*, *shelf*).
- 3 Change what you need. The cupboard is rebuilt straight away. Blank = the room / job / shop value.
- 4 **Changed on this cupboard** lists your changes; **Clear all** puts them all back.

Tab	What's in it (examples)
Backs & ends	Which cupboards get a back, how the back fits at each edge (ends, bottom, top: over, inside, or in a groove), back recess, back at a finished end, back stopping under the top, back grooves stopping short, partitions and fixed shelves into the back, short hidden ends, bottom under / top over hidden ends, skins on finished ends, open-unit end rails, finished backs for islands (plant-on, flush, groove, mitred).
Rails & joints	Wall / tall / base tops (full, rails, rails to the partitions, none), rail widths, hanging rails, rail tongues and dados, blind rail dados, carcass fasteners (screws, confirmats, dowels, cams), fastener positions, partitions between doors / drawers (single or double), dado depths and clearances.
Shelves	Shelf hole patterns and line boring, shelves snapped to the holes, nosings, corner shelf radius, pull-out shelves shorter, shelf heights for base and wall cupboards, closest shelf spacing.
Drawers	Drawer rails in the gaps, the rail under the top drawer, back rails, dividers between side-by-side drawers, drawer front heights from the top.
Doors & pulls	Overlay or inset doors, inset gap and setback, aluminium finger-pull channels, sloped doors, V-grooves, routed finger pulls.
Sliding & pocket, Robes	Sliding and pocket door hardware; robe rail notches, robe partition holes, hanging rod drop.
Panels & bulkheads	Bulkhead face and L frame, skirting notches, end panel corner radius, under panel LED channel, widths snapping to a step.
Kick, Edges, Machining ...	Back kicks for islands, kick returns, toe built into the ends, ladder layouts; which edges are banded for each kind of board; hand-added hole size.

Tip Wall and tall cupboards also get their own versions of many base settings, labelled – *wall* or – *tall*. Blank means "as base cupboards".

Corner units

All corner units are in the library under **Base > Corners** (wall and tall corners are there too). Each comes as a left and right hand – but you do not need to choose: drop it near the wall end and it picks the right hand and goes into the

corner.

Type	What it is	When to use
Blind corner (Blind Left / Blind Right)	A normal box with a door on one side and a fixed plain panel on the blind side, which runs into the corner behind the other run.	Simple, cheap, easy to make. The blind panel is plain (not routed) as standard.
Corner Bifold (corner on the left / right)	An L-shaped unit with bi-fold doors that open both sides of the corner.	Full access into the corner. Base, wall and tall pantry versions.
Corner 45	A unit with a 45° door across the corner.	A neat diagonal face; base, wall and tall pantry versions, plus Base Corner 45 Drawers .

Bi-fold and 45° corners are *shaped* cupboards: you can change both arms on the **Shape** tab (**Width, Depth, Side width, Side depth**, corner left / right). The bi-fold base corners use rails on edge with a long front rail through to the back, as most shops build them. The **45° base corners** have their front rail lying **flat**, with both ends cut to the angle of the ends – cut from a strip of board, so it nests well.

45° corner drawers

The drawer boxes run square to the 45° front on runner panels, each touching the end at the front. Where an end meets the angled front there is a small triangle; it is closed with a **fill** each side in the door board, cut at 45° to a point. The fills are made on the panel saw, so on the cut list they are two straight strips **80 wide** × the height, marked to cut on the saw (not the CNC). In 3D they show as the triangle. Settings: **45 corner drawers: fills each side** and **45 corner fill strip width**.

Careful 45° corner drawers need room for drawer boxes. If the unit is too small (under about 800) you get a warning and no boxes are made – make it bigger.

Shaped cupboards

Shaped cupboards have an outline you can change: angled ends, curved fronts, corners, or any shape you draw. You find them under **Base > Shaped** (and open / angled ends in the Wall and Tall headings). **Base Shaped (edit the outline)** starts as a plain box for you to shape.

The Shape tab

A top view of the cupboard. The wall is the dashed line at the back. Each edge is coloured by what it is.

- 1 Pick a starting shape from the drop-down: **Rectangle, L corner (bifold), 45° corner, Angled end** or **Curved front**.
- 2 Type its sizes in the boxes beside it: **Width, Depth**, and as needed **Side width, Side depth, Cut** (angled end) or **Curve** (curved front), and **corner left / corner right**.
- 3 Or drag the points on the drawing (they snap to 5 mm), or type **X** and **Y** in the points table (X along the wall, Y from the front to the wall). + adds a point in the middle of an edge, X removes one. Changing points by hand makes the shape **Custom**.
- 4 Click an edge on the drawing to pick it, then set **This edge is**:
 - **Back** – against the wall.
 - **End** – a carcass side. Choose **End board** (carcass, or finished in the door colour) and **Panel on the end** (**None, Plain panel, Door panel (door style)**).

- **Doors** – gets doors (no wider than your largest door width; two door edges meeting in an inside corner get bi-fold doors).
- **Drawers** – 1 to 5 drawers on runner panels square to that front.
- **Panel** – a fixed front panel.
- **Open** – no board.

5 **Curve** in the points table bows an edge out (mm at the middle, 0 = straight) – for round counters.

6 Set the **Shelves** (number, or blank for automatic; **fixed** or **adjustable (pin holes)**) and which way **Single doors hinge**.

⇌ **Front** ↔ **back** swaps every door edge with every back edge – handy to turn a unit round for the back of an island.

Tip The benchtop follows the shaped outline automatically and overhangs the open and door edges.

The board editor – changing one board

Sometimes one board needs something special: a notch for a pipe, a curved end, an extra hole, a groove for a light, a different tool. The board editor lets you change *one board* of one cupboard without touching anything else.

Open it by double-clicking a board in the cut list (or pressing , or **Open the board editor** on the board's card.

Top bar: ◀ / ▶ step to the board before / after, the board's name, size and material, **Remove this board**, **Back to standard** (throws away every change on this board) and **Close**.

Tabs: **Size & position**, **Material & edges**, **Joints** (boards that meet others at their ends), **Shape**, **Machining**, **3D**.

Joints: dado or screwed, end by end

The **Joints** tab lists each end of the board (left / right, front / back or top / bottom), the board it meets and how it meets it now (butted and screwed, or in a dado and how deep). Pick for each end:

- **As built** – as the cupboard makes it.
- **Screwed** – the board butts up to the other one and is screwed through it (screw holes in the other board).
- **Dado** – the board goes into a groove in the other one (nothing screwed through it: a show end, a panel to the floor). The board is made longer by the **Dado depth** (blank = the setting) and the groove is cut.

So a microwave box can sit in dados in its long panel to the floor and be screwed to the short end – or any other way round. The board's length, the groove and the screw holes all follow.

Dado settings (the Dados tab)

Under **Construction & settings** > **Dados** (and in Shop / Job settings), as the old program has them:

- **Dado depth: top / bottom / fixed shelves into ends, partitions** into the bottom and top, and **drawer stretchers** – each with its own **wall** and **tall** value (blank = as the base one). 0 = butted and screwed.
- **Dado back** groove depths in the ends, top and bottom (blank = Dado depth), **setback** (0 = the back flush with the back edges of the ends – the groove is a rebate) and **clearance**.
- **Blind dado front setback** (30 – clear of the edge bander) and **rear setback** (20): the grooves stop that far from the front / back edges and the board going in is notched to suit.
- **Tenon thickness** (8): the board going in is rebated on both faces down to a tongue this thick and the groove is only that wide (+ the clearance); 0 = the full board goes in. **Tenon length minus** (10): the tenon is that much shorter than its stopped groove (half each end), so it clears the round ends the cutter leaves.

Open units in the door board

Open units (base / wall / tall open, the open microwave, open angled ends) are made in the **door board** – ends, top, bottom, shelves and back – so they are the same colour inside and out; the kick frame stays carcass board. Any cupboard can be switched with **Built in the door board (open unit)** under **Parts** in the cupboard editor.

Size & position

Length, Width, Move across (X), Move back (Y), Move up (Z). Blank = worked out from the cupboard. The note shows the finished size and the cut size (before edging).

Material & edges

A different **Material** for this board, and its **Edge banding** (L1, L2 = the long sides, W1, W2 = the ends; thickness in mm, 0 = none, blank = standard).

Shape

A drawing board for the board's outline. **Wheel** = zoom, drag on empty space or right-drag = move the view, ↗ = fit the board in the view.

Tools on the left:

- ↗ Select & drag – drag points and lines. Click a line to select it; a ◆ handle shows in its middle – drag it to curve the line (an arc). Double-click a line to add a point.
- + Add a point – click on a line.
- ✕ Delete a point – click it (or select it and press **Delete**).

In the side panel:

- **Snap to** – off, 0.5, 1, 5 or 10 mm. Points also snap to the board edges and the other points.
- **Rectangle** – back to a plain rectangle.
- A picked **point: X, Y, Delete point, Corner radius** (type it, or click 3, 10, 25, 50 or 100) – the radius stays a radius when you drag the point; **Round as an arc** (turns the corner into two points and an arc you can edit); **Cut this corner** (a straight chamfer of the size in **Cut**).
- A picked **line: Curve** (+ bows out, – bows in), **Straight, Add a point in the middle**.
- **Points** table – X, Y, Radius and Curve to next for every point, all typeable.

The arrow keys nudge the picked point (hold **Shift** for 10 times further). Points near the far ends move with the board when the cupboard is resized, so a notch at the top stays at the top.

Tip Example – a notch for a pipe in an end: add two points on the back line, drag them in to the notch width, then add points and drag them in to the notch depth. Give the inside corners a small radius so the cutter can make them.

Machining

Every hole, groove and pocket on the board – the standard ones the program makes (shelf pins, hinge cups and plates, runner holes, screws, back grooves, handles ...) and your own.

- **Side: Front** (face up on the CNC) or **Back** (face down) – which side of the board you are looking at and working on. The number on each button is how many holes, grooves and pockets are on that side. Work on the other side shows dashed and faint.
- Tools: ↗ select & drag, ● Hole (click where it goes), ... Line bore (drag a row of holes), — Groove (drag along its centre line), □ Pocket (drag a rectangle), ⊞ Rebate (click near an edge – a recess the whole length of that edge).

- **New ...** settings show only for the tool you have picked: a hole has **Hole Ø**, **Depth** (or **through**) and **Tool**; a line bore adds the **pitch**; a groove its **width**; a pocket its **corner radius**; a rebate its **width**. With ↗ picked, only what is on the board is listed.
- A picked item shows its sizes and position to type, its **Face**, **through**, its **Tool** and – for pockets – **Square**, **Rounded** or **Round ends**.
- **On this board** – the full list, with the **Side** each one is on (front, back or through). Untick **On** to switch a standard one off. Your own have ✕ to delete.

Tool per job: leave **Tool** on **standard (by size)** and the CNC picks a tool from your tool list. Choose a tool number when an operation must use a particular cutter or drill (e.g. the rebate with a bigger cutter).

Tip Changing a *standard* hole (e.g. moving it) switches the standard one off and puts your own copy in its place. Switching it back on undoes that. **Shift**-drag moves straight across or straight up only. Arrow keys nudge.

3D

The board with every hole, groove and pocket really cut, as the CNC will cut it. **Look at the top face**, **Look at the underside**, **Look along the edge**. Drag = turn, wheel = zoom, right-drag = move.

Careful Board changes are kept on *this cupboard only*. Another cupboard of the same type does not get them – unless you copy this cupboard, or save it to your library and use it from there.

Panels, fillers and under panels

Tip Fillers. A **filler** is a strip of the door board on flat, flush with the doors, where a run meets a wall. For more fill to scribe, use the **Face Filler + HMR Backer** (Fillers in the library): the face in the door board, flush with the doors, with a white HMR backer the same size doubled up right behind it. Fillers are banded on one long edge and both short edges (the scribe edge against the wall is left plain) – none on painted boards, and none on the hidden backer. A filler narrower than the machines cut (min cut width, 80 mm) is listed at its size and cut at 80 to rip down. Edging rule: Construction, *edge_rule_fillers*.

Panels and fillers are single boards placed like cupboards. When you pick one, the editor shows cards for that kind of panel.

- **End panel** – its style (**Cupboard height (sits on the kick)**, **flush with doors**, **To the floor, flush with doors**, **End only (carcass size)**, **Door panel (door height, flush with the doors)**), a **Sloped top – drops at the front**, and a **Radius on the top front corner**.
- **Cut-outs** (end panels, under panels, bulkheads, loose panels, bar backs) – holes right through the panel for a rangehood, downlights, vents or pipes. + **Rectangle** or + **Round (e.g. downlight 70)**, then type where the centre is and the size.
- **Under panel** – see the Benchtops chapter, *Under panels*.

Tip An end panel placed from the library keeps the board thickness it was placed with. To add one right beside a cupboard, the quickest way is the + **Panel** / + **Panel to floor** buttons in the cupboard's **Ends** card.

Fridge space

A fridge space is built from the **Fridge Space** appliance, a **Tall End Panel Fridge** each side and a **Wall Over Fridge** cupboard. Their standard sizes come from the Room tab:

- **Fridge panels** (depth) – 600 as standard.

- **Over-fridge cabs from the floor** – 1850: the cupboard's bottom is that high off the floor and it goes up to the top of the wall cupboards. 0 = the standard over-fridge height.
- **Over-fridge cabs** (depth) – blank = as deep as the fridge panels, so its front is flush with theirs. Set the panels deeper to have them stand past the cupboard.
- **Fridge** side clearance – 20 each side.

My library – saving your own cupboards

Once you have a cupboard just how you like it – layout, settings, board changes and machining – save it. Next time it is one drag away, already done.

Save a cupboard

- 1 Pick the cupboard and press **Save to library...** (editor panel), or  **Save to library...** in the cupboard editor.
- 2 **Name** – what it will be called in the list.
- 3 **Library** – which of your libraries it goes in (**My cabinets** to start with), or **New library...** and type a name.
- 4 **Group** – the folder inside that library (**Base, Wall, Tall, Robe, Vanity, Bench, Panels, Corners**, or type your own).
- 5 Press **Save as new**.

If the cupboard came from one of your own libraries, you also get **Overwrite "name"** – that updates the saved one instead of adding another.

Named libraries

Keep your cupboards in as many libraries as you like, e.g. "Smith kitchens", "Laundries", "My robes".

- **+ Library** (beside the search box) – a new empty library.
-  beside a library's name – rename it.
-  beside a library's name – delete the library *and every cupboard in it* (it asks first).
-  on a cupboard row – remove just that cupboard from your library.

Careful Deleting a library cannot be undone with Ctrl+Z. Cupboards already placed in jobs are not affected.

Make a NEW cupboard type

- 1 Drag the closest library cupboard onto a wall (e.g. **Base 1 Door**, or **Base Shaped (edit the outline)** for an odd shape).
- 2 Double-click it to open the cupboard editor.
- 3 Set its **Size** to your usual starting size.
- 4 On the **Face** tab, lay out the doors and drawers. On the **Inside** tab, the shelves and partitions (or press **Inside from the fronts**).
- 5 Change any settings on **Construction & settings** (e.g. no back, finger-pull, a different runner).
- 6 If needed, change single boards on **Boards & materials** and in the board editor.
- 7 Give it a clear **Name** on the **Cupboard** tab.
- 8 Press  **Save to library...**, pick your library and group, and **Save as new**.
- 9 Click its  to put it in Favourites if you will use it often.

Test it: drag it onto a wall and resize it a few times to check the layout grows and shrinks the way you want. If not, set **When resized** on the lines in the Face and Inside tabs and save again with **Overwrite**.

Change an existing cupboard type

- **One of yours:** place it, change it, then **Save to library...** > **Overwrite**. New cupboards from it get the changes. Ones already in jobs stay as they were.
- **A built-in one:** the built-in library cannot be overwritten (so you always have a clean copy). Place it, change it, and **Save as new** into your own library – give it the same name if you like. Then ★ your version and take the ★ off the built-in one.

Tip If what you want to change is how you build *every* cupboard (back style, shelf holes, door gaps, kick type...), do not save a new cupboard type – change it once on the **Construction** page and every cupboard follows.

9 Benchtops, splashbacks and under panels

CabCarveCNC puts a benchtop on every run of base cupboards for you, as you build. This chapter shows how to change those benchtops – shape, cut-outs, ends, corners, edges and looks – how to add splashbacks, how to send a 1:1 template to the stonemason, and how to set up the under panels below your wall cupboards.

Tip Why automatic? The benchtop is worked out from the cupboards under it. Move a cupboard, add one, or make the run longer and the benchtop follows – no redrawing. You only step in to change what is different about *this* job.

Automatic benchtops

As soon as base cupboards stand side by side on a wall, they get one benchtop across them.

- The top comes forward past the door faces by the **front overhang** (20 mm as standard).
- At a **free end** – one with nothing beside it – it runs past the end by the **end overhang** (20 mm as standard). At a wall, a tall cupboard or another cupboard it stops flush.
- Two runs on the same wall with only a small gap between them get one top across the gap.
- Runs longer than the **longest benchtop piece** (3600 mm as standard) are made in pieces with joins.
- Runs meeting in a corner get a butt joint, a mitre, or are made as one L or U shaped piece – your choice (see [Corners](#)).
- A freestanding cooker breaks the benchtop – the top stops either side of it.
- Shaped cupboards (45° corners, L corners, angled ends) are part of the run's benchtop: the top follows their outline and joins the tops beside them. On a 45° corner the diagonal front comes out a little less than 20 mm so it lines up with the front corners of the tops either side.
- On an **island** (or an invisible wall) cupboards back to back get **one top across both sides**, with both sides' cut-outs on it. The island's ends are free ends (end overhang), and there is no upstand down the middle.
- Tops that meet in the corners count as **one benchtop** – in the editor you can change the whole top at once, or one wall's part (see [Whole top or one wall](#)).

The Benchtops tick box

On the view toolbar (over the plan) is **Benchtops**.

- Ticked – every run of base cupboards in this room gets a benchtop.
- Unticked – no benchtops in this room (e.g. a laundry with a bought top, or a room of robes).

It is a *room* setting, so each room can be different. The **Benchtop editor** button beside it turns benchtops back on if they were off, and opens the next benchtop.

No top on one cupboard

To stop the benchtop at one base cupboard (e.g. a cupboard that gets its own timber top), pick the cupboard and untick **Benchtop > on this cupboard** in its **Placement** card. To remove one whole benchtop, tick **No benchtop here** in the benchtop panel (below). Ticking the cupboard's box again brings the benchtop back.

Where the standard values come from

The standard benchtop for new jobs is set on the **Construction** page, tab **Benchtops**: the type, thickness, front and end overhang, longest piece, corner join, edge profile, upstand height, look, splashback panels and the sink cut-out

sizes. A job or a room can change them, and then each benchtop can change them again. A blank box always means "use the value from the level above".

The benchtop panel

Click a benchtop in the plan (they are drawn dashed), or press **Benchtop editor** on the toolbar. The benchtop's details open in the editor panel under the view.

- The heading says which cupboards it sits on and which wall.
- **Benchtop 1, Benchtop 2 ...** – jump between the benchtops in this room.
- **◀ Back to the cupboard** – back to the cupboard editor panel.
- **↗ Benchtop editor** – opens the full benchtop editor (below).
- A small top-view drawing: the wall at the top, joins as red dashed lines, cut-outs in white.

Box	What it does
Type	Stone 20 mm, Stone 40 mm, Laminate 33 mm, Laminate 38 mm. Sets the thickness and the price per metre.
Thickness	Only if it differs from the type's.
Colour	Its colour in 3D and in colour drawings.
Past the doors (front)	The front overhang.
Left end past the cupboard / Right end past the cupboard	How far each end runs past the last cupboard. The automatic value is shown faded. Use a minus number to stop short.
Gap at the wall	A gap between the back of the top and the wall.
Joins from the left	Where the pieces meet, measured from the left end, e.g. <i>1800, 3200</i> . Blank = automatic (equal pieces no longer than the longest piece setting).
Size	Length × depth × thickness and how many pieces.
In a corner	Butt joint, mitred (45°) or one piece (L / U shape).
Look	Plain colour, marble, granite, concrete, terrazzo or timber in 3D.
Splashback panel	Yes / No for this benchtop.

Below is the **Cut-outs** card: + **Sink**, + **Cooktop**, + **Tap hole**, **No benchtop here** and **Back to standard** (throws away every change you made to this benchtop).

The full benchtop editor

Press **↗ Benchtop editor**. It opens over the screen with the benchtop number buttons along the top (to jump to another benchtop), its size, material and cupboards, and **Close**.

The tabs are **Shape**, **Cut-outs**, **Edges & ends**, **Look & splashback**, **Settings** and **3D**.

Whole top or one wall

When the tops meet in the corners (L or U kitchens), the button row starts with **Whole top**, then a number for each wall's part.

- **Whole top** (it opens on this) – changes go to every part at once: type and thickness, material, colour and look, splashback, the front edge profile and overhang, and how the parts join in the corners. The **Shape** and **Cut-outs** tabs are hidden here. A drawing of the whole top from above sits at the top of the tabs, each part numbered – click a part to go to it; the **3D** shows every part together.

- **1, 2, 3 ...** – one wall's part: its shape, cut-outs, ends, waterfalls and upstand returns – and anything you want different on just that part.

Shape

The top view of the benchtop as a drawing board – the same tools as the board editor. The front is the bottom line; the wall is at the top. Cut-outs show dashed. It starts from the top as it really is – with the corner cupboard's arm, a 45° diagonal or an angled end – not a plain rectangle.

- ↗ – drag points and lines. Pick a line and drag its ♦ to curve it.
- + – add a point on a line. ✕ – delete a point.
- Pick a point to give it a **Corner radius** (e.g. a 50 radius on the free front corner), round it as an arc, or cut it at 45°.
- Type exact sizes in the **Points** table.
- **Rectangle** – back to the standard benchtop.

Tip A curved counter: add points along the front, then drag each line's ♦ to bow it (or type **Curve to next** in the table). Use Shape for a curved front on an island, a clipped corner at a walkway, or a step where the wall is out. For simple overhangs, use the boxes on the **Edges & ends** tab instead – they keep following the cupboards.

Cut-outs

Sinks, cooktops, tap holes and other holes in the top.

