MobiCAM

User Manual

Parametric CAD · CAM · CNC for furniture

Version 0.4 · 22 chapters

01 How to use this manual

Five minutes. Knowing how to read it saves more time than reading it.

MobiCAM is a **furniture design and manufacturing** program. You draw the kitchen, the wardrobe, the bathroom vanity in three dimensions; from that drawing the program works out **how many of which panel to cut**, **how to lay them on the sheet**, **the file that goes to the CNC machine** and **the price quote you hand the customer**.

The single most important idea is this: **there is one drawing, and everything else is derived from it.** Change a cabinet from 600 to 800 wide and the cut list, the drilling program, the sheet layout and the quoted price all change at the same moment. You never update any of them by hand — you cannot, because they are all read from that same drawing. That is why **the figure on the quote, the panel that gets cut and the cabinet that gets assembled always agree.**

How to read it

- **First time using the program:** read chapters 2, 3 and 4 in order. By the end of chapter 4 you will have a real kitchen, a real cut list and a real quote. It takes about an hour.
- **Looking for where something is:** use the contents, or your PDF reader's own search — `Ctrl`+`F` (`⌘`+`F` on a Mac). The whole manual is a single piece, deliberately. *The web version also has a search box:* mobicamsoft.com/kilavuz.html.
- **About to do a specific job:** jump straight to that chapter. Each one stands on its own and points you elsewhere when it needs to.
- **Want it on paper:** press `Ctrl`+`P` in your browser. The page is laid out for printing; menus and links stay out of the printout.

Marks used in this manual

- Underlined bold text like **Save** is **the name of a button or field you will see on screen**. It reads exactly like that.
- Boxed text like `⌘S` is **a keyboard key**. `⌘` is the Mac Command key; **on Windows and Linux use `Ctrl` instead**. The program itself writes these to match your operating system.
- Monospaced text like `cutlist.csv` is **a file name, a folder path, or something the computer writes**.

NOTE

You can change the program's language at any time: **Settings ▸ Language**. This manual describes the Turkish interface; if you switch the app to English, switch this page too with the **EN** button at the top right so the names line up.

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02 Installing and first launch

Getting the program onto your computer and opening it for the first time.

Is your computer good enough?

MobiCAM runs on an ordinary office computer. What you need:

- **Windows 10 or 11** (64-bit), **macOS 12 or later** on an Apple-silicon Mac, or **Linux** (x86_64; **Ubuntu 22.04 / Debian 12 / Fedora 36** or later).
- **8 GB of memory** is enough; 16 GB is more comfortable on large projects.
- **The program takes about 20 MB of disk.** Your projects are a few hundred kilobytes each — thousands of them fit in one folder.
- **Internet is not required.** Drawing, cut lists, nesting, G-code and quotes are all computed on your own computer. Internet is only needed for licence checks, updates and (if you want it) the AI panel.

Installing on Windows

1. Double-click the `MobiCAM_0.4.4_x64-setup.exe` file you took from the download page.
2. Windows may show a **"Windows protected your PC"** warning. This does *not* mean a virus was found: the program has no digital signature yet, so Windows is saying it does not recognise it. Click **More info**, then the **Run anyway** button that appears.
3. Click **Next** through the installer and finish.
4. Open **MobiCAM** from the Start menu.

Installing on a Mac

1. Double-click the `MobiCAM_0.4.4_aarch64.dmg` file.
2. In the window that opens, drag the **MobiCAM** icon into the **Applications** folder.

3. Right-click the MobiCAM disk in Finder's sidebar and choose **Eject**.
4. Open MobiCAM from Applications. The Mac says it came from the internet and asks once whether to open it: press **Open**. MobiCAM is notarized by Apple; you are asked only on first launch.

> NOTE
> If the file was handed to you on a USB stick or copied directly, this warning never appears. It only comes up when the file was downloaded from the internet.

Installing on Linux

One line, depending on your distribution:

- **Ubuntu / Debian / Mint:** `sudo apt install ./MobiCAM_0.4.5_amd64.deb`
- **Fedora:** `sudo dnf install ./MobiCAM-0.4.5-1.x86_64.rpm`
- **Other distributions (no install):** run `chmod +x MobiCAM_0.4.5_amd64.AppImage` and then the file. If you get an *"AppImages require FUSE"* error, install `sudo apt install libfuse2` or run the file with the `--appimage-extract-and-run` flag.

> CAUTION
> If the 3D view comes up black or empty on Linux, start the program like this: `WEBKIT_DISABLE_DMABUF_RENDERER=1 ./MobiCAM_0.4.5_amd64.AppImage`. If that does not fix it, add `WEBKIT_DISABLE_COMPOSITING_MODE=1`, try again, and let us know.

First launch: the welcome screen

When the program opens you get a **welcome screen** with three choices:

- **New Project** — opens a fresh workspace. It starts with a sample Turkish kitchen loaded; delete it and draw your own, or experiment on top of it.
- **Open Project...** — opens a `.mcam` file you saved earlier.
- **Customers** — goes straight to the customer book (chapter 17).

Below sits the **Recent Projects** list; every project you save lands there and opens with one click. If you would rather not see the screen again, clear the **Show this screen at launch** box at the bottom; `Esc` also dismisses it.

Updates

MobiCAM updates itself. When a new version is out, the program shows a **New version ready** box at launch; choose **Update and restart** and it downloads, installs and restarts itself. If you have unsaved work it asks you to save first. You can also check whenever you like from **Settings ▸ About ▸ Check for updates**.

CAUTION

Do not edit and re-save a project saved with 0.4.1 in an older version (0.4.0 or 0.3.x). The older version does not know the newer information — 0.4.1's handle model and screw-hole choice; 0.4.0's drawer box heights and runner lengths, hidden drawers, full-height carcass sides, notches and corner relief. It opens the file but silently drops all of it when it saves. Update every computer that opens the project to 0.4.1 first.

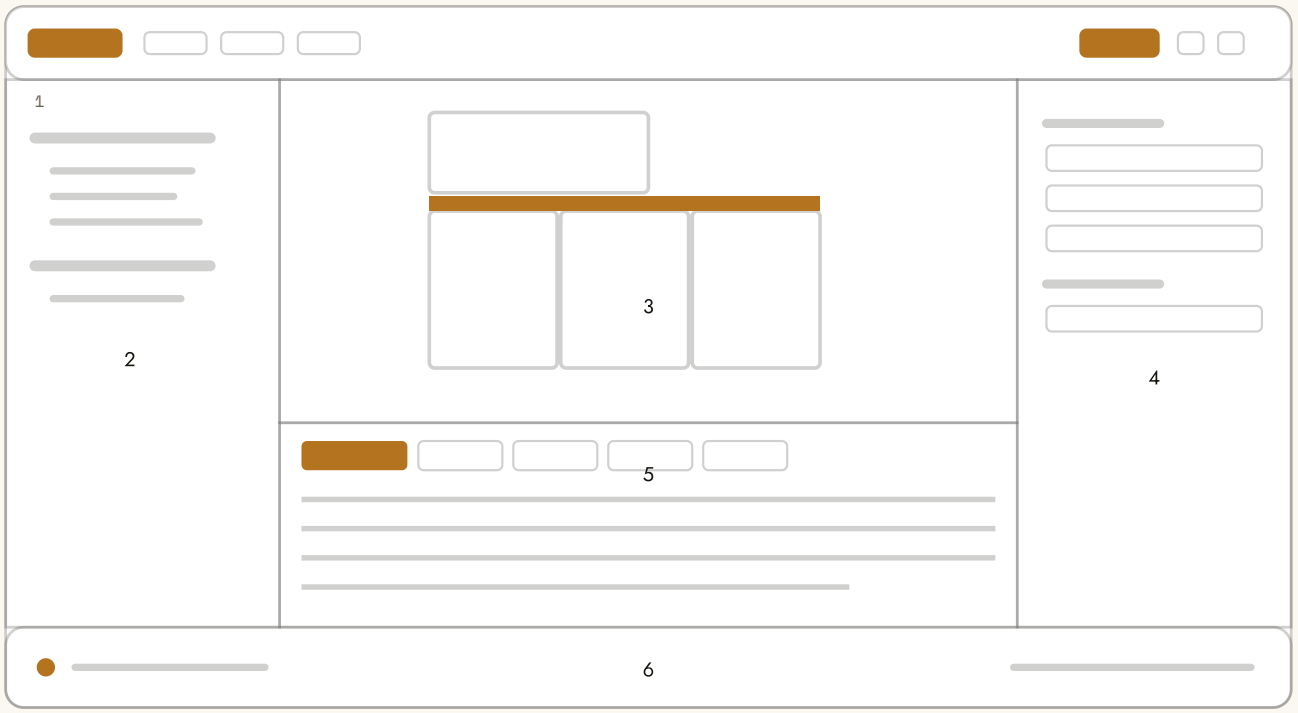
CAUTION

Export G-code and DXF made before 0.4.1 again. Earlier versions gave the holes and grooves of the parts that are turned over on the board (left sides, tops, backs, wide doors and some shelves) in mirrored positions. Open the project in 0.4.1 and export its programs and DXFs again.

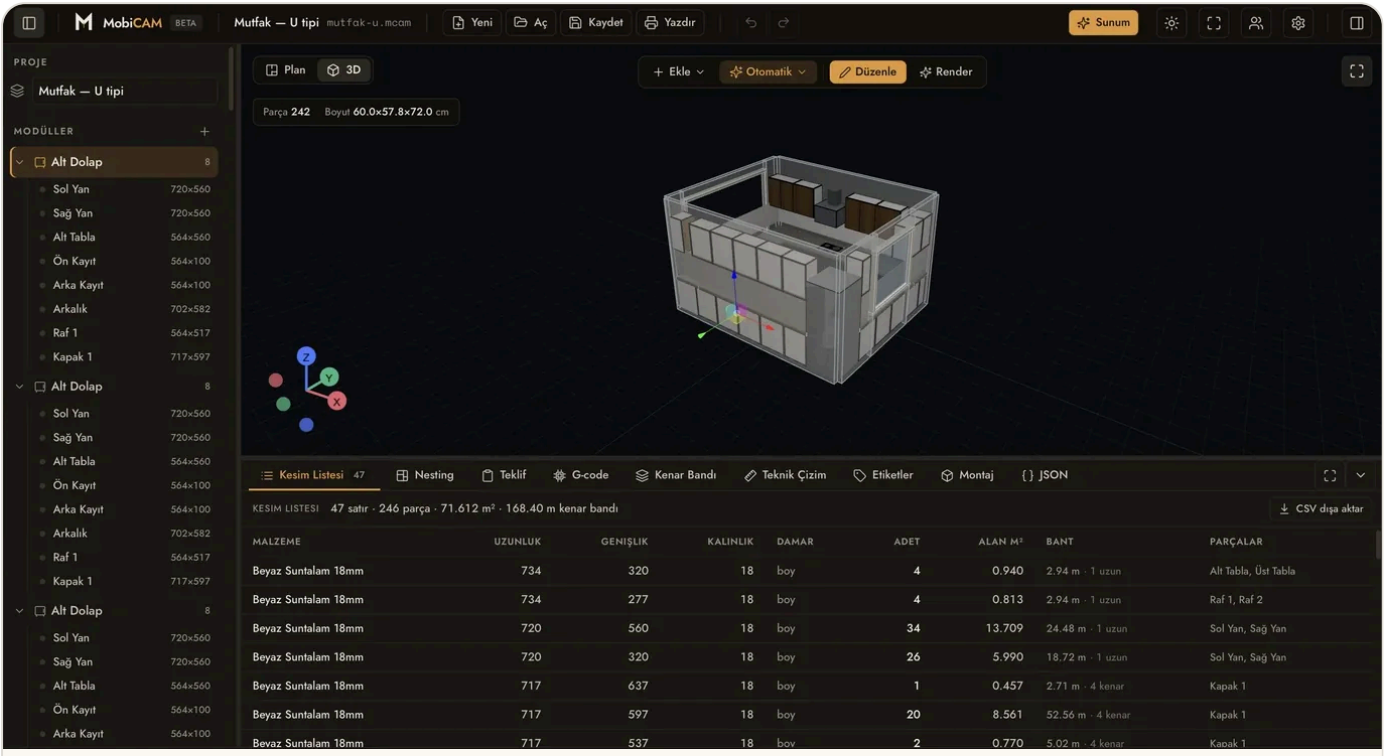
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03 A tour of the screen

The six regions you see when the program opens, and what each is for.



