

CFS Back-Shelf Desiccant Container Print & Use Guide

Two magnetic trays of loose silica for the empty shelf behind the filament bays — no screws, nothing modified.

Seven Printed Pieces

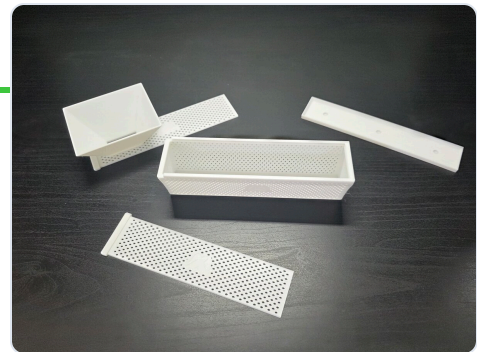
Slide-In Lids

Pre-Configured 3MF

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The CFS keeps its desiccant underneath and leaves a long empty shelf across the back, directly above the filament. This puts that shelf to work: two trays of loose indicating beads that drop onto magnetic rails and lift straight out again to recharge.

In the download



One half: tray, mesh lid, funnel lid, base rail.
You print two of everything except the funnel lid.

File	What it is
...-holder.3mf	Start here. Two plates — everything one CFS needs. Tested profile already set up.
...-no-funnel.3mf	Plate 1 on its own: two trays, two lids, two rails. One funnel lid serves a whole machine — it is a filling tool, not something that stays on — so use this when you already have one and are kitting out a second CFS.
...-one-half.3mf	One tray, one lid, one rail — print a single half first if you would rather try it before committing to the pair.
...-container-and-lid.3mf plus a single-part 3MF for each piece	One piece per plate. For reprinting a single item, and for slicers — phone apps especially — that will not open a multi-plate file.
Four .stl files	The raw meshes, for your own slicer and your own profile.

Print it

Both plates are already configured in `...-holder.3mf`. Nothing needs supports and nothing needs a raft.

Plate	Holds	Time and filament
Plate 1 — six pieces	Two trays, two mesh lids, two base rails	18 h 32 m 133.07 g
Plate 2 — one piece	One funnel lid	2 h 31 m 28.57 g
One complete CFS		21 h 03 m 161.64 g

Settings

Layer height	0.12 mm
Walls	3
Top / bottom shells	5 / 3
Infill	10% gyroid
Brim	5 mm
Supports	None required
Material	PLA, 220 °C nozzle
Sliced on	Creality Hi 2, 0.4 mm nozzle, epoxy resin plate

Dimensions

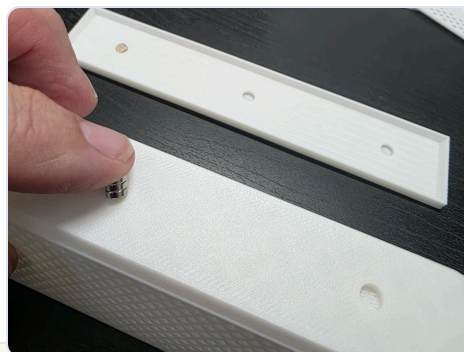
Piece	Size
Tray	164.5 × 51 × 42.9 mm
Mesh lid	162.4 × 42.9 × 3 mm
Funnel lid	166.4 × 43 × 67.2 mm
Base rail	166 × 30.5 × 7 mm

Mount it

What you supply

- ☐ **Twelve 5 × 2 mm disc magnets** — three per rail, three per tray.
- ☐ **VHB double-sided tape** for the two base rails.
- ☐ **Loose indicating silica gel**, 3 to 5 mm beads.
- ☐ **Isopropyl alcohol** and a cloth.

- 1 Fit the magnets.** Three into the base rail and three into the underside of the tray, for each half. Keep the polarity consistent so either tray will drop onto either rail.
- 2 Clean the back shelf** with isopropyl alcohol and let it dry. VHB will not hold on a dusty surface.
- 3 Tape the rails down.** VHB on the back of each rail, lined up with the front edge of the lip. The second butts against the first.



Three pockets in the rail, three in the underside of each tray.