- **Automatic cut-outs** – with **Cut-outs for the sinks and cooktops placed over this benchtop** ticked, every sink and cooktop you place in the room (Room page, **Sinks & cooktops**) gets its cut-out, and a sink gets a tap hole behind it. A sink cupboard with no sink placed over it still gets a standard sink cut-out centred on it (760 × 440 as standard), 65 mm back from the front.
- An automatic cut-out shows where it came from. **Change** makes it your own, so you can move and size it. **Off** switches that one off. **Turn the switched-off ones back on** brings them back.
- + **Sink** (comes with a tap hole behind), + **Cooktop**, + **Tap hole** (goes behind the last sink), + **Other** – add your own.
- For each cut-out type the **Centre from left**, **From front**, **Width**, **Depth** and **Corner R** (corner radius). ✕ deletes it.
- **Drag** a cut-out on the drawing to move it (it moves in 5 mm steps).
- **Cut-outs that follow the sink.** An undermount oval basin gets an **oval** hole, so no flange shows in the corners. An **apron-front (farmhouse) sink** gets a notch open at the front: the stone stops either side of it and its apron is flush with the benchtop edge. The doors of the cupboard under it start below the apron automatically (no setting to change); the cupboards beside it keep their full doors.

Careful Type the size of the **hole**, not the sink. Use the cut-out size on the sink or cooktop maker's template.

Cut-out warnings

The program checks every cut-out against what a stonemason will accept. A cut-out that breaks a rule is drawn **red** in the plan and in the editor, the reason is listed in orange at the top of the Cut-outs tab, and a red banner pops up when a new problem appears. It warns when a cut-out is:

- closer than 50 mm to an end of the top (tap holes 20 mm);
- past, or too close to, the front (20 mm) or the back (15 mm);
- overlapping, or closer than 50 mm to, another cut-out (tap holes 10 mm – a sink and its own tap hole are fine);
- within 50 mm of a join between pieces.

Fix it by moving the cut-out, moving the join (**Joins from the left**), or changing the cupboard layout. The 50 mm distances are settings, so you can match your stonemason's rules.

Tip Why it matters: stone cracks across thin strips beside cut-outs, and joins through cut-outs cannot be made. Catching it here saves a remade top.

Edges & ends

Three groups:

Front edge

- **Edge profile** – **Arris (small chamfer)**, **Pencil round**, **Bullnose**, **Half bullnose**, **Bevel**, **Square**, **Ogee**.
- **Edge built up to** – a thicker look at the front: a strip mitred or glued under the front edge (e.g. a 20 mm top built up to 40 mm).
- **Past the doors (front)** and **Gap at the wall**.

Ends

- **Left end past the cupboard / Right end past the cupboard**.
- **Waterfall end** – **left / right**. The stone runs from the top down to the floor past the cupboard end. The top is made longer by its thickness at that end, unless you type the end yourself.
- **Waterfall depth** (shows once a waterfall is ticked) – blank = as deep as the top. Type a bigger depth for a deeper waterfall; the extra **comes forward**, or pick **extra goes back**.
- **Waterfall / corner joins** – **Butt joint** (the top sits on the waterfall), **Mitred (45°)** (the waterfall runs up to the top face with a 45° join) or **One piece in the corner (L / U shape)**.
- **In a corner** – where two benchtops meet with a butt joint, choose which one **runs through to the wall** and which **butts against the other**. **automatic** picks for you.

Upstand (stone splashback on the top)

- **Height** and **Thickness** of an upstand along the wall edge of the top, and **Return on the ends** (left / right).

Corners: butt, mitre or one piece

When two benchtops meet in a corner (L or U kitchens):

- **Butt joint** – one top runs through to the wall, the other stops against its front edge. Simple and strong.
- **Mitred (45°)** – both tops are cut on the diagonal from the inside corner to the outside corner. Neater look, more stone work.
- Where a **shaped corner cupboard** (45° or L corner) fills the corner, its top already covers it: butt and mitre both become a straight join where the cupboards meet.
- **One piece** – the L or U is made as one piece with no join. The longest top carries the whole shape and everybody's cut-outs; the others show "one piece with benchtop ..." and have no stone of their own (their splashbacks still count).

Set the standard on the Construction page (**Benchtop joins**), or per benchtop on the **Edges & ends** or **Settings** tab.

Careful A one-piece L or U top must fit through the door and on the truck. Check the overall size with your stonemason before choosing it.

Look & splashback

How the top, the upstand and the splashback panel look in 3D and in colour drawings. A 3D preview at the bottom updates as you change things.

Benchtop

- **Colour, Look** (plain colour, marble, granite, concrete, terrazzo, timber, or a picture from the picture library via , **Pattern colour** (the veins, chips or grain).
- **Picture – Pick a picture** to use a photo or scan of the real stone. **Remove** takes it off.
- **Material name** – the name of the stone or laminate. It goes on the reports for the benchtop maker.

Upstand – Looks like the benchtop, or **its own colour / look**.

Splashback panel on the wall – see [Splashback panels](#).

Tip The look is only for pictures. The **Material name** is what the benchtop maker reads – always fill it in.

Settings

- **Type, Thickness, Material / colour name, Colour in 3D, Joins, Joins from the left.**
- **Price per metre** – for the quote. Blank = the type's price (or your shop's benchtop price).
- **Size** – length × depth × thickness and the number of pieces.
- **No benchtop here, Back to standard.**
- **Stone template (DXF)** – see below.

3D

The benchtop on its own, with real cut-outs, waterfalls and upstands, and the cupboards underneath shown faintly. Drag = turn, wheel = zoom, right-drag = move.

Loose benchtops (no cupboards under them)

A breakfast bar, a curved counter, a round table top, a top on legs – a benchtop with no cupboards. In the library under **Benchtops > Loose tops: Loose Benchtop** (a plain rectangle), **Curved Front Breakfast Bar Top, Bar Top With Round End, Half-round Top** and **Round Table Top 1000**.

- Place it like a cupboard: double-click it or drag it onto a wall. It sits at the base cupboards' height (its underside at the top of the cupboards), so it lines up with the other tops. Change **Off the floor** for a raised bar.
- Its **width × depth** is the top's box. Move it, pull it **Out from the wall** and **Turn** it on the Placement card, or drag it in the plan – a round table in the middle of the room is a round top pulled out from a wall.
- **Shape, edge, colour, cut-outs** ▶ on its Placement card (or click its dashed edge in the plan) opens its benchtop panel; ↗ **Benchtop editor > Shape** makes any outline – drag points, **Curve to next** for a curved front, **Radius** for round corners and ends.
- Along a wall it gets the upstand and splashback panel like any top (the room's settings, or its own on **Look & splashback**). Pulled out from the wall or turned: none.
- It is its own top: not joined to the run tops. A run that ends against a loose top gets no end overhang into it. Add legs or corbels from **Shelves, legs & accessories** to hold it up.
- It is on the benchtop list and the quote like any top (noted *loose top*), and on the stone template.

Stone template (DXF) for the stonemason

Instead of drawing the tops again for the stonemason, send them a drawing file.

- 1 Open the benchtop editor, tab **Settings**, and press **Stone template (DXF)**. (It is also on the **Reports** page, Benchtops.)
- 2 The message line says how many benchtops were saved and where the file is (your CabCarveCNC **Exports** folder, named after the job).
- 3 Email the file to the stonemason, or open it in any CAD program.

The file holds every benchtop piece in the room at 1:1 (real size), front edge down, with its cut-outs, a label on each piece (size, material, corner), and the plan of the room below – on separate layers for the pieces, cut-outs, text, plan and walls.

Tip Make the template after the cut-out warnings are cleared and the material names are filled in.

Splashback panels

A splashback panel is the glass, tiles, stone or other panel on the wall between the benchtop and the wall cupboards. (The **upstand** is different – a strip of stone standing on the back of the top.)

Turn them on

- For every benchtop: set **Splashback panels on the wall** to **Yes** on the Construction page (Benchtops tab), or for the job or room.
- For one benchtop: **Splashback panel** = **Yes** in the benchtop panel, or on the **Look & splashback** tab.

The panel goes from the top (or the upstand) up to the wall cupboards – or 600 mm high where there are none. It runs the whole way along the wall over the benchtops, right into the corners (also where the corner belongs to the other wall's top, and after a mitre). In a corner one panel runs through and the other stops against it, so the lengths on the list are right. It goes round windows: full height beside them, a strip under the sill and over the head.

Splashback settings (Look & splashback tab)

- **Made of** – **Glass (back painted), Tiles, Stone, Laminate, Painted wall, Mirror.**
- **Colour** and **Look** (a pattern, a ready tile layout or a picture).
- For tiles: **Tile layout** (**Brick (half offset), Third offset, Stack (grid), Vertical stack, Herringbone, Hexagon, Mosaic**), **Tile size (wide × high)** in mm (e.g. 300x75, 600x300) and **Grout** colour.
- **Height** – blank = up to the wall cupboards. **Thickness.**
- **Stops short – left / right** – keeps the panel back from the ends.
- **Pieces** – automatic, or your own (from the splashback editor).

The splashback editor

Press  **Splashback editor** to draw the pieces yourself – where the joins go and where the power points are cut out. It shows the wall face with the benchtop, the windows and the wall cupboards.

-  **Automatic again** – throw away your own pieces and go back to the automatic ones.
- **+ Piece, × Piece.**
-  **Join in the picked piece** – cuts the picked piece in two in the middle; then drag the edges to put the join where you want it.
- **+ Double power point, + Single power point, + Switch, + Data / TV point, + Other, × Cut-out.**
- Drag a piece to move it; drag its square handles to size it. Drag cut-outs into place. Edges snap to the windows, the wall cupboards and the benchtop ends.
- Or type the sizes in the tables: each piece's **From the left end, Width, Above the top, Height**; each cut-out's centre and size.

- **Done** closes it.

The pieces and cut-outs are listed on the Benchtops report for the glazier or tiler, and splashbacks are priced by the square metre on the quote (set the price in **Splashback price per m²**).

Tip Glass is usually made in as few pieces as possible; tiles do not need pieces at all, but the area is still worked out for ordering.

Under panels

An under panel is the board fixed under a run of wall cupboards – to hide the cupboard bottoms and the lights, and often to take the rangehood. Find them in the library under **Panels & fillers: Wall Under Panel** plain, **With Rangehood Cut-out**, **With LED Strip**, or **With Rangehood Cut-out & LED Strip**, either flush with the doors or in 16, 18 or 25 mm.

- 1 Drag the under panel onto the wall, under the wall cupboards (or double-click it with that wall chosen).
- 2 It sizes itself to the run of wall cupboards above it: their length, and the depth of the deepest one. Change the cupboards and it follows.
- 3 Pick it to change it in the **Under panel** card.

The Under panel card

- **Size to the wall cupboards above** – ticked, it follows the cupboards. If you size the panel by hand (typing or dragging) this is unticked for you; tick it again to go back.
- **Rangehood cut-out** – a hole for the rangehood. Automatically it is centred on the rangehood cupboard above (or the middle of the panel if there is none), at the standard size (580 × 280, set behind the cupboard front). To place it yourself type **From the left end**, **From the front edge**, **Width** and **Depth**; leave a box blank for the automatic value. **Automatic again** puts it back. A shallow panel gets a shallower cut-out so some board is always left behind it.
- **LED strip along the front** – an LED strip in the panel near the front edge, with **Aluminium channel** and **Light kit (driver + leads)**. These go on the quote (strip by the metre, channels and a kit).
- **Cut list** – long panels are cut in equal pieces no longer than the longest under panel (3600 mm as standard). They are drawn as one. Type **Own piece lengths** (e.g. 1800, 2100) to choose the joins yourself.

The LED channel in an under panel

Every under panel gets the groove (or rebate) for its LED channel cut in the underside on the CNC. As standard it is a groove at the **back, 15 in from the back edge**. The settings are in the **Panels & bulkheads** group (Construction page for the shop, **Override build...** for one panel):

Setting	What it does
Under panel LED channel	Groove, Rebate (open to the edge) or None.
LED channel at	At the back or at the front.
LED channel in from the edge	From that edge to the side of the channel (15). A rebate always runs to the edge.
LED channel	The channel you fit: Nover designer channel – press-fit 17.4 × 7 , accessory-fit 22 × 8 , or Custom – then LED channel width and LED channel depth are the size of the cut.

**LED channel stops
short of the ends**

0 = right through from end to end.

Tip Different channels need different cuts – set the width and depth from the channel maker's drawing once, and every under panel follows.

Careful The program warns you if the rangehood cut-out crosses a join between pieces, or runs past the end or the back of the panel. Move the join with **Own piece lengths**, or move or shrink the cut-out.

For downlights or other holes, use the **Cut-outs** card: + **Round (e.g. downlight 70)** or + **Rectangle**, then type the centre and size.

Tip Rangehoods are all different. The automatic cut-out gets you close; always check the size against the rangehood maker's installation sheet before cutting.

10 Order entry (doors and parts without a room)

Not every job is a kitchen. Sometimes a customer just wants twelve replacement doors, a few drawer fronts, some end panels or a stack of shelves. The **Order entry** page lets you type (or import) those pieces straight in, with no room and no cupboards, and they are cut, nested and machined just like everything else.

When to use Order entry

Use Order entry for anything that is **not part of a cupboard**:

- Replacement or "doors only" orders - doors and drawer fronts made in a door style, with hinge holes and handle holes.
- Loose panels - end panels, fillers, back panels, scribe panels, cut from door board and edged.
- Loose parts - shelves, cleats, spare boards, anything cut from carcass board.
- Parts you drew yourself on the **CAD** tab (signs, curved parts, brackets).
- Extra pieces for a normal kitchen job (a spare shelf, an extra panel) - Order entry rows live in the same job as the room.

Why it matters: a door made here is made exactly the same way as a door on a cupboard - the same door style routing, the same hinge cups, the same handle holes, the same edging rules. You don't have to fake a cupboard just to get a door cut.

Opening the page

- 1 Open (or start) the job the pieces belong to. Order entry rows are saved with the job.
- 2 Click the **Order entry** tab along the top of the window.
- 3 Pick one of the two tabs at the top of the page:
 - **Doors & drawer fronts** - anything made in a door style.
 - **Parts & panels** - plain boards, and CAD parts.The small number on each tab tells you how many rows are on it.

The Doors & drawer fronts tab

Adding doors from the style list

Down the left side is the list of every door style you have (the same styles as on the **Materials** page, **Door styles** tab).

- 1 Type a few letters in the **Find a style...** box to shorten the list (for example "shaker").
- 2 **Click** a style to add a **door** in that style.
- 3 **Shift+click** a style to add a **drawer front** in that style.
- 4 Change the size, quantity and other details in the new row (see [The row fields](#) below).

Tip You can also press + **Door** or + **Drawer front** above the table. These add a row in the job's standard door style (shown as **(job: style name)**), which is handy when the whole order is in the same style as the rest of the job.

A new door starts at 720 high × 450 wide, hinged on the left. A new drawer front starts at 180 × 450. Change them to suit.

Buttons above the table

- **+ Door / + Drawer front** - add a row.
- **Duplicate** - copies every ticked row (tick the box at the start of a row). Great for a pair of doors or a run of the same drawer front.
- **Delete** - removes every ticked row (it asks first).
-  **Import order file...** - bring in a door list from a spreadsheet (see [Importing an order file](#)).
- **Cut list** → - jump to the cut list to see the pieces there.

The tick box in the table heading ticks or unticks every row on the tab at once.

The Parts & panels tab

The left side here offers two kinds of board. Click one to add a row:

- **Panel (door board, edged all round)** - cut from the job's door board, edging on all four edges to start with. Use it for end panels, fillers and anything that shows.
- **Part (carcass board)** - cut from the job's carcass board, no edging to start with. Use it for shelves, cleats and hidden parts.

You can also press **+ Part** or **+ Panel** above the table. **Duplicate**, **Delete**,  **Import order file...** and **Cut list** → work the same as on the doors tab.

A new panel starts at 600 × 450; a new part at 600 × 300.

Tip The material is only a starting point. You can pick any board for any row - for example a panel in a different colour from the doors.

The row fields

Every row is one line in the table. Change a field and the picture at the start of the row redraws straight away, so you can see what you are ordering.

Column	What it does
Tick box	Picks the row for Duplicate or Delete .
Picture	A small drawing of the piece: the door style's frame, dots on the hinge side, and red lines on edged sides (for panels and parts).
Qty	How many of this piece. Always at least 1.
Type	On the doors tab: Door or Drawer front . On the parts tab: Panel or Part (or CAD part for parts from the CAD tab). Changing a door to a drawer front takes the hinge off.
Name	The name on the cut list, labels and sheet prints, e.g. "Pantry door" or "Fridge end panel".
Door style (doors tab)	The style it is made in. (job: ...) means "the job's standard door style" - if you change the job's style later, these rows follow.
Profile 1 (edge) (doors tab)	An edge profile run round the outside of the front, such as a round-over or chamfer. Picks from your shop's edge tool groups.
Profile 2 (groove) (doors tab)	The groove or pattern routed round each panel of the door. Picks from your shop's panel tool groups.

Profile 3 (pocket) (doors tab)	The cutter that cuts out the recessed panel. Picks from your router cutters (3 mm and bigger).
Width	Across the piece (for a door, across the front; hinge side to handle side).
Height / Length	Up the door (doors tab), or the long way along the part (parts tab). Type in your normal units.
Material	The board it is cut from.
Hinge (doors tab)	None, Left, Right, Top (lift up) or Bottom. Hinge cups are drilled on that side. Only doors have a hinge - for drawer fronts the box is greyed out.
Handle (doors tab)	(job standard) = the job's usual handle; No handle holes ; Finger pull ; or pick any handle from your hardware list. The holes are drilled to suit the handle you pick.
Grain (parts tab)	Tick it when the board has a grain that must run along the length. The optimiser will then not turn this part on the sheet.
Edges	Which edges get edge banding (see below). For a CAD part this is an  Open in CAD button instead.
Notes	Anything you want to remember, e.g. "Unit 4 laundry" or "customer to collect". The note goes with the piece.
ID	The row's number (N1, N2 ...). Use it when talking about a row on the phone or on paper.

Profile 1, 2 and 3 - why they are there

A door style already says how the door is routed. Profiles let you change one door without making a whole new style: for example a slab door with a round-over on the edge, or a shaker with a different groove. Leave a profile on **(style)** to use what the door style says, or pick **None** to leave that pass off.

Tip Picking an edge profile on a slab door turns it into a routed door with just the edge pass. Profiles come from your tool groups and cutters on the **CNC** page - if a list is empty, set up your tool groups there first.

Careful When you make the CNC files for a job with edge profiles, the program warns you once: cut one on an offcut first and check it, before running good doors.

Edges (edge banding)

The edge buttons are on/off switches. Each edge you switch on is banded:

- **L1** and **L2** - the two long edges (along the length / height).
- **W1** and **W2** - the two short edges (across the width).
- **Std** (doors and drawer fronts only) - "the job's door edging", i.e. the same as the doors on the cupboards. Click **Std** off to pick the edges yourself; click it on again to go back to the job's standard.

On panels and parts the banded edges show as red lines in the **Picture**, so you can check you have the right sides.

CAD parts in an order

Parts you draw on the **CAD** tab can go into a job and are nested and cut with the job's other boards.

- 1 On the **CAD** tab, draw the part and set up its toolpaths.
- 2 Press → **Add to the job as a part....**
- 3 In the box that opens, set the **Name**, **How many**, the **Board** it is cut from, and tick **Grain** if it must stay the way it is drawn (along X = along the grain).

- 4 Press **Add to the job**. The part appears on the **Parts & panels** tab with the type **CAD part** and a picture of its outline.
- 5 Save the job to keep it.

The width and length of a CAD part are greyed out - they come from the drawing. To change the part:

- 1 Press  **Open in CAD** on its row. The drawing opens on the CAD tab.
- 2 Make your changes.
- 3 Press **→ Add to the job as a part...** again, then **Update the job**. The same row is updated - you don't get a second copy.

Tip If the drawing has its own outside profile cut right through the board, it cuts itself out. If not, the shop's normal cut-out cutter cuts round its outline. Depths drawn as "through" go through whatever board you pick.

Importing an order file (CSV or Excel)

Many orders arrive as a spreadsheet - a door list from a builder, or a cut list from another shop. Instead of typing it all in, import it.

Files you can import: Excel **.xlsx**, **.csv** and **.txt** (comma or tab separated). Old Excel **.xls** files can't be read - open them in your spreadsheet program and **Save As** .xlsx or .csv first.

- 1 On either Order entry tab, press  **Import order file...** and pick the file.
- 2 The **Import order file** box opens, showing the file name and how many rows it found.
- 3 For each thing CabCarveCNC needs, pick which column of your spreadsheet holds it. It guesses from the column headings (for example a column called "Qty", "Quantity" or "Pcs" is picked for **Quantity**). Check each guess.
- 4 Set **Rows without a type are** - what a row is when the file doesn't say (for a door list, pick **Door**).
- 5 Set **Rows without a material** - a board for rows with no material column, or leave it on the job's standard (door board for fronts and panels, carcass board for parts).
- 6 Look at the preview underneath. It shows the first 12 rows exactly as they will be added, and how many rows in total.
- 7 If you want this file to **replace** what is already on the Order entry page (for example a corrected version of the same order), tick **Replace the order entry rows already in this job**. Otherwise the rows are added to what is there.
- 8 Press **Add the rows**.

The columns you can map

Field	What it reads
Type (door / drawer / panel / part)	Words like "drawer" or "drw" = drawer front; "panel", "end" or "filler" = panel; "door" = door; "part", "shelf" or "board" = part. If there is no type column, the Name / description is read the same way.
Name / description	The row's name.
Quantity	How many (blank = 1).
Width and Height / length	Read in your units (the box tells you which). Rows without a width and height are skipped - that is how heading rows and totals are left out.

Door style	Matched to your door styles by name.
Material / colour	Matched to your boards by name.
Hinge side	Starts with L = left, R = right, T / "up" / "lift" = top, B / "down" = bottom. If you don't map a hinge column, every door is hinged on the left.
Edging	"all", "4", "yes" or "all round" = four edges; "none", "no", "0" or "-" = no edging; "2L 1W" style = two long edges and one short; or the edge names L1, L2, W1, W2.
Profile 1 (edge), Profile 2 (groove), Profile 3 (pocket)	Matched to your tool groups / cutters by name; "none" leaves it off.
Notes	Any column you like - room, location, cupboard number, the customer's own ID.

Careful If a style, material or profile in the file doesn't match anything you have, the preview lists it under **⚠ Not found (the job's standard used)**. Those rows still come in, but with the job's standard. Either fix the names in the spreadsheet, or change those rows by hand after importing.

Tip Your column choices are remembered. The next time you import a file with the same column headings (for example the next order from the same builder), the columns are already picked for you, and so is your choice for **Rows without a type are**.