1 Top bar · **2** Project tree (left) · **3** Viewport (middle) · **4** Properties (right) · **5** Output tabs (bottom) · **6** Status bar



The real thing: the kitchen you will build in chapter 04, with the six regions of the diagram above.

1 · Top bar

On the left: the program name, the name of the open project, and a small **dot** when there are unsaved changes. Next to it the file actions — **New**, **Open**, **Save**, **Print** — and the undo/redo arrows.

In the middle, what the whole job comes to — how many cabinets, parts and boards, and what it costs. On the right: the **Present** button, full screen, the customer book and the panel-hiding buttons. **Settings is not here**: it is at the foot of the left panel (see below).

2 · Project tree (left panel)

A list of everything in the project. The project name sits at the top (click it to rename), and below it two sections:

- **Assemblies** — the cabinets in the project. Click the arrow in front of a cabinet to see the parts inside it (sides, bottom, top, back, shelves, doors…). The **Add cabinet** button is here.
- **Appliances** — white goods like the fridge, oven and hob, plus decor objects. The **Add appliance** button is here.

Clicking a row **selects** it: it is highlighted in the 3D view and in the plan, and the properties panel on the right shows that object's settings.

Pinned at the **foot** of the panel, where it does not scroll away with the list, is one row: **Settings**. However long the list gets it stays in the same place; `⌘,` opens the same window. Chapter 19 covers it.

3 · Viewport (middle)

Where the work happens. The toolbar above it switches between two views — **Plan** (a top-down 2D drawing) and **3D** (the three-dimensional model). The `V` key toggles between them. The same toolbar carries the room-element menu (**Add**) and the auto-design menu (**Auto**).

4 · Properties (right panel)

Every setting of the selected object: its dimensions, position, carcass construction, front type, fittings. With nothing selected it shows the room's own settings (floor, walls, ceiling, lighting). This panel is **closed by default** — so the drawing area stays large. `F4` or the panel button in the top bar opens it.

> TIP
>
> **Double-click** a cabinet and a small **quick-dimensions card** pops up right next to it: width, height, depth, on the spot. It is the fastest way to change a size without opening the full panel. The **All properties** link on the card opens the full panel if you need it.

5 · Output tabs (bottom panel)

The ten outputs derived from your drawing, tab by tab: **Cut List**, **Nesting**, **Materials**, **Quote**, **G-code**, **Edge-band**, **Drawings**, **Labels**, **Assembly** and **Source JSON**. Chapter 15 covers them one by one. Drag the panel's top edge to resize it; the buttons on the right maximise or collapse it.

6 · Status bar

A small dot and a line of text at the very bottom: **green** means everything is computed and ready, **amber** means the program is computing right now, **red** means there is an error. Beside it sit summary figures such as the part count. If something is wrong it says **"N problems"**; click it and the **PROBLEMS** list opens — each line says what is wrong and which part of the program it belongs to, and **Show** takes you to the tab concerned.

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04 Your first kitchen in 15 minutes

A tour from end to end. When you finish you will have a drawing, a cut list and a quote.

Read this chapter sitting at your computer with the program open. The aim is not to learn everything — it is **to see the whole job once**. The detail comes in the chapters after it.

Step 1 — Open an empty project

1. Click **New Project** on the welcome screen. A sample kitchen loads.
2. Pick a cabinet in the **Assemblies** list on the left, press `F4` to open the right panel, and press the **bin** button (**Delete cabinet**) in its header. Clear them all this way — or keep them if you would rather experiment on the sample; either is fine. Carrying on with an empty room teaches you more.
3. Click the project name at the top of the left panel and type a name, for example `Yılmaz kitchen`.

Step 2 — Give the room its real dimensions

1. Switch to **Plan** on the toolbar above the viewport (or press `V`). You get a dimensioned floor plan seen from above.
2. **Click a wall's dimension text** — `3600`, say. It becomes editable; type the real measurement and press `Enter`. The wall snaps to exactly that length.
3. Do the same for the other walls. Your room is now at its real size.

Step 3 — Line up the base cabinets

1. Press the **Add cabinet** button next to the **Assemblies** heading in the left panel. A list grouped into categories opens.
2. Under the **Kitchen** heading click **Base — 2 door**. The cabinet enters the project and appears in the list.
3. In the plan, grab the cabinet and **drag it**. As you approach a wall the wall highlights and the cabinet **backs onto it** by itself. If there is another cabinet beside it, it seats **flush** against it — no gap left between them.
4. Add three or four more base cabinets the same way and line them along the wall. Try the drawer, sink-base and corner types.

Step 4 — Put in the worktop and the appliances

1. From the **Add** menu above the viewport pick **Worktop**, then **click the wall** you lined the cabinets against. The worktop is pulled over the base cabinets on that wall.
2. Press **Add appliance** under the **Appliances** heading on the left and choose **Sink**. Drag the sink onto the worktop in the plan — **the sink cut-out opens by itself**.
3. Add and place **Cooktop**, **Refrigerator** and **Dishwasher** the same way.

Step 5 — Add the wall cabinets

Add cabinet ▸ **Kitchen** ▸ **Wall cabinet** again. Wall units hang at 1450 mm; when you drag them in the plan they seat against the wall independently of the base cabinets. Don't forget a **Range hood** over the hob.

Step 6 — Look at what came out

1. Press `V` for the **3D** view. **Hold the left mouse button and drag** to orbit around it; **the wheel** zooms in and out.
2. Look at the **Cut List** tab below. Every panel to be cut, its size, quantity, grain direction and which edges get banded is there.
3. Switch to **Nesting** — you see how the parts lay out on the sheet, how many sheets it takes and the waste percentage.

4. The **Quote** tab gives you material, hardware, labour and installation lines with a VAT-inclusive total.

5. The **G-code** tab already has the program for the CNC; **Export .nc** writes it to a folder.

Step 7 — Save

Press `⌘S` (`Ctrl`+`S` on Windows/Linux), pick a place and a name. Your file is saved with a `.mcam` extension — the whole project is inside it.

> TIP
>
> When you get something wrong, `⌘Z` undoes it and `⇧⌘Z` redoes it. Don't be shy about experimenting: there is no move in this program you cannot take back.

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05 Drawing the room

Walls, corners, doors, windows, passages and niches.

Every project starts with a **room**. The room gives the walls the cabinets will back onto and the real dimensions the program measures from. You draw the room in the **Plan** view.



The **Plan** view. The round handles at the corners move the walls, the plus sign at the middle of an edge adds an opening to it, and the room's size and floor area read on the left. Nothing here is a **drawing** — it is **dimensions**, and the 3D view and the cut list are derived from these numbers.

Three ways to change a wall's length

1. **By typing the measurement (the exact way).** Click the dimension text outside the wall, type the real measurement, press `Enter`. This lets you enter what you measured with a tape directly.

2. **By dragging the corner.** Drag the small handle where two walls meet. The corner moves in 10 mm steps, so even dragging by hand gives you round numbers.
3. **By sliding the wall.** With the **Select** tool active, grab the body of a wall and drag: the wall slides parallel to itself and both of its corners move together. The fastest way to widen a room in one direction.

L-shaped, U-shaped and more complex rooms

Grab the handle **in the middle of a wall** and drag: **a new corner opens** at that point and you start dragging it immediately. One gesture turns a straight wall into an L. Repeat it and you can build a U, a room with a recess, a room around a column — as many corners as you like.

Doors, windows, passages and niches

The **Add** menu above the viewport carries four wall elements:

ELEMENT	WHAT IT IS FOR
Door	An opening that runs down to the floor. You can choose which jamb the hinges are on.
Window	An opening with a sill height. Add glazing bars (rows/columns) to make a sash or a divided-light window.
Passage	An opening with no door — the gap through to the living room.
Niche	A shelved recess cut into the wall. You can give it a shelf count, glass shelves, a back material, an accent colour and an LED strip.

1. Pick the element you want from the **Add** menu. A hint appears at the bottom of the screen: "click a wall".
2. **Click where it goes** on whichever wall. The element lands at that point.
3. Click the placed element and an **inspector card** opens beside it: width, height, sill, material, colour, hinge side…
4. **Drag it along the wall** to reposition it, or pull **the handles on its edges** to make it wider.

> NOTE
>
> Doors and windows are not just for looks: they are drawn into the wall elevations, the services plan and the sections in the technical drawings. Placing them correctly prevents surprises on site.

06 Adding cabinets

The ready-made catalogue, searching, placement and standard module widths.

The ready-made catalogue

The **Add cabinet** button in the left panel opens the ready-made cabinets, grouped under seven headings:

- **Kitchen** — base units (single/double door, drawers, pan drawers, sink base, open shelf, push-to-open, soft close, Shaker/raised/beadboard/cathedral fronts, wine rack), wall units (plain, wide short, glazed display, divided-light display, lift-up flap, tambour appliance garage, open shelf, tall, plate rack) and tall units (pantry, pull-out larder, oven housing).
- **Bathroom** — vanity with drawers and with doors, wall-hung vanity, tall/laundry unit, mirror cabinet, WC/cistern unit.
- **TV unit** — 3-door and drawer lowboards, open-shelf console, media tower, floating lowboard, open bookcase.
- **Wardrobe** — 2/3/4-door and 2/3-sliding wardrobes, 5-drawer dresser, 2-drawer nightstand.
- **General** — plain base, wall and tall units, open shelf, 4-drawer unit. A starting point for your own design.
- **Curved** — base and wall units with a curved front.
- **Corner** — diagonal and L-shaped corner base/wall units.

Searching

The list is long; type into the **Search cabinets...** box at the top of the menu. The search scans **the Turkish name, the English name and the category heading** together, and it **folds Turkish letters** — type `gardirop` and you still find *Gardırop*; type `corner` and only that group stays. `Enter` adds the first result, `Esc` closes the menu.

Placing the cabinet

A newly added cabinet first lands at the edge of the room. To seat it, **drag it** in the **Plan** view. While you drag, the program does three things by itself:

- **Snaps it to the wall.** The wall you approach highlights; when you let go the cabinet backs onto it and faces into the room.

- **Butts it against its neighbour.** If there is another cabinet or appliance on the same wall and the same tier (base/wall), it seats flush with no gap between them. That includes the cabinet next to the fridge.
- **Recognises corners.** If you picked a corner unit it seats into the room's **corner** rather than onto one wall.

You can fine-tune with the keyboard: with a cabinet selected, the arrow keys move it 10 mm, `Shift`+arrow 1 mm, `Alt`+arrow 100 mm. (What the arrow keys do is chosen in **Settings ▸ Arrow keys** — chapter 19.)

Duplicating and deleting

With a cabinet selected, the **Duplicate cabinet** button at the top of the right panel makes a copy with all of its settings — that is how you get six identical cabinets in one kitchen. The **Delete cabinet** button beside it removes it. Both are undone with `⌘Z`.

> NOTE
>
> To delete a cabinet you **have to open the right panel** (`F4`); the `Delete` key does not act on cabinets. `Delete` only removes **room elements**: the selected door/window/niche, worktop, worktop cut-out, appliance and decor object. This is deliberate — so a mis-hit key cannot wipe out half a day of cabinet settings.