CHECK THE MAGNET FIT BEFORE YOU TAPE ANYTHING DOWN

How tightly the magnets seat depends on how your printer holds tolerance, which is not something the model can control. Drop one in and see. If it is loose, a drop of super glue in each pocket settles it — do that now, rather than after the rail is stuck to the machine.



One rail down, aligned to the front edge of the lip.

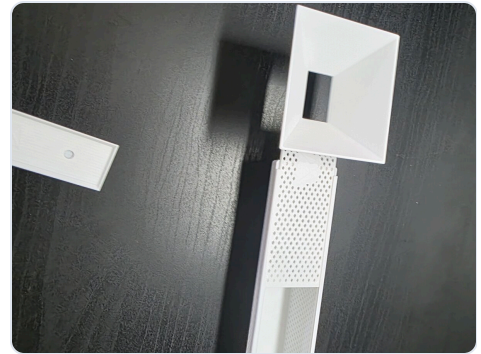


Both in. These stay put — only the trays come out.

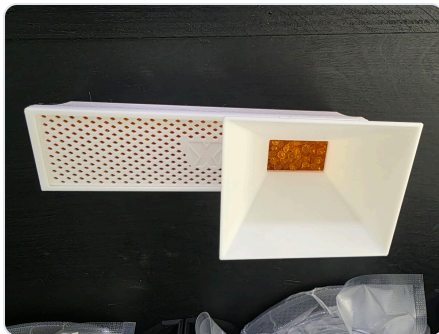
Fill it and fit it

Both lids ride the same **dovetail** along the top edge of the tray. There is nothing to click shut, nothing to fatigue, and nothing that springs open while you are lifting a full tray out of the machine.

- 1 **Slide the funnel lid on** from one end until it seats.
- 2 **Pour the beads in** through the throat. Fill to just below the lid.
- 3 **Slide the funnel lid off** and the mesh lid on in its place.
- 4 **Drop the tray onto its rail.** The magnets pull it into position.
- 5 **Repeat for the second half**, reusing the same funnel lid.



The funnel lid entering the dovetail. Its throat is open all the way through — that is what you pour into.



Filling through the funnel lid. Nothing spills into the bays below.



Mesh lid on. The beads read straight through it.

FILL THEM ON THE BENCH, NOT IN THE MACHINE

A half-length tray is short enough to carry and pour without tipping. That is half the reason this is built in halves at all — the other half is that 164.5 mm fits essentially any bed.

Live with it

Reading the beads

Orange indicating gel is **orange when it is ready to work** and **dark green when it is saturated**. The diamond mesh is open enough to read the color through, so a glance tells you where you are without taking anything apart.

TAKE THE BEADS OUT BEFORE YOU RECHARGE THEM

Indicating silica is recharged in an oven at 200 to 250 °F, or in a microwave. **PLA starts to soften around 140 °F**. Tip the beads into an oven-safe dish and recharge them there. Never put the printed tray, either lid, or the rail in an oven or a microwave — the tub's own instructions will lead you straight into it if you are not watching.



Two halves, seam in the middle, spanning the shelf.

What it did on my machine

Measured on my own CFS and read off the machine display. From a 38% starting point the enclosure came down to **5% relative humidity in 96 minutes**, with the temperature flat at 27 °C throughout. To be exact about what that measures: the desiccant in the floor cavities was recharged in the same session, so it is the whole freshly charged CFS and not these trays on their own.

The second test is the one I would judge it on. Two rolls on **cardboard spools** — the wettest spool material there is — went in that evening after six hours in a dryer. Humidity climbed to 18%, a print ran overnight, and the machine read **7% the next morning**. It keeps up while the machine is working.

When to recharge

- When the beads have gone dark green through the lid.
- Lift the tray straight up off its rail — the rail stays taped in place.
- Slide the mesh lid off, tip the beads out and recharge them.
- Slide the **funnel lid** on, pour them back in, then **swap it back for the mesh lid** — it never stays on — and drop the tray on its rail.

IF THIS ONE EARNED ITS SPOT

A **Like** or a **Favorite** takes a second and genuinely helps. A **Boost** helps more than either — it puts a design in front of makers who would never otherwise see it. Printed something with it, or want a version sized for a different machine? Tell me — most of what gets built here started as somebody asking.

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