What happens next

Order entry rows are a normal part of the job. Nothing extra needs to be done to send them through the shop:

- 1 Cut list** - press **Cut list** →. The pieces are listed with every other board, grouped by material. At the bottom of the cut list an **Order entry** section tells you how many pieces came from Order entry, with an **Open Order entry** → button to come back. In a job with rooms, Order entry pieces show under **Whole job** and **Not in a room**.
- 2 Optimiser** - the pieces are nested on sheets with the rest of the job (see the optimiser chapter). Doors in a grain board keep their grain direction.
- 3 CNC** - when you make the CNC files, doors and drawer fronts get their door style routing, hinge cups and handle holes; panels and parts are cut out; CAD parts get their own toolpaths.
- 4 Labels and sheet prints** - every piece gets its label and appears on the printed sheets, named with the **Name** you gave it.

Reports and the quote: Order entry rows are on the reports like cupboards: doors and drawer fronts in the **Doors and fronts** table, their hinges, handles and screws on the hardware list and the quote, and the boards in the **Sheets and banding** totals. They are numbered **O1, O2 ...** (the number in the last column of the order list), so you can tell them from the cupboards. They are not counted as cupboards for labour.

Quick reference

To...	Do this
Add a door in a style	Click the style on the left
Add a drawer front in a style	Shift + click the style
Copy rows	Tick them, press Duplicate
Band only some edges	Turn Std off, then click L1 / L2 / W1 / W2
Bring in a spreadsheet	 Import order file...

Change a CAD part

 **Open in CAD**, edit, then → **Add to the job as a part...** → **Update the job**

11 Cut lists, reports, quotes and printing

Once a job is drawn, CabCarveCNC works out every board, every hinge and every screw for you. This chapter shows where to find those lists, how to price the job, and how to print good-looking drawings with your own logo, or save them as PDF or DXF.

Where everything is

Tab	What it is for
Cut list	Every board to cut, grouped by material, with sizes, edging and which cupboard it belongs to.
Reports	The quote, the cupboard list, doors and fronts, drawer boxes, glass, benchtops, hardware, sheets and banding.
Print	Print sets: plans, elevations, 3D views, benchtops, cupboard lists, cut list and quote, on your paper with your title block.

Everything on these pages is worked out fresh from the job each time you open them, so they are always up to date with your last change.

Changing the quote

The quote on the Reports page is worked out from the job, and you can change any of it:

- Type over any **Qty** or **Each** price. The line turns orange-edged; ⌵ puts the worked-out figure back.
- ✕ takes a line off the quote (it is listed under the table with **put back**).
- **Benchtops priced:** by the lineal metre, by the square metre, or **whole stone slabs** – type the slab size and the price per slab; the slabs needed are worked out from the tops' area plus a cutting allowance (Shop setting, 15%).
- **Kitchen removal** tick, and quick lines: **Workshop hours, CNC machine hours, Delivery, Poly / paint, Appliances supplied, Travel**, or **+ Line...** for your own. Your own lines have their name, quantity and price to type.

Shop settings (Prices) set the standard rates so they come in by themselves: workshop rate and hours per cupboard, machine rate and hours per sheet, delivery, kitchen removal, poly / paint per m² (every painted board, one face) and the stone slab size and price. The changes are kept with the job.

The Cut list page

Click the **Cut list** tab. You get one table per material (for example "White HMR – 16 mm"), with the number of parts and the square metres of board in its heading.

Reading the cut list

- The same part at the same size is counted together - six identical shelves show as one line with **Qty** 6.
- **Length** and **Width** are the cut sizes (before edge banding) unless you tick **Finished sizes (with banding)**.
- **Edges** shows which edges are banded (L1, L2 = long edges; W1, W2 = short edges).
- **Cupboards** shows where each part goes, written as **Rroom:cupboard(how many)**. For example **R1:4(2)** means room 1, cupboard 4, two of them.
- Under each table, a line gives the **edge banding** needed for that board, in metres per banding thickness.
- A part marked • **saw** is cut on the panel saw, not the CNC (see [Part names](#)). It stays on the cut list but is left off the CNC sheets.
- A very narrow part (narrower than the shop's smallest cut width, 80 mm to start with) shows its real size plus (**cut 80**). That means it is cut wider and trimmed to size afterwards, because a narrow strip can move under the

cutter.

- Drawer sides that are metal (part of the runner system) are not listed - you buy them, you don't cut them.
- In a room, each run of cupboards gets one long kick, so kicks are listed by run, not per cupboard.

Filtering the cut list

Use the filters across the top to see only what you need - for example just the doors for the spray painter, or just cupboards 1 to 5 for today's work.

- **Room** list (only in jobs with rooms): **Whole job**, one room, or **Not in a room** (Order entry pieces and loose cupboards).
- **Material**: **All**, or just one board.
- **Parts**: **All parts**, **Carcass**, **Doors, fronts & panels**, **Drawer boxes**, **Kicks** or **Other**.
- **Cupboards**: type cupboard numbers, e.g. **1,3-5** for cupboards 1, 3, 4 and 5. Leave blank for all.
- **Finished sizes (with banding)**: show sizes with the banding on, for checking finished parts.

The filters stay set while you move around the program, until you change them or close it.

Choosing the columns

Click the small  at the right-hand end of the table heading. A **Columns** box opens:

- 1 Tick the columns you want. Besides the standard ones you can add **Thick**, **Material**, **Order code**, **Area m²** and **Grain**.
- 2 Use ▲ and ▼ to change their order.
- 3 Press **Save as...** to keep this set of columns under a name (for example "Saw list"); pick it again later from **Saved layouts...**
- 4 **Standard** puts the columns back to how they started.

The same  button is on other tables too, such as the **Cupboards** table on the Reports page.

Buttons on the cut list

- **Save as CSV (Excel)** - saves the cut list as a CSV file and opens it, for a spreadsheet, a supplier or another machine.
- **Optimise...** - asks which materials to nest, then opens the **Optimiser** (see the optimiser chapter).
- **Part names...** - your own names for each kind of part (below).

Part names

Every kind of part (end, bottom, shelf, door, kick and so on) has a built-in name. Press **Part names...** to change how your shop names them. These are shop settings, so they apply to every job.

Column	What it does
Kind of part	What the part is.
Name	Your name for it on the cut list, reports and labels. Leave blank to keep the built-in name.
Label name	A short name for small labels.
CNC	Untick it for parts you cut on the panel saw (for example kicks or long strips). They stay on the cut list, marked • saw , but are left off the CNC sheets.
Turn on the sheet	As the board allows , Always turn or Never turn - for parts that must always run a certain way.

Press **Save**.

Order entry pieces

At the bottom of the cut list (for **Whole job** or **Not in a room**) an **Order entry** section says how many pieces came from the Order entry page, with an **Open Order entry** → button. See the Order entry chapter.

The Reports page

Click the **Reports** tab. At the top is the job name, the customer and their contact details (from the **Job** page), then the report sections one under the other.

Use the room list at the top left to report on **Whole job**, one room or **Not in a room**. That is handy when one job holds a kitchen and a laundry that are quoted separately.

What the Reports page lists

Section	What is in it
Quote	The priced list - see The quote below.
Cupboards	Every cupboard: number, name, room, width, height, depth.
Doors and fronts	Every door, drawer front and panel by type, material, height and width, with the quantity and the cupboard numbers. Send this to your door maker or painter.
Drawer boxes	By runner system: length, height, bottom width, quantity and cupboards.
Glass	(only when there are glass doors) The glass size for each glass-frame door, ready to order.
Benchtops	Room, type, length, depth, thickness, cupboards and the cut-outs (sink, cooktop) with notes such as one-piece L-shapes, waterfall ends and splashbacks. The Stone template (DXF) button saves a full-size DXF of every top with its cut-outs, for the stone mason.
Hardware	Hinges (with mounting plates), sliding door track and roller sets, lift-up / flap-down stay sets, drawer runner sets, handles by type, bought-in inserts (bins, racks) with their cupboard, shelf pins, adjustable legs and assembly screws.
Sheets and banding	How many sheets of each board, and the metres of each edge banding.

Buttons on the Reports page

- **Print / save as PDF** - prints the whole Reports page (or saves it as a PDF).
- **Cabinet drawings** - one sheet per cupboard: a front view and a side view, plus that cupboard's own parts list (part, material, cut length, cut width, thickness, edges and the machining on it). Good for the person assembling. It has its own **Print / save as PDF** and **Back to reports** buttons, and its own room list.

The quote

The quote lists **everything** in the job, line by line, with **Item, Qty, Unit, Each** and **Total**. Underneath come the **Cost**, the **Markup**, the **Price before tax, GST** and the **Total**.

What goes on the quote

- **Boards** - sheets of each board and size, at the board's price per sheet.
- **Edge banding** - metres, at the banding's own price (if the board has one) or the general banding price.
- **Benchtops** - metres of each benchtop type, and splashback panels (glass, tiles ...) by the square metre.

- **Doors** - for door styles that are priced (each, or by the square metre) and for bought-in doors; glass for glass doors by the square metre.
- **Hardware** - hinges with plates, drawer runner sets (or priced by runner system), drawer boxes (box style prices), handles by type, bought-in inserts, shelf pins, adjustable legs, sliding door tracks and rollers, lift-up / flap-down stays, pocket door sets and roller door kits.
- **Screws** - counted from the holes: carcass screws, hinge plate screws, runner screws, drawer box and drawer front screws, handle screws, hinge cup screws.
- **LED strip** - the lighting strips you placed, in metres, with how many 5 m rolls they are cut from; aluminium channel in 3 m lengths; and one LED light kit (driver and leads) per strip - only if you ticked those for the strip.
- **Labour** - "Labour - make" and "Labour - install", per cupboard.

Tip Why are some lines \$0.00? A line with no price yet is still listed, at \$0, so that nothing in the job is ever missed off a quote. Put a price on it once and it is right from then on.

Careful Sinks, taps, appliances and other room items are **not** quoted - they are drawn in the room for the picture only. LED strips are the only lights that go on the quote.

Careful The sheet count on the quote comes from a quick optimiser run. The full run on the **Optimiser** page may fit the parts on fewer sheets, so the quote is on the safe side.

Setting your prices

The program starts with example prices so the quote is never empty. Put your own in before you quote a customer:

- 1 **Board prices** (per sheet) and banding prices: **Materials** page, **Boards** tab.
- 2 **Door style prices** (each or per m²): **Materials** page, **Door styles** tab.
- 3 **Inserts and other bought items** (bins, racks, fittings): each item's price on the **Hardware** page. To load a whole supplier price list at once, press **Price list...** on the Hardware page and choose your supplier's CSV or Excel file (a column of part codes and a column of prices) - every item, runner and hinge with that code and no price of its own then uses it.
- 4 **Handles:** the handle price on the **Prices** tab (below).
- 5 **Everything else** (handles, hinges, runners, screws, legs, shelf pins, LED strip, channel, light kits, sliding / stay / pocket hardware, splashbacks, labour, and the markup and GST percentages): **Shop** page, **Prices** tab. Change them on the **Job** page instead to change them for this job only.

Markups

The general markup (30 % to start with) is added to the cost of every line. You can give some groups their own markup - for example less on bought-in benchtops, more on labour. The groups are **boards**, **hardware**, **doors**, **benchtops** and **labour**. Set a group's markup to -1 to use the general markup.

GST is added last (10 % to start with).

Price lists (Trade, Retail ...)

If you charge builders one price and home owners another, keep both as price lists:

- 1 Set up the prices and markups you want on a job.
- 2 Go to **Materials** → **Price lists** and press + **New price list from this job's prices**. Give it a name, e.g. "Trade".

- 3 On any later job, press **Use for this job** on the list you want. Or press **Make it the shop's prices** to make it your standard.

You can change any value in a price list right there, rename it, or **Delete** it.

Quote status, number and templates

- **Status** - Draft, Sent, Accepted or Declined. Setting **Sent** or **Accepted** notes the date. The status shows beside the job in **File** → **Open** (type *sent* in the Find box to see the quotes waiting on an answer).
- **Quote no.** - printed at the top of the quote. Leave it blank and one is made from the date and job name.
- **Valid for** - how many days the price holds (30 if blank), printed with the quote number.
- **Save as template...** keeps the lines you added by hand (delivery, travel, your own lines), the deposit and kitchen removal. **Template...** adds a saved template's lines to another job's quote.

The Print page (print sets)

The **Print** tab puts together a set of pages - plans, elevations, 3D views, benchtop plans, cupboard lists, the cut list and the quote - each with your title block, ready to print or save as one PDF. The choices are kept with the job, so next time you print the same job it is set up the same way.

Making a print set

- 1 Click the **Print** tab. On the left are the settings and the page list; on the right a preview of every page.
- 2 Set the **Paper** (**A4**, **A3**, **Letter** or **Tabloid**), **Way round** (**Landscape** or **Portrait**) and **Margins** (5 to 20 mm).
- 3 Pick the **Drawing style** (see [Drawing styles](#)). The  button beside it opens the style editor.
- 4 Pick the **Scale: Fit the page**, or a true scale from **1:10** to **1:100**.
- 5 Pick **Text on paper: Small (about 7 pt)**, **Normal (about 8 pt)** or **Large (about 10 pt)**.
- 6 Pick **Colour: As the drawing style**, or **Black and white (grey)** to save colour ink or for photocopying.
- 7 Tick **Title block on every page** and pick which title block to use.
- 8 Under **Pages**, tick the pages you want.
- 9 Check the preview, then press **Make PDF and print**.

The PDF is saved in **Documents\Cabinet Studio\Exports** and opened, so you can print it or email it to the customer. **Close** takes you back to the drawing.

The pages you can pick

For each room:

- **Plan** – *room*
- **Elevation** – *room wall n* (and **(back)** for islands and walls with cupboards on both sides). Walls with cupboards are ticked to start with.
- **Benchtops** – *room (plan with sizes)* - a plan of just the tops with their sizes, for the stone mason or benchtop maker.
- **Cupboard list** – *room* - every cupboard with its sizes, wall and number of doors, plus a benchtop table.
- **3D view** – *room* - a picture of the room as it looks in the 3D view.

For the whole job: **Cut list** and **Quote**, and every multi-view sheet you have made (**Sheet** – *name*).

Why scale and text size are separate

Text and dimensions print at the same size on paper whatever the scale, so a 1:50 plan is still easy to read. When you pick a true scale (say 1:20), the drawing prints at its real size on the paper - you can measure it with a scale rule. If a drawing is too big for the page at that scale, a warning shows above the preview: pick a smaller scale (a bigger number) or bigger paper.

Tip In  **Preferences, Prints in** lets you print in different units from the screen.

Your company and logo

Under **Your company** on the Print page, fill in **Name, Address, Phone, Email, Website** and **Licence / ABN**. For the logo, click **Pick a picture** and choose your logo file (**Change** or **Remove** later). These details go in the title block on every print set, optimiser sheet print and drawing. You only need to do this once.

Saving drawings as DXF

Press **Save drawings as DXF** to save every plan and elevation you have ticked as a DXF file in **Documents\Cabinet Studio\Exports**. Builders, architects and other drawing programs can open these.

Multi-view sheets (several drawings on one page)

Sometimes one drawing per page is too many pages. A multi-view sheet puts several drawings on one page - for example the plan and all the elevations on one A3 sheet for the installer.

- 1 On the Print page, press  **Multi-view sheets....**
- 2 Under **New sheet**, pick a starting layout: **Plan + elevations, All elevations, Plan + 3D + cupboard list, Plan + benchtops** or **Empty page**. Pick the room if the job has more than one.
- 3 Press **+ New sheet**. The page is laid out for you, at the biggest scale that fits.
- 4 Drag a box to move it; drag its corner to size it.
- 5 Click a box to change it on the right:
 - **Shows** - **Plan, Elevation, Benchtops (plan with sizes), 3D view, Cupboard list** or **Text / notes**.
 - **Room**, and for an elevation the **Wall** and front / back.
 - **Scale** - **Best that fits (standard), Fill the box**, or a set scale such as 1:20.
 - **Caption** - show it or not, and your own caption text.
 - **Frame** - a line round the box.
 - **Place (mm)** - exact X, Y, W, H.
 - For text boxes: the **Text** and its **Size (pt)**.
- 6 Add more with the **+ Plan, + Elevation, + Benchtops, + 3D view, + Cupboard list** and **+ Text / notes** buttons. **Copy box, Delete box** and **Same scale on all** (every drawing at this box's scale) are under the box settings.
- 7 Press **Done**. The sheet is now a page you can tick in the print set.

The paper, margins, drawing style and title block come from the print set. Elevations left on **Best that fits** all come out at the same scale so they match. A red **too big for its box** note means the drawing doesn't fit at the scale you set. Use **Copy sheet, Delete sheet**, rename it in the name box, or **Lay out again...** to start over from a layout.

Drawing styles

A drawing style decides how plans, elevations and prints look: colours, line weights, fonts, how dimensions are drawn and which dimensions show. Pick the style from the drop-down on the bar above the drawing (its tip says **Drawing style**), or in a print set.

The built-in styles

- **Screen** - for working on screen.
- **Architectural** - clean black-and-white drawings for customers and builders.
- **Shop drawing** - everything shown, for the workshop.
- **Colour presentation** - coloured, with the workshop clutter (carcass parts, dimensions, numbers, swings) left off, for showing a customer.

Changing a style or making your own

- 1 Pick  **Edit styles...** at the bottom of the style drop-down (or the  beside the style in a print set).
- 2 Click a style on the left. To make your own, press + **New style (a copy of this one)** and type a **Name**.
- 3 Change what you like. A preview of the current room shows on the right as it would print on A4.
 - **Colours** - background, text, walls, cupboards, fronts, kicks, benchtops, windows and doors, appliances, door swings, cupboard numbers and your notes. A faint swatch means the style's own colour; **x** puts it back.
 - **Lines & text** - **Outline thickness**, **Walls in plan** (hatched or solid), **Font**, **Text size**, **Cupboard number size**, and **Cupboard numbers** plain, in a circle or in a box.
 - **Dimensions** - colour, **Line ends** (ticks, architectural slashes, arrows or dots), text size, text above or in the line, height text turned or level, line thickness, extension lines (**Short** – the standard – stops them clear of the cupboards; **Right to what is measured** runs them all the way; or **None**), and the spacing of the rows.
 - **Dimension groups** - which rows of dimensions show at all (see below).
- 4 Press **Use this style** to draw with it.

Back to standard undoes your changes to a built-in style; **Delete this style** removes one of your own. **Save to a file** saves a style in **Documents\Cabinet Studio\Themes** to share with another computer; **Load a style file** brings one in. Styles are saved on this computer.

Dimension groups

Dimensions are drawn in groups. Untick a group in the style editor to leave it off every drawing in that style:

- **Elevations:** Base & tall cupboards (under), ... include tall cupboards, Benchtops (under), Overall wall length (under), Wall cupboards (over), Windows & doors (over), Heights (right side).
- **Plan:** Wall lengths, Floor cupboards & openings, Wall cupboards, Benchtops, Overall wall.

Layers

Layers decide what is shown on the drawing. Press **Layers** on the bar above the drawing.

Built-in layers

Walls, Windows & doors, Cupboards, Carcass parts (plan), Overhead cupboards (plan), Doors & drawer fronts, Door swings, Handles, Shelves & inside, Kicks, Benchtops, Appliances, Sinks, plumbing & power, Dimensions, Cupboard numbers and Grid (plan). Tick or untick them. **Standard** puts the style's own choice back.

Tip Each drawing style remembers its own layers. That means you can have "Shop drawing" with everything on and "Architectural" with the inside of the cupboards hidden, and just switch styles.

Your own layers

Your own layers let you show or hide chosen cupboards - for example "Stage 2" cupboards, or a "Customer option" set.

- 1 In the **Layers** box, press + **Layer** and type its name.
- 2 Select a cupboard, and in its editor (**Cupboard** tab → **Layer**) pick the layer.
- 3 Tick or untick the layer in the **Layers** box to show or hide those cupboards. Press **X** to delete a layer (its cupboards go back to having no layer).

The **Layers** box also has the dimension group ticks for the drawing you are looking at, **Show *n* hidden rows**, **Put moved rows back** and  **Edit styles....**

Dimensions you can move, hide and add

The program dimensions every drawing for you, but you are the one who knows what the installer needs. You can tidy the automatic dimensions and add your own.

Moving or hiding an automatic dimension row

- 1 Click a dimension row to pick it.
- 2 Drag it to move it further from or closer to the drawing.
- 3 Or press **Delete** to hide it on this drawing only.

To undo: **Layers** → **Show *n* hidden rows**, or **Put moved rows back**.

Adding your own dimension (**Dim**)

- 1 Press  **Dim** on the bar above the drawing.
- 2 Click the first point, then the second point. Points snap to the corners of cupboards, fronts, tops, walls and windows. Hold **Shift** to measure along a slope; hold **Alt** to stop snapping.
- 3 Click where the dimension line goes.
- 4 Carry on with the next one, or press **Esc** when done.

Drag your dimension to move it. Double-click it to type your own text instead of the size (leave it blank to go back to the size). Click it and press **Delete** to remove it.

Adding a note (**Note**)

- 1 Press  **Note**.
- 2 Click where the note goes and type it, e.g. "Power point 1100 AFF".
- 3 Drag it to move it; double-click to change it; **Delete** to remove it.

Your dimensions and notes are saved with the job and print in every print set.

Title blocks with your logo

The title block is the box on each printed page with your logo, company details, the job, the page title and the page number. You can design your own.

Two start you off: **Drawings (company · job · page)** (for print sets) and **Optimiser sheets** (for optimiser sheet prints).

- 1 Open the editor: **Templates...** on the Print page, or **Title block...** on the Optimiser page.
- 2 Pick a template, or press + **New** or **Copy**.
- 3 Set the **Name**, whether it sits at the **Top** or **Bottom** of the page (**On the page**), and the **Logo height (mm)**.
- 4 Build it row by row. Each row has boxes; for each box pick what it **Shows**, a small **Label** above it, its **Width** (its share of the row), its **Size pt** and **Bold**. Use ← to move a box left, X to remove it, + **Box** and + **Row** to add, and ↑ / X **row** to move or remove a row.
- 5 Under **Use for**, tick **print sets** and / or **optimiser sheet prints**.
- 6 Check the **Preview**, then press **Save**.

A box can show: Logo, Company name, Company address, Company phone · email, Licence / ABN, Website, Company (name, address, contact, website), Job name, Customer, Site address, Job phone, Job email, Job date, Job notes, Page title, Material, Sheet size, Parts · yield, Drawing style / machine view, Today's date, Page x of y, Your own text, or an Empty box (for a signature or hand-written notes).

Tip An empty box labelled "Customer approval" makes a simple sign-off area on the drawings you send for approval.