Standard module widths

Kitchen cabinets in Türkiye are built at certain widths. The program knows the ladder:

`150 · 200 · 250 · 300 · 350 · 400 · 450 · 500 · 550 · 600 · 700 · 800 · 900 · 1000 · 1100 · 1200 mm`

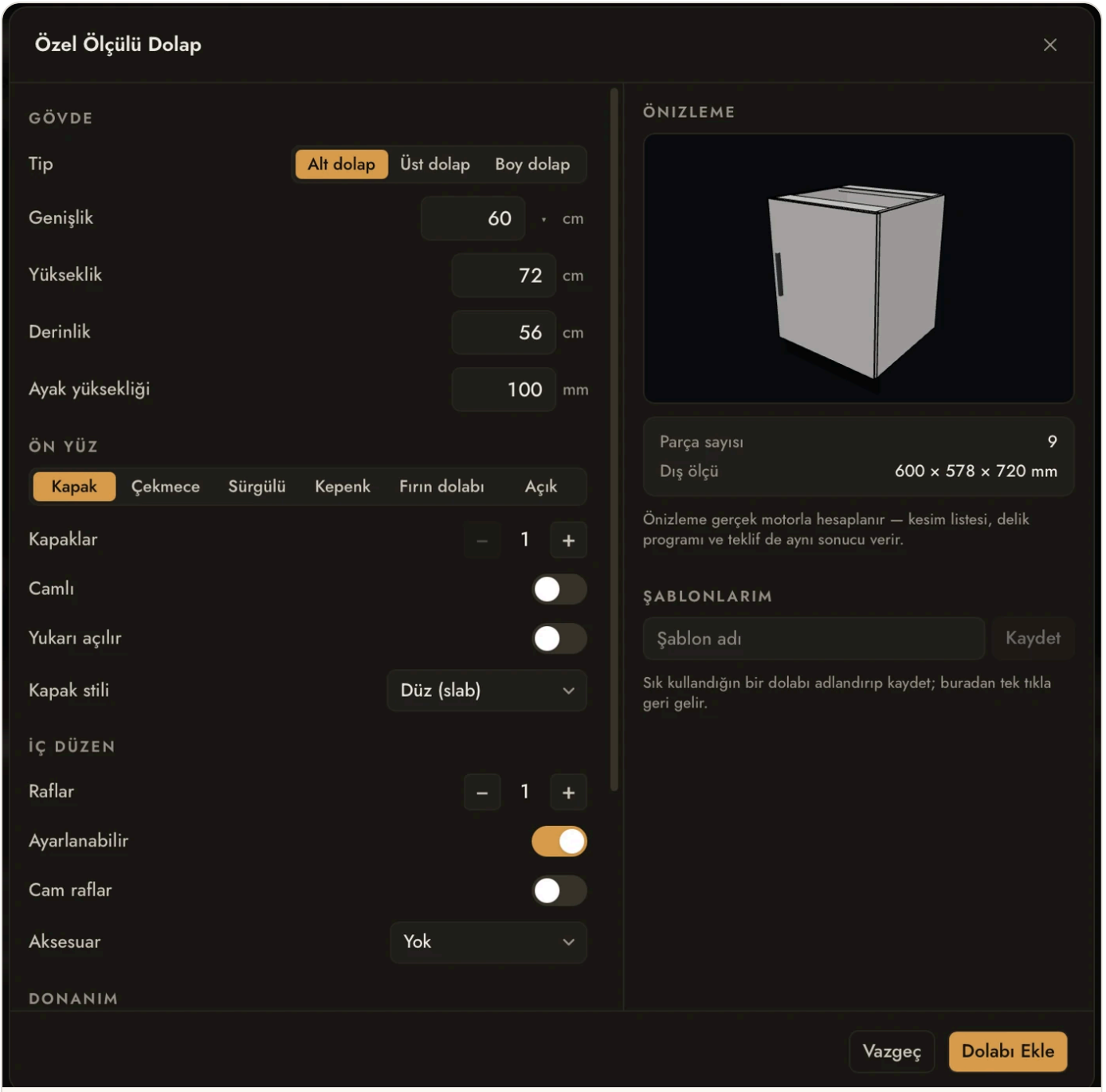
In a width field the `↑` and `↓` keys jump to the next and previous **standard** size. Typing a non-standard size is not blocked — the program marks it **"custom"** and tells you the nearest module. If a column, a pipe or an out-of-square wall means you need an 835 mm cabinet, you make an 835 mm cabinet; the program just makes it visible that this was a deliberate choice.

> NOTE
>
> Auto kitchen (chapter 12) uses the same ladder: it fills the wall with standard modules and gives the remainder to **one made-to-measure cabinet** — exactly how a kitchen is planned in real life.

07 The custom cabinet wizard

Building a cabinet the catalogue doesn't have — drawn before you add it.

If the ready-made cabinets don't cover your job, choose **Add cabinet ▸ Custom cabinet...**. In the window that opens you describe the cabinet from scratch, and **a 3D preview of it is drawn on the right as you go** — you see what you are getting before it enters the project.



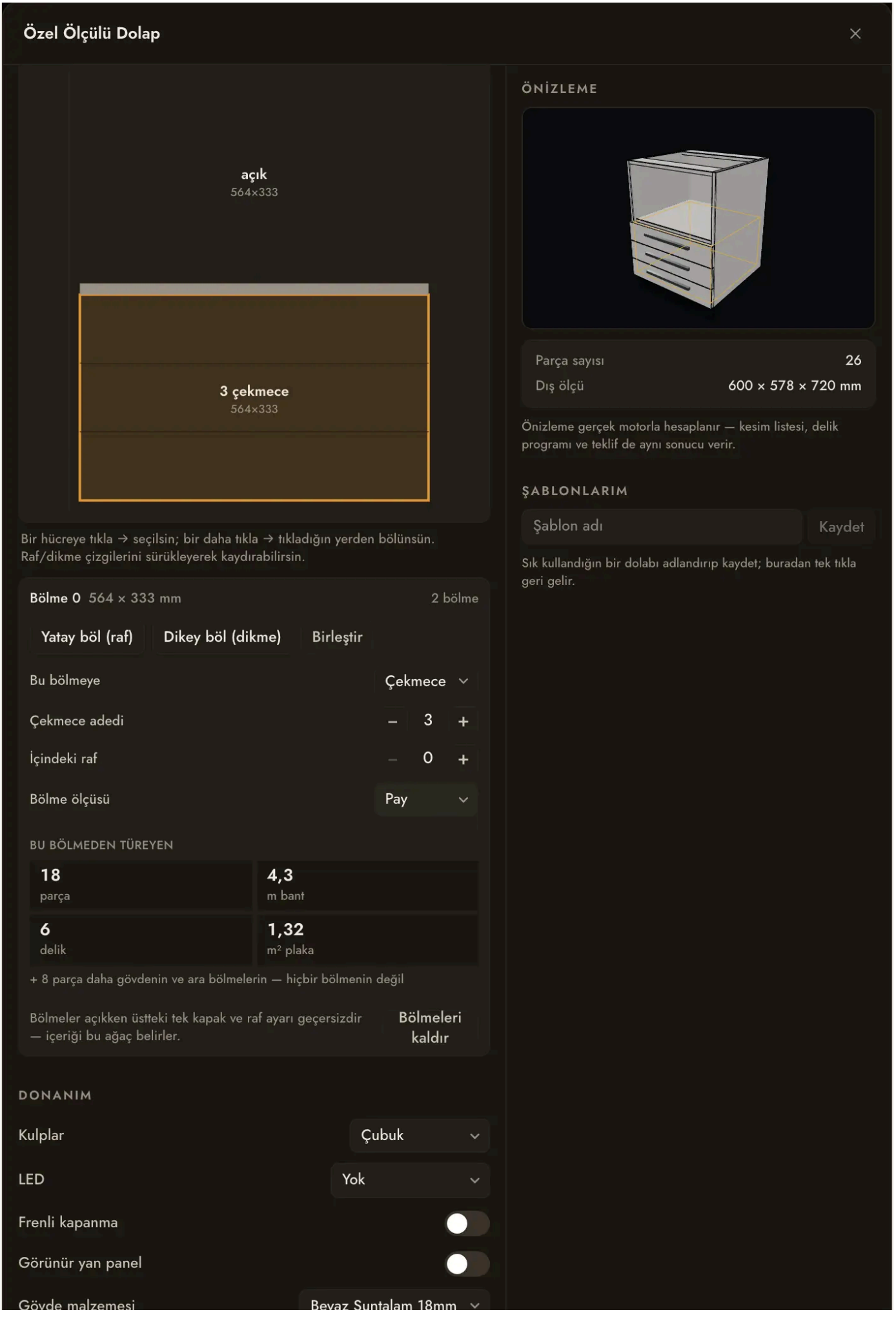
The wizard. Every change on the left shows up in the preview on the right at once; the **part count** and **overall size** under it are the same numbers that will land in the cut list when you add the cabinet — the preview is computed by the real engine, not drawn separately.

The sections of the window

SECTION	WHAT'S IN IT
Carcass	Type (base / wall / tall), width, height, depth, leg height and carcass material.
Front	Door, drawer, sliding, tambour, appliance housing or open. Depending on what you pick you are asked for door count, drawer count, lift-up flap, appliance aperture and door style.
Interior	Shelf count and interior fittings (cutlery tray, wire basket, waste bin, corner carousel, larder mechanism, hanging rail, wine rack, plate rack).
Compartments	The drawing that cuts the inside into cells: every cell gets its own shelf count and its own size; the front is either an outer front over the whole face or each cell's own. How far the internal dividers stand back from the front is chosen here too. Covered separately below.
Fittings	Handle type, soft close, LED and visible end panels (left/right).

Compartments — cutting the inside into cells

The inside of a cabinet does not have to be one door and a few shelves: three drawers on the left, a door on the right, an open shelf above it — all in one carcass. That is what the **Compartments** section is for, and the drawing in the middle is not only a front elevation, **it is the tool itself**: click a cell and it is selected; **click it again and it is cut exactly where you clicked.** Shelf and divider lines can be dragged with the mouse — as you drag, the two pieces either side of the line are written out in millimetres.


Özel Ölçülü Dolap
açık
564×333
3 çekmece
564×333
Bir hücreye tıkla → seçilsin; bir daha tıkla → tıkladığın yerden bölünsün.
Raf/dikme çizgilerini sürükleyerek kaydırabilirsin.
Bölme 0 564 × 333 mm
2 bölme
Yatay böl (raf)
Dikey böl (dikme)
Birleştir
Bu bölmeye
Çekmece
Çekmece adedi
3
İçindeki raf
0
Bölme ölçüsü
Pay
BU BÖLMEDEN TÜREYEN
18
parça
4,3
m bant
6
delik
1,32
m² plaka
+ 8 parça daha gövdenin ve ara bölmelerin — hiçbir bölmenin değil
Bölmeler açıkken üstteki tek kapak ve raf ayarı geçersizdir — içeriği bu ağaç belirler.
Bölmeleri kaldır
DONANIM
Kulplar
Çubuk
LED
Yok
Frenli kapanma
Görünür yan panel
Gövde malzemesi
Beyaz Suntalam 18mm
ÖNİZLEME
Parça sayısı
26
Dış ölçü
600 × 578 × 720 mm
Önizleme gerçek motorla hesaplanır — kesim listesi, delik programı ve teklif de aynı sonucu verir.
ŞABLONLARIM
Şablon adı
Kaydet
Sık kullandığın bir dolabı adlandırıp kaydet; buradan tek tıkla geri gelir.



The lower compartment is selected. It is framed in amber in the drawing on the left, and **the same compartment is boxed in the same colour in the 3D preview** on the right — so which compartment you are editing shows in both places at once. The four figures in the middle belong to that compartment alone: 18 parts, 4.3 m of tape, 6 holes, 1.32 m² of board.