Printing and exporting - summary

To get...	Do this
A PDF of drawings, cut list and quote	Print page → Make PDF and print
The plan or elevation on screen, on its own	Print button on the bar above the drawing
A DXF of the plan or elevation on screen	DXF button on the bar above the drawing
DXFs of all drawings in the print set	Print page → Save drawings as DXF
The reports or quote as PDF	Reports → Print / save as PDF
A drawing of each cupboard	Reports → Cabinet drawings → Print / save as PDF
Stone templates	Reports → Benchtops → Stone template (DXF)
The cut list in a spreadsheet	Cut list → Save as CSV (Excel)

DXF and PDF files go in **Documents\Cabinet Studio\Exports**. To send a PDF to a paper printer, print it from the PDF window that opens.

12 The optimiser (nesting sheets)

The optimiser takes every part on the cut list and fits them onto full sheets of board with as little waste as possible. What you see on its sheets is exactly what the CNC will cut, so this is also where you check the job before it goes to the machine, keep offcuts, print the sheets and labels, and make the CNC programs.

Starting the optimiser

- 1 Click the **Optimiser** tab (or press **Optimise...** on the Cut list page).
- 2 The job is nested straight away. A table shows each material with its sheet count, and the sheets are drawn underneath.
- 3 Change any options along the top (below), then press  **Optimise** to run it again.

In a job with rooms, the room list at the top left lets you nest **Whole job**, one room, or **Not in a room**. Every choice you make here is saved with the job, so the CNC files, labels and prints always use the same run.

Options along the top

Materials... - picking what to nest

Press **Materials...** to choose which boards are in this run. The box **Select materials to optimise** lists each board in the job with its number of parts. Tick the ones you want (**Select all** / **Clear all** help), then **OK**. The button shows **(all)** or how many you picked.

Tip Why: you may cut the white carcass board today and the door board next week when it arrives - nest only what is on the rack.

Quality

How hard the optimiser looks for a better layout:

- **Estimate (fast)** - a quick count, good while you are still designing.
- **Good**
- **Better (recommended)** - the normal choice before cutting.
- **Best (slow)** - for big jobs or dear boards where one sheet saved is worth the wait.

The same parts with the same settings always give the same layout - so what you looked at yesterday is what gets cut today.

Spacing

The gap between parts on the sheet, which must be at least the width of the cutter that cuts them out (12 mm to start with). Leave it blank to use the shop setting, or type a number for this job. The shop can also set the gap to follow the cut-out cutter for each board automatically (cutter size plus a few mm) - see the CNC & optimiser settings.

Turn parts

yes lets parts turn 90° on boards with no grain (better yield); **no** keeps every part lengthwise. The first choice shows the shop's setting. Boards with a grain never turn parts across the grain.

Offcuts

How to use the offcuts you have ticked on the **Material** tab (see [Offcuts](#)):

- **Use up offcuts first** - fill the offcuts before starting new sheets.
- **Use offcuts if it saves a sheet** - only use them when that means one less full sheet.
- **Don't use offcuts.**

Cutting order ticks

- **Sheets with large parts first** - big parts are cut while the board is fresh and flat.
- **Keep cupboards together (can use more board)** - each cupboard's parts come off the same sheets, so you can assemble as you go. This may cost extra board.
- **Sheets with flip-side parts first** - sheets with parts that need work on both faces come first.
- **Small parts off the edges (no extra board)** - on by default. Small parts are kept away from the sheet edges where that costs nothing, because small parts at the edge are the ones that move when cut.

Patterns... and Batch...

See [Saved nesting patterns](#) and [Batch jobs](#) below.

The four tabs

- **Sheets** - the nested sheets, the sheet viewer, offcuts, printing and the CNC buttons.
- **Material** - sheet sizes, trims, grain and feed rate for this run, and the shop's offcut list.
- **Parts** - every part, to turn, leave out, or tick for a "ticked only" run.
- **Labels** - part labels and the label designer.

The Sheets tab

The summary table

One line per material: **Material**, **Thick**, **Sheet** size, **Parts**, **Sheets** (full sheets), **Offcuts** (offcut pieces used), **Used** (m² of parts) and **Yield** (how much of the board ends up as parts). The last column warns you about problems:

- **too big** - a part bigger than the sheet (it is also listed in red under the material heading). Change the part or use a bigger sheet.
- **by hand** - this material's sheets were laid out by hand.
- **unplaced / in the remake bin** - parts not on any sheet (hand layouts).
- **parts overlap** - a hand-laid sheet with parts too close; it gets no CNC program until fixed.

Sheet thumbnails

Under each material heading are small drawings of every sheet, with a caption like "Sheet 2 · 14 parts · 1 offcut kept · 87% used". Offcut pieces show as **Offcut** with their size; pattern sheets show the pattern name. If a sheet has parts with work underneath, the caption says how many **second-side ops** there are.

Click a thumbnail to open it big in the sheet viewer above.

The sheet viewer

The bar above the big sheet has:

- ◀ and ▶ - previous / next sheet, across all materials.

- **Sheet / 3D / G-code** - three ways to look at the sheet.
-  **Edit by hand** - move parts yourself (see [Hand layouts](#)).
-  **Save as pattern** - keep this sheet's layout to cut again.
-  **Show...** - what the drawings show.

Sheet (2D)

The sheet from above, with the trim round the edge, every part, and its machining: holes, grooves and recesses on the top face drawn solid; work on the underside drawn dashed, as if you could see through the board. A part with underside work also has a small circle in its corner. Hover over a part to see its name, size, cupboard and whether it is turned or face down.

Show... options

Tick what the sheet drawings show (these are kept on this computer):

- **Part numbers (the same as on the labels)**
- **Part sizes**
- **Edge banding (thick line on the banded edges)** - a heavy line just inside each banded edge, so you can see which way round a part goes.
- **Offcut numbers** and **Offcut sizes**

And the **Part text**: **Room, cupboard and part name, Room and cupboard number, Part name, Part name, short** or **No names**.

3D

Every part as a real board with every hole, groove and recess at its true depth. Drag to turn it (right round to see underneath), wheel to zoom, right-drag to move. Buttons **Top**, **Underneath** and **Corner** jump to a view.

- **Bed and waste board** - show the machine bed and the waste round the parts (off: just the parts, easier to see underneath).
- **See-through parts (hole and groove depths)** - makes the boards glassy so you can check how deep things go.

Top-face work is dark, underside work is blue, and parts that lie face down are tinted.

Colours: parts show in their own board colour (white HMR parts are white) on a light spoilboard. To colour parts by kind – backs green, ends white, tops and bottoms blue – set colour rules on the CNC page, **Machine** tab, **Sheet view colours** (see the CNC chapter).

Tip Why look in 3D? It is the fastest way to catch a hinge hole on the wrong face or a groove that goes too deep - before the board is cut.

G-code

Once the CNC files are made, this shows the real program for the sheet: a top-view drawing of the cutter path (dashed = moves above the board; coloured = cutting, blue for shallow through to red for the deepest), and the program text beside it. If a sheet has more than one program, pick it from the list. If no program has been made yet, press ► **Make CNC files (G-code)**.

Careful Always check the program here, then air-cut the first sheet on the machine before cutting good board.

Right-click a part

Right-click any part on a sheet for its own menu:

-  **Turn it 90°** /  **Lay it lengthwise (don't turn)**, and **Turn: let the optimiser choose**.
-  **Flip it – machine face down** /  **Machine it face up**, and **Face: let the optimiser choose**. The optimiser normally picks the face with the most work on top.
-  **Leave it out of this run** - the part stays on the cut list but is not nested now (put it back on the Parts tab).
-  **Open it in the board editor** - change its shape or machining.
-  **Show cupboard** *n* - jumps to the cupboard it belongs to.

Each change re-runs the optimiser.

The Material tab: sheet sizes and offcuts

Each material in the job has its own box. Anything you type here is for **this run only** - the board's own settings on the **Materials** page don't change. Blank boxes show the board's normal value in grey.

- **Sheet length** and **Sheet width** - e.g. when the supplier sends 3600 × 1800 instead of 2400 × 1200.
- **Length trim** and **Width trim** - how much is trimmed off the sheet edges (factory edges are often chipped).
- **Feed rate %** - slows the CNC down (or speeds it up) for this board, e.g. 80 for a hard, dense board.
- **Grain** - = **material**, **Has grain** or **No grain**.

When a board comes in more than one sheet size, the shop setting for sheet size decides which is used: the cheapest that fits your CNC bed (auto), the main size, or the largest.

A material that is not in this run (see **Materials...**) is shown greyed with **(not in this run)**.

Offcuts

Offcuts are good pieces of board left over from a sheet. CabCarveCNC can cut them out cleanly, keep a list of them for the whole shop, and use them up on later jobs.

Marking offcuts on a sheet

- 1 On the **Sheets** tab, press  **Mark offcuts** (it stays on until you press it again).
- 2 Open a sheet in the viewer, then either:
 - **Click** on spare board - the biggest clear piece around that spot is marked (it must be at least 300 × 300 to start with), or
 - **Drag** a rectangle - your own size, trimmed back so it stays clear of the parts.
- 3 The offcut shows on the sheet with its size. Click a marked offcut to remove it.

Or press  **Auto offcuts** to mark the biggest spare piece on **every** sheet that doesn't have one yet. **Clear offcuts** takes all marked offcuts off these sheets.

What happens to them: the CNC cuts each marked offcut out as a clean rectangle (kept a little further from the parts than the normal gap, so the cutter never touches a part), it gets a label, and when you make the CNC files it is added to the shop's offcut list.

Tip Offcuts that would cut into a part show red and are not kept.

The shop offcut list

On the **Material** tab, under each board, is the shop's list of offcuts of that board - shared by every job. Each line has **Use**, **Qty**, **Length**, **Width** and **Comment** (e.g. "rack 3, top shelf"). Press **+ Offcut** to add one you have in the rack by hand, or **X** to remove one that has been thrown out.

Quickest way: the **+ Offcut** button on the optimiser bar (beside the Offcuts choice) opens one small box – pick the board (this job's boards first, then every other board), type the length, width, how many and a comment, and press **Add** (or **Add + another** / Enter to type the next one). It goes straight on the shop's list, and is ticked for this run when the job uses that board. It works with an empty job too.

Using offcuts up

- 1 On the **Material** tab, tick **Use** beside the offcuts you want in this run.
- 2 Choose how they are used with the **Offcuts** list at the top (**Use up offcuts first** and so on).
- 3 Press **Optimise**. Parts are nested on the offcuts as well as new sheets; offcut pieces show in the thumbnails as **Offcut** *length × width*.

When you make the CNC files, the offcuts this job used are taken off the shop list, and listed under **Offcuts this job used** on the Material tab. If the job doesn't go ahead, press **Put back** to return an offcut to the list.

The Parts tab: turn, leave out, ticked only

Every part of every material in the run, with a small picture of its shape, **Qty**, **Part** name (and "grain" if it has one), **Length**, **Width**, **Edges**, **Cupboards** and the number of machining **Ops**.

- **Turn** - **auto** (turns only on boards without a grain), **turn 90°** (always lies across) or **never turn**.
- **Leave out** - tick to keep it out of this run. It stays on the cut list; untick to put it back.
-  - open the part in the board editor (in the first cupboard it comes from).

Optimising ticked parts only

Use this to re-cut a few parts - a damaged door, a shelf the customer added - without nesting the whole job again.

- 1 Press **Untick all**.
- 2 Tick the ☒ box on the parts you want.
- 3 Tick **Optimise the ticked parts only**. A **only the ticked parts** warning shows at the top of the page so you don't forget it is on.
- 4 Go to the **Sheets** tab. Only the ticked parts are nested.

Untick **Optimise the ticked parts only** afterwards to go back to the whole job. **+ Add parts... (Cut list page)** takes you to the cut list for parts that are not in a cupboard.

Batch jobs (several jobs on the same sheets)

Small jobs waste a lot of board on part-used sheets. Batch lets you nest other saved jobs together with this one.

- 1 Press **Batch....**
- 2 Tick the other jobs to cut with this one, then **OK**. The button shows how many jobs are added.

- 3 Their parts are nested with this job's. On the Parts tab they show the job name in brackets; on labels and sheets they show as "*Job name: ...*" so they don't get mixed up.

Careful Batch uses the other jobs **as they are saved**. Save them first. Offcuts and the CNC files are made with this (the open) job.

Saved nesting patterns

If you cut the same sheet again and again (a stock door set, a standard shelf run, a product you make every week), keep its layout as a pattern and cut it as it is whenever you like.

Saving a pattern

- 1 Open the sheet in the viewer.
- 2 Press  **Save as pattern** and give it a name.

Cutting a pattern

- 1 Press **Patterns....** Each saved pattern shows its board, number of parts, how much of the sheet it uses and when it was saved.
- 2 Type how many of each to cut in **Sheets this run**, then **OK**.
- 3 The pattern sheets are added after this run's own sheets, cut exactly as saved. Their labels say which pattern they came from.

Patterns are shop data - every job can use them. **Delete** removes one you no longer need.

Hand layouts (Edit by hand)

The optimiser is very good, but sometimes you know better - you want the long parts at the front of the bed, a door on the best part of a woodgrain sheet, or a part moved off a damaged corner. Edit by hand lets you move parts yourself, and the CNC files then follow your layout exactly.

Starting

- 1 Open a sheet in the viewer and press  **Edit by hand**.
- 2 A bar appears over the sheet:  **Editing by hand** with the buttons  **Done**, **+ Add sheet**, **Sheet size...** and **Delete sheet**.

Once you change anything, that material is "laid out by hand" (a **laid out by hand** tag shows). The optimiser won't rearrange it again until you press  **Back to automatic**.

Moving parts

- **Drag** a part to move it. It snaps to the trim and to the right gap from other parts. Hold **Alt** to move freely. The status line shows its X and Y as you go.
- **Pick several:** **Ctrl**+click (or **Shift**+click) parts, or drag a box round them on bare board. **Ctrl**+**A** picks every part on the sheet. Drag one and they all move together. **Esc** lets go.
- **Nudge:** with parts picked, the arrow keys move them 1 mm; hold **Shift** for 10 mm.
- A part that is too close to another, or off the board, turns **red**.
- **Click spare board** to mark an offcut there (as with  Mark offcuts).

Part properties (double-click)

Double-click a part (or right-click → ⚙ **Properties (position, turn, bump)...**) for exact placing:

- **X position** and **Y position** - measured from a **Sheet corner** to a **Part corner** that you pick (Bottom left, Bottom right, Top left, Top right). The corners you pick are remembered.
- **Rotation** - **0° (length along the sheet)** or **90°**.
- **Sheet** - move the part to another sheet.
- **Bump** - the arrow buttons slide the part that way until it meets another part or the trim. Great for packing parts tight.
- **Flip part (face down) / Machine face up, Move to remake bin, Take off the sheet.**

Press **OK** to apply.

Right-click menu while editing

⚙ **Properties...**, ↺ **Turn it 90° here**, ↕ **Flip it**, 🗑 **Move to the remake bin**, ✕ **Take it off the sheet (unplaced)** and 🖨 **Open it in the board editor**.

Unplaced parts and the remake bin

Parts you take off a sheet go on the **Unplaced parts** list under the sheet. For each one you can press **Place on this sheet** (it goes in the first clear spot, turned if needed) or **Remake bin**. **Place all unplaced** finds room for every unplaced part, adding new sheets if it has to.

The **Remake bin** holds parts you are keeping out of this run on purpose - to cut another time, for example on an offcut later. Press **Back to unplaced** to bring one back. The remake bin belongs to the job.

Sheets

- **+ Add sheet** - a new empty sheet of this board.
- **Sheet size...** - type this sheet's size (e.g. **2400 x 1200**), for a part sheet or an odd size.
- **Delete sheet** - its parts go to the unplaced list.

✓ Done = one re-check

While you are moving parts, nothing is re-calculated after each move - that keeps it quick. When the sheet is how you want it, press **✓ Done** (it lights up when there are changes). Every sheet is then checked once: overlaps, offcuts and yield. Making the CNC files also does this check for you if you forget.

Careful A sheet with parts that overlap or sit off the board gets **no CNC program** until it is fixed - a warning tells you which sheet. This protects your cutter and your board.

Press ↺ **Back to automatic** to throw away the hand layout for that material and let the optimiser lay it out again.

Print sheets (pencil-marking prints)

If you don't use a label printer, print the sheets instead. Take the prints to the machine, write on each part in pencil as it comes off, and keep the prints with the job.

- 1 On the **Sheets** tab, leave **as on the machine** ticked to draw each sheet the way it lies on your machine seen from the front, with the stops corner where it really is. Untick it to draw the sheet in the program's own way round (X0 Y0 bottom left).

2 Press **Print sheets.**

You get one A4 landscape page per sheet with:

- Your title block (choose its look with **Title block...** - see the reports and printing chapter).
- The sheet with every part numbered and named, with its cupboard and size, and **FACE DOWN** on parts that lie face down. The text turns to run along narrow parts and shortens on small ones.
- **Edge tape:** a heavy black bar just inside each edge that gets edge banding, so the edger knows which edges to tape.
- Marked offcuts drawn dashed with their size.
- The **STOPS (X0 Y0)** corner marked, so the sheet goes on the machine the right way round.
- A tick list of every part (number, part, cupboard, size, tape, face down / hinge press) with a ✓ column to tick off.

Cutting on a panel saw

No CNC, or some boards cut on the saw? Set **Cut on** (along the top) to **Panel saw**. The sheets are then laid out the way a sliding table saw or beam saw cuts: every cut runs straight through the piece it is made on. The shop default is on the CNC page (**Cut sheets on, Panel saw blade (kerf), Panel saw: rip strips**).

- **Kerf** - the saw blade's thickness, the gap left between parts (4.4 to start with).
- **Rip** - the first cuts (strips): **along the length, across, or auto** (each sheet the way that uses less board).

The cuts are numbered in the order you make them: rip a strip off, cross-cut it into pieces, cut those into parts, then rip the next strip. Each cut has a **fence** setting: the size of the piece you are cutting off. Click a sheet and choose **Cut list** to see every cut, its fence setting and the parts it frees. Left-over board is shaded with its size.

- The trim (Material tab) comes off the edges first; it is noted on the print, not numbered.
- Parts the Part names list marks **saw** go on the sheets in this mode (on a CNC run they are left off).
- Holes and grooves are not drawn on saw sheets, and the CNC files can't be made while a job is set to the panel saw.

Press  **Print saw cut sheets** for one A4 page per sheet: your title block, the sheet with every part and every cut numbered (thick line = rip, medium = cross-cut, dashed = cut / trim), and the cut list with fence settings and a ✓ column. Labels work the same as on CNC runs.

Part labels and the label designer

The **Labels** tab prints one label per part for this run, in sheet order. The part number on each label matches the number on the sheet drawings (turn on  **Show... → Part numbers**), so you can match labels to parts as they come off the machine.

Printing labels

- 1 Pick the **Label sheet** you print on: **A4, 3 x 8 (70 x 37), A4, 3 x 7 (70 x 42.4), A4, 2 x 4 (99.1 x 67.7)**, a label printer roll (**62 x 29, 100 x 50 or 100 x 73**), or one of your own.
- 2 Pick the **Label printer**, or **None – open the PDF and print it**. Press **Find printers** if your printer isn't listed.
- 3 Press  **Print labels** to send them to the printer, or  **Labels PDF** to just make the PDF.

Preview on the sheet shows a sample label on your label sheet; click "show this job's parts" to see the real first labels.

The label designer

Labels are designed once and used for every job. Three designs come with the program (a standard 70 × 37, a big 100 × 73 with a drawing of the part, and a 62 × 29 roll label). Change one, or make your own:

- 1 Pick a design from **Label design**, or press **+ New** (give it a name) or **Copy**. **Rename** and **Delete** are there too.
- 2 Set the **Label size** in mm. If it is bigger than the labels on your label sheet, a warning says it will be shrunk to fit.
- 3 Add items with the buttons under the label: **+ Field**, **+ Fixed text**, **+ Barcode**, **+ Part drawing**, **+ Line / box**.
- 4 Drag items to move them; drag an item's corner to size it (it snaps to 0.5 mm).
- 5 Click an item to change it on the right: what it **Shows** (for fields and barcodes), **Text before it** (e.g. "Size: "), **Font size** and **Bold**, **Line up** (left, centre, right), and exact **Left / top** and **Width / height** in mm. **Copy** and **× Remove** are under it.
- 6 When it looks right, press **Use this design**. The note changes to **✓ This design is used for the labels**.

A field can show: Part code (barcode number), Part number on the sheet, Part name, Short name (Part names list), Cupboard(s), Room, Job, Cut size, Finished size, Thickness, Material, Sheet (n of m), Edge banding, Grain, Face down / second side, Date. The **Part drawing** shows the part's outline with its banded edges and its holes, grooves and pockets.

Designs save themselves as you work.

Your own label sheets

If your labels are not one of the standard sheets, press **Label sheets...** and **+ Label sheet**. Fill in the **Name**, **Page W × H**, labels **Across × down**, **Label W × H**, **Left / top margin** (leave left blank to centre) and **Gap across / down**, all in mm. For a label printer roll, make the page the size of one label, 1 across × 1 down.

Press **Print a lining-up page**, print it on plain paper and hold it over a sheet of labels against the light - if the boxes line up, your sizes are right. Then **Save**.

Making the CNC files and sending them

When the sheets are right, the buttons at the top of the **Sheets** tab take the job to the machine:

- ► **Make CNC files (G-code)** - writes the machine programs, DXF drawings and labels for every sheet.
- 🏠 **Send to CNC** - copies the programs to the machine (the send folder set on the **CNC** page, **Machine** tab - the machine PC's shared folder or a USB stick). If the files are missing or out of date, it makes them first.
- 📁 **Folder** - opens the folder with the programs.

Underneath, a note tells you how many sheets were made and where, and lists any **things to check**. If you change the sheets after making the files, the note warns **The sheets changed since the files were made – make them again**.

Everything about tools, machine settings, cutting strategy and what to check before cutting is in **the CNC chapter**.

Quick reference

To...	Do this
Nest only some boards	Materials...
Use a different sheet size this time	Material tab → Sheet length / Sheet width
Stop a part turning	Right-click it → 🔄 Lay it lengthwise , or Parts tab → Turn → never turn

Re-cut a few parts	Parts tab → tick them → Optimise the ticked parts only
Keep a spare piece	⌘ Mark offcuts , click spare board (or ⌘ Auto offcuts)
Use your offcuts	Material tab → tick Use
Move parts yourself	✎ Edit by hand , drag, then ✓ Done
Cut the same sheet again later	💾 Save as pattern , then Patterns...
Print sheets for pencil marking	🖨 Print sheets
Print labels	Labels tab → 🖨 Print labels
Program the machine	▶ Make CNC files (G-code) → 📡 Send to CNC

13 CNC machining

CabCarveCNC works out every hole, groove, pocket and door pattern for you, and turns each nested sheet into a program for your CNC router. This chapter covers how that machining is worked out, how to set up the machine and its tools, how to make and send the programs, and how to cut your first job safely.

Careful Safety first. A CNC router can hurt people and wreck tools, boards and the spoilboard. CabCarveCNC writes the programs, but you are in charge of the machine. Every time you change the machine set-up, the tools, the post or the toolpath settings, check the result: look at it on screen, run an **air cut**, then cut a test board before you cut a real job. See [A safe first cut](#).

The big picture

From cupboard to cut part, the work moves along in this order:

- 1 **Design** the job (cupboards, doors, drawers, panels). Each board picks up its machining as you build it: shelf pin holes, hinge cups, screw holes and so on.
- 2 **Cut list** lists every board with its size, edging and machining.
- 3 **Optimiser** nests the boards onto sheets (and decides which way up each part goes).
- 4 **Make CNC files** writes one program per sheet (plus a drawing, labels and an air-cut copy).
- 5 **Send to CNC** copies the programs to the machine's folder or a USB stick.
- 6 At the machine: load the program, check it, air cut if anything is new, then cut.

Tip The machine side (header lines, tool changes, safe heights, the drilling head) always comes from your **CNC** page set-up. Everything else in the program (designs, door styles, parts drawn on the **CAD** tab) goes through that same set-up, so one good set-up serves every job.

How the machining is worked out

You don't draw holes on each board. CabCarveCNC works them out from the cupboard, its hardware and your settings. It puts each one on the board it lands on, on the right face, at the right depth. Here is what it makes and where it gets the information from:

Holes

- **Shelf pin holes** for adjustable shelves: a group of holes around each shelf (for example 5 holes, 32 mm apart), in a front row and a back row. You can also have a full line bore up the space instead. Settings: **Shelf pin holes**, **Adj. shelf holes per row**, **Rows of shelf holes**, **Shelf hole spacing**, **Front row in from the front**, **Back row in from the back**, plus diameter and depth.
- **Hinge cups** in doors: usually 35 mm across, 13 deep, 22.5 in from the door edge, the first hinge 100 from the top and bottom, and more hinges on tall doors so they are never more than 600 apart. Settings: **Hinge cups** and the hinge cup rows on the **Machining** tab. The exact cup and dowel pattern comes from the **Hinge system** (Hardware page).
- **Hinge plate holes** in the cupboard ends or partitions, lined up with the hinges. Setting: **Hinge plate holes**. There is also a setting that forces one plate hole depth, whatever the hinge system says.

- **Assembly screw holes** (3 mm) through the ends into the bottoms, tops, rails and fixed shelves. Setting: **Assembly screw holes**, and **Screws no further apart than**.
- **Drawer runner holes** in the ends and partitions, in the pattern of the runner system you picked. **Drawer box fixing holes** are made for board drawer boxes.
- **Lift-up stay holes** for lift-up and flap-down doors, from the lift system you picked.
- **Handle holes** in doors and drawer fronts, from the handle picked for the job.

CabCarveCNC does not drill into board edges (no horizontal boring). Edge holes such as dowels into edges are done off the CNC.

Grooves

- **Back grooves (dados)** when the back style is **In grooves (dado)**: a groove in the ends, bottom and top that the back slides into. Settings: **Dado depth**, **Dado back setback**, **Dado clearance**.
- Any groove you add yourself in the board editor (see below).

Pockets and door routing

- **Door styles** (Materials > Door styles) hold the toolpaths that cut a routed front: the recess in a shaker door, the lines round each panel, V-bit grooves, edge profiles. A toolpath there can use a **Tool group** from the CNC page, and then every tool in the group runs in turn (for example a pocket cutter for the recess, a straight cutter round the edge, then a V-bit that sharpens the corners).
- **Order entry** lets each door have its own profiles (edge profile, panel groove, recess cutter), or none.
- **Finger-pull bevel**: on handle-less fronts you can have a 45° bevel on the back of the handle edge, cut with a 90° V-bit before the part is cut out. Settings: **45° bevel on finger-pull fronts** and **Bevel leaves this much edge**. A bevel cuts outside the part by as much as it is deep, so the Optimiser leaves extra room round these parts. If a bevel would still reach the next part, you get a warning.
- **Pockets** you add in the board editor (square, rounded or round ends, with a corner radius).
- **Rebates** and any pocket that reaches the edge of a board **run past the edge** by the cutter's radius + 2 mm. The cutter's round corner is then off the board, so no little lip is left at the ends of a rebate.

Parts with sharp corners (a strip cut at 45°, a pointed end) are cut out with the cutter going **round** the corner, never running on past it into the next part on the sheet.

Changing the machining on one board

Double-click a board to open the **board editor** and go to the **Machining** tab. It works like a drawing board: drag holes and grooves, add new ones, delete ones you don't want. Each machining step can also name its own **Tool** (a T number). Leave it blank and CabCarveCNC picks a tool by size. The changes stay with that board and flow through to the cut list, the Optimiser and the CNC files.

Which face goes up

The router cuts from the top only. So for each part the Optimiser looks at both faces and puts the face with the most work **up**. A recess counts for more than a groove, and a groove counts for more than a hole. If most of a part's work is on its other face, the part is laid **face down** on the sheet. Anything still left on the underside is **second-side work** (see [Second-side work](#)).

To choose for yourself, right-click a part on the Optimiser's sheet drawing and pick ↕ **Flip it – machine face down** or ↕ **Machine it face up**. **Face: let the optimiser choose** puts it back to automatic.

Tip Plain (slab) doors go face down so the CNC drills the hinge cups. Routed doors (shaker and the like) must go face up so the router can cut the face. Their hinge cups are then underneath, and they go on the Hinge press list.

Which tool does what

- A **hole** is drilled by the drilling head if it has a spindle that size. If not, it uses a drill of the same size from the tool changer. If there is no drill that size, it is **bored** (cut round in a spiral) with a router cutter that is smaller than the hole.
- A **groove** is cut with a cutter no wider than the groove, in as many side-by-side passes as it needs. A V-bit or profile cutter chosen for a groove cuts its own width in one pass.
- A **pocket** (recess) uses the toolset's pocket cutter, or the cutter the door style or board names.
- **Cut-outs** (part outlines) use the cut-out cutter. You can choose a different one for each board (see [Cut-out cutter by board](#)).

When nothing fits, the program is still made, but you get a line to check, for example *no tool for a 12 mm groove*, and that step is left out.

Careful A pocket narrower than its cutter can't be cut and is left out. Always pick a cutter that fits inside the pocket.

The CNC page

Click **CNC** in the row of page tabs. Along the top are its own tabs:

Tab	What it is for
Make & send	Make the programs and send them to the machine.
Toolpaths	How the cutter goes in, which way round it cuts, how small parts are held, corners and pockets.
Tool library	Every cutter and drill you own: sizes, speeds, feeds, shape, photo.
ATC toolsets	Which tool sits in which slot (T number) of the tool changer.
Panel tool groups	Router patterns run round each panel of a door (shaker recess and so on).
Edge tool groups	Edge profiles run round a door edge (round-over, chamfer and so on).
Tooling spreadsheet	Every tool in one table you can edit cell by cell, export or print.
Machine	The machine itself: where programs go, bed size, datum corner, post (program type), heights, air cut.
Machining	Hole and groove settings: shelf pins, hinges, plates, stays, screws, dados.

Tip These are **shop settings**: your standards for every job. Any of them can be changed for one job only on the **Job** page (Job settings). All the CNC settings are also listed together on the **Shop** page, tab **CNC & optimiser**. Some extra ones are only there, such as program names, gang drilling and cut-out cutter by board.

On the **Machine** and **Machining** tabs, press **Save shop settings** after a change. The **Toolpaths** tab and all the tooling tabs save on their own as you go. You will see "Toolpath settings saved" or "Tooling saved".

Setting up the machine (Machine tab)

Do this once, when you first set up the program, and again if the machine changes.

- 1 Open **CNC > Machine**.
- 2 At the top, pick the **Toolset loaded on the machine** (see [ATC toolsets](#)). The programs use its T numbers.
- 3 Fill in the rows below (the right-hand column explains each one), then press **Save shop settings**.

Setting	What it means
Cnc send folder (first line)	Where Send to CNC copies the programs: a shared folder on the machine's PC (for example <code>\\CNC-PC\Jobs</code>) or a USB stick (for example <code>E:\</code>).
Machine name	Shown at the top of every program.
Bed length (X) / Bed width (Y)	The cutting area. A sheet bigger than the bed is flagged when you make the files.
Stops / fence corner (X0 Y0)	The corner of the bed where the stops and fence are. This is where a sheet corner goes, and it is X0 Y0 for every program, for example <i>back right</i> . It is printed on the sheet prints and on flip-side instructions.
Flip-side programs for underside work	Yes = an extra program for each part that has work on its underside. No = a Hinge press list instead. See Second-side work .
Program type	The "post": the dialect of G-code your control reads. See below.
Also make air-cut (dry run) programs	Yes = a safe dry-run copy of every program. See The air-cut copy .
Air cut: lift every Z by	How high the air cut runs over the real cut (standard 30 mm).
File extension	The program file ending your control wants: <code>.nc</code> , <code>.tap</code> , <code>.gcode</code> and so on.
Z zero	Table / spoilboard or Top of the board . It must match how the machine is zeroed.
Safe height	The height the cutter travels at between cuts (general posts).
Safe height over the board (Woodtron) / Rapid down to (over the board, Woodtron)	For the Woodtron post: the travel height over the board top (standard 31.8), and how far above the board the fast drop stops before the cutter feeds in (standard 6.4).
Cut into spoilboard	How far through cuts go into the spoilboard so parts come free (standard 0.3).
Rough pass outside the line (onion skin)	With an onion skin, the first pass runs this far outside the line and the last pass cleans up on the line (0.5 is a common value).
Outline tool no. / Groove / pocket tool no.	Used only when no toolset is set up. With a toolset, its ticks decide (see below).
Part spacing, Turn parts, Optimiser time (s) and the offcut rows	Optimiser settings, kept here because they depend on the cutter. The gap between parts must be at least the cut-out cutter's width.
Label layout	Which label sheet or label roll the part labels are laid out for.

Program type (the post)

Different controls read slightly different G-code. The **Program type** picks the right one:

- **Woodtron (Syntec) – drilling head + tool changer**: for a Woodtron router with a Syntec control, a multi-spindle drilling head and an automatic tool changer. The drilling head runs first, then each router tool in turn. Arcs and safe heights are written the way that control expects.
- **Syntec, one program per sheet (tool changer)** and **Syntec, one program per tool (no tool changer)**: other Syntec-controlled routers.
- **Generic G-code, one program per sheet** and **Generic G-code, one program per tool**: plain G-code for other controls.

"One program per tool" is for machines without a tool changer. You get a separate program for each tool on each sheet (named `..._T3` and so on). Fit the tool, run that program, then fit the next tool.

Careful A new or changed post must always be proven with an air cut and a test board before real work. Never assume a post written for one machine is right for another.

Sheet view colours

At the bottom of the **Machine** tab. These are shop settings and save straight away.

- **Spoilboard / waste board** – the colour of the MDF base under the parts in the sheet drawings and the 3D sheet view.
- **Colour rules** – a part whose name has the word in it gets the colour. + **Colour rule** adds one; **Example rules** fills in backs green, ends white, tops and bottoms blue, shelves yellow. The first rule that fits wins, so put the more exact words first (for example "Drawer Bottom" above "Bottom").

Parts no rule fits show in their board's own colour.

The datum corner and Z zero

Every program measures from **X0 Y0**, the corner where a sheet sits against the stops. CabCarveCNC draws sheets with X along the sheet length and Y across it. The **Stops / fence corner** setting doesn't move anything in the program. It tells people where that corner is on *your* machine. The sheet prints (Optimiser >  **Print sheets** with **as on the machine** ticked) are turned so the stops corner is drawn where it really is when you stand at the front of the machine.

Z zero must match how you zero the machine. If the machine is zeroed on the spoilboard (table), choose **Table / spoilboard**. Through cuts then go **Cut into spoilboard** below zero.

Machines and posts

A **post** writes the programs the way your machine's controller wants them. The moves are the same for every machine; the post sets the rest – the lines at the start and end, the tool change, arcs, comments, line numbers and the file extension. The **Machine** tab shows the post in use; press **Machines & posts...** to change it.

- **Built in:** Woodtron (Syntec with drilling head and tool changer), Syntec, plain G-code, Mach3 / Mach4, GRBL (most hobby routers), LinuxCNC, UCCNC, MASSO, Centroid, Weihong NcStudio, handheld DSP controllers and Fanuc-style ATC routers. Several come as "one program per tool" for machines without a tool changer.
- **Pick one** on the left to read about it and see its **test program**, then press **Use this post**.
- **To change one**, press **Copy to change it....** In the copy you set the file extension, tool changer or not, arcs (I J or R), comments, line numbers, decimals and line endings, and type the lines for the start, the tool change, after a tool and the end. Fields in curly brackets are filled in: {title}, {safe_z}, {tool}, {rpm}, {tool_name} and the others listed under the boxes. The test program updates as you type. Press **Save**, then **Use this post**.
- **Write test program** puts a small test (a 200 × 120 cut-out 6 mm deep with round corners, then four 5 mm holes) in *CNC\Post test*. Run it as an air cut first – Z well above the board – and check the moves, the tool change and the spindle before cutting.

Tip Every machine is set up a little differently – a new post is always run as an air cut first. The CNC page also writes an **Air cut** copy of every program (Machine tab, *Also make air-cut programs*).

The tool library

CNC > Tool library holds every cutter and drill in the shop, whether it is in the machine or on the shelf. It comes with a starting list. As soon as you change anything it becomes your own list.

The list (left)

- Click a tool to see its details. Use ▲ / ▼ to move it in the list.
- + **Tool** adds a tool. + **Heading** adds a heading line (for example *** *Compression cutters* ***) to keep the list tidy. **Copy** makes a copy to start a similar tool from. **Delete** removes it, and it warns you first if a toolset or tool group

uses it.

- **Export...** saves the list to a file. **Import...** reads one back, for example from another PC.

A tool's details (right)

- **Name** and kind: **Cutter**, **Drill**, or **Form / profile cutter (one pass)**. A form cutter (V-bit, round-over and the like) always cuts to full depth in one pass with no side-by-side steps.
- **Tool parameters**: **Diameter**, **Stepover** (how far it moves over between passes when clearing a pocket), **Pass depth** (how deep each pass goes), **Plunge depth**, **Pocket ramp**, **Add for thru cut** (how far a through cut goes past the board) and **Add for blind bore**.
- **Feeds and speeds** (min – max): **Spindle speed** (rpm), **Feed rate** and **Plunge rate** (mm/min).
- **Application**: tick what the tool may be used for: **Roughing**, **Cutout**, **Drill**, **Dado / groove**, **Pocket**, **Dovetail**, **Sharp corners**, **CNC door / profile**. Also **Priority** and **Map T#**.
- **Tool shape & picture**: pick a **Shape** (**Compression cutter**, **Downspiral**, **Upspiral**, **Straight / hogging**, **Drill**, **V-bit / chamfer**, **Round-over**, **Cove**, **Ogee**, **Beading**, or **Custom (draw it)**) with its **Cutting length**, **Angle** (V-bits) or **Radius** (profile bits). A drawing of the cutter appears. For a custom shape, type the half-profile points and press **Draw it**. You can use a real photo instead: **Use a photo...** (and **Back to the drawing**).
- **Notes**: supplier, code, where it lives.

Tip The shape matters. A V-bit's angle sets how deep a V-Bit goes. A profile bit's shape is drawn in the tool group preview, and doors in 3D are shaped from it.

Careful Speeds and feeds are your call. Use the cutter maker's figures for your boards and spindle. Start slower on a new tool and turn the feed override up once it cuts cleanly.

ATC toolsets and T numbers

A **toolset** is the list of what is actually loaded in the tool changer: which tool is in slot T1, T2, T3 and so on. The programs call tools by these T numbers, so this list **must match the machine exactly**.

- 1 Open **CNC > ATC toolsets**. Pick a toolset from the list, or press **+ Toolset** (also **Copy**, **Rename**, **Delete**, **Export...**, **Import...**).
- 2 For each slot, type the **T#** and pick the **Tool** from your library. **+ Slot** adds a row, **▲** moves it up, **✕** removes it. Leave a slot **(empty)** if nothing is in it.
- 3 Tick the columns to say what the program may use that slot for (**Cutout**, **Pocket**, **Dado / groove**, **Drill ...**). The tool's own Application ticks are the starting point.
- 4 On **CNC > Machine**, choose it as the **Toolset loaded on the machine**.

How the ticks are used: cut-outs use the **first slot ticked Cutout**, pockets use the **first slot ticked Pocket**, and holes use a drill of the same size. A door style or tool group that names a tool that isn't in the toolset uses a loaded tool of the same size and kind. If there isn't one, you get a line *tool ... is not in the machine's toolset*.

Careful Whenever you change a cutter in the machine, change the toolset to match **before** making programs. A program that calls the wrong T number will plunge the wrong cutter, at the wrong size, into your board.

Cut-out cutter by board

Different boards cut best with different cutters (for example a 3-flute compression cutter in MDF, a 2-flute in particle board, a bigger cutter in 25 mm boards). On **Shop > CNC & optimiser**, the **Cnc cutout by mat** setting holds a short

list of rules. Each rule has some text found in the board's name (or * for any board), a "from this thickness" value, and the T number to use. The first rule that matches wins. If none match, the toolset's cut-out cutter is used.

With **Gap = cutter + extra** turned on, the Optimiser spaces parts by that board's cut-out cutter plus **Extra on the cutter for the gap** (for example 10 mm cutter + 3 = 13 mm). This leaves room for a rough pass outside the line.

Tool groups (door patterns and edge profiles)

A tool group is a "recipe" of tools run one after another along the same line. Groups are used by **Materials > Door styles** (the toolpath's **Tool group** column) and by the per-door profiles in Order entry.

- **Panel tool groups** run round each panel of a door. For example a shaker recess: a hogging cutter clears the recess, a straight cutter cleans the edge, and a 90° V-bit cuts the bevel and lifts out at the corners to leave them sharp.
- **Edge tool groups** run round the door edge: a round-over, a chamfer and so on.

- 1 Open **Panel tool groups** or **Edge tool groups**. Pick a group (★ favourites are listed first), or press + **Group** (also **Copy**, **Rename**, **Delete**, **Export...**, **Import...**). Tick ★ **favourite** for the ones you use most.
- 2 Choose **On edge** or **On centre**. This says whether the **Offset** is measured to the tool's edge or to its centre line.
- 3 Add rows with + **Tool**, in cutting order. For each row set the **Tool**, **Depth** (how deep the tip goes), **Offset**, and tick **Thru cut**, **Sharp corners**, **Ramp** or **Flip side** as needed.
- 4 Check the cross-section picture. It shows each tool on an 18 mm board at its offset and depth, numbered in order.

Careful Edge profiles run on the finished edge line. The first time you use a profile (or after changing the cutter), cut one on an offcut and check the profile sits right. If it doesn't, adjust the group's **Offset**. CabCarveCNC reminds you of this when a job has edge profiles.

The tooling spreadsheet

CNC > Tooling spreadsheet shows every tool in one table: name, diameter, stepover, pass depth, plunge depth, through and blind amounts, spindle, feed and plunge (min and max), applications, priority and Map T#. Click any cell to change it. **Export...** / **Import...** share the list. **Print** gives you a sheet to pin up beside the machine.

The drilling head and gang drilling

With the Woodtron post, holes the drilling head has a spindle for are drilled by the head **first**, before any router tool. This is faster and saves tool changes. Each spindle has a B code, a diameter and an offset from the head's reference point. The program moves the head so the right spindle lands on the hole. The standard head set-up has 5, 3, 20, 10, 35 and 8 mm spindles. It is held in the **Cnc drill head** setting (Shop > CNC & optimiser).

Gang drilling: rows of 5 mm holes 32 mm apart (shelf pins, runner holes) are drilled 2, 3 or 4 at a time along X, or 2 at a time along Y, the way the head is built to work. Setting: **Cnc gang drill** (yes / no).

Careful Spindle offsets and gang directions must match **your** head exactly. If a hole lands in the wrong place, or a gang row comes out with a hole missing or one extra hole further away, stop. Set **Cnc gang drill** to *no* (every hole one at a time), and check the head settings against the machine's manual before going on.

Toolpath settings (how the machine cuts)

CNC > Toolpaths shows each choice as a small picture. Click the picture you want and it saves straight away. Hover over a choice for a longer explanation. **Back to the standard settings** puts them all back. To see the result, open the Optimiser, pick a sheet and click **G-code**.

Cut-outs: going in

- **Cutter goes in: Straight down, Ramp** (slopes down along the cut), or **Zigzag ramp** (down and back along the cut). *Why*: ramping is easier on the cutter and spindle than plunging, and cutters last longer.
- **Ramp length** (standard 50 mm).
- **Lift straight out** or **Ramp out** at the end of the cut.

Cut-outs: direction and corners

- **First passes climb / First passes conventional**, and the same for the **Last pass**. Climb means clockwise round the outside of a part. *Why*: climb cutting usually gives a cleaner edge on panel products. On some boards a conventional last pass leaves a cleaner bottom edge.
- **Square past the corner** or **Roll round the corner** (the cutter rolls round outside corners on an arc).
- **CAD curves as true arcs (G2 / G3)** (standard) or **as short lines**. With arcs on, every curve in a CAD program (round corners, circles, letters, pocket rings) is written as arcs in the post's own form – R on the Woodtron – which makes smaller programs and smoother curves. Moves that change depth (ramps, tabs) stay straight lines.

Cut-outs: order on the sheet

- **Part by part** finishes each part before moving on. **A depth at a time** takes every part down one pass, then the next. *Why*: the sheet stays stiff and parts stay put for longer.
- **Which part first: Smallest parts first (vacuum holds best), Small parts first, shortest travel, Large parts first, By cupboard**, or **Along the sheet, left to right**. *Why small first*: small parts are cut while the whole sheet is still sealing the vacuum, so they are held their best.

Small parts: onion skin or tabs

Once a small part is cut free, the vacuum may not hold it and it can move or fly. You have two ways to hold it:

- **Skin** (onion skin): each part is cut down to a thin skin (standard 0.8 mm), and then a last pass over the sheet cuts the skin off once everything else is done. Choose **Skin – small parts** or **Skin – every part**.
- **Tabs**: little bridges left on the outline, which you break off and sand. Choose **Tabs – small parts** or **Tabs – every part**.
- **Nothing**: parts are cut straight through.

Settings: **Skin / tab thickness**, **Tab length**, **One tab per** (about one tab for each this many mm of side). **Small = under (mm²)** (standard 90 000, which is 300 × 300) **or narrower than** (standard 130) decide what counts as small. **Feed on small parts (%)** slows the cutter down on small parts (standard 80 %).