The settings of the selected compartment

- **Split across (shelf)** / **Split down (divider)** — cuts the selected compartment in two down the middle. To cut at a particular place, click that point in the drawing — or type the size (below) — instead of pressing the button.
- **Merge** — merges the compartment back into its parent; whatever was in it stays in the first cell.
- **This cell holds** — that compartment's front: **Door**, **Drawers** or **Open**. Depending on what you pick you are asked for a door or drawer count. Choosing **Drawers** sets that compartment's shelves to 0 — a shelf cannot stand behind a drawer bank. Only asked while **Front** above is **Open**; with outer doors, they cover the compartment.
- **Shelves inside** — how many shelves go inside that one compartment. Rather than cutting it four times to get three shelves, just say three.
- **Cell size** — **Share**: it shares the space with its siblings, so changing the cabinet's height changes this compartment too. **Fixed mm**: its size stays put and the others share what is left; type the millimetres into the box to change it, and if the size does not fit the program tells you the range that would. Use fixed for anything whose size is already decided — an oven, a drawer bank. Sizes are the **clear opening** between two boards.

Shelf or divider — and cutting at an exact size

- Whether a click adds a **shelf or a divider** is not decided by the mouse but by the current mode. The window opens in **shelf** mode; **press and release** `Shift` once and it switches to divider mode — press it again and it is back to shelves. The line under the drawing says which mode you are in (**Adds a shelf** / **Adds a divider**).
- **Typing the size:** with a compartment selected, type the digits — e.g. `700` — and press `Enter`. The compartment is cut at exactly 700 mm from the bottom (a shelf) or from the left (a divider), and that piece becomes **Fixed mm**. A typed size is never rounded; if it does not fit, nothing is cut and the program writes the range that would. `Esc` clears what you typed.
- **Snapping while you click:** if the pointer comes very close to a quarter, a third, a half, two thirds or three quarters of the compartment, the line settles there — but it is pulled a few millimetres at most; a snap rounds an aim, it does not replace it. If you want an exact size, type it.

- **Undo:** the window keeps its own history. ⌘Z takes back the last cut, merge, front or size change; ⇧⌘Z or ⌘Y redoes it. While you are typing in a number box, ⌘Z first takes back what you typed, not the cabinet. Closing the window closes that history; once the cabinet is in the project, the project's own ⌘Z takes it back in one step.

From this compartment

The four tiles under the settings state **what comes out of the selected compartment only**: how many parts will be cut, how many metres of edge-banding, how many holes and how many m² of board. Turning one door into three drawers is the edit that changes a cabinet's part count most, and these tiles show you by how much before the cabinet is even added to the project. **holes** is different from the other three: which holes actually get bored is decided by the machine in your workshop, so until you ask, it shows a dash (**—**) — press it and the program runs. Change a dimension and the dash comes back, because it is a different cabinet now.

The **+ N more parts are the carcass and the dividers** line under the tiles is there for a reason: the carcass (sides, bottom, top, back, plinth) belongs to no compartment, and neither does the shelf between two compartments — that shelf is what **makes** them two, so it cannot be charged to either one. The compartments plus that line come to exactly the **Parts** figure on the right.

> CAUTION
>
> The moment you make the first cut in the drawing, the **Shelves** setting above goes away — from then on this tree decides the interior, and every compartment has its own shelves (**Shelves inside**). **Front** keeps applying and becomes the **outer front**: a door, sliding doors or a tambour divide the whole face equally, the doors running in front of the internal dividers — a divider at 300 mm does not split the doors into 300 + the rest. Choose **Open** and there is no outer front: each compartment carries its own. Drawers belong to their compartment: cut a drawer cabinet and its drawers move into the first compartment, and while a compartment holds drawers no outer door can be chosen. To go back, press **Remove compartments**. Nothing changes until that first cut: a cabinet whose compartments you never touched is built and saved exactly as before.

Divider setback — how many millimetres back from the front the internal dividers start. A new cabinet opens at 10 mm; type **0** and the divider is flush with the front. The divider still runs to the back and is cut that much shallower; the sides, shelves, bottom, top and back are not touched. If a compartment door is to hinge on a divider, the setback must be 0: no hinge plate is drilled on a divider that stands back, and the program says so. Dividers in older projects stay flush with the front, as they were.

Corner joint — the top and the bottom

Corner joint, in the **Body** section, chooses **how the cabinet's top and bottom meet its sides**. You click one of four small drawings; each draws the top and bottom in colour and the sides plain, so which board runs through the corner reads at a glance.

- **Between** — the panel sits **between** the two sides; the sides are the cabinet's full height. New cabinets and older projects are built this way.
- **Over** — the panel runs the cabinet's **full width** and sits on (or under) the sides; the sides are shorter by its thickness. The cabinet's outside size and its compartments do not change. The panel's exposed ends are edge-banded; where a full-height carcass side or a visible end panel covers an end, that end is not banded.
- **Top** and **Bottom** are **independent**: the top can be Between and the bottom Over — all four combinations can be chosen. Holes and connectors move to the new contact faces.
- A base cabinet has two **rails** instead of a top, and rails always sit between the sides; so on a base cabinet only **Bottom** is chosen. Shaped carcasses such as corner units are not offered the choice.
- **Full-height carcass side** — **Left** and **Right** each on its own: the chosen carcass side runs the cabinet's **full height**; an Over top or bottom stops against its inner face on that side, and the other side keeps the corner joint. The outside size does not change; the side is in the carcass board. With top and bottom Between, both sides are full height already.
- **Visible end L/R** is **a different thing**: a separate decorative panel in the fronts' board, applied outside the carcass. Both can be chosen on the same side.

> NOTE
>
> **A corner joint and a connector are two different things.** The corner joint decides *which board runs through the corner* — the sizes of the parts. The **Connector** (Minifix, Dowel, Confirmat, Screw…) decides *what holds that corner* — the holes and the hardware (chapter 8). Neither changes the other. The same **Corner joint** choice is in the properties panel too.

Drawers: slide length, box and hidden drawers

- **Slide** — standard slide lengths run from 250 to 800 mm in 50 mm steps. With **Automatic** the program picks the **longest** slide the carcass takes, and picks again when the depth changes; a length you choose yourself is kept while it fits. The drawer box is **exactly** as deep as the slide is long.
- **Box height** is chosen per drawer; a chosen box stands on its opening's floor. A box that does not fit, or a slide the carcass cannot take, shows as an error in the **PROBLEMS** list — it is never quietly

made smaller.

- **Hidden drawer** — a drawer bank standing behind a hinged outer door. Each drawer has an inner front of its own; 5 mm of air is left between the outer door and the inner front. A hidden drawer can only be built behind a hinged outer door.
- **Rail supports** — on both sides of a hidden bank an upright is derived at each slide's front and rear (4 pieces, from the carcass board, 100 mm wide); the bank stands the supports' width in from both sides. The supports are in the cut list and the layout, and the slide holes are drilled into them. **How the supports are fixed to the carcass** (glue, screws, dowels…) is the workshop's own method: nothing is drilled for it and no fastener is counted, and the assembly guide says so. If what is left is too narrow for a drawer the cabinet is not added; if it is wide enough, the drawer box's inside width is shown for information.
- **The slide holes are a generic pattern** (37 mm from each end and one centred), not any maker's. Check them against the slides you bought before fitting. If no slide price is entered, the quote bills every length at the engine's one built-in pair price and the line says **default price**; enter your own price for each length on the **Materials** screen.

Panel notch

- **Notch** — cuts a rectangle out of one corner of a carcass side or of a visible end panel (left and right on their own): the corner (front/rear, top/bottom), the width along the depth and the height. The notch must stay inside the panel; a size that does not fit is **refused**, never clipped.
- **The notch's path** — the space the notch opens runs through the cabinet to the other side: every carcass part on that path (bottom, rail, shelf, back…) is **shortened** or **shaped**; a path that would split a part in two or remove it is refused. A notch in a visible end cuts that panel alone. Holes under the notch are reported, not moved. The part drawings and the assembly guide's exploded view show the parts as they are cut.
- **Banding** — with **Automatic**, a new edge of the notch is banded when the panel's own edge facing the same way is; two other settings band all of them or none. The tape is counted into the quote.
- **Corner relief** — **None**, **Dogbone** or **T-bone**. A router cuts an inside corner round; a relief cuts a slot the size of the selected machine's cutter into the corner, so a square-cornered part seats fully in the notch. Its size comes from the machine's cutter.

The preview

The preview on the right computes the cabinet **with the real engine** — so what you are looking at is exactly what will enter the cut list and the drilling program once you add it, not an artist's impression.

Below it the **Part count** and **Overall size** are shown; change a dimension and they update instantly.

My templates

Don't rebuild the cabinet you make every week. Once the settings are right, type a name into the **My templates** section and press **Save**. Next time one click on that name brings every setting back. Templates live on your computer and work in every project.

When you're ready press **Add cabinet**; it enters the project and from then on moves, edits and duplicates like any other cabinet.

Editing a placed cabinet

To open a cabinet already in the project in this window again, press **Edit** in the properties panel (chapter 8). The window opens as **Edit Cabinet**, on the cabinet **as it is**: its sizes, compartments, outer front, divider setback, joints and materials — an older cabinet's setback comes back as 0, not as a new cabinet's 10. **Update** changes the same cabinet **in place**: its position, angle and identity stay; the settings this window does not ask about (connector, back panel, hinge side, notches, front finish) are kept as they are; one ⌘Z puts the cabinet back as it was. Press **Update** without changing anything and the project does not change at all; **Cancel** leaves the cabinet untouched. The cabinet's **kind** (base / wall / tall) cannot be changed while editing — the **Type** row shows it but does not let you choose, and a template of another kind is not applied; if you need another kind of cabinet, add a new one.

> TIP
>
> You can change a catalogue cabinet's size, front and shelves afterwards too (chapter 8). **Compartments** are built only in this window: to change a placed cabinet's compartments, press **Edit** in the properties panel and the cabinet opens here as it is.

---

08 The properties panel

Every setting of the selected cabinet, section by section.

This is the panel that opens when you select a cabinet and press `F4` (or click the right-panel button in the top bar). **Edit** in its header opens the cabinet in the builder as it is (chapter 7). The headings run down it in this order.

Dimensions

Width, **Height**, **Depth**. In the width field the arrow keys jump between standard modules (chapter 6). The unit button in the heading switches between mm / cm / m — that changes **the on-screen display only**; CNC output always stays in millimetres.

Placement

X (the width axis), **Y** (the depth axis), **Z** (height) and **Rotation**. Dragging in the plan changes these values; you can also type them here. To hang a wall unit at 1500 instead of 1450, just type Z.

Construction

- **Method** — **Frameless (32 mm)**, the modern standard, or **Face frame** (American style).
- **Carcass** and **Back panel** — which material and how many mm.
- **Mount** — how the back is fixed to the carcass: **Grooved in**, **Rabbeted** or **Applied**. This choice directly changes the cut sizes and the routing program.
- **Connector** (formerly labelled *Corner joint*) — **Minifix + Dowel**, **Minifix**, **Cabineo 8/12**, **Dowel**, **Confirmat**, **Screw** or **Domino**. It is what holds the carcass parts together; the drilling program and the hardware list are produced accordingly. For **Screw** no hole is drilled by default: the CNC leaves a small **screw mark** on the face the screw goes in from, 50 mm in from both ends of the joint and evenly between. How many screws a joint takes comes from its length: 2 up to 300 mm, 3 up to 500 mm, 4 up to 800 mm, then one more for every further 300 mm or part of it. Joints 100 mm or shorter (no room for the marks) get no mark and their screws are not counted; the **PROBLEMS** list says so. The mark needs a marker tool (V-bit) and a marking depth on the machine (Settings ▸ Machine); without them the marks are not written to the program, no hole is drilled instead, and the assembly guide tells the fitter to measure the places off the part drawing and mark them by hand. If you want a hole instead of a mark, choose **Hole** under **Settings ▸ Workshop ▸ Shop standards ▸ Screw positions** (diameter 3 mm by default): the screw positions are drilled straight through the board at the same places, and they appear in the G-code. If the machine has no drill of that diameter, the G-code summary says which holes will not be drilled. Two marks closer together than the marker is wide are made once, as one spot. The screws are counted into the quote; their unit price shows as missing until it is entered on the Materials screen. For **Domino** no holes are drilled yet and no connector is added to the price.
- **Corner joint** — how the top and bottom meet the sides: **Between** or **Over**, top and bottom each on its own. A separate setting from the connector (chapter 7).
- **Drawer box** and **Frame stock** — shown when the relevant types are selected.

Front & interior

The cabinet's front: **Door**, **Drawer**, **Sliding**, **Tambour**, **Appliance housing** or **Open**. Sub-settings open depending on what you pick — door count and hinge side, drawer count, dividers, sliding leaf count, appliance aperture. Also:

- **Glazed** — puts glass in the door; **Muntin rows/columns** turns it into a divided-light display cabinet.
- **Lift-up flap** — an upward-opening wall-unit door (the Aventos-type mechanism enters the quote).
- **Door style** — **Slab**, **Shaker**, **Raised panel**, **Beadboard** or **Cathedral**. Routed styles are priced as their own line on the quote.
- **Front material** and **Shelves** — the front can be a different material from the carcass; the shelf count is set here.
- **Hinges** — the hinge count comes from the door's height: doors **1500 mm and taller** hang on at least **3 hinges**. A door with no hinge kit chosen hangs on the default hinge; a door is never left without hinges, or off the quote.

On a divided cabinet this section shows the cabinet as it is. The **Outer front** can only be **Door**, **Sliding**, **Tambour** or **Open** — the kinds that can cover the whole face; drawers belong to their compartment, and no outer door can be chosen in front of a drawer compartment. With no outer front, the **In the compartments** line counts the compartments' own fronts; the **Interior** line says how many compartments, dividers and shelves the engine cut. There is no shelf-count stepper here: you change the compartments, shelves and drawers in the builder with **Edit compartments** (chapter 7).

Fittings

- **Handles** — **Bar**, **Knob**, **Handleless (gola)**, **Push-to-open** or **J-pull**. The handle choice affects both the drilling program and the quote. For **Bar** and **Knob** a **Handle model** row opens: pick one of the models in **Settings ▸ Workshop ▸ Handle library**. The fronts are drilled at the model's hole centres, the quote shows the model on its own line at its own price, and the 3D view draws the handle where it is drilled and at the model's length. **All** applies the chosen model to every cabinet with handles in the job, and to the cabinets added after. With no model chosen, the standard 128 mm-centre handle is drilled.
- **Legs** — adjustable leg height.
- **LED** — **Under-cabinet**, **Interior** or **Plinth** (floor wash).
- **Interior fittings** — cutlery tray, wire basket, waste bin, corner carousel, larder mechanism, hanging rail, wine rack, plate rack.
- **Cornice** (cove / crown) and **Light rail** — the top and bottom trims of wall units.

- **Soft close** and **Visible end L/R** — a decorative end panel in the fronts' board, applied outside the carcass of a cabinet at the end of a run. Making the carcass side itself full height is a separate choice: **Full-height carcass side** (chapter 7).

Front finish

For giving **this** cabinet's fronts a different look on their own (a contrasting island, a two-tone kitchen). This is **render only** — the panel that gets cut, its size and its price do not change. Switched off, the fronts inherit the room's finish.

> CAUTION
>
> There are two kinds of setting in this panel and it is worth not confusing them: **dimension and construction settings** (width, back mount, connector, handle) really do change the panel that gets cut and the price; **finish settings** (colour, texture, front finish) change only the picture. The program says which is which under the relevant heading.

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09 Appliances and decor

White goods, bathroom fixtures and staging objects.

The **Add appliance** menu in the left panel has three headings:

- **Appliances** — refrigerator, oven, cooktop, range hood, dishwasher, sink, microwave, washing machine, cooker, wine cooler, coffee machine, American fridge, freezer, warming drawer.
- **Decor** — plant, bar stool, pendant light, floor lamp, rug, wall art, vase, blinds, wall clock, fruit bowl, pouf, books, bottle, plate stack.
- **Bathroom** — toilet, basin, bathtub, shower, towel radiator.

The search box here also scans the Turkish name, the English name and the category together: typing `buzdolabi` is enough.

Placing them

Appliances drag in the plan just like cabinets, and show **the same wall-snap and butt-to-neighbour** behaviour. So the fridge seats at the end of a base-cabinet run with no gap.

Built-in appliances

When you bring an appliance in front of a cabinet, the program **seats it into that cabinet**. The **Built into** field in the right panel names which cabinet it went into. For a built-in appliance:

- The cabinet **opens up** — doors and shelves drop away to make room for it.
- The appliance now **follows the cabinet**: move the cabinet and it comes along.
- A hob and a sink **cut their own hole** in the worktop above them.

If it says **— free-standing**, the appliance is not tied to any cabinet; it stands on its own.

Appliance settings

In the right panel each appliance has dimensions, placement, a **Finish** (stainless / black / white) and a **Unit price**. The price you enter goes straight into the "Appliance" section of the quote.

Decor objects

> NOTE
> Decor objects (plants, rugs, wall art, coffee tables, armchairs…) are **for presentation only**. They never enter the cut list, the nesting, the G-code or the quote. They exist to bring the 3D image you show the customer to life; they affect production in no way at all.

Furniture objects (dining table, chair, sofa, armchair, coffee table, TV unit, bookshelf, bed, nightstand, wardrobe, desk, dresser) come from the **Add ▸ Furniture** menu; they drag freely in the plan and turn with the **Rotation** field.

---

10 Worktops, islands and bars

Pulling a worktop, choosing its edge, sink/hob cut-outs and building an island.

Adding a worktop

1. Line up the base cabinets first — the worktop will sit on them.
2. Choose **Add ▸ Worktop**, then **click that wall**. The worktop is pulled along the wall, over the cabinets.
3. Click the worktop and its inspector card opens.

If there are no base cabinets on that wall yet the program tells you so; place the cabinets first.

Worktop settings

SETTING	WHAT IT DOES
Thickness	The thickness of the slab. It enters the price along with the material.
Front lip	How far the worktop overhangs the cabinet front.
End return	The side overhang at the end of the run.
Bar overhang	A seating overhang at the front (knee room). For a deep bar the program automatically adds **steel support brackets** and shows them on the quote.
Edge	**Square**, **Bevel** or **Bullnose** edge profile. Priced by the metre.
Waterfall	Drops the slab to the floor at one end (solid slabs only).
L return	Wraps the worktop around the corner onto the neighbouring wall; you get a single-piece L worktop.
Backsplash	The tiled or panelled band between the worktop and the wall units.

Sink and hob cut-outs

The **Cut-outs** section of the inspector manages the holes in the worktop. There are two ways:

- **Automatic.** Place a sink or hob appliance on the worktop and the hole opens by itself, shown as *"Over …"* and tied to that appliance. Move the appliance and the hole moves with it.
- **By hand.** The **Sink** or **Hob** button adds a free-standing hole that you can drag in the plan. These are marked *"— manual"*. **Corner R** sets the corner radius and **Back margin** its distance from the wall.

Islands

Add ▸ Island builds a free-standing worktop in the middle of the room. An island carries all of the worktop settings (edge, bar overhang, cut-outs) and additionally turns about its own centre from the **Rotation** field. **Place base cabinets under it to complete the island** — the program reminds you of this. When you give it a bar overhang, the support brackets are written onto the quote with their count.

TIP

The easiest way to build a breakfast bar: make an island, give it a **Bar overhang**, then put two or three stools in front of it with **Add appliance ▸ Bar stool**. The stools are decor — they don't enter the price, but they finish the picture.

---

11 Room look and finishes

Floor, walls, ceiling, lighting and material finishes.

With nothing selected, the right panel shows **the room's own settings**. Everything here is about appearance; this is where you set up the 3D scene you will show the customer.

CAUTION

The settings in this chapter **do not change the panel that gets cut**. One exception: choosing a front or worktop *finish* changes **the material itself** — so every module sharing that material is re-clad along with it, and the material line on the quote changes accordingly.

Floor

Pattern: **Plain**, **Tiles**, **Herringbone parquet**, **Chevron parquet**, **Basketweave parquet**. The colour swatch beside it sets the floor colour.

Walls

Wall colour and pattern: **Paint**, **Subway tile**, **Grid tile**, **Hexagon tile**, **Herringbone**, **Slat wall**, **Wood planks** and three wallpaper patterns (stripe, trellis, grasscloth). Pick a tile and **Tile colour** and **Grout** colour appear as well.

Backsplash and listello

Backsplash is the ceramic band between the worktop and the wall units (roughly 900–1500 mm); it has its own pattern and colour. **Listello** is a thin decorative border at waist height (≈1100 mm) and is **priced by the metre** — so it enters the quote.

Accent tiles

To put a contrasting tile panel on part of a wall, choose **+ Add accent panel**. You set which wall, how far from the corner, how high off the floor and at what size. Use it for a feature wall behind a basin or

a bed.

Ceiling

Open (none), **Painted** or **Panel grid**. The ceiling is only drawn in interior and eye-level views; looking down into the room it hides itself so the plan stays readable.

Lighting

Downlights spacing (Dense 700 mm / Normal 900 mm / Sparse 1200 mm), **LED cove** and **Light colour** (Warm / Neutral / Cool). The fittings really do emit light in the render. **Downlights and the LED cove also enter the quote** — by the piece and by the metre.

Finishes

A finish is chosen separately for **Cabinets** and **Worktop**: **Matte**, **Gloss**, **Oak**, **Walnut**, **Glass**, **Marble**, **Granite**, **Concrete**, **Butcher block**, **Gloss quartz**. To give one cabinet's fronts a different finish, use that cabinet's own **Front finish** setting (chapter 8).

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12 Auto kitchen and importing

Furnishing the room with one press, and taking in existing drawings and 3D models.

Auto kitchen

From the **Auto** menu above the viewport press **Auto kitchen**. The program looks at the room you drew and **builds a complete kitchen**: it fills the walls with standard modules, lines up base and wall units, pulls the worktops, and places the sink, hob, fridge and dishwasher. When it finishes it tells you how many base units, wall units, appliances and worktops it placed.

- **You must have drawn a room first** — the layout needs walls. With no room the program says so.
- The result is **undone in a single step**: if you don't like it, ⌘Z.
- What comes out is an ordinary kitchen — you can edit, delete and duplicate each cabinet one by one. Treat it as a starting point.

Auto worktops only fills in what's missing: it pulls a worktop onto every wall that has a run of base cabinets and no worktop.

Importing DXF

If your architect or your customer gave you the flat's plan as a `.dxf`, **Auto ▸ Import DXF** takes it in without you redrawing the room. The program reads the wall lines from the file and turns them into a room; you line the cabinets up on top.

Importing a 3D model

Auto ▸ Import 3D brings a `.glb` / `.gltf` model into the scene — a special light fitting, an armchair the customer liked, an object the architect sent. These models **count as decor**: they appear in the scene, and are never cut or priced.

---

13 Working with AI

Adding, changing and removing cabinets — and laying out a kitchen — by describing it.

Press the **MODULES ▸ +** button in the left panel; the **last** item in the cabinet list that opens — **Cabinet with AI** — opens a text box. You write what you want **in ordinary language** and the program turns it into real cabinets. It can do four things:

REQUEST	EXAMPLE SENTENCE
Add a cabinet	`600 mm base cabinet with three drawers`
Change a cabinet	`make this cabinet 800 wide`
Remove a cabinet	`remove this cabinet`
Lay out a kitchen	`lay out the kitchen with no wall units`

How it works

1. Type your request and press **Generate**.
2. The answer comes back **as a preview first**: cabinets to be added are drawn, ones to be changed are shown *as they stand now*, and removals are listed under their own heading. **Nothing enters the project until you approve it.**
3. If you like it, press **Add to project** (or, depending on the operation, **Apply changes** / **Remove cabinets** / **Lay out kitchen**). If you don't, press **Discard**.
4. Even after applying, `⌘Z` takes the whole thing back **in one step**.