With a skin you can also set **Rough pass outside the line (onion skin)** on the Machine tab, so the roughing pass stays just off the line and the final pass cleans up on it.

Grooves and pockets: corners

- **Square-corner relief: Round (as cut), T-bone** or **Dog-bone**. A round cutter always leaves round inside corners where a groove stops inside a board, or in a sharp pocket corner. *Why relief*: a little extra cut into the corner lets a square part sit right in.
- **Plunge into grooves** or **Ramp into grooves**.

Pockets

- **Pocket pattern: Rings from the edge in** or **Zigzag, then round**.
- **Round corners at least:** rounds pocket corners to at least this radius (0 = as drawn).
- **Cut-outs bigger than this: round the inside only** (for example a sink hole in a panel). Smaller holes are cleared out completely. Bigger ones are cut round the inside so the waste drops out (0 = always clear).

Careful If big waste pieces drop out, make sure they can't be caught by the cutter and thrown. Stop and clear them, or keep them held (tabs).

Feed % per material

A hard or dense board may need slower feeds than the tool's standard ones. Rather than changing every tool, set a feed percentage on the board:

- For the board itself: **Materials > Boards**, column **CNC feed %** (blank = 100).
- For one optimiser run only: **Optimiser > Material** tab, **Feed rate %**.

Both the feed and the plunge rates in that board's programs are scaled. For example, 80 = 80 % of the normal feeds.

Making the CNC files

You can make the files from either place. Both do the same thing:

- **Optimiser > Sheets** tab: ► **Make CNC files (G-code)**, ⬆ **Send to CNC**, 📁 **Folder**.
- **CNC > Make & send:** the same buttons, plus a room picker (**Whole job**, one room, or **Not in a room**) and **Optimiser...** to go back to the sheets.

- 1 Optimise the job and look over the sheets: mark offcuts, and turn or flip parts if you need to.
- 2 Press ► **Make CNC files (G-code)**.
- 3 Read the result under the buttons. It tells you the folder, how many sheets, and any **things to check**. Read every one of them.
- 4 Press 👁 **Look at it** next to a program (CNC page), or open a sheet in the Optimiser and click **G-code**, to see the toolpaths drawn over the sheet.

What gets written

The files go into `Documents\Cabinet Studio\CNC\<job name>` (with `- <room>` added when you make one room):

- **One program per sheet**, or one per tool per sheet on a "per tool" post.
- **A DXF drawing per sheet:** the sheet, the part outlines, holes and pockets on named layers, in case you need it in other software.
- **labels.html** (open it and print the part labels, with barcodes) and **labels.csv**.
- **read me.txt:** machine, post, Z zero, and the list of things to check (or "No problems.").
- **Air cut** folder: the dry-run copies (when air cuts are on).
- **Hinge press list.txt** or a **Flip side** folder, when parts have underside work.

Making the files again replaces CabCarveCNC's own files from last time. Copies you renamed yourself are left alone. Offcuts that this job uses come off the shop's offcut list at this point. You can put them back on the Optimiser's **Material** tab with **Put back**.

Careful If you change the sheets after making the files, the Optimiser shows **⚠ The sheets changed since the files were made – make them again.** Always make them again before cutting. A sheet laid out by hand with parts overlapping or off the board gets **NO PROGRAM.** Fix it in the Optimiser first.

Program names

Many controls (Syntec included) want short program names made of letters, numbers and `_` only, with no spaces. CabCarveCNC's standard is short names:

- `JOBNAME_WHMR16_S01.nc` : job, board code, sheet 01.
- `AIR_JOBNAME_WHMR16_S01.nc` : its air-cut copy.
- `JOBNAME_WHMR16_S01_P3_FLIP.nc` : a flip-side program for part 3 on that sheet.
- `..._T3` is added for "one program per tool" posts.

If your control is happy with spaces, the setting **Cnc names** (Shop > CNC & optimiser) can be changed to *long*, for names like `White HMR 16mm - sheet 01.nc`.

Send to CNC

- 1 Make sure the machine PC is on and its shared folder can be reached, or that the USB stick is in.
- 2 Press **Send to CNC**. If the sheets have changed since the files were made, they are made again first.
- 3 The programs, labels and text files are copied to `<send folder>\<job>`. The **Air cut** and **Flip side** folders go with them.

If the send folder isn't set, CabCarveCNC offers to take you to **CNC > Machine**. If it can't reach the folder you will see "Cannot reach ... – is the machine PC on / the USB stick in?".

The air-cut copy

With **Also make air-cut (dry run) programs** on (the standard), every program gets a twin in the **Air cut** folder. It has exactly the same moves, but every height is lifted by **Air cut: lift every Z by** (standard 30 mm), so the cutter runs the whole job in the air above the board and nothing is cut. Its first line says *AIR CUT - DRY RUN*. Moves in machine coordinates (such as going home) and the sheet-size line are left as they are.

Why: it is the safest way to see that a new post, a new toolset or a new machine does what you expect: the right tool changes, the drilling head dropping the right spindles, the cutter following the outlines, and everything inside the sheet.

Careful An air cut is only safe if Z zero is set correctly. Keep your hand on the stop button anyway. If the cutter heads lower than you expect, stop.

Second-side work: flip-side programs or the Hinge press list

Some parts have work on both faces, for example a routed shaker door with hinge cups on the back. The router can only cut the face that is up, so the rest needs a second step. Pick the one that suits your shop with **Flip-side programs for underside work** (Machine tab):

- **Yes, flip-side programs:** for each such part you get an extra program in the **Flip side** folder. After the sheet is cut, roll the part over towards you (its ends stay at the same ends of the machine), push it into the stops corner where a sheet corner goes, and run its program. That program only does the holes, grooves and pockets, with no cutting out. The instructions are written at the top of the program.

- **No, Hinge press list:** instead you get **Hinge press list.txt** in the job's CNC folder. It lists each routed door whose hinge cups are underneath: its label code, size, board, cupboard, and the cup positions from the door ends and in from the hinge edge. Use it to bore them on a hinge boring machine. These parts' labels say **HINGES: PRESS**.

If other work (not hinges) is left underneath, you get a line to check and the label says how many steps are on the second side. In the Optimiser, the sheet bar shows **second-side ops** in red, and the 3D sheet view draws underside work in blue.

Careful Flip-side programs depend on your stops being square and accurate. Test one on a scrap part before trusting it on doors.

A safe first cut

Follow this every time something is new: a new machine or post, a new toolset, a changed drilling head, or the first job after an update. Print the sheets first (Optimiser >  **Print sheets**, with **as on the machine** ticked) so you have the part layout and the stops corner in your hand at the machine.

Before anything

- 1 Check the toolset against the machine, slot by slot: every T number, the right cutter in it, the right diameter.
- 2 Check the machine settings: Z zero (table or board top), the datum corner, bed size.
- 3 Keep a program from a job that has already been cut correctly on this machine handy, to compare with on the control's screen if anything looks odd.
- 4 Load the program on the control and look at its graphic preview: the parts are inside the sheet, the holes are inside the parts, and nothing runs past the sheet edge.

Step 1 – air cut

- 1 Run the program from the **Air cut** folder, with no board or with a board held down.
- 2 Watch the drilling head: the right spindles drop, and the hole positions look like a real cupboard end.
- 3 Watch the tool changes: the right T numbers, the spindle starts, the router comes down.
- 4 The cutter should stay about 30 mm above where it would cut, follow the outlines, and finish with the vacuum off.
- 5 If anything looks odd, stop and write down the line number the control shows.

Step 2 – test board, then a real sheet

- 1 Surface and zero the spoilboard the way you normally do.
- 2 Turn the feed override down low (for example 30–50 %) for the first parts, with your hand on the stop.
- 3 Cut the test board (below), or the first sheet of a simple job (one base cupboard and one door is ideal).
- 4 Check every part: sizes with a tape or rule, hole positions against the cut list and drawings, hole and groove **depths** with a depth gauge, and that the onion skin has been cleaned off.
- 5 Assemble the cupboard: the holes must line up.
- 6 If gang drilling is on, check every shelf-pin row: the right number of holes, 32 apart, on the marks.

Careful Never leave a new program running unattended. Stay at the machine with your hand near the stop until the whole sheet has been cut correctly at least once.

The test board

A ready-made machine test job is supplied: **CNC TEST 2 - Test board 600**. It is one 600 × 600 board of 18 mm MDF that exercises almost everything the machine does:

- 100 × 100 pockets at different depths, one with each router cutter.
- A shaker-style recess with a V-bit and sharp corner lifts.
- A drilling-head hole of every spindle size, a gang row along X, a gang pair along Y, and a through hole.
- Holes bored with router cutters (15, 25 and 50 mm).
- Grooves 3, 6, 8 and 16 mm wide, and rebates on the front and right edges.

Its folder, `Documents\Cabinet Studio\CNC\CNC TEST 2 - Test board 600`, holds the program, its air cut, labels, and the plan: **TEST BOARD PLAN.pdf** (also as .html and .png) and **TEST BOARD POSITIONS.csv**. The plan gives every feature's position, size, depth and tool, measured from the board's **front-left corner** on the top face. The front edge has the 12 mm rebate and the right edge has the 20 mm rebate, so you can tell which way round the board is.

- 1 Print **TEST BOARD PLAN.pdf**.
- 2 Air cut the program from its **Air cut** folder.
- 3 Cut the board.
- 4 Measure each numbered feature against the plan: position, size, depth. Tick them off.
- 5 Anything out? Note which feature, which way and by how much. That tells you whether it is a tool (diameter or length), a spindle offset or a setting.

When something is listed to check

Message (in short)	What to do
sheet ... is bigger than the bed	Check the board's sheet size (Materials) and the bed size (Machine tab).
... is bigger than the sheet	That part won't fit any sheet. Split it, or use a bigger sheet.
... parts not on a sheet yet	The Optimiser has unplaced parts. Place them or let it run again.
no tool for a ... mm hole / groove, no pocket tool	Add a suitable tool to the loaded toolset and tick what it may be used for, or change the machining.
tool ... is not in the machine's toolset	A door style, tool group or board names a tool you haven't loaded. Load it, or pick another.
finger-pull bevel on ... reaches ...	Move that part to a sheet edge, or give it more room.
Edge profiles ... cut one on an offcut first	Test the profile on an offcut (see Tool groups).
... holes / grooves on the underside of parts that are not hinges	Plan how you will do them (flip the part, or by hand); the labels show which parts.
... overlap or are off the board – NO PROGRAM	Fix the hand layout in the Optimiser.

14 The CAD tab (draw your own parts)

The **CAD** tab is a drawing board for parts that aren't cupboards: signs, brackets, curved panels, templates, cut-outs, one-off shapes. You draw the part (or bring in a DXF or SVG drawing), put toolpaths on it, check it in 3D, and make a program for your CNC. You can also drop the finished part into a job so it gets nested and cut with the job's boards.

Tip The machine side is always taken from your **CNC** page: the tool numbers come from the toolset loaded on the machine, and the program header, tool changes and safe heights come from your post. You can't break the machine set-up from the CAD tab. Set up the CNC page first (see [CNC machining](#)).

The screen

Click **CAD** in the row of page tabs. The screen has three parts:

- **Left panel – the drawing tools:** the drawing's name and file buttons, then a strip of tabs down its edge: **Job** (the board), **Draw**, **Edit**, **Arrange**, **Pictures**, **3D** and **Layers**. Each tab shows its picture buttons. Hover over a button to see its name. Buttons that need a shape picked are greyed out until you pick one.
- **Middle:** the drawing. The pale rectangle is the sheet, and the two lines crossing are X0 and Y0. Along the bottom are the snap and view options and a read-out of the mouse position.
- **Right panel: Toolpaths** (picture buttons for each kind of cut), the settings for the picked toolpath, and  **Make program**, **3D preview** and **→ Add to the job as a part....**

 **Own window** (in the bar under the drawing) opens CAD in a window of its own, with no room tabs or job buttons – the whole screen for drawing. It opens the last saved drawing, so save first. On the CAD page the job's name / New / Open / Save / undo buttons at the top are hidden (the CAD tab has its own), and   in the bar under the drawing undo and redo drawing changes.

Hiding the side columns

For the biggest drawing, hide the columns:

- The buttons under the drawing say what they do: **◀ Hide drawing tools / ▶ Show drawing tools** and **Hide toolpaths ▶ / Show toolpaths ◀**.
- On each edge of the drawing is a small handle – click it to hide the column on that side.
- A hidden column leaves an orange tab on the edge – **Drawing tools** on the left, **Toolpaths** on the right. Click it to bring the column back.

Moving round the drawing: roll the mouse wheel to zoom in on the pointer, and drag with the right or middle button to move the view.  **Fit** fits the whole sheet back in the window.

Starting, saving and opening drawings

- Type a name in the **Drawing name** box at the top left. A red ● beside it means there are changes that aren't saved.
- **New** starts a clean drawing (it asks first if the current one isn't saved).
- **Save** (or **Ctrl+S**) saves it in `Documents\Cabinet Studio\CAD`.
- **Open...** lists your saved drawings with their dates. Click one to open it, or **X** to delete it.
- The CAD tab opens on the last drawing you used.

Sheet size and material

Open **Sheet / material** on the left and set:

- **Length (X)** and **Width (Y)**: the board you will cut from (standard 2400 × 1200).
- **Thickness**: the board thickness. "Through" depths use it.
- **Material**: a name, for example *MDF 18*. It goes in the program header, and it is used to suggest a board when you add the part to a job.

X0 Y0 is the sheet corner the machine's datum is on, and Z zero is the same as your shop's machine setting. In other words, the drawing sits on the bed exactly the way a nested sheet does.

Careful If the sheet is bigger than the machine bed, the program will list it as a problem. Don't cut until the sheet fits.

Drawing shapes

Pick a tool under **Create vectors** (or Select / Edit nodes / Trim ... under **Edit objects**). Hover over any button to see what it does.

Button	Tool	How to use it
	Select / move	Click a line to pick its shape. Drag to move it. Drag a box to pick several (Shift adds to the pick).
	Edit nodes	Drag the points. Drag the  in the middle of a side to bend it into an arc. Double-click a side to add a point.
	Lines / polyline	Click each point. Double-click or press Enter to finish, or click the first point again to close the shape.
	Curve	Click the points the curve passes through. Double-click or press Enter to finish, or click the first point to close it. It comes out as a smooth curve; shape it afterwards by dragging its handles in node editing.
	Rectangle	Click two corners. Set a Corner radius first if you want: round , inside (cove) or chamfer .
	Circle	Click the centre, then a point on the edge.
	Ellipse	Click the centre, then a corner of its box.
	Polygon	Click the centre, then a corner. Set Sides / points first.
	Star	Click the centre, then a point. Set the points and the inner size (%).
	Arc	Click the start, then the end, then a point the arc passes through.
	Fillet / chamfer	Choose Fillet radius or Chamfer and a size, then click near a corner.
	Measure	Click two points. The distance, across, up and angle show in the status bar.

Typing exact points

While drawing, you can type a point in the **Point** box and press **Enter** instead of clicking:

- **100,50**: the point at X 100, Y 50.
- **@20,0**: 20 along X from the last point.
- **@300<45**: 300 long at 45° from the last point.

Exact shapes

Open **Exact shapes** to add a shape by its sizes: **Rect** width × height, or **Circle Ø**, placed **at X / Y** by its **corner** or its **centre**. Then press **Add**.

Tip Closed shapes have an inside and an outside, so you can cut them out, pocket them or cut holes in them. Open lines can only be engraved or cut **on the line**. A picked shape shows a small dot at its start point, which is where the cutter starts.

Text

Pick **T** and click where the words start. Type the words (Enter starts a new line), pick any **font** on this PC and its **style** (Bold, Italic ...), the **height** of the capital letters, **letter spacing** (% of the height, minus = closer), **line spacing** and how the lines **line up** on the point you clicked (left, centre, right). The box shows the words as you type. The letters are ordinary closed shapes, so any toolpath works on them – V-Bit for signs, pocket, profile or engrave. Letters with holes (O, A, B) keep their holes.

A text block stays together as a group. Click it once to pick all of it, and **double-click** it (or press **↖ Text**) to change the words, font or size. It stays where you moved it. **Ungroup** turns it into plain shapes, after which it can no longer be changed as words.

Groups

Pick several shapes and press **Group** (Ctrl+G) to keep them together: one click then picks the whole group, for moving, sizing and toolpaths. **Ungroup** (Ctrl+Shift+G) lets them be picked one by one again. Node editing still works on one shape of a group.

Trim and extend

✂ Trim: click the bit of a line you want gone. It is cut away up to where other lines cross it on each side; a closed shape opens up, and an arc stays a true arc. A line nothing crosses goes completely. Toolpaths on the line move to the pieces left.

→ **Extend**: click near the end of an open line and it carries on, straight, until it meets the next line or circle. (An end that is an arc is not extended.)

Dimensions

↔ **Dimension**: click two points (they snap to corners, middles and centres), then click where the size line goes. Pick **along the points**, **across (X)** or **up (Y)** in the box on the left first. Sizes are for drawings only – they are never cut. In Select, click a size to pick it (Delete removes it) or drag it to a new place. **Sizes** in the bar under the drawing shows or hides them, and **Print** prints the drawing with its sizes in black on white, fitted to the page.

Layers

Open **Layers** on the left. The ticked round button is the layer new shapes go on. Each layer has a **colour** for its lines,  to show or hide it and  to lock it (shown, but it can't be picked or moved – handy for a template you draw over). ← moves the picked shapes onto that layer, **+ Layer** adds one, double-click a name to rename it, and **X** deletes an empty layer. DXF drawings keep their own layers when imported. Hidden shapes still cut if they are in a toolpath.

Importing drawings (DXF, SVG, PDF) and tracing pictures

1 Press **Import...** and pick a **.dxf**, **.svg** or **.pdf** drawing, or a picture (**.png**, **.jpg**, **.bmp**, **.gif**, **.webp**) to trace.

- 2 The shapes come in and are picked. Pieces whose ends meet are joined into one shape. If the drawing lies off the sheet, it is moved onto it.
- 3 Read the status bar. It says how many shapes came in, how many pieces were joined, and how many shapes are **still open** (they have gaps).
- 4 Close any gaps: use **Join**, or drag the end points together in node editing, or use **Close**.
 - **DXF**: lines, polylines, arcs and circles come in with their arcs kept as true arcs. Curves are followed closely.
 - **SVG**: paths and basic shapes come in, scaled from screen units (96 per inch) to millimetres.

PDF drawings

A box shows the page with the lines it found. Pick the **Page** (when there are several) and set the **Drawing scale**: a plan printed at 1:20 – type **20** and it comes in full size (1 = as printed). Untick **lines** or **filled shapes** to leave those out (filled shapes are often hatching or solid blocks). Curves come in as real curves you can node-edit, and the page's white background, clip outlines and repeated shapes are left out. **Text** in a PDF is letters, not lines, so it isn't brought in – the box tells you how much there was.

A **scanned** drawing is a picture inside the PDF, so it has no lines: the box says so. Press **Trace it as a picture...** to trace it (below).

Tip Check the size after bringing in a plan: measure a dimension you know. A PDF printed "fit to page" isn't at its true scale – fix it with **W / H** and **keep proportions**.

Tracing a picture

A picture (a logo, a sketch, a scan) is turned into closed outlines. The box shows the picture with the outlines in red, and redraws as you change:

- **Threshold**: what counts as ink. **auto** picks it; slide it to take in lighter or only darker parts.
- **light on dark (invert)**: for white lines on a dark picture.
- **Smoothness**: how far (in picture pixels) the outline may be from the pixels – bigger gives fewer points and smoother lines.
- **Corners**: corners sharper than this angle stay sharp; the rest of the outline becomes smooth curves. Untick **smooth curves** for straight lines only.
- **Specks**: dots smaller than this (picture pixels²) are left out.
- **Width**: how wide the traced result is in mm (the height follows).

Press **Bring in the outlines**. Holes (the middle of an O) come in as their own outlines, so a pocket or V-Bit leaves them standing. Big pictures are traced at 1600 pixels across.

Careful Always check the size after importing: pick the shape and look at **W** and **H**, or measure a known distance. Drawings saved in inches, or SVGs from programs that use a different scale, can come in the wrong size. Fix them with **W / H** and **keep proportions** ticked.

Editing shapes

Transform objects

Pick one or more shapes, and **Transform objects** shows:

- **X, Y** (lower-left corner) and **W, H** (size). Type new values to move or resize. With **keep proportions** ticked, changing one size changes the other to match.

- **turn**: an angle, then the turn button (anticlockwise; a minus angle turns clockwise), about the middle.
- The two mirror buttons mirror left to right and top to bottom; the next one moves the shapes so their lower-left corner is at 0,0.
- Line-up buttons: left, centres across, right, bottom, centres up, top, and $\oplus$ middle of the sheet. With one shape picked, it lines up on the sheet. With several, they line up with each other.

Edit objects, offset and layout

- **Copy** (**Ctrl** + **D**), **Delete**, **Group / Ungroup**.
- **Offset** (under Offset and layout): makes a new shape a set distance outside the picked one. Tick **inside** to go inwards, and **sharp** to keep corners square instead of rounded. Handy for a frame, a clearance line or a second outline.
- **Weld**: joins overlapping closed shapes into one outline (where they overlap is filled in).
- **Subtract**: the biggest picked shape minus the others.
- **Overlap**: keeps only the area where they all overlap.
- **Join**: open lines whose ends meet become one shape (closed if they go all the way round). **Join gap** sets how close two ends must be to count as meeting (0.1 to start). Ends further apart: right-click an end – **Join to the nearest end** (see Nodes below).
- **Close**: adds a line back to the start of an open shape.
- **Reverse**: changes the direction of a shape.
- **Array...**: copies in **Rows / columns** (how many across and up, and the spacing) or **Round a centre** (how many copies, over what angle, about which centre).

Node editing: points, arcs and curves

Double-click a shape (or pick it and choose the node edit button) to edit its points:

- Squares (■) are the points. Drag them, or click one and type its **X / Y**.
- The $\diamond$ in the middle of a straight or arc side bends that side into an arc. Drag it out or in. Drag it back flat and the side goes straight again.
- A **curve** side has two small open squares (its handles) on lines from its points. Drag a handle to shape the curve. At a smooth point the handle on the other side turns with it, so the curve stays smooth; hold **Shift** while dragging to make a corner there. Moving a point takes its handles with it.
- Double-click a side to add a point there.
- **Drag an open end onto another open end** (it snaps) and the two lines join into one.

Right-click a point or a side for the node menu. Each item has a letter: with the mouse over a point or side in node editing, just press the letter.