Why you can trust it

- A cabinet the AI produced goes through **the same engine as one you built by hand**. The cut list, the drilling program and the quote come out identically — there is no separate, less trustworthy "AI cabinet".
- **A change is really a change**: it does not rebuild the cabinet, it writes only the field you named. Its material, handle, door style, end panels and placement stay exactly as they were.
- For removals the program shows you **a picture of the cabinet you are about to lose**, not an id.
- **On a divided cabinet** the AI changes only the size, the handle and the **outer front** over the whole face (door, sliding, tambour or open). It does not change the shelves or the compartments' own doors and drawers: such a request is skipped and says why, and nothing invisible is written in its place. You change those in the builder with **Edit**.

It needs a key

This feature runs through the MobiCAM server on your computer's licence; **no separate API key or account is needed**. **Settings ▸ AI** shows whether the AI is available and how much you have used this month. The pilot licence does not include the AI.

> NOTE
>
> If you never enter a key, the rest of the program loses nothing — the AI panel is an optional assistant, not something the program depends on.

---

14 Views and rendering

Getting around in 3D, reading the plan, presenting, and producing a photoreal image.



Present mode. The program folds the toolbars away, turns the lighting and shadows on, and **hides the walls nearest the camera** — so the inside of the room stays visible from every angle. This is the picture you show the customer.

Getting around in the 3D view

ACTION	WHAT IT DOES
Hold the left button and drag	Orbits around the model.
Mouse wheel	Zooms in and out.
Drag with the right (or middle) button	Pans the view.
Click a cabinet	Selects it; it is selected in the left tree and the right panel too.
Double-click	Opens the quick-dimensions card.
`F`	Fits everything to the screen.
`V`	Toggles between Plan and 3D.

By default the arrow keys orbit **the view** (`Shift` pans). If you would rather they move the selected cabinet, change it in **Settings ▸ Arrow keys**.

The plan view

A dimensioned 2D drawing seen from above. Wall lengths, cabinet runs, worktops, sink/hob cut-outs and section lines all live here. Drag to pan, wheel to zoom; `F` or the **Fit** button brings everything on screen. The small box at the top right gives the room's dimensions and area.

Present mode

The amber **Present** button in the top bar (or `⇧F11`) does three things at once: switches to the 3D view, turns on the realistic render, and **folds every panel away**. Only the model is left — use it when showing a customer. `Esc` or `F11` leaves and brings everything back.

If you only want full screen (panels kept, window frame and taskbar gone), `F11` is enough.

Photorealistic rendering

The **Render** button above the viewport gives a fast, realistic image. A step beyond it is **Photo Render**: it computes real light transport — colour bleed, refraction through glass, true reflections. The image **cleans up over time**; the percentage next to the button shows how close it is to the level counted as clean.

- Moving the camera **starts the computation over** — set the angle first, then start it.
- **Stop** returns you to the fast view at any moment.
- **Save render as PNG** writes the image to disk. The render you save is also taken as **the cover photo of the customer proposal** (chapter 16).
- If your computer is struggling, lower **Settings ▸ Render quality**.

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15 The output tabs

Ten documents derived from your drawing. You fill in none of them by hand.

The tabs in the bottom panel are different faces of the current drawing. The moment you change anything in the drawing they all recompute themselves. Their order is the order the job runs in the workshop.



The **Cut List** tab. The summary on the top row — how many lines, how many parts, how many m² of board, how many metres of edge-banding — is the set of numbers you hand the workshop; each line groups the parts that share a size.

Cut List

Every panel to be cut: its material, **Length** × **Width** × **Thickness**, **Grain** direction (length / width / none), **Qty**, its area, and which of its edges get banded in the **Band** column. The **Part** column says which parts that line is.

The list comes **cabinet by cabinet**, because that is how a job is built in the workshop. Each cabinet's header carries its own figures: how many parts, how many metres of banding, how many m² of board, and — once the machine program has been computed — how many holes. **Clicking a header folds that cabinet's rows away**; on a thirty-cabinet kitchen that is how you find the one you are looking for. **Collapse all** in the toolbar folds every one at once.

> NOTE
>
> Folding a cabinet **does not change the figures**. The parts, banding, area and holes in the header are the sum of all that cabinet's rows, whether or not those rows are on screen. Folding is a matter of display, not a filter.

The search box above narrows by part name, material or size; when it narrows, the counter says so — `5 / 39 rows` — and every header re-totals from the rows it has left. While a search is on, folded cabinets **open by themselves** — otherwise the search would be hiding what it just found. **Merge identical parts**, by contrast, sets the cabinets aside and collects every identical blank in the project onto one line: that is **the saw's list**, and it is what the CSV gives you.

Export CSV takes it into Excel or your own program.

Nesting

How the parts lay out on the sheet. The summary bar gives the **Sheets** count, the **Yield** percentage, the **Parts** count, the **Waste** and the **Stock cost**. Below it each sheet is drawn as its own card, with rotated parts marked. The saw kerf is accounted for. When the selected machine is a router, the parts

are packed onto the sheet **without strips**, close together, and the leftover is one clean piece; it never takes more sheets than the straight-cut layout. If you cut your sheets on a panel saw, **Settings ▸ Machine ▸ Where boards are cut ▸ On a panel saw** selects the straight-cut layout.

Sheet stock and offcuts

The **Stock** button lets you declare the sheets you actually have for that material: sheet size and quantity on hand (leave it empty and it counts as unlimited). The real gain is here: **usable offcuts** from a run (≥ 300 mm on an edge) can be recorded as **remnants** with the **Stock** button. On later jobs the program **uses the remnants first** — the material you have already paid for. A sheet cut from a remnant costs nothing, and that shows up on the quote too.

Materials

Every item this job has to **buy**, with its price — and the place those prices are **changed**. It comes in two sections: **Bought by the board** (the price is the price of one sheet) and **Bought by measure** (the price is per metre or per m²). Each row carries the **Item**, **This job** — how much of it this project takes — and an editable **Unit price**. The materials-and-hardware total sits at the foot.

If a material has no price at all, the status bar says **unpriced** and takes you here; the **match** button on the row writes the suggested market price in one press. Where the price the quote actually used differs from the one you typed — a per-sheet price derived from mixed stock, or the coefficient a profiled edge applies — the program shows that separately.

> NOTE
>
> **Change the price here and the quote recomputes itself.** The quantities are the engine's; the same number is never written in two places. Change the price of a sheet here and the total on the **Quote** tab changes with it — there is nowhere you have to update both.

Quote

What the job costs, in six sections: **Material**, **Hardware**, **Fitting**, **Appliance**, **Labour**, **Installation**. The VAT-inclusive total sits at the top. Chapter 16 covers it in detail.

G-code

The program that goes to the CNC. A separate `.nc` file is produced for each sheet; you can read the code on screen and see the toolpaths drawn. The summary bar says how many **bores**, **edge bores**, **contours** and **grooves** there are, and the **Machine time** — how many hours and minutes the program will run for. The same figure appears on each sheet's header; hover it to see the split into

cutting, plunging, drilling, rapid travel and tool changes. It is a **floor**: it leaves out the machine's acceleration and the operator, so the job will not take less than this.

- Pick your machine profile from the **Machine** list: **Generic ISO 3-axis router**, **Generic ISO 3-axis router (expanded drill)** — for controllers that do not implement canned cycles — or **Generic ISO router + horizontal boring head**. The last one also does the **edge bores** (minifix, dowel) a flat router cannot.
- **The horizontal boring head.** With a machine that has a horizontal head selected, boards carrying edge holes are laid out on the **Nesting** tab with at least the head's **approach distance** between parts (how far out from the hole the drill tip drops, 10 mm); the Nesting screen says so on the material's row. On a board laid out that way the drill tip never enters the next part. If a hole that would still do so is left (an old layout made for another machine, say), the **PROBLEMS** list and the G-code summary name the board, the parts and how many holes — and **the `.nc` cannot be exported**. The check looks at the drill **tip**'s path only: the head body's size is not in the machine profile, so the program does not prove the body clears.
- **Cutter compensation and the gap between parts.** The contours in the program are the cutter's **centre path**: the part is cut at its nominal size, and the control must not apply G41/G42 compensation on top. That is why the Nesting tab lays the parts out for the selected machine: the gap at least the cutter's diameter, the board margin at least its radius; a larger kerf set in the project wins, and the project's value is not changed. If the cutter does not fit a part's corner, would cut the next part or would leave the board, the program refuses that board and says why.
- **Holes no drill makes.** If the machine has no drill of a face hole's diameter (for example 3 mm for **Screw positions ▸ Hole**), that hole is not written to the program, and the G-code summary says how many holes of which diameter will not be drilled. Add a drill of that diameter under **Settings ▸ Machine**.
- **Export .nc** writes the files to the folder you choose.
- **Send to machine** lets you name the folder the machine reads (a USB stick, a network share) once; every send after that is one click.
- **Export DXF** gives you each nested sheet as a DXF — for those who use their own CAM. The line of text under the board (material, sheet number, size, part count) is switched on and off with **Settings ▸ Machine ▸ Show sheet info**. Switched off, the text is not written and the drawing's extents are taken **from the board and the parts alone** — for programs that frame a job on the drawing's extents, such as VCarve. Part DXFs are not affected. A sheet DXF is in the program's coordinates: the origin is the board's bottom-left corner, and every part lies on the board as the machine will cut it.

> CAUTION
>
> The first time you send to a given machine, **run the first sheet on cheap material**. The machine profile may not match your controller's dialect exactly, and a test cut costs less than a sheet of chipboard.

Edge-band

The work order for the banding job. The **Panels** count, the finished **Tape** length, the **Roll** quantity **to buy** (including the allowance per edge) and the **Est.** run time. The **Runs** view groups the work; the **Order** view tells you which panel to feed in which sequence — so you change tape and settings as few times as possible. **Save order** prints it as a `.txt` work order.

Drawings

A scaled, dimensioned drawing set: **Floor Plan**, **Services Plan**, **Kitchen Walls** (an elevation of each wall), **Sections**, **Cabinets** and **Parts** (a manufacturing drawing of every panel with its drilling and routing). **Print / PDF** opens the whole set in your browser; print it or save it as PDF from there. Part drawings are in the program's coordinates: the origin is the part's bottom-left corner. Parts of one size that are bored differently — a pair of doors, for example — come with their own names (Door 1, Door 2) and their own barcodes.

Three-dimensional export happens here too:

FORMAT	WHAT FOR
Export DXF	A 2D DXF per part — outline and machining on named layers. For CAD/CAM programs.
Export 3D	OBJ + MTL mesh — SketchUp, 3ds Max, Blender.
Export glTF	A single `.glb` file with realistic materials — Blender, three.js, Windows 3D Viewer.
Export STEP	A true **solid model** (AP214), not a mesh — editable in SolidWorks, Fusion, FreeCAD.

Labels

A label to stick on every part: its name, size, which cabinet it belongs to and its banding. **Print / PDF** prints the label sheet. It is what stops a part getting lost between the saw and the assembly bench.

Assembly

A step-by-step assembly guide for each cabinet: which parts, in which order, with which hardware. The part list and hardware list sit under each cabinet. Print it with **Print / PDF** and hand it to the fitter.

Source JSON

The project in raw form — the text the program actually stores. For advanced users: you can edit it directly, copy it, or download it as a `.mcam` file.

> CAUTION
> If you don't know what you are doing, leave this tab alone. A bad edit can make the project unopenable. Normal use never needs it.

---

16 Pricing and the quote

Setting up your own prices and handing the customer a branded proposal.