Key	On a point	On a side
D	Delete point	Delete this side
S	Smooth point – both sides become curves with their handles in line	
I / M		Insert a point here / in the middle
C	Cut vector here (a closed shape opens; a line splits in two)	Cut vector here
P	Make start point	
L / A / B		Make it a line / an arc / a curve
F	Round this corner (fillet radius)	
H / V	Mirror the shape horizontal / vertical	

E	Close vector with a line (or: move the end onto the start)	
J / K	On an open end: join to the nearest open end – moved onto it (J) or with a line (K)	
X	On an open end: extend to the next line	
R		Reverse direction
N	Leave node edit mode	

In **Select** mode, right-click a shape (or the picked shapes) for **Group / Ungroup**, Weld, Subtract, Overlap, Join, Close, Copy, Delete, Mirror, Reverse and Edit nodes. In node editing you get the node menu above; on empty drawing, **Join every open line whose ends meet**. A right-*drag* still moves the view.

Tip After **Trim**, the pieces left are open lines. To make a closed shape again, pick them and press **Join**, or right-click an end and **Join to the nearest end**. Or skip the trimming: pick the overlapping closed shapes and press **Weld**.

Tip Set the start point where a small mark won't matter. The cutter goes in there, and on some boards that leaves a slight witness mark.

Snaps

Along the bottom of the drawing:

- **Grid** (with its size box): points snap to the grid.
- **Points**: points snap to the ends, middles and centres of shapes, and to the sheet corners and middle. A small square shows when it snaps.
- **Toolpaths**: shows or hides the toolpath lines. **Cutter width** shows how wide each cutter cuts.

Keys

Ctrl + Z / Ctrl + Y	Undo / redo
Ctrl + C , Ctrl + V , Ctrl + D	Copy, paste, duplicate
Ctrl + A	Pick everything
Del	Delete the picked shapes (or the picked point while editing nodes)
Arrow keys	Nudge the picked shapes (Shift = 10 times further)
Esc	Finish or cancel the shape being drawn, or drop the pick and go back to Select
Ctrl + S	Save the drawing

Toolpaths

A toolpath tells the machine what to do to the shapes: cut them out, pocket them, drill them and so on. The list on the right is the **cutting order**: the top one runs first.

- 1 Pick the shapes (click them, or drag a box round them).
- 2 Press one of + **Profile**, + **Pocket**, + **Drill**, + **V-Bit**, + **Engrave**, + **Quick engrave**.
- 3 A sensible tool is chosen from the loaded toolset. Change any settings below the list.
- 4 The toolpath is drawn on the shapes straight away in its own colour. Any problem shows a .

In the list: the tick box turns a toolpath on or off for the program, ▲ / ▼ change the cutting order,  copies it, and ✕ deletes it. Click a toolpath to see its settings and its shapes. **Use the picked shapes** moves it onto whatever is picked now.

Tip Cut in a sensible order: drill and pocket first, cut the inside holes next, and cut the part out last. The part then stays held by the sheet for as long as possible.

Settings every toolpath has

- **Name** and **Tool** (the list shows the T number, name and diameter of each tool in the loaded toolset).
- **Depth**: how deep, measured from the top of the board. **Through** sets it to the board thickness, and the shop's "cut into spoilboard" amount is added.
- **Start depth**: start this far down (for example to cut only the bottom part of a step).
- **Direction**: **Shop setting**, **Climb** or **Conventional** (not on drilling).

Profile

Cuts along or round shapes.

- **Cut: Outside (a part)** keeps the inside the right size, **Inside (a hole)** keeps the hole the right size, and **On the line** runs the cutter centre on the line (for grooves, or for open lines).
- **Leave**: extra left on for a clean-up pass later.
- When the picked shapes include holes inside a part, one profile toolpath cuts the holes first and the outside last.
- **Tabs** – tick **hold the part** to leave little bridges that stop the part moving when it is cut free. Set how many tabs, how **long** and how **thick**. Break them off and sand afterwards.
- **Last pass – separate**: every pass leaves the amount you set on (0.5 to start), then one more pass at full depth takes it off for a clean edge. **reverse** runs that last pass the other way round.
- **Corners – sharp outside corners** (outside cuts): the cutter goes round outside corners on a mitre so they stay sharp, instead of rolling round them.
- **Leads: Straight** or **Arc** – the cutter goes down in the waste and comes in along the lead (10 long to start), so it never plunges on the finished edge, and goes back out the same way. **Overcut** carries on past the start point before leaving, so there is no mark where the cut met. Leads always go on the waste side (outside a part, inside a hole).
- **Start at: the longest side** (room for a ramp), **where the shape starts** (the dot on a picked shape), or **nearest to X Y**.
- **Order: holes and small bits first** (the outside last, so the part is held while the holes are cut) or **as the shapes were picked**.
- **Passes** (profile and pocket): blank = by the tool's pass depth; a number = that many equal passes; or type the depths of the passes before the last, e.g. **6, 12**.
- Under **Speeds, feeds & passes, Into the cut** adds **Spiral**: the cutter goes down all the way round every lap and does one clean-up lap at the bottom – no plunge marks. The **Ramp** can be a length or an angle (e.g. 5°: as long as a pass needs at that slope).

Careful A small part cut right through can be thrown by the cutter. Use tabs (or the shop's onion skin) on anything small.

Pocket

Clears out the inside of closed shapes to a depth.

- **Clear by: Rings (offset)** follows the shape of the outline in rings, one inside the next, and **Lines (raster)** goes back and forth at an angle you choose.

- **Leave:** stock left on the walls.
- A shape inside another shape is left standing (an island). For example, pocketing a frame shape only clears the frame.
- With **Lines (raster)**, **edge pass** runs one ring round the edge **last** (a clean wall), **first**, or **none**.
- **Clearance tools** – see below.

Clearance tools (pocket and V-Bit)

Clear the bulk with a big cutter, then let a smaller one do only what the big one couldn't reach – the same.

- Press + **Add a clearance tool** as many times as you like. Each one gets its own **tool**, **Rings** or **Lines** (with the line angle), **direction** (as the toolpath, climb or conventional) and **ramp** (blank = the toolpath's *Into the cut*, **0** = straight down, a number = ramp that long).
- The biggest cutter always goes first, whatever order you add them in. Each next one only cuts where the ones before couldn't get (narrow slots, tight corners), plus enough room to get there.
- Each clearance tool is its own toolpath in the program, named like **Pocket 1 [Clear 1]**, and is cut **before** the toolpath it belongs to. The toolpath list shows them in front of the main tool, e.g. **T10 + T4**.
- **Pocket:** the pocket's own tool then cleans up what is left and runs once round all the walls, so the walls are cut by one tool.
- **CabCarve:** they clear the flat bottom (set a **Flat depth**). The V-bit then carves the sloping sides.
- A clearance tool with nothing left to cut, or one that doesn't fit anywhere, is left out with a $\triangle$ note.

Drill

Drills circles at their centres.

- A circle the same size as a drill is drilled with it. A circle **bigger** than the tool is bored round with a cutter. A circle **smaller** than the tool is drilled at the tool's size, and you get a warning.
- **Peck every:** drill in steps of this depth, lifting out each time to clear the chips (blank = no peck).

Drill toolpaths on the CAD tab use the router's tools, not the multi-spindle drilling head.

Engrave

Runs the tool along the lines at a set depth: lettering outlines, decoration, marking lines. It works on open and closed shapes.

CabCarve

Uses a V-bit. Where the shape is wider the bit goes deeper, so you get crisp lettering, signs and sharp inside corners.

- **Flat depth:** leave it blank for a full V (as deep as the shape is wide), or set a limit so wide areas get a flat bottom at that depth.
- **Clearance tools:** flat cutters to clear those wide flat bottoms quickly (see above). With none, the V-bit does the flat bottoms in lines.
- **Corner sharpen** (on to start): after the clearance tools, the V-bit cleans the corners of the flat area they couldn't get into. Turn it off and you get a $\triangle$ that a little is left in the corners.
- **Start at the shapes' start points:** each shape's carving starts at its own start point (the dot on a picked shape).
- **Carve in the order picked:** one shape (letter) at a time, in the order you picked them. Off = the shortest way over them all.
- The V-bit's angle comes from its shape in the tool library. If the tool has no V angle, 90° is used and you get a warning.
- If parts of the shape are wider than the V-bit can reach, you get a warning saying how deep it will go. Set a flat depth and clearance tools.

Quick engrave

A V-bit runs along the lines at the depth you set (open or closed shapes) – quick lettering and lines. At every sharp corner the bit rises up and out along the corner, so the outside of the corner comes out sharp instead of rounded. Its rise touches both sides of the groove all the way up, so it never makes the groove wider. Set a V-bit as the tool (its angle comes from the tool library).

Tools for this drawing

The CAD tab always uses the machine's own toolset – the 10 in the changer, set up on the CNC page. Nothing here changes it, so your cupboard jobs are never touched. Open **Tools for this drawing** (under the toolpath list) to set things for this piece only:

- **All feeds %**: slow every tool's feed and plunge down (or up) for this piece, e.g. **70** for hardwood.
- Click a tool to give it its own **rpm, feed, plunge, pass** depth and **stepover** for this drawing. Blank boxes show the machine's value faded. A value you type here isn't changed by the %.
- ⇌ **Swap**: put a special cutter in that slot for this drawing only, e.g. a ball nose in T8. Give it a name, type (end mill, ball nose, V-bit, tapered engraving, diamond drag, form tool), diameter, angle / tip, flutes and its feeds – the chip load shows as you type. The toolpaths then use its size, and the screen, the program and the problems list all say *load it in T8 – put the original back after*. **Put the original back** undoes the swap.
- The compression cutters (🔒 your 10 mm and 12 mm cut-out tools) can't be swapped – they always stay in the changer.
- A drawing with a swapped cutter can't be added to a cupboard job (the job's sheets cut with the changer as it is) – make it as its own program.

A toolpath's own values (below) still win over the drawing's.

3D models: 3D rough and 3D finish

Carve a 3D model (an **STL** file – from a 3D design program or a model library) into the board.

- 1 **Import...** an **.stl** file (or **+ STL model...** under **3D models** on the left). Set its **Width** (its height follows), how **Deep** it is carved, a **Gap** (its highest point that far below the board top, 0 = at the top), **Turn**, and where it goes. It shows shaded on the drawing. All of these can be changed later under **3D models**, plus the **Detail** it is worked out at (auto is fine; finer = slower).
 - 2 Press **3D rough**: a flat cutter clears the bulk level by level (the pass depth), leaving **Leave** (0.5 to start) on the model. **Clear by** rings or lines, like a pocket. It also clears a band round the model, so the finishing can run over the edges.
 - 3 Press **3D finish**: a **ball nose** follows the surface in close lines (**along X** or **along Y**), the **Stepover** 10% of the ball to start (smaller = smoother, slower). It never cuts into the model: every point is worked out so the whole ball stays above the surface.
- 3D rough goes in front of 3D finish in the list (cut first). Finishing without roughing goes to full depth in one go – you get a warning when the model is deeper than the ball's pass depth.
 - No ball nose in the changer? **Tools for this drawing** ⇌ – put one in a slot for this drawing only.
 - Off the model (round its outline) counts as its base: a model on a flat plate is carved down to the plate.

Job setup: where X0 Y0 is, Z zero, two-sided

Under **Sheet / job setup** on the left.

- **X0 Y0** is always the board's bottom left corner, set against the machine's stops – the same corner as the cabinet programs. It is set once for the machine (CNC page > Machine: **Stops / fence corner**), not per drawing. A red /

green mark shows it on the drawing.

- **Z0**: the table or the board top, for machines that allow it; the Woodtron is always the table.
- **Two-sided**: tick it, and pick how the board is turned over – **left to right** or **top to bottom**. The **Top side / Bottom side** buttons (under the drawing, left) switch sides. Each side has its own shapes, toolpaths and sizes. The bottom is drawn as the board lies once turned over, and the other side's shapes show faint (dashed) in the right place, so you can line things up (they snap too).
- **⚙ Make program** makes one program per side: `NAME_TOP` first, then `NAME_BOT`. Each says in it which side it is and which way to turn the board. Turn it over against the same stops – the same X0 Y0 corner – before running the bottom.
- The **3D preview** and **simulation** show both sides; **↕ Turn it over** looks at the bottom. A two-sided drawing can't be added to a job (job sheets are cut from one side) – make it as its own programs.

Tiles: a board longer than the machine

A benchtop, sign or slab longer than the bed is cut in pieces (tiles), sliding the board along between them.

- 1 Set the board's real size under **Sheet / job setup** (it says when the board is bigger than the bed), and tick **Tiles**.
 - 2 Pick the way the board slides (**along X** or **Y**), how much one tile cuts (**each**: the bed's length to start) and the **overlap** (10: each tile runs that far into the one before, so the joins are cut twice and leave no step). It shows how many tiles and how far to slide each time; the tiles show on the drawing.
 - 3 **⚙ Make program** makes one program per tile: `NAME_T1`, `NAME_T2` ... (two-sided: per side). Each one says which tile it is and how far the board must have slid.
 - 4 Run tile 1 with the board's end at X0. Slide the board the distance given along –X (or –Y), set it square at the new place, and run tile 2 – and so on.
- X0 Y0 is the board's bottom left at the tile's start.
 - A shape running over a join is cut in both tiles; a hole is drilled once, in the first tile it fits in whole.
 - The accuracy at the joins is only as good as the slide: mark the board (or use a stop / fence) so it moves exactly the distance. Air-cut the joins first.

Flatten (surfacing a slab)

Flatten a twisted or rough slab of timber with the big surfacing (decking) cutter, as a planer would: straight lines over the board down to a thickness.

- 1 Set the board under **Sheet / material** to the slab's size, and its **Thickness** to its **thickest point** (e.g. 45).
 - 2 Press **Flatten**. No shapes are needed: it flattens the whole board. To flatten only part of the bed (the slab sitting away from the corner), draw a rectangle where the slab sits, pick it and press **Use the picked shapes**.
 - 3 Set **Flatten to** – the finished thickness (e.g. 44). It shows how much comes off and in how many passes (the cutter's pass depth).
 - 4 Lines **along X** or **along Y**; **one way, with the cutter** (ticked) lifts back between lines so every line cuts the same way – the cleanest face. Unticked it goes back and forth (quicker).
 - 5 **Overrun**: the cutter's edge goes this far past every side (2), so every edge is cleaned. It starts each pass off the board and goes straight down in the air.
- The cutter is **T7, 75 mm surfacing cutter**, ticked **Carving only** in the tool library (CNC page): the CAD tab can use it, cabinets and job sheets never do – it is never offered for profiles, pockets or clearance, and a drawing that uses it can't be put into a job (make it as its own program).

- Running off the edges takes the cutter past X0 / Y0 (you get a warning): keep the stops and clamps clear, or put the slab away from the corner and flatten a rectangle drawn where it sits.
- Set the feeds and speeds for the timber under **Tools for this drawing** (T7) or in the toolpath's **Speeds, feeds & passes**.

Cut direction (climb / conventional)

The router spindle always runs clockwise seen from above (M3), as every program CabCarveCNC writes – and as your old programs did. With that turn, **climb** means the uncut wood is on the cutter's right as it moves; **conventional** on its left. Each toolpath's **Direction** (blank = the shop setting *Climb cut outlines*) is worked out for you: outside profiles go clockwise round the part, inside profiles and pocket rings anticlockwise, flatten lines the way that keeps the new wood on the right – for climb; all the other way for conventional. Job recesses and cut-outs follow the same shop setting. The drilling head's spindles turn the way the head is built (left- and right-hand spindles): the program only picks which spindles drop, so each drill must sit in a spindle of its own hand.

Speeds, feeds and passes (per toolpath)

Open **Speeds, feeds & passes** under a toolpath to set values for that toolpath only: **Spindle** (rpm), **Feed** and **Plunge** (mm/min), **Pass depth**, **Stepover** (pockets and CabCarve), **Into the cut** (**Shop setting**, **Ramp**, **Zigzag** or **Straight down**) and **Ramp length**.

A blank box uses the tool's own value from the tool library (shown faded in the box). The heading says – *own values set* when you have changed anything. *Why*: the same cutter might need a gentler feed in hardwood, or shallower passes for a fragile part, without changing the tool for every other job.

Tool numbers, tool changes and safe heights always come from the machine set-up and can't be changed here.

3D preview and simulating the cut

Press **3D preview** to see the board as the toolpaths will leave it, as a solid board with its thickness: pockets, CabCarve, holes, profiles and tabs. Drag to turn it, roll the wheel to zoom, and right-drag to move. Use it to catch a wrong depth, a missing toolpath or a part with no tabs *before* you cut.

- ► **Simulate the cut** plays the toolpaths in order on an uncut board, with the cutter shown moving (flat, ball nose or V-bit). Pick the speed (slow ... very fast), || **Pause** / ► **Go on**, and ⏏ to skip to the end. The box shows the toolpath it is on and how far through.
- **cutting ≈ ... at the feeds**: the cutting time from the toolpaths (the passes at each tool's feed). ⚙ **Make program** then gives the time from the program itself, rapids and tool changes included: **≈ ... to run**. Machine speed-ups and slow-downs aren't counted, so a real run is a little longer.
- Where a cut goes right through, the board comes apart into pieces. **Click a piece** (an offcut) to hide it, so only the part you're making is left. The view then moves in to fit what's left, so it's easy to turn and zoom. **Show every piece** brings them all back.
- Tabs are split between the part and the offcut, so a part on tabs still comes away – you see the tab stubs on it.
- A small sheet is shown whole. On a big sheet the view shows the area round the cuts (with 30 mm extra each side), so the detail stays sharp.

Make program and Send to CNC

- 1 Tick the toolpaths you want in the program.
- 2 Press ⚙ **Make program**. The drawing is saved first (it asks for a name if it doesn't have one).
- 3 The result shows the program name, how many lines it has and its folder, plus any problems. Read them all.

- 4 **Look at the program** shows the G-code text. **Open the folder** opens it in Windows.
- 5 **Send to CNC** copies the program to the machine's send folder (set on **CNC > Machine**).

Programs are saved in `Documents\Cabinet Studio\CNC\CAD\<drawing name>`. The program name is short: the drawing name in capitals with letters and numbers only, up to 16 characters (for example *Sign 2* becomes `SIGN2.nc`). When the shop has air cuts turned on, an air-cut copy (`AIR_SIGN2.nc`) is written into an **Air cut** folder beside it.

Careful Run the air-cut copy first for any new drawing, and watch the first real cut with your hand on the stop. The **Send to CNC** button on the CAD tab copies the main program only. Copy the air-cut file from the **Air cut** folder yourself (**Open the folder**).

Problems you may see: a toolpath's tool is not in the machine's toolset (that toolpath is left out); a depth deeper than the board (it is cut at the through depth instead); the sheet is bigger than the bed.

Adding a CAD part to a job

A drawn part can go into a job like any other board. It is nested with the job's boards on the Optimiser and cut with its own toolpaths, so you don't need a separate sheet for it.

- 1 Open the job the part belongs to.
- 2 On the CAD tab, with the drawing finished and saved, press → **Add to the job as a part...**
- 3 Check the box that opens: the part's size, how many toolpaths it has, and whether it cuts itself out. Then set the **Name**, **How many**, the **Board** to cut it from, and tick **Grain** if it must stay the way it is drawn (along X = along the grain).
- 4 Press **Add to the job**, then **save the job**.
- 5 The part is listed on **Order entry > Parts & panels** as a **CAD part**. Its size comes from the drawing, so it can't be typed there.

How it is cut:

- The part's own toolpaths run before the parts on that sheet are cut out, and they turn with the part if the Optimiser turns it.
- If the drawing has its own **outside** profile cut through the board, the part cuts itself out and isn't cut out again. If not, the shop's cut-out tool cuts round its outline (or round its box).
- Depths drawn as through go through whatever board it is cut from.
- A drawing with several separate outlines is nested as one block.

To change it later, press ↖ **Open in CAD** on its Order entry row, make the changes, then press → **Add to the job as a part...** again and choose **Update the job**.

Tip CAD part toolpaths aren't drawn on the Optimiser's sheet drawings. Check them in the CAD tab's 3D preview, and in the sheet's **G-code** view after making the CNC files.

The 3D part builder: special builds into the kitchen plan

For commercial and special work – a round servery, a curved bar front, a reception counter – the parts are drawn and carved in the CAD tab, one drawing per sheet. The 3D part builder puts those parts together in 3D, as they will really be built, and turns the finished build into a model you can place in the kitchen plan for renders and drawings.

1. Set up each sheet in the CAD tab: draw the parts, give them an **outside profile** toolpath (that is what makes them parts), and add the pockets, grooves, CabCarves and holes. Save each drawing.
2. Click  **Build 3D** on the bar under the drawing. The parts of the open drawing are listed on the left, each one machined in 3D as its toolpaths will cut it. **+ Parts from another drawing...** adds the parts from more sheets.
3. Drag a part into the build window (or click ). Click a part to pick it, and drag it to move it along the floor. Hold **Shift** to drag it up or down. When it comes close to another part's face it clicks against it, and it clicks onto the floor.
4. On the right, turn the picked part 90° at a time about X, Y or Z (or type an angle). Use **Stand up** to stand a panel on its edge, **Mirror** to make the left-hand copy of a right-hand part, and type exact centre positions if you need them. The arrow keys nudge it 1 mm (10 with Shift), PgUp / PgDn move it up and down, and R turns it.
5. Tick **Locked in place** when a part is where it belongs, so it can't be bumped. **Lock all** locks every part.
6. **Save** keeps the build (Documents\Cabinet Studio\CAD\Builds). **Open...** brings it back to change.
7.  **Make it a model for the kitchen...** locks the whole build together as one model and puts it in the **Library > Furniture & room > Special builds**, at its real size. Drag it into the room like any other item. It shows in 3D and in renders.

Tip The bar along the top shows the whole build's size, so you can check it fits the space before anything is cut.

Cornice, capping and light rail profiles

The **Cornice** side tab draws the section of a cornice, capping, light rail or picture rail for the library. The room then runs it along the cupboards (see *Cornice, capping and light rail* in the Cupboards chapter).

- 1 Click a standard profile to start from: **Cove 55, Cove 75, Cove 90, Flat capping 18, Ogee capping 25, Shadow line capping 80, Bullnose capping 32, Light rail 50 – bevel, Picture rail 42** or **Panelling cap 42 × 19**. It opens in a drawing of its own (*Profile – ...*) with its points showing.
- 2 Change it with the usual tools: drag a point () , drag  to bend a side into an arc, double-click a side to add a point, or right-click a point for more. You can also draw your own closed shape with the line, curve or rectangle tools.
- 3 The red cross is where the profile fixes, and the grey shows what is round it: for a **cornice** the wall (or bulkhead face) and the ceiling – the cross is the corner where they meet; for a **capping** the cupboard top and the door face (light rail: the cupboard bottom); for a **picture rail** the wall at the rail height (a panelling cap: the panelling under it). Anything right of the cross sits out into the room. **Show where it fixes** hides or shows the grey; the list beside it changes where it fixes.
- 4 **Save to library...** Give it a name, the **Kind** (its folder in the library), where it **Fixes**, how it is **Made** (*bought in lengths*, quoted by the metre, or *cut from the board*, put on the cut list as strips), its **Finish**, **Price per metre**, **Length bought** (5.4 m to start), **Height on the wall** (a picture rail's height), supplier and code.