The price book

The program ships with default prices, but **your prices are your business**. Open **Settings ▸ Pricing** and enter your own figures. What you change is permanent and applies across every project:

- **VAT rate** — as a percentage.
- **Fitting unit prices** — handle (each), gola profile (metre), LED strip (metre), legs (each), sliding track, tambour (m^2), routed door style, downlight, LED cove, cutlery tray, wire basket, waste bin, corner carousel, pull-out larder, hanging rail, wine rack, plate rack, listello, bar bracket.
- **Edge banding** (metre), **worktop edge** (metre), **wall tiling** (m^2).
- **Labour** — your hourly rate, plus the times for cutting (min/part), boring (sec/hole), routing (m/min) and assembly (min/cabinet).
- **Installation** — delivery, and the fee per cabinet, per appliance and per worktop.

The **Reset to defaults** button clears every change you made.

Changing the price of one line

The **unit prices are editable in place** on the **Quote** tab. To price one item differently for this job, change the figure right there. The **reset** link returns to the default price book. The same bar also lets you change the **Workshop labour rate** and the **VAT rate** on the spot.

Items with no price are counted separately as **unpriced** — make sure that number is zero before you hand the quote to a customer.

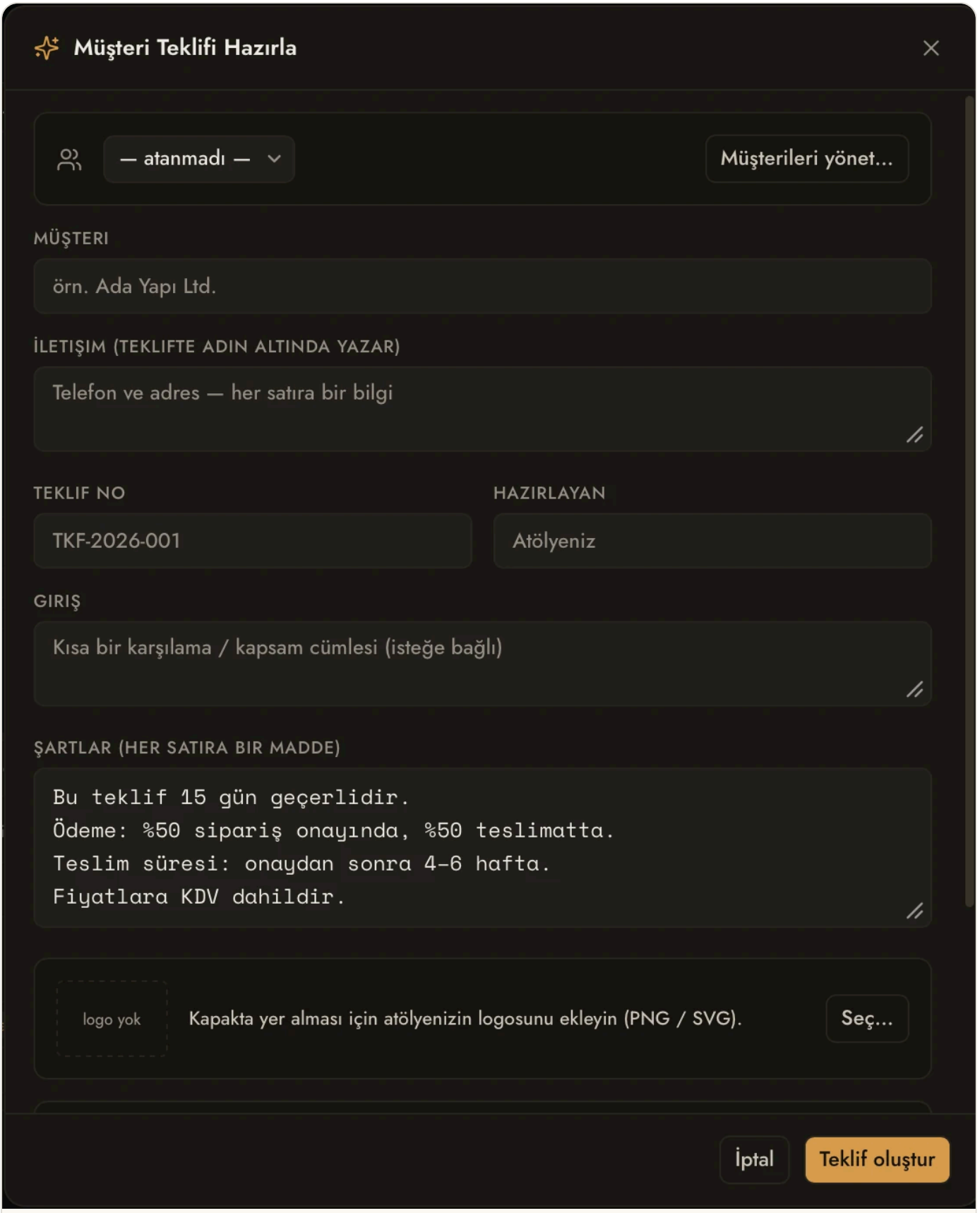
Material library and stock

You enter your shop's boards **once** and use them in every project. The **Library** button on the **Materials** tab (or the last item of any material list in the cabinet properties, **+ New material / library…**) opens the library: name, kind, thickness, board size, grain, price, colour and finish. Picking a library board from a material list adds it to the project by itself.

Stock is counted in boards: **Receive** adds the boards that came in, **Count** writes the counted figure. When a project goes out with **Send to machine** or **Export**, the boards its nest uses come off stock. Sending the same project again takes nothing; a revised one takes only the difference. Every movement is listed in the library with its date.

Preparing a customer proposal

The **Proposal** button on the **Quote** tab produces the **branded document** you give the customer. In the window that opens:



The window the steps below describe. The terms box **comes filled in and is editable** — write your own payment and delivery terms once and they stay there.

1. Type the **Client** name and contact details. If you assigned someone from the customer book, press **Fill the proposal fields from this customer** and skip the typing.

2. Fill in **Reference** and **Prepared by** (your workshop's name).
3. Optionally write a short **Intro** sentence and **Terms** (one item per line: payment, lead time, warranty…).
4. Use **Choose…** to add **your workshop's logo** (PNG / SVG). Your logo goes on the cover and the MobiCAM name moves to the footer.
5. For the cover image, first save a render in the 3D view (chapter 14) — the window will then say **3D render captured**.
6. Two switches set the document's scope: **Wall elevations** (include the design drawings?) and **Itemised pricing** (show the full price list, or only the total?).
7. Press **Create proposal**. The document opens in your browser; print it or save it as a PDF and send it to the customer.

> NOTE
>
> The proposal document is **presentation only**: it never changes the project and never touches your design. Produce as many as you like, with different scopes.

---

17 Customers

Whose job it is, what stage it's at, and what it's worth.

The **Customers** button in the top bar (also reachable from the welcome screen) opens your workshop's book. It has two tabs.

People

On the left the customer list and a search box; on the right the selected customer's card: **Name / Company**, **Phone**, **E-mail**, **Address** and a free **Note** field (site address, preferred colour, outstanding balance…). **New customer** adds one.

Below the card sits that person's **Jobs** list: which projects are theirs, when each was last saved, what it comes to. Press **Open** on a job and the project opens directly.

Assigning a project to a customer

With the project open, press **Assign to this project** in the customer book — or pick the customer in the proposal window. After assigning, **save the project**; that is when the job lands in the book.

Each job carries a **Status**: **Draft**, **Quoted**, **Won**, **In production**, **Delivered**, **Lost**.

The jobs board

The second tab shows **the whole workshop's** jobs by stage on one screen: what's in cutting, what's out for quote, what's being delivered. The total value of open jobs is shown at the top. To see closed (delivered/lost) jobs too, tick **Show closed as well**.

> NOTE
>
> The customer book is kept **entirely on this computer**; it needs no internet and is shared with no one. Deleting a customer **does not delete the project files** — it only removes that book entry and its job list.

---

18 Saving, backup and recovery

Everything you need to know so you never lose work.

The project file

Projects are saved with a `.mcam` extension. A `.mcam` file is **the whole project**: the room, the cabinets, the appliances, the finishes, your price edits, the proposal details. Copying that one file is enough to back it up or move it to another computer.

- `⌘S` saves. If the file has never been saved it asks for a place and a name.
- `⌘O` opens, `⌘N` starts a new project.
- The **small dot** beside the project name in the top bar means there are unsaved changes.

Automatic backup

The program snapshots your work **every 15 seconds** on its own. This snapshot is not a substitute for the file you save — it is what steps in if the power goes, the program crashes or the computer shuts down.

When that happens, the next time you open the program it asks **Recoverable work found**. Press **Restore**, then **save immediately with** `⌘S` — the program reminds you of this too.

> CAUTION
>
> If you ever see the *"Automatic backup failed"* warning on screen, stop and **save to a file straight away**. That warning means your work is not protected right now (the disk may be full, or the folder may not be writable).

The close guard

If you try to close the window with unsaved changes, the program offers three choices: **Save and quit**, **Quit without saving**, **Cancel**. Losing work by accidentally closing is not possible.

If something goes wrong

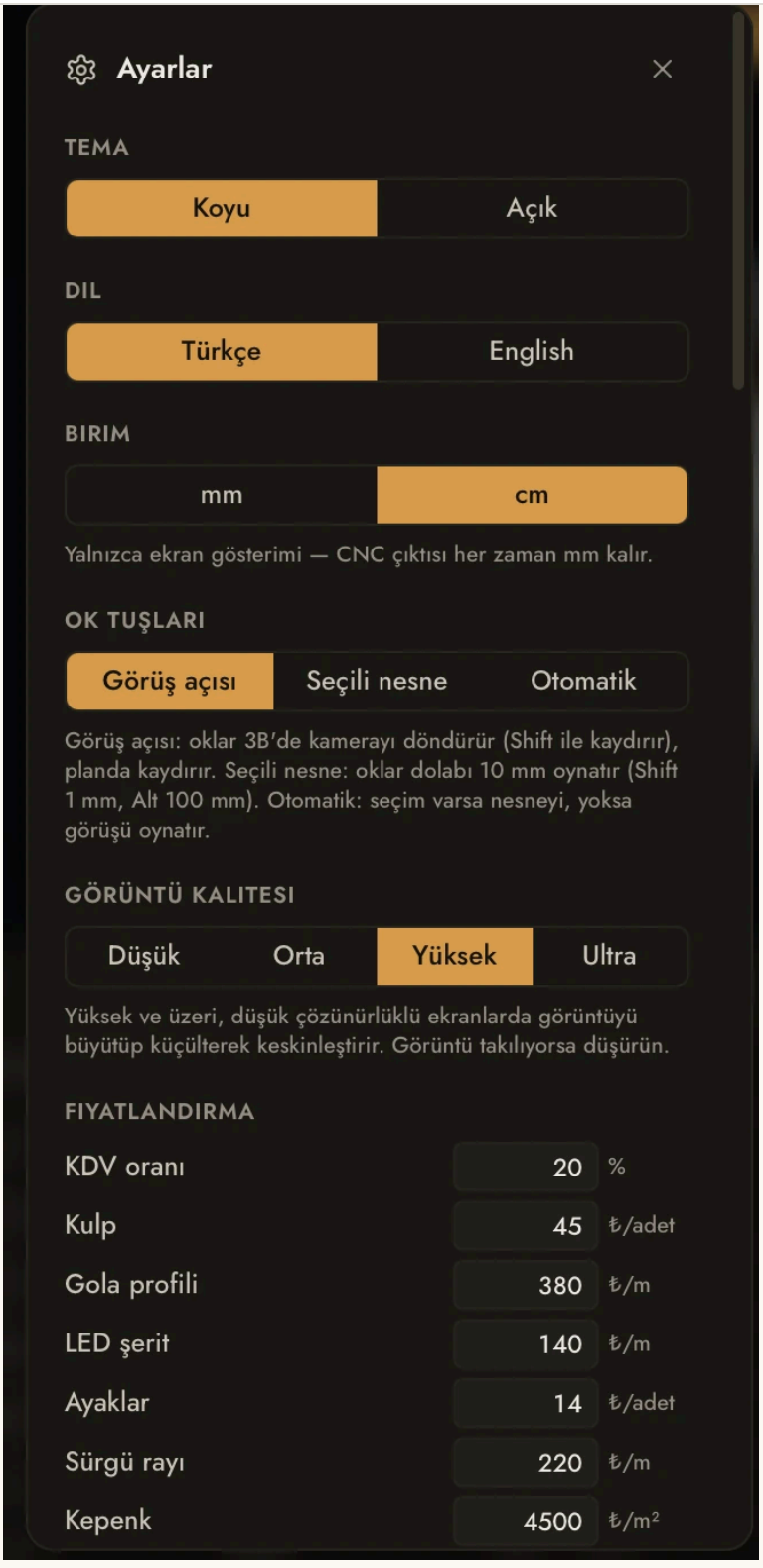
If the program hits an unexpected error it shows an **error screen** rather than a white one. On that screen:

- It tries to snapshot your work and tells you the result.
- **Save project to file** lets you rescue your work right there.
- **Copy error details** gives you the technical information to send us — it speeds up the fix.
- **Reload** refreshes the program; at launch it offers to restore the snapshot.

---

19 Settings

The **Settings** row at the foot of the left panel, or `⌘,`.



The window scrolls; every setting in the table below is in here. The **Pricing** section is the price book described in chapter 16 — not somewhere else, just further down the same window. (This shot was taken before **Tone**, **Accent colour**, **Screen size** and **Text size** were added to **Appearance**.)

SETTING	DESCRIPTION
Tone	**Amber**, **Paper** or **Steel** — the screen's colour family. Amber is MobiCAM's own and the default; Paper gives a warm workshop screen, Steel a cool one.
Theme	Dark or Light. **A separate setting from the tone**: the colour family you pick holds on the dark side too, so three tones × two lightnesses = **six palettes**. Both live in this section — there is no sun/moon icon in the top bar.
Accent colour	The colour of buttons, selection and tabs: the tone's own, one of eight ready colours, or one you pick yourself (a colour code can be typed too). So that type stays readable, each palette lightens or deepens your colour only as far as it needs to, and the colour of the label on it is chosen for you. **Tone colour** puts it back.
Screen size	90% / 100% / 110% / 120% — the whole app grows or shrinks together. It grows only as far as the window can carry: in a small window (a 1366 × 768 laptop, say) it stays at 100% and says so under the setting; as the window grows, it goes up to your choice.
Text size	Normal / Large / Larger — only the type grows; panels, icons and drawings stay where they are. On a small screen this is the way to enlarge.
Language	Turkish / English. It changes instantly with no restart. Screens, reports and the text inside the technical drawings all switch together.
Units	mm / cm / m. **Display only** — CNC output always stays in millimetres.
Arrow keys	**Camera:** the arrows orbit the camera in 3D (Shift pans) and pan in the plan. **Selection:** the arrows move the cabinet 10 mm (Shift 1 mm, Alt 100 mm). **Auto:** moves the selection when there is one, the view otherwise.
Render quality	Low / Medium / High / Ultra. High and above sharpen the image on low-resolution screens. **Lower it if the view stutters.**
Pricing	Your price book — chapter 16.
Machine	Your CNC router and your edgebander. In the **Tools and feeds** table each tool takes its number, diameter and **its own spindle speed, feed and plunge**; a blank field uses the machine's general figure. Drills can be added and removed — holes are matched to a drill by diameter. **Show sheet info** turns the line of text under the board of a sheet DXF on or off (part DXFs are not affected). **Where boards are cut**: **On this machine** (router; a tight layout with no strips) or **On a panel saw** (a straight-cut layout) — chapter 15, Nesting.
Workshop	Every new cabinet's **connector** (Minifix, Minifix + Dowel, Cabineo 8/12, dowel, confirmat, screw, Domino), its **screw positions** (mark or hole), its **shelf-pin holes** (1 or 3 holes only under each shelf, or full height; spacing, depth, diameter) and **back staples**. **Save and apply to existing cabinets** changes the cabinets in this project as well. The same section holds the **Handle library**: your shop's handle models — name, hole centres, length and price (chapter 8, Accessories).

SETTING	DESCRIPTION
Layout	Returns the panel widths you set by dragging to their factory values.
Data sharing	Not a setting but a description: what is sent is explained below.
License	Enter your licence key and activate this computer. The company, plan, seat count and expiry are shown here. If you are moving the program to another computer, press **Release this machine** — the seat goes back. The licence is not asked for at start-up: an installation with no key can design, save and open projects; the top bar says **No license**, and **G-code, cut-list, label, drawing, assembly-guide, report and quote** outputs need a licence — clicking a locked output brings you here. With a pilot licence the top bar shows the days left (**Pilot · 42 days**); it turns orange in the last seven.
AI	Available or not, requests this month — chapter 13.
About & support	Version, operating system, data folder and log folder. The **Copy support info** button puts it all on the clipboard. **Always send this when reporting a problem. Check for updates** is here too.

Data sharing (KVKK)

There is no setting in this section; it shows the detail behind the notice the program displays the first time it opens. Two things are sent: a **technical-support copy** and an **anonymous sample for the AI**.

Technical-support copy: on every save and every G-code export, the whole project — client name, contact details, proposal and prices included; with the programs produced, for an export — is sent to MobiCAM linked to your company. It is there so that, when you report a problem, we can open your file and the program sent to your machine ourselves. Without internet it waits on your computer and goes on the next connection, the next save or the next launch.

Anonymous sample: when you export G-code, an anonymised copy of the design is sent. Kept: room dimensions and walls, cabinets and their parameters, material names and thicknesses, cutting/machining settings and the G-code produced. Removed: project name, client and preparer names, date, proposal text and your logo, room name, **your price list**, supplier and stock codes, the names of files you imported.

Samples are first written to a folder on your computer, and the panel shows that folder — **what gets sent is exactly the file you see there**, not a preview of it.

NOTE

Anonymous samples already sent cannot be recalled — **the server keeps no record of which sample came from which computer**. Technical-support copies, on the other hand, are linked to your company; they are deleted when you ask.

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20 Keyboard shortcuts

`⌘` on a Mac, `Ctrl` on Windows and Linux.

KEY	WHAT IT DOES
`⌘N`	New project
`⌘O`	Open project
`⌘S`	Save
`⌘P`	Print shop package — cut list, nest and drawings
`⌘Z`	Undo — also undoes the project while a drop-down list has focus; in a text or number box it first undoes that box's own typing
`⇧⌘Z` or `⌘Y`	Redo
`⌘,`	Settings
`V`	Plan ⇄ 3D view
`F` or `0`	Fit to view
`F4`	Show / hide the properties panel
`F11`	Full screen (panels stay)
`⇧F11`	Present mode (panels fold away, render on)
`Esc`	Leave full screen / present, close the open dialog
`Delete` or `Backspace`	Deletes **whatever is selected** — a cabinet, an appliance, a decor prop, a door/window/niche, a worktop, an island or a worktop cut-out. Works in the 3D view and in the plan. With a cut-out selected it removes the cut-out, not the worktop it sits in. <kbd>⌘Z</kbd> puts it back.
Arrow keys	Orbit/pan the view — or move the selection by 10 mm (`Shift` 1 mm, `Alt` 100 mm). Which one is chosen in Settings.
`Shift` (once)	Custom cabinet ▸ Compartments: shelf ⇄ divider mode
Digits + `Enter`	Custom cabinet ▸ Compartments: cut the selected compartment at exactly that many millimetres
`⌘Z` / `⇧⌘Z` or `⌘Y`	In the custom cabinet window: that window's own undo / redo. In a text or number box, the box's own undo comes first.
`Enter`	Runs the primary button of the open dialog

21 Troubleshooting

Common situations and what to do about them.

"Windows protected your PC" appears during install

That is normal; the program has no digital signature yet. **More info** ▸ **Run anyway**. It is not a virus warning.

The Mac says "Apple could not verify"

A file older than 0.4.4 says this; since 0.4.4 MobiCAM is notarized by Apple. Take the current file from the download page. To go on with the old one: **System Settings** ▸ **Privacy & Security** ▸ **Open Anyway** at the bottom of the page.

The 3D view is empty or black

First try `F` to fit the view — the model may simply be off screen. On Linux, see the `WEBKIT_DISABLE_DMABUF_RENDERER=1` fix in chapter 2. If it persists, set **Settings** ▸ **Render quality** to **Low** and restart the program.

The view stutters and the mouse lags

Lower **Settings** ▸ **Render quality**. If the photo render is running, press **Stop** — path tracing uses the machine's graphics power continuously.

The worktop won't go in / it says there are no base cabinets on this wall

A worktop sits on base cabinets. Line the base cabinets against that wall first, then choose **Add** ▸ **Worktop** and click the wall.

Auto kitchen does nothing

You have to draw a room first — the layout needs walls. See chapter 5.

The cut list is empty

There are no cabinets in the project yet. Decor objects and furniture never enter the cut list — only real cabinets do.

The quote has "unpriced" items

No price has been entered for those items. Fill them in from **Settings** ▸ **Pricing**, or type the unit price directly on the row in the **Quote** tab.

I delete a cabinet and it stays / `Delete` does nothing

Cabinets are not deleted with `Delete`. Select the cabinet, press `F4` to open the right panel, and press the **Delete cabinet** button in its header.

The arrow keys move the wrong thing

Choose between **Camera**, **Selection** and **Auto** in **Settings ▸ Arrow keys**.

The AI panel says “enter a key”

The AI is on by itself in the paid plans; see its status under **Settings ▸ AI** (chapter 13).

I want to report a problem

On the **Settings ▸ About & support** screen press **Copy support info** and send it to us with a screenshot. If you also attach the file from **the log folder** named on that screen, diagnosis gets much faster.

---

22 Glossary

Terms used in this manual and in the program.

Parametric

A way of drawing in which everything updates itself when you change a dimension. You change the cabinet’s width; the side panels, shelves, doors, hole positions and the price change with it.

Module

A single cabinet. They sit in the **Assemblies** list in the program. “Standard module width” means the cabinet widths the trade is used to (150–1200 mm).

Cut list

The list of which panels to cut, from which material, at what size and how many. It also gives grain direction and which edges get banded.

Nesting

Laying the parts out on the sheet so as to waste as little as possible.

Waste

The unusable material left over after cutting a sheet. Shown as a percentage; larger pieces can be taken into stock as **remnants**.

Kerf (saw allowance)

The thickness of material the saw blade consumes as it cuts. It is part of the nesting calculation; without it the parts look like they fit on the sheet when in fact they don't.

G-code

The command language a CNC machine understands. The program writes it for you; all you pick is your machine profile.

Post-processor / machine profile

The setting that decides which machine the G-code is written for. The same drawing produces different code under different profiles.

BOM

Bill of Materials. The equivalent of the breakdown on the **Quote** tab.

Carcass

The cabinet's skeleton without its fronts: sides, bottom, top, back, shelves.

Gola

The aluminium grip profile used in handleless kitchens, running above or beside the front.

Minifix / Confirmat / Dowel

Ways of joining the carcass corners. Your choice changes the drilling program and the hardware list.

System-32

The worldwide standard hole system, with shelf and hinge holes drilled at 32 mm spacing. It is the basis of frameless cabinets.

Built-in (ankastre)

An appliance recessed into a cabinet (oven, dishwasher, hob). In the program you only bring the appliance in front of the cabinet; it does the rest.

Section

A technical drawing showing the kitchen as if cut through a plane and viewed from the side. Used to read heights and depths.

Render

A computed image of the three-dimensional model that looks like a photograph. Used for presenting to the customer.

DXF · OBJ · glTF · STEP

File-exchange formats for other programs. **DXF** is a 2D drawing, **OBJ** and **glTF** are 3D display models, and **STEP** is an editable solid CAD model.

.mcam

The MobiCAM project file. It holds the whole project; back it up and move it as a single file.

> NOTE
>
> If you couldn't find the term you were after, or a chapter didn't make sense, write to us. This manual grows from the questions you ask.