Saving a standard profile keeps it as a new one of your own (the standard one stays). Your own profiles are listed under **Yours** on the Cornice tab. Open one, change it and press **Save** to update it, or **Save as a new one** to keep both. Save the drawing too (**Save** at the top) if you want to come back to it later from **Open...**

Tip Want to cut a profile template or a scraper on the CNC? It is an ordinary drawing: give the shape a profile toolpath like any other part.

What the CAD tab doesn't do (yet)

- There is no text tool. To carve lettering, draw it in another drawing program, save it as SVG or DXF, and import it.
- Drilling uses router tools, not the multi-spindle drilling head.

- It is made for flat 2D and 2½D work (profiles, pockets, holes, CabCarve), not 3D carving.

15 The ♦ Build helper (type or say what to build)

Tell CabCarveCNC what you want in plain shop talk, for example "2588 wall, 400 drawer bank, 900 sink cupboard, 600 dishwasher, grain 1 16 doors, 40 stone benchtop". It shows you a ticked list of what it understood, and builds the room when you say so. You can type it, say it, or (with the optional local AI) describe it loosely or ask how to do something in the program. Everything stays on your PC.

Opening the Build helper

Use any one of these:

- The ♦ **Build helper** button on the view's toolbar (on the **Cabinets** page).
- **Ctrl** + **K** from anywhere.
- **Tools** menu > **Build helper (type or say what to build)**.

The helper opens as a floating box over the view, with the typing box ready.

- Drag it by its title bar to move it.
- The title-bar buttons dock it in the right-hand side bar or under the view, float it again, or put it back where it started.
-  opens it in a window of its own, which you can drag onto a second screen. Close that window to bring the box back.
- **X** or **Esc** closes it.

Tip The helper builds into the room you are looking at. If the job has no room yet, make one first (or pick one from the room tabs). Otherwise it will ask you to.

♦ Design a kitchen

Draw the walls (or pick a quick room shape) and put the windows and doors in, then press ♦ **Design a kitchen**. It lays out a first kitchen the way a cabinet maker would, as a ticked list – nothing is built until you press **Build ticked**:

- **Sink** under the window (else the middle of the longest wall), with a 760 undermount sink and a mixer tap; an **integrated dishwasher** beside it (its panel in the door board) and a **bin pull-out** on the other side.
- **Cooking** on a wall beside the sink wall (else the same wall, clear of the sink): an oven housing with the cooktop over it and a **rangehood cupboard** above, drawers either side.
- **Fridge** at the end of a run (an open end first, away from the sink), between fridge panels, with an over-fridge cupboard and a pantry beside it when there is room.
- **Corners**: a blind corner unit into the corner, the other wall starting past it with a filler.
- **Ends**: a filler where a run meets a wall (your 16 / 18 board on flat, flush with the doors), end panels at open ends.
- The rest filled with doors (drawers beside the cooktop) in even widths up to 900, and **overheads** over the bases – none over windows or doors.

It places things so no odd little gaps are left; if one is unavoidable it becomes a filler. In a four-wall room it uses the sink wall and the wall beside it. Untick any line you don't want, tick **Clear the room first** to replace what is there, then **Build ticked** – one Ctrl+Z takes it all back.

Words in the box change it: 900 cooktop, gas, no pantry, 600 fridge, 75 fillers, no overheads.

Quick commands

Type one item after another, separated by commas. Write sizes in millimetres, and leave out "mm" if you like. Press **?** in the box at any time to see this list.

Walls

- `2588 wall` : the first wall, the back wall as you face it from the room.
- `1800 wall` : the next wall, which turns **right** into the room (an inside corner). Its cupboards start past the corner cupboards of the wall before.
- `1800 wall to the left` : the next wall turns left instead.
- `on wall 2` : the next cupboards go on wall 2 (also *wall 1, the first wall, last wall*).

Tip Walls go clockwise round the room. For an L or U shape with a left-hand wall, say the **left wall first**: `1800 wall, 3000 wall` gives you a left wall, then the back wall.

Cupboards

Cupboards are placed from left to right along the current wall, each one after the last. Base cupboards and overheads keep their own rows. A tall cupboard blocks both rows. Examples:

- `400 drawer bank, 600 base, 2 x 600 base, 600 3 drawer`
- `900 sink cupboard, 600 dishwasher, 900 fridge space, 450 bin, 300 pull out, blind corner`
- `600 pantry, 600 oven tower`
- `600 overhead, 900 overhead 2 door, 600 rangehood, 900 over fridge`
- Your own sizes: `600 base 720 high, 600 base 450 deep`

Each cupboard comes from your library, so it is built with your construction, boards and hardware, just as if you had dragged it in.

Where

- `50 gap` : leaves a gap before the next cupboard.
- `start at 1200` : the next cupboard starts 1200 from the left end of the wall (`start at 300 overheads` moves only the overhead row).
- Add a place to one cupboard: `900 fridge space at the end, 900 sink cupboard in the middle, 600 base at 900, 900 fridge space on wall 2`.

Boards

- `white hmr 16 carcass, grain 1 18 doors, colour 2 16 doors, satin mdf 18 panels`
- It works for doors and fronts, carcass, panels, kicks, drawer boxes and backs.
- The board is matched to the closest one on your **Materials** page. If some words don't match any board (for example a colour name you haven't set up), it uses the closest board, says which words it didn't know, and marks the line **⚠**. Add or rename the board on the Materials page to make it match next time.

Style and handles

- `shaker doors, slab doors` (add *overhead* to change just the overheads).
- `no handles` (finger pull / push to open), `128 bar handles`. Handles are matched to your **Hardware** list, and you can say *overhead* or *drawer* handles separately.

Benchtop and sizes

- 40 stone benchtop, 20 stone benchtop, laminate benchtop, no benchtop. A benchtop goes on every base run.
- kick 150, legs (adjustable legs and a clip-on kick).
- base height 900, overhead height 900, tall height 2200, base depth 600.
- ceiling 2700 (for this room).

Clear

clear takes the cupboards out of the room before building. You can also tick **Clear the room first** under the list.

Spoken-style numbers work too: "nine hundred sink cupboard" or "twenty five eighty eight wall".

A worked example

An L-shaped kitchen, with a back wall of 3000 and a right wall of 2000:

3000 wall, 2000 wall, on wall 1, 450 drawer bank, 600 base, 900 sink cupboard, 600 base, 450 drawer bank, on wall 2, 900 fridge space at the end, grain 1 16 doors, shaker doors, 40 stone benchtop

Read list or ♦ Ask AI

There are two ways to read what you typed:

Button	Key	What it does
Read list	Enter	The built-in reader. It is instant and needs no AI. It understands the quick commands above.
♦ Ask AI	Ctrl + Enter	The local AI reads looser wording, a whole kitchen described in a sentence, or a question about the program. It rewrites your request as quick commands, and those then go through exactly the same reader and checks.

Use Shift + Enter for a new line in the typing box.

Examples for ♦ Ask AI:

- "Galley 2400 with a dishwasher next to the sink and overheads all along, white doors, shaker"
- "U shape, left wall 1800, back wall 3000, right wall 1800, pantry at the start of the left wall, cooktop drawers in the middle of the back wall"

Tip Start with **Read list**. It is instant and predictable. If some lines come back **X**, a **♦ Try with AI** button appears so the AI can have a go at the lines the reader couldn't follow.

♦ Ask AI is greyed out until the local AI is set up and running (see [Set-up](#)).

The ticked list

After reading, every phrase you typed is shown on its own line with what it was understood as:

- → (ticked): understood. For example 900 sink cupboard → Sink cupboard 900 on Wall 1.
- ⚠ (ticked, take a look): understood with a doubt. For example the closest board was used, or a cupboard runs past the end of the wall.
- X (can't be ticked): not understood or not allowed. The reason is shown, for example there is no wall 3 yet, no board like that on the Materials page, or say the wall first ("2400 wall").

Notes in red under the list explain anything left out.

- 1 Read down the list. Untick anything you don't want.
- 2 Fix the **X** lines in the typing box and read again, or leave them out.
- 3 Tick **Clear the room first** if you want to start the room again.
- 4 Press **Build ticked**.

If you untick a wall, the cupboards that were going on that wall are left out too.

Build ticked = one undo

Everything built from the list is **one step**. If the result isn't what you wanted, press **Ctrl** + **Z** once and it all comes back out. The helper switches to the **Cabinets** page and shows the plan (or 3D) so you can see the result. Then type the next lot, for example `on wall 1, 2 x 600 overhead`, and it carries on after the cupboards already there.

Tip What comes out is ordinary cupboards and settings. Fine-tune them the normal way afterwards: drag, resize, open the cupboard editor.

Speaking instead of typing

- 1 Press . It changes to **• Listening....**
- 2 Say your list in one go, for example *"twenty five eighty eight wall, four hundred drawer bank, nine hundred sink cupboard"*. Stop talking to finish.
- 3 What you said is added to the typing box and read straight away with **Read list**.

It uses the speech recognition built into Windows, which works **offline**, so nothing is sent anywhere. If it hears nothing, check that the microphone works and is chosen in Windows sound settings, then try again. Speak clearly and say the numbers the way you would on the phone.

Pictures of plans (rough first draft only)

With the picture model installed,  lets you pick a photo or image of a kitchen plan (PNG, JPG, WEBP, BMP). The AI looks at it and writes the walls and cupboards as quick commands, and you get the same ticked list as before.

Careful Treat a picture as a **rough first draft** only. A local picture model usually reads the labels and overall sizes, but often gets the layout wrong: walls missing, or cupboards placed on walls that don't exist (those lines come back **X**). Always check every size against the real plan before building. If you have the plan as a DXF drawing, use **Room > Walls > Import a plan...** instead. It reads the drawing itself, so it is far more accurate.

The picture is shrunk before reading so it takes seconds, not minutes. The first time it can take longer while the model loads.

Set-up: the local AI

The quick commands, **Read list** and  need no set-up at all.  **Ask AI** and  need a local AI: a free program that runs AI models on your own PC, plus the models themselves. **Everything runs on this PC and nothing is sent over the internet.**

- 1 Install the local AI program (**Ollama**) and start it. It then starts with Windows and sits in the system tray.

- 2 In the Build helper, press . It shows whether the **Local AI** is **running** or **not running**, which models are installed, and which one is used for words and which for pictures.
- 3 Press **Download the language model** (about 4.7 GB, one time). This one is for  **Ask AI**.
- 4 If you want to read pictures, press **Download the picture model** (about 6 GB, one time).
- 5 The download progress shows in the box. Press **Check again** when it has finished.
 - If it says **not running**, start the local AI program from the Windows Start menu, then press **Check again**.
 - The first request after starting the PC loads the model into memory and can take up to a minute. After that, answers take a few seconds.
 - The models need a reasonably powerful PC: a graphics card with plenty of memory makes it much faster. Only one model is kept loaded at a time.

Asking questions about the program

With the local AI set up, you can type a question and press  **Ask AI**, for example "*where do I change the kick height?*" or "*how do I make the CNC files?*". You get a short answer (marked ) about where to find things in CabCarveCNC. A question never builds anything.

Tip The answers are short pointers, not a replacement for this manual. If an answer doesn't sound right, check the chapter on that subject.

What it can and can't do

The helper is deliberately limited, so it can't do damage:

- It can only **add walls, add cupboards, clear the room, and change a short list of job settings**: boards, door style, handles, benchtop and its type, kick and legs, cupboard heights and depths, and ceiling height.
- The AI never changes anything directly. It only writes the same quick commands you could type, and every action is checked against that list before it is shown.
- Nothing is built until you press **Build ticked**, and one   takes it all back.
- It doesn't touch shop settings, prices, CNC set-up, materials or saved jobs.

Limits to know:

- It places cupboards along walls, left to right. Islands, angled walls, windows and doors are best drawn in the room as usual. A DXF plan can be imported with **Import a plan...**
- It only knows boards, door styles, handles and library items that exist in your program. Unknown names are matched to the closest one and marked .
- The local AI is a small model. It is good at turning a description into a list, but it can misjudge widths or places. Read the ticked list before building, every time.
- Pictures of plans give a rough draft at best.

16 Jobs, saving and backups

A **job** is one client's work. It holds all the rooms, cupboards, materials and settings for that client. This chapter shows how to start, save and open jobs, how to go back to an earlier save, how to send a job to someone else, and where all your files end up.

What's in a job

A job holds:

- its **rooms** (Kitchen, Laundry, Ensuite ...), each with its walls, windows, doors, lights and fixtures;
- the **cupboards** in each room, plus any cupboards that are **Not in a room**;
- the parts in **Order entry** (doors, panels and loose parts);
- the **Job details** (customer, site address, phone, email, date, notes) and the **Job settings**, both on the **Job** tab;
- your dimensions, notes and print sets for its drawings.

Your shop lists (materials, hardware, door styles, your library, CNC tools) are **not** inside the job. They belong to the shop and are shared by every job.

Each job is saved as one file in **Documents\Cabinet Studio\Jobs**.

Starting a new job

- 1 Click **New** in the top bar (or **File > New job**, or **Ctrl + N**).
- 2 If the job on screen has changes you haven't saved, the program asks **Discard unsaved changes?** Click **Cancel** if you want to save it first.
- 3 You get a new job with one empty room, and the **Start a room** box. Pick a quick wall plan or draw the walls.
- 4 Type the job's name in the **Job name** box in the top bar, for example the client's name and suburb: "Smith – Jindabyne".

Tip Give the job a name and save it early. A job can't be saved without a name, and the backups and **Earlier saves** only protect jobs that have been saved.

Tip Fill in the **Job details** on the **Job** tab (customer, site address, phone, email, date, notes). They're used on your quotes and print sets.

Saving

- 1 Make sure the **Job name** box has a name.
- 2 Click **Save** (or **File > Save**, or **Ctrl + S**).
- 3 The status line says, for example, **Smith – Jindabyne saved**.

If you forget the name, the program warns **Give the job a name first** and puts the cursor in the name box.

The status line shows **– not saved** after the job name whenever there are changes that haven't been saved yet.

Careful CabCarveCNC does **not** save the job by itself as you work. Press **Ctrl** + **S** often: before lunch, before you send something to the CNC, and before you close the program. (The automatic backups only copy jobs that have been saved.)

Save as: a copy under a new name

Use **Save as** to make a second version of a job, for example "Smith – option 2 (shaker doors)", without changing the first.

- 1 Click **File > Save as...** (or **Ctrl** + **Shift** + **S**).
- 2 Type the new name and click **OK**.
- 3 The job is saved under the new name, and the screen now shows the new copy. The old job stays as it was.

Careful If you type the name of a job that already exists, Save and Save as write over that job without asking. The job you wrote over isn't lost, though: its last copy is kept in **Earlier saves** (see below).

Some characters can't be used in a Windows file name (such as **/ \ : * ? " < > |**). In the file name they're replaced with **_**.

Opening a job

There are two ways:

- **Quick:** click the **Open...** drop-down in the top bar and pick the job.
- **With a search:** click **File > Open job...** (or **Ctrl** + **O**). The **Open a job** box lists every job. Type part of the name in **Find...** to shorten the list, then click the job.

If the job on screen has unsaved changes, you're asked **Discard unsaved changes?** first. The job opens on its first room, and the status line says, for example, **Smith – Jindabyne opened**.

Earlier saves (job versions)

Every time you save a job, the copy being replaced is kept first, in **Documents\Cabinet Studio\Jobs\versions\<job name>**. The **last 30 saves** of every job are kept, and older ones are removed.

Why this matters: if you saved a mistake ("I deleted the pantry and saved"), or the client says "actually, we liked it better last week", you can go back.

- 1 Open the job.
- 2 Click the **Job** tab.
- 3 Scroll down to **Earlier saves**.
- 4 In the drop-down, (**pick an earlier save of this job**), choose a save. Each one is named by its date and time, newest first, for example **2026-10-12 155512** (12 October 2026, 3:55:12 pm).
- 5 Click **Open it**, then **OK** when asked.
- 6 The earlier save is now on screen. Look it over.
- 7 To keep it as the job, click **Save**. (The version you're replacing is itself kept as an earlier save, so nothing is lost.) If you don't want it, just open the job again without saving.

Tip Earlier saves are made only when you **save**. If you save every 10 minutes, you can go back 10 minutes. If you save once a day, you can only go back a day.

Sending a job to someone: job files (.csjob)

To give a job to another computer running CabCarveCNC (a second office PC, the designer's laptop, another shop), export it as a **job file**. A job file is one file ending in **.csjob** that holds the whole job.

Exporting a job file

- 1 Open the job and make sure it has a name.
- 2 Click **File > Export job file (to share)...**
- 3 The file is saved as **Documents\Cabinet Studio\Exports\<job name>.csjob**. The status line shows exactly where.
- 4 Email the file, or copy it to a USB stick or a shared folder.

Importing a job file

- 1 Click **File > Import job file...**
- 2 Pick the **.csjob** file. (A job's own saved file from another computer's **Jobs** folder can also be picked.)
- 3 If you have unsaved changes, you're asked **Discard unsaved changes?** first.
- 4 The job opens, and the status line says **... imported – press Save to keep it**.
- 5 Click **Save**. Until you do, the job is only on screen and not in your Jobs folder.

Careful A job file holds the job, but **not** your shop lists. If the job uses a board, door style or hardware that the other computer doesn't have, that computer will show it differently or warn about it. Shops sharing jobs should keep the same materials and hardware lists.

Careful If a job with the same name is already in your Jobs folder, pressing **Save** writes over it (its last copy goes to **Earlier saves**). Rename the imported job in the **Job name** box before saving if you want to keep both.

Importing rooms from another job

Sometimes you want a room from an old job in the new one. Maybe a client is doing a laundry the same as last time, or you have a standard ensuite you reuse. Import the room, and its cupboards come with it.

- 1 Open the job you want the room **in**.
- 2 Click **File > Import rooms from another job...**
- 3 In the **Import rooms from another job** box, find and click the job the room comes **from**.
- 4 The box lists that job's rooms, each with how many cupboards it has. All of them are ticked to start with. Untick the rooms you don't want.
- 5 Click **Import into this job** (or **Cancel**).
- 6 The rooms are added as new room tabs, with their walls, windows, doors and cupboards. The program opens the last one.

If your job already has a room with the same name, the new one gets the other job's name added, for example **Laundry (Smith – Jindabyne)**.

The rooms are **copies**: changing them in this job doesn't change the old job. Press **Ctrl** + **Z** to take the import back, and **Save** to keep it.

Tip This is a handy way to keep **standard rooms**. Make a job called, say, "Standard rooms" with your usual laundry, ensuite vanity and so on, and import from it whenever you need one.

Other imports on the File menu

These bring in work from outside CabCarveCNC. Each is explained in its own chapter.

- **Import order file (door list / cut list)...**: a door list or cut list from a spreadsheet (CSV), into **Order entry**.
- **Import a plan (DXF: walls, windows, doors, cupboards)...**: a designer's or architect's DXF plan. The program reads the walls, windows, doors and cupboards, shows them for you to check, then builds the room.
- **Import walls from a DXF plan...**: just the walls, on the **Room** page.

Reporting a problem

If something goes wrong, click **Report a problem** (top right, next to Preferences) or **Help > Report a problem...** Write what you were doing and what went wrong, then click **Make the report**.

The job you have open, your shop settings, your preferences, the end of the program's log and any screen errors caught since the program started are packed into one zip file, **Problem report <date>.zip**, in Documents\Cabinet Studio\Exports. The folder opens with the file picked – attach it to an email to the help desk. Nothing is sent by itself.

Backing up everything

Earlier saves protect each job. A **full backup** protects *everything*: every job, the shop settings, materials, hardware, your library, title blocks, CNC files and more, in one dated zip file.

Making a backup now

Any of these makes a backup straight away:

- **File > Back up everything**. This also opens the backup folder so you can see the file.
- The **Back up everything now** button on the **Shop** tab.
- The **Back up now** button in **Preferences > Automatic backup**.

The file is named with the date and time, for example **Cabinet Studio backup 2026-10-12 1555.zip**.

Tip Make a backup before anything big: updating the program, moving computers, or a large change to your materials or hardware lists.

Automatic backups

You don't have to remember. Set **Preferences > Automatic backup > Back up everything** to **Every day** (the standard) or as often as you like, and **Keep the last** to how many to keep. The program makes the backups in the background while it's open. All the details are in [Automatic backups](#) in the Installing chapter.

Where backups go

- Standard: **OneDrive\Cabinet Studio Backups** if the computer has OneDrive (it then goes up to the cloud on its own), otherwise **Documents\Cabinet Studio Backups**.
- To choose another folder: on the **Shop** tab, under **Backups**, type the folder in **Backup folder**, then click **Save shop settings**. Leave it empty to go back to the standard folder.

Careful A backup on the same computer won't help if the computer dies or is stolen. Use OneDrive, Dropbox, a network drive, or a USB drive you take home, so a copy lives somewhere else.

Where your files end up

Everything is under **Documents\Cabinet Studio**:

What	Where
Saved jobs	Jobs\<job name>.json
Earlier saves of a job	Jobs\versions\<job name>\ (last 30)
Cut list saved as CSV	Jobs\<job name> - cut list.csv
CNC programs, sheet DXF drawings and labels	CNC\<job name>\ , or CNC\<job name> - <room name>\ when made for one room. There are sub-folders Air cut and Flip side when those are used.
Programs from the CAD tab	CNC\CAD\<drawing name>\
CAD drawings	CAD\<name>.cad.json
PDFs (print sets, reports, drawings)	Exports\
Drawings saved as DXF, benchtop DXFs	Exports\
Job files to share (.csjob)	Exports\<job name>.csjob
Photo renders	Renders\
Exported themes	Themes\
Full backups	OneDrive\Cabinet Studio Backups (or Documents\Cabinet Studio Backups , or your own folder)

Careful When you make the CNC files for a job again, CabCarveCNC first clears out **its own** program and DXF files from the last run in that folder, so old programs can't get mixed up with new ones. Files you have **renamed** are left alone. If you want to keep an old set of programs, copy or rename them before you make the files again.

Tip After saving a PDF, CSV, render or backup, the program usually tells you the exact path in the status line, and often opens the file or folder for you.